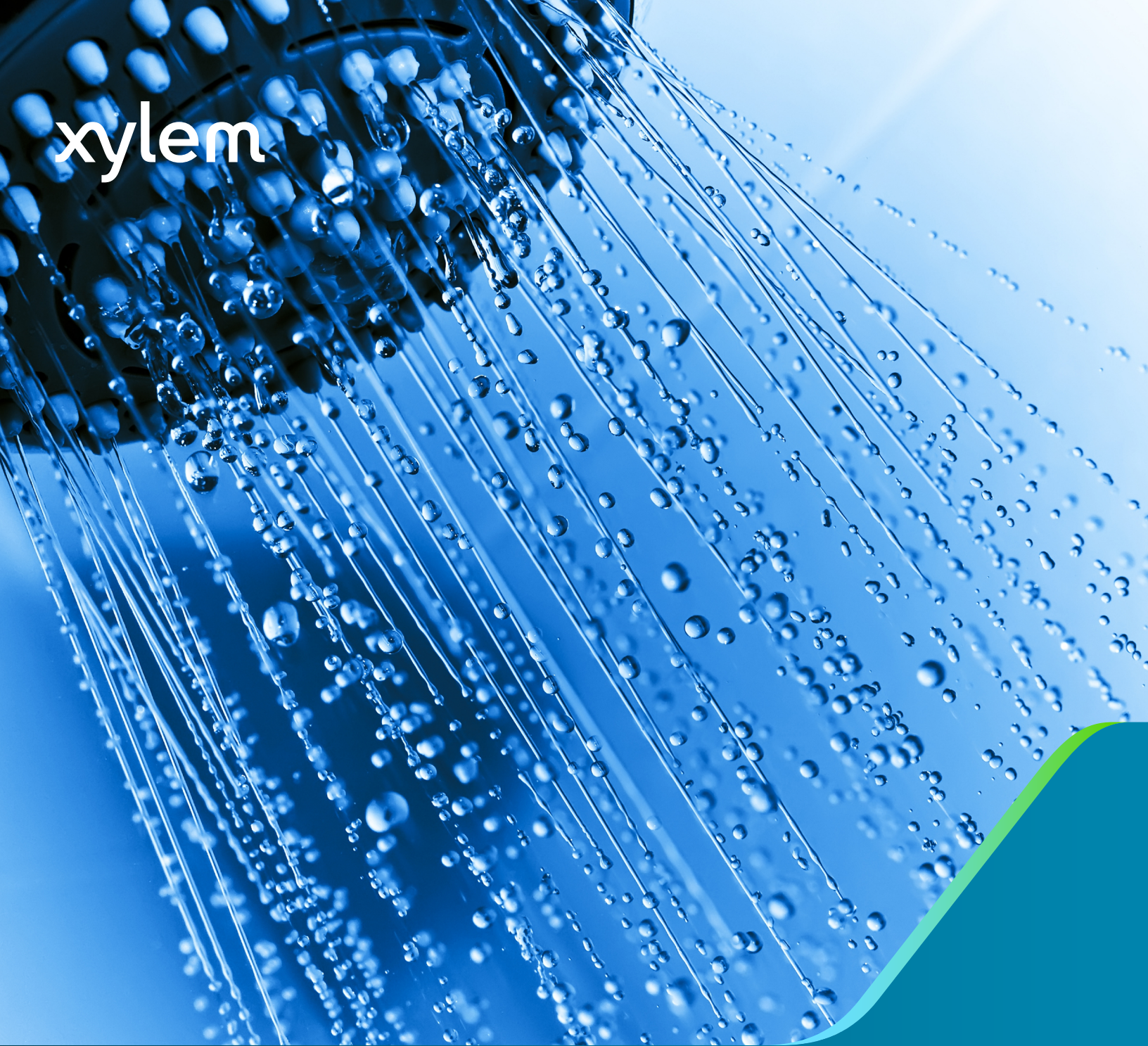




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Jet and Submersible Product Catalog



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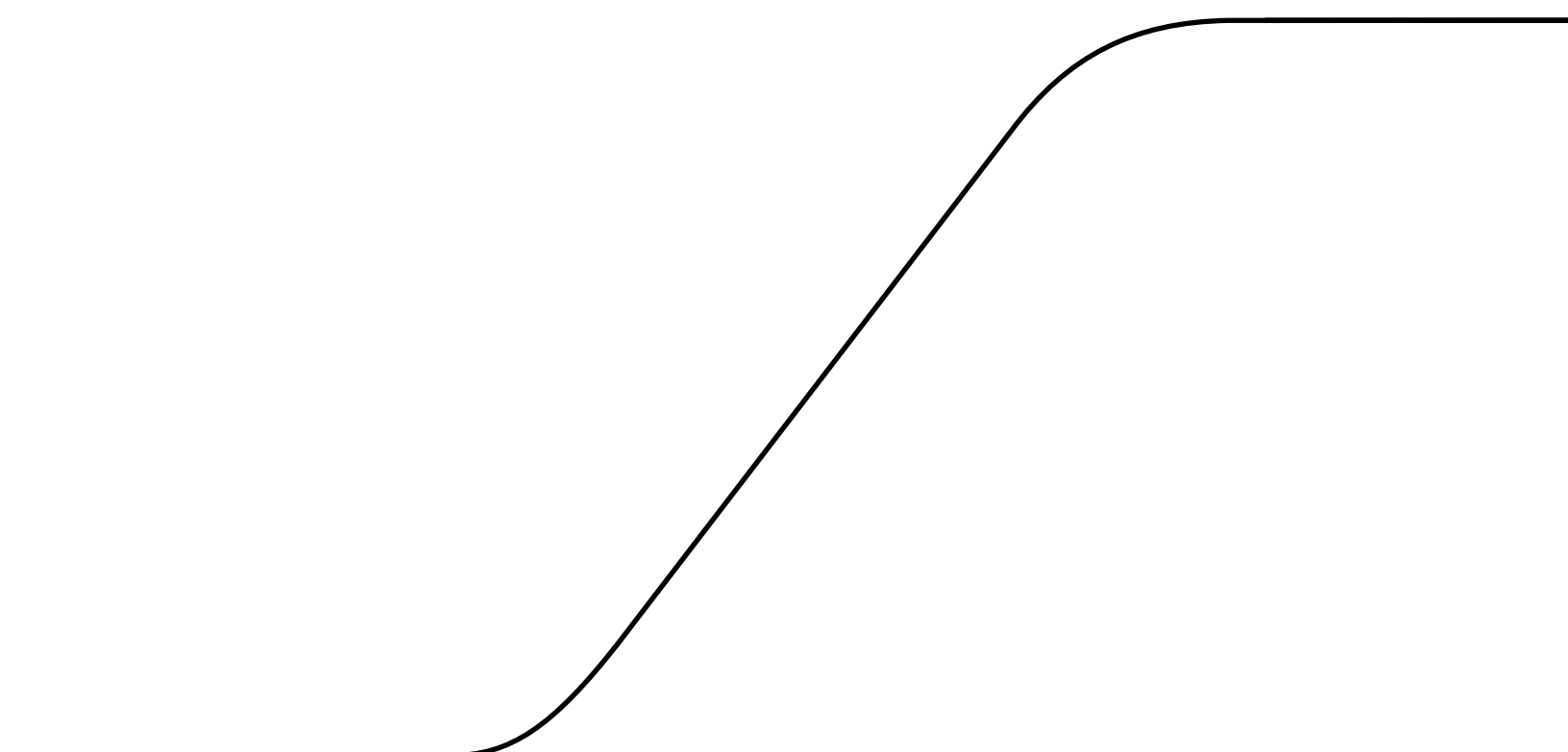
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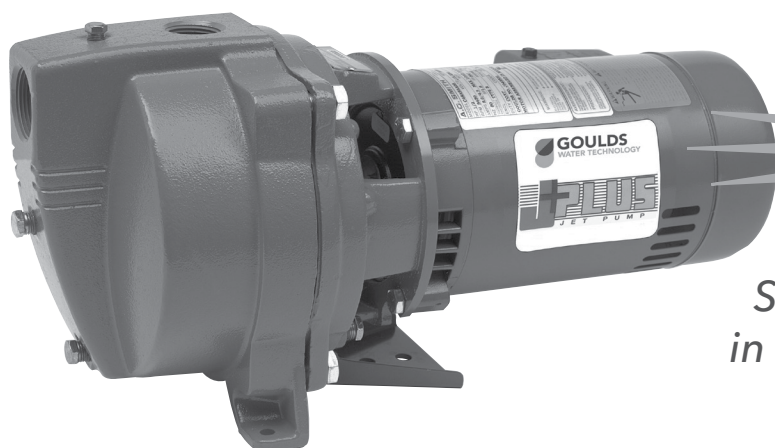
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Jet pumps





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DRINKING WATER
NSF/ANSI 61 & 372

JS+ J5S, J5SH, J7S, J10S, J15S

SHALLOW WELL JET PUMPS - 1/2, 3/4, 1 AND 1 1/2 HP



FEATURES

Compact: Design has an integral shallow well adapter built into the casing, which eliminates the need for a separate shallow well adapter.

Serviceable:

- Back pullout design allows disassembly of pump for service without disturbing piping.
- Two compartment motor for easy access to motor wiring and replaceable components.
- Nozzle clean out plug in pump case.
- Corrosion resistant, engineered plastic tubing and fittings are easily removed for cleaning. Premium O-ring design fittings need only be hand tight to seal.

Impeller: F.D.A. compliant, glass filled engineered composite. Corrosion and abrasion resistant.

Diffuser (Guidevane): Bolt down diffuser provides positive alignment with impeller. Diffuser also has stainless wear ring for extended performance in abrasive conditions. F.D.A. compliant, injection molded, food grade, glass filled engineered composite for durability and abrasion resistance.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Cottages
- Booster service

SPECIFICATIONS

Pump:

- **Pipe connections:** 1¼" NPT suction and 1" NPT discharge
- **Pressure switch:** AS4 preset (30-50 PSI).

Motor:

- NEMA standard
- 60 Hz
- ½ - 1½ HP, 115/230 V capacitor start
- Single phase
- 3500 RPM
- Built-in overload with automatic reset
- Stainless steel shaft
- Rotation: clockwise when viewed from motor end
- UL778 listed

Maximum temperature: 140°F.

Tubing and Fittings: F.D.A. compliant engineered plastic is corrosion and U.V. resistant.

Powered for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits. Can be operated continuously without damage.

Corrosion Resistant: Electro-coated paint process is applied inside and out, then baked on.

Protected Mechanical Seal: Special diaphragm design retains water in the casing at all times to ensure the mechanical seal can never run dry.

Excellent Air Handling Ability: After initial priming the pump has the ability to re-prime itself even when air gets into the system. Pumping resumes once the water level rises above the foot valve.

NSF Listed: The first NSF listed jet pumps in the industry. All jet pumps and shallow well components only, deep well components are not listed.

SYSTEM COMPONENTS

- **Basic Pump Unit:** Includes pump with integral shallow well jet (nozzle and venturi), motor, pressure switch and tubing.

AGENCY LISTINGS



Canadian Standards Association



Underwriters Laboratories[®]



DRINKING WATER
NSF/ANSI 61 & 372

MODEL INFORMATION

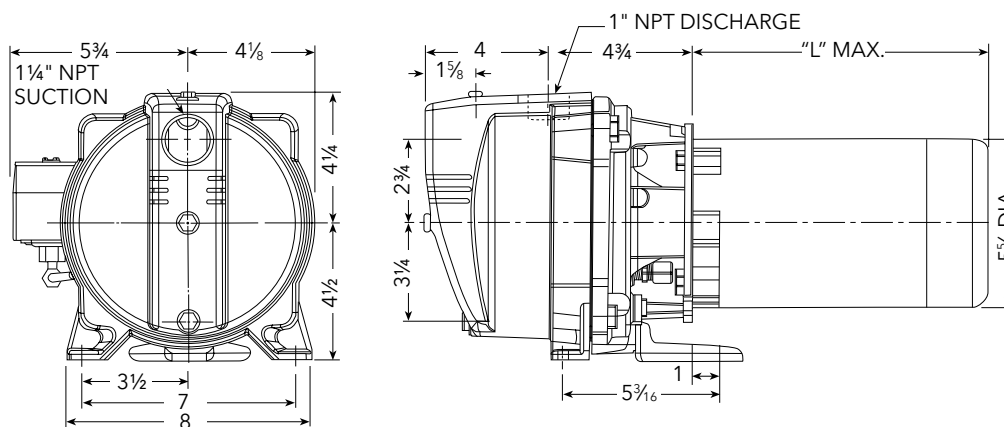
CSA Listed Order No.	U.L. Listed Order No.	HP
J5S	J5SUL	½
J5SH	J5SHUL	½
J7S	J7SUL	¾
J10S	J10SUL	1
J15S	J15SUL	1½

SHALLOW WELL PERFORMANCE RATINGS

HP/Model	½ HP - J5S					½ HP - J5SH					¾ HP - J7S					1 HP - J10S					1½ HP - J15S						
Nozzle	AN017					AN019					AN018					AN018					AN022						
Venturi	AD3332					AD3328					AD3336					AD3339					AD3342						
	Discharge Pressure - PSI					Discharge Pressure - PSI					Discharge Pressure - PSI					Discharge Pressure - PSI					Discharge Pressure - PSI						
Total Suction Lift (feet)	20	30	40	50	Max. Shut off (PSI)	20	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	
	Gallons per minute					Gallons per minute						Gallons per minute						Gallons per minute						Gallons per minute			
5	17.5	16.5	10.2	5.0	63	11.5	11.3	11.0	7.7	4.8	83	21.3	18.3	12.5	6.6	70	24.8	24.4	16.6	9.9	74	26.6	26.3	25.0	15.6	80	
10	15.7	14.4	9.2	4.3	61	10.3	10.0	9.6	7.0	4.2	81	18.8	17.3	11.3	5.0	68	22.9	22.2	15.8	8.6	72	24.7	24.3	22.6	13.9	77	
15	13.7	12.5	8.0	3.6	59	8.8	8.6	8.3	6.3	3.7	79	16.4	15.5	9.6	3.7	66	19.8	19.5	13.8	6.9	70	21.6	21.5	20.4	12.9	75	
20	11.5	10.4	7.1	2.3	57	7.0	7.0	6.8	5.8	3.2	76	13.6	13.2	8.3	2.0	63	16.6	16.6	12.2	5.6	67	18.1	18.0	17.6	12.0	73	
25	8.7	8.6	6.2	1.3	54	5.3	5.2	5.2	5.0	2.8	73	10.0	9.9	6.4	1.0	59	12.5	12.4	10.4	3.6	65	14.0	14.0	14.0	10.1	71	

DIMENSIONS AND WEIGHTS

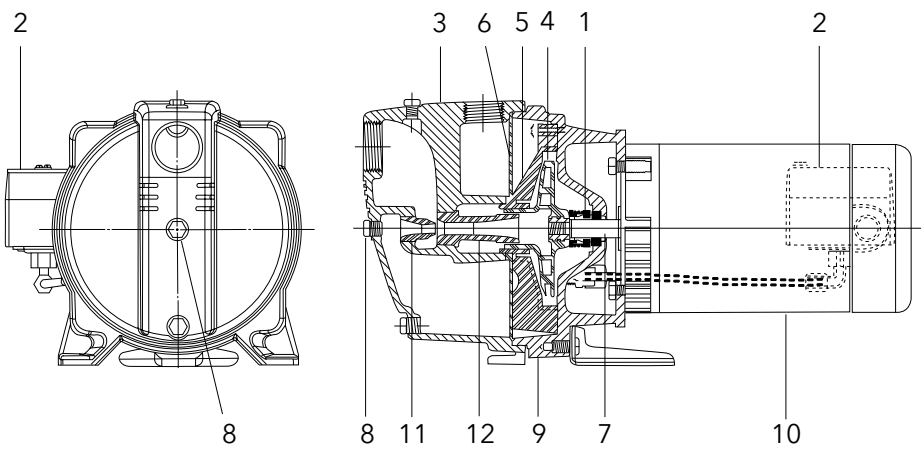
Model	J5S	J5SH	J7S	J10S	J15S
Wt. (lbs.)	43	43	47	50	60
Length	17¼	17¼	18¼	18¾	19¼
Width	9⅞				
Height	8¾				
HP	½	½	¾	1	1½
"L" Max.	8½	8½	9½	10	10½

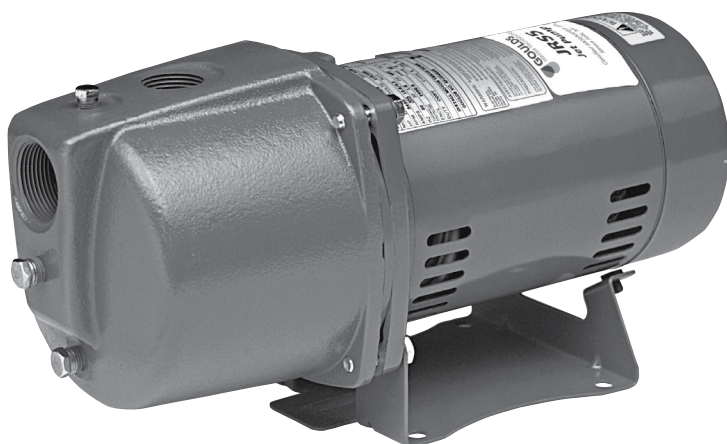


(All dimensions are in inches and weights in lbs. Do not use for construction purposes.)

COMPONENTS

Item No.	Description
1	Mechanical seal
2	Pressure switch
3	Casing
4	Impeller
5	Diffuser (Guidevane)
6	Diaphragm
7	Stainless steel shaft
8	Nozzle clean-out plug
9	Motor adapter
10	Motor
11	Nozzle
12	Venturi (diffuser)





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DRINKING WATER
NSF/ANSI 61 & 372

JRS JRS5, JRS5H, JRS7 and JRS10

SHALLOW WELL JET PUMPS - 1/2, 3/4 AND 1 HP (60 HZ)

FEATURES

Compact: Design has an integral shallow well jet built into the casing, which eliminates the need for a separate shallow well adapter.

Serviceable:

- Back pullout design allows disassembly of pump for service without disturbing piping.
- Two compartment motor for easy access to motor wiring and replaceable components.
- Nozzle clean out plug in pump case.
- Corrosion resistant, engineered plastic tubing and fittings are easily removed for cleaning. Premium O-ring design fittings need only be hand tight to seal.
- O-ring casing seal

Drain Plug: For ease of winterizing and maintenance.

Seal Housing: Engineered composite. Corrosion and abrasion resistant.

Impeller: F.D.A. compliant, glass filled engineered composite. Corrosion and abrasion resistant.

Diffuser (Guidevane): F.D.A. compliant, injection molded, food grade, glass filled engineered composite for durability and abrasion resistance.

Tubing and Fittings: F.D.A. compliant engineered plastic is corrosion and U.V. resistant.

Powered for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits. Can be operated continuously without damage.

Corrosion Resistant: Electro-coat paint process is applied inside and out, then baked on.

Excellent Air Handling Ability: After initial priming the pump has the ability to reprime itself even when air gets into the system. Pumping resumes once the water level rises above the foot valve.

NSF Listed: The first NSF listed jet pumps in the industry. All jet pumps and shallow well components only, deep well components are not listed.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Cottages
- Booster service

SPECIFICATIONS

Pump:

- Pipe connections: 1¼" suction and 1" discharge
- Pressure switch: AS4 preset (30-50 PSI)
- EPDM elastomers NSF approved

Motor:

- NEMA service factors
- 60 Hz
- ½ - 1 HP, 115/230 V capacitor start
- Single phase
- 3500 RPM
- Built-in overload with automatic reset
- Stainless steel shaft
- Rotation: clockwise when viewed from motor end

Maximum temperature: 140°F.

SYSTEM COMPONENTS

- **Basic Pump Unit:** Includes pump with integral shallow well jet (nozzle and venturi), motor, pressure switch and tubing.

AGENCY LISTINGS



Canadian Standards Association
LR38549



DRINKING WATER
NSF/ANSI 61 & 372

PERFORMANCE RATINGS - SHALLOW WELL

HP/Order No.	½ HP - JRS5					¾ HP - JRS7				1 HP - JRS10				
Nozzle	AN018					AN018				AN018				
Venturi	AD3330					AD3336				AD3339				
Total Suction Lift (feet)	Discharge Pressure - PSI					Discharge Pressure - PSI				Discharge Pressure - PSI				
	20	30	40	50	Max. Shut-off (PSI)	30	40	50	Max. Shut-off (PSI)	30	40	50	60	Max. Shut-off (PSI)
	Gallons per minute					Gallons per minute				Gallons per minute				
5	14.1	13.3	10.5	5.8	64	22.5	17.9	12.4	69	27.0	22.4	15.7	9.6	72
10	12.4	12.0	9.2	4.2	59	20.3	16.3	11.5	65	24.5	20.5	14.8	7.5	69
15	10.5	10.0	8.0	2.4	56	17.8	15.3	9.0	63	21.2	19.2	12.6	5.1	66
20	8.6	8.5	6.6	1.2	53	14.8	13.6	7.3	61	17.6	16.8	11.1	3.3	63
25	6.7	6.5	5.0	0.6	51	11.5	10.8	5.2	58	13.4	13.0	8.7	-	61

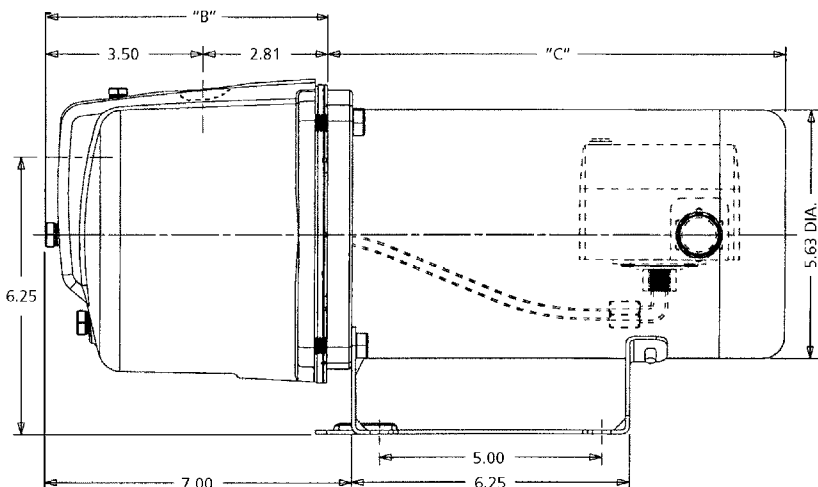
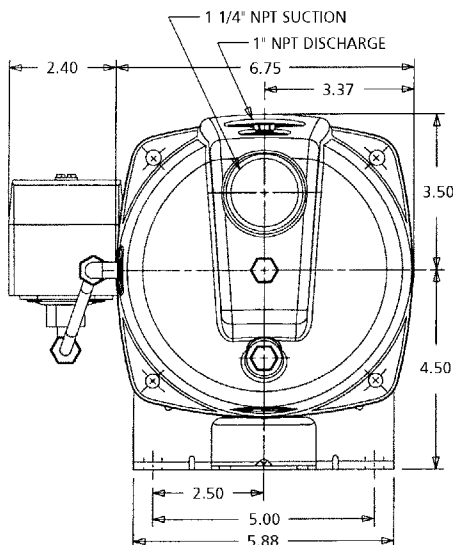
PERFORMANCE RATINGS - SHALLOW WELL, HIGH PRESSURE

HP/Order No.	½ HP - JRS5H							
Nozzle	AN020							
Venturi	AD3325							
Total Suction Lift (feet)	Discharge Pressure - PSI							
	20	30	40	50	60	70	80	Max. Shut-off (PSI)
	Gallons per minute							
5	6.7	6.4	6.2	5.8	4.2	2.5	0.8	84
10	5.8	5.6	5.3	5.1	3.7	2.0	NA	82
15	4.8	4.7	4.6	4.5	3.3	1.5	NA	79
20	4.0	3.8	3.7	3.6	3.1	1.3	NA	75
25	3.0	2.9	2.9	2.8	2.3	0.8	NA	74

DIMENSIONS AND WEIGHTS

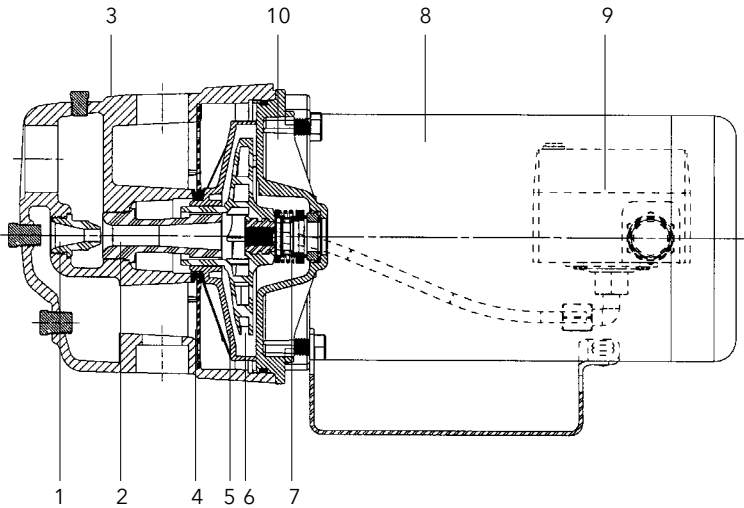
Order No.	HP	(Inches)				Wt. (lbs.)
		"C" Max.	"B" Max.	Width	Height	
JRS5(H)	½	10.81	6.31	9.15	8.0	37
JRS7	¾	11.56				42
JRS10	1	11.81				47

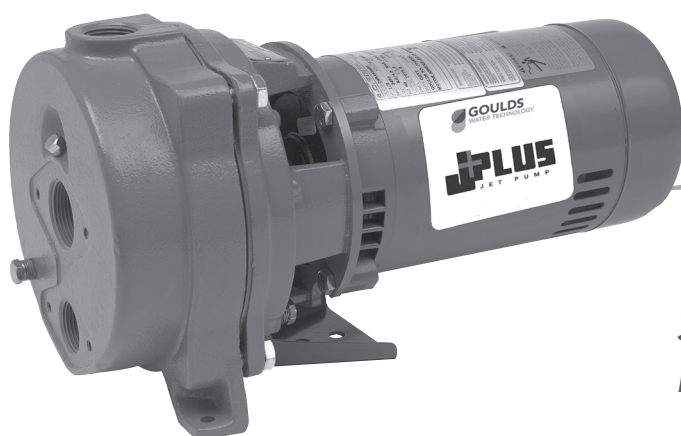
Do not use for construction purposes.



COMPONENTS

Item No.	Description
1	Nozzle
2	Venturi
3	Cast Iron Casing
4	Separator plate
5	Diffuser (Guidevane)
6	Impeller
7	Mechanical seal
8	Motor
9	Pressure switch
10	Seal housing





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DRINKING WATER
NSF/ANSI 61 & 372

J+

J5, J7, J10 AND J15

CONVERTIBLE JET PUMPS ½, ¾, 1 AND 1½ HP - 60 HZ

FEATURES

Convertible: May be used on shallow or deep well applications using appropriate Goulds Water Technology fittings.

Serviceable:

- Back pullout design for service without disturbing piping.
- Two compartment motor for access to wiring and replaceable components.
- Nozzle clean out plug in shallow well adapter.
- Corrosion resistant, plastic tubing and fittings are easily removed for cleaning. Premium O-ring design fittings need only be hand tight to seal.

Impeller: F.D.A. compliant, glass filled engineered composite. Corrosion and abrasion resistant.

Diffuser (Guidevane): Bolt down glass filled engineered composite diffuser has stainless wear ring for extended performance in abrasive conditions.

Powered for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits. Can be operated continuously without damage.

Corrosion Resistant: Electro-coat paint is baked on.

Protected Mechanical Seal: Diaphragm retains water in the casing to ensure the mechanical seal can never run dry.

Excellent Air Handling Ability: After initial priming the pump has the ability to re-prime itself.

NSF Listed: The first NSF listed jet pumps in the industry. All jet pumps and shallow well components only, deep well components are not listed.

AGENCY LISTINGS



Canadian Standards
Association



DRINKING WATER
NSF/ANSI 61 & 372

MODEL INFORMATION

CSA Listed Order No.	HP
J5	½
J7	¾
J10	1
J15	1½

APPLICATIONS

Specifically designed for:

- Homes • Farms • Cottages • Booster service

SPECIFICATIONS

Pump:

- Pipe connections: 1¼" NPT suction, 1" NPT discharge, 1" NPT drive (pressure)
- Pressure switch: AS4 preset at 30-50 PSI

Motor:

- NEMA standard
- 60 Hz, 3500 RPM, single phase
- ½ – 1½ HP, 115/230 V capacitor start
- Built-in overload with automatic reset
- Stainless steel shaft
- Rotation: clockwise when viewed from motor end
- UL778 listed

Maximum temperature: 140°F

SYSTEM COMPONENTS

- Basic Pump Unit: Includes pump and motor, pressure gauge and bushing, pressure switch with tubing and fittings.

NOTE: THE TUBING COMES CONNECTED FOR SHALLOW WELL USE. A DEEP WELL SET UP REQUIRES A JDW FITTINGS PACKAGE OR AN AV22 KIT.

Both include additional fittings and a 24" tubing to connect to a pressure control valve.

ADDITIONAL COMPONENTS REQUIRED

- Shallow Well Package: Includes shallow well adapter, nozzle, venturi (diffuser), gasket, bolts and pipe plugs OR
- Deep Well Package: Choose either a twin pipe or packer style.
 - Twin pipe includes jet body, nozzle, venturi (diffuser) and foot valve.
 - Packer includes packer body, nozzle, venturi (diffuser), and built-in check valve.

NOTE: Packer systems also require a packer adapter on the wellhead.

Deep well systems require a pressure control valve.

NOTE: YOU MUST HAVE A JDW OR AV22 KIT TO MAKE THE PRESSURE SWITCH CONNECTION.

Pressure tank required on all systems.

SHALLOW WELL PERFORMANCE RATINGS

HP/Model	½ HP - J5					½ HP - J5					¾ HP - J7					1 HP - J10					1½ HP - J15					
Shallow Well Package	FH5					FH5H (High Pressure Model)					FH7					FH10					FH15					
Adapter	4K62																									
Nozzle	AN017					AN019					AN018					AN018					AN022					
Venturi	AD3731					AD3528					AD3536					AD3538					AD3542					
	Discharge Pressure - PSI					Discharge Pressure - PSI					Discharge Pressure - PSI					Discharge Pressure - PSI					Discharge Pressure - PSI					
Total Suction Lift (feet)	20	30	40	50	Max. Shut off (PSI)	20	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)	30	40	50	60	Max. Shut off (PSI)
	Gallons per minute					Gallons per minute					Gallons per minute					Gallons per minute					Gallons per minute					
5	17.5	16.5	10.2	5.0	63	11.5	11.3	11.0	7.7	4.8	83	21.3	18.3	12.5	6.6	70	24.8	24.4	16.6	9.9	74	26.6	26.3	25.0	15.6	80
10	15.7	14.4	9.2	4.3	61	10.3	10.0	9.6	7.0	4.2	81	18.8	17.3	11.3	5.0	68	22.9	22.2	15.8	8.6	72	24.7	24.3	22.6	13.9	77
15	13.7	12.5	8.0	3.6	59	8.8	8.6	8.3	6.3	3.7	79	16.4	15.5	9.6	3.7	66	19.8	19.5	13.8	6.9	70	21.6	21.5	20.4	12.9	75
20	11.5	10.4	7.1	2.3	57	7.0	7.0	6.8	5.8	3.2	76	13.6	13.2	8.3	2.0	63	16.6	16.6	12.2	5.6	67	18.1	18.0	17.6	12.0	73
25	8.7	8.6	6.2	1.3	54	5.3	5.2	5.2	5.0	2.8	73	10.0	9.9	6.4	1.0	59	12.5	12.4	10.4	3.6	65	14.0	14.0	14.0	10.1	71

TWIN PIPE PERFORMANCE RATINGS

HP/Model	½ HP - J5				¾ HP - J7				1 HP - J10				1½ HP - J15			
Well Casing min. I.D.	4		4½		4		4½		4		4½		4½			
Pressure	1		1¼		1		1¼		1		1¼		1¼			
Suction	1¼		1½		1¼		1½		1¼		1½		1½			
Jet Assembly Package ①	FT4B-13	FT4B-31	FT4B-08	FT5B-14	FT4B-14	FT4B-34	FT4B-18	FT5B-47	FT5B-48	FT4B-44	FT4B-43	FT4B-18	FT5B-49	FT5B-11	FT5B-12	FT5B-11
Jet Body (only)	AT4B			AT5B	AT4B			AT5B	AT4B			AT5B	AT5B			AT5B
Nozzle	AN017	AN016	AN015	AN018	AN017	AN016	AN016	AN018	AN017	AN017	AN017	AN016	AN019	AN018	AN019	AN018
Venturi	AD726	AD723	AD720	AD724	AD729	AD725	AD722	AD730	AD725	AD730	AD727	AD722	AD732	AD727	AD734	AD727
Control Valve Setting (PSI) ②	30	30	30	30	28	29	30	28	30	31	33	35	30	32	35	40
Feet		Gallons Per Minute (GPM) 30-50 PSI Pressure Switch Setting														
Depth to Jet Assembly (based on submergence of 5 feet)	30	13.0	11.0					15.8				16.6			17.0	
	40	11.8	9.0					15.7				16.0			16.6	
	50		7.6			6.9		13.2				15.0			14.4	
	60		7.0	5.2	6.4	10.2				13.0		11.5	11.2		14.3	
	70			4.7	5.6			8.2		11.0	10.0		9.3		12.6	
	80			3.8	4.8			6.5			8.6		7.3	6.2	10.0	10.0
	90			3.1	4.1			5.0	5.0		7.3			6.1		8.7
	100								4.4		6.0			5.4		7.0
	110								3.5		5.0			4.5		5.7
	120														4.5	
	130															4.0
	140															2.8
	150															1.5
	160															
	170															

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown.

① Jet assembly package includes jet body (AT4), venturi, nozzle and foot valve.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.

PACKER SYSTEM PERFORMANCE RATINGS

HP/Model		½ HP - J5			¾ HP - J7		1 HP - J10	
Well Casing		2			2		2	
Suction Pipe Size (in.)		1¼			1¼		1¼	
Jet Assembly Package ①		FP2-13	FP2-31	FP2-08	FP2-40	FP2-47	FP2-48	FP2-43
Jet Body (only)		AP2			AP2		AP2	
Nozzle		AN017	AN016	AN015	AN015	AN015	AN016	AN016
Venturi		AD726	AD723	AD720	AD727	AD723	AD729	AD725
Control Valve Setting (PSI) ②		30	30	30	30	32	35	36
Feet		Gallons Per Minute (GPM) 30-50 PSI Pressure Switch Setting						
Depth to Jet Assembly (based on submergence of 5 feet)	30	11.9	9.5		13.8		16.7	
	40	10.6	7.9		13.5		14.6	
	50		7.6		11.5		13.5	
	60		6.7	4.8	9.0	7.8	11.0	9.2
	70			4.3		7.1		9.0
	80			3.5		5.1		7.3
	90					4.3		5.6
	100							4.2
	110							
	120							
	130							
	140							
	150							
	160							
	170							

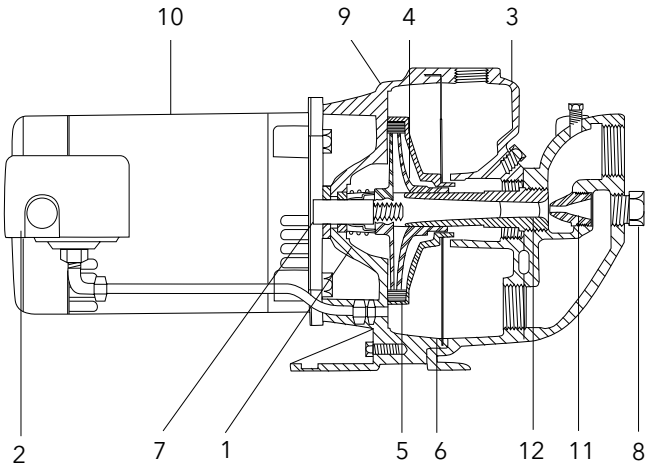
NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown. Special turned (diameter) couplings are required on 2" packer systems, order no. 64655 in Jet and Sub price book.

① Jet Assembly Package includes jet body, AP2; built-in check valve, nozzle and venturi. AP3 (3" Jet body packer) is no longer available.

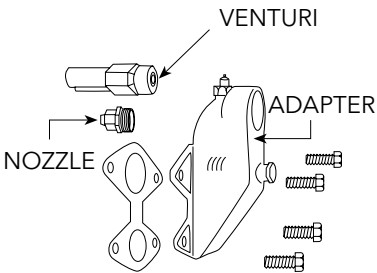
② Same as above

COMPONENTS

Item No.	Description
1	Mechanical seal
2	Pressure switch
3	Casing
4	Impeller
5	Diffuser (Guidevane)
6	Diaphragm
7	Stainless steel shaft
8	Nozzle clean-out plug
9	Motor adapter
10	Motor
11	Nozzle
12	Venturi

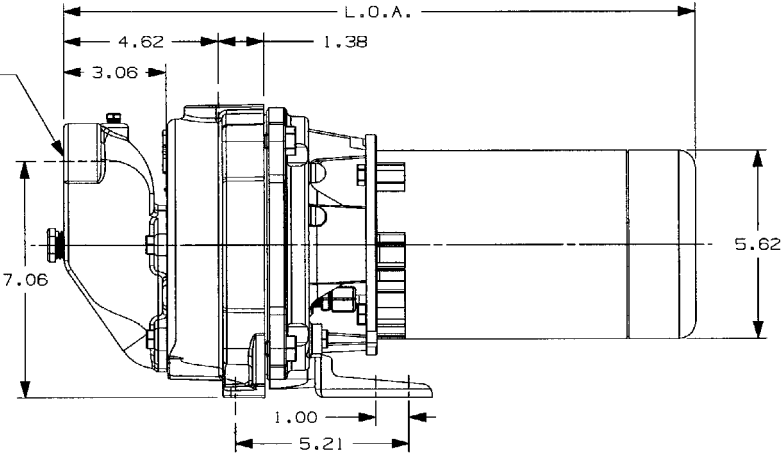
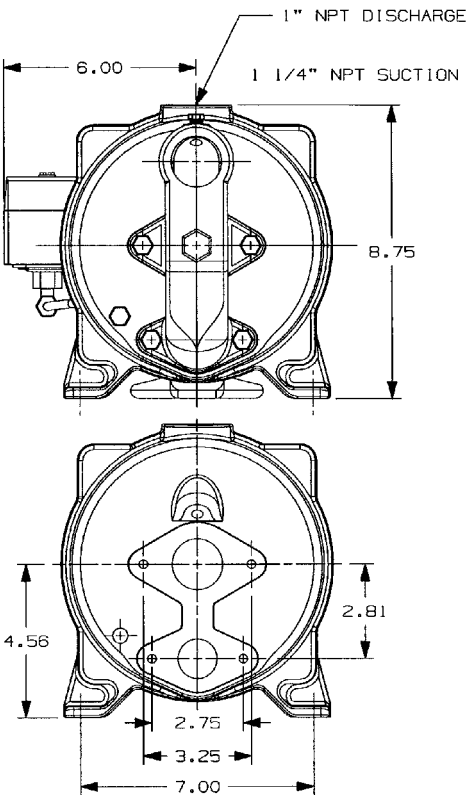


Shallow Well Model



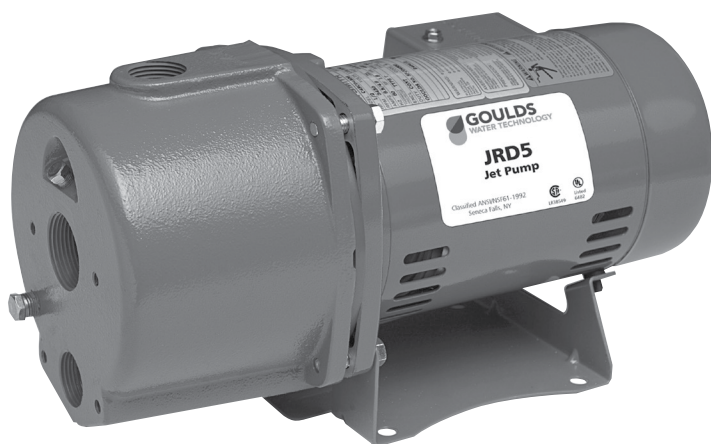
Shallow Well Package

DIMENSIONS AND WEIGHTS



Model	J5	J5H	J7	J10	J15
HP	½	½	¾	1	1½
Weight (lbs.)	50	50	55	59	68
L.O.A.	20½	20½	21	21½	24

Weight includes shallow well adapter. (All dimensions are in inches and weights in lbs. Do not use for construction purposes.)



NOW NSF LISTED!!



DRINKING WATER
NSF/ANSI 61 & 372

JRD JRD5, JRD7 AND JRD10

CONVERTIBLE JET PUMPS ½, ¾ AND 1 HP - 60 HZ

FEATURES

Convertible: May be used on shallow or deep well applications using appropriate Goulds Water Technology fittings.

Serviceable:

- Back pullout design allows disassembly of pump for service without disturbing piping.
- Corrosion resistant, engineered plastic tubing and fittings are easily removed for cleaning. Premium O-ring design, fittings need only be hand tight to seal.

Impeller: F.D.A. compliant, glass filled engineered composite. Corrosion and abrasion resistant.

Diffuser (Guidevane): F.D.A. compliant, injection molded, food grade, glass filled engineered composite for durability and abrasion resistance.

Powered for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits. Can be operated continuously without damage.

Corrosion Resistant: Electro-coat paint is baked on.

Excellent Air Handling Ability: After initial priming the pump has the ability to re-prime itself even when air enters the system. Pumping resumes once the water level rises above the foot valve.

Basic Pump Unit: Includes pump and motor, pressure switch with tubing and fittings.

Water system tank required on all systems.

NSF Listed: The first NSF listed jet pumps in the industry. All jet pumps and shallow well components only, deep well components are not listed.

APPLICATIONS

Specifically designed for:

- Homes • Farms • Cottages • Booster service

SPECIFICATIONS

Pump:

- Pipe connections: 1" NPT discharge, 1¼" NPT suction, 1" NPT pressure
- Pressure switch: AS4 preset at 30-50 PSI

Motor:

- Standard NEMA service factors
- 60 Hz, 3500 RPM, single phase
- ½ - 1 HP 115/230 V capacitor start
- Built-in overload with automatic reset
- Stainless steel shaft
- Rotation: clockwise when viewed from motor end

Maximum temperature: 140°F

ADDITIONAL COMPONENTS REQUIRED

- **Deep Well Package:** Choose either a twin pipe or packer style.
 - Twin pipe includes jet body, nozzle, venturi and foot valve.
 - Packer includes packer body, nozzle, venturi and built-in check valve.
- NOTE:** Packer systems also require an AWJ2 packer adapter on the wellhead.
- Deep well systems require a pressure control valve.

NOTE: You must have JDW or AV22KIT to make the pressure switch connection.

AGENCY LISTINGS



Canadian Standards Association
File #LR38549

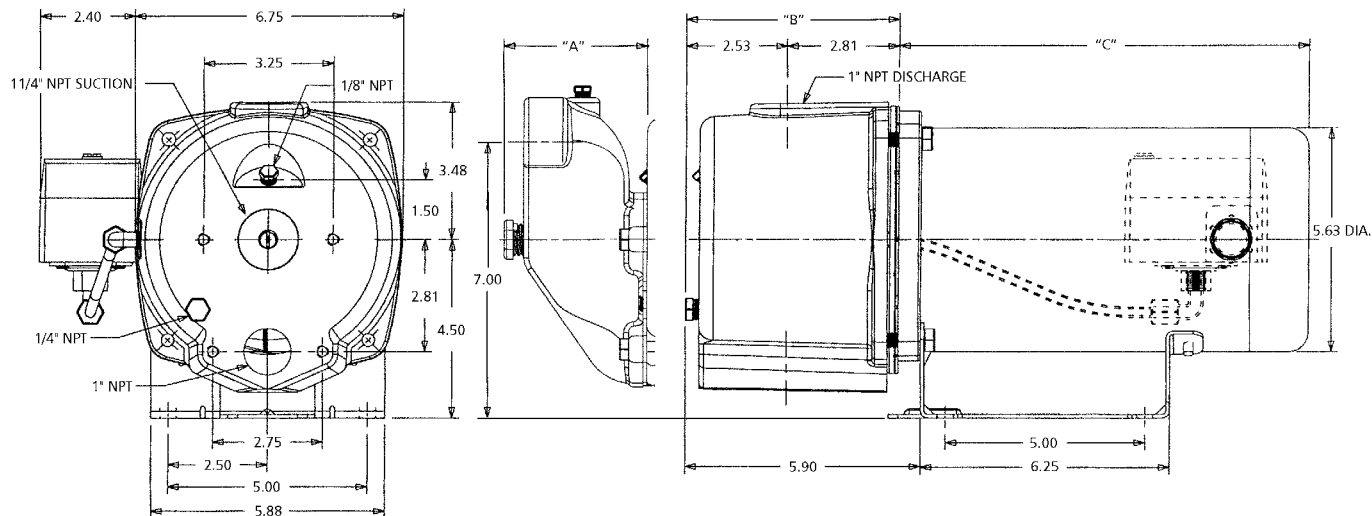


DRINKING WATER
NSF/ANSI 61 & 372

PERFORMANCE RATINGS - SHALLOW WELL

Require pump and shallow well package shown below.

HP/Order No.	½ HP - JRD5					¾ HP - JRD7				1 HP - JRD10				
Shallow Well Package (includes the components below)	FH5JRD					FH7				FH10				
Adapter	4K62					4K62				4K62				
Nozzle	AN018					AN018				AN018				
Venturi	AD3731					AD3536				AD3538				
Total Suction Lift (feet)	Discharge Pressure - PSI					Discharge Pressure - PSI				Discharge Pressure - PSI				
	20	30	40	50	Max. Shut-off (PSI)	30	40	50	Max. Shut-off (PSI)	30	40	50	60	Max. Shut-off (PSI)
	Gallons per minute					Gallons per minute				Gallons per minute				
5	12.3	12.0	9.0	4.0	63	19.0	16.5	10.5	69	22.0	21.0	15.0	8.0	72
10	11.0	10.8	7.6	3.0	62	16.0	14.5	9.0	67	18.5	18.0	12.5	6.5	70
15	9.2	9.0	6.5	2.5	60	13.5	13.0	7.0	65	16.0	15.5	11.0	5.0	68
20	7.6	7.5	5.5	1.5	57	12.0	11.5	5.5	63	13.3	13.0	9.0	3.0	65
25	5.7	5.5	4.0	0.6	55	9.0	8.7	4.0	60	9.6	9.0	7.0	1.5	63



DIMENSIONS AND WEIGHTS - PUMP, MOTOR AND SHALLOW WELL ADAPTER

Order No.	HP	(Inches)				Height (Inches)		Wt. (lbs.)
		Opt. SW Adapter "A"	"B"	"C" Max.	Width	Shallow Well	Deep Well	
JRD5	1/2	3.31	5.34	10.81	9.15	8.41	8.0	37
JRD7	3/4			11.56				42
JRD10	1			11.81				47

Do not use for construction purposes.

TWIN PIPE PERFORMANCE RATINGS

HP/Order No.		½ HP - JRD5				¾ HP - JRD7					1 HP - JRD10					
Well Casing Min. I.D. (in.)		3	4		4½	4		4½		4		4½				
Pressure Suction	Pipe Size (in.)	¾	1		1¼	1		1¼		1		1¼				
		1	1¼		1½	1¼		1½		1¼		1½				
② Jet Assembly Package		FT3B-09	FT4B-13	FT4B-31	FT4B-08	FT5B-14	FT4B-14	FT4B-34	FT4B-18	FT5B-47	FT5B-48	FT4B-44	FT4B-43	FT4B-18	FT5B-49	FT5B-11
Jet Body (Only)		AT3B	AT4B		AT5B	AT4B		AT5B		AT4B		AT5B				
Nozzle		AN015	AN017	AN016	AN015	AN018	AN017	AN016		AN018	AN017		AN016	AN019	AN018	
Venturi		AD722	AD726	AD723	AD720	AD724	AD729	AD725	AD722	AD730	AD725	AD730	AD727	AD722	AD732	AD727
Control Valve Setting (PSI)		30									31	33	35	30	32	
Feet		Gallons Per Minute (GPM) 30-50 PSI Pressure Switch Setting														
Depth to Jet Assembly (Based on Submergence of 5 Feet)	30	6.4	11.7	10.0			13.3			14.3		14.5			16.3	
	40	5.7	10.7	8.0			13.2			14.2		14.3			16.3	
	50	4.3	9.3	6.8			11.3			13.0		12.3			15.3	
	60			6.2	4.7		8.8	8.0		11.5		9.8	9.5		13.0	
	70			5.0	4.2	5.0		7.0		9.8	8.3		8.0		10.8	
	80				3.3	4.3		5.7			7.3		6.3	5.3	8.7	8.8
	90				2.8	3.7		4.2	4.5		6.3			5.2		7.5
	100								3.7		5.3			4.7		6.2
	110								3.0		4.3			3.8		4.8
	120															3.8

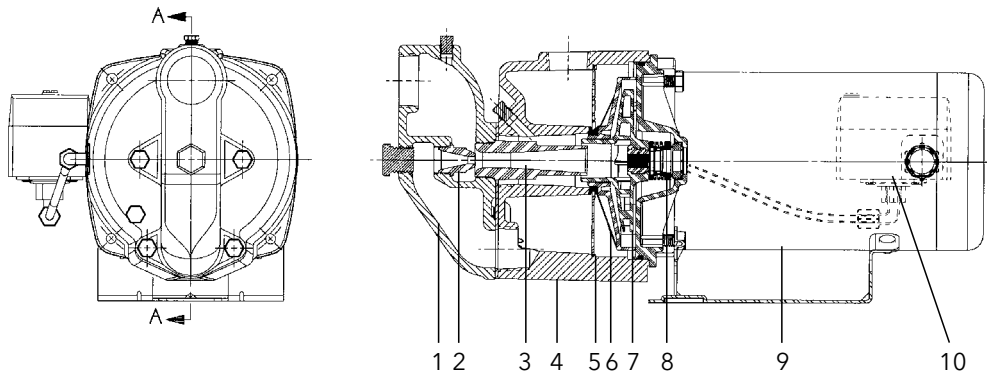
② Jet Assembly Package includes: Jet Body, Venturi, Nozzle, Foot Valve.

Important: An offset of 50 feet will result in a decrease of about 25% from ratings as shown.

PACKER SYSTEM PERFORMANCE RATINGS

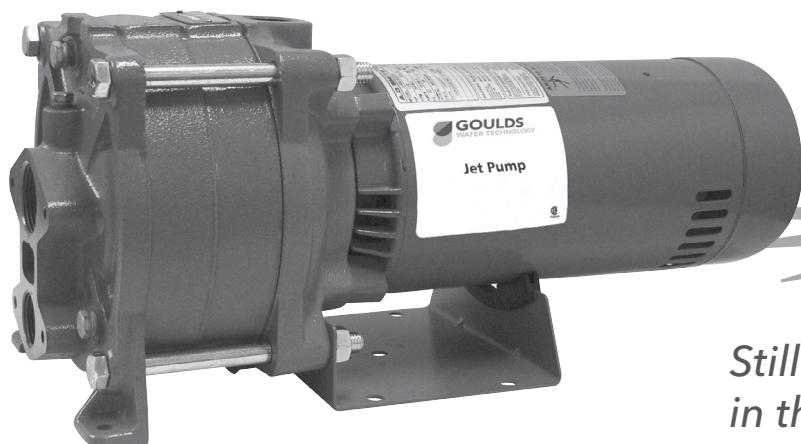
HP/Order No.		½ HP - JRD5			¾ HP - JRD7		1 HP - JRD10	
Well Casing		2						
Suction Pipe Size (in.)		1¼						
① Jet Assembly Package		FP2-13	FP2-31	FP2-08	FP2-40	FP2-47	FP2-48	FP2-43
Jet Body (Only)		AP2			AP2		AP2	
Nozzle		AN017	AN016	AN015	AN015		AN016	
Venturi		AD726	AD723	AD720	AD727	AD723	AD729	AD725
Control Valve Setting (PSI)		30			30	32	35	36
Feet		Gallons Per Minute (GPM) 30-50 PSI Pressure Switch Setting						
Depth to Jet Assembly (Based on Submergence of 5 Feet)	30	10.7	8.5		11.8		14.2	
	40	9.5	7.3		11.5		12.5	
	50	8.3	6.7		9.8		11.5	
	60		5.8	4.3	7.7	6.7	9.3	7.8
	70			3.8		6.0		7.7
	80			3.2		4.3		6.3
	90					3.7		4.8
	100							3.7
	110							
120								

① Jet Assembly Package includes: Jet Body, Venturi, Nozzle, Built-in Check Valve, Leather Crimps, Spacer and Fitting.
Important: An offset of 50 feet will result in a decrease of about 25% from ratings as shown.



COMPONENTS

Item No.	Description
1	Shallow well adapter
2	Nozzle
3	Venturi
4	Cast iron casing
5	Separator plate
6	Diffuser (Guidevane)
7	Impeller
8	Mechanical seal
9	Motor
10	Pressure switch



Basic Convertible Pump

NOW NSF LISTED!!

*Still Built
in the USA...*



DRINKING WATER
NSF/ANSI 61 & 372

HSJ

MULTI-STAGE CONVERTIBLE JET PUMPS - 60 HZ



FEATURES

High Capacity and Pressure: Specifically designed to deliver high capacities at greater pressures.

Stainless Steel Pump Shaft: Hex design provides positive drive for impellers and eliminates clearance adjustments.

Easy to Service: Can be taken apart for service by removing four bolts.

Corrosion Resistant: Glass filled thermoplastic impellers. Stainless steel wear rings and coverplates. Electrocoat paint process applied inside and out and then baked on.

Powered for Continuous Operation: Pump is designed for continuous operation. All ratings are within the motor manufacturer's recommended working limits.

Convertible: Designed for use on shallow or deep well applications using appropriate Goulds Water Technology fittings. See the performance charts on the following pages for fitting order numbers.

NSF Listed: The first NSF listed jet pumps in the industry. All jet pumps and shallow well components only, deep well components are not listed.

AGENCY LISTINGS



Canadian Standards Association



Underwriters Laboratories^①



DRINKING WATER
NSF/ANSI 61 & 372

APPLICATIONS

Specifically designed for:

- Homes, Farms, Cottages, Booster service

SPECIFICATIONS

Pump

- Pipe connections:
1 ¼" NPT suction, 1" NPT discharge,
1" NPT drive (pressure).
- Pressure switch:
¾ - 1 ½ HP, AS4; 2 HP, AS10,
both preset (30-50 PSI).

Motor

- NEMA standard
- ¾-1 ½ HP - 115/230 V
- 2 HP - 230 V only
- 60 Hz, capacitor start
- Single phase, 3500 RPM
- Built-in overload with automatic reset
- Stainless steel shaft
- Rotation: clockwise when viewed from motor end

Maximum temperature: 140°F

SYSTEM COMPONENTS

- Basic Pump Unit: Includes pump, motor, pressure switch, tubing, fittings, pressure gauge and bushing.
- Shallow Well Package: Includes adapter, nozzle, venturi, bolts, gasket and pipe plugs.
- Deep Well Jet Assembly Package: Twin Pipe includes: jet body, nozzle, venturi and foot valve. Packer includes: jet body with built-in check valve, nozzle and venturi.

Additional Accessories Required:

- Packer System - well casing adapter AWJ2 (2") and turned coupling 64655.
- For Deep Well Systems - a pressure control valve such as an AV22KIT or AV22 plus a JDW tubing kit.



AV22

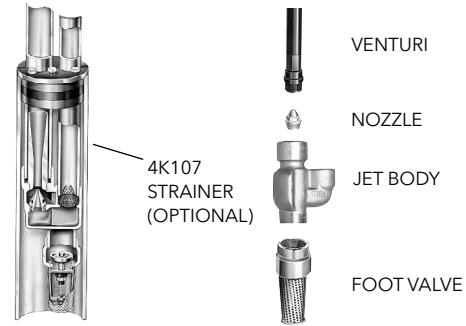
MODEL INFORMATION

CSA Listed Order No.	U.L. Listed (Indoor use) ① Order No.	HP	Stages
HSJ07N	HSJ07NUL	¾	2
HSJ10N	HSJ10NUL	1	2
HSJ15N	HSJ15NUL	1 ½	3
HSJ20N	HSJ20NUL	2	3

PERFORMANCE RATINGS - SHALLOW WELL SYSTEM

HP/Model	¾ HP - HSJ07N					1 HP - HSJ10N					1½ HP - HSJ15N							2 HP - HSJ20N						
Shallow Well Package	FHSJ07					FHSJ10					FHSJ15							FHSJ20						
Adapter	4K62										4K62													
Nozzle	ANO12					ANO12					ANO12							ANO12						
Venturi	AD3432					AD3437					AD3439							AD3448						
	Discharge Pressure - PSI										Discharge Pressure - PSI													
Total Suction Lift (feet)	30	40	50	60	Max.	30	40	50	60	Max.	30	40	50	60	70	80	Max.	30	40	50	60	70	80	Max.
	Gallons per minute				Shut off (PSI)	Gallons per minute				Shut off (PSI)	Gallons per minute						Shut off (PSI)	Gallons per minute						Shut off (PSI)
5'	18.5	18.3	14.6	8.0	76	22.8	22.7	19.8	12.2	79	22.8	22.8	22.8	21.7	17.0	11.2	104	28.2	28.0	25.8	22.7	21.2	16.2	105
10'	15.9	15.8	12.7	6.7	74	20.7	20.3	17.5	10.3	77	20.7	20.7	20.7	20.0	16.3	9.0	102	24.8	24.7	24.2	23.3	18.7	13.7	103
15'	13.8	13.8	11.0	5.6	71	18.0	17.8	15.2	9.2	74	18.0	18.0	18.0	17.7	14.2	-	99	21.3	21.3	20.8	20.7	18.7	13.7	101
20'	13.8	11.3	9.2	-	68	14.5	14.3	12.8	-	71	15.0	15.0	15.0	15.0	12.0	-	97	18.0	17.7	17.5	17.0	16.2	10.8	98
25'	8.6	8.6	5.7	-	65	11.5	11.4	8.3	-	68	11.2	11.2	11.2	11.0	-	-	95	12.3	12.0	11.9	11.7	10.5	-	95

Deep Well Twin Pipe System



PERFORMANCE RATINGS – TWIN PIPE SYSTEMS - 4" WELL

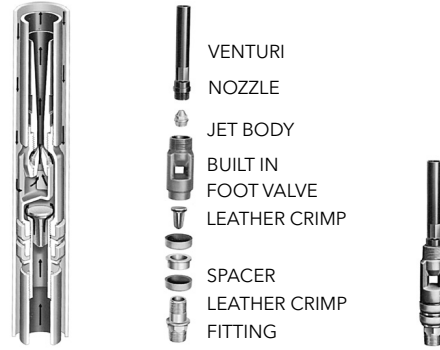
HP/Model		¾ HP - HSJ07N			1 HP - HSJ10N			1½ HP - HSJ15N			2 HP - HSJ20N		
Jet Assembly Package ①		FT4B-48	FT4B-47	FT4B-06	FT4B-47	FT4B-24	FT4B-08	FT4B-45	FT4B-30	FT4B-29	FT4B-45	FT4B-30	FT4B-29
Pressure	Pipe	1 "											
Suction	Size (in.)	1¼"											
Nozzle		AN012	AN013	AN014	AN013	AN015		AN013					
Venturi		AD727	AD724	AD720	AD724		AD720	AD726	AD722	AD719	AD726	AD722	AD719
Pressure Control Valve Setting (PSI) ②		37	40			43		62	65	67	76	78	80
Depth to Jet Assembly (based on submergence of 5 feet)	Feet	Gallons Per Minute (GPM) 30-50 Pressure Switch Setting											
	30	15.1			16.0			13.0			13.0		
	40	13.5			15.2			13.0			13.0		
	50	11.8			14.7			13.0			13.0		
	60	10.7			13.7			12.8			12.8		
	70	8.5	9.0		11.7	11.7		12.2			12.8		
	80		7.5			10.5		10.6			12.0		
	90		6.2	6.2		9.0		9.2	9.3		11.3		
	100			5.8		7.5			9.0		9.5	9.5	
	110			5.0		6.3	6.0		8.0			9.4	
	120			4.6			5.0		7.0			8.5	
	130			4.0			4.3		6.2	5.8		7.7	
	140						4.0			5.6		6.8	
	150						3.5			5.2		6.0	5.7
	160									4.7			5.5
	170									4.2			5.3
	180									3.7			5.0
	190									3.2			4.5
	200												3.8

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown.

① Jet assembly package includes jet body (AT4), venturi, nozzle and foot valve.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.

Deep Well Packer System



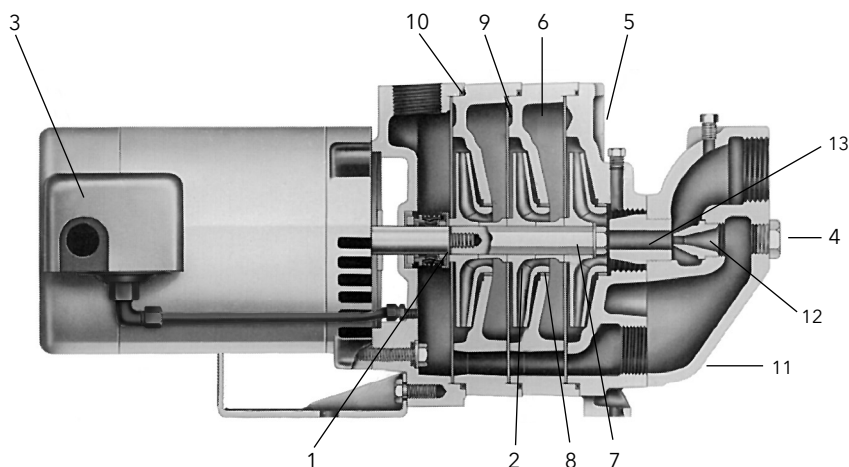
PERFORMANCE RATINGS – PACKER SYSTEM

HP/Model		¾ HP - HSJ07N					1 HP - HSJ10N					1½ HP - HSJ15N						2 HP - HSJ20N						
Well Casing (in.)		2			3		2			3		2			3			2			3			
Suction	Pipe Size (in.)	1¼			1½		1¼			1½		1¼			1½			1¼			1½			
		FP2-51	FP2-50	FP2-06	FP3-40	FP3-42	FP2-50	FP2-07	FP2-08	FP3-40	FP3-49	FP2-49	FP2-30	FP2-29	FP3-47	FP3-46	FP3-34	FP2-49	FP2-30	FP2-29	FP3-47	FP3-46	FP3-34	
Jet Assembly Package ①		AP2			AP3		AP2			AP3		AP2			AP3			AP2			AP3			
Nozzle		AN012	AN013	AN014	AN013	AN014	AN013	AN014	AN015	AN013	AN015	AN013												
Venturi		AD727	AD724	AD720	AD724	AD722	AD724		AD720	AD724	AD723	AD726	AD722	AD719	AD727	AD722	AD719	AD726	AD722	AD719	AD727	AD722	AD719	
Pressure ② Control Valve Setting (PSI)		40			36	40	45		40	43	62	65	67	62	64	66	76	78	80	75	78	80		
Depth to Jet Assembly (based on submergence of 5 feet)	Feet	Gallons Per Minute (GPM) 30-50 Pressure Switch Setting																						
	30	14.9			15.3		15.8			16.3		13.0			14.7			13.0			14.7			
	40	13.1			13.5		14.0			16.0		13.0			14.5			13.0			14.7			
	50	11.6			12.5		12.5			15.5		12.9			14.3			13.0			14.7			
	60	10.5			12.2		11.2	11.3		14.2		12.7			14.3			13.0			14.5			
	70	8.4	8.8		11.8			10.0		12.5		11.8			14.2			12.8			14.5			
	80		7.6		10.2	8.5		8.7		10.0		10.2			12.2			11.8			13.5			
	90		6.0	6.2		7.8		7.3		8.3	9.0	8.3	9.1		10.0			10.5			12.7			
	100			5.7		6.9		5.5			8.2		8.3		7.8	9.1		8.5	9.1		10.5			
	110			4.3		6.0		4.2	4.8		7.3		7.3			8.8			8.9		8.3	9.1		
	120			3.8		5.3			4.0		6.7		6.2			7.6			7.9			9.1		
	130			2.2		4.5			3.5		5.8		5.4	5.6		6.9			6.9			8.8		
	140								3.0		4.8			5.3		6.2			6.0			8.2		
	150								2.4		4.1			4.8		5.4	5.6		5.2	5.6		7.3		
	160													4.3			5.5			5.4		6.5		
	170													3.6			5.0			4.9		5.7	5.7	
	180													3.0			4.7			4.3			5.6	
	190																4.3			3.8			5.5	
	200																3.8			3.3			5.3	
	210																3.3						4.8	
	220																						4.5	
	230																						4.0	

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown. Special turned (diameter) couplings are required on 2" packer systems, order no. 64655 in Jet and Sub price book.

① Jet Assembly Package includes jet body, AP2 or AP3; built-in check valve, nozzle and venturi.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.



Shallow Well Model

COMPONENTS

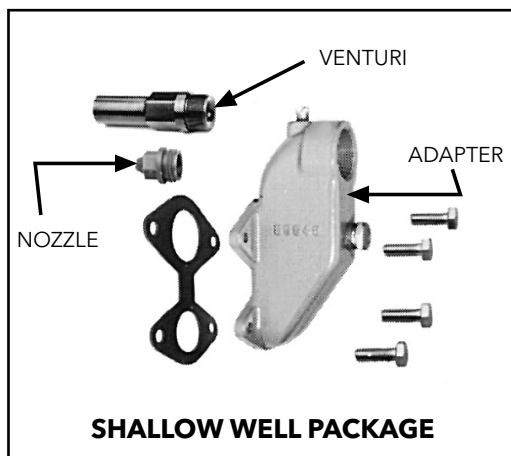
Item #	Description	Material
1	Mechanical Seal	Carbon/Ceramic/ Buna/SS
2	Impeller	Glass Filled Engineered Composite
3	Pressure Switch	Various
4	Plug	Carbon Steel
5	Casing	Cast Iron
6	Intermediate Stage	Cast Iron
7	Hex Shaft Extension	Stainless Steel
8	Wear Ring	Stainless Steel
9	Cover Plate	Stainless Steel
10	O-Rings	Buna-N
11	Shallow Well Adapter	Cast Iron
12	Nozzle	Delrin
13	Venturi	Polypropylene
14	Motor Adapter	Cast Iron

DIMENSIONS AND WEIGHTS

HP/Model	¾-HSJ07N	1-HSJ10N	1½-HSJ15N	2-HSJ20N
Weight	53	58	72	75
Length^①	15	16	17	19
Width	8	8	8	8
Height	9	9	9	9

(All dimensions are in inches and weights in lbs. Do not use for construction purposes.)

① Add 4" for shallow well adapter.



TECHNICAL BROCHURE

BSJ R4

FEATURES

High Capacity and Pressure: Specifically designed to deliver high capacities at deeper settings.

Stainless Steel Pump Shaft: Hex design provides positive drive for impellers and eliminates clearance adjustments.

Easy to Service: Can be taken apart for service by removing four bolts.

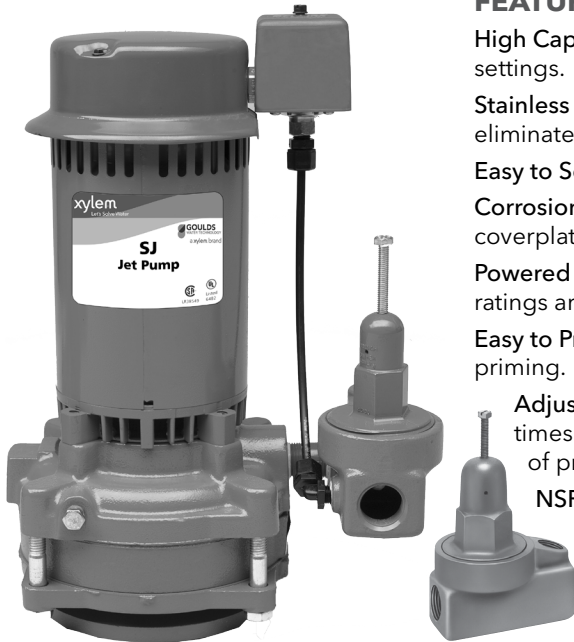
Corrosion Resistant: Glass filled thermoplastic impellers. Stainless steel wear rings and coverplates. Electrocoat paint process applied inside and out and then baked on.

Powered for Continuous Operation: Pump is designed for continuous operation. All ratings are within the motor manufacturer's recommended working limits.

Easy to Prime: Top mounted vent plug allows air to escape from seal cavity during initial priming.

Adjustable Automatic Pressure Control Valve: Guarantees maximum capacity at all times. By-pass check valve equalizes pressure in entire system and helps prevent loss of prime.

NSF Listed: The first NSF listed jet pumps in the industry. All jet pumps and shallow



NOW NSF LISTED!!

SJ

60 HZ VERTICAL JET PUMPS DEEP WELL

Still...



DRINKING WATER
NSF/ANSI 61 & 372

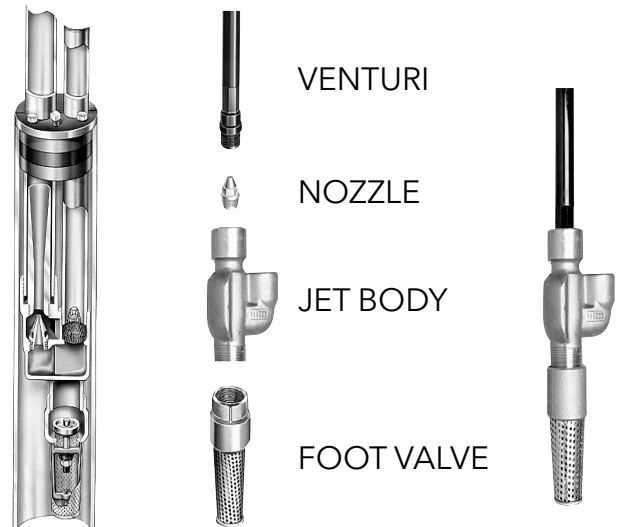
PERFORMANCE RATINGS – TWIN PIPE SYSTEMS

HP/Model		¾ HP - SJ07			1 HP - SJ10			1½ HP - SJ15			2 HP - SJ20		
Well Casing Min. I.D. in.		4											
Pressure	Pipe Size (in.)	1											
Suction		1¼											
Jet Assembly Package ①		FT4B-48	FT4B-47	FT4B-06	FT4B-47	FT4B-24	FT4B-08	FT4B-45	FT4B-30	FT4B-29	FT4B-45	FT4B-30	FT4B-29
Jet Body (Only)		AT4B											
Nozzle		AN012	AN013	AN014	AN013	AN015		AN013					
Venturi		AD727	AD724	AD720	AD724		AD720	AD726	AD722	AD719	AD726	AD722	AD719
Control Valve Setting (PSI) ②		37	40			43		62	65	67	76	78	80
Depth to Jet Assembly (based on submergence of 5 feet)	Feet	Gallons Per Minute (GPM) 30-50 Pressure Switch Setting											
	30	15.2			16.0			13.0			13.0		
	40	13.5			15.2			13.0			13.0		
	50	11.8			14.7			13.0			13.0		
	60	10.7			13.7			12.8			12.8		
	70	8.5	9.0		11.7	11.7		12.2			12.8		
	80		7.5			10.5		10.6			12.0		
	90		6.2	6.2		9.0		9.2	9.3		11.3		
	100			5.8		7.5			9.0		9.5	9.5	
	110			5.0		6.3	6.0			8.0			9.4
	120			4.6			5.0			7.0			8.5
	130			4.0			4.3			6.2	5.8		7.7
	140						4.0				5.6		6.8
	150						3.5			5.2		6.0	5.7
	160									4.7			5.5
	170									4.2			5.3
	180									3.7			5.0
	190									3.2			4.7
	200												3.8

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown.

① Jet assembly package includes jet body (AT4), venturi, nozzle and foot valve.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.



PERFORMANCE RATINGS – PACKER SYSTEM

HP/Model		¾ HP SJ07				1 HP SJ10					1½ HP SJ15						2 HP SJ20						
Well Casing In.		2		3		2		3			2		3				2		3				
Suction	Pipe Size (in.)	1¼		1½		1¼		1½			1¼		1½				1¼		1½				
Jet Assembly Package ①		FP2-51	FP2-50	FP2-06	FP3-40	FP3-42	FP2-50	FP2-07	FP2-08	FP3-40	FP3-49	FP2-49	FP2-30	FP2-29	FP3-47	FP3-46	FP3-34	FP2-49	FP2-30	FP2-29	FP3-47	FP3-46	FP3-34
Jet Body (Only)		AP2		AP3		AP2		AP3			AP2		AP3				AP2		AP3				
Nozzle		AN012	AN013	AN014	AN013	AN014	AN013	AN014	AN015	AN013	AN015	AN013											
Venturi		AD727	AD724	AD720	AD724	AD722	AD724		AD720	AD724	AD723	AD726	AD722	AD719	AD727	AD722	AD719	AD726	AD722	AD719	AD727	AD722	AD719
Pressure ② Control Valve Setting (PSI)		40		36	40		45		40	43	62	65	67	62	64	66	76	78	80	75	78	80	
Depth to Jet Assembly (based on submergence of 5 feet)	Feet	Gallons Per Minute 30-50 Pressure Switch Setting																					
	30	14.9			15.3		15.8			16.3		13.0			14.7			13.0			14.7		
	40	13.1			13.5		14.0			16.0		13.0			14.5			13.0			14.7		
	50	11.6			12.5		12.5			15.5		12.9			14.3			13.0			14.7		
	60	10.5			12.2		11.2	11.3		14.2		12.7			14.3			13.0			14.5		
	70	8.4	8.8		11.8			10.0		12.5		11.8			14.2			12.8			14.5		
	80		7.6		10.2	8.5		8.7		10.0		10.2			12.2			11.8			13.5		
	90		6.1	6.2		7.8		7.3		8.3	9.0	8.3	9.1		10.0			10.5			12.7		
	100			5.7		6.9		5.5			8.2		8.3		7.8	9.1		8.5	9.1		10.5		
	110			4.3		6.0		4.2	4.8		7.3		7.3			8.8			8.9		8.3	9.1	
	120			3.8		5.3			4.0		6.7		6.2			7.6			7.9			9.1	
	130			2.2		4.5			3.5		5.8		5.4	5.6		6.9			6.9			8.8	
	140								3.0		4.8			5.3		6.2			6.0			8.2	
	150								2.4		4.1			4.8		5.4	5.6		5.2	5.6		7.3	
	160													4.3			5.5			5.4		6.5	
	170																5.0			4.9		5.7	5.7
	180																4.7			4.3			5.6
	190																4.3			3.8			5.5
	200																3.8			3.3			5.3
	210																3.3						4.8
	220																						4.5
	230																						4.0

NOTE: An offset of 50 feet will result in a decrease of about 25% from ratings as shown. Special turned (diameter) couplings are required on 2" packer systems, order no. 64655 in Jet and Sub price book.

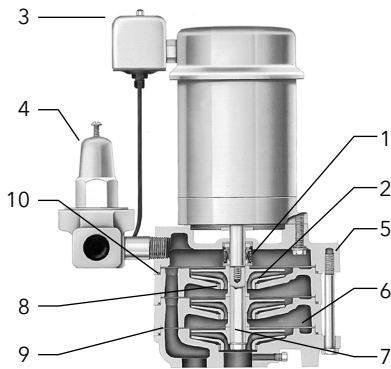
① Jet Assembly Package includes jet body, AP2 or AP3; built-in check valve, nozzle and venturi.

② Deep well jet pumps require a pressure control device on the discharge to provide back pressure to the jet assembly. Failure to control the amount of discharge by adjusting the back pressure (pressure control valve setting) will cause the pump to lose prime. On pumps with low control valve settings, up to 40 psi, a simple ball valve or AV15 will work. On systems with control valve settings of 40 - 80 psi an AV22, AV22KIT or AV21 is required. They measure the pressure on the outbound side so that the high pressure does not open the 30-50 psi switch and turn the pump off.



COMPONENTS

Item No.	Description
1	Mechanical seal
2	Corrosion resistant impellers
3	Pressure switch
4	Pressure control valve
5	Rugged cast iron construction
6	Electro-coat paint
7	Stainless steel hex shaft
8	Stainless steel wear rings
9	Stainless steel cover plates
10	O-ring seals



AGENCY LISTINGS



Canadian Standards Association



Underwriters Laboratories^①



DRINKING WATER
NSF/ANSI 61 & 372

MODEL INFORMATION

CSA Listed Order No.	U.L. Listed (Indoor use) ^① Order No.	HP	Stages
SJ07	SJ07UL	¾	2
SJ10	SJ10UL	1	2
SJ15	SJ15UL	1½	3
SJ20	SJ20UL	2	3

DIMENSIONS AND WEIGHTS

HP/Model	¾-SJ07	1-SJ10	1½-SJ15	2-SJ20
Stages	2	2	3	3
Weight	58	63	77	88
Length	14	14	14	14
Width	8	8	8	8
Height	15½	16	20	20½

Pressure Control Valve included in dimensions.

(All dimensions are in inches and weight in lbs. Do not use for construction purposes.)

APPLICATIONS

Specifically designed for:

- Homes
- Farms
- Cottages

SPECIFICATIONS

Pipe connection –
1" NPT drive (pressure)
1¼" NPT suction
1" NPT discharge

Pressure switch –
¾-1½ HP, AS4
2 HP, AS10
both preset (30-50 PSI)

- NEMA standard
- ¾-1½ HP, 115/230 V, 60 Hz, capacitor start
- 2 HP, 230 V only, 60 Hz
- Single phase
- 3500 RPM
- Built-in overload with automatic reset
- Stainless steel shaft
- Rotation: clockwise when viewed from motor end.

140° F

REQUIRED SYSTEM COMPONENTS

- **Basic Pump Unit:** Includes pump, motor, pressure switch, tubing, fittings, pressure gauge, bushing and AV21 pressure control valve.
- **Deep Well Jet Assembly Package:** Twin Pipe includes: Jet body, nozzle, venturi and foot valve. Packer includes: Jet body with built-in check valve, nozzle and venturi.
- **Additional Accessories Required:** For Packer: well casing adapter AWD2 (2").

Note: 3" well casing adapter is no longer available.

MODEL SJ

For twin pipe or packer systems.





GT IRRI-GATOR®

SELF-PRIMING CENTRIFUGAL PUMPS - 60 HZ

FEATURES

Self-Priming Design: Once pump is initially primed, filled with water, it will reprime when the water level rises above the end of the suction pipe.

Easy Servicability:

- Back pullout design allows disassembly of pump for service without disturbing piping.
- Two compartment motor for easy access to motor wiring and replaceable components.

Diffuser (Guidevane): Bolt down diffuser provides positive alignment with impeller. FDA compliant, injection molded, glass-filled engineered composite for durability and abrasion resistance.

Corrosion Resistant: Electrocoat paint process is applied inside and out, then baked on.

APPLICATIONS

Specifically designed for the following uses:

- Lawn sprinkling
- Heat pumps
- Irrigation
- Water transfer
- Air conditioning systems
- Dewatering

SPECIFICATIONS

Pump:

- Pipe connections: 1½" NPT suction • 1½" NPT discharge
- Capacities: to 110 gpm at 5 foot suction lift
- Heads: to 128 feet
- Reprime capabilities: to 25 feet suction lift
- Maximum water temperature: 140° F (60° C)
- Maximum working pressure: 125 psi
- Rotation: clockwise when viewed from motor end.

Motor:

- NEMA standard open drip proof
- 60 Hz, 3500 rpm
- Stainless steel shaft
- Single phase: ¾-1½ hp, 115/230 V; 2 and 3 hp, 230 V only. Built-in overload with automatic reset.
- Three phase: 230/460 V. Overload protection must be provided in starter unit. Starter and heaters (3) must be ordered separately.
- Optional TEFC motors are available. See price book for order numbers.

Options:

- Add a "B" suffix for a silicon brass impeller, ex. GT07B
- Add an "S" suffix for an extended (higher) base.

Impeller: **Standard** - glass-filled, abrasion resistant engineered composite

Optional - Silicon brass is available (lead content is < .05%)

Casing: Cast iron, 4-bolt, back pullout design. Openings for vacuum gauge and casing drain.

Powered for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits. Can be operated continuously without damage.

Mechanical Seal: Carbon/ceramic faces, Buna elastomers. 300 series stainless steel metal parts. Diaphragm prevents the seal from running dry.

AGENCY LISTINGS



Canadian Standards Association



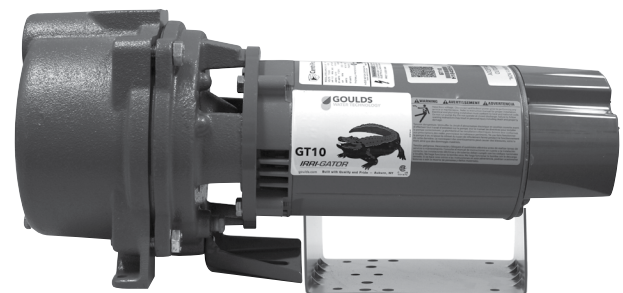
Class 6853 01 - Low Lead Content Certification

Suitable for outdoor use

STANDARD ODP MODELS

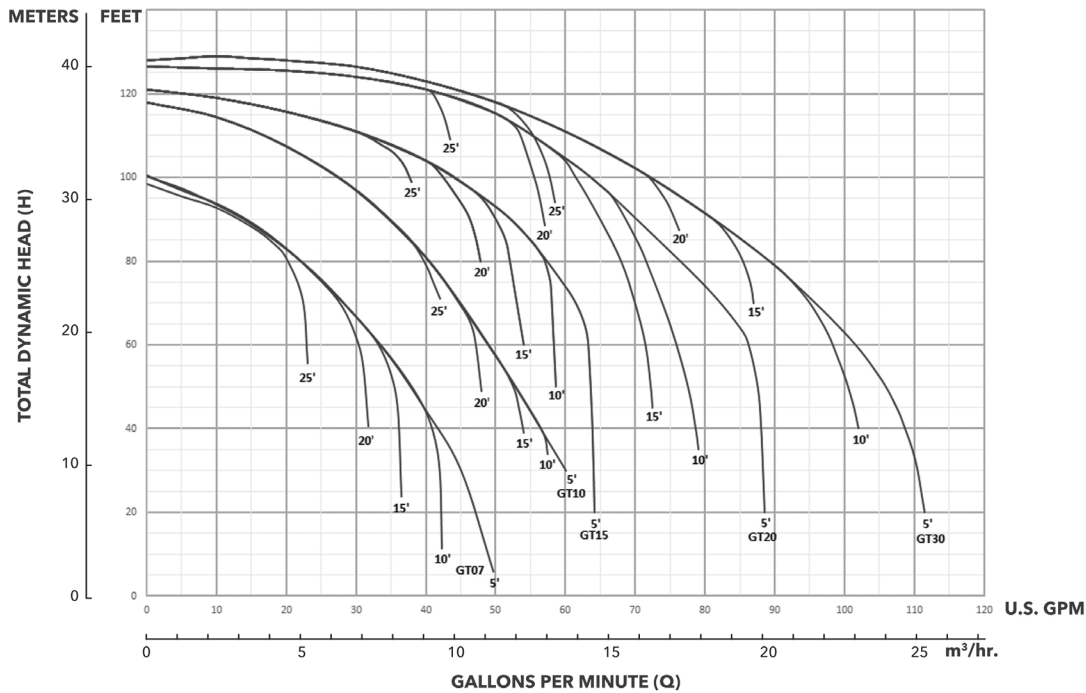
Model	HP	Phase
GT07	¾	1
GT10	1	
GT15	1½	
GT20	2	
GT30	3	
GT073	¾	3
GT103	1	
GT153	1½	
GT203	2	
GT303	3	

Add on "S" suffix for extended base. See back page.



GT -- S with optional tall base

PERFORMANCE CURVE



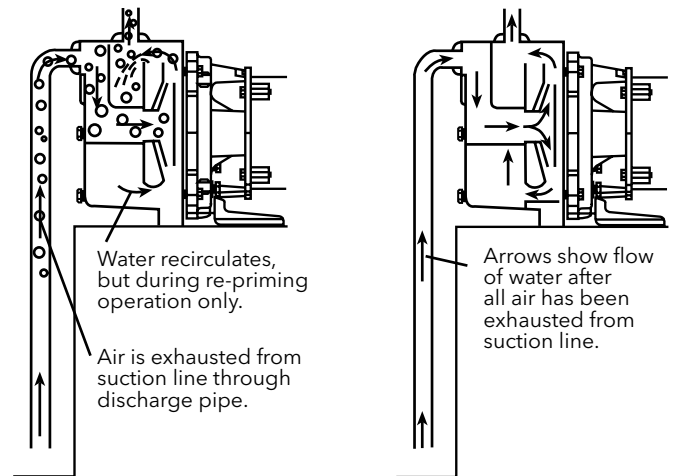
Single and three phase have same performance.

PERFORMANCE RATINGS

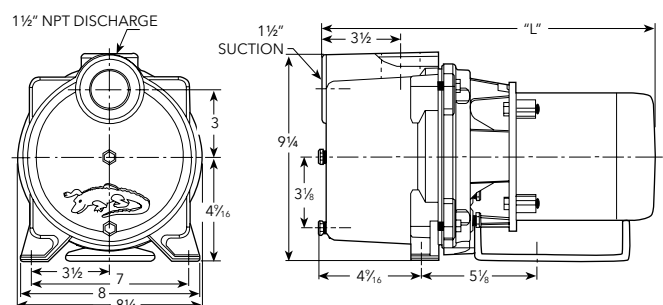
Model	PSI Discharge Pressure	Suction Lift in Feet				
		5	10	15	20	25
GT07/ GT073	20	44	41	36	31	24
	30	34	31	26	22	14
	40	10	4	0	0	0
GT10/ GT103	20	53	51	49	46	41
	30	43	41	38	36	32
	40	29	22	16	8	0
GT15/ GT153	20	63	59	54	49	39
	30	60	55	51	46	37
	40	45	38	33	20	14
GT20/ GT203	20	86	77	70	59	46
	30	80	72	67	57	44
	40	65	60	57	50	43
GT30/ GT303	20	105	100	88	76	60
	30	92	90	84	75	57
	40	73	67	62	55	50

Performance ratings are in GPM.

SELF-PRIMING (AFTER INITIAL PRIME)[®]



DIMENSIONS

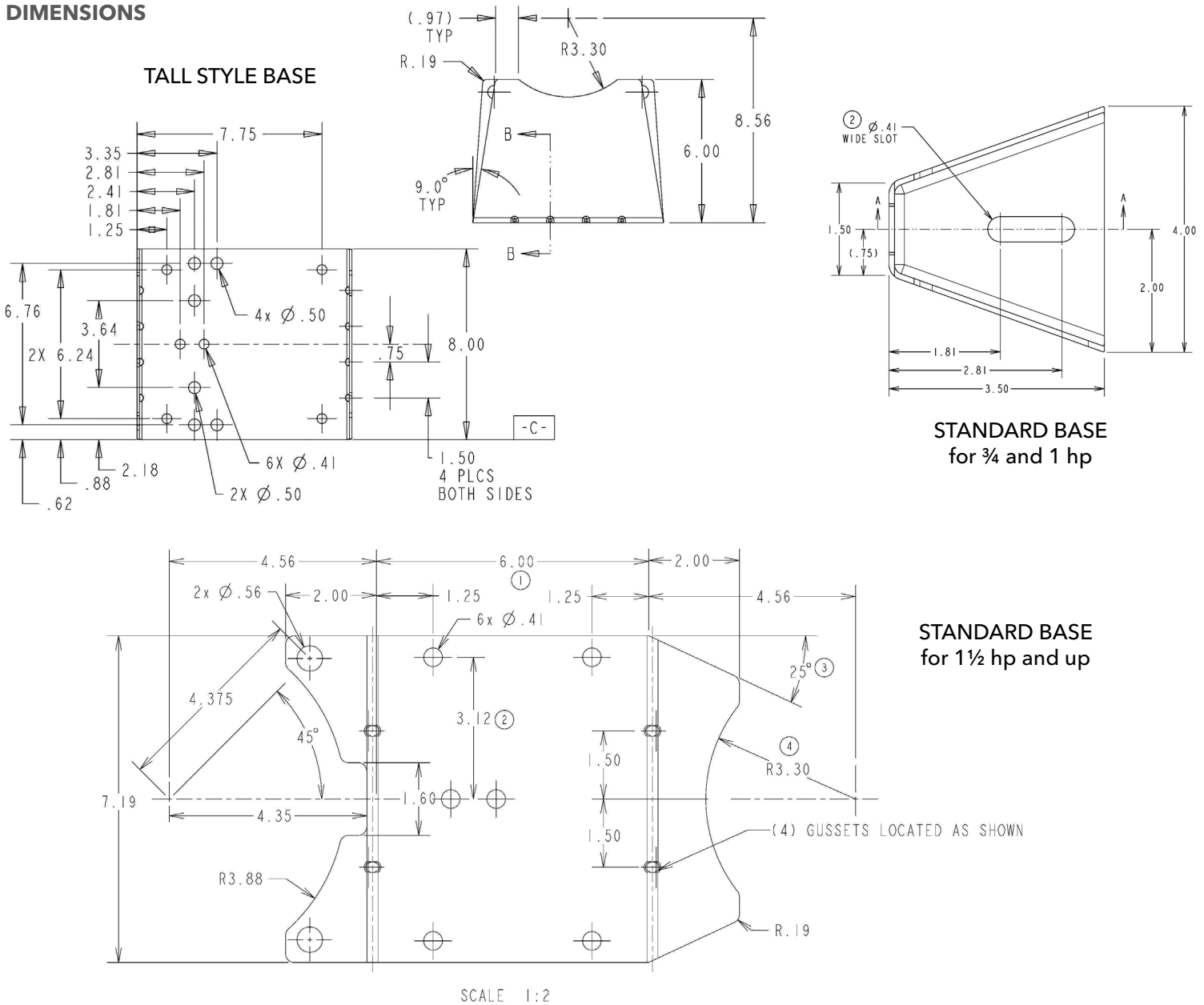


BASE DIMENSIONS AND WEIGHTS

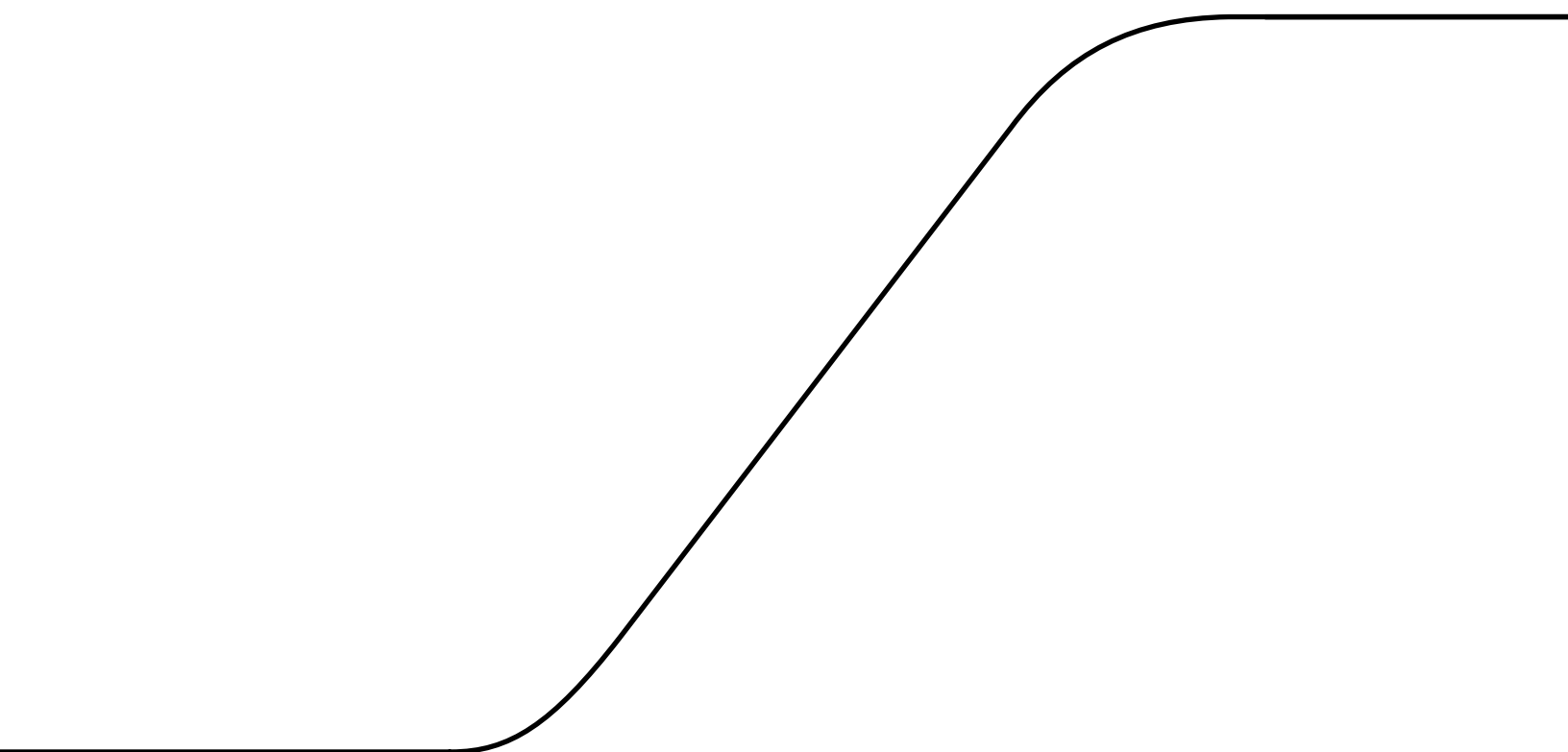
Model	GT07	GT10	GT15	GT20	GT30	GT073	GT103	GT153	GT203	GT303
HP	$\frac{3}{4}$	1	1½	2	3	$\frac{3}{4}$	1	1½	2	3
Length "L"	19 $\frac{3}{16}$	19 $\frac{7}{8}$	21 $\frac{3}{16}$	20 $\frac{3}{32}$	21 $\frac{11}{32}$	19	19 $\frac{3}{4}$	20 $\frac{1}{16}$	20 $\frac{13}{16}$	21 $\frac{3}{16}$
Width	8 $\frac{1}{4}$									
Height	9 $\frac{1}{4}$ (13 $\frac{1}{4}$ with "S" Base)									
Weight (lbs.)	48	52	60	65	76	49	52	55	69	71
Phase	Single					Three				

(All dimensions are in inches and weights in lbs. Do not use for construction purposes.)

DIMENSIONS



Submersible pumps





G Slimline

STAINLESS STEEL SUBMERSIBLE PUMP FOR 4" AND LARGER WELLS
5, 7 & 10 GPM - UP TO 1½ HP - VFD COMPATIBLE



FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

Field Serviceable: Units are field serviceable with common tools and readily available repair parts.

Sand Handling Design: The face clearance, floating impeller stack has proven itself for over 40 years as a superior sand handling, durable pump design.

FDA Compliant Non-Metallic Parts: Impellers, diffusers and bearing spiders are constructed of glass-filled engineered composites. They are corrosion resistant and non-toxic.

Discharge Head: Stainless steel, corrosion resistant is strong and durable. Safety loop provided for installer convenience.

Check Valve: Integral spring loaded check valve

Motor Adapter: Stainless steel, corrosion resistant provides a strong, accurate alignment of liquid end to motor. The plastic wrap around strainer keeps debris out of pump.

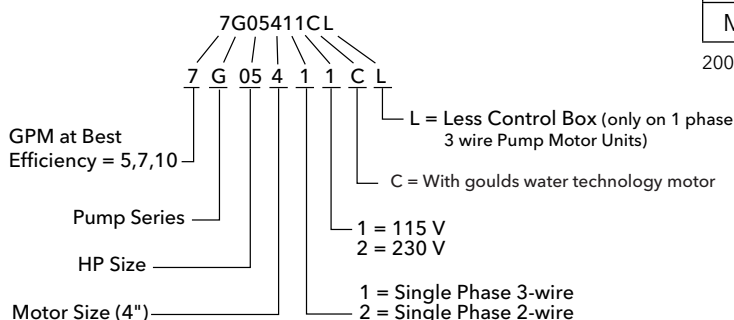
Stainless Steel Casing: Polished stainless steel is strong and corrosion resistant.

Hex Shaft Design: Six sided shafts for positive impeller drive.

5G, 7G & 10G PUMPS

Series	Model	Required HP	Stages	Water End	
				Length (in)	Wt. (lbs)
5G	5G05	.5	15	15.1	9
	5G07	.75	20	18.2	11
	5G10	1	25	22.5	14
	5G15	1.5	34	28.2	17
7G	7G05	.5	11	12.5	7
	7G07	.75	15	15.1	9
	7G10	1	20	18.2	11
	7G15	1.5	25	22.5	14
10G	10G05	.5	12	14.7	8
	10G07	.75	15	16.8	9
	10G10	1	20	20.3	10
	10G15	1.5	27	26.3	16

NUMBER CODE



GOULDS WATER TECHNOLOGY 4" SINGLE-PHASE MOTORS

Order No.	Type	HP	Volts	Length (in)	Weight (lb)
M05421	2-wire PSC	.5	115	11.0	19.2
M05422		.5	230	11.0	19.2
M07422		.75	230	12.4	22.7
M10422		1	230	13.3	24.5
M15422	3-wire	1.5	230	14.9	28.9
M05411		.5	115	10.0	18.9
M05412		.5	230	9.7	18.1
M07412		.75	230	10.8	21.4
M10412		1	230	11.7	23.1
M15412		1.5	230	13.6	27.4

GOULDS WATER TECHNOLOGY 4" THREE-PHASE MOTORS

Order No.	HP	Volts	Length (in)	Weight (lb)
M05432	.5	230	10.0	19.0
M07432	.75		10.8	22.0
M10432	1		11.7	23.1
M15432	1.5			

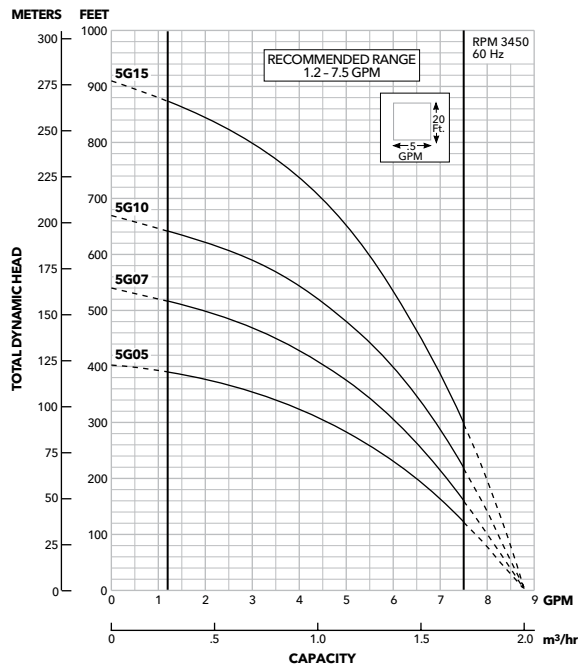
200, 460, and 575V options also available for 3 phase motors.

SPECIFICATIONS

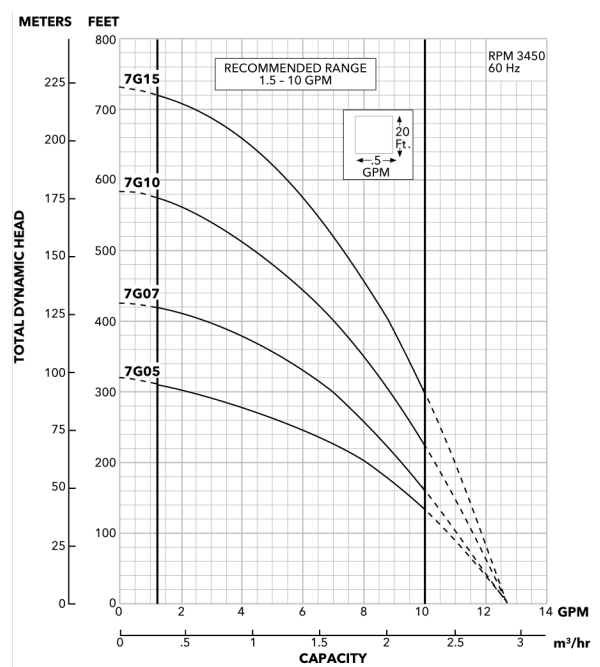
Model	Flow Range GPM	Horsepower Range	Best Efficiency GPM	Discharge Connection	Minimum Well Size	Rotation ^①	Effective Diameter
5G	1.2 - 7.5	½-1½	5	1.25"	4"	CCW	3.75"
7G	1.5 - 10		7				
10G	2 - 12		10				

① Rotation is counterclockwise when observed from pump discharge end.

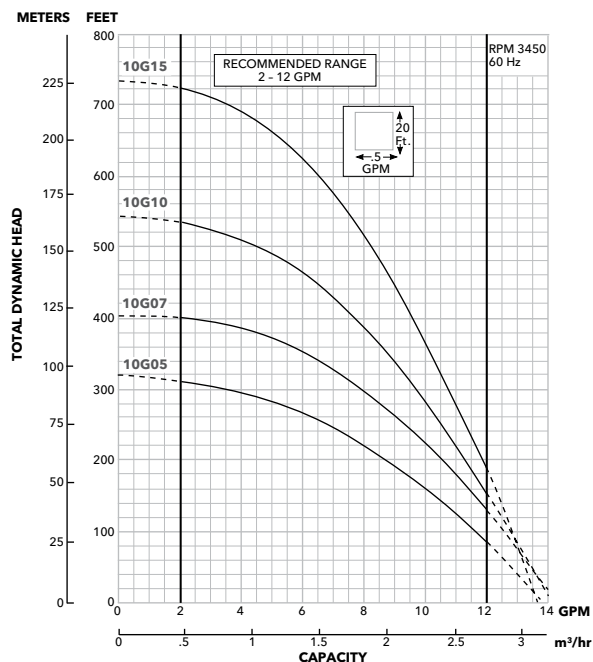
MODEL 5G



MODEL 7G

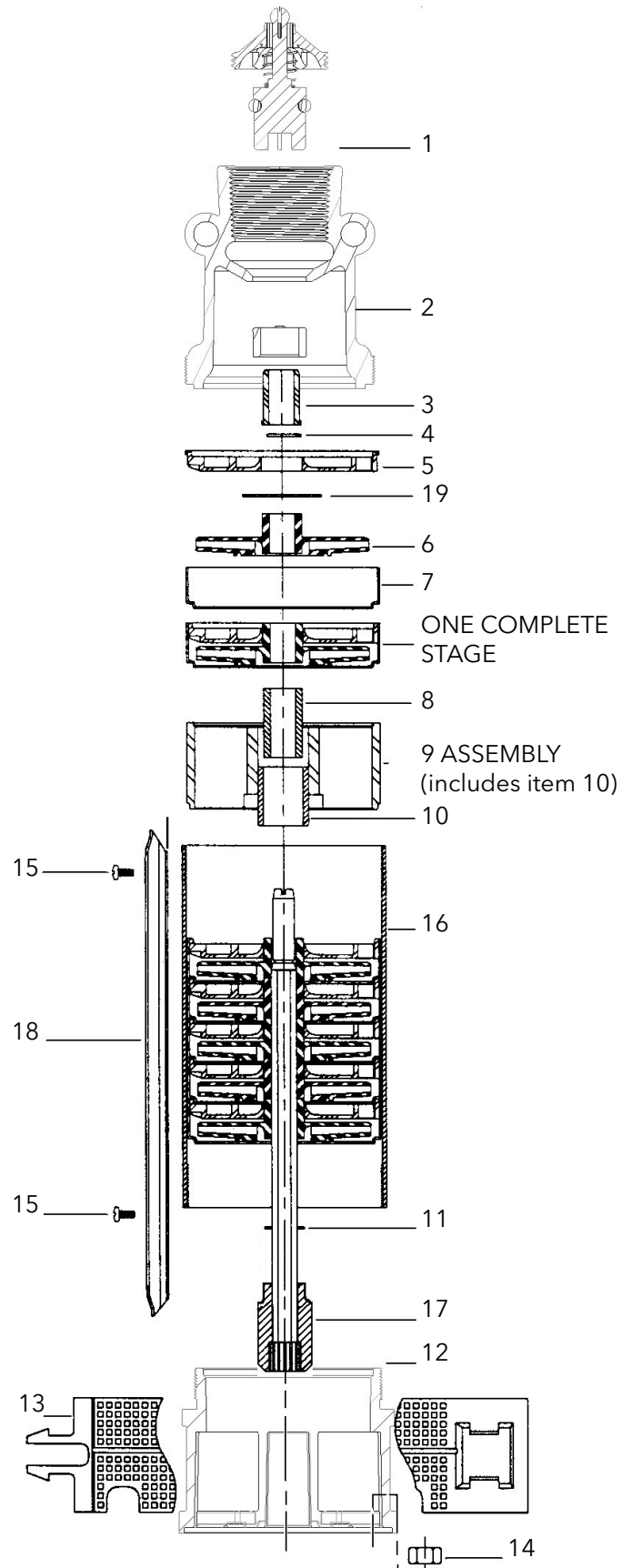


MODEL 10G



Item No.	Part Description	Current Model			
	Number of Stages	HP	5G	7G	10G
		½	15	11	12
		¾	20	15	
		1	25▲	20	20
		1½	34▲	25▲	27▲
1	Check valve		7K2227		
2	Discharge head		7K60		
3	Bearing		7K2739		
4	Retaining ring		7K817		
5	Diffuser		7K9	7K12	7K3462
6	Impeller		7K8	7K11	7K3461
7	Bowl		7K7		
8	Center sleeve▲		7K209		
9	Intermediate bearing spider assembly▲		7K13		
10	Intermediate bearing▲		7K156		
11	Shim		7K155		
12	Motor adapter		7K3450		
13	Inlet strainer		7K3356		
14	Motor nut		13K114		
15	Cable guard screw		13K91		
16	Casing	½	7K484	7K483	7K3474
		¾	7K485	7K484	7K3475
		1	7K861	7K485	7K3476
		1½	7K1178	7K861	7K3477
17	Shaft and coupling	½	7K1380	7K1375	7K3257
		¾	7K3466	7K1380	7K3208
		1	7K1388	7K3466	7K1458
		1½	7K3467	7K1388	7K3978
18	Cable guard	½	7K1092	7K1091	7K3470
		¾	7K1093	7K1092	7K3471
		1	7K1094	7K1093	7K3472
		1½	7K2147	7K1094	7K3473
19	Upthrust washer		7K15		

Note: ▲ Indicates models with intermediate bearing spider.



MODEL 5G

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																								
			40	80	120	160	200	240	280	320	360	400	440	480	520	560	600	640	680	720	760	800	840	880			
5G05	½	0	10.1	8.0	7.4	7.1	6.5	5.8	4.9	4.1	2.9	0.3															
		20	7.8	7.4	7.0	6.4	5.6	4.8	4.0	2.6																	
		30	7.5	7.2	6.7	6.0	5.1	4.3	3.3	1.2																	
		40	7.3	7.0	6.3	5.5	4.7	3.8	2.3																		
		50	7.1	6.6	5.9	5.0	4.2	3.1	0.7																		
		60	6.9	6.2	5.4	4.6	3.6	2.0																			
Shut-off PSI			156	139	121	104	87	69	52	35	17																
5G07	¾	0	9.2	8.3	7.8	7.5	7.1	6.8	6.3	5.8	5.3	4.6	3.8	2.7	1.1												
		20	8.2	7.7	7.4	7.1	6.7	6.2	5.7	5.2	4.5	3.7	2.5	0.7													
		30	7.9	7.5	7.2	6.9	6.4	6.0	5.4	4.8	4.0	3.0	1.6														
		40	7.7	7.4	7.0	6.6	6.2	5.6	5.1	4.4	3.5	2.2	0.4														
		50	7.5	7.2	6.8	6.4	5.9	5.3	4.7	3.9	2.8	1.3															
		60	7.3	7.0	6.6	6.1	5.6	5.0	4.3	3.3	2.0	0.1															
Shut-off PSI			216	199	182	165	147	130	113	95	78	61	43	26	9												
5G10	1	0	8.6	8.4	8.1	7.9	7.6	7.3	7.0	6.7	6.4	6.0	5.6	5.0	4.4	3.6	2.6	1.3									
		20	8.3	8.1	7.8	7.6	7.3	7.0	6.7	6.3	5.9	5.5	5.0	4.3	3.5	2.4	1.0										
		30	8.2	7.9	7.7	7.4	7.1	6.8	6.5	6.1	5.7	5.2	4.6	3.9	2.9	1.7											
		40	8.0	7.8	7.5	7.2	6.9	6.6	6.3	5.9	5.4	4.9	4.2	3.3	2.2	0.8											
		50	7.9	7.6	7.4	7.1	6.7	6.4	6.0	5.6	5.1	4.5	3.7	2.7	1.4												
		60	7.8	7.5	7.2	6.9	6.6	6.2	5.8	5.3	4.8	4.1	3.2	2.0	0.5												
Shut-off PSI			273	255	238	221	203	186	169	152	134	117	100	82	65	48	30	13									
5G15	1½	0	8.6	8.5	8.3	8.2	8.0	7.8	7.6	7.4	7.1	6.9	6.6	6.3	6.1	5.8	5.5	5.1	4.7	4.2	3.7	3.0	2.1	0.9			
		20	8.5	8.3	8.2	8.0	7.8	7.6	7.3	7.1	6.8	6.6	6.3	6.0	5.7	5.4	5.1	4.6	4.2	3.6	2.9	1.9	0.7				
		30	8.4	8.2	8.1	7.9	7.6	7.4	7.2	6.9	6.7	6.4	6.1	5.9	5.5	5.2	4.8	4.4	3.8	3.2	2.3	1.3					
		40	8.3	8.1	7.9	7.7	7.5	7.3	7.0	6.8	6.5	6.3	6.0	5.7	5.4	5.0	4.6	4.1	3.5	2.7	1.8	0.5					
		50	8.2	8.0	7.8	7.6	7.4	7.2	6.9	6.6	6.4	6.1	5.8	5.5	5.1	4.8	4.3	3.8	3.1	2.2	1.1						
		60	8.1	7.9	7.7	7.5	7.3	7.0	6.8	6.5	6.2	5.9	5.6	5.3	4.9	4.5	4.0	3.4	2.6	1.6	0.3						
Shut-off PSI			377	359	342	325	307	290	273	255	238	221	203	186	169	152	134	117	100	82	65	48	30	13			

MODEL 7G

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																							
			30	60	90	120	150	180	210	240	270	300	330	360	390	420	450	480	510	540	570	600	630	660	690	720
7G05	½	0	12.1	11.6	11.0	10.3	9.5	8.6	7.6	6.3	4.6	2.2														
		20	11.3	10.6	9.9	9.0	8.1	7.0	5.5	3.4	0.6															
		30	10.8	10.0	9.2	8.3	7.3	5.8	3.9	1.3																
		40	10.2	9.4	8.6	7.5	6.2	4.4	2.0																	
		50	9.6	8.8	7.8	6.5	4.9	2.6																		
		60	9.0	8.0	6.9	5.3	3.2	0.3																		
Shut-off PSI			126	113	100	87	74	61	48	35	22	9														
7G07	¾	0	12.4	11.5	11.0	10.7	10.3	9.7	9.1	8.3	7.6	6.8	6.0	4.9	3.3	0.7										
		20	11.2	10.9	10.5	10.0	9.4	8.7	7.9	7.1	6.4	5.4	4.2	2.1												
		30	10.9	10.6	10.1	9.5	8.8	8.1	7.3	6.5	5.7	4.5	2.7													
		40	10.7	10.2	9.7	9.0	8.3	7.5	6.7	5.9	4.8	3.2	0.5													
		50	10.4	9.8	9.2	8.4	7.7	6.9	6.1	5.1	3.6	1.2														
		60	10.0	9.3	8.6	7.8	7.1	6.3	5.4	4.0	1.9															
Shut-off PSI			171	158	145	132	119	106	93	80	67	54	41	28	15	2										
7G10	1	0	12.4	12.0	11.6	11.3	10.9	10.5	10.1	9.7	9.3	8.8	8.3	7.8	7.2	6.5	5.8	4.9	4.0	2.9	1.6	0.1				
		20	11.8	11.4	11.1	10.7	10.3	9.9	9.5	9.1	8.6	8.1	7.5	6.9	6.1	5.3	4.4	3.4	2.2	0.8						
		30	11.5	11.1	10.8	10.4	10.0	9.6	9.2	8.7	8.2	7.6	7.0	6.3	5.5	4.6	3.6	2.5	1.1							
		40	11.2	10.9	10.5	10.1	9.7	9.3	8.8	8.3	7.8	7.2	6.5	5.7	4.9	3.9	2.8	1.5	0.0							
		50	10.9	10.6	10.2	9.8	9.4	8.9	8.4	7.9	7.3	6.6	5.9	5.1	4.1	3.0	1.8	0.3								
		60	10.7	10.3	9.9	9.5	9.0	8.5	8.0	7.4	6.8	6.1	5.3	4.4	3.3	2.1	0.7									
Shut-off PSI			238	225	212	199	186	173	160	147	134	121	108	95	82	69	56	43	30	17	4					
7G15	1½	0	13.3	12.4	11.8	11.5	11.2	11.0	10.8	10.6	10.3	10.0	9.6	9.2	8.8	8.4	8.0	7.6	7.2	6.7	6.3	5.7	5.0	4.0	2.7	0.9
		20	12.1	11.6	11.3	11.1	10.9	10.7	10.4	10.1	9.8	9.4	9.0	8.6	8.2	7.8	7.4	6.9	6.5	6.0	5.3	4.5	3.3	1.8		
		30	11.7	11.4	11.2	11.0	10.7	10.5	10.2	9.9	9.5	9.1	8.7	8.3	7.9	7.5	7.0	6.6	6.1	5.5	4.7	3.6	2.2	0.2		
		40	11.5	11.2	11.0	10.8	10.6	10.3	10.0	9.6	9.2	8.8	8.4	8.0	7.6	7.1	6.7	6.2	5.6	4.9	3.9	2.5	0.7			
		50	11.3	11.0	10.8	10.6	10.3	10.0	9.7	9.3	8.9	8.5	8.1	7.7	7.2	6.8	6.3	5.8	5.1	4.2	2.9	1.2				
		60	11.1	10.9	10.7	10.4	10.1	9.8	9.4	9.0	8.6	8.2	7.7	7.3	6.9	6.5	5.9	5.3	4.4	3.2	1.6					
Shut-off PSI			303	290	277	264	251	238	225	212	199	186	173	160	147	134	121	108	95	82	69	56	43	30	17	4

[illegible]



TECHNICAL BROCHURE

B5-25GS R9

FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

Field Serviceable: Units have left hand threads and are field serviceable with common tools and readily available repair parts.

Sand Handling Design: Our face clearance, floating impeller stack has proven itself for over 50 years as a superior sand handling, durable pump design.

FDA Compliant Non-Metallic Parts: Impellers, diffusers and bearing spiders are constructed of glass filled engineered composites. They are corrosion resistant and non-toxic.

Discharge Head/Check Valve: Cast 303 stainless steel for strength and durability. Two cast-in safety line loops for installer convenience. The built-in check valve is constructed of stainless steel and FDA compliant BUNA rubber for abrasion resistance and quiet operation.

Motor Adapter: Cast 303 stainless steel for rigid, accurate alignment of pump and motor. Easy access to motor mounting nuts using standard open end wrench.

Stainless Steel Casing: Polished stainless steel is strong and corrosion resistant.

Hex Shaft Design: Six sided shafts for positive impeller drive.

Engineered Polymer Bearings: The proprietary, engineered polymer bearing material is strong and resistant to abrasion and wear. The enclosed upper bearing is mounted in a durable Noryl® bearing spider for excellent abrasion resistance.

5GS, 7GS, 10GS, 13GS, 18GS & 25GS

5-25 GPM, ½ - 5 HP, 60 HZ, SUBMERSIBLE PUMPS



WATER END DATA

Series	Model	Required HP	Stages	Length (in)	Weight (lbs)
5GS	5GS05R	.5	9	12.9	8
	5GS05	.5	12	15.0	9
	5GS07	.75	15	17.0	11
	5GS10	1	20	21.7	13
	5GS15	1.5	26	25.8	15
	5GS20	2	33	31.6	19
7GS	7GS05R	.5	7	11.7	6
	7GS05	.5	10	13.8	7
	7GS07	.75	13	16.0	8
	7GS10	1	17	18.8	9
	7GS15	1.5	22	23.6	12
	7GS20	2	27	27.2	13
10GS	10GS05R*	0.5	8	12.2	7
	10GS05*	0.5	10	13.6	8
	10GS07*	0.75	14	16.4	9
	10GS10*	1	16	17.7	11
	10GS15	1.5	17	18.4	12
	10GS20	2	20	21.7	13
	10GS30	3	27	27.5	18
	10GS50R	5	35	33	21
	10GS50	5	42	40.2	24
13GS	13GS05	.5	5	10.1	6
	13GS07	.75	7	11.5	7
	13GS10	1	10	13.6	8
	13GS15	1.5	12	15.0	9
	13GS20	2	17	18.4	12
	13GS30	3	21	22.3	15
18GS	18GS07	.75	6	11.8	7
	18GS10	1	8	13.5	8
	18GS15	1.5	11	16.1	10
	18GS20	2	14	18.6	11
	18GS30	3	19	24.1	15
	18GS50R	5	24	28.3	17
25GS	25GS10	1	7	13.4	8
	25GS15	1.5	9	15.3	9
	25GS20	2	11	17.2	10
	25GS30	3	15	20.9	14
	25GS50R	5	22	28.7	17
	25GS50	5	26	33.4	21

*New High Head Hydraulic Design for models manufactured starting 8/2017

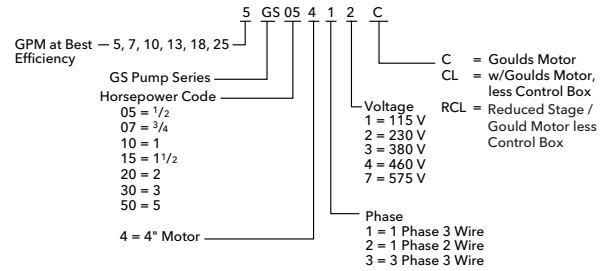
SPECIFICATIONS

Model	Flow Range GPM	Horsepower Range	Best Efficiency GPM	Discharge Connection	Minimum Well Size	Rotation ^①
5GS	1.2 - 7.5	½ - 2	5	1¼	4"	CCW
7GS	1.5 - 10	½ - 3	7	1¼	4"	CCW
10GS	3 - 16	½ - 5	10	1¼	4"	CCW
13GS	4 - 20	½ - 3	13	1¼	4"	CCW
18GS	6 - 28	¾ - 5	18	1¼	4"	CCW
25GS	8 - 33	1 - 5	25	1¼	4"	CCW

① Rotation is counterclockwise when observed from pump discharge end.

NOMENCLATURE See price book for complete order numbers.

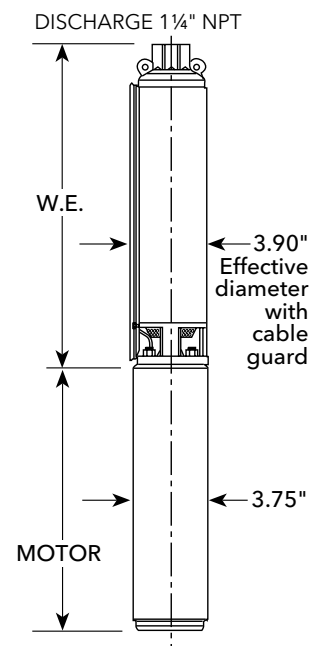
NOMENCLATURE See price book for complete order numbers.



"GS" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	AISI 303 SS
Check Valve Poppet	AISI 304 SS
Check Valve Seal	BUNA, FDA compliant
Check Valve Seat	AISI 304 SS
Check Valve Retaining Ring	AISI 302 SS
Bearing Spider - Upper	Noryl® GFN2
Bearing	Proprietary Engineered Polymer
Klipring	AISI 301 SS
Diffuser	Lexan®
Impeller	Noryl®
Bowl	AISI 304 SS
Intermediate Sleeve *	AISI 304 SS, Powder Metal
Intermediate Shaft Coupling *	AISI 304 SS, Powder Metal
Intermediate Bearing Spider *	Glass Filled Engineered Composite
Intermediate Bearing Spider *	AISI 303 SS
Shim	AISI 304 SS
Screws - Cable Guard	AISI 304 SS
Motor Adapter	AISI 303 SS
Casing	AISI 304 SS
Shaft	AISI 304 SS
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS
Suction Screen	AISI 304 SS

*See repair parts for where used.



GOULDS WATER TECHNOLOGY 4" SINGLE-PHASE MOTORS

Order No.	Type	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M05421	2-wire PSC	½	115	10.5 (267)	18 (8.2)
M05422		½		10.5 (267)	18 (8.2)
M07422		¾	230	11.9 (302)	22 (9.7)
M10422		1		12.5 (318)	24 (10.5)
M15422		1.5		14.2 (361)	28 (12.4)
M05411	3-wire	½	115	9.6 (244)	17.9 (8.1)
M05412		½		9.2 (234)	16.7 (7.6)
M07412		¾		10.3 (262)	19.8 (9.0)
M10412		1	230	11.2 (284)	22.0 (10.0)
M15412		1.5		12.8 (325)	26.0 (11.8)
M20412		2		15.1 (383)	31 (14.1)
M30412		3		18.3 (466)	40 (18.1)
M50412		5		27.7 (703)	70 (31.8)

NEMA MOTOR

- Corrosion resistant stainless steel construction.
- Built-in surge arrestor is provided on single phase motors through 5 HP.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Replaceable motor lead assembly.
- NEMA mounting dimensions.
- Control box is required with 3 wire single phase units.
- Three phase units require a magnetic starter with three leg Class 10 overload protection.

GOULDS WATER TECHNOLOGY 4" THREE-PHASE MOTORS

Order No. by Voltage			HP	Length in. (mm)	Weight lb. (kg.)
200V	230V	460V			
M05430	M05432	M05434	½	10.0 (254)	19 (8.7)
M07430	M07432	M07434	¾	10.8 (275)	22 (9.7)
M10430	M10432	M10434	1	11.7 (297)	23 (10.4)
M15430	M15432	M15434	1.5	11.7 (297)	23 (10.4)
M20430	M20432	M20434	2	13.8 (351)	28 (12.7)
M30430	M30432	M30434	3	15.3 (389)	32 (14.5)
M50430	M50432	M50434	5	21.7 (550)	55 (24.9)
M75430	M75432	M75434	7.5	27.7 (703)	70 (1.8)

Order No.	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M15437	1.5	575	11.7 (297)	23 (10.4)
M20437	2		15.3 (389)	32 (14.5)
M30437	3		15.3 (389)	32 (14.5)
M50437	5		27.7 (703)	70 (31.8)
M75437	7.5		27.7 (703)	70 (31.8)

AGENCY LISTINGS



Pump/Water End and Goulds water technology Motor - tested to UL778 and CAN 22.2 by CSA International (Canadian Standards Association)



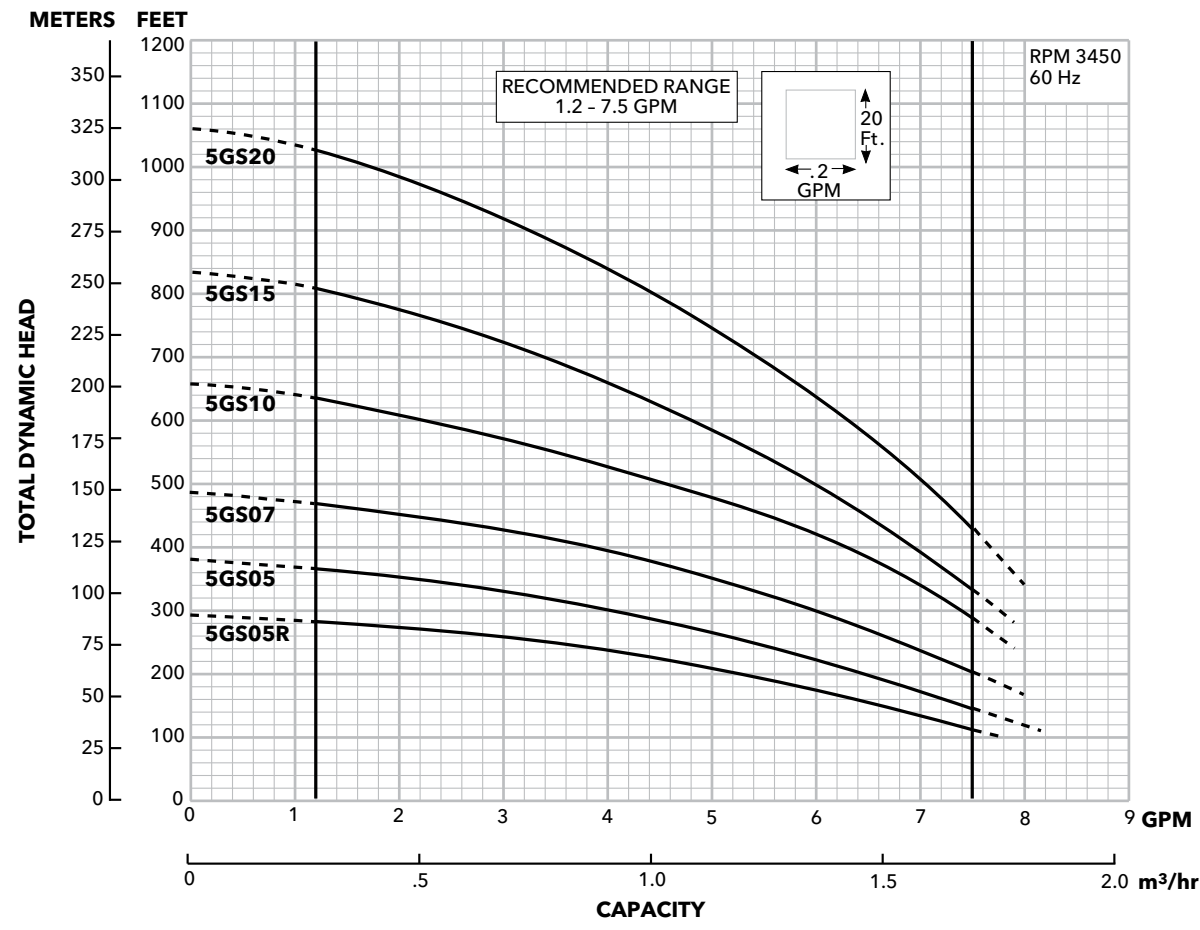
Goulds water technology Motor - Certified to NSF/ANSI 61, Annex G, Drinking Water System Components 4P49



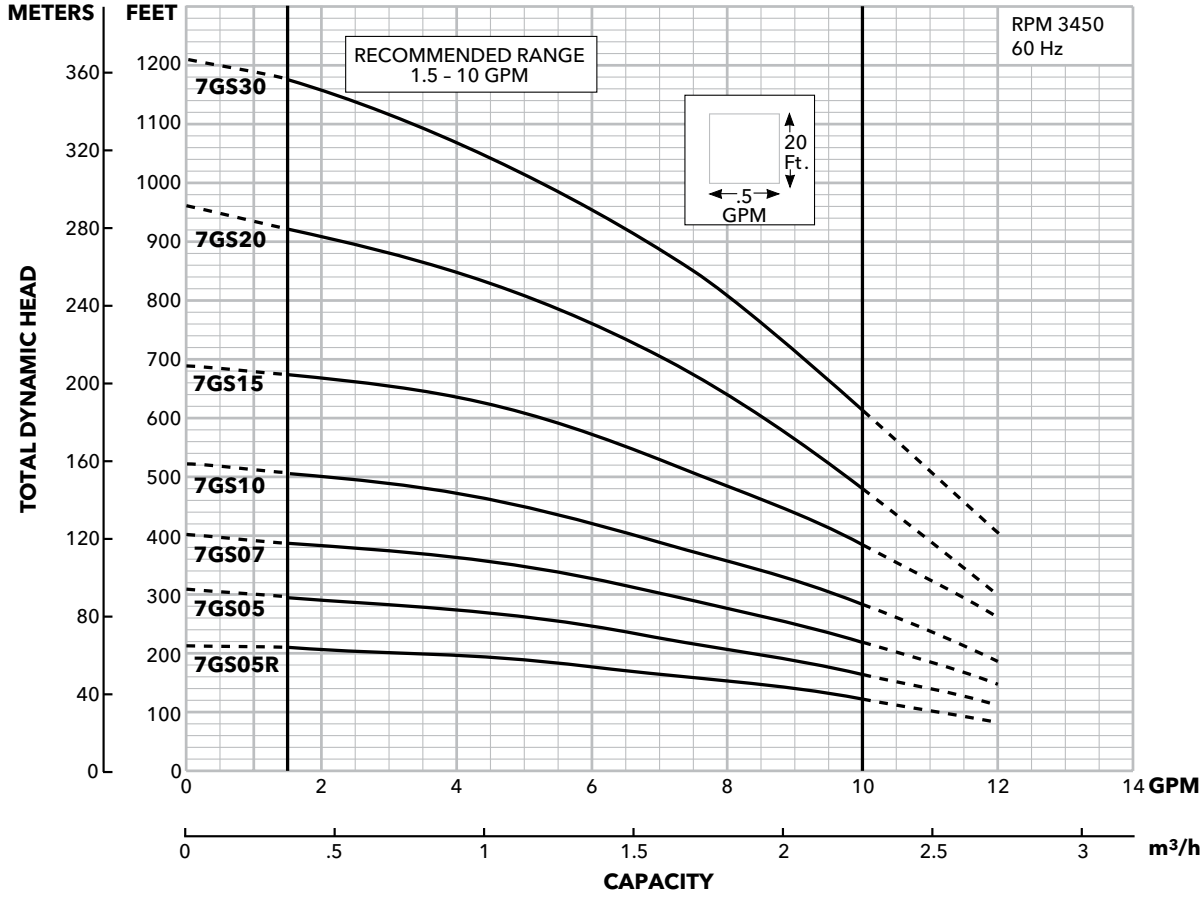
NSF/ANSI 372 - Drinking Water System Components - Lead Content

CLASS 6853 01 - Low Lead Content Certification Program - Plumbing Products

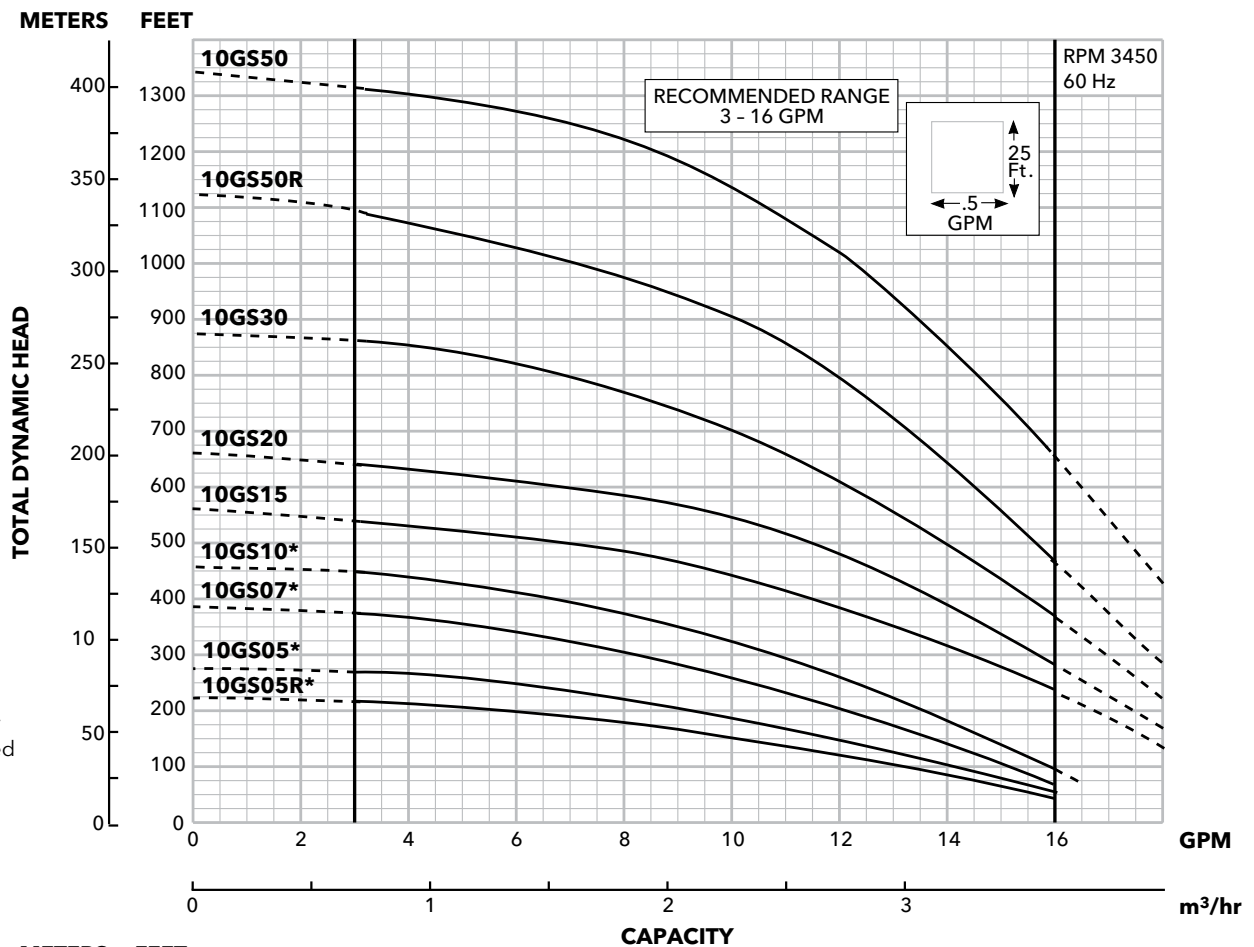
Model 5GS



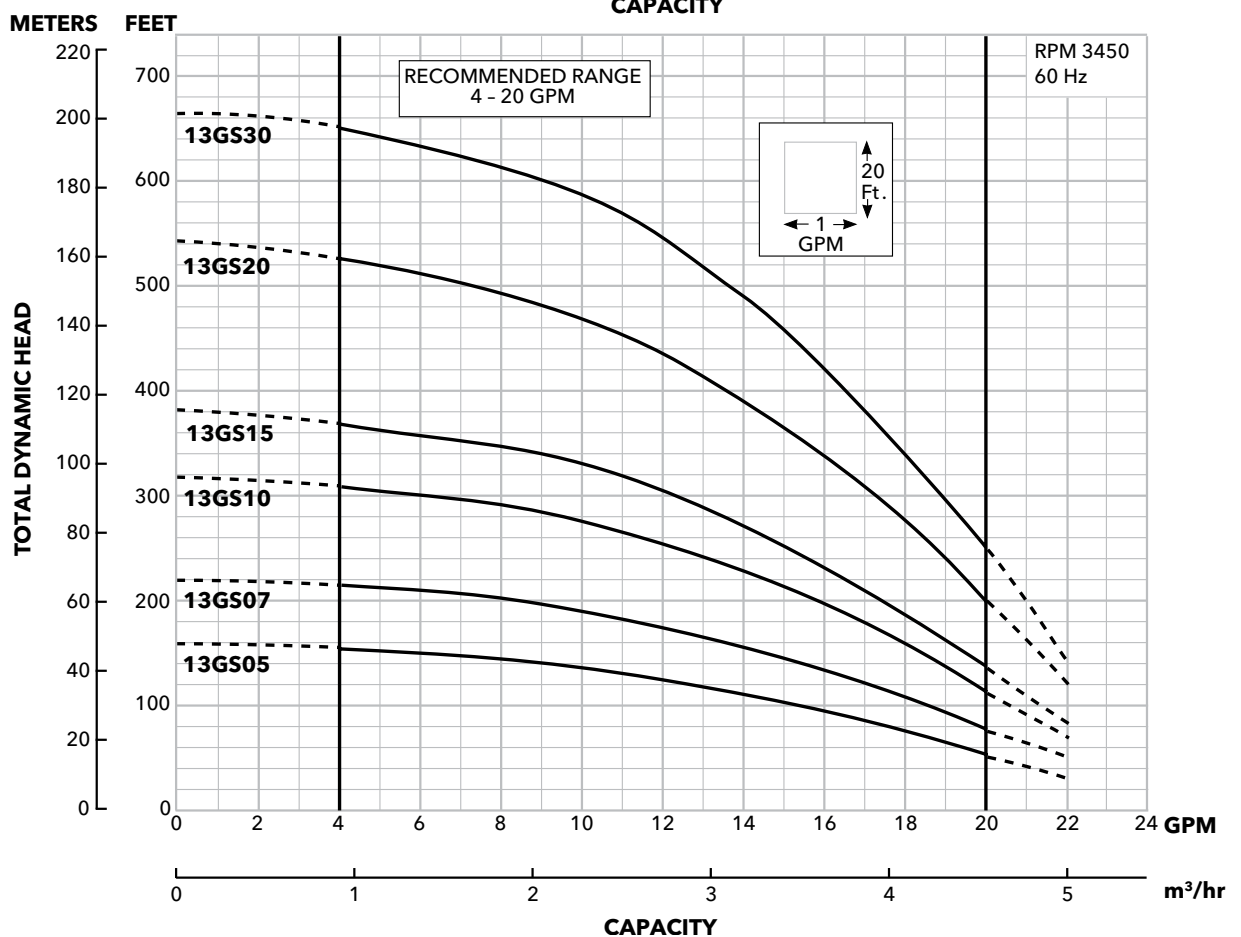
Model 7GS



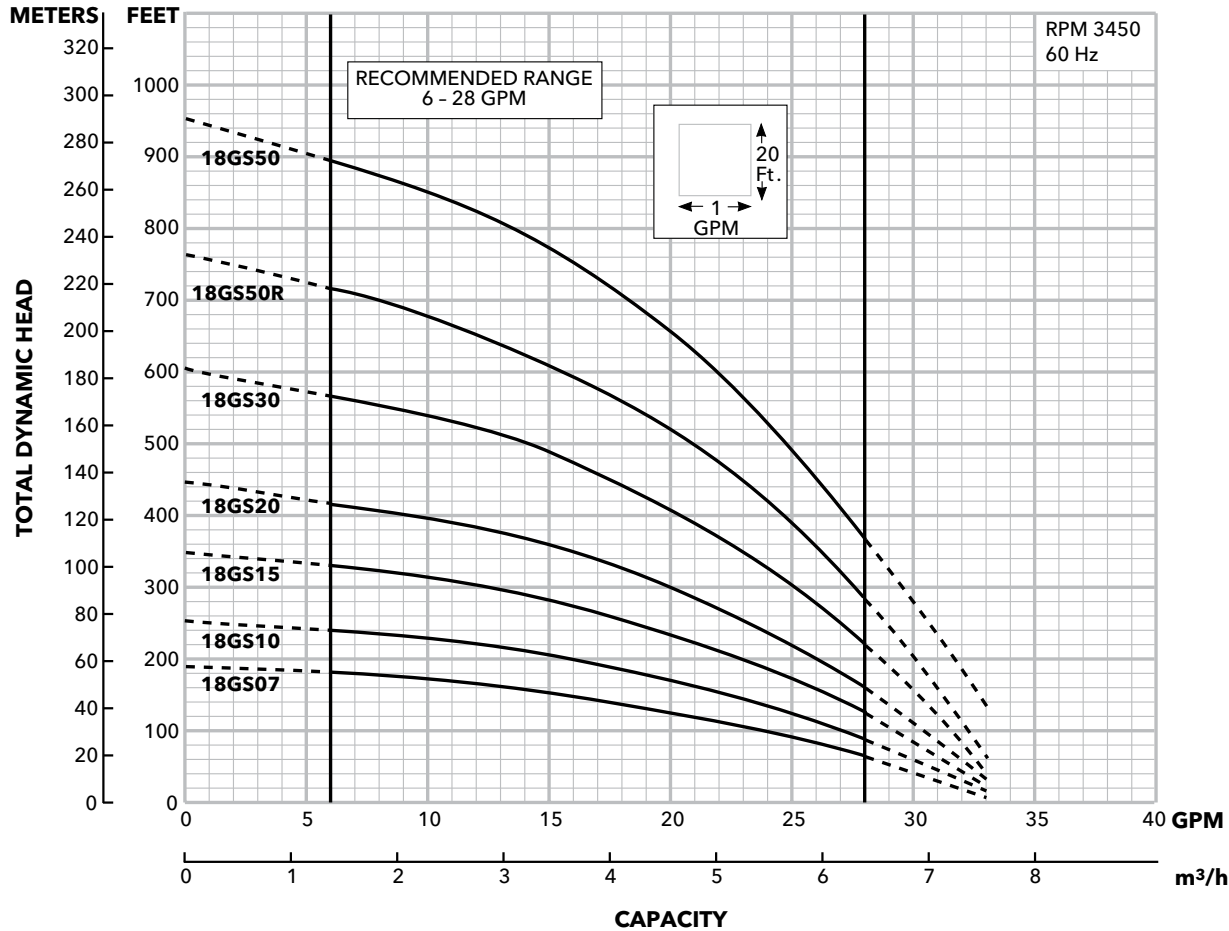
Model 10GS



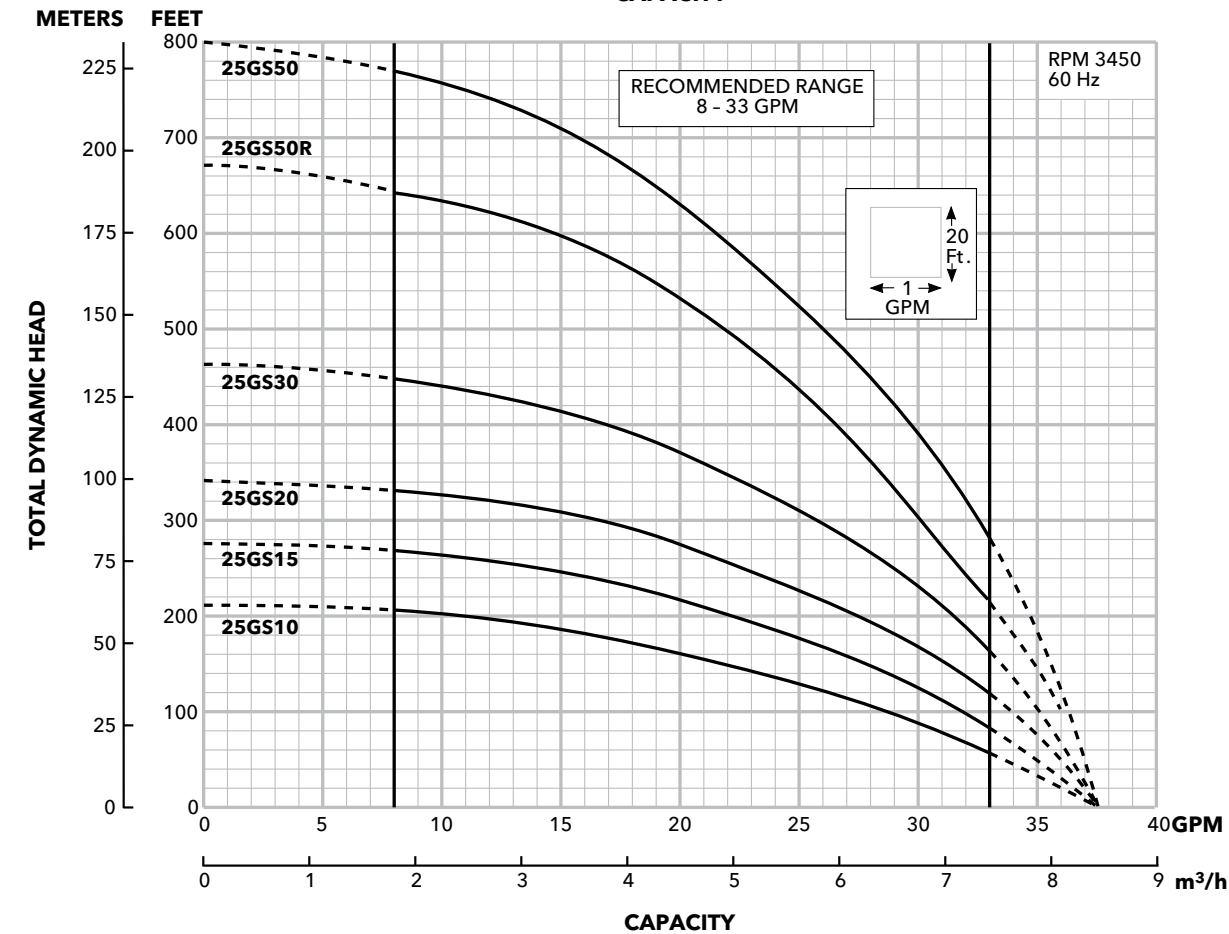
Model 13GS



Model 18GS



Model 25GS



MODEL 5GS

SELECTION CHART

Horsepower Range ½ - 2, Recommended Range 1.2 - 7.5 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																		
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020		
5GS05R	½	0						7.4	6.9	6.3	5.8	5.3	4.7	4.0	3.0	1.4																					
		20				7.3	6.7	6.2	5.6	5.1	4.5	3.8	2.6																								
		30			7.2	6.6	6.1	5.6	5.0	4.4	3.6	2.3																									
		40		7.1	6.6	6.0	5.5	4.9	4.3	3.4	2.1																										
		50	7.0	6.5	5.9	5.4	4.9	4.2	3.3	1.8																											
		60	6.4	5.8	5.3	4.8	4.1	3.1	1.6																												
Shut-off PSI			118	109	101	92	83	75	66	57	49	40	31	23	14	5																					
5GS05	½	0							7.7	7.3	6.9	6.4	6.0	5.6	5.1	4.7	4.1	2.6																			
		20					7.5	7.1	6.7	6.3	5.9	5.4	5.0	4.5	3.9	3.2	2.3																				
		30				7.5	7.1	6.7	6.2	5.8	5.4	4.9	4.4	3.8	3.1	2.1																					
		40			7.4	7.0	6.6	6.2	5.7	5.3	4.9	4.3	3.7	2.9	1.9																						
		50	7.7	7.4	6.9	6.5	6.1	5.7	5.2	4.8	4.2	3.6	2.8	1.8																							
		60	7.3	6.9	6.5	6.0	5.6	5.2	4.7	4.2	3.5	2.6	1.6																								
Shut-off PSI			156	147	138	130	121	112	104	95	86	78	69	60	52	43	34	17																			
5GS07	¾	0										7.6	7.3	7.0	6.6	6.3	5.9	5.2	4.4	3.3	1.6																
		20								7.5	7.2	6.9	6.5	6.2	5.8	5.5	5.1	4.2	3.1	1.3																	
		30							7.5	7.2	6.8	6.5	6.1	5.8	5.4	5.0	4.6	3.6	2.1																		
		40					7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.6	4.1	2.8																				
		50					7.4	7.1	6.7	6.4	6.0	5.7	5.3	4.9	4.5	4.0	3.4	1.8																			
		60			7.6	7.3	7.0	6.7	6.3	6.0	5.6	5.3	4.9	4.4	3.9	3.3	2.6																				
Shut-off PSI					184	175	167	158	149	141	132	123	115	106	97	89	80	63	45	28	11																
5GS10	1	0														7.5	7.0	6.5	5.9	5.3	4.6	3.8	2.8	1.6													
		20												7.6	7.4	7.2	7.0	6.4	5.9	5.2	4.5	3.7	2.6														
		30											7.6	7.4	7.2	6.9	6.7	6.1	5.5	4.8	4.0	3.1	1.9														
		40										7.6	7.4	7.1	6.9	6.6	6.3	5.8	5.1	4.4	3.5	2.5															
		50									7.5	7.3	7.1	6.8	6.6	6.3	6.0	5.4	4.7	3.9	2.9	1.7															
		60								7.5	7.3	7.1	6.8	6.5	6.3	6.0	5.7	5.0	4.3	3.4	2.3																
Shut-off PSI									214	206	197	188	180	171	162	154	136	119	102	84	67	50	32	15													
5GS15	1½	0															7.5	7.2	6.8	6.3	5.9	5.5	5.1	4.6	4.1	3.5	2.8	1.8									
		20													7.6	7.5	7.1	6.7	6.3	5.8	5.4	5.0	4.5	4.0	3.4	2.6	1.6										
		30												7.6	7.5	7.3	6.9	6.5	6.0	5.6	5.2	4.7	4.2	3.7	3.0	2.1											
		40												7.6	7.4	7.3	7.1	6.6	6.2	5.8	5.3	4.9	4.5	3.9	3.3	2.5	1.4										
		50											7.6	7.4	7.2	7.0	6.8	6.4	6.0	5.5	5.1	4.7	4.2	3.6	2.9	1.9											
		60										7.6	7.4	7.2	7.0	6.8	6.6	6.1	5.7	5.3	4.8	4.4	3.8	3.2	2.4												
Shut-off PSI											274	265	257	248	239	231	213	196	179	162	144	127	110	92	75	58	40	23									
5GS20	2	0																		7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.7	4.3	3.9	3.3	2.7					
		20																		7.4	7.1	6.7	6.4	6.0	5.7	5.3	5.0	4.6	4.2	3.8	3.3	2.6	1.9				
		30																		7.5	7.2	6.9	6.5	6.2	5.8	5.5	5.1	4.8	4.4	4.0	3.5	2.9	2.2				
		40																		7.3	7.0	6.7	6.3	6.0	5.6	5.3	4.9	4.6	4.2	3.7	3.2	2.5	1.7				
		50																			7.2	6.8	6.5	6.1	5.8	5.4	5.1	4.7	4.3	3.9	3.4	2.8	2.1				
		60																			7.6	7.3	7.0	6.6	6.3	5.9	5.6	5.2	4.9	4.5	4.1	3.6	3.1	2.4	1.6		
Shut-off PSI																	328	311	293	276	259	242	224	207	190	172	155	138	120	103	86	68	51				

MODEL 7GS

SELECTION CHART

Horsepower Range ½ – 1, Recommended Range 1.5 – 10 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	540	580	620
7GS05R	½	0						10.2	8.9	7.5	5.9	3.6																		
		20				9.8	8.5	7.0	5.3	2.5																				
		30			9.6	8.3	6.8	4.9	1.9																					
		40		9.4	8.1	6.5	4.6	1.2																						
		50	9.2	7.8	6.3	4.2	0.5																							
		60	7.6	6.0	3.8																									
Shut-off PSI			85	77	68	59	51	42	33	25	16	7																		
7GS05	½	0								10.1	9.2	8.3	7.4	6.3	5.0	3.4														
		20						9.8	9.0	8.1	7.1	6.0	4.6	2.7																
		30					9.7	8.8	7.9	6.9	5.8	4.3	2.4																	
		40			10.4	9.6	8.7	7.8	6.7	5.6	4.1	2.0																		
		50		10.3	9.4	8.5	7.6	6.6	5.4	3.8	1.7																			
		60	10.2	9.3	8.4	7.5	6.4	5.1	3.5																					
Shut-off PSI			125	116	107	99	90	81	73	64	55	47	38	29	21	12														
7GS07	¾	0											10.0	9.3	8.6	7.9	7.1	6.2	5.2	4.0	2.4									
		20								10.4	9.8	9.1	8.4	7.7	6.9	6.0	4.9	3.5	1.8											
		30							10.3	9.7	9.0	8.3	7.5	6.7	5.8	4.7	3.3	1.5												
		40						10.2	9.5	8.9	8.2	7.4	6.6	5.6	4.5	3.1														
		50					10.1	9.4	8.8	8.1	7.3	6.5	5.5	4.3	2.8															
		60				10.0	9.3	8.7	7.9	7.2	6.3	5.3	4.1	2.5																
Shut-off PSI						140	131	122	114	105	96	88	79	70	62	53	44	36	27	18	10									
7GS10	1	0													10.1	9.6	9.0	8.5	7.9	7.3	6.7	6.0	5.3	4.4	3.4	2.1				
		20											10.4	9.9	9.4	8.9	8.3	7.7	7.1	6.5	5.8	5.0	4.1	3.0	1.6					
		30										10.3	9.9	9.3	8.8	8.2	7.6	7.0	6.4	5.7	4.9	4.0	2.8							
		40										10.3	9.8	9.2	8.7	8.1	7.5	6.9	6.3	5.6	4.8	3.8	2.6							
		50									10.2	9.7	9.2	8.6	8.0	7.4	6.8	6.2	5.4	4.6	3.7	2.4								
		60							10.1	9.6	9.1	8.5	7.9	7.3	6.7	6.0	5.3	4.5	3.5	2.2										
Shut-off PSI								166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10				

Horsepower Range 1½ – 3, Recommended Range 1.5 – 10 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020	1060	1100	1140	
7GS15	1½	0								10.2	9.3	8.5	7.6	6.8	5.9	4.7	2.6													
		20							10.1	9.2	8.3	7.5	6.7	5.8	4.5	2.1														
		30						10.4	9.6	8.7	7.8	7.0	6.2	5.1	3.3															
		40					10.3	9.9	9.1	8.2	7.4	6.6	5.6	4.2	1.6															
		50				10.3	9.9	9.4	8.6	7.7	6.9	6.0	4.9	2.9																
		60			10.2	9.8	9.4	8.9	8.1	7.2	6.4	5.4	3.9																	
Shut-off PSI					194	186	177	168	151	134	116	99	82	64	47	30	12													
7GS20	2	0											9.8	9.3	8.7	8.4	7.8	7.1	6.3	5.4	4.5	3.5	2.2							
		20										9.8	9.3	8.7	8.4	7.7	6.9	6.2	5.3	4.3	3.2	2.8								
		30									9.9	9.5	9.0	8.5	7.9	7.2	6.4	5.7	4.4	3.7										
		40								10.0	9.7	9.2	8.7	8.3	7.5	6.7	6.0	5.2	4.1	3.0										
		50								9.9	9.4	8.9	8.5	7.8	7.2	6.3	5.5	4.7	3.5											
		60							10.0	9.6	9.1	8.7	8.2	7.4	6.6	5.8	5.0	4.0												
Shut-off PSI								268	251	234	216	199	182	165	147	130	113	95	80	61	43	26								
7GS30	3	0													9.8	9.5	9.2	8.7	8.3	7.9	7.4	6.8	6.2	5.4	4.7	3.9	3.0	2.0		
		20												9.8	9.4	9.2	8.7	8.3	7.8	7.2	6.7	6.2	5.3	4.5	3.7	3.3	1.7			
		30											10.0	9.6	9.2	8.8	8.5	8.0	7.5	6.9	6.3	5.7	4.8	4.1	3.2	2.3				
		40										10.0	9.7	9.4	9.0	8.6	8.2	7.7	7.2	6.6	5.9	5.2	4.4	3.6	2.7	1.7				
		50										9.9	9.5	9.2	8.7	8.4	7.9	7.4	6.8	6.3	5.5	4.8	3.9	3.1	2.2					
		60										10.0	9.7	9.3	9.0	8.6	8.1	7.6	7.0	6.5	5.8	5.1	4.2	3.4	2.5	1.5				
Shut-off PSI											320	303	286	268	251	234	216	199	182	165	147	130	113	95	78	61	43	27		

MODEL 10GS

SELECTION CHART Horsepower Range ½ - 3, Recommended Range 3 - 16 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																							
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	
10GS05R*	½	0			15.3	14.2	13.1	12.0	10.9	9.8	8.4	6.1	2.1													
		20	15.0	13.9	12.8	11.6	10.6	9.4	7.8	5.1	0.3															
		30	13.7	12.6	11.5	10.4	9.2	7.5	4.6																	
		40	12.4	11.3	10.2	9.0	7.2	3.9																		
		50	11.1	10.1	8.8	6.8	3.2																			
		60	9.9	8.5	6.4	2.5																				
Shut-off PSI			89	80	72	63	54	46	37	28	20	11	2													
10GS05*	½	0			15.7	14.9	14.1	13.3	12.4	11.4	10.4	9.3	8.0	6.3	3.9											
		20	15.4	14.7	13.9	13.0	12.1	11.1	10.1	8.9	7.5	5.7	2.9													
		30	14.6	13.8	12.9	12.0	11.0	9.9	8.7	7.3	5.3	2.3														
		40	13.6	12.8	11.8	10.8	9.7	8.5	7.0	4.9	1.7															
		50	12.6	11.7	10.6	9.5	8.3	6.8	4.5	1.0																
		60	11.5	10.5	9.3	8.1	6.5	4.1	0.2																	
Shut-off PSI			113	105	96	87	79	70	61	53	44	35	27	18	9	1										
10GS07*	¾	0				15.7	15.2	14.6	14.0	13.4	12.7	12.0	11.4	10.8	10.1	9.5	8.7	7.7	6.4	4.6	2.1					
		20	16.0	15.5	15.0	14.5	13.8	13.2	12.5	11.8	11.2	10.6	9.9	9.2	8.4	7.3	5.9	3.9	1.2							
		30	15.5	15.0	14.4	13.7	13.1	12.4	11.7	11.1	10.5	9.8	9.1	8.3	7.1	5.6	3.5	0.7								
		40	14.9	14.3	13.6	12.9	12.3	11.6	11.0	10.4	9.7	9.0	8.1	6.9	5.3	3.1	0.2									
		50	14.2	13.5	12.8	12.2	11.5	10.9	10.3	9.6	8.9	8.0	6.7	5.0	2.7											
		60	13.4	12.7	12.1	11.4	10.8	10.2	9.5	8.7	7.8	6.5	4.7	2.3												
Shut-off PSI			161	152	143	135	126	118	109	100	92	83	74	66	57	48	40	31	22	14	5					
10GS10*	1	0					15.7	15.2	14.8	14.4	14.0	13.6	13.2	12.7	12.1	11.4	10.7	10.0	9.3	8.6	7.9	7.0	5.7	3.8	0.6	
		20		16.0	15.5	15.0	14.6	14.3	13.9	13.5	13.0	12.5	11.9	11.2	10.5	9.8	9.1	8.4	7.6	6.7	5.2	2.9				
		30	16.0	15.4	15.0	14.6	14.2	13.9	13.4	13.0	12.4	11.8	11.1	10.4	9.7	9.0	8.3	7.5	6.5	4.9	2.5					
		40	15.3	14.9	14.5	14.2	13.8	13.4	12.9	12.3	11.6	11.0	10.3	9.6	8.9	8.2	7.4	6.3	4.6	2.0						
		50	14.8	14.5	14.1	13.7	13.3	12.8	12.2	11.5	10.9	10.1	9.5	8.8	8.1	7.2	6.1	4.3	1.5							
		60	14.4	14.1	13.7	13.2	12.7	12.1	11.4	10.7	10.0	9.4	8.7	7.9	7.1	5.8	3.9	0.9								
Shut-off PSI			192	184	175	166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10	2	

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	
10GS15	1½	0											15.7	15.3	14.8	14.4	13.3	12.2	10.9	9.3	7.1	3.0									
		20								16.0	15.6	15.2	14.6	14.7	14.3	13.7	13.2	11.9	10.6	9.0	6.5										
		30							15.9	15.5	15.2	14.6	14.2	13.5	13.1	12.6	11.3	9.7	7.6	4.0											
		40						15.8	15.5	15.1	14.6	14.2	13.5	13.0	12.5	11.8	10.3	8.8	6.0												
		50					15.7	15.4	14.9	14.5	14.0	13.4	12.8	12.3	11.7	11.0	9.4	7.4	3.4												
		60					15.7	15.3	14.8	14.4	13.9	13.3	12.8	12.2	11.6	10.9	10.1	8.1	5.6												
Shut-off PSI							197	188	180	171	162	154	144	136	128	119	110	93	76	58	41	24	6								
10GS20	2	0													16.0	15.7	14.9	14.2	13.4	12.4	11.4	10.0	8.2	5.8							
		20											15.9	15.5	15.3	14.8	14.1	13.2	12.2	11.0	9.9	8.0	5.2								
		30										15.8	15.4	15.1	14.7	14.4	13.5	12.7	11.7	10.3	8.8	6.5									
		40								15.8	15.4	15.1	14.7	14.4	14.0	12.9	12.2	10.9	9.5	7.8	3.9										
		50						16.1	15.7	15.3	15.0	14.6	14.2	14.0	13.4	12.5	11.5	10.1	8.5	6.0											
		60						16.0	15.7	15.3	14.9	14.5	14.2	13.8	13.4	12.8	11.8	10.7	9.1	7.2	3.4										
Shut-off PSI								225	216	208	199	190	182	173	164	156	139	121	104	87	69	52	35	17							
10GS30	3	0																15.8	15.2	14.6	14.0	13.3	12.6	11.9	11.0	10.0	9.0	7.5	5.8		
		20																15.7	15.1	14.5	13.9	13.2	12.5	11.8	10.9	9.9	8.8	7.2	5.4		
		30															15.9	15.4	14.8	14.2	13.4	12.8	12.0	11.3	10.3	9.3	8.1	6.2	3.8		
		40													15.9	15.6	15.0	14.4	13.8	13.1	12.4	11.5	10.8	9.7	8.6	7.1	4.7				
		50											16.0	15.8	15.6	15.3	14.7	14.1	13.3	12.7	11.9	11.0	10.2	9.1	7.8	6.0	3.0				
		60										16.0	15.8	15.5	15.2	14.8	14.3	13.7	12.9	12.3	11.4	10.6	9.6	8.3	6.8	4.5					
Shut-off PSI												284	275	267	258	249	232	215	197	180	163	145	128	111	94	76	59	42	24		

Horsepower Range 5, Recommended Range 3 - 16 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																		
			340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020	1060
10GS50R	5	0					15.6	15.1	14.6	14.2	13.7	13.3	12.8	12.3	11.7	11.0	10.2	9.2	7.9	6.3	4.3
		20			16.0	15.5	15.0	14.6	14.1	13.6	13.2	12.7	12.2	11.6	10.9	10.1	9.0	7.6	6.0	3.9	
		30			15.7	15.3	14.8	14.3	13.8	13.4	12.9	12.4	11.9	11.2	10.4	9.5	8.2	6.7	4.9		
		40		16.0	15.5	15.0	14.5	14.0	13.6	13.1	12.6	12.1	11.5	10.8	9.9	8.8	7.4	5.7	3.6		
		50		15.7	15.2	14.7	14.2	13.8	13.3	12.9	12.4	11.8	11.1	10.3	9.3	8.0	6.5	4.5			
		60	15.9	15.4	14.9	14.4	14.0	13.5	13.0	12.6	12.0	11.4	10.7	9.7	8.6	7.2	5.4	3.2			
Shut-off PSI			341	324	306	289	272	255	237	220	203	185	168	151	133	116	99	81	64	47	29

MODEL 13GS

SELECTION CHART

Horsepower Range ½ – 3, Recommended Range 4 – 20 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820
13GS05	½	0			19.0	17.5	15.3	12.5	8.2																					
		20	18.8	16.5	14.5	12.0	8.0																							
		30	16.0	13.4	11.0	4.1																								
		40	13.3	10.6	4.0																									
		50	9.8																											
		60																												
Shut-off PSI			60	52	43	35	26	17	9																					
13GS07	¾	0				19.7	18.5	17.0	15.0	13.2	11.5	8.5																		
		20		19.4	18.0	16.4	14.8	12.9	10.5	6.0																				
		30	18.9	17.5	16.0	14.6	12.5	10.0	5.0																					
		40	17.4	15.9	14.4	12.4	9.7	4.0																						
		50	15.4	13.8	12.0	9.5																								
		60	13.2	11.5	8.5																									
Shut-off PSI			86	78	69	61	52	43	35	26	17	8																		
13GS10	1	0						19.6	18.4	17.6	16.6	15.4	14.1	12.8	11.4	9.5	6.0													
		20			20.0	19.4	18.5	17.2	16.3	15.0	13.8	12.5	11.0	8.5	4.0															
		30		20.0	19.2	18.2	17.1	15.8	14.7	13.6	12.2	10.5	7.5																	
		40	19.9	19.0	18.0	17.0	15.7	14.6	13.5	12.0	10.1	7.3																		
		50	18.8	17.8	16.8	15.5	14.5	13.0	11.6	9.9	7.0																			
		60	17.6	16.6	15.4	14.1	12.8	11.4	9.5	6.0																				
Shut-off PSI			128	119	110	102	93	84	76	67	58	50	41	32	24	15	6													
13GS15	1½	0							19.7	18.9	18.2	17.3	16.3	15.2	14.2	13.2	12.1	8.7												
		20					19.5	18.4	17.9	17.0	16.0	15.1	14.1	12.9	11.8	10.2	8.8													
		30			20.2	19.4	18.6	17.6	16.8	15.8	14.9	14.0	12.6	11.5	9.9	7.9	4.0													
		40		20.0	19.3	18.5	17.5	16.6	15.7	14.8	13.9	12.5	11.4	9.5	7.3	4.0														
		50	20.0	19.1	18.3	17.4	16.4	15.5	14.5	13.6	12.3	11.0	9.2	6.3																
		60	18.9	18.2	17.3	16.3	15.2	14.2	13.3	12.1	11.0	8.7	5.6																	
Shut-off PSI			156	147	139	130	121	113	104	95	87	78	69	61	52	43	35	17												
13GS20	2	0										20.0	19.5	19.0	18.3	17.9	17.2	15.8	14.4	12.6	10.5	7.7								
		20								19.8	19.4	18.8	18.2	17.6	17.0	16.3	15.6	14.1	12.4	10.2	6.8									
		30							19.7	19.3	18.7	18.2	17.4	16.8	16.2	15.5	14.8	13.1	11.1	8.8										
		40						19.6	19.2	18.6	18.1	17.3	16.7	16.1	15.4	14.7	13.8	12.0	9.8	6.0										
		50				20.1	19.5	19.1	18.4	18.0	17.2	16.6	16.0	15.2	14.6	13.7	12.9	10.8	8.5											
		60			20.0	19.5	19.0	18.3	17.9	17.2	16.5	15.8	15.1	14.4	13.6	12.6	11.5	9.2	5.0											
Shut-off PSI					206	198	189	180	172	163	155	146	137	129	120	111	103	85	68	51	33	16								
13GS30	3	0													19.8	19.4	18.9	18.0	17.1	16.0	14.6	13.5	11.9	10.0	7.3					
		20												19.6	19.2	18.9	18.3	17.9	17.0	15.9	14.7	13.3	11.8	9.7	6.9					
		30										20.0	19.5	19.1	18.8	18.2	17.8	17.4	16.4	15.2	13.9	12.3	10.5	8.3	4.0					
		40									20.0	19.4	19.1	18.7	18.2	17.8	17.3	16.8	15.6	14.5	13.0	11.4	9.5	6.0						
		50							19.9	19.5	19.0	18.6	18.1	17.7	17.2	16.7	16.1	14.9	13.7	12.0	10.1	7.9								
		60						19.8	19.4	18.9	18.5	18.0	17.5	17.1	16.6	16.0	15.4	14.2	12.9	11.0	9.0	5.0								
Shut-off PSI							235	226	217	209	200	191	183	174	165	157	139	122	104	87	70	53	35	18						

MODEL 18GS

SELECTION CHART

Horsepower Range $\frac{3}{4}$ - 5, Recommended Range 6 - 28 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860
18GS07	¾	0			28.2	26.5	24.0	21.0	17.9	13.5																					
		20	27.7	25.9	23.0	20.0	16.5	10.8																							
		30	25.0	22.0	18.8	15.7	9.5																								
		40	22.2	18.9	15.1	9.0																									
		50	18.4	15.0	7.5																										
		60	13.5	5.0																											
Shut-off PSI			74	66	58	49	40	32	23	14																					
18GS10	1	0					27.0	25.5	23.6	21.2	18.8	15.9	12.0																		
		20		28.0	26.6	25.1	22.7	20.0	17.6	14.0	10.0																				
		30	27.9	26.1	24.3	22.2	19.8	17.1	13.8	8.3																					
		40	26.0	24.1	22.0	19.7	17.0	13.1	8.0																						
		50	24.0	22.0	19.1	16.5	13.0	7.1																							
		60	21.0	18.6	15.8	12.0																									
Shut-off PSI			103	94	86	77	68	60	51	42	34	25	16																		
18GS15	1½	0						28.4	27.2	26.0	24.8	23.0	21.4	19.6	17.5	15.0	12.1														
		20					27.8	26.8	25.4	24.0	22.2	20.6	18.8	16.7	14.0	10.0															
		30				27.7	26.5	25.3	23.8	22.0	20.2	18.5	16.1	13.5	10.0																
		40		27.5	26.3	25.0	23.6	22.0	20.1	18.1	16.0	13.1	9.5																		
		50	27.6	26.4	25.0	23.4	21.8	20.0	18.0	15.5	13.0	9.2																			
		60	26.0	24.6	23.0	21.2	19.5	17.5	15.0	12.0	7.9																				
Shut-off PSI			143	134	126	117	108	100	91	82	74	65	56	48	39	30	22														
18GS20	2	0								28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	16.8	12.8												
		20						27.8	26.8	25.8	24.6	23.7	22.6	21.0	19.5	18.0	16.0	11.6													
		30					27.5	26.5	25.5	24.5	23.3	22.1	20.6	19.0	17.5	15.8	13.6	6.5													
		40			28.5	27.4	26.4	25.4	24.4	23.2	22.0	20.5	18.9	17.4	15.7	13.5	11.0														
		50		28.0	27.2	26.2	25.3	24.3	23.0	21.8	20.3	18.7	17.0	15.3	13.1	10.5	6.0														
		60	28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	18.3	16.8	14.8	12.8	9.5																
Shut-off PSI			183	174	165	157	148	139	131	122	113	105	96	87	79	70	61	44	27												
18GS30	3	0											28.0	27.4	26.7	26.0	25.0	23.5	21.5	19.2	16.9	14.2	10.5								
		20									27.7	27.0	26.3	25.8	24.9	24.0	23.0	21.0	18.9	16.5	13.5	9.0									
		30								27.6	26.9	26.2	25.5	24.8	23.9	22.9	21.9	19.8	17.5	14.9	11.2										
		40							27.5	26.9	26.2	25.4	24.6	23.8	22.8	21.8	20.9	18.5	16.0	13.3	8.0										
		50						27.4	26.8	26.0	25.2	24.5	23.6	22.6	21.7	20.6	19.5	17.3	14.5	11.0											
		60				28.0	27.4	26.7	26.0	25.0	24.3	23.5	22.5	21.5	20.5	19.2	18.0	15.7	12.8	7.0											
Shut-off PSI						225	216	208	199	190	182	173	164	156	147	139	130	113	95	78	61	43	26								
18GS50R	5	0															27.7	26.6	25.4	24.0	22.5	20.8	19.0	16.9	14.5	11.7	8.1				
		20														27.6	27.0	26.4	25.2	23.8	22.2	20.5	18.7	16.6	14.1	11.2	7.4				
		30											28.0	27.5	26.9	26.3	25.7	24.4	22.9	21.3	19.5	17.5	15.2	12.5	9.1						
		40										27.9	27.4	26.8	26.2	25.6	25.0	23.5	22.0	20.3	18.4	16.2	13.7	10.6	6.7						
		50									27.9	27.3	26.7	26.1	25.5	24.8	24.1	22.7	21.0	19.2	17.2	14.8	12.0	8.5							
		60							27.8	27.2	26.7	26.1	25.4	24.7	24.0	23.3	21.7	20.0	18.1	15.9	13.3	10.1	6.0								
Shut-off PSI										261	252	244	235	226	218	209	200	183	166	148	131	114	96	79	62	44	27				
18GS50	5	0																	27.9	26.8	25.8	24.8	23.7	22.6	21.2	19.9	18.4	16.8	14.8	12.4	9.7
		20																	27.5	26.6	25.6	24.5	23.3	22.2	21.0	19.8	18.0	16.2	14.3	12.0	8.8
		30																28.0	26.9	26.0	25.0	23.9	22.9	21.6	20.3	18.6	17.0	15.0	13.0	10.2	6.2
		40															28.0	27.4	26.3	25.3	24.4	23.2	22.1	20.1	19.4	17.9	16.0	14.0	11.6	8.0	
		50													27.9	27.3	26.8	25.9	24.9	23.8	22.7	21.3	20.1	18.5	16.9	14.9	12.8	10.0	6.0		
		60												27.9	27.2	26.8	26.2	25.2	24.1	23.0	21.9	20.7	19.2	17.5	15.8	13.6	11.0	7.8			
Shut-off PSI														307	298	290	281	264	246	229	212	195	177	160	143	125	108	91	73	56	39

MODEL 25GS

SELECTION CHART

Horsepower Range 1 – 5, Recommended Range 8 – 33 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																									
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740
25GS10	1	0			32.8	30.8	28.6	26.2	23.5	20.0	16.2	11.0																
		20	31.8	30.0	27.5	25.2	22.0	19.0	15.0	8.0																		
		30	29.6	27.2	25.0	21.6	18.0	14.0																				
		40	27.1	24.9	21.5	17.9	13.9																					
		50	24.3	21.0	17.5	13.0																						
		60	20.0	16.2	11.0																							
Shut-off PSI			82	74	65	56	48	39	30	22	13	4																
25GS15	1½	0				33.0	31.8	30.3	28.8	26.9	24.8	22.0	19.8	16.5	11.0													
		20		32.6	31.2	29.6	28.0	26.0	23.8	21.0	18.1	14.8	8.0															
		30	32.5	31.0	29.5	27.6	25.6	23.2	20.9	17.9	14.0																	
		40	30.9	29.4	27.5	25.5	23.1	20.8	17.7	13.6																		
		50	29.0	27.2	25.1	22.9	20.4	17.2	13.0																			
		60	26.9	24.8	22.0	19.8	16.5	11.0																				
Shut-off PSI			111	103	94	85	77	68	59	51	42	33	25	16	7													
25GS20	2	0						33.0	31.8	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4											
		20				32.7	31.3	30.0	28.6	26.8	25.0	22.9	20.9	18.3	14.3	9.0												
		30			32.3	31.0	29.6	28.5	26.4	24.5	22.6	20.5	18.0	14.0	8.0													
		40			30.9	29.5	28.2	26.3	24.3	22.4	20.4	17.8	13.6	8.0														
		50		30.5	29.4	28.0	26.0	24.1	22.1	20.0	17.2	13.2																
		60	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4	12.2																	
Shut-off PSI			139	130	121	113	104	95	87	78	69	61	52	43	35	26	17											
25GS30	3	0								33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	22.6	19.0	14.0								
		20						32.8	32.0	31.0	30.0	29.0	27.9	26.6	25.0	23.8	21.9	20.0	12.6									
		30					32.6	31.8	30.9	30.0	28.8	27.6	26.5	24.9	23.4	21.6	19.9	15.2	8.0									
		40				32.5	31.7	30.9	29.9	28.8	27.5	26.2	24.7	23.3	21.5	19.9	17.8	11.9										
		50			32.3	31.6	30.8	29.8	28.5	27.3	26.0	24.5	23.0	21.2	19.5	17.4	11.5											
		60	33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	24.1	22.6	20.9	19.0	16.9	14.0	10.0											
Shut-off PSI			191	183	174	165	157	148	139	131	122	113	105	96	87	79	70	53	35	18								
25GS50R	5	0											32.7	32.2	31.7	31.2	30.5	29.1	27.3	25.3	23.3	21.4	19.3	16.5	11.7			
		20								33.0	32.5	32.1	31.5	31.0	30.3	29.6	28.8	27.0	25.0	23.0	21.1	18.9	15.9	10.6				
		30							32.9	32.5	32.0	31.5	30.9	30.2	29.5	28.7	27.8	25.9	23.9	21.9	19.9	17.4	13.3					
		40						32.9	32.4	31.9	31.4	30.8	30.1	29.4	28.5	27.6	26.7	24.7	22.7	20.8	18.6	15.3						
		50					32.8	32.3	31.8	31.3	30.7	30.0	29.2	28.4	27.5	26.5	25.6	23.6	21.6	19.6	16.9							
		60			32.7	32.2	31.7	31.2	30.6	29.9	29.1	28.3	27.4	26.4	25.4	24.4	22.4	20.4	18.2	14.6								
Shut-off PSI					252	243	234	226	217	208	200	191	182	174	165	156	139	122	104	87	70	52	35	18				
25GS50	5	0														33.0	32.5	31.5	30.2	29.0	27.6	26.0	24.2	22.4	20.5	18.3	15.8	12.0
		20												32.9	32.3	31.8	31.3	30.0	28.8	27.2	25.8	23.9	22.0	20.0	17.8	15.0	11.0	
		30												32.8	32.2	31.8	31.2	30.5	29.3	27.9	26.4	24.8	22.9	21.0	18.9	16.2	13.0	8.0
		40											32.7	32.1	31.7	31.1	30.4	29.9	28.5	27.1	25.4	23.7	21.9	19.9	17.5	14.5	10.5	
		50										32.6	32.1	31.6	31.0	30.3	29.9	29.2	27.8	26.3	24.5	22.6	21.8	18.7	16.0	12.7		
		60						33.0	32.5	32.0	31.5	30.8	30.2	29.8	29.0	28.3	26.9	25.1	23.3	21.5	19.5	17.0	14.0	9.5				
Shut-off PSI								286	277	268	260	251	242	234	225	216	199	182	165	147	130	113	95	78	61	43	26	



FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

Sand Handling Design: Our face clearance, floating impeller stack has proven itself for over 50 years as a superior sand handling, durable pump design.

FDA Compliant Non-Metallic Parts: Impellers, diffusers and bearing spiders are constructed of glass filled engineered composites. They are corrosion resistant and non-toxic.

Discharge Head: Cast 303 stainless steel for strength and durability. Two cast-in safety line loops for installer convenience.

Motor Adapter: Cast 303 stainless steel for rigid, accurate alignment of pump and motor. Easy access to motor mounting nuts using standard open end wrench.

Stainless Steel Casing: Polished stainless steel is strong and corrosion resistant.

Hex Shaft Design: Six sided shafts for positive impeller drive.

Engineered Polymer Bearings: The proprietary, engineered polymer bearing material is strong and resistant to abrasion and wear. The enclosed upper bearing is mounted in a durable Noryl® bearing spider for excellent abrasion resistance.

Check Valve: Screws into discharge head from the top, easily removed for drain-back systems or replacement without disassembling the pump. Spring loaded, o-ring poppet design for positive seal in all conditions.

Crimped Design: For strength, will not separate in the harshest conditions.

Quad-Lock technology: 4 Permanently roll-formed grooves provides the durability and sealing needed in the toughest conditions.

5CS, 7CS, 10CS, 13CS, 18CS & 25CS

5-25 GPM, ½ - 3 HP, 60 HZ, SUBMERSIBLE PUMPS

WATER END DATA

Model	Order Number	Required HP	Stages	Weight (lbs)	Length (in)
5CS	5CS05R	½	9	8	13.3
	5CS05	½	12	9	15.3
	5CS07	¾	15	11	17.4
	5CS10	1	20	13	20.8
7CS	7CS05R	½	7	6	12.1
	7CS05	½	10	7	14.2
	7CS07	¾	13	8	16.4
	7CS10	1	17	9	19.2
	7CS15	1½	22	12	24.0
10CS	10CS05R*	½	8	7	12.2
	10CS05*	½	10	8	13.6
	10CS07*	¾	14	9	16.4
	10CS10*	1	16	11	17.7
	10CS15	1½	17	12	18.8
	10CS20	2	20	13	20.8
13CS	13CS05	½	5	6	10.5
	13CS07	¾	7	7	11.9
	13CS10	1	10	8	14.0
	13CS15	1½	12	9	15.3
	13CS20	2	17	12	18.8
	13CS30	3	21	15	22.7
18CS	18CS07	¾	6	7	12.2
	18CS10	1	8	8	13.9
	18CS15	1½	11	10	16.4
	18CS20	2	14	11	19.0
	18CS30	3	19	15	23.3
25CS	25CS10	1	7	8	13.6
	25CS15	1½	9	9	15.5
	25CS20	2	11	10	17.4
	25CS30	3	15	14	21.1

* New high head hydraulic design for models manufactured starting 8/2017.

NOTE: Use maximum head limit when using VFD (see curve).

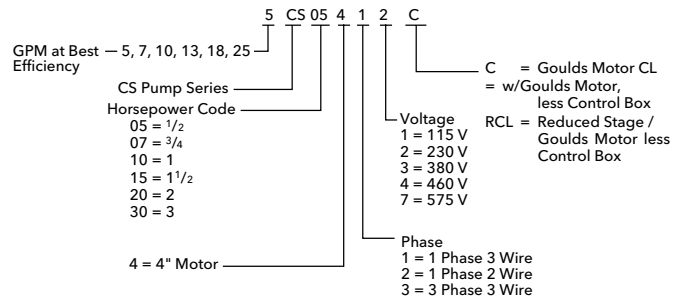
SPECIFICATIONS

Model	Flow Range GPM	Horsepower Range	Best Efficiency GPM	Discharge Connection	Minimum Well Size	Rotation ^①
5CS	1.2 - 7.5	½ - 1	5	1¼	4"	CCW
7CS	1.5 - 10	½ - 1½	7	1¼	4"	CCW
10CS	3 - 16	½ - 2	10	1¼	4"	CCW
13CS	4 - 20	½ - 3	13	1¼	4"	CCW
18CS	6 - 28	¾ - 3	18	1¼	4"	CCW
25CS	8 - 33	1 - 3	25	1¼	4"	CCW

① Rotation is counterclockwise when observed from pump discharge end.

Optional wrap-around style strainer - order number

NOMENCLATURE See price book for complete order numbers.

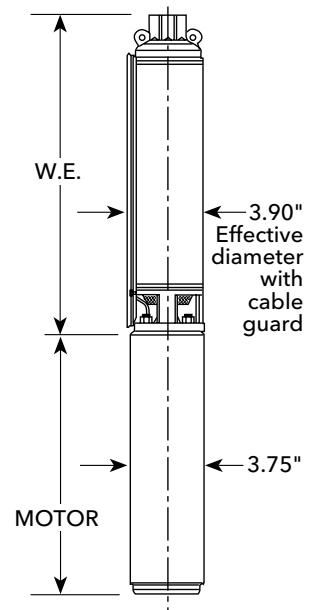


"CS" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	AISI 303 SS
Check Valve Poppet	Delrin®
Check Valve Seal	BUNA, FDA compliant
Check Valve Retaining Ring	AISI 302 SS
Bearing Spider - Upper	Noryl® GFN2
Bearing	Proprietary Engineered Polymer
Klipring	AISI 301 SS
Diffuser	Lexan®
Impeller	Noryl®
Bowl	AISI 304 SS
Shim	AISI 304 SS
Screws - Cable Guard	AISI 304 SS
Motor Adapter	AISI 303 SS
Casing	AISI 304 SS
Shaft	AISI 304 SS
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS
Suction Screen	Engineered Composite

Optional wrap around suction strainer
Order 7K3356 (quantity 1) • Order 7K3361 (quantity 50)

DISCHARGE 1¼" NPT



GOULDS WATER TECHNOLOGY 4" SINGLE-PHASE

Order No.	Type	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M05421	2-wire PSC	½	115	11.0 (279)	20 (9.1)
M05422		½	230	11.0 (279)	20 (9.1)
M07422		¾		12.4 (314)	23 (10.4)
M10422		1		13.3 (337)	25 (11.3)
M15422		1.5		14.9 (378)	29 (13.2)
M05411	3-wire	½	115	10.0 (253)	19 (8.6)
M05412		½	230	9.7 (246)	18 (8.2)
M07412		¾		10.8 (275)	22 (10)
M10412		1		11.7 (297)	23 (10.4)
M15412		1.5		13.6 (345)	28 (12.7)
M20412		2		15.1 (383)	31 (14.1)
M30412		3		18.3 (466)	40 (18.1)
M50412		5		27.7 (703)	70 (31.8)

NEMA MOTOR

- Corrosion resistant stainless steel construction.
- Built-in surge arrestor is provided on single phase motors through 5 HP.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Replaceable motor lead assembly.
- NEMA mounting dimensions.
- Control box is required with 3 wire single phase units.
- Three phase units require a magnetic starter with three leg Class 10 overload protection.

GOULDS WATER TECHNOLOGY 4" THREE-PHASE

Order No. by Voltage			HP	Length in. (mm)	Weight lb. (kg.)
200V	230V	460V			
M05430	M05432	M05434	½	10.8 (275)	22 (9.7)
M07430	M07432	M07434	¾	10.8 (275)	22 (9.7)
M10430	M10432	M10434	1	11.7 (297)	23 (10.4)
M15430	M15432	M15434	1.5	11.7 (297)	23 (10.4)
M20430	M20432	M20434	2	13.8 (351)	28 (12.7)
M30430	M30432	M30434	3	15.3 (389)	32 (14.5)
M50430	M50432	M50434	5	21.7 (550)	55 (24.9)
M75430	M75432	M75434	7.5	27.7 (703)	70 (1.8)

Order No.	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M15437	1.5	575	11.7 (297)	23 (10.4)
M20437	2		15.3 (389)	32 (14.5)
M30437	3		15.3 (389)	32 (14.5)
M50437	5		27.7 (703)	70 (31.8)
M75437	7.5		27.7 (703)	70 (31.8)

AGENCY LISTINGS



Pump/Water End and Goulds Water Technology Motor - tested to UL778 and CAN 22.2 by CSA International (Canadian Standards Association)



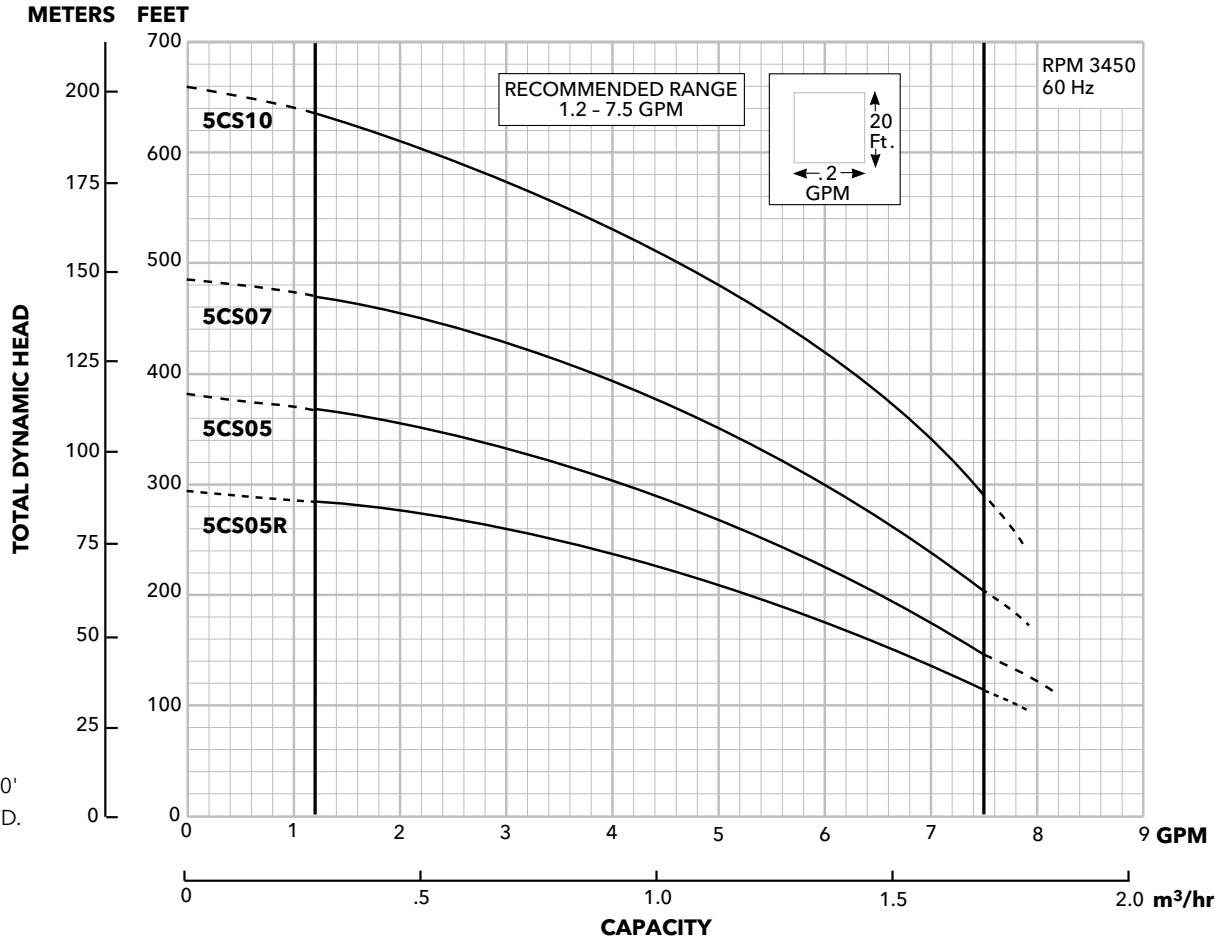
Goulds Water Technology Motor - Certified to NSF/ANSI 61, Annex G, Drinking Water System Components 4P49



NSF/ANSI 372 - Drinking Water System Components - Lead Content

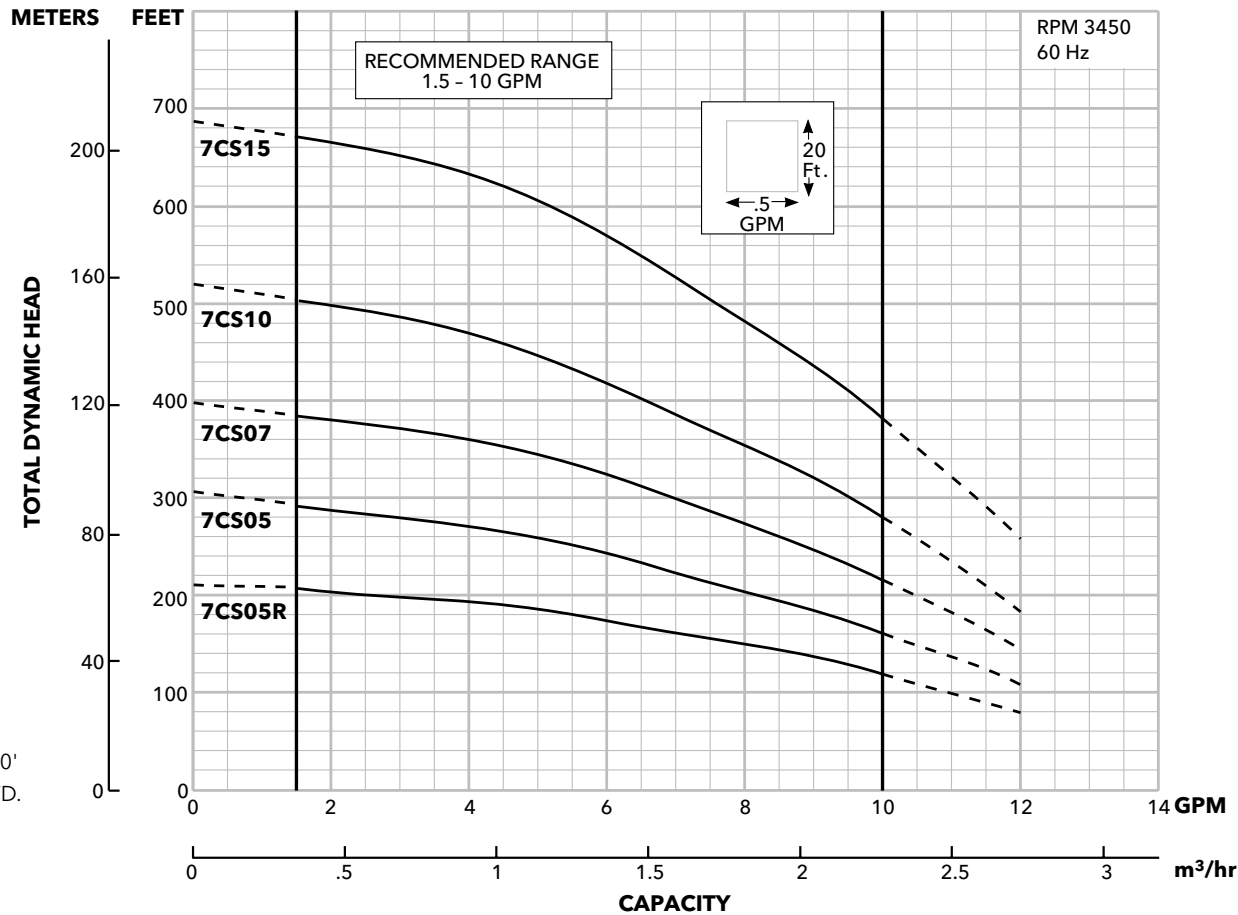
CLASS 6853 01 - Low Lead Content Certification Program - Plumbing Products

Model 5CS



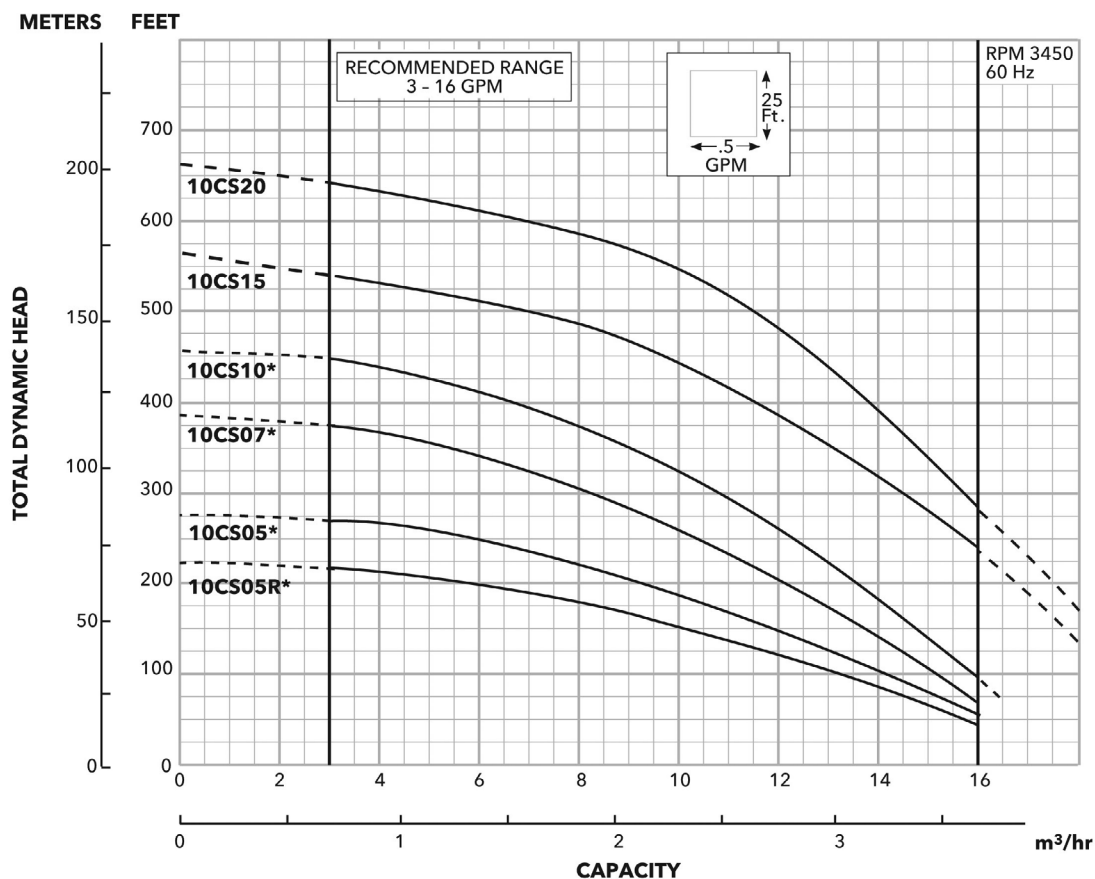
NOTE:
Maximum head 650'
when used with VFD.

Model 7CS



NOTE:
Maximum head 680'
when used with VFD.

Model 10CS

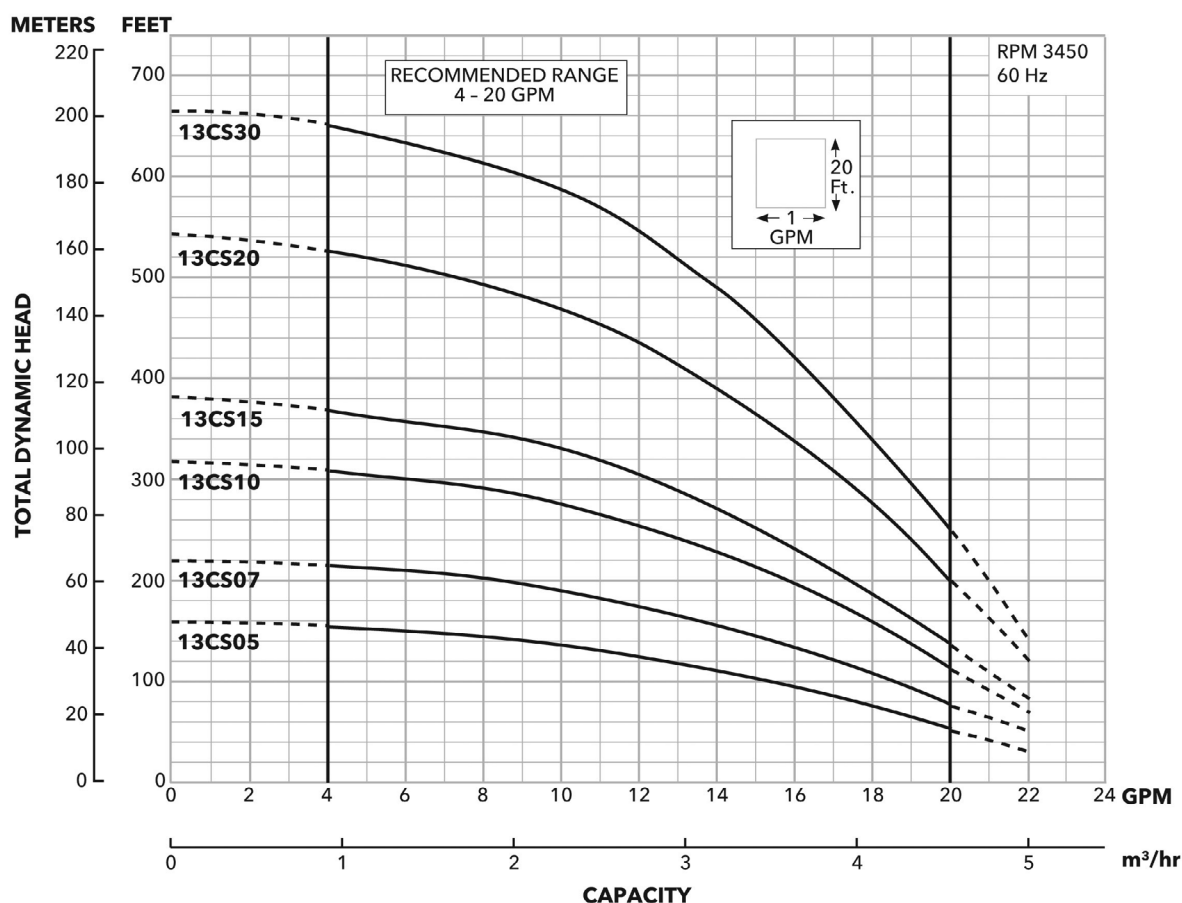


* HH Versions

NOTE:

Maximum head 660'
when used with VFD.

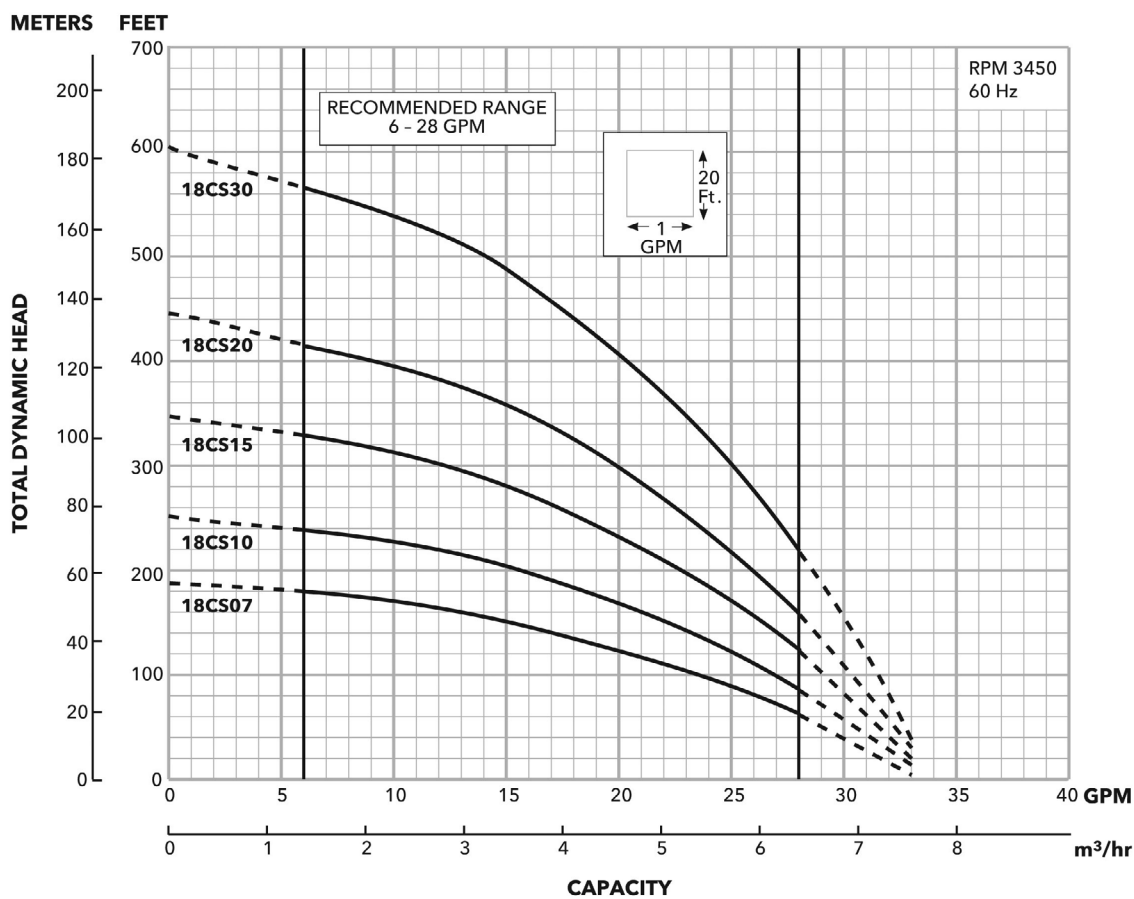
Model 13CS



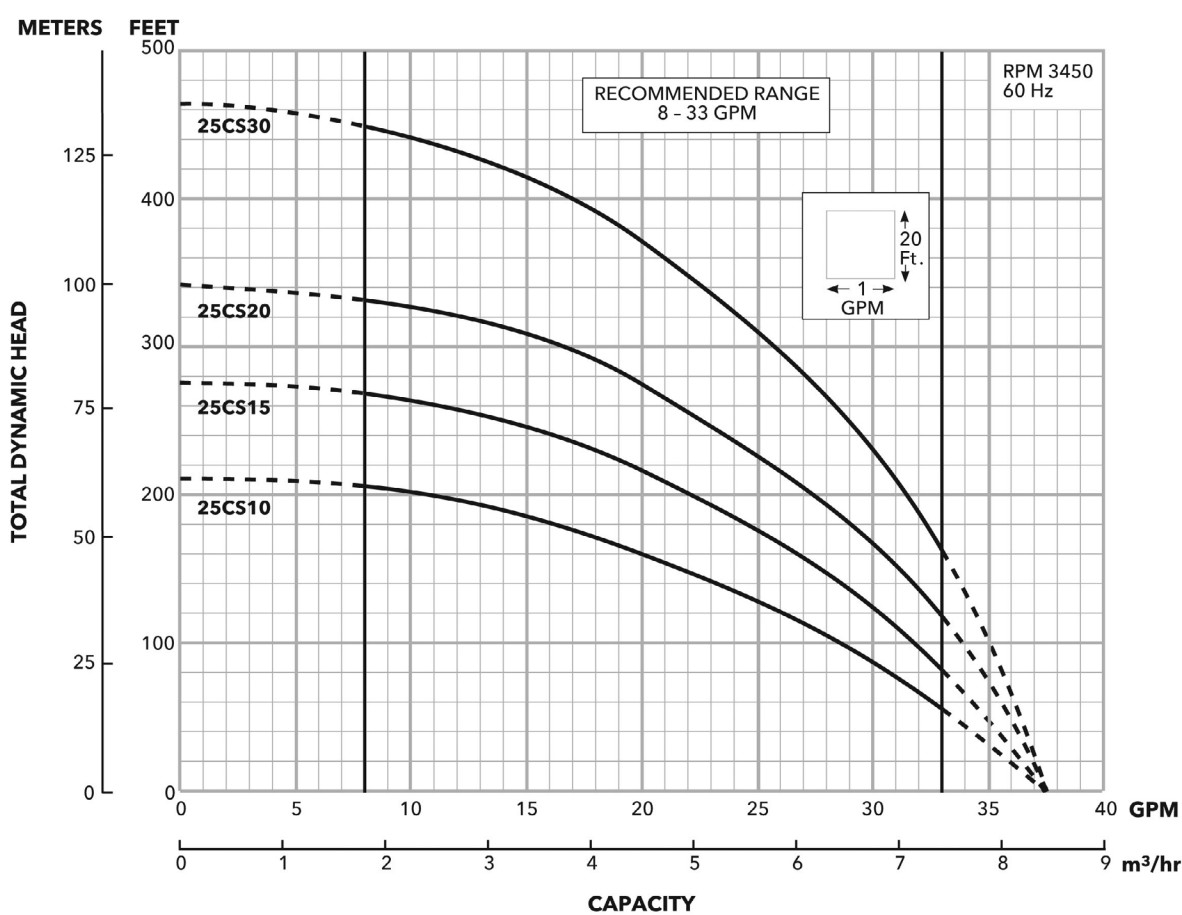
NOTE:

Maximum head 660'
when used with VFD.

Model 18CS



Model 25CS



MODEL 5CS

SELECTION CHART

Horsepower Range ½ – 1, Recommended Range 1.2 – 7.5 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																		
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020		
5CS05R	½	0						7.4	6.9	6.3	5.8	5.3	4.7	4.0	3.0	1.4																					
		20				7.3	6.7	6.2	5.6	5.1	4.5	3.8	2.6																								
		30			7.2	6.6	6.1	5.6	5.0	4.4	3.6	2.3																									
		40		7.1	6.6	6.0	5.5	4.9	4.3	3.4	2.1																										
		50	7.0	6.5	5.9	5.4	4.9	4.2	3.3	1.8																											
		60	6.4	5.8	5.3	4.8	4.1	3.1	1.6																												
Shut-off PSI			118	109	101	92	83	75	66	57	49	40	31	23	14	5																					
5CS05	½	0							7.7	7.3	6.9	6.4	6.0	5.6	5.1	4.7	4.1	2.6																			
		20					7.5	7.1	6.7	6.3	5.9	5.4	5.0	4.5	3.9	3.2	2.3																				
		30				7.5	7.1	6.7	6.2	5.8	5.4	4.9	4.4	3.8	3.1	2.1																					
		40			7.4	7.0	6.6	6.2	5.7	5.3	4.9	4.3	3.7	2.9	1.9																						
		50	7.7	7.4	6.9	6.5	6.1	5.7	5.2	4.8	4.2	3.6	2.8	1.8																							
		60	7.3	6.9	6.5	6.0	5.6	5.2	4.7	4.2	3.5	2.6	1.6																								
Shut-off PSI			156	147	138	130	121	112	104	95	86	78	69	60	52	43	34	17																			
5CS07	¾	0										7.6	7.3	7.0	6.6	6.3	5.9	5.2	4.4	3.3	1.6																
		20								7.5	7.2	6.9	6.5	6.2	5.8	5.5	5.1	4.2	3.1	1.3																	
		30							7.5	7.2	6.8	6.5	6.1	5.8	5.4	5.0	4.6	3.6	2.1																		
		40						7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.6	4.1	2.8																			
		50					7.4	7.1	6.7	6.4	6.0	5.7	5.3	4.9	4.5	4.0	3.4	1.8																			
		60			7.6	7.3	7.0	6.7	6.3	6.0	5.6	5.3	4.9	4.4	3.9	3.3	2.6																				
Shut-off PSI					184	175	167	158	149	141	132	123	115	106	97	89	80	63	45	28	11																
5CS10	1	0														7.5	7.0	6.5	5.9	5.3	4.6	3.8	2.8	1.6													
		20													7.6	7.4	7.2	7.0	6.4	5.9	5.2	4.5	3.7	2.6													
		30												7.6	7.4	7.2	6.9	6.7	6.1	5.5	4.8	4.0	3.1	1.9													
		40											7.6	7.4	7.1	6.9	6.6	6.3	5.8	5.1	4.4	3.5	2.5														
		50									7.5	7.3	7.1	6.8	6.6	6.3	6.0	5.4	4.7	3.9	2.9	1.7															
		60									7.5	7.3	7.1	6.8	6.5	6.3	6.0	5.7	5.0	4.3	3.4	2.3															
Shut-off PSI										214	206	197	188	180	171	162	154	136	119	102	84	67	50	32	15												

MODEL 7CS

SELECTION CHART

Horsepower Range ½ - 1, Recommended Range 1.5 - 10 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	540	580	620	
7CS05R	½	0						10.2	8.9	7.5	5.9	3.6																			
		20				9.8	8.5	7.0	5.3	2.5																					
		30			9.6	8.3	6.8	4.9	1.9																						
		40		9.4	8.1	6.5	4.6	1.2																							
		50	9.2	7.8	6.3	4.2	0.5																								
		60	7.6	6.0	3.8																										
Shut-off PSI			85	77	68	59	51	42	33	25	16	7																			
7CS05	½	0								10.1	9.2	8.3	7.4	6.3	5.0	3.4															
		20						9.8	9.0	8.1	7.1	6.0	4.6	2.7																	
		30					9.7	8.8	7.9	6.9	5.8	4.3	2.4																		
		40			10.4	9.6	8.7	7.8	6.7	5.6	4.1	2.0																			
		50		10.3	9.4	8.5	7.6	6.6	5.4	3.8	1.7																				
		60	10.2	9.3	8.4	7.5	6.4	5.1	3.5																						
Shut-off PSI			125	116	107	99	90	81	73	64	55	47	38	29	21	12															
7CS07	¾	0											10.0	9.3	8.6	7.9	7.1	6.2	5.2	4.0	2.4										
		20								10.4	9.8	9.1	8.4	7.7	6.9	6.0	4.9	3.5	1.8												
		30							10.3	9.7	9.0	8.3	7.5	6.7	5.8	4.7	3.3	1.5													
		40						10.2	9.5	8.9	8.2	7.4	6.6	5.6	4.5	3.1															
		50					10.1	9.4	8.8	8.1	7.3	6.5	5.5	4.3	2.8																
		60				10.0	9.3	8.7	7.9	7.2	6.3	5.3	4.1	2.5																	
Shut-off PSI						140	131	122	114	105	96	88	79	70	62	53	44	36	27	18	10										
7CS10	1	0														10.1	9.6	9.0	8.5	7.9	7.3	6.7	6.0	5.3	4.4	3.4	2.1				
		20											10.4	9.9	9.4	8.9	8.3	7.7	7.1	6.5	5.8	5.0	4.1	3.0	1.6						
		30										10.3	9.9	9.3	8.8	8.2	7.6	7.0	6.4	5.7	4.9	4.0	2.8								
		40									10.3	9.8	9.2	8.7	8.1	7.5	6.9	6.3	5.6	4.8	3.8	2.6									
		50									10.2	9.7	9.2	8.6	8.0	7.4	6.8	6.2	5.4	4.6	3.7	2.4									
		60							10.1	9.6	9.1	8.5	7.9	7.3	6.7	6.0	5.3	4.5	3.5	2.2											
Shut-off PSI									166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10				

Horsepower Range 1½, Recommended Range 1.5 - 10 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020	1060	1100	1140	
7CS15	1½	0								10.2	9.3	8.5	7.6	6.8	5.9	4.7	2.6													
		20							10.1	9.2	8.3	7.5	6.7	5.8	4.5	2.1														
		30						10.4	9.6	8.7	7.8	7.0	6.2	5.1	3.3															
		40					10.3	9.9	9.1	8.2	7.4	6.6	5.6	4.2	1.6															
		50				10.3	9.9	9.4	8.6	7.7	6.9	6.0	4.9	2.9																
		60			10.2	9.8	9.4	8.9	8.1	7.2	6.4	5.4	3.9																	
Shut-off PSI					194	186	177	168	151	134	116	99	82	64	47	30	12													

MODEL 10CS

SELECTION CHART Horsepower Range ½ - 2, Recommended Range 3 - 16 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																							
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	
10CS05R*	½	0			15.3	14.2	13.1	12.0	10.9	9.8	8.4	6.1	2.1													
		20	15.0	13.9	12.8	11.6	10.6	9.4	7.8	5.1	0.3															
		30	13.7	12.6	11.5	10.4	9.2	7.5	4.6																	
		40	12.4	11.3	10.2	9.0	7.2	3.9																		
		50	11.1	10.1	8.8	6.8	3.2																			
		60	9.9	8.5	6.4	2.5																				
Shut-off PSI			89	80	72	63	54	46	37	28	20	11	2													
10CS05*	½	0			15.7	14.9	14.1	13.3	12.4	11.4	10.4	9.3	8.0	6.3	3.9											
		20	15.4	14.7	13.9	13.0	12.1	11.1	10.1	8.9	7.5	5.7	2.9													
		30	14.6	13.8	12.9	12.0	11.0	9.9	8.7	7.3	5.3	2.3														
		40	13.6	12.8	11.8	10.8	9.7	8.5	7.0	4.9	1.7															
		50	12.6	11.7	10.6	9.5	8.3	6.8	4.5	1.0																
		60	11.5	10.5	9.3	8.1	6.5	4.1	0.2																	
Shut-off PSI			113	105	96	87	79	70	61	53	44	35	27	18	9	1										
10CS07*	¾	0				15.7	15.2	14.6	14.0	13.4	12.7	12.0	11.4	10.8	10.1	9.5	8.7	7.7	6.4	4.6	2.1					
		20	16.0	15.5	15.0	14.5	13.8	13.2	12.5	11.8	11.2	10.6	9.9	9.2	8.4	7.3	5.9	3.9	1.2							
		30	15.5	15.0	14.4	13.7	13.1	12.4	11.7	11.1	10.5	9.8	9.1	8.3	7.1	5.6	3.5	0.7								
		40	14.9	14.3	13.6	12.9	12.3	11.6	11.0	10.4	9.7	9.0	8.1	6.9	5.3	3.1	0.2									
		50	14.2	13.5	12.8	12.2	11.5	10.9	10.3	9.6	8.9	8.0	6.7	5.0	2.7											
		60	13.4	12.7	12.1	11.4	10.8	10.2	9.5	8.7	7.8	6.5	4.7	2.3												
Shut-off PSI			161	152	143	135	126	118	109	100	92	83	74	66	57	48	40	31	22	14	5					
10CS10*	1	0					15.7	15.2	14.8	14.4	14.0	13.6	13.2	12.7	12.1	11.4	10.7	10.0	9.3	8.6	7.9	7.0	5.7	3.8	0.6	
		20		16.0	15.5	15.0	14.6	14.3	13.9	13.5	13.0	12.5	11.9	11.2	10.5	9.8	9.1	8.4	7.6	6.7	5.2	2.9				
		30	16.0	15.4	15.0	14.6	14.2	13.9	13.4	13.0	12.4	11.8	11.1	10.4	9.7	9.0	8.3	7.5	6.5	4.9	2.5					
		40	15.3	14.9	14.5	14.2	13.8	13.4	12.9	12.3	11.6	11.0	10.3	9.6	8.9	8.2	7.4	6.3	4.6	2.0						
		50	14.8	14.5	14.1	13.7	13.3	12.8	12.2	11.5	10.9	10.1	9.5	8.8	8.1	7.2	6.1	4.3	1.5							
		60	14.4	14.1	13.7	13.2	12.7	12.1	11.4	10.7	10.0	9.4	8.7	7.9	7.1	5.8	3.9	0.9								
Shut-off PSI			192	184	175	166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10	2	

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820
10CS15	1½	0											15.7	15.3	14.8	14.4	13.3	12.2	10.9	9.3	7.1	3.0								
		20									16.0	15.6	15.2	14.7	14.3	13.7	13.2	11.9	10.6	9.0	6.5									
		30								15.9	15.5	15.2	14.6	14.2	13.5	13.1	12.6	11.3	9.7	7.6	4.0									
		40							15.8	15.5	15.1	14.6	14.2	13.5	13.0	12.5	11.8	10.3	8.8	6.0										
		50						15.7	15.4	14.9	14.5	14.0	13.4	12.8	12.3	11.7	11.0	9.4	7.4	3.4										
		60					15.7	15.3	14.8	14.4	13.9	13.3	12.8	12.2	11.6	10.9	10.1	8.1	5.6											
Shut-off PSI							197	188	180	171	162	154	144	136	128	119	110	93	76	58	41	24	6							
10CS20	2	0													16.0	15.7	14.9	14.2	13.4	12.4	11.4	10.0	8.2	5.8						
		20												15.9	15.5	15.3	14.8	14.1	13.2	12.2	11.0	9.9	8.0	5.2						
		30											15.8	15.4	15.1	14.7	14.4	13.5	12.7	11.7	10.3	8.8	6.5							
		40										15.8	15.4	15.1	14.7	14.4	14.0	12.9	12.2	10.9	9.5	7.8	3.9							
		50								16.1	15.7	15.3	15.0	14.6	14.2	14.0	13.4	12.5	11.5	10.1	8.5	6.0								
		60						16.0	15.7	15.3	14.9	14.5	14.2	13.8	13.4	12.8	11.8	10.7	9.1	7.2	3.4									
Shut-off PSI								225	216	208	199	190	182	173	164	156	139	121	104	87	69	52	35	17						

* HH Versions

MODEL 13CS

SELECTION CHART

Horsepower Range ½ – 3, Recommended Range 4 – 20 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820
13CS05	½	0			19.0	17.5	15.3	12.5	8.2																					
		20	18.8	16.5	14.5	12.0	8.0																							
		30	16.0	13.4	11.0	4.1																								
		40	13.3	10.6	4.0																									
		50	9.8																											
		60																												
Shut-off PSI			60	52	43	35	26	17	9																					
13CS07	¾	0				19.7	18.5	17.0	15.0	13.2	11.5	8.5																		
		20		19.4	18.0	16.4	14.8	12.9	10.5	6.0																				
		30	18.9	17.5	16.0	14.6	12.5	10.0	5.0																					
		40	17.4	15.9	14.4	12.4	9.7	4.0																						
		50	15.4	13.8	12.0	9.5																								
		60	13.2	11.5	8.5																									
Shut-off PSI			86	78	69	61	52	43	35	26	17	8																		
13CS10	1	0						19.6	18.4	17.6	16.6	15.4	14.1	12.8	11.4	9.5	6.0													
		20			20.0	19.4	18.5	17.2	16.3	15.0	13.8	12.5	11.0	8.5	4.0															
		30		20.0	19.2	18.2	17.1	15.8	14.7	13.6	12.2	10.5	7.5																	
		40	19.9	19.0	18.0	17.0	15.7	14.6	13.5	12.0	10.1	7.3																		
		50	18.8	17.8	16.8	15.5	14.5	13.0	11.6	9.9	7.0																			
		60	17.6	16.6	15.4	14.1	12.8	11.4	9.5	6.0																				
Shut-off PSI			128	119	110	102	93	84	76	67	58	50	41	32	24	15	6													
13CS15	1½	0						19.7	18.9	18.2	17.3	16.3	15.2	14.2	13.2	12.1	8.7													
		20					19.5	18.4	17.9	17.0	16.0	15.1	14.1	12.9	11.8	10.2	8.8													
		30			20.2	19.4	18.6	17.6	16.8	15.8	14.9	14.0	12.6	11.5	9.9	7.9	4.0													
		40		20.0	19.3	18.5	17.5	16.6	15.7	14.8	13.9	12.5	11.4	9.5	7.3	4.0														
		50	20.0	19.1	18.3	17.4	16.4	15.5	14.5	13.6	12.3	11.0	9.2	6.3																
		60	18.9	18.2	17.3	16.3	15.2	14.2	13.3	12.1	11.0	8.7	5.6																	
Shut-off PSI			156	147	139	130	121	113	104	95	87	78	69	61	52	43	35	17												
13CS20	2	0										20.0	19.5	19.0	18.3	17.9	17.2	15.8	14.4	12.6	10.5	7.7								
		20								19.8	19.4	18.8	18.2	17.6	17.0	16.3	15.6	14.1	12.4	10.2	6.8									
		30							19.7	19.3	18.7	18.2	17.4	16.8	16.2	15.5	14.8	13.1	11.1	8.8										
		40						19.6	19.2	18.6	18.1	17.3	16.7	16.1	15.4	14.7	13.8	12.0	9.8	6.0										
		50				20.1	19.5	19.1	18.4	18.0	17.2	16.6	16.0	15.2	14.6	13.7	12.9	10.8	8.5											
		60			20.0	19.5	19.0	18.3	17.9	17.2	16.5	15.8	15.1	14.4	13.6	12.6	11.5	9.2	5.0											
Shut-off PSI					206	198	189	180	172	163	155	146	137	129	120	111	103	85	68	51	33	16								
13CS30	3	0													19.8	19.4	18.9	18.0	17.1	16.0	14.6	13.5	11.9	10.0	7.3					
		20												19.6	19.2	18.9	18.3	17.9	17.0	15.9	14.7	13.3	11.8	9.7	6.9					
		30										20.0	19.5	19.1	18.8	18.2	17.8	17.4	16.4	15.2	13.9	12.3	10.5	8.3	4.0					
		40									20.0	19.4	19.1	18.7	18.2	17.8	17.3	16.8	15.6	14.5	13.0	11.4	9.5	6.0						
		50							19.9	19.5	19.0	18.6	18.1	17.7	17.2	16.7	16.1	14.9	13.7	12.0	10.1	7.9								
		60						19.8	19.4	18.9	18.5	18.0	17.5	17.1	16.6	16.0	15.4	14.2	12.9	11.0	9.0	5.0								
Shut-off PSI							235	226	217	209	200	191	183	174	165	157	139	122	104	87	70	53	35	18						

MODEL 18CS

SELECTION CHART

Horsepower Range $\frac{3}{4}$ – 3, Recommended Range 6 – 28 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860
18CS07	¾	0			28.2	26.5	24.0	21.0	17.9	13.5																					
		20	27.7	25.9	23.0	20.0	16.5	10.8																							
		30	25.0	22.0	18.8	15.7	9.5																								
		40	22.2	18.9	15.1	9.0																									
		50	18.4	15.0	7.5																										
		60	13.5	5.0																											
Shut-off PSI			74	66	58	49	40	32	23	14																					
18CS10	1	0					27.0	25.5	23.6	21.2	18.8	15.9	12.0																		
		20		28.0	26.6	25.1	22.7	20.0	17.6	14.0	10.0																				
		30	27.9	26.1	24.3	22.2	19.8	17.1	13.8	8.3																					
		40	26.0	24.1	22.0	19.7	17.0	13.1	8.0																						
		50	24.0	22.0	19.1	16.5	13.0	7.1																							
		60	21.0	18.6	15.8	12.0																									
Shut-off PSI			103	94	86	77	68	60	51	42	34	25	16																		
18CS15	1½	0						28.4	27.2	26.0	24.8	23.0	21.4	19.6	17.5	15.0	12.1														
		20				27.8	26.8	25.4	24.0	22.2	20.6	18.8	16.7	14.0	10.0																
		30			27.7	26.5	25.3	23.8	22.0	20.2	18.5	16.1	13.5	10.0																	
		40		27.5	26.3	25.0	23.6	22.0	20.1	18.1	16.0	13.1	9.5																		
		50	27.6	26.4	25.0	23.4	21.8	20.0	18.0	15.5	13.0	9.2																			
		60	26.0	24.6	23.0	21.2	19.5	17.5	15.0	12.0	7.9																				
Shut-off PSI			143	134	126	117	108	100	91	82	74	65	56	48	39	30	22														
18CS20	2	0								28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	16.8	12.8												
		20						27.8	26.8	25.8	24.6	23.7	22.6	21.0	19.5	18.0	16.0	11.6													
		30					27.5	26.5	25.5	24.5	23.3	22.1	20.6	19.0	17.5	15.8	13.6	6.5													
		40			28.5	27.4	26.4	25.4	24.4	23.2	22.0	20.5	18.9	17.4	15.7	13.5	11.0														
		50		28.0	27.2	26.2	25.3	24.3	23.0	21.8	20.3	18.7	17.0	15.3	13.1	10.5	6.0														
		60	28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	18.3	16.8	14.8	12.8	9.5																
Shut-off PSI			183	174	165	157	148	139	131	122	113	105	96	87	79	70	61	44	27												
18CS30	3	0											28.0	27.4	26.7	26.0	25.0	23.5	21.5	19.2	16.9	14.2	10.5								
		20									27.7	27.0	26.3	25.8	24.9	24.0	23.0	21.0	18.9	16.5	13.5	9.0									
		30								27.6	26.9	26.2	25.5	24.8	23.9	22.9	21.9	19.8	17.5	14.9	11.2										
		40						27.5	26.9	26.2	25.4	24.6	23.8	22.8	21.8	20.9	18.5	16.0	13.3	8.0											
		50					27.4	26.8	26.0	25.2	24.5	23.6	22.6	21.7	20.6	19.5	17.3	14.5	11.0												
		60			28.0	27.4	26.7	26.0	25.0	24.3	23.5	22.5	21.5	20.5	19.2	18.0	15.7	12.8	7.0												
Shut-off PSI						225	216	208	199	190	182	173	164	156	147	139	130	113	95	78	61	43	26								

MODEL 25CS

SELECTION CHART

Horsepower Range 1 – 3, Recommended Range 8 – 33 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																									
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740
25CS10	1	0			32.8	30.8	28.6	26.2	23.5	20.0	16.2	11.0																
		20	31.8	30.0	27.5	25.2	22.0	19.0	15.0	8.0																		
		30	29.6	27.2	25.0	21.6	18.0	14.0																				
		40	27.1	24.9	21.5	17.9	13.9																					
		50	24.3	21.0	17.5	13.0																						
		60	20.0	16.2	11.0																							
Shut-off PSI			82	74	65	56	48	39	30	22	13	4																
25CS15	1½	0				33.0	31.8	30.3	28.8	26.9	24.8	22.0	19.8	16.5	11.0													
		20		32.6	31.2	29.6	28.0	26.0	23.8	21.0	18.1	14.8	8.0															
		30	32.5	31.0	29.5	27.6	25.6	23.2	20.9	17.9	14.0																	
		40	30.9	29.4	27.5	25.5	23.1	20.8	17.7	13.6																		
		50	29.0	27.2	25.1	22.9	20.4	17.2	13.0																			
		60	26.9	24.8	22.0	19.8	16.5	11.0																				
Shut-off PSI			111	103	94	85	77	68	59	51	42	33	25	16	7													
25CS20	2	0					33.0	31.8	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4												
		20				32.7	31.3	30.0	28.6	26.8	25.0	22.9	20.9	18.3	14.3	9.0												
		30			32.3	31.0	29.6	28.5	26.4	24.5	22.6	20.5	18.0	14.0	8.0													
		40			30.9	29.5	28.2	26.3	24.3	22.4	20.4	17.8	13.6	8.0														
		50		30.5	29.4	28.0	26.0	24.1	22.1	20.0	17.2	13.2																
		60	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4	12.2																	
Shut-off PSI			139	130	121	113	104	95	87	78	69	61	52	43	35	26	17											
25CS30	3	0							33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	22.6	19.0	14.0									
		20						32.8	32.0	31.0	30.0	29.0	27.9	26.6	25.0	23.8	21.9	20.0	12.6									
		30					32.6	31.8	30.9	30.0	28.8	27.6	26.5	24.9	23.4	21.6	19.9	15.2	8.0									
		40				32.5	31.7	30.9	29.9	28.8	27.5	26.2	24.7	23.3	21.5	19.9	17.8	11.9										
		50			32.3	31.6	30.8	29.8	28.5	27.3	26.0	24.5	23.0	21.2	19.5	17.4	11.5											
		60	33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	24.1	22.6	20.9	19.0	16.9	14.0	10.0											
Shut-off PSI			191	183	174	165	157	148	139	131	122	113	105	96	87	79	70	53	35	18								

TECHNICAL BROCHURE

B5-25HS R10



HS

60 HZ STANDARD CAPACITY 4" SUBMERSIBLE PUMPS



FEATURES

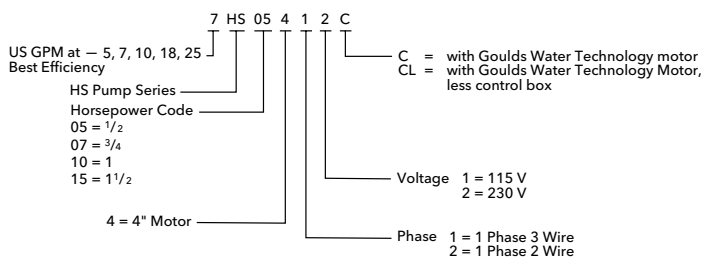
- Powered by Goulds Water Technology 4" motors for dependable operation and long service life.
- Built-in check valve screws into discharge head from the top, easily removed for drain-back systems or replacement without disassembling the pump. Spring loaded, o-ring poppet design for positive seal in all conditions.
- Nylon motor adapter for strength and corrosion resistance.
- Stainless steel hex design shafts, shaft couplings, casings and stage bowls inhibit corrosion.
- Glass filled engineered composite impellers for abrasion resistance and durability.
- Glass filled engineered composite diffusers are abrasion resistant.

- All engineered composite components are non-toxic, non-leaching, FDA compliant materials.
- Goulds Water Technology field proven floating impeller stack design for superior sand and abrasive handling and durability.
- **Quad Lock Technology:** 4 Roll Formed grooves provide durability and strength, tested to exceed strength of poly and PVC pipes.
- Complete pump/motor assemblies are CSA listed, CSA/CUS approved motors are available in 2-wire and 3-wire single phase designs.



- Maximum allowable pressure - 300 psi

NOMENCLATURE



WATER END DATA

Model	Order No.	Req. HP	Stages	Weight (lbs)	Length (in)
5HS	5HS05	1/2	12	5.5	15.7
	5HS07	3/4	15	6.5	17.8
	5HS10	1	20	8.1	21.2
7HS	7HS05	1/2	10	4.9	14.6
	7HS07	3/4	13	5.9	16.7
	7HS10	1	17	7.2	19.6
10HS	10HS05*	1/2	10	13.6	12.3
	10HS07*	3/4	14	16.4	14.4
	10HS10*	1	16	17.7	15.7
	10HS15	1 1/2	17	18.4	19.2
18HS	18HS07	3/4	6	3.8	12.6
	18HS10	1	8	4.5	14.3
	18HS15	1 1/2	11	5.6	16.8
25HS	25HS10	1	7	4.3	14.0
	25HS15	1 1/2	9	5.1	15.9

* New High Head Hydraulic Design for models manufactured starting 8/2017

MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	Glass Filled Engineered Composite
Check Valve Poppet	Delrin®
Check Valve Seal	BUNA, FDA compliant
Check Valve Retaining Ring	AISI 302 SS
Bearing	Proprietary Engineered Polymer
Shaft Retaining Ring	AISI 301 SS
Diffuser	Glass Filled Engineered Composite
Impeller	Glass Filled Engineered Composite
Bowl	AISI 304 SS
Shim	AISI 304 SS
Screws - Cable Guard	AISI 304 SS
Motor Adapter	Glass Filled Engineered Composite
Casing	AISI 304 SS
Shaft	AISI 304 SS
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS

Optional wrap around suction strainer

Order 7K3356 (quantity 1) • Order 7K3361 (quantity 50)

2-WIRE MODELS WITH GOULDS WATER TECHNOLOGY MOTOR

Model	Order No.	HP	Stages	Volts	2-Wire CP
5HS	5HS05421C	½	12	115	M05421
	5HS05422C	½	12	230	M05422
	5HS07422C	¾	15	230	M07422
	5HS10422C	1	20	230	M10422
7HS	7HS05421C	½	10	115	M05421
	7HS05422C	½	10	230	M05422
	7HS07422C	¾	13	230	M07422
	7HS10422C	1	17	230	M10422
10HS	10HS05421C*	½	10	115	M05421
	10HS05422C*	½	10	230	M05422
	10HS07422C*	¾	14	230	M07422
	10HS10422C*	1	16	230	M10422
	10HS15422C	1½	17	230	M15422
18HS	18HS07422C	¾	6	230	M07422
	18HS10422C	1	8	230	M10422
	18HS15422C	1½	11	230	M15422
25HS	25HS10422C	1	7	230	M10422
	25HS15422C	1½	9	230	M15422

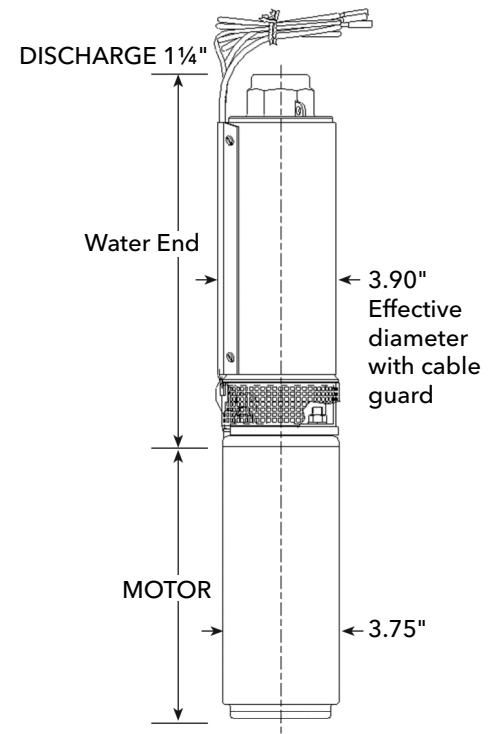
* New High Head Hydraulic Design for models manufactured starting 8/2017

3-WIRE MODELS WITH GOULDS WATER TECHNOLOGY MOTOR

Model	Order No.	HP	Stages	Volts	3-Wire CP
5HS	5HS05411C	½	12	115	M05411
	5HS05412C	½	12	230	M05412
	5HS07412C	¾	15	230	M07412
	5HS10412C	1	20	230	M10412
7HS	7HS05411C	½	10	115	M05411
	7HS05412C	½	10	230	M05412
	7HS07412C	¾	13	230	M07412
	7HS10412C	1	17	230	M10412
10HS	10HS05411C*	½	10	115	M05411
	10HS05412C*	½	10	230	M05412
	10HS07412C*	¾	14	230	M07412
	10HS10412C*	1	16	230	M10412
	10HS15412C	1½	17	230	M15412
18HS	18HS07412C	¾	6	230	M07412
	18HS10412C	1	8	230	M10412
	18HS15412C	1½	11	230	M15412
25HS	25HS10412C	1	7	230	M10412
	25HS15412C	1½	9	230	M15412

GENERATION II – 2-WIRE & 3-WIRE WEIGHTS AND DIMENSIONS

Type	Goulds Order No.	HP	Volts	Length (L) In.	Weight (lbs)
2-Wire	M05421	.5	115	10.5	18
	M05422	.5	230	10.5	18
	M07422	.75		11.9	22
	M10422	1		12.5	24
	M15422	1.5		14.2	28
3-wire	M05411	.5	115	9.6	18
	M05412	.5	230	9.2	17
	M07412	.75		10.3	20
	M10412	1		11.2	22
	M15412	1.5		12.8	26
	M20412	2		15.1	31
	M30412	3		18.3	40
	M50412	5		27.7	70



MODEL 5HS

SELECTION CHART

Horsepower Range ½ – 1½, Recommended Range 1.2 – 7.5 gpm, 60 Hz, 3450 rpm

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860				
5HS05	½	0							7.7	7.3	6.9	6.4	6.0	5.6	5.1	4.7	4.1	2.6																	
		20					7.5	7.1	6.7	6.3	5.9	5.4	5.0	4.5	3.9	3.2	2.3																		
		30				7.5	7.1	6.7	6.2	5.8	5.4	4.9	4.4	3.8	3.1	2.1																			
		40			7.4	7.0	6.6	6.2	5.7	5.3	4.9	4.3	3.7	2.9	1.9																				
		50	7.7	7.4	6.9	6.5	6.1	5.7	5.2	4.8	4.2	3.6	2.8	1.8																					
		60	7.3	6.9	6.5	6.0	5.6	5.2	4.7	4.2	3.5	2.6	1.6																						
Shut-off PSI			156	147	138	130	121	112	104	95	86	78	69	60	52	43	34	17																	
5HS07	¾	0										7.6	7.3	7.0	6.6	6.3	5.9	5.2	4.4	3.3	1.6														
		20									7.5	7.2	6.9	6.5	6.2	5.8	5.5	5.1	4.2	3.1	1.3														
		30							7.5	7.2	6.8	6.5	6.1	5.8	5.4	5.0	4.6	3.6	2.1																
		40					7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.6	4.1	2.8																		
		50				7.4	7.1	6.7	6.4	6.0	5.7	5.3	4.9	4.5	4.0	3.4	1.8																		
		60			7.6	7.3	7.0	6.7	6.3	6.0	5.6	5.3	4.9	4.4	3.9	3.3	2.6																		
Shut-off PSI					184	175	167	158	149	141	132	123	115	106	97	89	80	63	45	28	11														
5HS10	1	0															7.5	7.0	6.5	5.9	5.3	4.6	3.8	2.8	1.6										
		20												7.6	7.4	7.2	7.0	6.4	5.9	5.2	4.5	3.7	2.6												
		30											7.6	7.4	7.2	6.9	6.7	6.1	5.5	4.8	4.0	3.1	1.9												
		40									7.6	7.4	7.1	6.9	6.6	6.3	5.8	5.1	4.4	3.5	2.5														
		50								7.5	7.3	7.1	6.8	6.6	6.3	6.0	5.4	4.7	3.9	2.9	1.7														
		60							7.5	7.3	7.1	6.8	6.5	6.3	6.0	5.7	5.0	4.3	3.4	2.3															
Shut-off PSI									214	206	197	188	180	171	162	154	136	119	102	84	67	50	32	15											

MODEL 7HS

SELECTION CHART

Horsepower Range ½ – 1, Recommended Range 1.5 – 10 gpm, 60 Hz, 3450 rpm

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																												
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	540	580	620	
7HS05	½	0								10.1	9.2	8.3	7.4	6.3	5.0	3.4															
		20						9.8	9.0	8.1	7.1	6.0	4.6	2.7																	
		30					9.7	8.8	7.9	6.9	5.8	4.3	2.4																		
		40			10.4	9.6	8.7	7.8	6.7	5.6	4.1	2.0																			
		50		10.3	9.4	8.5	7.6	6.6	5.4	3.8	1.7																				
		60	10.2	9.3	8.4	7.5	6.4	5.1	3.5																						
Shut-off PSI			125	116	107	99	90	81	73	64	55	47	38	29	21	12															
7HS07	¾	0											10.0	9.3	8.6	7.9	7.1	6.2	5.2	4.0	2.4										
		20								10.4	9.8	9.1	8.4	7.7	6.9	6.0	4.9	3.5	1.8												
		30							10.3	9.7	9.0	8.3	7.5	6.7	5.8	4.7	3.3	1.5													
		40						10.2	9.5	8.9	8.2	7.4	6.6	5.6	4.5	3.1															
		50					10.1	9.4	8.8	8.1	7.3	6.5	5.5	4.3	2.8																
		60				10.0	9.3	8.7	7.9	7.2	6.3	5.3	4.1	2.5																	
Shut-off PSI						140	131	122	114	105	96	88	79	70	62	53	44	36	27	18	10										
7HS10	1	0														10.1	9.6	9.0	8.5	7.9	7.3	6.7	6.0	5.3	4.4	3.4	2.1				
		20											10.4	9.9	9.4	8.9	8.3	7.7	7.1	6.5	5.8	5.0	4.1	3.0	1.6						
		30										10.3	9.9	9.3	8.8	8.2	7.6	7.0	6.4	5.7	4.9	4.0	2.8								
		40									10.3	9.8	9.2	8.7	8.1	7.5	6.9	6.3	5.6	4.8	3.8	2.6									
		50									10.2	9.7	9.2	8.6	8.0	7.4	6.8	6.2	5.4	4.6	3.7	2.4									
		60								10.1	9.6	9.1	8.5	7.9	7.3	6.7	6.0	5.3	4.5	3.5	2.2										
Shut-off PSI									166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10				

MODEL 10HS

SELECTION CHART

Horsepower Range 1/2 – 1 1/2, Recommended Range 3 – 16 gpm, 60 Hz, 3450 rpm

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																							
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	
10HS05*	½	0			15.7	14.9	14.1	13.3	12.4	11.4	10.4	9.3	8.0	6.3	3.9											
		20	15.4	14.7	13.9	13.0	12.1	11.1	10.1	8.9	7.5	5.7	2.9													
		30	14.6	13.8	12.9	12.0	11.0	9.9	8.7	7.3	5.3	2.3														
		40	13.6	12.8	11.8	10.8	9.7	8.5	7.0	4.9	1.7															
		50	12.6	11.7	10.6	9.5	8.3	6.8	4.5	1.0																
		60	11.5	10.5	9.3	8.1	6.5	4.1	0.2																	
Shut-off PSI			113	105	96	87	79	70	61	53	44	35	27	18	9	1										
10HS07*	¾	0				15.7	15.2	14.6	14.0	13.4	12.7	12.0	11.4	10.8	10.1	9.5	8.7	7.7	6.4	4.6	2.1					
		20	16.0	15.5	15.0	14.5	13.8	13.2	12.5	11.8	11.2	10.6	9.9	9.2	8.4	7.3	5.9	3.9	1.2							
		30	15.5	15.0	14.4	13.7	13.1	12.4	11.7	11.1	10.5	9.8	9.1	8.3	7.1	5.6	3.5	0.7								
		40	14.9	14.3	13.6	12.9	12.3	11.6	11.0	10.4	9.7	9.0	8.1	6.9	5.3	3.1	0.2									
		50	14.2	13.5	12.8	12.2	11.5	10.9	10.3	9.6	8.9	8.0	6.7	5.0	2.7											
		60	13.4	12.7	12.1	11.4	10.8	10.2	9.5	8.7	7.8	6.5	4.7	2.3												
Shut-off PSI			161	152	143	135	126	118	109	100	92	83	74	66	57	48	40	31	22	14	5					
10HS10*	1	0					15.7	15.2	14.8	14.4	14.0	13.6	13.2	12.7	12.1	11.4	10.7	10.0	9.3	8.6	7.9	7.0	5.7	3.8	0.6	
		20		16.0	15.5	15.0	14.6	14.3	13.9	13.5	13.0	12.5	11.9	11.2	10.5	9.8	9.1	8.4	7.6	6.7	5.2	2.9				
		30	16.0	15.4	15.0	14.6	14.2	13.9	13.4	13.0	12.4	11.8	11.1	10.4	9.7	9.0	8.3	7.5	6.5	4.9	2.5					
		40	15.3	14.9	14.5	14.2	13.8	13.4	12.9	12.3	11.6	11.0	10.3	9.6	8.9	8.2	7.4	6.3	4.6	2.0						
		50	14.8	14.5	14.1	13.7	13.3	12.8	12.2	11.5	10.9	10.1	9.5	8.8	8.1	7.2	6.1	4.3	1.5							
		60	14.4	14.1	13.7	13.2	12.7	12.1	11.4	10.7	10.0	9.4	8.7	7.9	7.1	5.8	3.9	0.9								
Shut-off PSI			192	184	175	166	158	149	140	132	123	114	106	97	88	80	71	62	54	45	36	28	19	10	2	

* New High Head Hydraulic Design for models manufactured starting 8/2017

MODEL 18HS

SELECTION CHART

Horsepower Range $\frac{3}{4}$ - $1\frac{1}{2}$, Recommended Range 6 - 28 gpm, 60 Hz, 3450 rpm

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in US GPM (Gallons per Minute)														
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
18HS07	¾	0			28.2	26.5	24.0	21.0	17.9	13.5							
		20	27.7	25.9	23.0	20.0	16.5	10.8									
		30	25.0	22.0	18.8	15.7	9.5										
		40	22.2	18.9	15.1	9.0											
		50	18.4	15.0	7.5												
		60	13.5	5.0													
Shut-off PSI			74	66	58	49	40	32	23	14							
18HS10	1	0					27.0	25.5	23.6	21.2	18.8	15.9	12.0				
		20		28.0	26.6	25.1	22.7	20.0	17.6	14.0	10.0						
		30	27.9	26.1	24.3	22.2	19.8	17.1	13.8	8.3							
		40	26.0	24.1	22.0	19.7	17.0	13.1	8.0								
		50	24.0	22.0	19.1	16.5	13.0	7.1									
		60	21.0	18.6	15.8	12.0											
Shut-off PSI			103	94	86	77	68	60	51	42	34	25	16				
18HS15	1½	0						28.4	27.2	26.0	24.8	23.0	21.4	19.6	17.5	15.0	12.1
		20				27.8	26.8	25.4	24.0	22.2	20.6	18.8	16.7	14.0	10.0		
		30			27.7	26.5	25.3	23.8	22.0	20.2	18.5	16.1	13.5	10.0			
		40		27.5	26.3	25.0	23.6	22.0	20.1	18.1	16.0	13.1	9.5				
		50	27.6	26.4	25.0	23.4	21.8	20.0	18.0	15.5	13.0	9.2					
		60	26.0	24.6	23.0	21.2	19.5	17.5	15.0	12.0	7.9						
Shut-off PSI			143	134	126	117	108	100	91	82	74	65	56	48	39	30	22

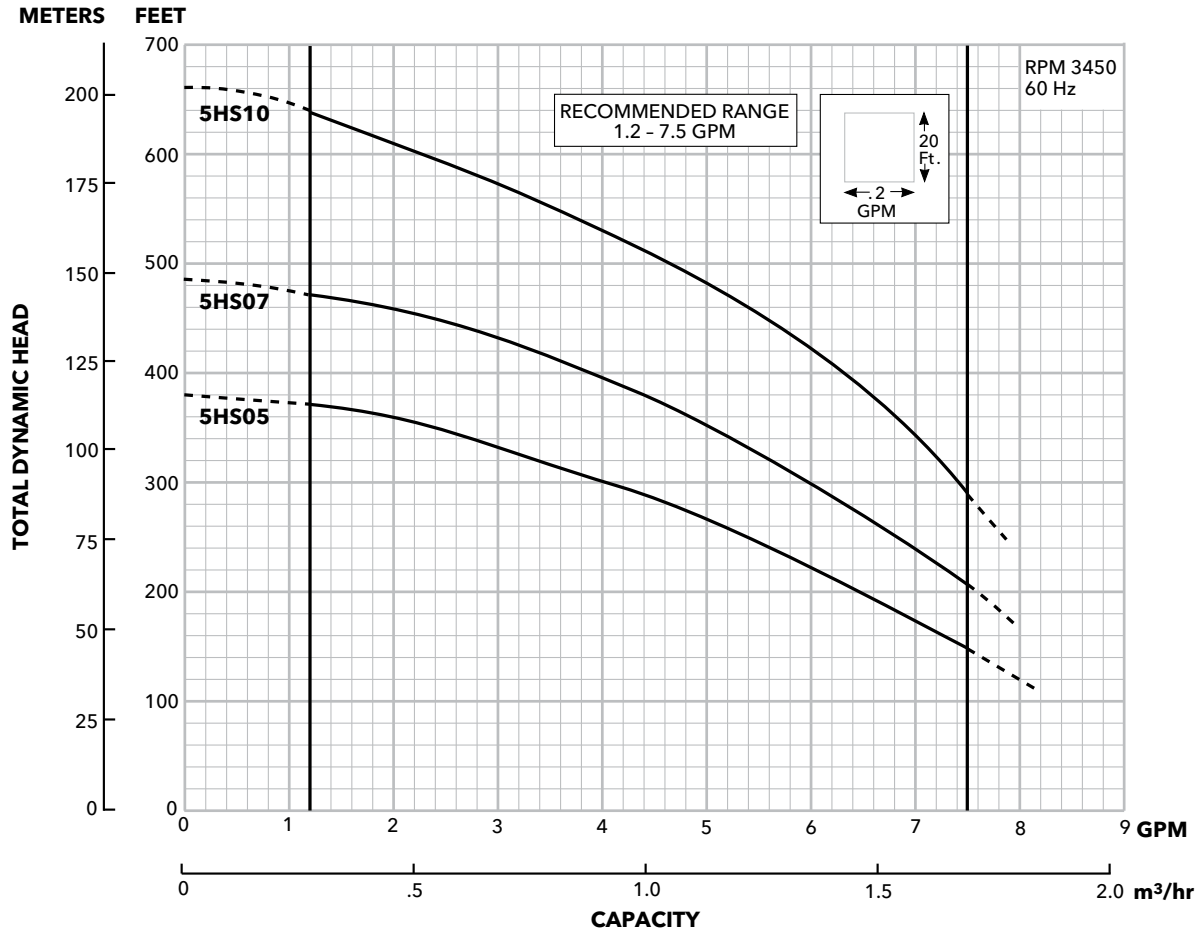
MODEL 25HS

SELECTION CHART

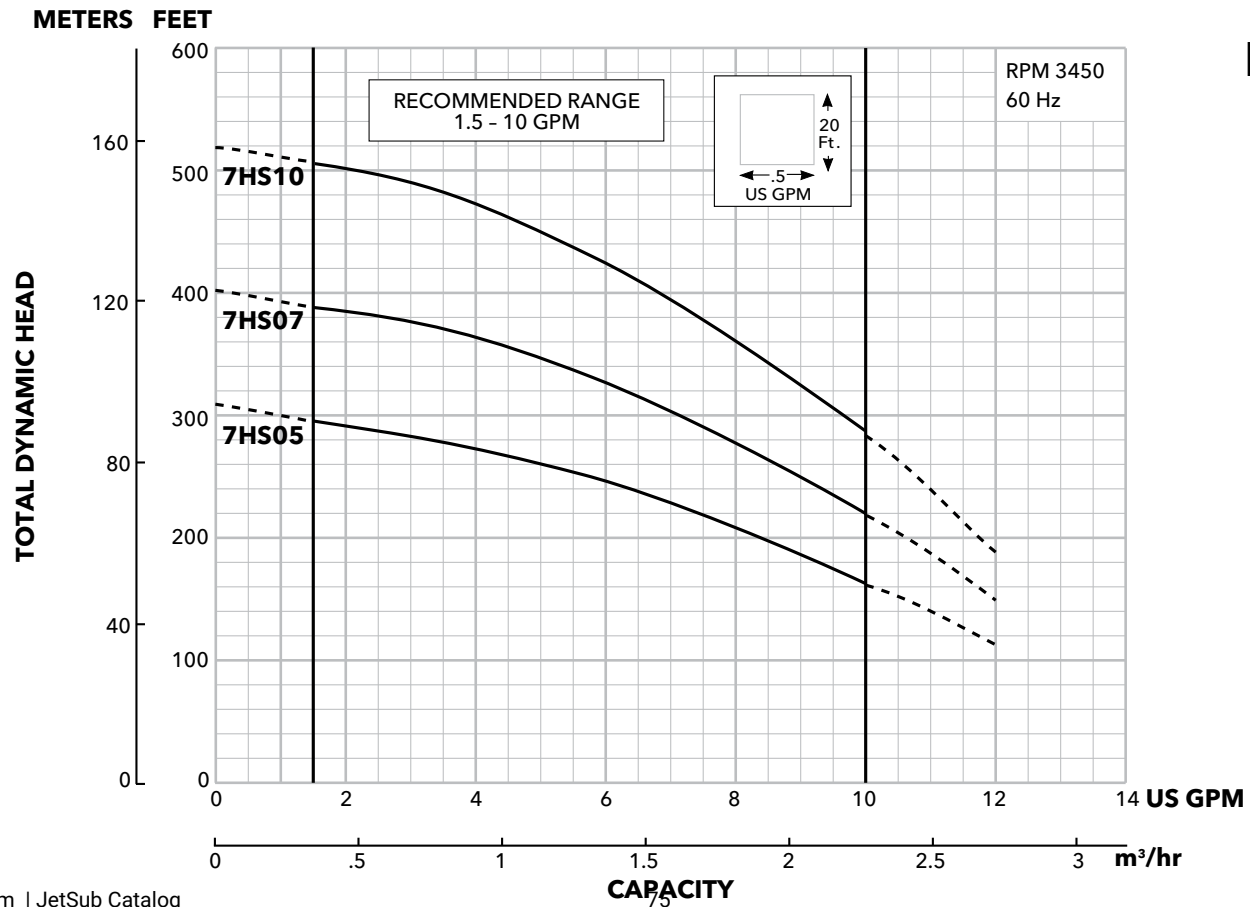
Horsepower Range 1, Recommended Range 8 - 33 gpm, 60 Hz, 3450 rpm

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)												
			20	40	60	80	100	120	140	160	180	200	220	240	260
25HS10	1	0			31.5	29.3	27.2	24.7	22.8	18.9	15.0	10.7			
		20	30.8	29.1	26.7	24.4	21.3	18.4	14.6	7.8					
		30	28.7	26.4	24.3	21.0	17.5	13.6							
		40	26.3	24.2	20.9	17.4	13.5								
		50	23.6	20.4	17.0	12.6									
		60	19.4	15.7	10.7										
Shut-off PSI			80	72	63	54	47	38	29	21	13	4			
25HS15	1½	0				32.0	30.8	29.4	27.9	26.1	24.1	21.3	19.2	16.5	11.0
		20		31.6	30.3	28.7	27.2	25.2	23.1	20.4	17.6	14.4	7.8		
		30	31.5	30.1	28.6	26.8	24.8	22.5	20.3	17.4	13.6				
		40	30.0	28.5	26.7	24.7	22.4	20.2	17.2	13.2					
		50	28.1	26.4	24.3	22.2	19.8	16.7	12.6						
		60	26.1	24.1	21.3	19.2	16.0	10.7							
Shut-off PSI			108	100	91	82	75	66	57	49	41	32	24	16	7

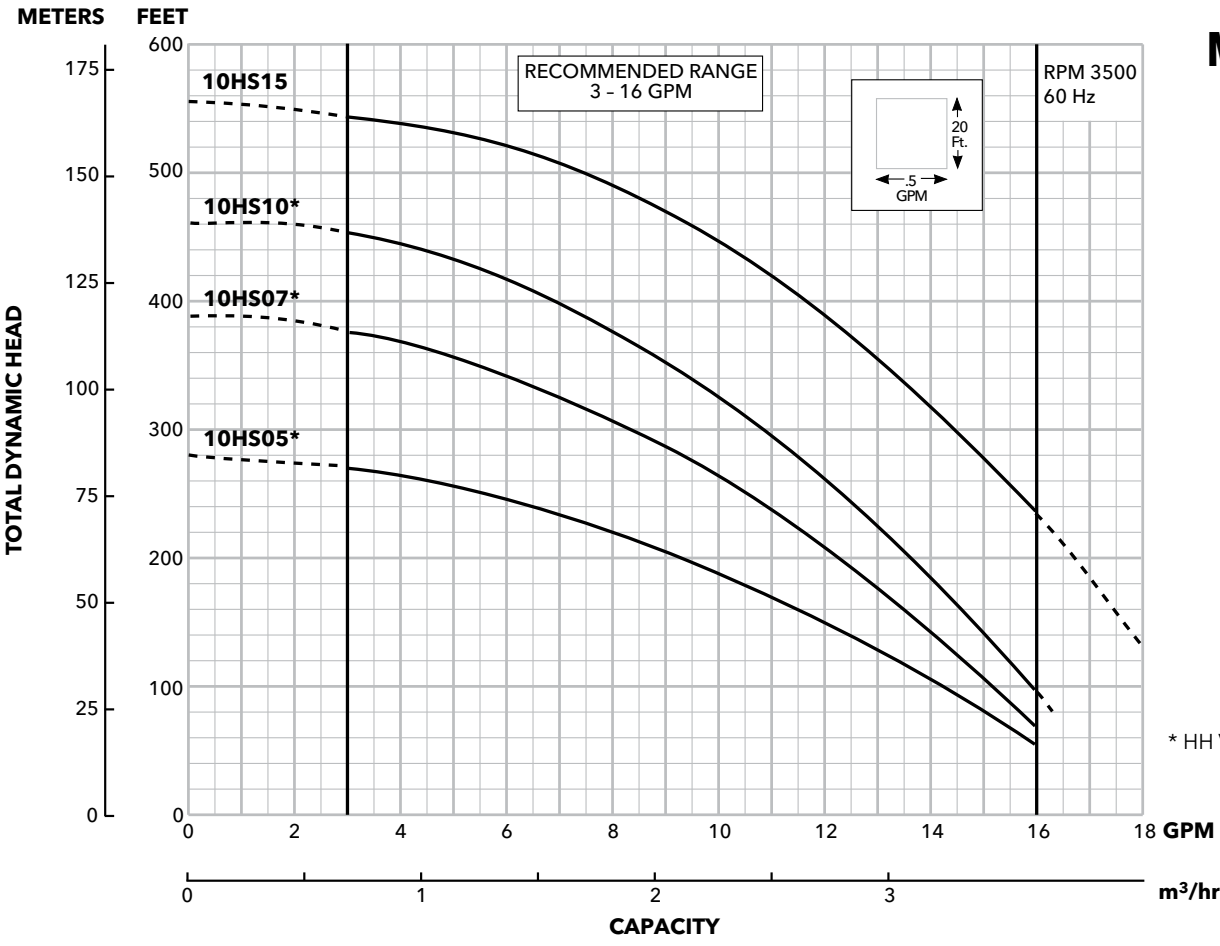
Model 5HS



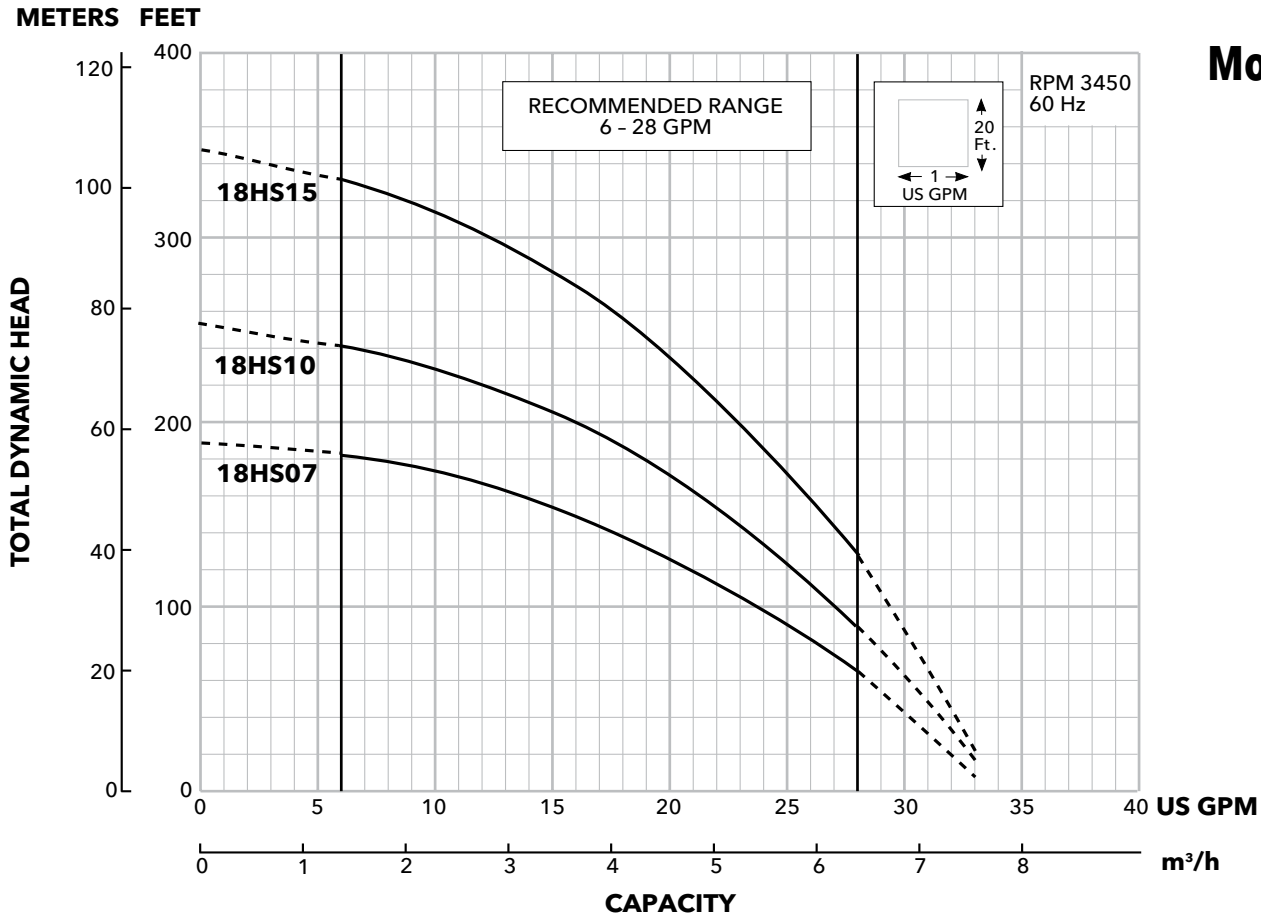
Model 7HS



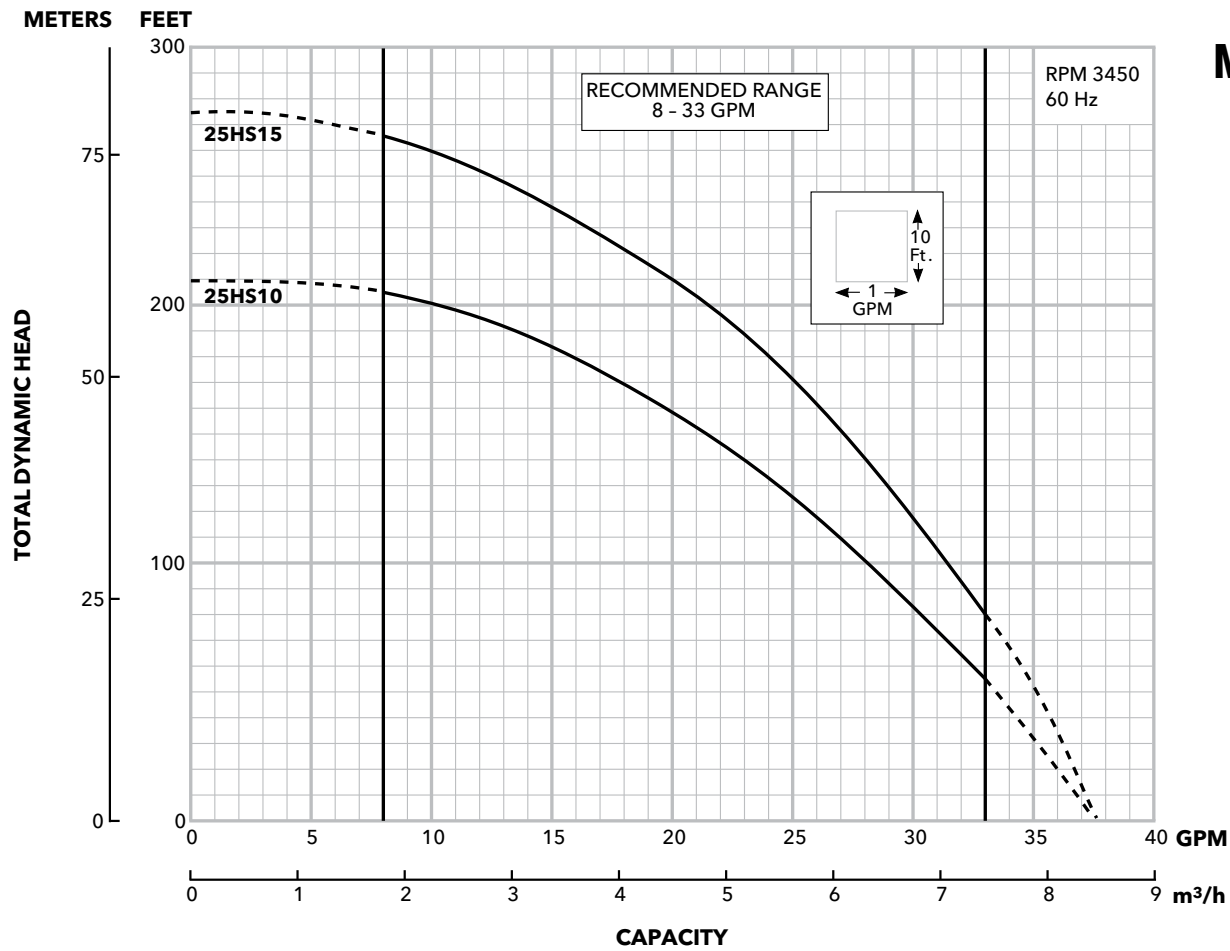
Model 10HS



Model 18HS



Model 25HS





e-GS Xtreme™ CBM

60 HZ, 4" SUBMERSIBLE PUMPS



FEATURES

Field Proven Design: The GS Xtreme features super strong construction due to the welded casing joints at both ends. The proprietary engineered polymer bearings have been field proven with great success in some of the toughest submersible pump applications on the planet – coalbed methane extraction. They are the deepest set pumps we build, available up to 10 HP in many models. Capable of pumping over 1600' TDH.

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

Sand Handling Design: Our face clearance, floating impeller stack has proven itself for over 50 years as a superior sand handling, durable pump design.

Stainless Steel Metal Parts: AISI types 302, 303 and 304 are corrosion resistant, non-toxic and non-leaching.

FDA Compliant Non-Metallic Parts: Impellers, diffusers and bearing spiders are constructed of glass filled engineered composites. They are corrosion resistant and non-toxic.

Discharge Head: Cast stainless steel discharge head features built-in safety loops and an upthrust limiting stud which is factory set to prevent the rotating assembly from upthrusting. These pumps require a separate field installed external check valve to prevent backflow.

"GS" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	AISI 303 SS
Bearing Spider - Upper	Glass Filled Engineered Composite
Bearing	Proprietary Engineered Composite
Klipring	AISI 301 SS
Diffuser	Glass Filled Engineered Composite*
Impeller	Glass Filled Engineered Composite
Bowl	AISI 304 SS
Intermediate Sleeve*	AISI 304 SS, Powder Metal
Intermediate Shaft Coupling*	AISI 304 SS, Powder Metal
Intermediate Bearing Spider*	Glass Filled Engineered Composite
Intermediate Bearing Spider*	AISI 303 SS
Shim	AISI 304 SS
Screws - Cable Guard	AISI 304 SS
Motor Adapter	AISI 303 SS
Casing	AISI 304 SS
Shaft (up to 3 HP)	
Shaft (5 HP and larger)	17/4 PH
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS
Suction Screen	AISI 304 SS

* Used on models 35GS, 45GS, 65GS and 85GS

Bowls: Stainless steel for strength and abrasive resistance.

Check Valve: Not supplied, order separately, pumps have 2" NPT discharge threads.

Stainless Steel Casing: Polished stainless steel is strong, attractive and corrosion resistant.

Hex Shaft Design: Six sided shafts for positive impeller drive.

Shaft Coupling: Exposed for ease of field alignment to motor shaft and to check pump rotation.

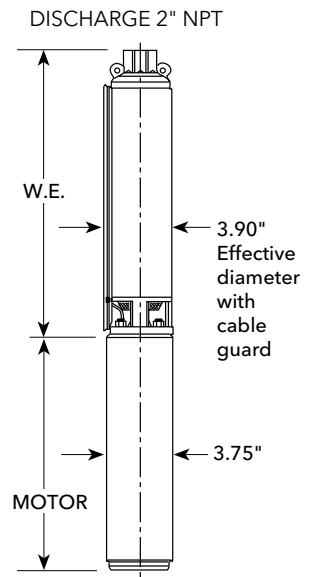
Bearings: Proprietary engineered polymer bearing material is a super strong, abrasion and heat resistant design.

MODELS AND SPECIFICATIONS

Model	Flow Range GPM	HP Range	Best Eff. GPM	Discharge Connection	Minimum Well Size
5GS	1.2 - 7.5	½ - 3	5	2"	4"
7GS	1.5 - 10	½ - 5	7	2"	4"
10GS	3 - 16	1 - 5	10	2"	4"
18GS	6 - 28	1 - 10	18	2"	4"
25GS	8 - 33	1 - 10	25	2"	4"
35GS	10 - 50	1 - 10	35	2"	4"
45GS	20 - 65	1½ - 10	45	2"	4"
65GS	20 - 80	1½ - 10	65	2"	4"
85GS	40 - 100	3 - 10	85	2"	4"

Rotation on all units is counterclockwise when viewed from pump discharge end.

An optional 4" x 6" Adapter - Part No. **ADAPT46** is available for installations where a 6" motor is desired. The kit contains a 4" x 6" adapter, a 4" to 6" splined shaft extension and required bolts.



DIMENSIONS AND WEIGHTS

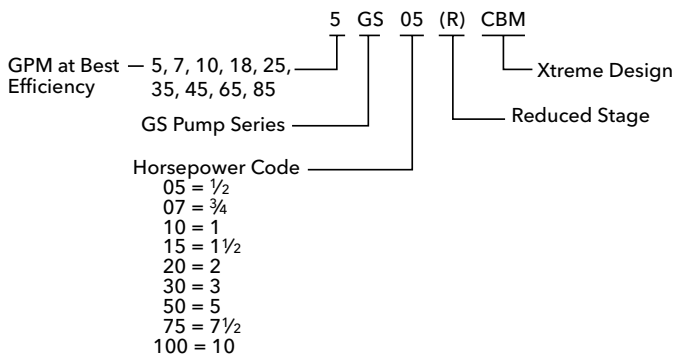
Model	HP	Stages	Length (W.E.)	W.E. Weight (lbs.)
5GS05CBM	½	12	14.8	9
5GS07CBM	¾	15	16.8	10
5GS10CBM	1	20	20.0	12
5GS15CBM	1½	26	25.3	15
5GS20CBM	2	33	30.1	19
5GS30CBM	3	46	42.7	25
7GS05CBM	½	10	13.3	8
7GS07CBM	¾	13	15.4	10
7GS10CBM	1	17	18.3	11
7GS15CBM	1½	22	21.9	13
7GS20CBM	2	27	26.6	16
7GS30CBM	3	34	31.6	20
7GS50CBM	5	54	49.6	28
10GS10CBM	1	16	14.4	10
10GS15CBM	1½	17	17.9	12
10GS20CBM	2	20	20.0	13
10GS30CBM	3	27	26.0	17
10GS50RCBM	5	35	32.5	21
10GS50CBM	5	42	36.3	22
18GS10CBM	1	8	13.0	8
18GS15CBM	1½	11	15.5	10
18GS20CBM	2	14	18.1	11
18GS30CBM	3	19	22.4	13
18GS50RCBM	5	24	27.8	16
18GS50CBM	5	30	33.9	19
18GS75CBM	7½	45	46.7	30
18GS100CBM	10	60	61.7	39
25GS10CBM	1	7	12.8	7
25GS15CBM	1½	9	14.6	9

Model	HP	Stages	Length (W.E.)	W.E. Weight (lbs.)
25GS20CBM	2	11	16.5	10
25GS30CBM	3	15	20.2	12
25GS50RCBM	5	22	28	16
25GS50CBM	5	26	30.9	19
25GS75CBM	7½	34	40.5	24
25GS100CBM	10	50	58.0	31
35GS10CBM	1	6	14.2	8
35GS15CBM	1.5	8	16.6	9
35GS20CBM	2	10	19.1	10
35GS30CBM	3	14	24.0	13
35GS50CBM	5	23	36.4	20
35GS75CBM	7.5	36	53.0	28
35GS100CBM	10	46	65.2	34
45GS15CBM	1.5	5	12.9	8
45GS20CBM	2	7	15.4	9
45GS30CBM	3	10	19.0	10
45GS50CBM	5	17	27.7	15
45GS75CBM	7.5	25	38.9	21
45GS100CBM	10	34	50.6	27
65GS15CBM	1.5	6	19.1	10
65GS20CBM	2	7	21.2	11
65GS30CBM	3	10	27.4	12
65GS50CBM	5	16	41.2	18
65GS75CBM	7.5	26	62.3	35
65GS100CBM	10	33	76.8	42
85GS30CBM	3	8	29.4	13
85GS50CBM	5	14	42.8	18
85GS75CBM	7.5	21	63.8	35
85GS100CBM	10	27	79.9	41

GOULDS 4" SINGLE PHASE MOTORS

Order No.	Type	HP	Volts	Length		Weight	
				In.	MM	Lb.	Kg.
M05421	2-wire PSC	½	115	11.0	279	19.2	8.7
M05422		½	230	11.0	279	19.2	8.7
M07422		¾		12.4	314	22.7	10.3
M10422		1		13.3	337	24.5	11.1
M15422		1½		14.9	378	28.9	13.1
M05411	3-wire	½	115	10.0	253	18.9	8.6
M05412		½	230	9.7	246	18.1	8.2
M07412		¾		10.8	275	21.4	9.7
M10412		1		11.7	297	23.1	10.5
M15412		1½		13.6	345	27.4	12.4
M20412		2		15.1	383	31.0	14.1
M30412		3		18.3	466	40.0	18.1
M50412		5		27.7	703	70.0	31.8

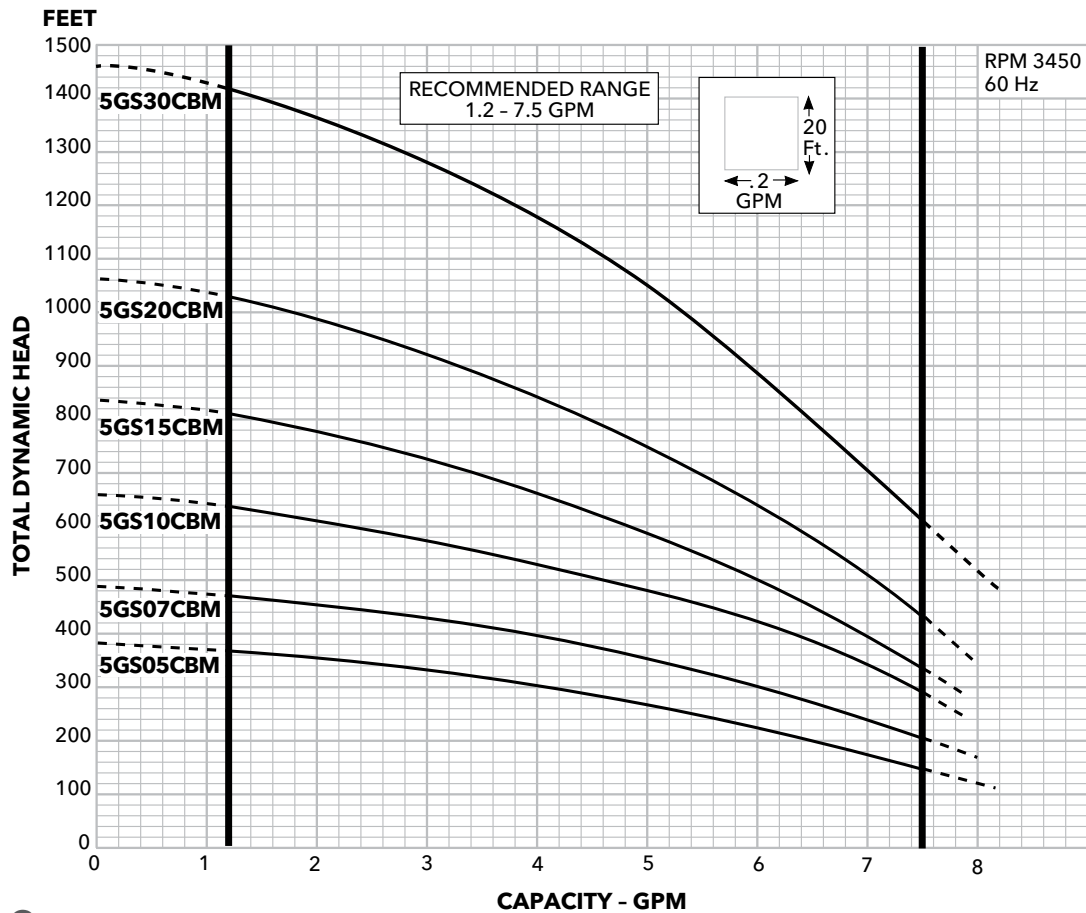
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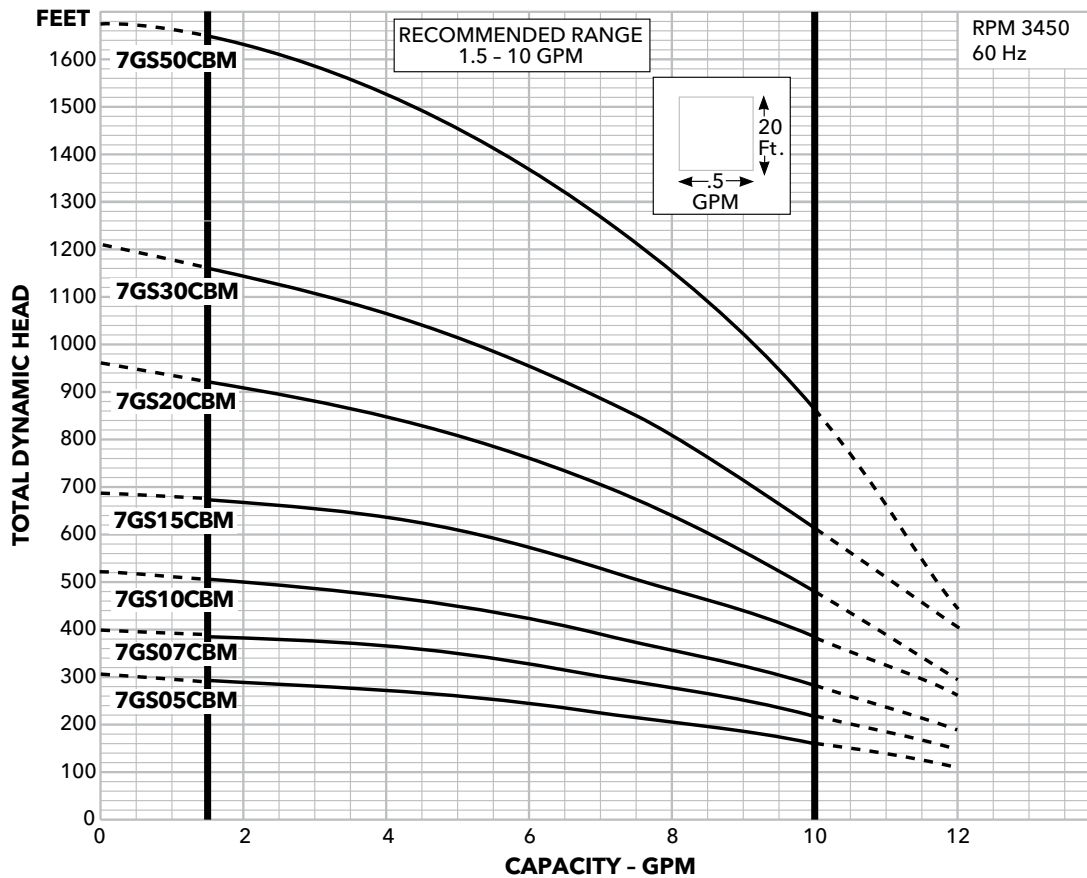
GOULDS 4" THREE PHASE MOTORS

Order No.	HP	Volts	Length		Weight	
			In.	MM	Lb.	Kg.
M05430	½	200	10.8	275	22	9.7
M07430	¾		10.8	275	22	9.7
M10430	1		11.7	297	23.1	10.5
M15430	1½		11.7	297	23.1	10.5
M20430	2		13.8	351	27.4	12.4
M30430	3		15.3	389	32	14.5
M50430	5		21.7	550	55	24.9
M75430	7½		27.7	703	70	31.8
M05432	½	230	10.8	275	22	9.7
M07432	¾		10.8	275	22	9.7
M10432	1		11.7	297	23.1	10.5
M15432	1½		11.7	297	23.1	10.5
M20432	2		13.8	351	27.4	12.4
M30432	3		15.3	389	32	14.5
M50432	5		21.7	550	55	24.9
M75432	7½		27.7	703	70	31.8
M05434	½	460	10.8	275	22	9.7
M07434	¾		10.8	275	22	9.7
M10434	1		11.7	297	23.1	10.5
M15434	1½		11.7	297	23.1	10.5
M20434	2		13.8	351	27.4	12.4
M30434	3		15.3	389	32	14.5
M50434	5		21.7	550	55	24.9
M75434	7½		27.7	703	70	31.8
M100434	10		30.7	780	78	35.4

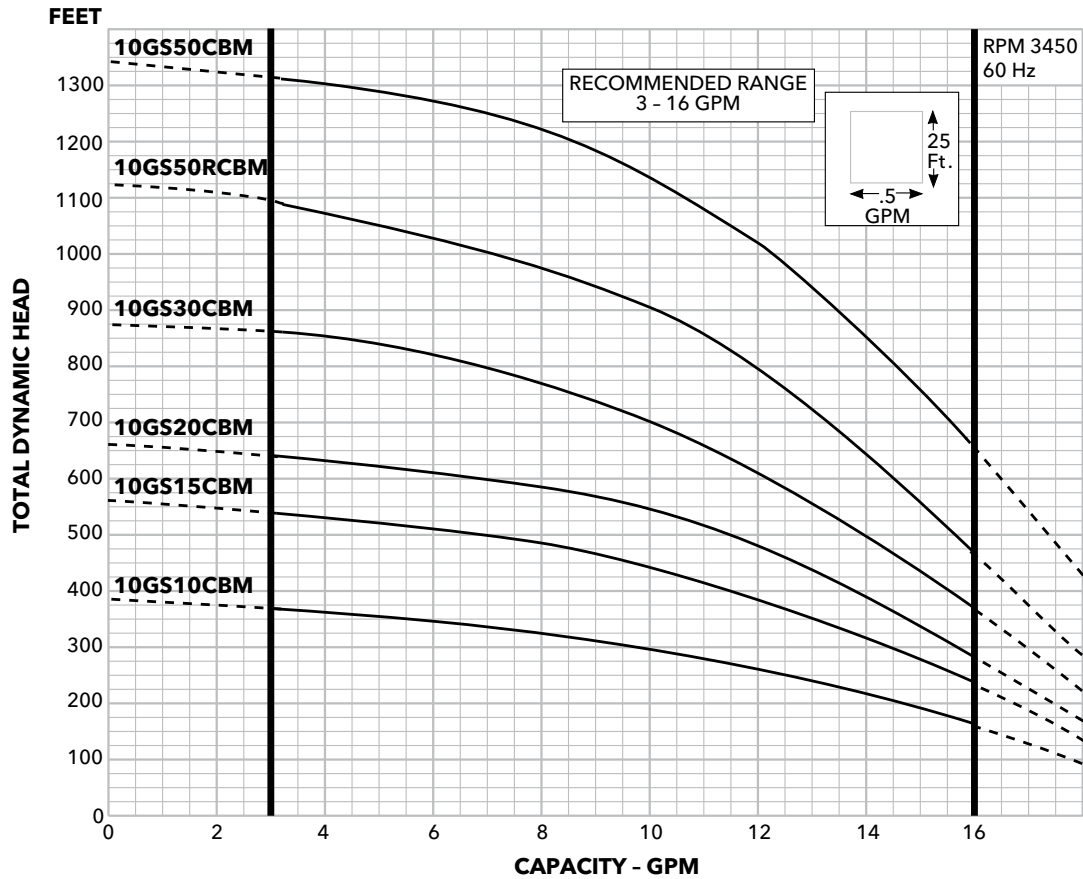
5GSCBM Curve



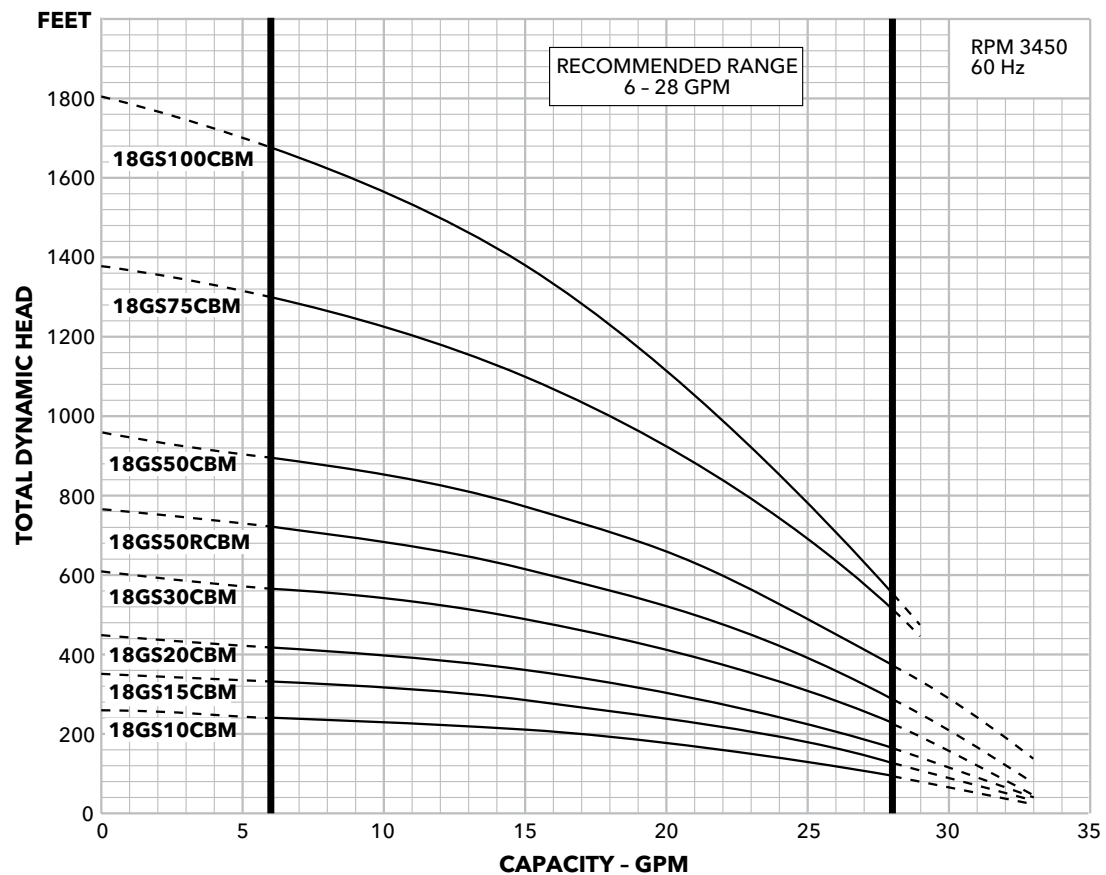
7GSCBM Curve



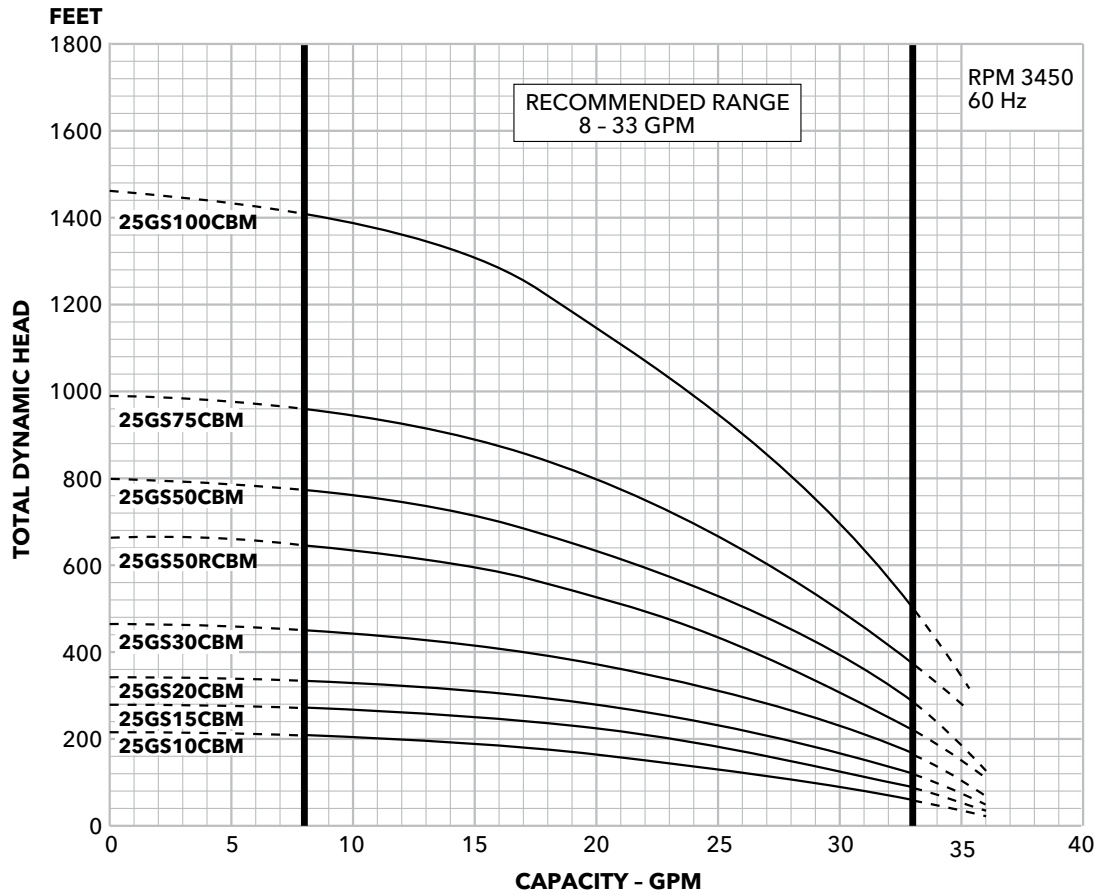
10GSCBM Curve



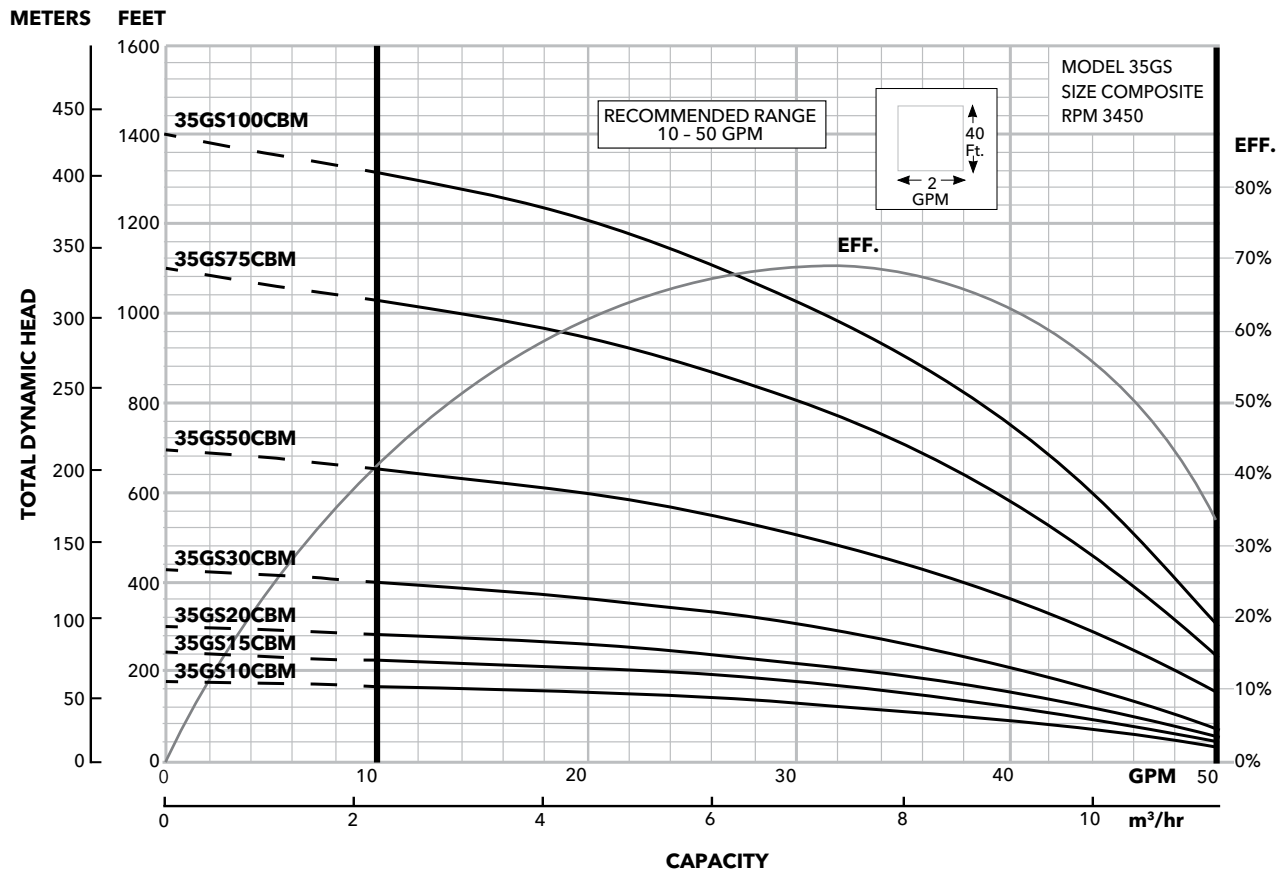
18GSCBM Curve



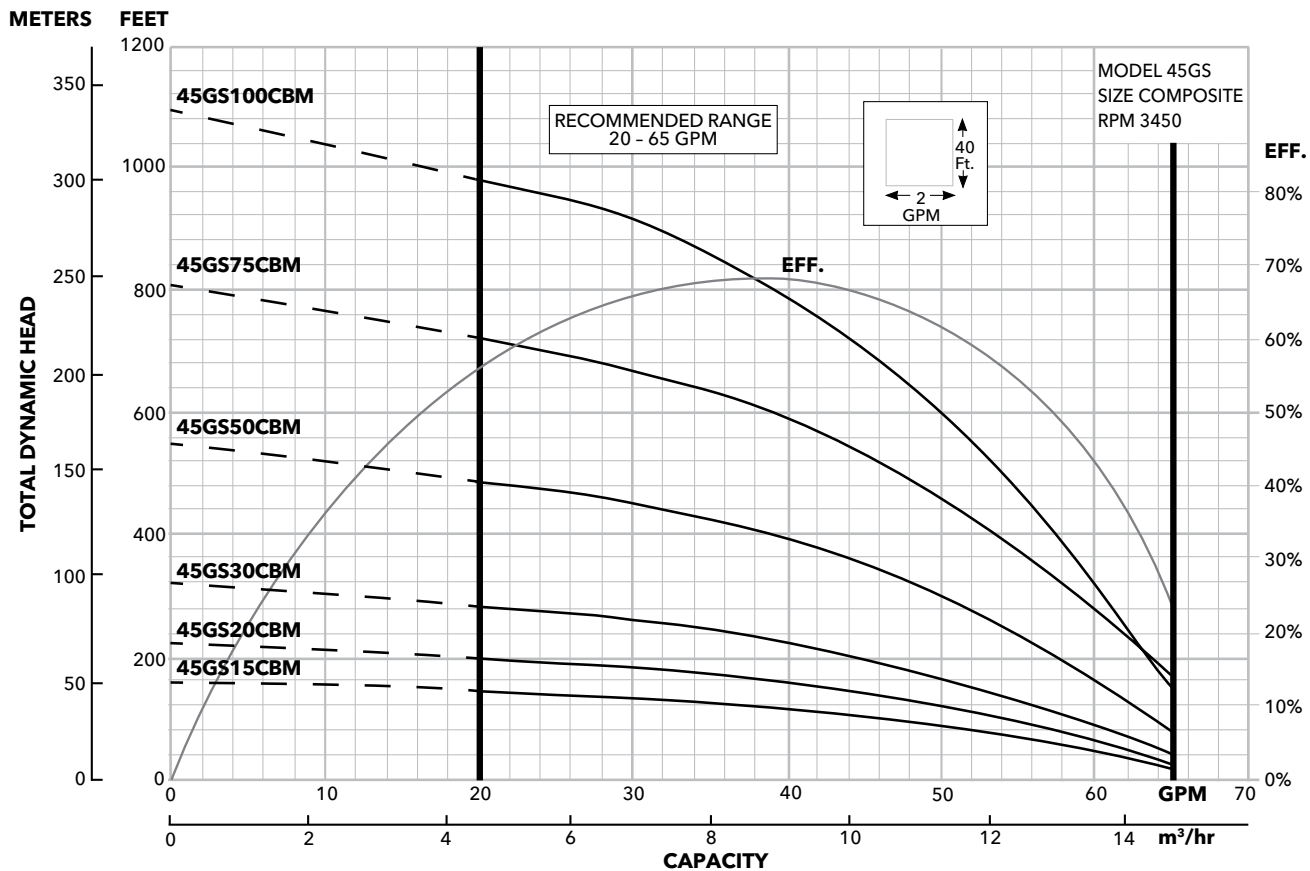
25GSCBM Curve



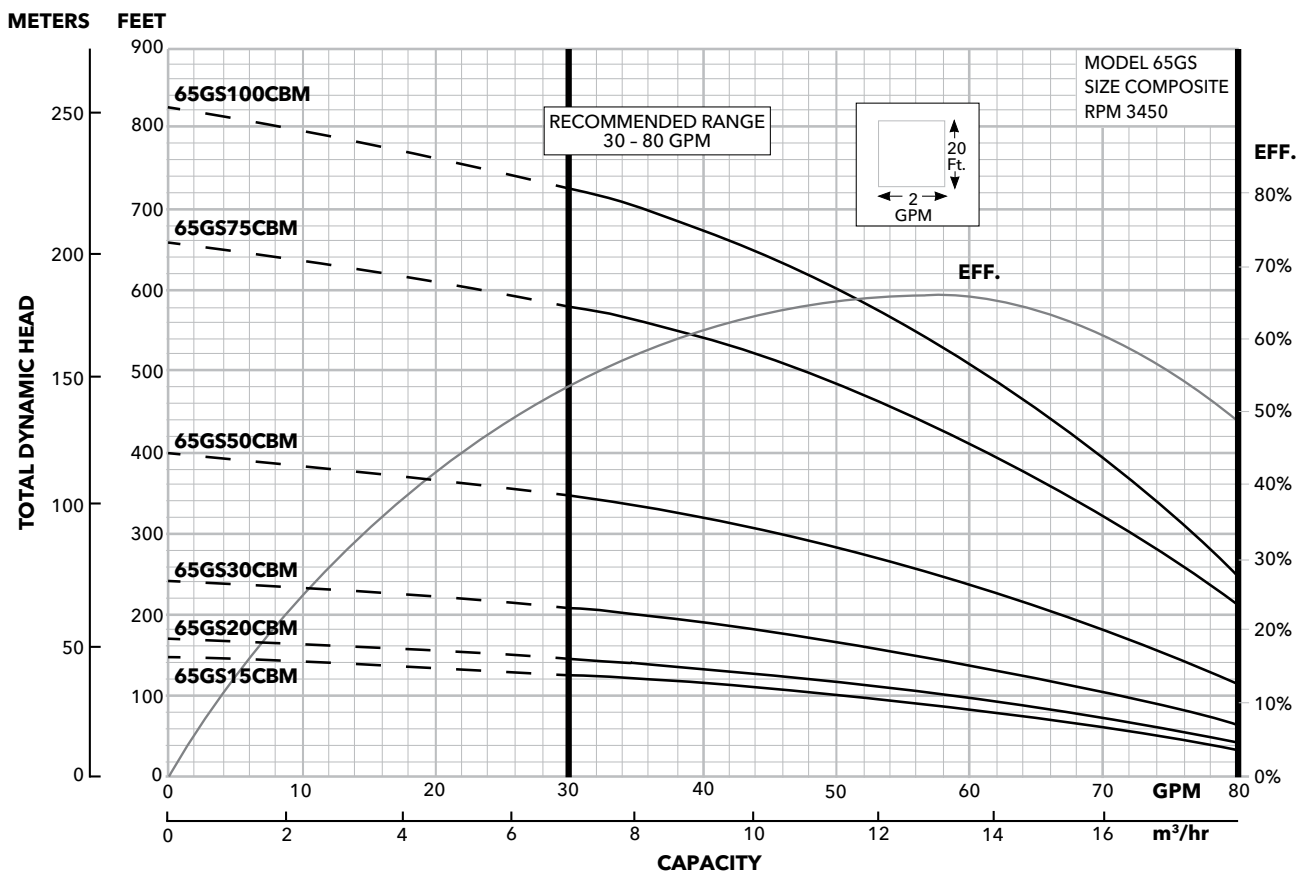
35GSCBM Curve



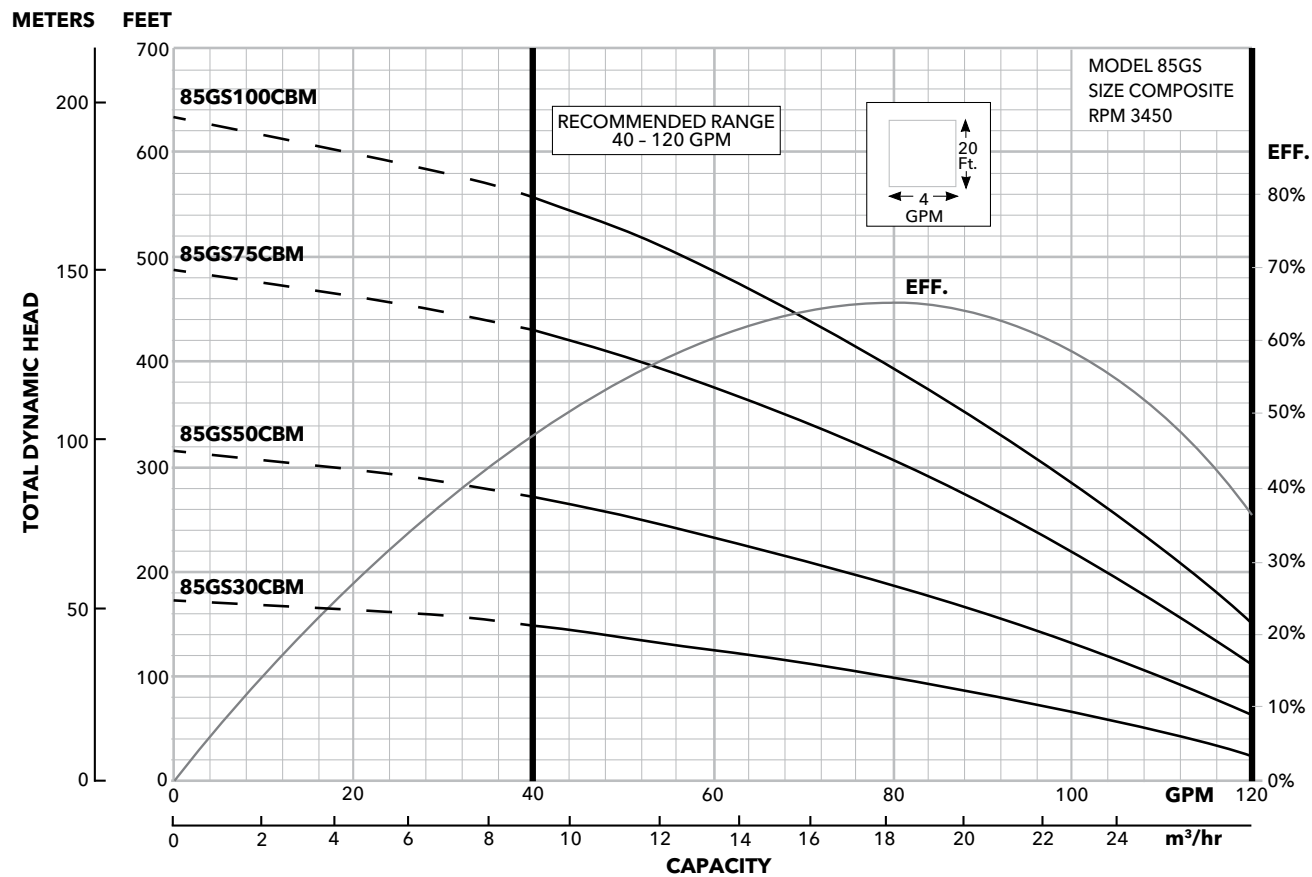
45GSCBM Curve



65GSCBM Curve



85GSCBM Curve





e-GS

35GS, 45GS, 65GS & 85GS

35-85 GPM 1-10HP, 60 HZ, SUBMERSIBLE PUMPS



FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

Field Serviceable: Units have left hand threads and are field serviceable with common tools and readily available repair parts.

Sand Handling Design: Our face clearance, floating impeller stack has proven itself for over 50 years as a superior sand handling, durable pump design.

FDA Compliant Non-Metallic Parts: Impellers, diffusers and bearing spiders are constructed of glass filled engineered composites. They are corrosion resistant and non-toxic.

Discharge Head/Check Valve: Cast 303 stainless steel for strength and durability. Two cast-in safety line loops for installer convenience. The built-in check valve is constructed of stainless steel and FDA compliant BUNA rubber for abrasion resistance and quiet operation.

Motor Adapter: Cast 303 stainless steel for rigid, accurate alignment of pump and motor. Easy access to motor mounting nuts using standard open end wrench.

Stainless Steel Casing: Polished stainless steel is strong and corrosion resistant.

Hex Shaft Design: Six sided shafts for positive impeller drive.

Engineered Polymer Bearings: The proprietary, engineered polymer bearing material is strong and resistant to abrasion and wear. The enclosed upper bearing is mounted in a durable glass filled engineered composite bearing spider for excellent abrasion resistance.

WATER END DATA

Series	Model	Required HP	Stages	Water End	
				Length (in)	Weight (lbs)
35GS	35GS10	1	6	14.2	8
	35GS15	1.5	8	16.6	9
	35GS20	2	10	19.1	10
	35GS30	3	14	24.0	13
	35GS50	5	23	36.4	20
	35GS75	7.5	36	53.0	28
	35GS100	10	46	65.2	34
45GS	45GS15	1.5	5	12.9	8
	45GS20	2	7	15.4	9
	45GS30	3	10	19.0	10
	45GS50	5	17	27.7	15
	45GS75	7.5	25	38.9	21
	45GS100	10	34	50.6	27
65GS	65GS15	1.5	6	19.1	10
	65GS20	2	7	21.2	11
	65GS30	3	10	27.4	12
	65GS50	5	16	41.2	18
	65GS75	7.5	26	62.3	35
	65GS100	10	33	76.8	42
85GS	85GS30	3	8	29.4	13
	85GS50	5	14	42.8	18
	85GS75	7.5	21	63.8	35
	85GS100	10	27	79.9	41

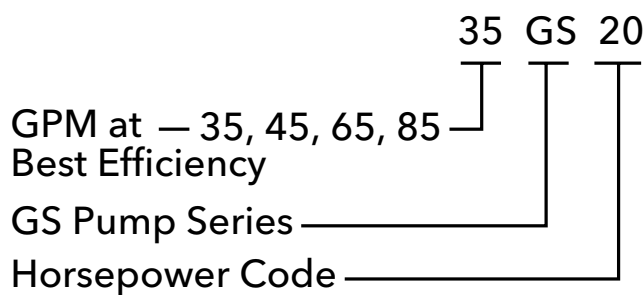
SPECIFICATIONS

Model	Flow Range GPM	Horse-Power Range	Best Efficiency GPM	Discharge Connection	Minimum Well Size	Rotation
35GS	10-50	1.0 - 10	35	2"	4"	CCW
45GS	20 - 65	1.5 - 10	45	2"	4"	CCW
65GS	30 - 80	1.5 - 10	65	2"	4"	CCW
85GS	40 - 120	3.0 - 10	85	2"	4"	CCW

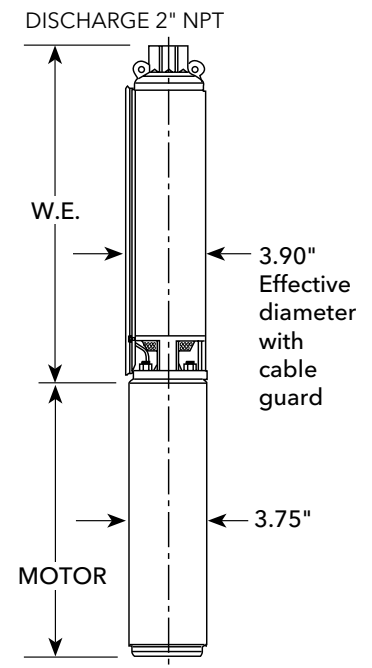
"GS" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	AISI 303 SS
Check Valve Poppet	AISI 303 SS
Check Valve Seal	BUNA, FDA Compliant
Check Valve Seat	AISI 304 SS
Check Valve Retaining Ring	AISI 302 SS
Bearing Spider - Upper	Glass filled engineered composite
Bearing	Proprietary Engineered Polymer
Klipring	AISI 301 SS
Diffuser	Glass filled engineered composite
Impeller	Glass filled engineered composite
Bowl	AISI 304 SS
Intermediate Sleeve*	AISI 304 SS, Powder Metal
Intermediate Shaft Coupling*	AISI 304 SS, Powder Metal
Intermediate Bearing Spider*	Glass filled engineered composite
Intermediate Bearing Spider*	AISI 303 SS
Shim	AISI 304 SS
Screws - Cable Guard	AISI 304 SS
Motor Adapter	AISI 303 SS
Casing	AISI 304 SS
Shaft	17-4 PH Stainless Steel
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS
Suction Screen	AISI 304 SS

NOMENCLATURE - SOLD AS WATER ENDS ONLY



10 = 1	50 = 5
15 = 1½	75 = 7½
20 = 2	100 = 10
30 = 3	



GOULDS WATER TECHNOLOGY 4" SINGLE-PHASE MOTORS

Order No.	Type	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M10422	2-wire PSC	1	230	13.3 (337)	24.5 (11.1)
M15422		1.5		14.9 (378)	28.9 (13.1)
M10412	3-wire	1	230	11.7 (297)	23.1 (10.5)
M15412		1.5		13.6 (345)	27.4 (12.4)
M20412		2		15.1 (383)	31.0 (14.1)
M30412		3		18.3 (466)	40.0 (18.1)
M50412		5		27.7 (703)	70.0 (31.8)

GOULDS WATER TECHNOLOGY 4" THREE-PHASE MOTORS

Order No.	HP	Volts	Length in. (mm)	Weight lb. (kg.)
M10430	1	200	11.7 (297)	22 (10.4)
M15430	1.5		11.7 (297)	22 (10.4)
M20430	2		13.8 (351)	28 (12.7)
M30430	3		15.3 (389)	32 (14.5)
M50430	5		21.7 (550)	55 (24.9)
M75430	7.5		27.7 (703)	70 (31.8)
M10432	1	230	11.7 (297)	23 (10.4)
M15432	1.5		11.7 (297)	23 (10.4)
M20432	2		13.8 (351)	28 (12.7)
M30432	3		15.3 (389)	32 (14.5)
M50432	5		21.7 (550)	55 (24.9)
M75432	7.5		27.7 (703)	70 (31.8)
M10434	1	460	11.7 (297)	23 (10.4)
M15434	1.5		11.7 (297)	23 (10.4)
M20434	2		13.8 (351)	28 (12.7)
M30434	3		15.3 (389)	32 (14.5)
M50434	5		21.7 (550)	55 (24.9)
M75434	7.5		27.7 (703)	70 (31.8)
M100434	10		—	—
M15437	1.5	575	11.7 (297)	23 (10.4)
M20437	2		15.3 (389)	32 (14.5)
M30437	3		15.3 (389)	32 (14.5)
M50437	5		27.7 (703)	70 (31.8)
M75437	7.5		27.7 (703)	70 (31.8)

NEMA MOTOR

- Corrosion resistant stainless steel construction.
- Built-in surge arrestor is provided on single phase motors through 5 HP.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Replaceable motor lead assembly.
- NEMA mounting dimensions.
- Control box is required with 3 wire single phase units.
- Three phase units require a magnetic starter with three leg Class 10 overload protection.

AGENCY LISTINGS



Goulds water technology Motor - tested to UL778 and CAN 22.2 by CSA International (Canadian Standards Association)



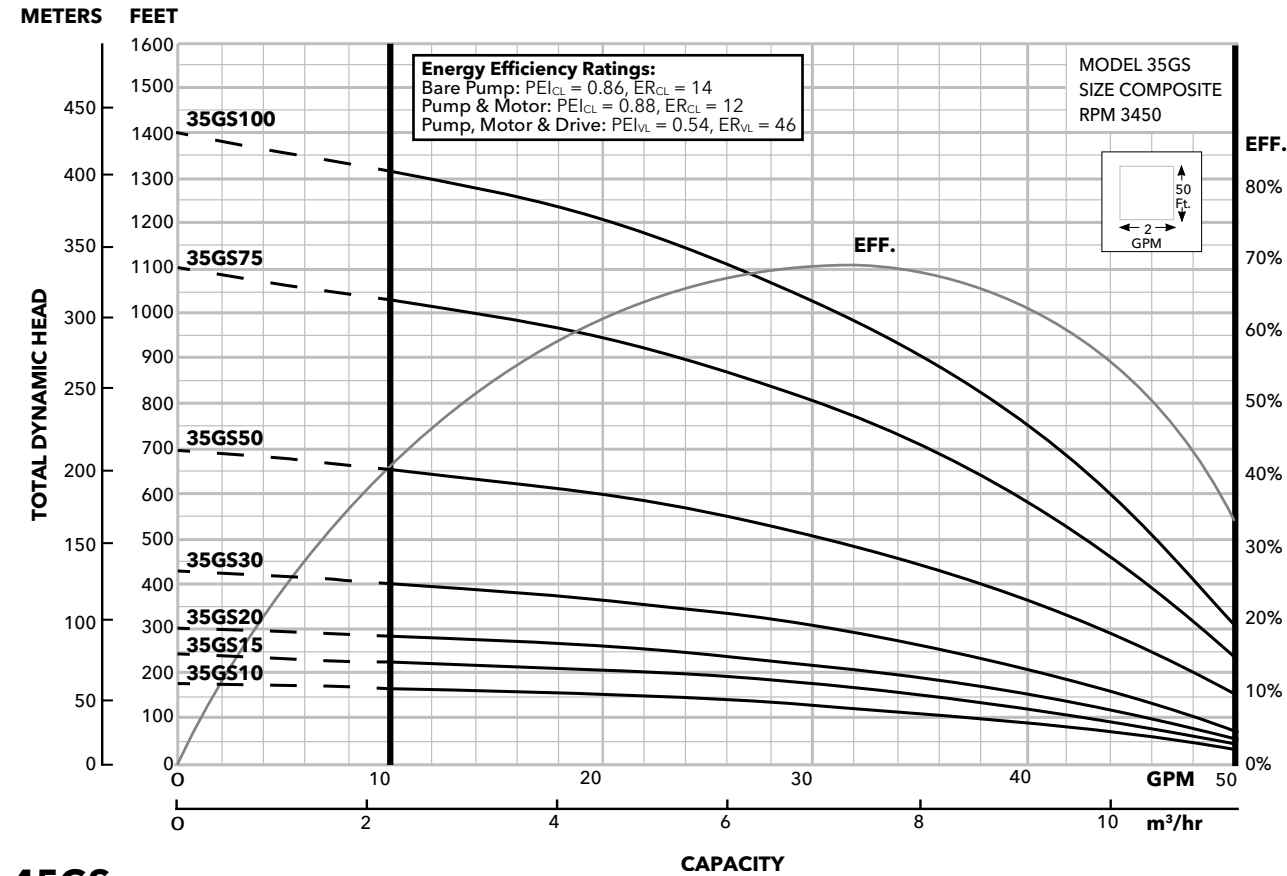
Goulds water technology Motor - Certified to NSF/ANSI 61, Annex G, Drinking Water System Components 4P49



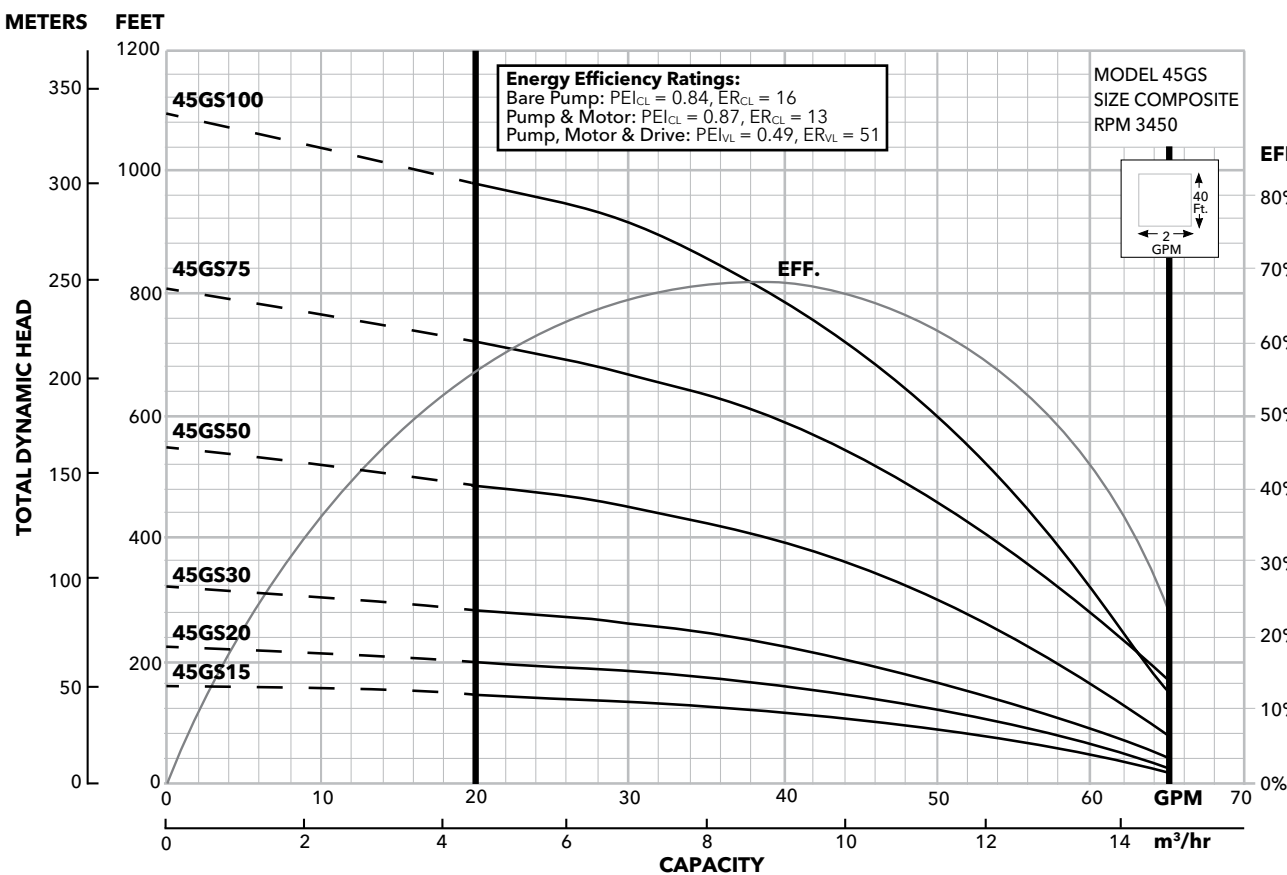
NSF/ANSI 372 - Drinking Water System Components - Lead Content

CLASS 6853 01 - Low Lead Content Certification Program - Plumbing Products

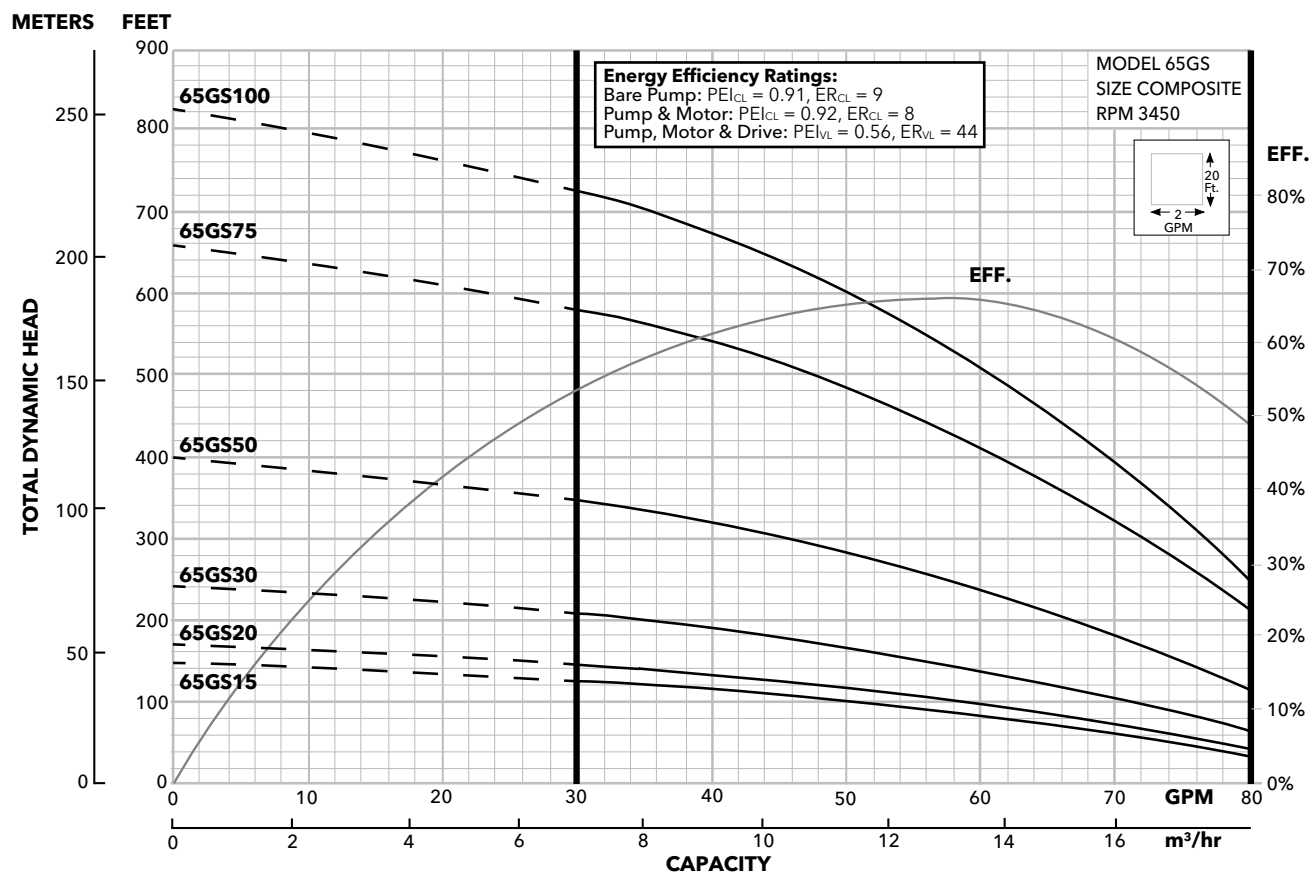
Model 35GS



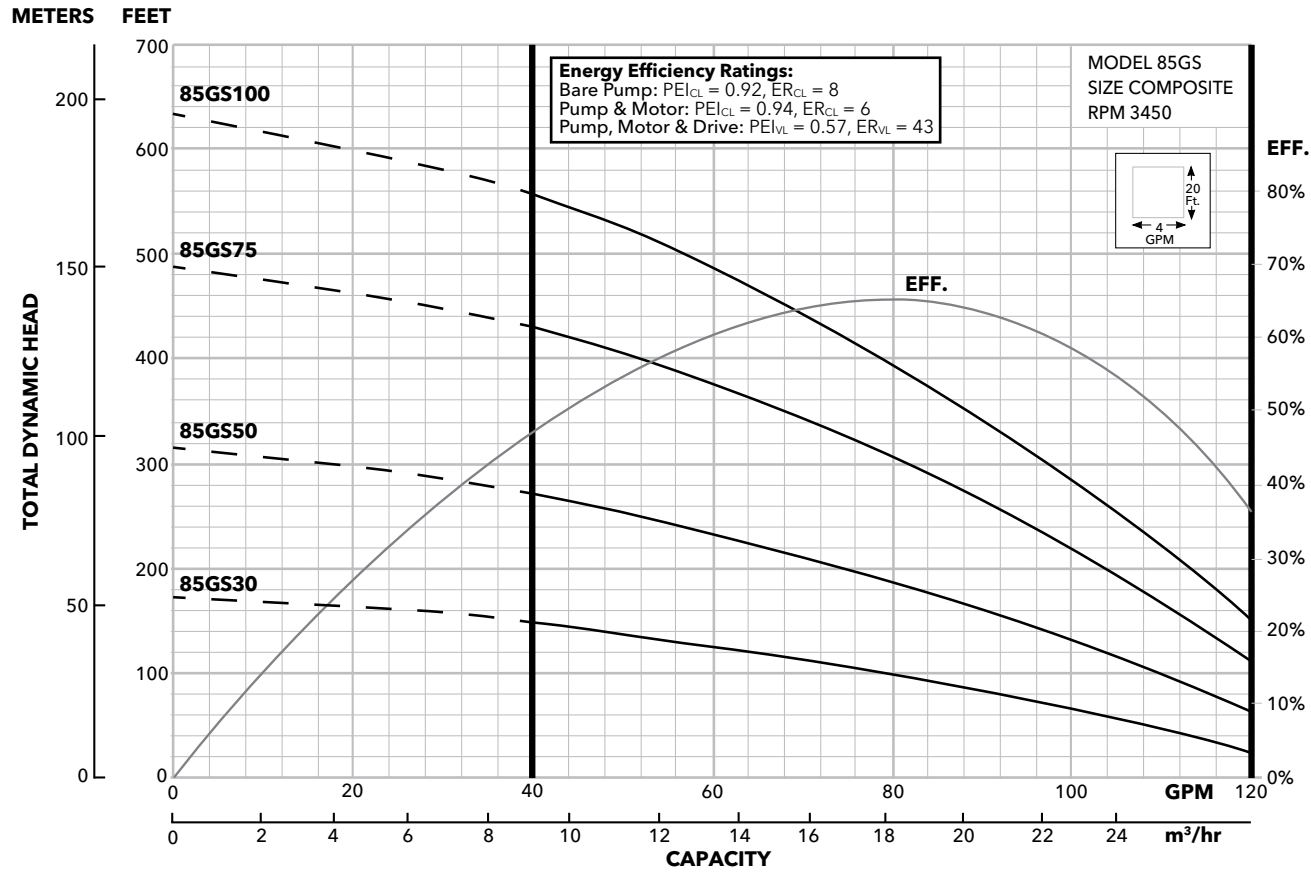
Model 45GS



Model 65GS



Model 85GS



MODEL 35GS

SELECTION CHART

Horsepower Range 1 - 3, Recommended Range 10 - 50 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	520	560	600	
35GS10	1	0		49	46	42	38	33	26	15																				
		20	44	40	36	31	23	11																						
		30	40	36	30	22																								
		40	35	29	20																									
		50	28	18																										
		60	16																											
Shut-off PSI			69	60	52	43	34	26	17	8																				
35GS15	1½	0			48	46	43	40	37	33	29	23	14																	
		20	47	45	43	39	36	32	28	21	10																			
		30	45	42	39	35	32	27	19																					
		40	42	38	35	31	26	18																						
		50	38	34	30	25	16																							
		60	34	29	24	15																								
Shut-off PSI			97	88	79	71	62	53	45	36	27	19	10																	
35GS20	2	0			50	48	46	44	42	39	37	34	30	26	20	12														
		20	49	47	45	43	41	38	36	33	29	24	17																	
		30	47	45	43	40	38	35	32	28	23	16																		
		40	44	42	40	38	35	32	27	22	15																			
		50	42	40	37	34	31	27	21	14																				
		60	39	37	34	30	26	20	12																					
Shut-off PSI			123	114	105	97	88	79	71	62	53	45	36	27	19	10														
35GS30	3	0				50	48	47	45	44	42	41	39	38	36	34	31	28	25	21	16	10								
		20		49	48	46	45	43	42	40	39	37	35	33	30	27	24	19	14											
		30	49	47	46	45	43	42	40	39	37	35	33	30	27	23	18	13												
		40	47	46	44	43	41	40	38	37	35	32	30	26	22	18	12													
		50	46	44	43	41	40	38	36	34	32	29	26	22	17	11														
		60	44	42	41	39	38	36	34	31	29	25	21	16	10															
Shut-off PSI			176	168	159	150	142	133	124	116	107	98	90	81	72	64	55	46	38	29	20	12								

Horsepower Range 5-10, Recommended Range 10 - 50 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																										
			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
35GS50	5	0			50	48	46	43	41	38	35	31	26	19	11														
		20		50	48	46	44	41	38	35	31	26	20	12															
		30		49	47	45	42	40	37	33	29	24	16																
		40	50	48	46	44	41	38	35	31	27	20	12																
		50	49	47	45	43	40	37	34	29	24	17																	
			48	46	44	41	39	35	32	27	21	13																	
Shut-off PSI			280	259	237	215	194	172	150	129	107	85	64	42															
35GS75	7½	0					50	48	47	46	44	43	41	39	37	35	33	30	27	24	19	14							
		20				50	49	47	46	44	43	41	39	37	35	33	31	28	24	20	14								
		30			50	49	48	47	45	44	42	40	38	37	34	32	29	26	22	17	12								
		40			50	49	47	46	44	43	41	39	38	36	33	31	28	24	20	15									
		50		50	49	48	47	45	44	42	40	39	37	35	32	30	26	22	18	12									
				50	49	47	46	45	43	41	40	38	36	34	31	28	25	20	15										
Shut-off PSI			453	431	410	388	366	345	323	301	280	258	236	215	193	171	150	128	106	85	63	42							
35GS100	10	0							49	48	47	46	45	44	42	41	40	38	37	35	33	31	29	26	24	20	16	11	
		20						49	48	47	46	45	44	42	41	40	38	37	35	33	31	29	27	24	20	16	12		
		30						49	48	47	46	45	44	43	42	40	39	38	36	34	32	30	28	25	22	19	14		
		40					49	48	47	46	45	44	43	41	40	38	37	35	34	32	29	27	24	21	17	12			
		50					49	48	47	46	44	43	42	41	39	38	36	34	33	31	28	26	23	19	15	10			
							49	48	47	46	45	44	43	41	40	39	37	35	34	32	30	27	24	21	17	13			
Shut-off PSI			583	561	540	518	496	475	453	431	410	388	366	345	323	302	280	258	237	215	193	172	150	128	107	85	63	42	

MODEL 45GS

SELECTION CHART

Horsepower Range 1½ - 5, Recommended Range 20 - 65 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	440	480	520	560	600	640		
45GS15	1½	0	64	61	57	52	46	37	23																					
		20	55	50	44	34																								
		30	49	43	32																									
		40	41	30																										
		50	27																											
		60																												
Shut-off PSI			61	52	44	35	26	18	9																					
45GS20	2	0		62	60	57	53	49	45	40	32																			
		20	59	56	52	48	43	38	28																					
		30	55	51	47	43	36	26																						
		40	51	47	42	35	25																							
		50	46	41	34	22																								
		60	40	37	29																									
Shut-off PSI			88	80	71	63	54	45	37	28	19																			
45GS30	3	0		65	62	60	59	56	53	50	47	45	41	37	30	21														
		20	62	60	58	55	52	49	47	44	40	35	28																	
		30	60	58	55	52	49	46	43	39	34	26																		
		40	57	54	51	49	46	42	38	33	25																			
		50	54	51	48	45	42	38	32	23																				
		60	51	48	45	41	37	31	22																					
Shut-off PSI			130	121	113	104	95	87	78	69	61	52	43	35	26	17														
45GS50	5	0				65	63	62	61	60	59	58	56	55	53	51	50	48	46	44	42	39	32	22						
		20		64	63	61	60	59	58	57	56	54	53	51	49	47	46	43	41	38	35	31	20							
		30	64	62	61	60	59	58	57	55	54	52	51	49	47	45	43	41	38	34	30	25								
		40	62	61	60	59	58	57	55	54	52	50	49	47	45	43	40	37	33	29	24									
		50	61	60	59	58	56	55	53	52	50	48	47	45	42	40	37	33	28	23										
		60	60	59	58	56	55	53	52	50	48	46	44	42	39	36	32	28	22											
Shut-off PSI			228	220	211	202	194	185	176	168	159	150	142	133	124	116	107	98	90	81	72	64	46	29						

Horsepower Range 7½ - 10, Recommended Range 20-65 GPM, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																										
			40	80	120	160	200	240	280	320	360	400	440	480	520	560	600	640	680	720	760	800	840	880	920	960	1000	1040	
45GS75	7½	0					63	62	60	58	56	53	51	48	46	43	39	34	28	21									
		20				63	61	60	57	55	53	50	48	45	42	38	33	27	19										
		30			64	62	60	58	56	54	51	49	46	43	40	35	30	23											
		40		65	63	61	59	57	55	52	50	47	45	41	37	32	26												
		50		64	62	60	58	56	54	51	49	46	43	39	35	29	21												
		60	65	63	61	59	57	55	52	50	47	44	41	37	31	25													
Shut-off PSI			332	315	298	280	263	246	228	211	194	177	159	142	125	107	90	73	55	38									
45GS100	10	0				65	64	63	61	60	58	57	55	54	53	51	50	48	46	44	42	39	36	32	28	23			
		20			65	64	63	61	60	58	57	55	54	52	51	49	48	46	44	42	39	36	32	27	22				
		30		65	64	63	62	60	59	57	56	54	53	52	50	49	47	45	43	40	37	33	29	24					
		40		65	64	62	61	60	58	56	55	54	52	51	49	48	46	44	41	38	35	31	26	21					
		50	65	64	63	62	60	59	57	56	54	53	51	50	48	47	45	42	40	36	33	28	23						
		60	65	64	62	61	59	58	56	55	53	52	50	49	47	45	43	41	38	34	30	26	20						
Shut-off PSI			456	439	422	404	387	370	353	335	318	301	283	266	249	231	214	197	179	162	145	127	110	93	75	58			

MODEL 65GS

SELECTION CHART

Horsepower Range 1½ - 5, Recommended Range 30 - 80 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																					
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	440	480
65GS15	1½	0		78	70	61	51	36																
		20	68	58	47	30																		
		30	57	45																				
		40	42																					
		50																						
		60																						
Shut-off PSI			55	46	38	29	20	12																
65GS20	2	0		81	74	67	59	48	35															
		20	72	64	56	45	30																	
		30	63	54	43																			
		40	53	41																				
		50	39																					
		60																						
Shut-off PSI			65	56	48	39	30	22	13															
65GS30	3	0			81	76	71	66	59	53	45	35												
		20	80	75	69	64	57	51	42	32														
		30	74	69	63	56	49	41	30															
		40	68	62	55	48	39																	
		50	61	54	47	38																		
		60	53	46	36																			
Shut-off PSI			96	87	79	70	61	53	44	35	27	18												
65GS50	5	0					80	77	73	70	67	63	59	55	50	45	39	32						
		20				79	76	72	69	66	62	58	54	49	44	37	30							
		30			78	75	72	69	65	61	57	53	48	43	36									
		40		78	75	71	68	64	61	57	52	47	42	35										
		50	77	74	71	67	64	60	56	52	47	41	34											
		60	74	70	67	63	59	55	51	46	40	33												
Shut-off PSI			164	155	147	138	129	121	112	103	95	86	77	69	60	51	43	34	26					

Horsepower Range 7½ - 10, Recommended Range 30 - 80 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																					
			40	80	120	160	200	240	280	320	360	400	440	480	520	560	600	640	680	720	760	800	840	880
65GS75	7½	0						78	74	70	66	61	56	50	44	35								
		20				80	77	73	69	65	60	55	50	42	33									
		30				79	75	71	67	62	57	52	46	38										
		40			80	77	73	69	64	60	54	49	41	32										
		50			78	75	70	66	62	57	51	45	36											
		60		79	76	72	68	64	59	54	48	40	30											
Shut-off PSI			268	251	233	216	199	181	164	147	129	112	95	77	60	43								
65GS100	10	0						80	78	75	72	69	66	62	58	54	50	45	39	31				
		20					80	78	75	72	69	65	62	58	54	49	44	37	30					
		30					79	76	73	70	67	63	59	55	51	46	40	33						
		40			80	77	74	71	68	65	61	57	53	48	43	36								
		50			78	76	73	69	66	63	59	55	50	45	39	32								
		60			79	77	74	71	68	64	60	57	52	48	42	35								
Shut-off PSI			339	322	305	288	270	253	236	218	201	184	166	149	132	114	97	80	62	45				

MODEL 85GS

SELECTION CHART

Horsepower Range 3 - 10, Recommended Range 40 - 120 GPM, 60 Hz, 3450 RPM

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																							
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	440	480	520	
85GS30	3	0		112	103	92	79	64	48																	
		20	100	88	74	59	42																			
		30	86	72	57	39																				
		40	70	54																						
		50	52																							
		60																								
Shut-off PSI			66	58	49	40	32																			
85GS50	5	0				114	109	103	97	90	83	74	66	57	47											
		20	119	113	107	101	95	88	80	72	63	54	43													
		30	112	106	101	94	87	79	70	62	52	41														
		40	105	100	93	85	77	69	60	51	40															
		50	99	92	84	76	68	59	49																	
		60	91	83	75	66	58	48																		
Shut-off PSI			128	119	111	102	93	85	76	67	59	50	41	33	24											
85GS75	7½	0						119	115	111	108	104	100	95	91	86	81	76	71	65	59	52				
		20				118	114	110	106	102	98	94	89	84	80	74	69	63	57	50	41					
		30			117	113	110	106	102	98	93	88	84	79	74	68	62	56	48	40						
		40	120	116	113	109	105	101	97	92	88	83	78	73	67	61	55	47								
		50	116	112	109	105	101	96	92	87	82	77	72	66	60	54	46									
		60	112	108	104	100	95	91	86	81	76	71	66	59	53	45										
Shut-off PSI			203	194	185	177	168	159	151	142	133	125	116	107	99	90	81	73	64	55	47	38				
85GS100	10	0								119	116	114	111	108	104	101	97	94	90	87	83	79	71	62	52	
		20						118	116	113	110	107	103	100	96	93	89	85	82	78	74	70	61	50		
		30				120	118	115	112	109	106	103	99	96	92	89	85	81	77	73	69	65	55	42		
		40			120	117	115	112	109	106	102	99	95	92	88	84	81	77	73	68	64	59	48			
		50		120	117	114	111	108	105	102	98	95	91	87	84	80	76	72	68	63	58	53	40			
		60	119	117	114	111	108	105	101	98	94	91	87	83	79	75	71	67	63	58	52	46				
Shut-off PSI			265	257	248	239	231	222	213	205	196	188	179	170	162	153	144	136	127	118	110	101	84	66	49	



**50L, 65L, 95L, 120L,
160L, 250L, 320L**

6" Stainless Steel Submersible Pumps

60 HZ HIGH CAPACITY - FOR 6" AND LARGER WELLS

FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor. Pump can be operated continuously.

New Design Features: Cast 304 SS discharge head and motor adapter.

Field Serviceable: Easy to install and service. All parts easily dismantled if field service is ever necessary.

Diverse Application: Designed for commercial, municipal and agricultural water needs.

Stainless Steel Construction: Durable in most waters.

Bearings: Replaceable, silicon carbide bearings allow excellent abrasives handling and wear resistance.

Built-in Check Valve: Positive sealing, stainless steel check valve assembly incorporated into discharge head.

Impellers: New stainless steel impeller design provides improved efficiency.

Maximum Temperature: 140°F (60°C) for pump.

Four-Fluted Shaft Design: Four sided stainless steel shaft eliminates impeller keys and provides positive drive.

Coupling: Removable heavy duty stainless steel, splined coupling for maximum load-carrying capability.

Suction Strainer: Stainless steel strainer restricts gravel and other debris from entering the pump.

Cable Guard: Stainless steel cable guard surrounds and protects motor leads.

Fasteners: All fasteners are stainless steel.

Goulds Motors: Designed to NEMA standards. Stainless steel casing resists corrosion. Water filled design provides a constant supply of lubrication. Hermetically sealed stator assures moisture free windings. Durable Kingsbury type thrust bearing absorbs all thrust. Replaceable motor lead assembly.

Certified to NSF/ANSI 61, Annex G.

SPECIFICATIONS

Model	Horsepower Range	Discharge Connection	Recommended GPM Operating Range	GPM at Best Efficiency	Minimum* Well Size	Rotation at Discharge End
50L	3 - 20	3" NPT	17 - 70	50	6" / 8" *	CCW
65L	3 - 40		20 - 90	65		
95L	5 - 40		25 - 130	90		
120L	5 - 50		40 - 170	120		
160L	3 - 60		50 - 240	160		
250L	7.5 - 60	4" NPT	70 - 300	250	6"	
320L	7.5 - 60		100 - 400	320		

* Minimum well size refers only to dimensional fit in a well, the specifier or installer must determine the minimum required well diameter that will insure an adequate supply of water to the pump and also properly cool the motor. See Water End Data Chart for specific diameter by model number.

AGENCY LISTINGS



NSF/ANSI 372 - Drinking Water System Components - Lead Content

CLASS 6853 01 - Low Lead Content Certification Program - Plumbing Products



Pump/Water End - Drinking Water System Components - Certified to NSF/ANSI 61, Annex G

"L" SERIES MATERIALS OF CONSTRUCTION

Ref. No.	Part Name	Material	Material Code
1	Discharge Head	Stainless steel	ASTM CF-8 (AISI 304 cast)
2	Check Valve Support	Stainless steel	ASTM CF-8 (AISI 304 cast)
3	Check Valve	Stainless steel	AISI 304 SS
4	Elastomers	Ethylene propylene	EPDM
5	Bolts and Screws	Stainless steel	AISI 304 SS
6	Shaft Sleeve and Bushing	Tungsten carbide	–
7	Thrust Bearing	PTFE+Graphite	–
8	Impeller	Stainless steel	AISI 304 SS
9	Diffuser	Stainless steel	AISI 304 SS
10	Spacer	Stainless steel	AISI 431 SS
11	Tie Rod	Stainless steel	AISI 304 SS
12	Cable Guard	Stainless steel	AISI 304 SS
13	Wear Rings	Technopolymer PPO	Engineered polymer
14	Strainer	Stainless steel	AISI 304 SS
15	Shaft	Stainless steel	AISI 431 SS
16	Shaft Coupling	Stainless steel	AISI 431 SS
17	Motor Adapter	Stainless steel	ASTM CF-8 (AISI 304 cast)

SYSTEM COMPONENTS

□ Pump/Water End:

- 50L-250L with 3" NPT discharge.
- 320L with 4" NPT discharge.
- 3 HP Water Ends Have 4" Motor Adapters
- 5 & 7.5 HP Water Ends Have Either a 4" or 6" Motor Adapter (see Water End Data chart)
- 10 HP and Larger Water Ends Have 6" Motor Adapters

□ Motor:

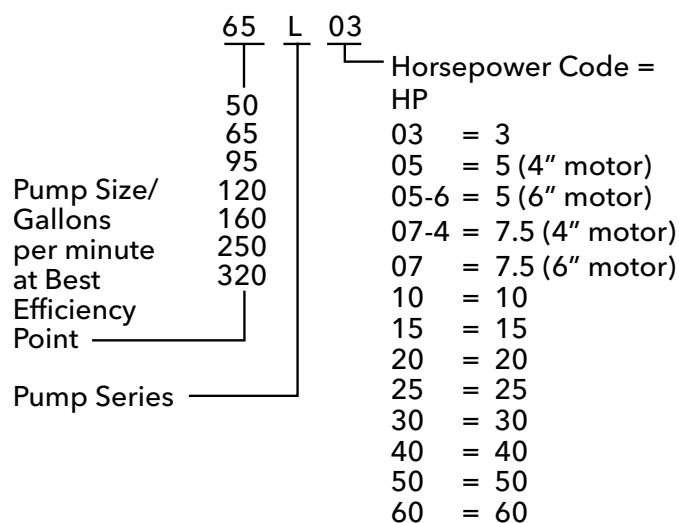
- 4" motor required for 3 HP and 5 HP pumps.
- 4" or 6" motors can be used for 7.5 HP pumps.
- 6" motor required for 10 HP and larger pumps.

□ **Control Box:** Required for all single phase motors.

□ **Magnetic Starter:** A magnetic starter with Class 10 overloads is required for all three phase units.

WATER ENDS AND MOTORS MUST BE ORDERED SEPARATELY AND ARE PACKAGED SEPARATELY.

ORDER NUMBER CODE



WATER END (PUMP) DATA

Model	Order No.	No. Stages	Min. HP Required	Required Motor Dia.	Dimensions & Weights					
					Length		Diameter		Weight	
					in.	mm	in.	mm	lbs.	kg.
50L	50L03	4	3	4	20.6	522	5.59	142	25	11
	50L05R**	7	5	4/6	25.8	656	5.67	144	35	16
	50L05**	8	5		27.8	706			40	18
	50L07**	11	7.5		33.3	844			49	22
	50L10	15	10	6	40.2	1020			57	26
	50L15	23	15		56.9	1446			82	37
	50L20	28	20		65.8	1670			94	43
65L	65L03	3	3	4	18.6	472	5.59	142	26	12
	65L05**	5	5	4/6	22.2	564	5.67	144	31	14
	65L07**	7	7.5		25.8	656			35	16
	65L10	10	10		31.3	794			44	20
	65L15	16	15	6	42.1	1070			60	27
	65L20	21	20		53.0	1346			75	34
	65L25	27	25		63.9	1622			90	41
	65L30*	32	30		98.7	2508	6.97*	177	220	100
	65L40*	41	40		115.0	2922			253	115
95L	95L05**	3	5	4/6	18.6	472	5.59	142	26	12
	95L07**	5	7.5	6	22.2	564	5.67	144	31	14
	95L10	7	10		25.8	656			35	16
	95L15	10	15		31.3	794			44	20
	95L20	14	20		38.5	978			53	24
	95L25	17	25		43.9	1116			62	28
	95L30	21	30		53.0	1346			75	34
	95L40*	28	40		67.3	1710	6.97*	177	156	71
120L	120L05**	2	5	4/6	16.8	426	5.59	142	22	10
	120L07**	3	7.5		19.5	495	5.67	144	26	12
	120L10	5	10		24.9	633			33	15
	120L15	7	15	6	30.4	771			40	18
	120L20	10	20		38.5	978			51	23
	120L25	12	25		43.9	1116			57	26
	120L30	15	30		52.1	1323			68	31
	120L40	20	40		65.7	1668			86	39
	120L50*	24	50		80.9	2055	6.97*	177	179	81
160L	160L03	1	3	4	14.5	367	5.59	142	18	8
	160L05**	2	5	4/6	17.2	436	5.67	144	22	10
	160L07**	3	7.5		19.9	505			26	12
	160L10	4	10		22.6	574			31	14
	160L15	6	15	6	28.0	712			37	17
	160L20	8	20		33.5	850			44	20
	160L25	9	25		36.2	919			46	21
	160L30	11	30		41.6	1057			53	24
	160L40	15	40		52.5	1333			68	31
	160L50	18	50		60.6	1540			77	35
	160L60	20	60		65.7	1668			86	39
250L	250L07**	2	7.5	4/6	20.8	528	5.67	144	26	12
	250L10	3	10	6	25.3	643			33	15
	250L15	5	15		34.4	873			44	20
	250L20	7	20		43.4	1103			55	25
	250L25	8	25		48.0	1218			60	27
	250L30	9	30		52.5	1333			66	30
	250L40	13	40		70.6	1793			88	40
	250L50	16	50		84.2	2138			104	47
	250L60	19	60		97.8	2484			128	58
320L	320L07**	2	7.5	4/6	21.8	553	5.67	144	27	12
	320L15	4	15	6	30.8	783			38	17
	320L20	5	20		35.4	898			45	20
	320L25	6	25		39.9	1013			50	22
	320L30	8	30		49.0	1243			61	27
	320L40	11	40		62.5	1588			78	35
	320L50	13	50		71.6	1818			89	40
	320L60	16	60		84.2	2138			104	47

* Note pump diameter - high pressure models have an exterior casing and larger diameters, verify they will fit your well.

** Pumps can be configured to accommodate a 4" or 6" motor. See product order code.

MOTOR DATA

NOTE: 4" diameter motors are required for 3 and 5 HP "L" Series pumps.

4" or 6" diameter motors can be used for 7.5 HP "L" Series pumps. See Water End Data Chart.

6" diameter motors are required for 10 HP and larger "L" Series pumps.

GOULDS 4" MOTORS

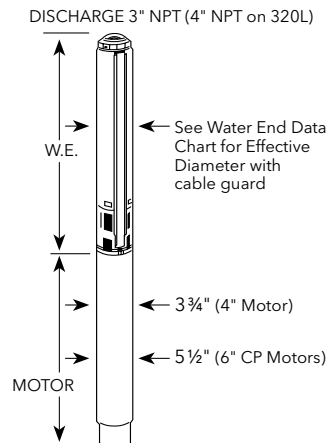
Single Phase Motors - Dimensions and Weights					
Motor Order No.	HP	Motor Dia.	Volts	Length in. (mm)	Weight lbs. (Kg)
M30412	3	4"	230	18.3 (466)	40 (18.1)
M50412	5			27.7 (703)	70 (31.8)
Three Phase Motors - Dimensions and Weights					
M30430	3	4"	200	15.3 (389)	32 (14.5)
M30432			230		
M30434			460		
M50430	5	4"	200	21.7 (550)	55 (24.9)
M50432			230		
M50434			460		
M75430	7.5	4"	200	27.7 (703)	70 (31.8)
M75432			230		
M75434			460		

GOULDS 6" MOTORS

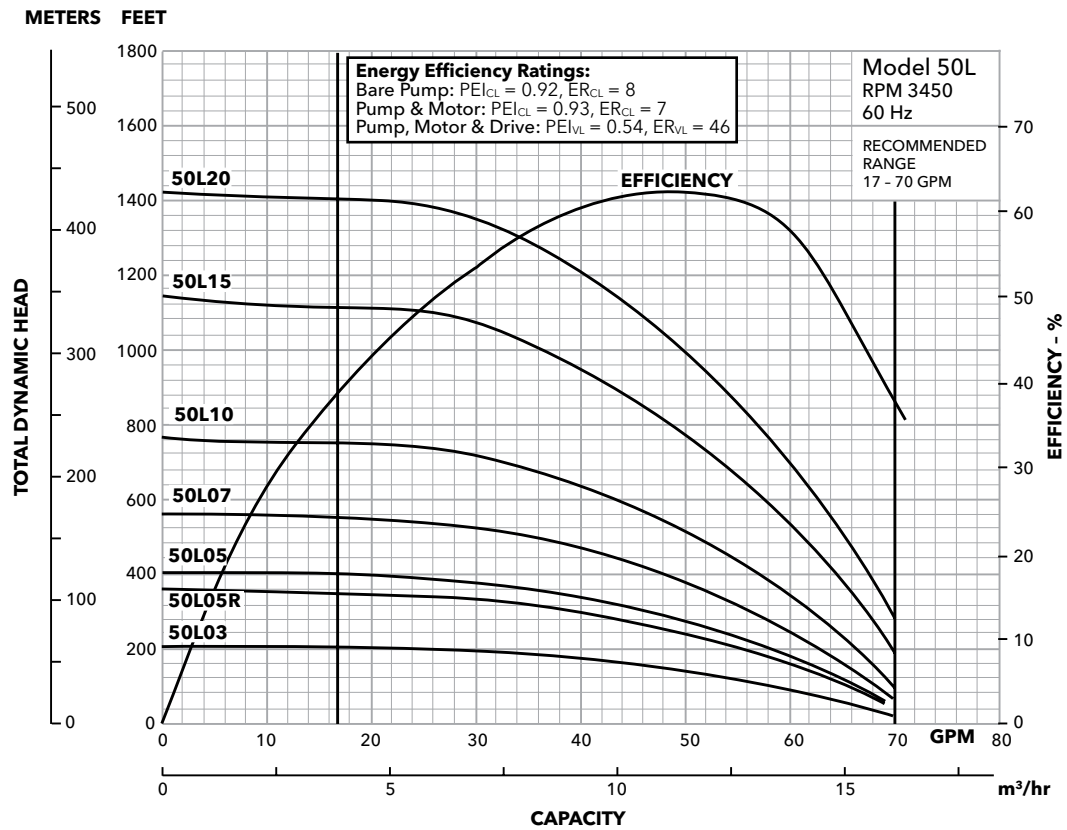
Single Phase Motors - Dimensions and Weights					
Motor Order No.	HP	Motor Dia.	Volts	Length (inches)	Weight (lbs)
6M071	7.5	6"	230	29.9	128
6M101	10	6"	230		
6M151	15	6"	230	33.5	148
Three Phase Motors - Dimensions and Weights					
6M078	7.5	6"	200	24.8	99
6M072			230		
6M074			460		
6M108	10		200	27.0	110
6M102			230		
6M104			460		
6M158	15		200	29.9	128
6M152			230		
6M154			460		
6M208	20		200	31.5	137
6M202			230		
6M204			460		
6M258	25		200	36.2	161
6M252			230		
6M254			460		
6M308	30		200	38.2	176
6M302			230		
6M304			460		
6M404	40			40.6	187
66M504	50			41.7	198
86M504	50	6" x 8"		46.4	353

GOULDS FM-SERIES 6" MOTORS

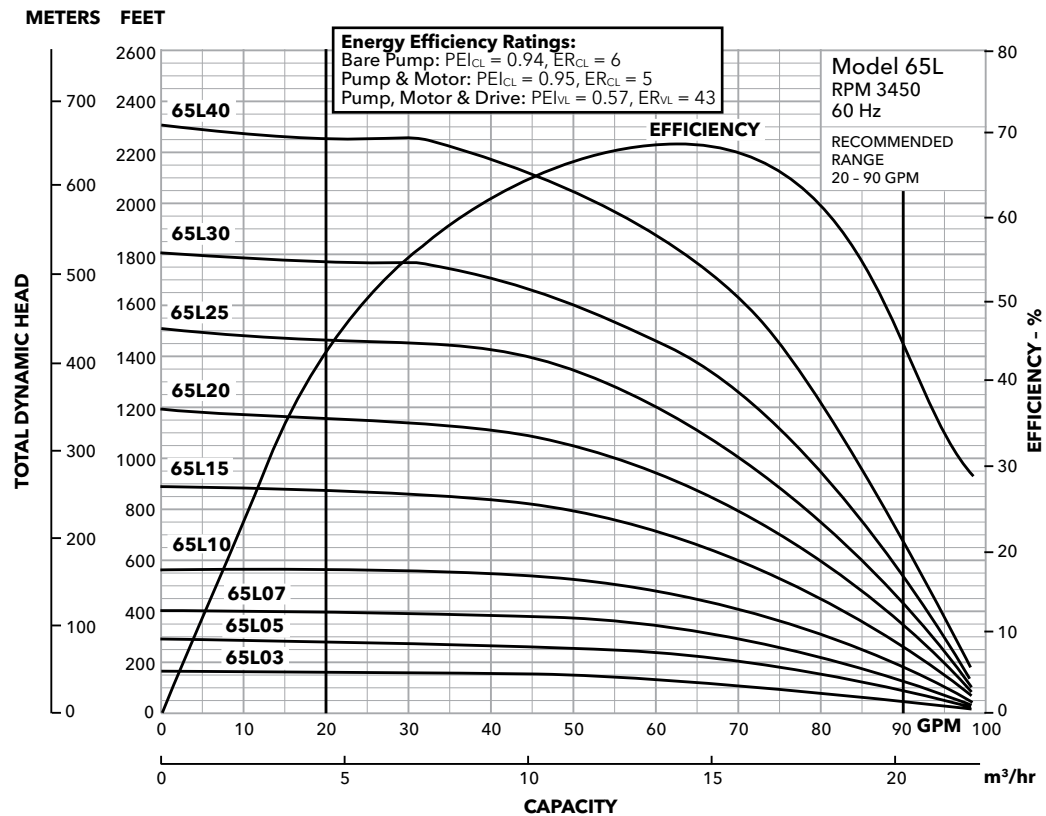
Single Phase Motors Dimensions and Weights					
Motor Order No.	HP	Motor Dia.	Volts	Length (inches)	Weight (lbs)
6F051	5	6"	230	25.6	143
6F071	7.5			28.1	161
6F101	10			30.3	161
6F151	15			32.8	181
Three Phase Motors Dimensions and Weights					
Motor Order No.	HP	Motor Dia.	Volts	Length (inches)	Weight (lbs)
6F058	5	6"	200-208	23.0	107.0
6F052			230		
6F054			460		
6F078	7.5		200-208	24.3	117.0
6F072			230		
6F074			460		
6F108	10		200-208	25.6	124.0
6F102			230		
6F104			460		
6F158	15		200-208	28.1	127.0
6F152			230		
6F154			460		
6F208	20		200-208	30.3	152.0
6F202			230		
6F204			460		
6F258	25		200-208	32.8	164.0
6F252			230		
6F254			460		
6F308	30		200-208	35.6	185.0
6F302			230		
6F304			460		
6F404	40		460	39.3	207.0
6F504	50		460	54.1	285.0



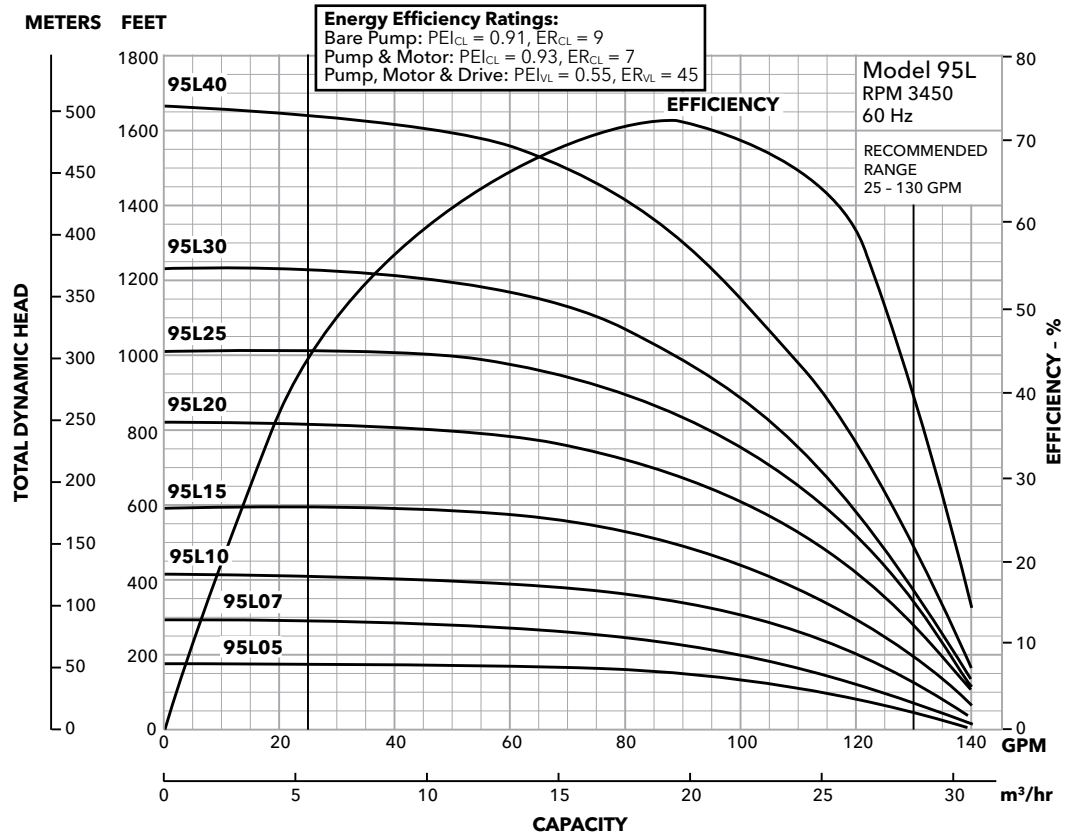
MODEL 50L



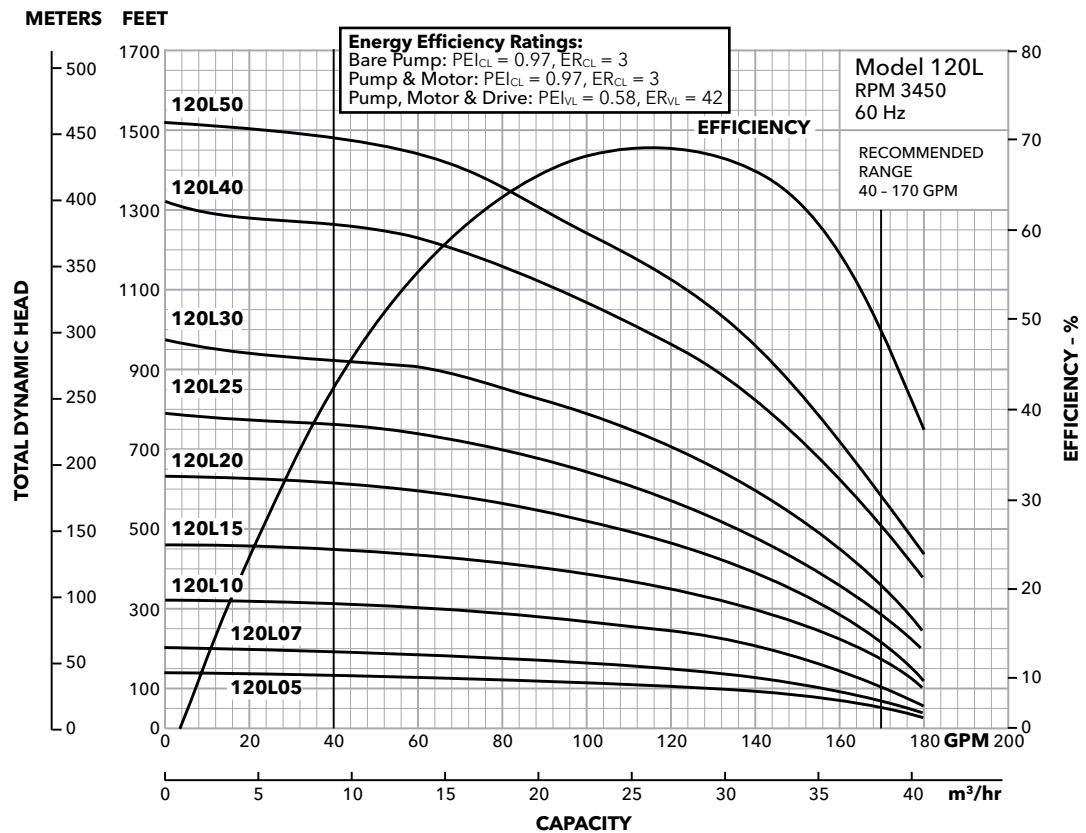
MODEL 65L



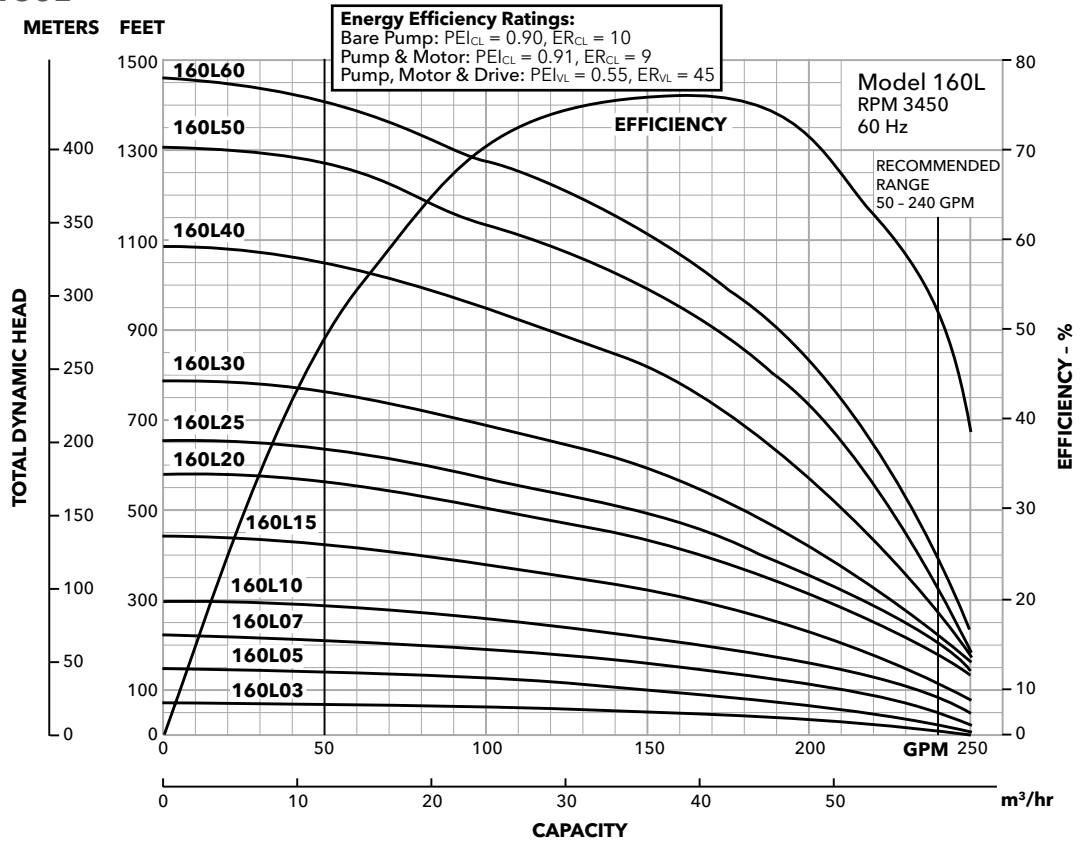
MODEL 95L



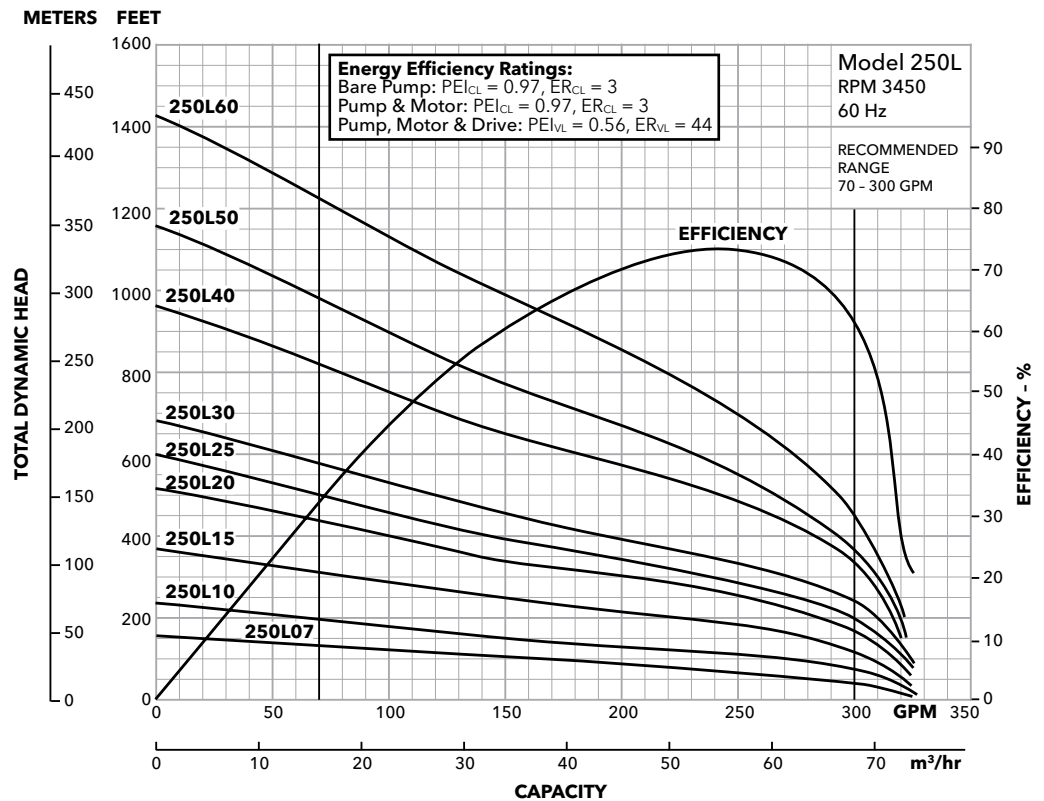
MODEL 120L



MODEL 160L

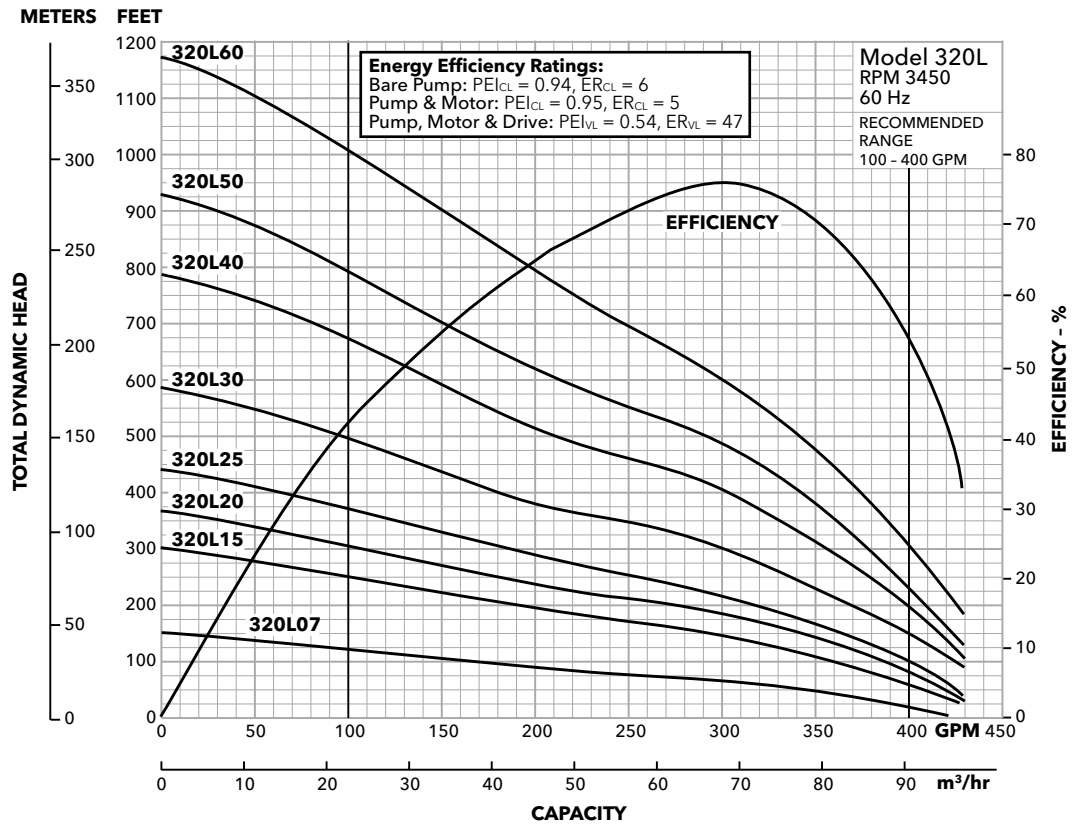


MODEL 250L



NOTE: On 250L, operation below minimum recommended flow will increase motor amp. draw and trip overloads.

MODEL 320L



NOTE: On 320L, operation below minimum recommended flow will increase motor amp. draw and trip overloads.

MODEL 50L

SELECTION CHART

Horsepower Range 3 - 20, Recommended Range 17 - 70 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																
	HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	
50L03 4 Stages	3	0		74	68	62	58	50	42	21																							
		20	69	63	59	52	43	27																									
		30	63	59	52	44	29																										
		40	59	53	45	31																											
		50	53	45	33																												
		60	46	35																													
50L05R 7 Stages	5	0				56	72	67	62	59	58	54	48	44	40	27																	
		20		49	72	68	62	60	58	55	49	44	41	31																			
		30	45	71	69	63	60	58	55	50	45	41	32																				
		40	71	69	63	60	58	55	50	45	41	33																					
		50	70	63	60	58	56	51	45	42	34																						
		60	64	60	59	56	51	46	42	35																							
50L05 8 Stages	5	0			65	74	72	68	64	62	60	58	54	50	46	42	36	21															
		20	62	73	72	68	65	62	61	58	55	51	47	43	37	24																	
		30	73	73	69	65	63	61	58	55	51	47	43	37	26																		
		40	73	69	65	63	61	59	56	52	47	43	38	27																			
		50	69	65	63	61	59	56	52	48	44	39	28																				
		60	66	63	61	59	56	52	48	44	39	29																					
50L07 11 Stages	7.5	0				63	72	74	72	68	66	64	62	61	59	57	55	52	49	46	43	39	33	21									
		20		60	72	74	72	69	66	64	62	61	60	58	55	52	49	46	43	40	34	23											
		30	59	71	74	72	69	66	64	63	61	60	58	55	52	49	46	43	40	35	25												
		40	71	74	72	69	66	64	63	61	60	58	56	53	50	47	44	40	35	26													
		50	74	73	70	67	64	63	61	60	58	56	53	50	47	44	41	36	27														
		60	73	70	67	65	63	61	60	58	56	53	50	47	44	41	36	27															
50L10 15 Stages	10	0					57	68	73	74	73	71	68	66	65	63	62	61	60	59	57	56	54	51	49	47	45	43	40	36	30	21	
		20			54	67	72	74	73	71	69	67	65	63	62	61	60	59	58	56	54	52	49	47	45	43	40	37	32	23			
		30		53	66	72	74	73	71	69	67	65	64	62	61	60	59	58	56	54	52	50	47	45	43	41	37	32	24				
		40	52	65	72	74	73	71	69	67	65	64	63	62	61	59	58	56	54	52	50	48	45	43	41	38	33	24					
		50	65	72	74	73	71	69	67	65	64	63	62	61	59	58	56	54	52	50	48	46	43	41	38	33	25						
		60	71	74	73	72	69	67	65	64	63	62	61	60	58	56	55	52	50	48	46	44	41	38	33	26							

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																
	HP	PSI	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	
50L15 23 Stages	15	0				63	72	74	72	68	66	64	62	61	59	57	55	52	49	46	43	39	33	21									
		20				62	72	74	72	69	66	64	62	61	59	57	55	52	49	46	43	39	34	22									
		30		50	68	74	73	70	67	65	63	62	60	59	56	54	51	48	45	41	37	29											
		40	33	60	72	74	72	69	66	64	62	61	60	58	55	52	49	46	43	40	34	23											
		50	48	67	73	73	71	68	65	63	62	60	59	57	54	51	48	45	42	38	30												
		60	59	71	74	72	69	66	64	63	61	60	58	55	52	49	46	43	40	35	25												
50L20 27 Stages	20	0					57	68	73	74	73	71	68	66	65	63	62	61	60	59	57	56	54	51	49	47	45	43	40	36	30	21	
		20					56	67	73	74	73	71	68	66	65	63	62	61	60	59	58	56	54	52	49	47	45	43	40	37	31	22	
		30				46	62	71	74	74	72	70	67	66	64	63	62	61	60	58	57	55	53	50	48	46	44	42	39	34	27		
		40				54	67	72	74	73	71	69	67	65	63	62	61	60	59	58	56	54	52	49	47	45	43	40	37	32	23		
		50		44	61	70	73	74	72	70	68	66	64	63	62	61	60	59	57	55	53	51	48	46	44	42	39	35	28				
		60	30	53	66	72	74	73	71	69	67	65	64	62	61	60	59	58	56	54	52	50	47	45	43	41	37	32	24				

MODEL 65L

SELECTION CHART

Horsepower Range 3 - 40, Recommended Range 20 - 90 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																						
	HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875	900	
65L03 3 Stages	3	0		89	83	73	64	49																															
		20	84	75	65	53																																	
		30	75	66	59																																		
		40	66	56																																			
		50	58																																				
		60																																					
65L05 5 Stages	5	0				89	85	81	75	68	60	47																											
		20		89	85	81	76	69	61	50	21																												
		30	90	86	82	76	69	62	51	25																													
		40	86	82	77	70	63	52	28																														
		50	82	77	71	63	53	31																															
		60	78	71	64	54	34																																
65L07 7 Stages	7.5	0				88	87	86	83	79	74	69	66	63	57	38																							
		20		91	89	88	86	84	80	75	70	66	64	59	43																								
		30		89	88	86	84	80	75	70	67	64	59	45																									
		40	89	88	87	84	81	76	71	67	64	60	46																										
		50	88	87	85	81	76	71	67	64	60	48																											
		60	87	85	81	77	71	67	65	61	50																												
65L10 10 Stages	10	0					91	89	88	88	88	87	85	82	79	75	71	68	66	65	62	57	44																
		20				91	89	88	88	88	87	85	83	79	76	72	69	67	65	63	58	47	23																
		30				89	88	88	88	87	86	83	80	76	72	69	67	65	63	58	48	25																	
		40			89	88	88	88	87	86	83	80	76	72	69	67	65	63	59	49	28																		
		50	89	88	88	88	87	86	84	80	77	73	69	67	65	63	59	50	30																				
		60	88	88	88	87	86	84	81	77	73	70	67	65	63	60	51	32																					
65L15 16 Stages	15	0						91	90	89	88	88	87	86	85	84	83	81	79	77	75	72	70	68	67	65	64	63	62	60	57	52	44	31					
		20						90	89	88	88	87	87	86	85	84	83	81	79	77	75	73	71	69	67	66	64	63	62	60	57	53	45	33					
		30					90	89	88	88	87	87	86	86	84	83	81	80	77	75	73	71	69	67	66	64	63	62	60	58	53	46	34						
		40					90	89	88	88	87	87	86	86	85	83	82	80	78	75	73	71	69	67	66	65	63	62	61	58	54	47	35						
		50				90	89	88	88	87	87	86	86	85	83	82	80	78	75	73	71	69	67	66	65	64	62	61	58	54	47	36	20						
		60		90	89	88	88	88	87	87	86	85	83	82	80	78	77	73	71	69	67	66	65	64	62	61	58	54	48	37	22								

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																
	HP	PSI	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
65L20 21 Stages	20	0						88	87	85	83	81	78	75	72	69	66	63	60	56	50	39											
		20					88	87	85	84	81	79	76	72	69	66	63	61	57	51	40	20											
		30					87	86	85	83	80	77	74	71	68	65	62	59	54	46	32												
		40				88	87	85	84	82	79	76	73	69	66	64	61	57	51	41	22												
		50				87	86	85	83	80	77	74	71	68	65	62	59	55	47	33													
		60			88	87	86	84	82	79	76	73	70	67	64	61	57	52	42	24													
65L25 27 Stages	25	0				91	89	88	88	87	86	86	84	83	81	79	77	74	72	69	67	66	64	62	60	57	51	41	26				
		20			91	89	88	88	87	86	86	85	83	81	79	77	74	72	70	68	66	64	62	60	57	51	42	27					
		30			90	89	88	87	87	86	85	84	82	80	78	76	73	71	69	67	65	63	62	59	55	47	36						
		40		91	89	88	88	87	87	86	85	83	81	79	77	75	72	70	68	66	64	63	60	57	52	43	29						
		50		90	89	88	87	87	86	85	84	82	81	78	76	73	71	69	67	65	64	62	59	55	48	37							
		60	91	90	89	88	87	87	86	85	83	82	80	77	75	72	70	68	66	64	63	61	57	52	44	30							

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
	HP	PSI	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	
65L30 32 Stages	30	0					89	87	85	83	80	78	76	74	73	71	70	69	68	67	66	65	62	59	54	47	37	
		20				90	88	85	83	81	78	76	74	73	71	70	69	68	67	66	65	62	59	54	47	38		
		30					89	87	84	82	80	77	75	74	72	71	70	69	68	67	66	64	61	57	51	43	33	
		40				90	88	85	83	81	78	76	74	73	71	70	69	68	67	66	65	63	59	55	48	39		
		50				89	87	84	82	80	77	75	74	72	71	70	69	68	67	66	64	61	57	52	44	34		
		60			90	88	86	83	81	79	77	75	73	71	70	69	68	68	66	65	63	60	55	49	40			

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)		
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MODEL 95L

SELECTION CHART

Horsepower Range 5 – 40, Recommended Range 25 – 130 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																			
	HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	
95L05 3 Stages	5	0		128	128	117	99	88	38																											
		20	128	120	101	90	55																													
		30	121	102	90	62																														
		40	104	91	67																															
		50	91	72																																
		60	76																																	
95L07 5 Stages	7.5	0			128	124	122	117	108	97	89	81	58																							
		20		125	123	118	109	99	90	82	64																									
		30	125	123	118	110	99	90	83	66																										
		40	123	119	111	100	91	84	68																											
		50	119	111	101	91	84	70																												
		60	112	102	92	85	72	26																												
95L10 7 Stages	10	0					128	126	125	124	120	113	104	96	91	87	77	48																		
		20				128	126	125	124	120	114	106	98	92	87	79	54																			
		30			128	126	125	124	121	114	106	98	92	88	80	57																				
		40	129	126	125	124	121	115	107	99	92	88	81	60																						
		50	126	125	124	121	116	107	99	93	88	82	63																							
		60	125	125	122	116	108	100	93	89	83	65																								
95L15 10 Stages	15	0								129	126	125	125	125	123	120	116	110	104	99	94	91	88	82	71	45										
		20						129	127	125	125	125	123	121	117	111	105	100	95	91	88	83	73	50												
		30					130	127	125	125	125	124	121	117	112	106	100	95	91	88	84	74	52													
		40				130	127	126	125	125	124	121	117	112	106	100	95	92	89	84	75	55														
		50		130	127	126	125	125	124	121	118	112	107	101	96	92	89	85	76	57																
		60	130	127	126	125	124	122	118	113	107	101	96	92	89	85	77	59																		
95L20 14 Stages	20	0										130	128	127	126	125	125	124	122	120	117	114	110	106	102	98	94	91	89	86	82	75	63	43		
		20									130	128	127	126	125	125	124	123	121	118	114	110	106	102	98	95	92	89	86	82	76	65	47			
		30								130	128	127	126	125	125	124	123	121	118	115	111	107	102	99	95	92	89	87	83	77	66	48				
		40									128	127	126	125	125	124	123	121	118	115	111	107	103	99	95	92	90	87	83	77	67	50				
		50							129	127	126	125	125	124	123	121	118	115	111	107	103	99	96	92	90	87	83	78	68	52						
		60						129	127	126	126	125	124	123	121	119	115	112	108	103	99	96	93	90	87	84	78	69	53							

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																	
	HP	PSI	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600			
95L25 17 Stages	25	0			128	126	126	126	125	122	116	109	102	96	91	88	83	67																
		20		127	126	126	126	124	120	114	106	99	94	90	86	78	56																	
		30		129	126	126	126	125	122	117	110	103	96	92	88	84	71																	
		40	129	127	123	120	117	114	110	106	101	95	89	81	70	49																		
		50	128	126	126	126	124	120	114	107	100	94	90	87	79	59																		
		60	127	126	126	125	122	118	111	104	97	92	89	84	72																			
95L30 21 Stages	30	0			130	127	126	125	125	124	122	119	115	111	106	101	96	92	89	85	78	66	42											
		20		130	127	126	125	125	124	122	120	116	111	106	101	96	93	89	85	79	67	45												
		30		129	127	126	125	125	123	121	118	114	109	104	99	95	91	88	83	74	58	29												
		40	130	127	126	125	125	124	123	120	116	112	106	101	97	93	89	86	80	68	47													
		50	129	127	126	125	125	124	122	118	114	109	104	99	95	91	88	83	75	60	32													
		60	128	126	125	125	124	123	120	116	112	107	102	97	93	90	86	80	69	49														
95L40 28 Stages	40	0			130	128	127	126	126	125	125	124	123	121	119	116	113	109	106	102	99	95	92	89	86	83	78	70	59	41				
		20			130	128	127	126	126	125	125	124	123	121	119	116	113	110	106	102	99	96	92	90	87	83	78	71	60	43				
		30			129	128	127	126	125	125	124	124	122	120	118	115	112	108	104	101	97	94	91	88	85	81	75	66	53	32				
		40		130	129	127	126	126	125	125	124	123	121	119	117	113	110	106	103	99	96	93	90	87	83	79	72	61	44	19				
		50		130	128	127	126	126	125	125	124	122	120	118	115	112	108	105	101	98	94	91	88	85	81	76	67	54						
		60	131	129	127	126	126	125	125	124	123	121	119	117	114	110	107	103	99	96	93	90	87	84	79	72	62	46						

MODEL 120L

SELECTION CHART

Horsepower Range 5 - 50, Recommended Range 40 - 170 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																
	HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	
120L05 2 Stages	5	0		167	147	121	53																										
		20	150	126	68																												
		30	129	75																													
		40	82																														
		50																															
		60																															
120L07 3 Stages	7.5	0			166	153	138	116	74																								
		20	168	155	141	120	82																										
		30	156	142	122	86																											
		40	143	124	90																												
		50	126	93																													
		60	96																														
120L10 5 Stages	10	0				170	164	157	150	141	131	115	91	56																			
		20			165	158	151	143	132	118	95	62																					
		30		165	158	151	143	133	119	97	65																						
		40	166	159	152	144	134	120	99	68																							
		50	159	152	145	135	122	101	71																								
		60	153	145	136	123	103	74																									
120L15 7 Stages	15	0							170	163	155	148	142	136	130	121	109	90	63														
		20					171	164	156	149	143	137	131	123	111	94	68																
		30					164	157	150	143	137	131	123	112	95	70																	
		40				165	157	150	144	138	132	124	113	97	72																		
		50			165	158	151	144	138	132	125	114	98	74	40																		
		60		166	158	151	145	139	133	125	115	100	77	43																			
120L20 10 Stages	20	0								168	164	159	155	151	146	142	137	132	126	119	110	99	85	69	48								
		20					168	164	160	156	151	147	143	138	133	127	120	111	101	88	71	51											
		30					169	165	160	156	152	147	143	138	133	127	120	112	101	89	73	53											
		40				169	165	161	156	152	148	143	139	134	128	121	113	102	90	74	55												
		50			169	165	161	157	152	148	144	139	134	128	121	113	103	91	75	56													
		60		170	166	161	157	153	148	144	139	134	129	122	114	104	92	77	58														
120L25 12 Stages	25	0								169	165	160	156	151	147	143	139	135	130	126	121	116	109	101	91	78	63	44					
		20						170	165	161	156	152	147	143	139	135	131	127	122	117	110	102	92	80	65	47							
		30						170	166	161	157	152	148	143	139	135	131	127	122	117	111	103	93	81	67	49							
		40					170	166	162	157	152	148	144	140	136	132	127	123	117	111	103	94	82	68	50								
		50				171	166	162	157	153	148	144	140	136	132	128	123	118	112	104	95	83	69	52									
		60			171	167	162	158	153	149	144	140	136	132	128	124	118	112	105	95	84	70	53										

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																													
	HP	PSI	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450		
120L30 15 Stages	30	0					165	158	151	144	138	131	123	113	99	80	54													
		20				165	158	152	145	138	131	123	114	100	82	56														
		30			169	162	155	148	142	135	128	119	108	92	71	41														
		40			166	159	152	145	139	132	124	114	101	83	58															
		50		169	163	156	149	142	136	128	120	109	94	73	44															
		60		166	160	153	146	139	132	125	115	102	85	60																
120L40 20 Stages	40	0							170	166	161	156	150	145	140	134	129	123	115	107	96	82	65	42						
		20							166	161	156	151	145	140	135	129	123	116	108	97	83	66	44							
		30						169	164	159	154	148	143	138	132	126	120	112	103	91	76	57								
		40						167	162	156	151	146	140	135	130	124	117	108	98	85	68	46								
		50					169	164	159	154	149	143	138	133	127	120	113	104	92	77	58									
		60					167	162	157	151	146	141	135	130	124	117	109	99	86	69	48									
120L50 24 Stages	50	0									168	164	161	158	156	153	149	144	137	130	122	114	107	100	94	87	76	56		
		20								168	164	161	159	156	153	149	144	138	130	123	115	108	101	95	87	77	58			
		30								166	163	160	157	155	151	147	141	134	127	119	111	104	98	92	83	69				
		40							169	165	161	159	156	153	150	145	138	131	123	115	108	101	95	88	78	60				
		50						167	163	160	158	155	152	147	142	135	127	120	112	105	99	92	84	71						
		60						165	162	159	156	154	150	145	139	132	124	116	109	102	96	89	79	62						

MODEL 160L

SELECTION CHART

Horsepower Range 3 - 60, Recommended Range 50 - 240 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																															
	HP	PSI	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250					
160L03	3	0	243	237	208	177	147	102																								
		10	198	167	136	86																										
		20	124	62																												
Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																															
HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	
160L05 2 Stages	5	0	236	214	185	149	87																									
		20	190	155	100																											
		30	158	105																												
		40	111																													
160L07 3 Stages	7.5	0	231	239	227	207	184	158	123	68																						
		20	229	210	188	162	129	78																								
		30	212	189	164	132	83																									
		40	191	166	135	88																										
		50	168	138	92																											
		60	140	97																												
160L10 4 Stages	10	0				233	218	203	185	164	137	103	57																			
		20		234	221	205	188	167	142	109	65																					
		30	235	222	206	189	169	144	111	69																						
		40	223	208	191	171	146	114	73																							
		50	209	192	172	148	117	76																								
		60	193	174	150	120	80																									
160L15 6 Stages	15	0					239	231	222	212	201	190	178	164	148	129	104	74														
		20					232	223	213	203	192	180	166	151	132	108	79															
		30					233	224	214	204	193	181	167	152	134	110	81															
		40		234	225	215	204	193	182	169	153	135	112	84																		
		50	234	225	216	205	194	183	170	155	137	114	86	50																		
		60	226	216	206	195	183	171	156	138	116	89	53																			
160L20 8 Stages	20	0								234	225	217	209	200	192	183	173	163	151	137	121	102	79	51								
		20						235	227	218	210	202	193	184	175	165	153	140	124	105	83	56										
		30						236	227	219	211	202	194	185	176	165	154	141	125	107	85	58										
		40					236	228	220	211	203	195	186	176	166	155	142	126	108	86	60											
		50				237	229	220	212	204	195	186	177	167	156	143	128	110	88	62												
		60		237	229	221	213	204	196	187	178	168	157	144	129	111	90	65														
160L25 9 Stages	25	0								238	232	225	218	212	205	199	192	185	177	168	158	147	133	117	98	76	50					
		20						239	233	226	219	213	206	200	193	186	178	170	160	149	136	120	102	80	54							
		30						240	233	227	220	213	207	200	194	187	179	170	161	150	137	121	103	82	56							
		40					240	234	227	220	214	207	201	194	187	179	171	162	151	138	123	105	83	58								
		50					234	228	221	214	208	201	195	188	180	172	162	151	139	124	106	85	60									
		60				235	228	221	215	208	202	195	188	181	172	163	152	140	125	108	87	62										
160L30 11 Stages	30	0									237	233	228	223	218	213	208	203	198	192	186	180	173	166	157	148	137	124	109	92	73	50
		20							238	233	229	224	219	214	209	204	199	193	187	181	175	167	159	149	139	126	112	95	76	54		
		30							238	234	229	224	219	214	209	204	199	194	188	182	175	168	159	150	139	127	113	96	77	56		
		40						239	234	229	224	220	215	210	205	199	194	188	182	176	168	160	151	140	128	114	98	79	57			
		50					239	234	230	225	220	215	210	205	200	194	189	183	176	169	161	152	141	129	115	99	80	59				
		60				239	235	230	225	220	215	210	205	200	195	189	183	177	169	161	152	142	130	116	100	82	61					
Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																															
HP	PSI	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350			
160L40 15 Stages	40	0							238	230	222	214	207	199	192	184	175	166	154	139	122	99	72									
		20						239	235	231	223	215	207	200	192	185	176	166	155	141	123	101	74									
		30						239	235	231	227	219	211	204	196	189	181	172	161	149	133	114	89	59								
		40					239	235	231	227	223	215	208	200	193	185	177	167	156	142	125	103	76									
		50			240	236	232	228	224	220	212	204	197	189	181	172	162	150	134	115	91	62										
		60	240	236	232	228	224	220	216	208	201	194	186	177	168	157	143	126	105	78												
160L50 18 Stages	50	0								239	233	228	223	218	213	208	202	196	189	181	171	160	148	133	116	97	74					
		20								239	234	229	224	219	214	208	203	196	189	181	172	161	149	134	118	98	76	51				
		30							239	237	231	226	221	216	211	206	200	193	186	177	167	156	142	127	109	88	65					
		40						239	237	234	229	224	219	214	209	203	197	190	182	173	162	150	135	119	100	78	53					
		50					240	237	234	232	227	222	217	212	206	200	194	186	178	168	157	143	128	110	90	67						
		60				240	237	234	232	229	224	219	214	209	204	197	190	182	173	163	151	137	120	101	80	55						
160L60 20 Stages	60	0												237	230	224	219	213	207	201	195	189	182	174	165	155	144	130	114	96	74	
		20												237	231	225	219	213	207	202	196	189	182	175	166	156	145	131	115	97	76	50
		30												234	228	222	216	211	205	199	193	186	179	171	162	151	139	124	107	88	64	
		40												238	231	225	219	214	208	202	196	190	183	175	167	157	146	132	117	99	77	52
		50												235	229	223	217	211	205	199	193	187	179	171	162	152	140	125	109	89	66	
		60									238																					

MODEL 250L

SELECTION CHART

Horsepower Range 7.5 – 60, Recommended Range 70 – 300 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																		
	HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	
250L07 2 Stages	7.5	0		286	224	149	74																												
		20	235	161	85																														
		30	167	91																															
		40	96																																
		50																																	
		60																																	
250L10 3 Stages	10	0			294	259	213	160	105	68																									
		20	298	265	221	168	113	78																											
		30	268	224	173	117	83																												
		40	228	177	122	69																													
		50	181	126	72																														
		60	130	76																															
250L15 5 Stages	15	0					291	271	246	217	183	148	112	77																					
		20			294	275	250	221	189	153	117	82																							
		30		295	276	252	224	191	156	120	84																								
		40	296	278	254	226	194	159	123	87																									
		50	280	256	228	196	162	125	90																										
		60	258	231	199	164	128	92																											
250L20 7 Stages	20	0							301	291	277	257	233	205	175	145	117	94	75																
		20						293	280	261	237	209	179	149	121	97	78																		
		30					294	281	262	239	211	181	151	123	99	79																			
		40				295	282	264	241	214	184	154	125	101	80																				
		50			295	283	266	243	216	186	156	127	102	82																					
		60		296	284	267	245	218	188	158	129	104	83																						
250L25 8 Stages	25	0							298	289	275	258	238	216	192	167	143	121	101	83															
		20						299	290	277	261	241	219	195	171	147	124	104	86	70															
		30					300	291	279	262	243	221	197	173	149	126	105	87	71																
		40				300	292	280	264	244	223	199	175	150	128	107	88	72																	
		50			301	293	281	265	246	224	201	176	152	129	108	90	74																		
		60			293	282	266	248	226	203	178	154	131	110	91	75																			
250L30 9 Stages	30	0								299	289	277	264	249	233	216	198	180	160	141	121	102	83												
		20							300	290	279	266	251	236	219	201	182	163	144	124	105	86													
		30							291	280	267	253	237	220	202	184	165	145	126	106	87														
		40						292	281	268	254	238	221	204	185	166	147	127	108	89	70														
		50					293	282	269	255	240	223	205	187	168	148	129	109	90	72															
		60			294	283	270	256	241	224	206	188	169	150	130	111	92	73																	
250L40 13 Stages	40	0													300	295	287	278	266	253	239	224	209	194	179	165	151	138	125	113	101	90	79		
		20													296	289	279	268	255	241	226	211	197	182	167	153	140	127	114	103	91	80	69		
		30												297	289	280	269	256	242	227	213	198	183	168	154	141	128	115	104	92	81	70			
		40											297	290	281	270	257	243	229	214	199	184	169	155	142	129	116	104	93	82	71				
		50									297	291	282	270	258	244	230	215	200	185	170	156	143	130	117	105	94	83	72						
		60							298	291	282	271	259	245	231	216	201	186	172	157	144	131	118	106	95	84	73								

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																	
	HP	PSI	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875	900	925	950	
250L50 16 Stages	50	0							300	295	289	283	276	269	261	253	245	236	227	218	208	198	188	177	166	156	145	134	123	111	100	89	79	
		20						296	290	284	277	270	262	255	246	238	228	219	209	199	189	179	168	157	146	135	124	113	102	91	80	70		
		30					296	291	284	278	271	263	255	247	238	230	220	210	200	190	180	169	158	147	136	125	114	103	92	81	71			
		40				297	291	285	278	271	264	256	248	239	230	221	211	201	191	180	170	159	148	137	126	115	104	93	82	71				
		50			297	291	285	279	272	264	256	248	240	231	221	212	202	192	181	171	160	149	138	127	116	105	94	83	72					
		60		298	292	286	279	272	265	257	249	240	231	222	212	203	192	182	171	161	150	139	128	116	105	94	84	73						

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																			
	HP	PSI	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875	900	925	950	975	1000	1025	1050	1075	1100	1125	1150	1175	1200	
250L60 19 Stages	60	0						298	294	289	284	278	271	263	255	246	236	227	217	206	196	185	174	164	154	144	134	124	115	107	99	91	84	77	70	
		20					299	295	290	285	279	272	264	256	247	238	228	218	208	197	187	176	165	155	145	135	126	117	108	100	92	85	78	71		
		30				299	295	291	285	279	272	265	257	248	239	229	219	209	198	187	177	166	156	146	136	127	117	109	101	93	85	78	72			
		40			299	295	291	286	280	273	265	257	249	239	230	220	209	199	188	178	167	157	147	137	127	118	109	101	93	86	79	72				
		50	299	296	291	286	280	273	266	258	250	243	230	220	210	200	189	178	168	157	147	137	128	119	110	102	94	86	79	73						
		60	296	292	287	281	274	267	259	250	241	231	221	211	200	190	179	169	158	148	138	129	119	111	102	94	87	80	73							

MODEL 320L

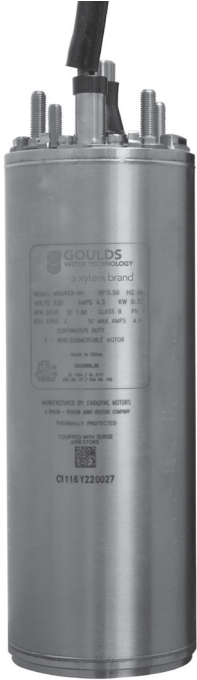
SELECTION CHART

Horsepower Range 7.5 – 60, Recommended Range 100 – 400 GPM, 60 Hz, 3450 RPM

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
	HP	PSI	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650
320L07 2 Stages	7.5	0		343	262	172																						
		20	275	186																								
		30	193	100																								
		40	107																									
		50																										
		60																										
320L15 4 Stages	15	0		392	393	370	332	286	237	189	143																	
		20	394	374	338	293	245	196	150	105																		
		30	376	341	297	248	200	153	108																			
		40	344	300	252	204	157	112																				
		50	304	256	207	160	115																					
		60	260	211	164	119																						
320L20 5 Stages	20	0				391	365	336	303	267	228	188	147	105														
		20		394	370	341	308	273	234	194	153	112																
		30	396	372	343	311	275	237	197	156	115																	
		40	374	345	313	278	240	200	159	118																		
		50	348	316	281	243	203	162	121																			
		60	319	284	246	207	166	124																				
320L25 6 Stages	25	0					387	366	343	316	288	257	225	191	157	123												
		20				390	370	346	320	292	262	230	196	162	128													
		30		392	371	348	322	294	264	232	199	165	130															
		40	393	373	350	324	296	266	235	201	167	133																
		50	375	352	326	299	269	237	204	170	136	101																
		60	354	328	301	271	239	206	173	138	104																	
320L30 8 Stages	30	0						391	375	357	336	314	291	267	242	217	192	166	141	116								
		20					393	378	360	340	318	295	271	246	221	196	170	145	120									
		30				395	379	361	341	319	296	273	248	223	197	172	147	122										
		40			396	380	363	343	321	298	274	250	225	199	174	149	124											
		50		397	382	364	344	323	300	276	252	227	201	176	151	125	100											
		60	398	383	365	346	324	302	278	254	229	203	178	153	127	102												
320L40 11 Stages	40	0									399	388	375	361	346	331	314	297	280	262	244	225	207	188	169	150	131	113
		20									390	377	363	349	333	317	300	282	265	246	228	209	191	172	153	134	115	
		30									390	378	365	350	334	318	301	284	266	248	229	211	192	173	155	136	117	
		40						391	379	366	351	336	319	302	285	267	249	231	212	194	175	156	137	118				
		50					392	380	367	352	337	321	304	286	269	251	232	214	195	176	158	139	120	101				
		60				393	381	368	353	338	322	305	288	270	252	234	215	196	178	159	140	121	102					

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
	HP	PSI	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775		
320L50 13 Stages	50	0					395	387	378	367	355	343	330	316	301	286	270	254	238	222	205	188	172	155	138	122	106	
		20			396	388	379	369	357	345	332	318	303	288	273	257	241	224	208	191	174	158	141	124	108	146	135	
		30	397	389	380	369	358	346	333	319	304	289	274	258	242	225	209	192	176	159	142	126	109	147	136	125		
		40	390	381	370	359	347	334	320	306	291	275	259	243	227	210	193	177	160	143	127	111						
		50	381	371	360	348	335	321	307	292	276	260	244	228	211	195	178	161	145	128	112							
		60	372	361	349	336	322	308	293	277	262	246	229	213	196	179	163	146	129	113								

Pump Model	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																																			
	HP	PSI	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825	850	875	900	925	950	975	1000	
320L60 16 Stages	60	0							395	389	383	376	368	360	351	341	331	320	308	295	281	268	253	239	224	209	195	181	167	154	142	130	120	109	100	
		20						396	390	384	377	369	361	352	343	332	321	309	297	284	270	255	241	226	212	197	183	169	156	144	132	121	111	101		
		30					397	391	384	377	370	362	353	344	333	322	310	298	285	271	257	242	227	213	198	184	170	157	145	133	122	112	102			
		40			397	391	385	378	370	362	354	344	334	323	311	299	286	272	258	243	228	214	199	185	171	158	146	134	123	112	103					
		50		398	391	385	378	371	363	354	345	335	324	312	300	287	273	259	244	230	215	200	186	172	159	146	135	124	113	103						
		60	398	392	386	379	372	364	355	346	336	325	313	301	288	274	260	245	231	216	201	187	173	160	147	136	124	114	104							



FEATURES

- 304 SS casing and end bells for corrosion resistance
- Kingsbury type, 3 shoe, 700 lb. thrust bearing
- Stainless steel, 17-4 PH splined shaft
- PSC design for quiet, efficient operation
- Built-in, hermetically sealed, environmentally safe capacitor
- Automatic reset, on-winding thermal overload protection on 2-wire up to 1½ HP
- Removable, replaceable 48" motor lead on ½ - 1½ HP
- Water lubricated with filter/check valve to maintain fluid fill
- Surge arrestors built-in
- NEMA Mounting Dimensions
- Annex G, NSF / ANSI 61 -2008

AGENCY LISTINGS



Tested by CSA to CSA
and UL Standards

Single Phase 2-Wire, ½-1½ HP PSC Motors

60 HZ, 3450 RPM

APPLICATIONS

- These 4" motors are designed and sized for installation in 4" diameter or larger water wells.
- PSC, permanent split capacitor, 2 wire motors are efficient and quiet.
- Built-in, hermetically sealed, environmentally safe capacitor eliminates the noise causing pulsations common to many split-phase 2 wire motors.

SPECIFICATIONS

- **Temperature Rating:** Rated for continuous duty in water of 86° F (30° C) maximum.

- **Cooling:** Proper motor cooling requires a water velocity past the motor of .25'/sec which translates into 1.2 gpm in a 4" casing, 7 gpm in a 5" casing and 13 gpm in a 6" casing.
- **Power Lead (14 AWG):** Removable and replaceable motor leads are held in place by two (2) stainless steel screws for positive compression and sealing. Leads are furnished with motors and are also available as replacement parts.
- **Rotation:** CCW, counterclockwise as you face the top or shaft end of the motor.

Generation II - April 2011

2-WIRE MOTORS Identified by a - 01 Nameplate Order No. Suffix

As part of Faradyne Motors' continual improvement process, 2-Wire Generation II motors were introduced in April 2011. Pump model numbers and motor order numbers remained unchanged. The Motor Nameplate will have a new Faradyne part number and the Goulds Water Technology part number on the Motor Nameplate will have a - 01 suffix, example M05422 will be M05422 - 01, only on the Motor Nameplate not in our catalog or price book.

The self-stick, Mylar motor data stickers we pack with 2 wire motors and complete pumps will be updated with the new electrical data so that installers will know which motor is installed in the well should service work ever be necessary. Note that the motor data is only needed to troubleshoot a motor in the well, i.e. resistance and amperage ratings or when installing a variable speed drive system to set the overloads.

MATERIALS OF CONSTRUCTION

Part	Material
Motor (Stator) Shell	304L SS
Shaft - 1 piece	All 17-4 PH hardened SS
Motor End Bells	304 SS Castings
Upper and Lower Radial Bearings	Carbon Sleeve
½ - 1½ HP Thrust Bearing	700 lb. Kingsbury Type
Overload Protection	Built-in, Auto Reset

Part	Material
Lead Wire	XLPE (14 AWG)
Lead Potting	Epoxy
Lead Connector	18-8 SS
Fasteners	18-8 SS
Sand Slinger / Slinger Seat	NBR / Delrin

GENERATION II 2011 - 2-WIRE, 4" SINGLE PHASE ELECTRICAL DATA, 60 HERTZ, 3450 RPM

Type	Motor Order No.		HP	KW	Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Winding Resistance	KVA Code
	GWT	Red Jacket					Amps	Watts	Amps	Watts			
2-Wire (PSC)	M05421	50C201	0.5	0.37	115	1.6	7.9	910	9.8	1120	28	1.4-2.0	H
	M05422	50C211	0.5	0.37	230	1.6	4.0	845	4.7	1050	16	6.1-7.2	J
	M07422	75C211	0.75	0.55	230	1.5	5.0	1130	6.2	1400	18	5.9-6.9	F
	M10422	100C211	1.0	0.75	230	1.4	6.7	1500	8.1	1800	24	4.2-5.2	F
	M15422	150C211	1.5	1.1	230	1.3	9.0	2000	10.4	2350	43	1.8-2.4	H

GENERATION II 2011 - EFFICIENCY AND POWER FACTOR DATA

Type	Motor Order No.		HP	KW	Volts	Efficiency %		Power Factor %		Length		Weight		Thrust Rating
	GWT	Red Jacket				F.L.	S.F.	F.L.	S.F.	Inches	mm	lb.	kg.	
2-Wire (PSC)	M05421	50C201	0.5	0.37	115	42%	54%	99%	99%	10.5	267	18	8.2	700 #
	M05422	50C211	0.5	0.37	230	45%	59%	92%	97%	10.5	267	18	8.2	
	M07422	75C211	0.75	0.55	230	51%	61%	98%	98%	11.9	302	22	9.7	
	M10422	100C211	1.0	0.75	230	50%	59%	98%	98%	12.5	318	24	10.5	
	M15422	150C211	1.5	1.1	230	57%	63%	98%	99%	14.2	361	28	12.4	

Generation II - April 2011

GENERATION II 2011 - FUSE OR CIRCUIT BREAKER AMPS

Type	Motor Order No.		HP	Fuse or Circuit Breaker Amps		
	GWT	Red Jacket		Standard Fuse	Dual Element Time Delay	Circuit Breaker
2-Wire (PSC)	M05421	50C201	0.5	25	15	20
	M05422	50C211	0.5	15	10	10
	M07422	75C211	0.75	15	10	15
	M10422	100C211	1.0	20	15	20
	M15422	150C211	1.5	30	15	25

GENERATION II 2011 - 2-WIRE MOTORS, RECOMMENDED LEAD LENGTHS

Released for Sale in November/December 2011

Goulds Water Technology Motor Lead Lengths - 2 Wire Motors, 1Ø, 4" Motors Based on Service Factor Amps, 30° C Ambient and 5% Voltage Drop															
Motor Rating					60° C and 75° C Insulation - AWG Copper Wire Size										
Volts	HP	kW	FLA	SFA	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0
115	1/2	0.37	7.9	9.8	112	178	284	449	699	1114	1769	2814	3550	4481	5646
230	1/2	0.37	4.0	4.7	466	742	1183	1874	2915	4648	7379	11733			
230	3/4	0.55	5.0	6.2	353	562	897	1420	2210	3523	5594	8895	11222		
230	1	0.75	6.7	8.1	271	430	686	1087	1692	2697	4281	6808	8590	10843	
230	1 1/2	1.1	9.0	10.4	211	335	535	847	1318	2100	3335	5303	6690	8445	

Generation II Single Phase (November 2015)

As part of Faradyne Motors' continual improvement process, further improvements have been made to Generation II motors in November 2015. Our pump model numbers and motor order number will not change. The Motor Nameplate for the improved Generation II will have a - 01 suffix, example M05422 will be M05422 - 01, only on the Motor Nameplate not in our catalog or price book. To decipher the November 2015 Generation II motors from the April 2011 Generation II motors, please use the date code located on the motor. Goulds Water Technology motor date codes are 12 characters long, the first character represents the month and the fourth and fifth character represent the year. The self-stick, Mylar motor data stickers we pack with our motors and complete pumps will be updated with the new electrical data so that installers will know which motor is installed in the well should service work ever be necessary.

GENERATION II 2015 - 2 WIRE PSC, SINGLE PHASE 4" MOTORS - ELECTRICAL DATA, 60 HZ, 3450 RPM

Type	Model	RJ Ref. #	Rating				Full Load		Service Factor		Locked Rotor Amps	Winding Resistance	
			HP	KW	Volts	SF	Amps (B or Y/B/R)	Watts	Amps (B or Y/B/R)	Watts		Main (B-Y or B-B)	Start (R-Y)
2-Wire (PSC)	M05421	50C201	0.5	0.37	115	1.6	8.1	890	10.2	1110	28	1.4 - 2.0	-
	M05422	50C211	0.5	0.37	230	1.6	4.3	845	4.8	1035	16	6.1 - 7.2	-
	M07422	75C211	0.75	0.55	230	1.5	5.0	1100	6.4	1375	18	5.9 - 6.9	-
	M05422	100C211	1.0	0.75	230	1.4	6.7	1450	8.2	1770	23.5	4.2 - 5.2	-
	M15422	150C211	1.5	1.1	230	1.3	9.1	1950	10.5	2300	43	1.8 - 2.4	-

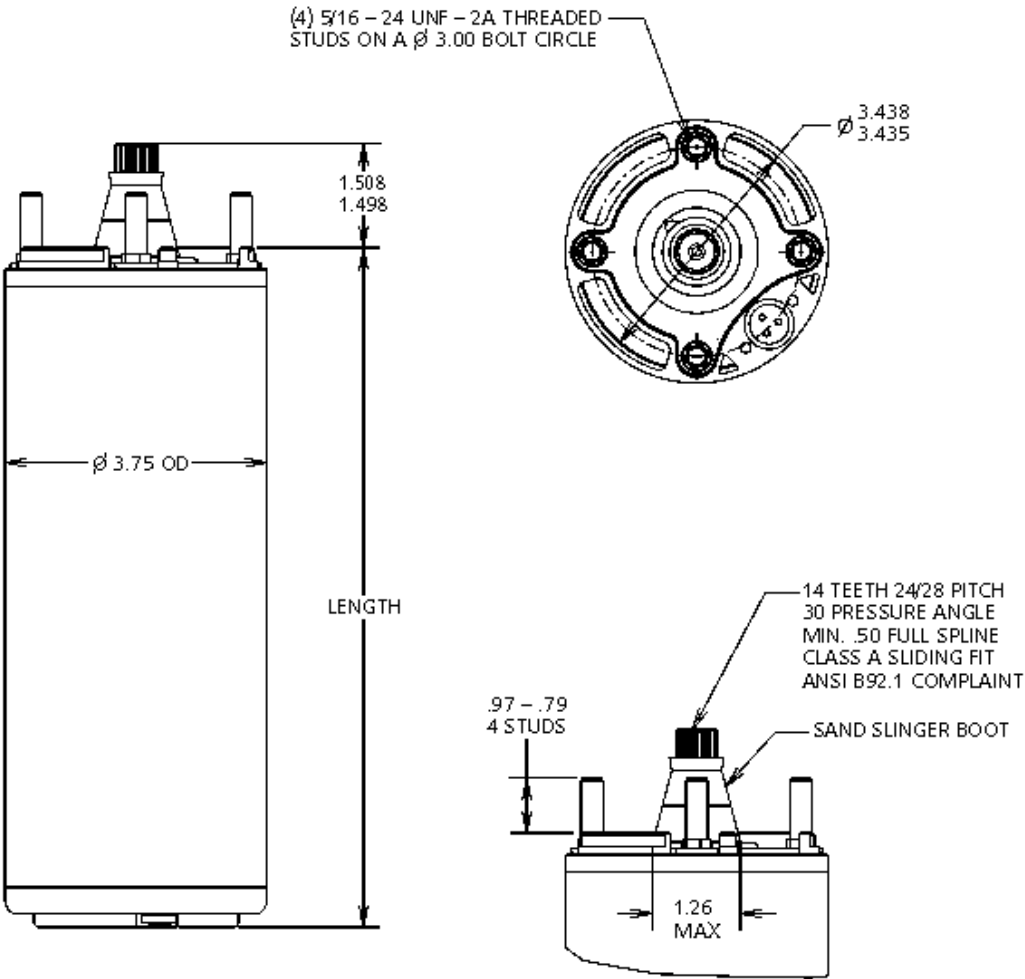
GENERATION II 2015 - 2-WIRE, SINGLE PHASE 4" MOTORS - ENGINEERING DATA

Type	Model	HP	Volts	Efficiency %		Power Factor %		Thrust Rating	KVA Code	Standard Fuse	Dual Element Time Delay Fuse	Circuit Breaker
				F.L.	S.F.	F.L.	S.F.					
2-Wire (PSC)	M05421	0.5	115	42	54	99	99	700 #	H	25	15	20
	M05422	0.5	230	44	58	90	97		J	15	10	10
	M07422	0.75	230	51	61	99	99		F	15	10	15
	M05422	1.0	230	52	59	99	99		F	20	15	20
	M15422	1.5	230	58	63	98	99		H	30	20	25

The MAID Manual has both Generation I and II data for reference.

WEIGHTS AND DIMENSIONS

Type	Motor Order No.		HP	Volts	Length		Motor Weight	
	GWT	Red Jacket			Inches	mm	lb.	kg.
2-Wire (PSC)	M05421	50C201	0.5	115	10.5	267	18	8.2
	M05422	50C211	0.5	230	10.5	267	18	8.2
	M07422	75C211	0.75		11.9	302	22	9.7
	M10422	100C211	1.0		12.5	318	24	10.5
	M15422	150C211	1.5		14.2	361	28	12.4





Single Phase 3-Wire, 1/2-5 HP Motors

60 HZ, 3450 RPM – 1ST GENERATION

FEATURES

- 304 SS casing and end bells for corrosion resistance
- Kingsbury type, 3 shoe, thrust bearing, see chart for ratings.
- Stainless steel, 17-4 PH splined shaft
- Removable, replaceable 48" motor lead on ½ - 2 HP, 100" on 3 and 5 HP
- Water lubricated with filter/check valve to maintain fluid fill
- Lightning and surge protection built-in
- Automatic reset, on-winding thermal overload protection on 3-wire up to 1 HP, 1½ - 5 HP have overloads in control box.

APPLICATIONS

- These 4" motors are designed and sized for installation in 4" diameter or larger water wells.
- Three wire motors are a capacitor start induction run design and require a control box with a starting relay and capacitor.
- Use the CSCR capacitor start/capacitor run control boxes on ½ - 1 HP motors to increase efficiency and motor life and reduce energy consumption.
- The 1½ HP and larger control boxes are all CSCR type.

MATERIALS OF CONSTRUCTION

Part	Material
Motor (Stator) Shell	304 SS
Shaft Extension	17-4 PH hardened SS
Motor End Bells	304 SS Castings
Upper and Lower Bearings	Carbon Sleeve
Thrust Bearing	Kingsbury Type
Overload Protection	Built-in, Auto Reset
Lead Wire	XLPE (14 AWG)
Lead Potting	Epoxy
Lead Connector	18-8 SS
Fasteners	18-8 SS
Sand Slinger / Slinger Seat	NBR / Delrin

- CSA Certified
- NEMA Mounting Dimensions
- Tested to ANSI/NSF 61
- Quick disconnect control boxes with voltage relays for motors up to 1 HP.
- CSCR control boxes available for ½ - 5 HP motors.
- MC (magnetic contactor) control boxes available for 1Ø, 4" motors from 1½ - 5 HP.

AGENCY LISTINGS



Tested by CSA to CSA and UL Standards

SPECIFICATIONS

- **Temperature Rating:** Rated for continuous duty in water of 86° F (30° C) maximum.
- **Cooling:** Proper motor cooling requires a water velocity past the motor of .25'/sec which translates into 1.2 gpm in a 4" casing, 7 gpm in a 5" casing and 13 gpm in a 6" casing.
- **Power Lead (14 AWG):** Removable and replaceable motor leads are held in place by two (2) stainless steel screws for positive compression and sealing. Leads are furnished with motors and are also available as replacement parts.
- **Rotation:** CCW, counterclockwise as you face the top or shaft end of the motor.
- **Control Box:** Required on single phase 3 wire models, available in quick disconnect or more efficient CSCR designs.

FUSE OR CIRCUIT BREAKER AMPS

			Fuse or Circuit Breaker Amps		
Type	HP	Volts	Standard Fuse	Dual Element Time Delay	Circuit Breaker
3-Wire QD (CSIR)	0.5	115	30	20	30
	0.5		15	10	15
	0.75		20	10	20
	1.0		25	15	25
3-Wire CSCR	0.5	230	15	10	10
	0.75		20	10	15
	1.0		20	10	15
	1.5		30	15	25
	2.0		30	20	25
	3.0		45	25	40
	5.0		80	45	60

THREE WIRE, SINGLE PHASE 4" MOTORS - ENGINEERING DATA

Type	Motor Order Number				Efficiency %		Power Factor %		Thrust Rating	KVA Code
	Goulds	Red Jacket	HP	Volts	F.L.	S.F.	F.L.	S.F.		
3-Wire	M05411	50C301	0.5	115	51	59	54	69	700 #	N
	M05412	50C311	0.5	230	50	58	58	71		M
	M07412	75C311	0.75		55	61	61	72		L
	M10412	100C311	1.0		59	62	66	75		L
	M15412	150C311	1.5		66	67	80	86		J
	M20412	200C311	2		68	69	96	95	900 #	G
	M30412	300C311	3		72	72	96	97		G
	M50412	500C311	5		71	71	97	98	1500 #	E

3-WIRE 1Ø MOTOR WIRE SIZING CHART

Goulds Motor Lead Lengths - 3 Wire Motors, 1Ø, 4" Motors Based on Service Factor Amps, 30° C Ambient and 5% Voltage Drop																	
Motor Rating					60° C and 75° C Insulation - AWG Copper Wire Size												
HP	Volts	kW	FLA	SFA	14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0
½	115	0.37	11	12.6	87	138	221	349	544	867	1090	1376	1734	2188	2761	3485	4391
½	230	0.37	5.5	6.3	348	553	883	1398	2175	3467	4359	5505	6935	8753	11044	13942	17564
¾		0.55	7.2	8.3	264	420	670	1061	1651	2632	3309	4178	5264	6644	8383	10582	13332
1		0.75	8.4	9.7	226	359	573	908	1413	2252	2831	3575	4504	5685	7173	9055	11408
1½		1.1	9.7	11.1	197	314	501	793	1234	1968	2474	3124	3936	4968	6268	7913	9969
2		1.5	9.9	12.2	180	286	456	722	1123	1790	2251	2843	3581	4520	5703	7199	9070
3		2.2	14.3	16.5	133	211	337	534	830	1324	1664	2102	2648	3342	4217	5323	6706
5		3.7	24	27			206	326	507	809	1017	1284	1618	2042	2577	3253	

Tables based on values from NEC, Tables 310.16 and 310.17 and NEC, Chapter 9, Table 8 Conductor Properties.

NOTE: Motors and control boxes are designed to operate on 230V systems. Systems with low line voltage, between 200 - 207 volts require the next larger cable size than shown in the 230V charts. If using a 3-wire motor with control box on a low voltage application switch to a 208V start relay. The 208V start relay order numbers are found on control box repair part charts in this manual.

Another option is to use a boost transformer to increase voltage.

The 2-wire sizing chart above is only for use with PSC type, 2-wire motors.

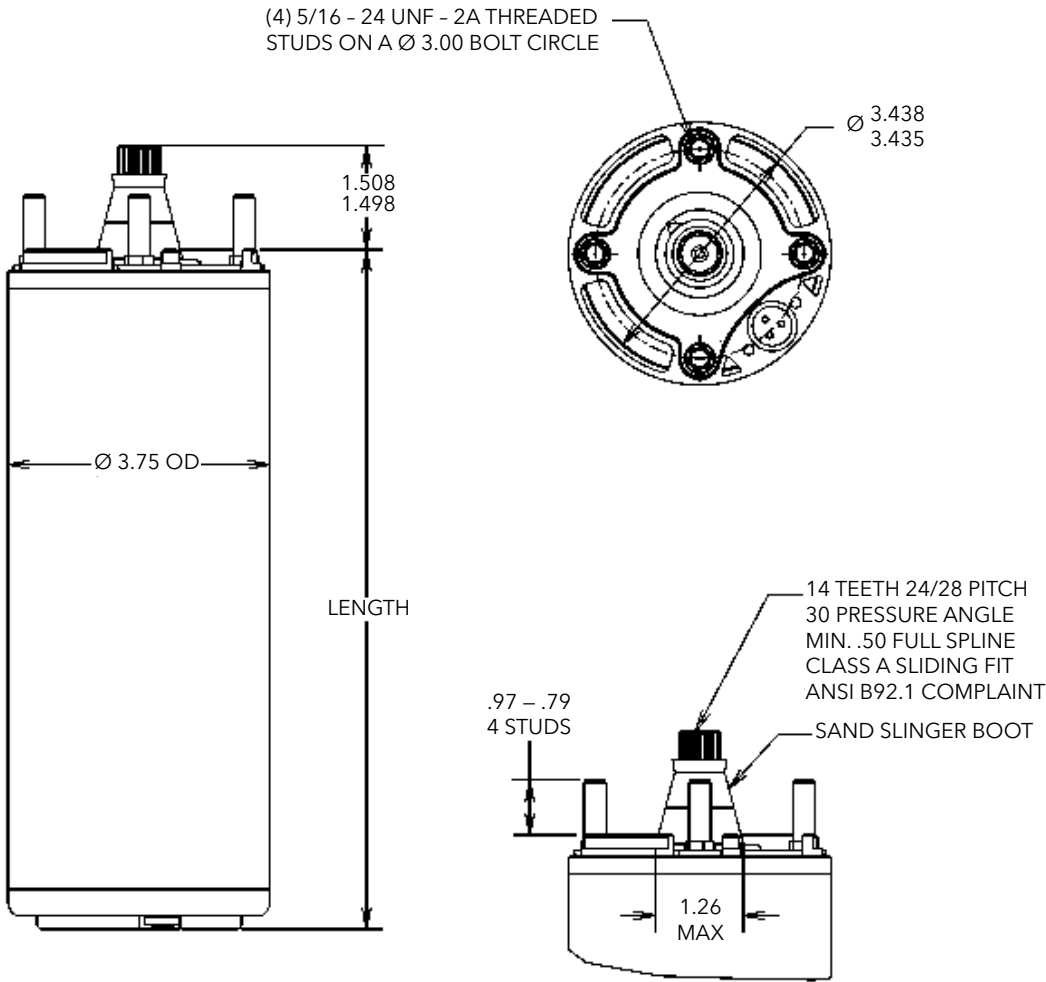
Temperature Conversions: 20° C = 68° F, 30° C = 86° F, 60° C = 140° F, 75° C = 167° F, 90° C = 194° F

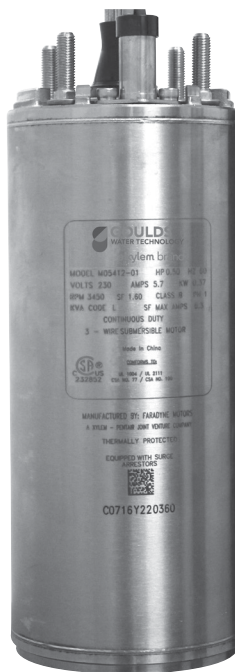
THREE WIRE, SINGLE PHASE 4" MOTORS - ELECTRICAL DATA, 60 HERTZ, 3450 RPM

	Motor Order No.						Full Load		Service Factor		Locked Rotor Amps	Winding Resistance		Required Control Box
Type	Goulds	Red Jacket	HP	kW	Volts	SF	Amps	Watts	Amps	Watts		Main (B-Y)	Start (R-Y)	
3-Wire with Q.D. Cap. Start Box	M05411	50C301	0.5	0.37	115	1.6	Y - 11.0 B - 11.0 R - 0	733	Y - 12.6 B - 12.6 R - 0	1021	49.6	.9-1.6	5.7-7.0	CB05411
	M05412	50C311	0.5	0.37	230	1.6	Y - 5.5 B - 5.5 R - 0	745	Y - 6.3 B - 6.3 R - 0	1033	22.3	4.2-4.9	17.4-18.7	CB05412
	M07412	75C311	0.75	0.55		1.5	Y - 7.2 B - 7.2 R - 0	1014	Y - 8.3 B - 8.3 R - 0	1381	32.0	2.6-3.6	11.8-13.0	CB07412
	M10412	100C311	1.0	0.75		1.4	Y - 8.4 B - 8.4 R - 0	1267	Y - 9.7 B - 9.7 R - 0	1672	41.2	2.2-3.2	11.3-12.3	CB10412
3-Wire with CSCR (CR) or Magnetic Contactor (MC) Control Box	M05412	50C311	0.5	0.37		1.6	Y - 4.1 B - 4.1 R - 2.2	720	Y - 4.9 B - 4.4 R - 2.1	955	22.3	4.2-4.9	17.4-18.7	CB05412CR
	M07412	75C311	0.75	0.55		1.5	Y - 5.1 B - 5.0 R - 3.2	1000	Y - 6.3 B - 5.6 R - 3.1	1300	32.0	2.6-3.6	11.8-13.0	CB07412CR
	M10412	100C311	1.0	0.75		1.4	Y - 6.1 B - 5.7 R - 3.3	1205	Y - 7.2 B - 6.3 R - 3.3	1530	41.2	2.2-3.2	11.3-12.3	CB10412CR
	M15412	150C311	1.5	1.1		1.3	Y - 9.7 B - 9.5 R - 1.4	1693	Y - 11.1 B - 11.0 R - 1.3	2187	47.8	1.6-2.3	7.9-8.7	CB15412CR or CB15412MC
	M20412	200C311	2	1.5		1.25	Y - 9.9 B - 9.1 R - 2.6	2170	Y - 12.2 B - 11.7 R - 2.6	2660	49.4	1.6-2.2	10.8-12.0	CB20412CR or CB20412MC
	M30412	300C311	3	2.2		1.15	Y - 14.3 B - 12.0 R - 5.7	3170	Y - 16.5 B - 13.9 R - 5.6	3620	76.4	1.1-1.4	2.0-2.5	CB30412CR or CB30412MC
	M50412	500C311	5	3.7		1.15	Y - 24.0 B - 19.1 R - 10.2	5300	Y - 27.0 B - 22.0 R - 10.0	6030	101.0	.62-.76	1.36-1.66	CB50412CR or CB50412MC

WEIGHTS AND DIMENSIONS

Type	Motor Order No.		HP	Volts	Length		Motor Weight	
	Goulds	Red Jacket			Inches	mm	lb.	kg.
3-wire	M05411	50C301	.5	115	10.0	253	18.9	8.6
	M05412	50C311	.5	230	9.7	246	18.1	8.2
	M07412	75C311	.75		10.8	275	21.4	9.7
	M10412	100C311	1		11.7	297	23.1	10.5
	M15412	150C311	1.5		13.6	345	27.4	12.4
	M20412	200C311	2		15.1	383	31.0	14.1
	M30412	300C311	3		18.3	466	40.0	18.1
	M50412	500C311	5		27.7	703	70.0	31.8





Single Phase 3-Wire, 1/2-5 HP Motors

60 HZ, 3450 RPM – GENERATION II - 2011 AND 2015

FEATURES

- 304 SS casing and end bells for corrosion resistance
- Kingsbury type, 3 shoe, thrust bearing, see chart for ratings.
- Stainless steel, 17-4 PH splined shaft
- Removable, replaceable 48" motor lead on ½ - 2 HP, 100" on 3 and 5 HP
- Water lubricated with filter/check valve to maintain fluid fill
- Surge arrestors built-in
- Automatic reset, on-winding thermal overload protection on 3-wire up to 1 HP, 1½ - 5 HP have overloads in control box.
- CSA Certified
- NEMA Mounting Dimensions
- Tested to ANSI/NSF 61
- Quick disconnect control boxes with voltage relays for motors up to 1 HP.
- CSCR control boxes available for ½ - 5 HP motors.
- MC (magnetic contactor) control boxes available for 1Ø, 4" motors from 1½ - 5 HP.

AGENCY LISTINGS



Tested by CSA to CSA and UL Standards

APPLICATIONS

- These 4" motors are designed and sized for installation in 4" diameter or larger water wells.
- Three wire motors are a capacitor start induction run design and require a control box with a starting relay and capacitor.
- Use the CSCR capacitor start/capacitor run control boxes on ½ - 1 HP motors to increase efficiency and motor life and reduce energy consumption.
- The 1½ HP and larger control boxes are all CSCR type.

SPECIFICATIONS

- **Temperature Rating:** Rated for continuous duty in water of 86° F (30° C) maximum.
- **Cooling:** Proper motor cooling requires a water velocity past the motor of .25'/sec which translates into 1.2 gpm in a 4" casing, 7 gpm in a 5" casing and 13 gpm in a 6" casing.
- **Power Lead (14 AWG):** Removable and replaceable motor leads are held in place by two (2) stainless steel screws for positive compression and sealing. Leads are furnished with motors and are also available as replacement parts.
- **Rotation:** CCW, counterclockwise as you face the top or shaft end of the motor.
- **Control Box:** Required on single phase 3 wire models, available in quick disconnect or more efficient CSCR designs.

MATERIALS OF CONSTRUCTION

Part	Material
Motor (Stator) Shell	304 SS
Shaft Extension	17-4 PH hardened SS
Motor End Bells	304 SS Castings
Upper and Lower Radial Bearings	Carbon Sleeve
Thrust Bearing	Kingsbury Type
Overload Protection	Built-in, Auto Reset
Lead Wire	XLPE (14 AWG)
Lead Potting	Epoxy
Lead Connector	18-8 SS
Fasteners	18-8 SS
Sand Slinger / Slinger Seat	NBR / Delrin

Generation II - April 2011

3-WIRE MOTORS Identified by a - 01 Nameplate Order No. Suffix

As part of Faradyne Motors' continual improvement process, 3-Wire Generation II motors were introduced in April 2011. Pump model numbers and motor order numbers remained unchanged. The Motor Nameplate will have a new Faradyne part number and the Goulds Water Technology part number on the Motor Nameplate will have a - 01 suffix, example M05412 will be M05412 - 01, only on the Motor Nameplate not in our catalog or price book.

GENERATION II 2011 - FUSE OR CIRCUIT BREAKER AMPS

Type	Motor Order Number		HP	Fuse or Circuit Breaker Amps		
	Goulds Water Technology	Red Jacket		Standard Fuse	Dual Element Time Delay	Circuit Breaker
3-Wire CSIR (QD)	M05411	50C301	0.5	30	20	30
	M05412	50C311	0.5	20	10	15
	M07412	75C311	0.75	20	15	20
	M10412	100C311	1.0	25	15	25
3-Wire CSCR	M05412	50C311	0.5	15	10	10
	M07412	75C311	0.75	15	10	15
	M10412	100C311	1.0	20	15	15
	M15412	150C311	1.5	30	20	25
	M20412	200C311	2.0	30	20	25
	M30412	300C311	3.0	45	25	40
	M50412	500C311	5.0	80	45	60

Generation II - April 2011

GENERATION II 2011 - 3-WIRE, SINGLE PHASE 4" MOTORS - ELECTRICAL DATA, 60 HERTZ, 3450 RPM

Type	Motor Order No.				Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Winding Resistance		Required Control Box ¹
	Goulds	Red Jacket	HP	KW			Amps	Watts	Amps	Watts		Main (B-Y)	Start (R-Y)	
3-Wire with Q.D. Cap. Start Box	M05411	50C301	0.5	0.37	115	1.6	Y-8.8 B-8.8 R-0	675	Y-10.9 B-10.9 R-0	980	44	1.0-1.4	2.5-3.1	CB05411
	M05412	50C311	0.5	0.37	230	1.6	Y-5.3 B-5.3 R-0	740	Y-6.1 B-6.1 R-0	1050	21	5.1-6.1	12.4-13.7	CB05412
	M07412	75C311	0.75	0.55		1.5	Y-6.6 B-6.6 R-0	970	Y-7.8 B-7.8 R-0	1350	32	2.6-3.3	10.4-11.7	CB07412
	M10412	100C311	1.0	0.75		1.4	Y-8.1 B-8.1 R-0	1215	Y-9.4 B-9.4 R-0	1620	41	2.0-2.6	9.3-10.4	CB10412
3-Wire with CSCR (CR) or Magnetic Contactor (MC) Control Box	M05412	50C311	0.5	0.37		1.6	Y-4.2 B-4.1 R-1.8	715	Y-4.8 B-4.3 R-1.8	960	21	5.1-6.1	12.4-13.7	CB05412CR
	M07412	75C311	0.75	0.55		1.5	Y-4.8 B-4.4 R-2.5	940	Y-6.0 B-4.9 R-2.3	1270	32	2.6-3.3	10.4-11.7	CB07412CR
	M10412	100C311	1.0	0.75		1.4	Y-6.1 B-5.2 R-2.7	1165	Y-7.3 B-5.8 R-2.6	1540	41	2.0-2.6	9.3-10.4	CB10412CR
	M15412	150C311	1.5	1.1		1.3	Y-9.1 B-8.2 R-1.2	1660	Y-10.9 B-9.4 R-1.1	2130	49	2.1-2.5	10.0-10.8	CB15412CR or CB15412MC
	M20412	200C311	2	1.5		1.25	Y-9.9 B-9.1 R-2.6	2170	Y-12.2 B-11.7 R-2.6	2660	49	1.6-2.2	10.8-12.0	CB20412CR or CB20412MC
	M30412	300C311	3	2.2		1.15	Y-14.3 B-12.0 R-5.7	3170	Y-16.5 B-13.9 R-5.6	3620	76	1.1-1.4	2.0-2.5	CB30412CR or CB30412MC
	M50412	500C311	5	3.7		1.15	Y-24.0 B-19.1 R-10.2	5300	Y-27.0 B-22.0 R-10.0	6030	101	.62-.76	1.36-1.66	CB50412CR or CB50412MC

¹ A CSCR control box with a CR suffix can be replaced by a Magnetic Contactor model ending in MC.

GENERATION II 2011 - 3-WIRE, SINGLE PHASE 4" MOTORS - ENGINEERING DATA

Type	Motor Order Number		HP	Volts	Efficiency %		Power Factor %		Thrust Rating	KVA Code
	Goulds	Red Jacket			F.L.	S.F.	F.L.	S.F.		
3-Wire CSIR (QD)	M05411	50C211	0.5	115	57	62	65	78	700 #	M
	M05412	75C211	0.5	230	52	58.5	61	75		L
	M07412	100C211	0.75		60	64.5	64	76		L
	M10412	150C211	1		63	66	66	76		L
3-Wire CSCR	M05412	50C311	0.5		54.5	61.5	77	87		L
	M07412	75C311	0.75		62	69	86	91		L
	M10412	100C311	1.0		66	71	86	91		L
	M15412	150C311	1.5		68	69	81	87		J
	M20412	200C311	2		70	70	89	91	900 #	G
	M30412	300C311	3		72	72	96	97		G
	M50412	500C311	5		70.5	71	97	97.5	1500 #	E

GENERATION II 2011 - 3-WIRE, 4" SINGLE PHASE RECOMMENDED WIRE LENGTHS

Generation II - Goulds Water Technology 3-Wire Motors - Recommended Motor Lead Lengths Based on Service Factor Amps, 30°C Ambient and 5% Voltage Drop															
Motor Rating					60° C and 75° C Insulation - AWG Copper Wire Size										
Volts	HP	kW	FLA	SFA	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0
115	0.5	0.37	8.8	10.9	101	160	255	404	629	1002	1591	2530	3192	4029	5076
230	0.5	0.37	5.3	6.1	359	571	912	1444	2246	3581	5685	9040	-	-	-
	0.75	0.55	6.6	7.8	281	447	713	1129	1757	2800	4446	7070	8920	-	-
	1.0	0.75	8.1	9.4	233	371	592	937	1458	2324	3689	5867	7402	-	-
	1.5	1.1	9.1	10.9	201	320	510	808	1257	2004	3182	5059	6383	-	-
	2.0	1.5	9.9	12.2	180	286	456	722	1123	1790	2843	4520	5703	-	-
	3.0	2.2	14.3	16.5	133	211	337	534	830	1324	2102	3342	4217	5323	-
	5.0	3.7	24	27	-	-	206	326	507	809	1284	2042	2577	3253	-

Generation II Single Phase (November 2015)

As part of Faradyne Motors' continual improvement process, further improvements have been made to Generation II motors in November 2015. Our pump model numbers and motor order number will not change. The Motor Nameplate for the improved Generation II will have a - 01 suffix, example M05422 will be M05422 - 01, only on the Motor Nameplate not in our catalog or price book. To decipher the November 2015 Generation II motors from the April 2011 Generation II motors, please use the date code located on the motor. Goulds Water Technology motor date codes are 12 characters long, the first character represents the month and the fourth and fifth character represent the year. The self-stick, Mylar motor data stickers we pack with our motors and complete pumps will be updated with the new electrical data so that installers will know which motor is installed in the well should service work ever be necessary.

GENERATION II 2015 - 3-WIRE, SINGLE PHASE 4" MOTORS - ELECTRICAL DATA, 60 HZ, 3450 RPM

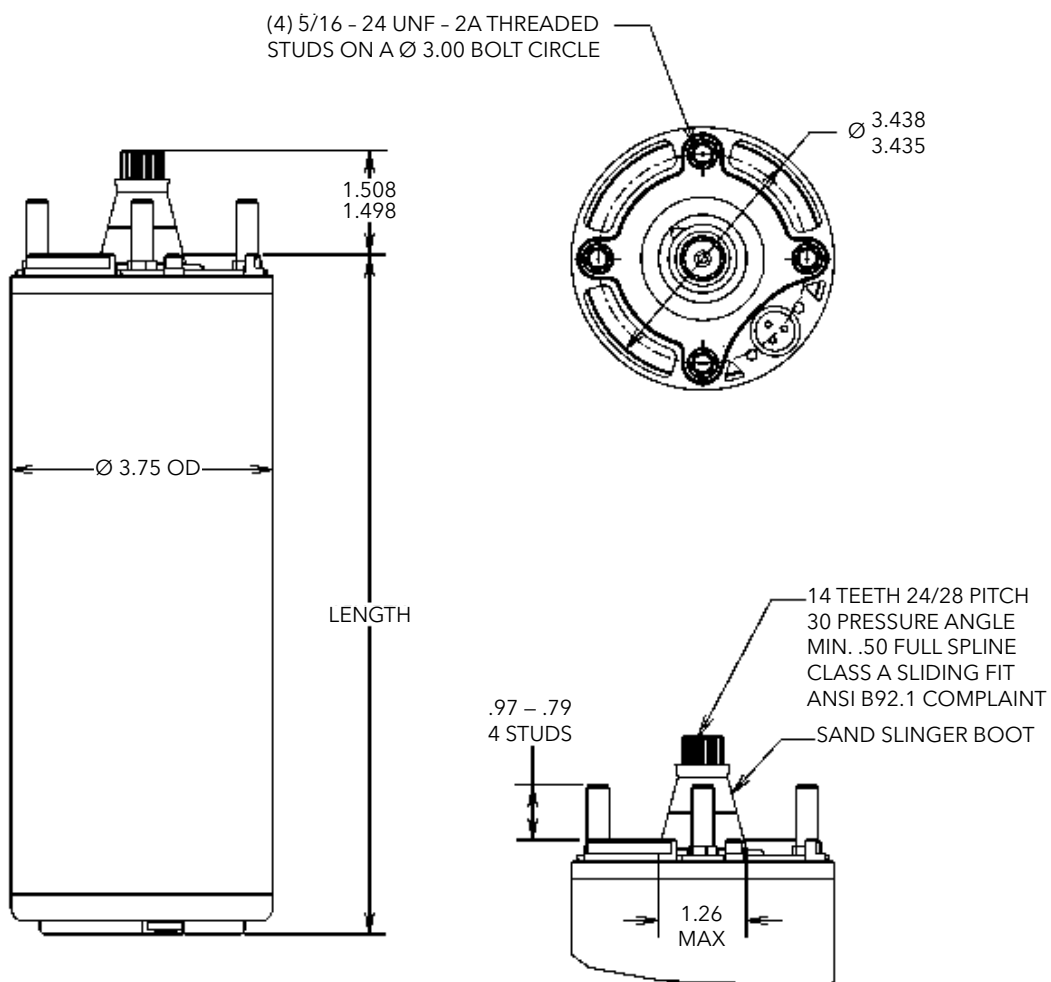
Type	Model	RJ Ref. #	Rating				Full Load		Service Factor		Locked Rotor Amps	Winding Resistance		Standard Control Box	Deluxe Control Box (Mag Contactor)
			HP	KW	Volts	SF	Amps (B or Y/B/R)	Watts	Amps (B or Y/B/R)	Watts		Main (B-Y or B-B)	Start (R-Y)		
3-Wire (CSIR) PREMIUM	M05411	50C301	0.5	0.37	115	1.6	9.8/9.8/0	670	11.6/11.6/0	980	44	1.0 - 1.4	2.5 - 3.1	CB05411	-
	M05412	50C311	0.5	0.37	230	1.6	5.7/5.7/0	735	6.3/6.3/0	1035	20.5	5.1 - 6.1	12.4 - 13.7	CB05412	-
	M07412	75C311	0.75	0.55	230	1.5	6.7/6.7/0	940	7.9/7.9/0	1335	32	2.6 - 3.3	10.4 - 11.7	CB07412	-
	M10412	100C311	1	0.75	230	1.4	8.5/8.5/0	1175	9.5/9.5/0	1590	41	2.0 - 2.6	9.3 - 10.4	CB10412	-
3-Wire (CSCR) PREMIUM	M05412	50C311	0.5	0.37	230	1.6	4.4/4.3/1.9	715	5.0/4.5/1.9	950	21	5.1 - 6.1	12.4 - 13.7	CB05412CR	-
	M07412	75C311	0.75	0.55	230	1.5	4.6/4.6/2.6	920	6.1/5.1/2.6	1235	32	2.6 - 3.3	10.4 - 11.7	CB07412CR	-
	M10412	100C311	1.0	0.75	230	1.4	6.2/6.0/3.6	1165	7.4/6.3/3.3	1490	41	2.0 - 2.6	9.3 - 10.4	CB10412CR	-
	M15412	150C311	1.5	1.1	230	1.3	9.2/8.7/1.2	1660	11.0/9.9/1.2	2110	49	2.1 - 2.5	10.0 - 10.8	CB15412CR	CB15412MC
	M20412	200C311	2.0	1.5	230	1.25	9.9/9.1/2.6	2170	12.2/11.7/2.6	2660	49	1.6 - 2.2	4.8 - 5.9	CB20412CR	CB20412MC
	M30412	300C311	3.0	2.2	230	1.15	14.3/12.0/5.7	3170	16.5/13.9/5.6	3620	76	1.0 - 1.4	2.0 - 2.5	CB30412CR	CB30412MC
	M50412	500C311	5.0	3.7	230	1.15	24/19.1/10.2	5300	27.0/22.0/10.0	6030	101	.6 - .8	1.3 - 1.7	CB50412CR	CB50412MC

GENERATION II 2015 - 3-WIRE, SINGLE PHASE 4" MOTORS - ENGINEERING DATA

Type	Model	RJ REF #	HP	Volts	Efficiency %		Power Factor %		Thrust Rating	KVA Code
					F.L.	S.F.	F.L.	S.F.		
3-Wire (CSIR) PREMIUM	M05411	50C301	0.5	115	55.5	61	63	77	700 #	M
	M05412	50C311	0.5	230	51	58	60	75		L
	M07412	75C311	0.75	230	60	63	64	78		L
	M10412	100C311	1	230	63.5	66	63	76		L
3-Wire (CSCR) PREMIUM	M05412	50C311	0.5	230	52	63	75	86		L
	M07412	75C311	0.75	230	61	68	86	93		L
	M10412	100C311	1.0	230	64	70	85	91		L
	M15412	150C311	1.5	230	68	69	82	87		J
	M20412	200C311	2.0	230	68	69	96	95	900 #	G
	M30412	300C311	3.0	230	72	72	96	97		G
	M50412	500C311	5.0	230	70.5	71	97	97.5	1500 #	E

WEIGHTS AND DIMENSIONS

Type	Motor Order No.				Length		Motor Weight	
	Goulds Water Technology	Red Jacket	HP	Volts	Inches	mm	lb.	kg.
3-wire	M05411	50C301	.5	115	9.6	244	17.9	8.1
	M05412	50C311	.5	230	9.2	234	16.7	7.6
	M07412	75C311	.75		10.3	262	19.8	9.0
	M10412	100C311	1		11.2	284	22.0	10.0
	M15412	150C311	1.5		12.8	325	26.0	11.8
	M20412	200C311	2		15.1	383	31.0	14.1
	M30412	300C311	3		18.3	466	40.0	18.1
	M50412	500C311	5		27.7	703	70.0	31.8





Three Phase 4" Motors, 1/2-10 HP

60 HERTZ, 3450 RPM

FEATURES

304 SS casing and end bells for corrosion resistance
Kingsbury type, 3 shoe, thrust bearing, see chart for ratings

Stainless steel, 17-4 PH splined shaft

Removable, replaceable motor leads, 48" (½ - 2 HP)
or 100" (3 - 10 HP)

Water lubricated with filter/check valve to maintain fluid fill

Surge arrestors built-in

Magnetic starter with Class 10, quick-trip overload protection required.

NEMA Mounting Dimensions

MATERIALS OF CONSTRUCTION

Part	Material
Motor (Stator) Shell	304 SS
Shaft Extension	17-4 PH hardened SS
Motor End Bells	304 SS Castings
Upper and Lower Radial Bearings	Carbon Sleeve
Thrust Bearing	Kingsbury Type
Lead Wire	XLPE (14 AWG)
Lead Potting	Epoxy
Lead Connector	18-8 SS
Fasteners	18-8 SS
Sand Slinger / Slinger Seat	NBR / Delrin

APPLICATIONS

- 4" motors are designed and sized for installation in 4" diameter or larger water wells.

SPECIFICATIONS

- **Temperature Rating:** Rated for continuous duty in water of 86° F (30° C) maximum.
- **Cooling:** Proper motor cooling requires a water velocity past the motor of .25'/sec which translates into 1.2 GPM in a 4" casing, 7 GPM in a 5" casing and 13 GPM in a 6" casing.
- Surge arrestors built-in
- **Power Lead (14 AWG):** Removable and replaceable motor leads are held in place by two (2) stainless steel screws for positive compression and sealing. Leads are furnished with motors and are also available as replacement parts.
- **Rotation:** CCW, counterclockwise as you face the top or shaft end of the motor.
- **Starter:** Three phase units require a magnetic starter with three leg, Class 10, quick trip overload protection. Starters are ordered separately.

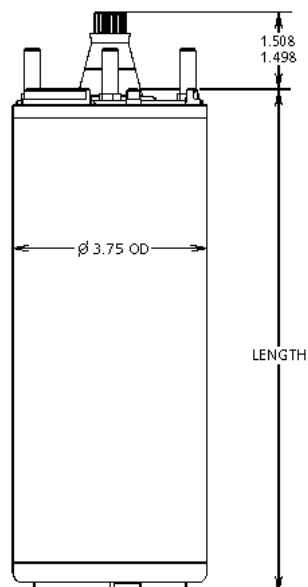
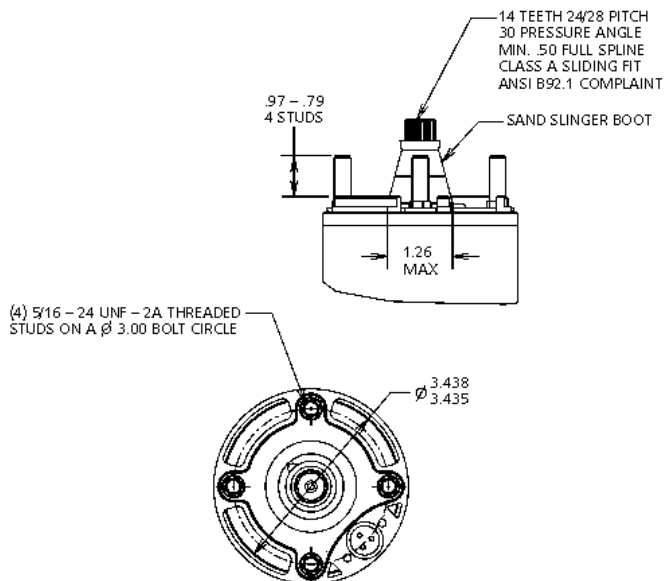
AGENCY LISTINGS



Goulds Water Technology Motor - tested to UL778 and CAN 22.2 by CSA International (Canadian Standards Association)



Goulds Water Technology Motor - Certified to NSF/ANSI 61, Annex G, Drinking Water System Components 4P49



THREE PHASE, 4" MOTOR - ELECTRICAL DATA, 60 HERTZ, 3450 RPM

GWT #	Red Jacket #	HP	kW	Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Line - Line Resistance
						Amps	Watts	Amps	Watts		
M05430	50C323	0.5	0.37	200	1.6	2.9	600	3.4	870	22	4.1 - 5.2
M07430	75C323	0.75	0.55		1.5	3.8	812	4.5	1140	32	2.6 - 3.0
M10430	100C323	1	0.75		1.4	4.6	1150	5.5	1500	29	3.4 - 3.9
M15430	150C323	1.5	1.1		1.3	6.3	1560	7.2	1950	40	1.9 - 2.5
M20430	200C323	2	1.5		1.25	7.5	2015	8.8	2490	51	1.4 - 2.0
M30430	300C323	3	2.2		1.15	10.9	2890	12.0	3290	71	0.9 - 1.3
M50430	500C323	5	3.7		1.15	18.3	4850	20.2	5515	113	0.4 - 0.8
M75430	750C323	7.5	5.5		1.15	27.0	7600	30.0	8800	165	0.5 - 0.6
M05432	50C313	0.5	0.37	230	1.6	2.4	610	2.9	880	17.3	5.7 - 7.2
M07432	75C313	0.75	0.55		1.5	3.3	850	3.9	1185	27	3.3 - 4.3
M10432	100C313	1	0.75		1.4	4.0	1090	4.7	1450	26.1	4.1 - 5.1
M15432	150C313	1.5	1.1		1.3	5.2	1490	6.1	1930	32.4	2.8 - 3.4
M20432	200C313	2	1.5		1.25	6.5	1990	7.6	2450	44	1.8 - 2.4
M30432	300C313	3	2.2		1.15	9.2	2880	10.1	3280	58.9	1.3 - 1.7
M50432	500C313	5	3.7		1.15	15.7	4925	17.5	5650	93	.85 - 1.25
M75432	750C313	7.5	5.5		1.15	24	7480	26.4	8570	140	.55 - .85
M05434	50C353	0.5	0.37	460	1.6	1.3	610	1.5	875	9	23.6 - 26.1
M07434	75C353	0.75	0.55		1.5	1.7	820	2.0	1140	14	14.4 - 16.2
M10434	100C353	1	0.75		1.4	2.2	1145	2.5	1505	13	17.8 - 18.8
M15434	150C353	1.5	1.1		1.3	2.8	1560	3.2	1980	16.3	12.3 - 13.1
M20434	200C353	2	1.5		1.25	3.3	2018	3.8	2470	23	8.0 - 8.67
M30434	300C353	3	2.2		1.15	4.8	2920	5.3	3320	30	5.9 - 6.5
M50434	500C353	5	3.7		1.15	7.6	4810	8.5	5530	48	3.58 - 4.00
M75434	750C353	7.5	5.5		1.15	12.2	7400	13.5	8560	87	1.9 - 2.3
M100434	1000C353	10	7.5		1.15	15.6	9600	17.2	11000	110	1.8 - 2.2
M15437	150C363	1.5	1.1	575	1.3	2.0	1520	2.4	1950	11.5	19.8 - 20.6
M20437	200C363	2	1.5		1.25	2.7	1610	3.3	2400	21	9.4 - 9.7
M30437	300C363	3	2.2		1.15	3.7	2850	4.1	3240	21.1	9.4 - 9.7
M50437	500C363	5	3.7		1.15	7.0	5080	7.6	5750	55	3.6 - 4.2
M75437	750C363	7.5	5.5		1.15	9.1	7260	10.0	8310	55	3.6 - 4.2

DIMENSIONS AND WEIGHTS

HP	Volts	Length		Weight	
		In.	MM	Lb.	Kg.
.5	200	10.0	254	19	8.7
.75		10.8	275	22	9.7
1		11.7	297	23	10.4
1.5		11.7	297	23	10.4
2		13.8	351	28	12.7
3		15.3	389	32	14.5
5		21.7	550	55	24.9
7.5		27.7	703	70	31.8
10	460	30.7	780	78	35.4
1.5	575	11.7	297	23	10.4
2		15.3	389	32	14.5
3		15.3	389	32	14.5
5		27.7	703	70	31.8
7.5		27.7	703	70	31.8

EFFICIENCY, THRUST RATING, FUSE/CIRCUIT BREAKER, KVA CODES

Motor Order No.		HP	Volts	Efficiency %		Thrust Rating	KVA Code	Standard Fuse		DE-TD Fuse		Circuit Breaker	
GWT	Red Jacket			F.L.	S.F.			Meets NEC based FLA	Max. Value based SFA	Meets NEC based FLA	Max. Value based SFA	Meets NEC based FLA	Max. Value based SFA
M05430	50C323	0.5	200	62	68.5	700 #	R	10	15	6	10	10	15
M07430	75C323	0.75		69	74		R	15	20	10	15	10	20
M10430	100C323	1		66	70		M	15	20	10	10	10	15
M15430	150C323	1.5		72	74		L	20	25	10	15	15	20
M20430	200C323	2		74	75	900 #	K	25	30	15	20	20	25
M30430	300C323	3		77	77		K	35	40	20	25	30	35
M50430	500C323	5		76	76	1500 #	J	60	70	35	40	50	60
M75430	750C323	7.5		74	74		J	80	90	50	60	70	80
M05432	50C313	0.5	230	61	68	700 #	R	6	10	6	6	6	10
M07432	75C313	0.75		66	71		R	6	15	6	10	6	10
M10432	100C313	1		69	72		M	10	15	6	10	10	15
M15432	150C313	1.5		75	76		K	15	20	10	15	15	15
M20432	200C313	2		75	75	900 #	K	15	25	15	15	20	20
M30432	300C313	3		77	77		J	25	35	15	20	25	30
M50432	500C313	5		76	76	1500 #	J	45	60	30	35	40	45
M75432	750C313	7.5		75	75		J	70	80	45	50	60	70
M05434	50C353	0.5	460	61	68	700 #	R	3	6	3	3	3	6
M07434	75C353	0.75		69	73.5		R	3	10	6	6	3	6
M10434	100C353	1		65	69		M	6	10	3	6	6	10
M15434	150C353	1.5		72	73		K	10	10	6	6	6	10
M20434	200C353	2		74	75	900 #	L	15	15	6	10	10	10
M30434	300C353	3		76	77		J	15	20	10	10	15	15
M50434	500C353	5		77	77	1500 #	J	25	30	15	20	20	20
M75434	750C353	7.5		76	76		L	40	50	25	30	35	40
M100434	1000C353	10		79	80		K	45	60	25	35	35	45
M15437	150C363	1.5	575	73	74	700 #	J	6	10	3	6	6	10
M20437	200C363	2		78	78	900 #	M	10	10	6	6	10	10
M30437	300C363	3		78	78		J	10	15	10	10	10	15
M50437	500C363	5		74	75	1500 #	M	20	25	15	15	20	20
M75437	750C363	7.5		77	77		J	25	35	20	20	25	30

THREE PHASE (November 2015)

As part of Faradyne Motors' continual improvement process, further improvements have been made to Goulds Water Technology Three Phase motors in November 2015. Our pump model numbers and motor order number will not change. To decipher the November 2015 motors from the previous three phase motors, please use the date code located on the motor. Goulds Water Technology motor date codes are 12 characters long, the first character represents the month and the fourth and fifth character represent the year. The self-stick, Mylar motor data stickers we pack with our motors and complete pumps will be updated with the new electrical data so that installers will know which motor is installed in the well should service work ever be necessary.

ELECTRICAL DATA, 60 HZ, 3450 RPM, 4" MOTORS (2015)

Type	GWT #	RJ Ref. #	HP	KW	Volts	SF	Full Load		Service Factor		Locked	Winding Resistance
							Amps	Watts	Amps	Watts	Rotor Amps	PH-PH
4" 3-Phase (PREMIUM)	M05430	50C323	0.5	0.37	200	1.6	2.9	600	3.4	870	22	4.1 - 5.2
	M07430	75C323	0.75	0.55		1.5	3.8	812	4.5	1140	32	2.6 - 3.0
	M10430	100C323	1	0.75		1.4	4.6	1150	5.5	1500	29	3.4 - 3.9
	M15430	150C323	1.5	1.1		1.3	6.3	1560	7.2	1950	40	1.9 - 2.5
	M20430	200C323	2	1.5		1.25	7.5	2015	8.8	2490	51	1.4 - 2.0
	M30430	300C323	3	2.2		1.15	10.9	2890	12.0	3290	71	1.2 - 1.5
	M50430	500C323	5	3.7		1.15	18.3	4850	20.2	5515	113	0.7 - 0.9
	M75430	750C323	7.5	5.5		1.15	27.0	7600	30.0	8800	165	0.4 - 0.6
	M05432	50C313	0.5	0.37	230	1.6	2.4	610	2.9	880	17.3	5.7 - 7.2
	M07432	75C313	0.75	0.55		1.5	3.3	850	3.9	1185	27	3.3 - 4.3
	M10432	100C313	1	0.75		1.4	4.0	1090	4.7	1450	26.1	4.1 - 5.1
	M15432	150C313	1.5	1.1		1.3	5.2	1490	6.1	1930	32.4	2.8 - 3.4
	M20432	200C313	2	1.5		1.25	6.5	1990	7.6	2450	44	2.2 - 2.8
	M30432	300C313	3	2.2		1.15	9.2	2880	10.1	3280	58.9	1.6 - 2.0
	M50432	500C313	5	3.7		1.15	15.7	4925	17.5	5650	93	.9 - 1.3
	M75432	750C313	7.5	5.5		1.15	24	7480	26.4	8570	140	.5 - .9
	M05434	50C353	0.5	0.37	460	1.6	1.3	610	1.5	875	9	23.6 - 26.1
	M07434	75C353	0.75	0.55		1.5	1.7	820	2.0	1140	14	14.4 - 16.2
	M10434	100C353	1	0.75		1.4	2.2	1145	2.5	1505	13	17.8 - 18.8
	M15434	150C353	1.5	1.1		1.3	2.8	1560	3.2	1980	16.3	12.3 - 13.1
	M20434	200C353	2	1.5		1.25	3.3	2018	3.8	2470	23	7.5 - 9.3
	M30434	300C353	3	2.2		1.15	4.8	2920	5.3	3320	30	6.3 - 7.7
	M50434	500C353	5	3.7		1.15	7.6	4810	8.5	5530	48	3.9 - 4.9
	M75434	750C353	7.5	5.5		1.15	12.2	7400	13.5	8560	87	2.1 - 2.7
	M100434	1000C353	10	7.5		1.15	15.6	9600	17.2	11000	110	1.8 - 2.2
	M15437	150C363	1.5	1.1	575	1.3	2.0	1520	2.4	1950	11.5	19.8 - 20.6
	M20437	200C363	2	1.5		1.25	2.7	1610	3.3	2400	21	10.2 - 12.5
	M30437	300C363	3	2.2		1.15	3.7	2850	4.1	3240	21.1	10.2 - 12.5
	M50437	500C363	5	3.7		1.15	7.0	5080	7.6	5750	55	3.6 - 4.2
	M75437	750C363	7.5	5.5		1.15	9.1	7260	10.0	8310	55	3.6 - 4.2

4" MOTORS - ENGINEERING DATA (2015)

Type	GWT #	HP	Volts	Efficiency %		Thrust Rating	KVA Code	Standard Fuse		Dual Element Time Delay		Circuit Breaker	
				F.L.	S.F.			Meets NEC Based on FL	Max Value Based on SFA	Meets NEC Based on FL	Max Value Based on SFA	Meets NEC Based on FL	Max Value Based on SFA
4" 3-Phase (PREMIUM)	M05430	0.5	200	62	68	700 #	R	10	15	6	10	10	10
	M07430	0.75		69	74		R	15	15	10	15	10	15
	M10430	1		66	70		M	15	20	10	10	10	15
	M15430	1.5		72	74		L	20	25	10	15	15	20
	M20430	2		74	75	900 #	K	25	30	15	20	20	25
	M30430	3		77	77		K	35	40	20	25	30	35
	M50430	5		76	76	1500 #	J	60	70	35	40	50	60
	M75430	7.5		74	74		J	80	90	50	60	70	80
	M05432	0.5	230	61	68	700 #	R	6	10	6	6	6	10
	M07432	0.75		66	71		R	6	15	6	10	6	10
	M10432	1		69	72		M	10	15	6	10	10	15
	M15432	1.5		75	76		K	15	20	10	15	15	20
	M20432	2		75	75	900 #	K	15	25	15	15	20	20
	M30432	3		77	77		J	25	35	15	20	25	30
	M50432	5		76	76	1500 #	J	45	60	30	35	40	45
	M75432	7.5		75	75		J	70	80	45	50	60	70
	M05434	0.5	460	61	68	700 #	R	3	6	3	3	3	6
	M07434	0.75		69	73		R	3	10	6	6	3	6
	M10434	1		65	69		M	6	10	3	6	6	10
	M15434	1.5		72	73		K	10	10	6	6	6	10
	M20434	2		74	75	900 #	L	15	15	6	10	10	10
	M30434	3		76	77		J	15	20	10	10	15	15
	M50434	5		77	77	1500 #	J	25	30	15	20	15	25
	M75434	7.5		76	76		L	40	50	25	30	30	35
	M100434	10		79	80		K	45	60	25	35	35	45
	M15437	1.5	575	73	74	700 #	J	6	10	3	6	6	10
	M20437	2		78	78	900 #	M	10	10	6	6	10	10
	M30437	3		78	78		J	10	15	10	10	10	15
	M50437	5		74	75	1500 #	M	20	25	15	15	20	20
	M75437	7.5		77	77		J	25	35	20	20	25	30

FEATURES

SINGLE PHASE:

Single Phase, 6" motors available in 5 - 15 HP, 230 volt models.

Require Goulds Water Technology Control Boxes as shown on Order Number chart.

THREE PHASE:

Three Phase, 6", 5 - 30 HP, 230 and 460 volt models have an exclusive voltage change plug feature. Stock one model and a different voltage plug to reduce inventory cost.

Change Plug Order Numbers are:

- PLUG-230V • PLUG-460V

6 - 10" Three Phase available from 5 - 200 HP, see charts for available voltages.



NSF/ANSI STANDARD 61

Drinking Water System Components - Health Effects

6" Single Phase Motors 6-10" Three Phase Motors

6" SINGLE PHASE MOTORS AND REQUIRED CONTROL BOXES

Motor Order No.	HP	kW	Volts	Phase	Motor Dia. vs Flange Dia.	S.F.	Rated Input		Service Factor		L.R. Amps	Control Box Order No. ^①
							Amps	Watts	Amps	Watts		
6M051	5	3.7	230	1	6" x 6"	1.15	24	4987	27.5	5735	124	CB05MC3R
6M071	7.5	5.5					36	7675	41	8950	167	CB07MC3R
6M101	10	7.5					50	10135	58	11830	202	CB10MC3R
6M151	15	11					72	15180	85	18050	275	CB15MC3R

① NEMA 3R control boxes will be replacing the current models.

6-10" THREE PHASE MOTORS

Motor Order No.	HP	kW	Volts	Phase	Motor Dia. vs Flange Dia.	S.F.	Rated Input		Service Factor		L.R.	
							Amps	Watts	Amps	Watts	Amps	
6M058	5	3.7	200	3	6" x 6"	1.15	17.5	4910	19.5	5610	124	
6M052	5	3.7	230				15.0	4857	17.0	5520	110	
6M054	5	3.7	460				7.5	4857	8.5	5520	55	
6M078	7.5	5.5	200				25.4	7180	28.5	8230	158	
6M072	7.5	5.5	230				22.0	7127	26.0	8140	144	
6M074	7.5	5.5	460				11.0	7127	13.0	8140	72	
6M108	10	7.5	200				33.3	9360	37.2	10700	236	
6M102	10	7.5	230				29.0	9407	33.0	10730	208	
6M104	10	7.5	460				14.5	9407	16.5	10730	104	
6M158	15	11	200				47.4	13700	53.5	15710	347	
6M152	15	11	230				42.0	13700	46.0	15800	320	
6M154	15	11	460				21.0	13700	23.0	15800	160	
6M208	20	15	200				61.2	18040	69.5	20820	431	
6M202	20	15	230				54.0	17930	60.0	20650	392	
6M204	20	15	460				27.0	17930	30.0	20650	196	
6M258	25	18.5	200				77.3	22740	87.5	26190	578	
6M252	25	18.5	230				68.0	22470	76.0	25800	530	
6M254	25	18.5	460				34.0	22470	37.0	25800	265	
6M308	30	22	200				91.8	27000	104.0	31120	674	
6M302	30	22	230				82.0	27130	94.0	31160	610	
6M304	30	22	460				41.0	27130	47.0	31160	305	
6M404	40	30	460	3	6" x 6"	1.15	53.0	35530	60.0	41100	340	
66M504	50	37	460		8" x 6"		70.0	45210	79.0	52380	465	
86M504	50	37	460				66.1	44501	74.1	50891	518	
86M604	60	45	460				76.8	51866	86.8	59576	562	
8M754	75	55	460		8" x 8"		96.0	65900	109.0	76100	650	
8M1004	100	75	460				127.0	87600	145.0	101300	795	
8M1254	125	90	460				160.0	110800	180.0	126000	980	
8M1504	150	110	460				195.0	130700	220.0	152000	1060	
10M2004	200	150	460				10 "x 10"		235.0	171100	270.0	198600

5-30 HP, 3 Phase 230 and 460 Motors have adjustable voltage feature, change voltage plugs to convert from 230V to 460V operation. Spare Change Plug Order No's are: PLUG-230V or PLUG-460V.

6" SINGLE PHASE MOTORS

Motor Order No.	HP	kW	Volts	Phase	F.L. Efficiency %	KVA Code	Resistance - Ohms		
							R - Y	B - Y	R - B
6M051	5	3.7	230	1	74.8	G	2.172	0.512	2.627
6M071	7.5	5.5			72.9	F	1.401	0.400	1.774
6M101	10	7.5			73.6	E	1.052	0.316	1.310
6M151	15	11			73.7	D	0.678	0.230	0.850

6-10" THREE PHASE MOTORS

Motor Order No.	HP	kW	Volts	Phase	F.L. Efficiency %	KVA Code	Line - Line Resistance	Time Delay Fuse	
								Standard	Dual Element
6M058	5	3.7	200	3	75.9	K	0.618	50	25
6M052	5	3.7	230		76.8	K	0.806	45	20
6M054	5	3.7	460		76.8	K	3.050	25	10
6M078	7.5	5.5	200		77.9	J	0.504	80	40
6M072	7.5	5.5	230		78.5	J	0.651	70	30
6M074	7.5	5.5	460		78.5	J	2.430	35	15
6M108	10	7.5	200		79.7	K	0.315	100	50
6M102	10	7.5	230		79.3	K	0.448	90	40
6M104	10	7.5	460		79.3	K	1.619	45	20
6M158	15	11	200		81.7	K	0.213	175	70
6M152	15	11	230		81.7	K	0.312	150	60
6M154	15	11	460		81.7	K	1.074	70	30
6M208	20	15	200		82.7	J	0.189	200	90
6M202	20	15	230		83.2	J	0.258	175	70
6M204	20	15	460		83.2	J	0.861	90	35
6M258	25	18.5	200		82.0	K	0.146	250	110
6M252	25	18.5	230		83.0	K	0.210	225	90
6M254	25	18.5	460		83.0	K	0.666	110	45
6M308	30	22	200		82.9	J	0.119	300	125
6M302	30	22	230		82.5	K	0.166	250	100
6M304	30	22	460		82.5	K	0.554	125	50
6M404	40	30	460		84.0	H	0.446	175	70
66M504	50	37	460		82.5	J	0.388	225	90
86M504	50	37	460		83.8	K	0.331	225	125
86M604	60	45	460		86.3	J	0.278	250	150
8M754	75	55	460		84.9	H	0.218	300	125
8M1004	100	75	460		85.2	H	0.164	400	175
8M1254	125	90	460		84.2	G	0.132	500	225
8M1504	150	110	460		85.6	G	0.115	600	250
10M2004	200	150	460		87.2	F	0.0929	800	350

GENERAL FEATURES OF CANNED AND REWINDABLE WATER-TIGHT MOTORS

6" AND 8"x6" CANNED DESIGN MOTOR FEATURES

- Replaceable Plug-in Motor Lead – All 6" motor leads are stranded copper for flexibility and strength. Leads are 150" long and field replaceable.
- Insulation – The canned motor's stator coil is mounted in a stainless steel frame and is completely sealed in a stainless steel cylinder. The coil wire features moisture resistant insulation which is completely water-proofed for long life.
- Heat Resistant – The space between the stator's stainless steel protective can and its frame is filled with a specially formulated patented resin that protects the motor against thermal fluctuation and internal stress.

8-10" REWINDABLE WATER-TIGHT MOTOR FEATURES

- Insulation Wire – The coil conductor insulation material is a specially developed denatured polypropylene, which offers excellent leak-resistant characteristics. Three barriers are applied to the copper conductors to provide complete insulation against the motor's cooling fluid. This design is the result of extensive research and is of superior quality. It insures that Goulds Water Technology motors will have an extremely long service life.

MOTOR FEATURES - BOTH DESIGNS

Maximum Water Temperature 6, 8 & 10" Motors

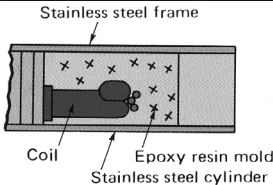
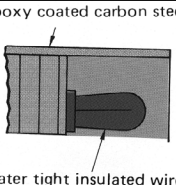
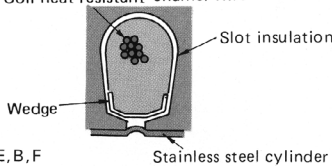
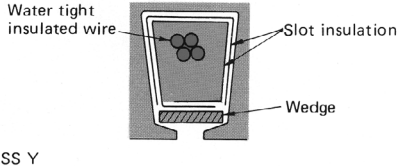
Size	HP	Temperature Range	Minimum Flow Rate	Ph Range
6"	5 - 40	95° F (35° C)	.5 Ft/sec.	6.5 - 8.0
8x6"	50 - 60	77° F (25° C)	.5 Ft/sec.	6.5 - 8.0
8"	75 - 150	77° F (25° C)	.5 Ft/sec.	6.5 - 8.0
10"	200	77° F (25° C)	.5 Ft/sec.	6.5 - 8.0

- Sand Resistant Slinger and Lip Seals – Goulds Water Technology submersible motors feature double-row, grease packed, lip seals to prevent sand from entering the motor. A carbon steel slinger with a baked on epoxy coating prevents sand from entering the lip seal area.

Additional protection against sand intrusion is provided by the close tolerance slinger guide with a .02" fit. This design is field-proven in West Texas wells which are considered to be some of the worst sandy well applications. Best of all, these features are standard for a Goulds Water Technology motor, so there is no need to stock one motor for clean wells and another more expensive motor for the more abrasive, sandy jobs.

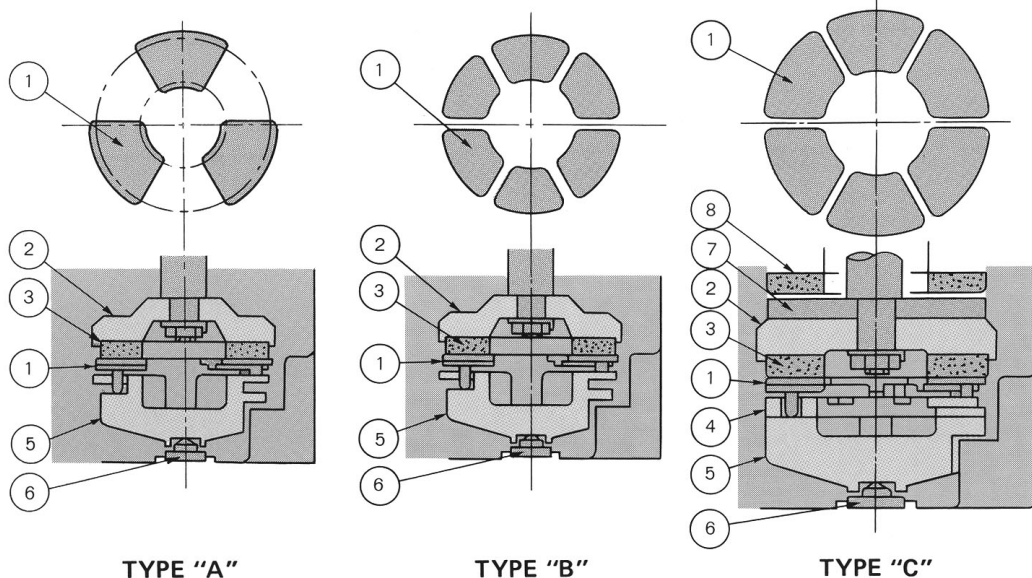
- High Torque Characteristics – The stator laminations are constructed of high quality, electrical grade, silicon steel which provide high torque even when the motor is subjected to nominal voltage variations.
- Balancing – The rotor balance rings (one on each end of the rotor) allow for excellent dynamic balance for the rotating element of the motor.
- Carbon Sleeve Bearings – Two carbon, water-lubricated, guide bearings are used to properly align the shaft. The bearings have a large surface area to better support the shaft, reducing whipping, while acting as a steady bushing.
- Water-Filled Design – The internal cooling water is mixed with antifreeze and antirust liquid to allow the motor to be stored at -22° F (-30° C). Two water plugs are provided for filling or draining the anti-freeze fluid during maintenance. These plugs are also used to top off and to check the water level.
- Complete Corrosion and Water-Tight Protection – All main motor components are made of stainless steel: including the can housing (water tight type motors have baked epoxy coated carbon steel housings), shaft and bolts. All other motor parts are finished with the baked epoxy coating.
- Baked Epoxy Coating – All external and internal cast iron parts are coated with a baked epoxy resin that provides excellent resistance to water and corrosion.
- Quality Control – All Goulds Water Technology submersible motors are manufactured and tested under the most stringent quality control procedures, providing long service life and trouble-free operation.

CONSTRUCTION AND INSULATION DETAILS

TYPE	6" and 8"x6" CANNED DESIGN	8-10" REWINDABLE WATER-TIGHT DESIGN
Construction	 Stainless steel frame Coil Epoxy resin mold Stainless steel cylinder	 Baked epoxy coated carbon steel frame Water tight insulated wire
Slot Insulation	 Coil heat-resistant enamel wire Slot insulation Wedge CLASS E, B, F Stainless steel cylinder	 Water tight insulated wire Slot insulation Wedge CLASS Y

SPECIAL TECHNOLOGY

HIGH PERFORMANCE THRUST BEARING



APPLICATION

Motor Size	Output		Bearing Type	Number of Shoes
	HP	kW		
6"	5 - 30	3.7 - 22	A	3
6"	40 - 50	30 - 45	B	6
8 - 10"	40 - 150	30 - 110	C	6
10"	200	150	C	8

Number	Part Name
1	Pivot Shoe
2	Bearing Frame
3	Carbon Disc
4	Metal Support
5	Metal Frame
6	Thrust Plate
7	Slide Plate
8	Up Thrust Bearing

The field proven KINGSBURY design thrust bearing creates a wedge of water between the pivot shoe and carbon disc. Our innovative design permits high thrust loads to be placed on the bearings while showing no measurable wear after several years of severe duty operation. This allows for long pumping life, virtual trouble free operation and low maintenance. For all 6" motors, the 300 lbs. maximum continuous up thrust is absorbed between the upper carbon sleeve bearing and the rotor balance ring. For all 8" - 10" motors, the 1000 lbs. maximum continuous up thrust is carried between the upper slide plate and the separate up thrust carbon bearing.

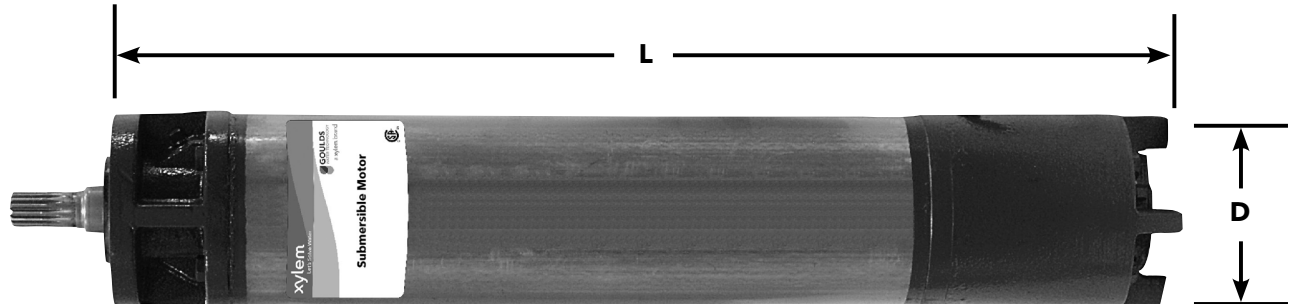
Motor Size	2P			
	Down Thrust		Up Thrust	
	lbs.	kg	lbs.	kg
6" 5-30 HP	3,500	1,590	300 *(450)	136 *(200)
6" 40-50 HP	5,000	2,270	300 *(450)	136 *(200)
8x6" 50-60 HP	6,000	2,721	300 *(450)	136 *(200)
8"	10,000 ** (5,000)	4,540 ** (2,270)	1,000 ** (1,500)	450 ** (680)
10"	10,000	4,540	1,000	450

Note:

1. Thrust ratings showed are continuous except for values marked *.
2. * Momentary rating (3 minutes maximum).
3. ** 8" motor - 6" Flange when using standard stainless steel bolts (B&M), has a thrust value of 5,000 lbs. A thrust value of 10,000 lbs. can be obtained by using high tensile stainless steel bolts (ASTM F593G).

6" and 8"x6" CANNED DESIGN MOTORS

SIZE AND WEIGHT - 2 POLE 3600 RPM 60 Hz – 3000 RPM 50 Hz



Motor Size	Phase	Output		D inch (mm)	L		Net Weight	
		HP	kW		inch	mm	lbs.	kg
6"	1Ø	5	3.7	5.5 (140)	26.97	685	110	50
		7.5	5.5		29.92	760	128	58
		10	7.5		29.92	760	128	58
		15	11		33.46	850	148	67
	3Ø	5	3.7		22.95	583	95	43
		7.5	5.5		24.80	630	99	45
		10	7.5		26.97	685	110	50
		15	11		29.92	760	128	58
		20	15		31.50	800	137	62
		25	18.5		36.22	920	161	73
		30	22		38.19	970	176	80
		40	30		40.55	1030	187	85
		50	37		41.73	1060	198	90
		50	37		41.61	1057	353	160
		60	45				364	165
8"x6"				6.89 (175)				

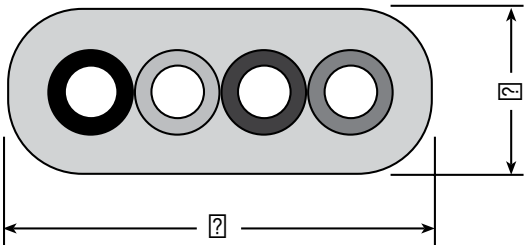
*Gross Weight: See page 12.

Motor Size	Phase	Output		460V, 415V, 400V, 380V			230V, 208V				
		HP	kW	Lead Wire Size		A x B inch (mm)	Lead Wire Size		A x B inch (mm)		
				mm ²	AWG		mm ²	AWG			
6"	1Ø	5-15	3.7-11	–	–	–	3.5	#12	0.82x0.33 (20.8x8.2)		
	3Ø	5-25	3.7-18.5	3.5	#12	0.82x0.33 (20.8x8.2)	3.5	#12	0.82x0.33 (20.8x8.2)		
		30	22	5.5	#10	0.99x0.38 (25.1x9.6)	5.5	#10	0.99x0.38 (25.1x9.6)		
		40	30	3.5	#12	0.82x0.33 (20.8x8.2)	–	–	–		
		8"x6"	50	37	8.0	#8				1.09x0.41 (27.7x10.4)	
			60	45							

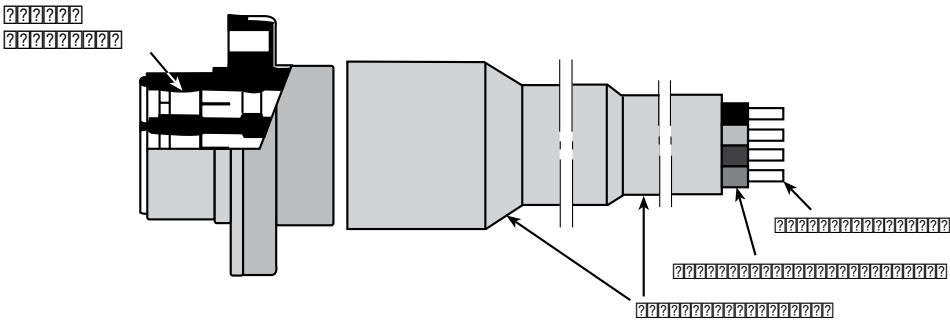
6" CANNED DESIGN MOTORS (continued)

TYPE OF LEAD WIRE - 600V CLASS

- Ethylene-Propylene Rubber Insulated Chloroprene
- Cabtyre Cable
- Plug-In (Field replaceable.)
- Color Coded
- USA Standard
(Black, Yellow, Red, Green)



CHLOROPRENE CABTYRE CABLE

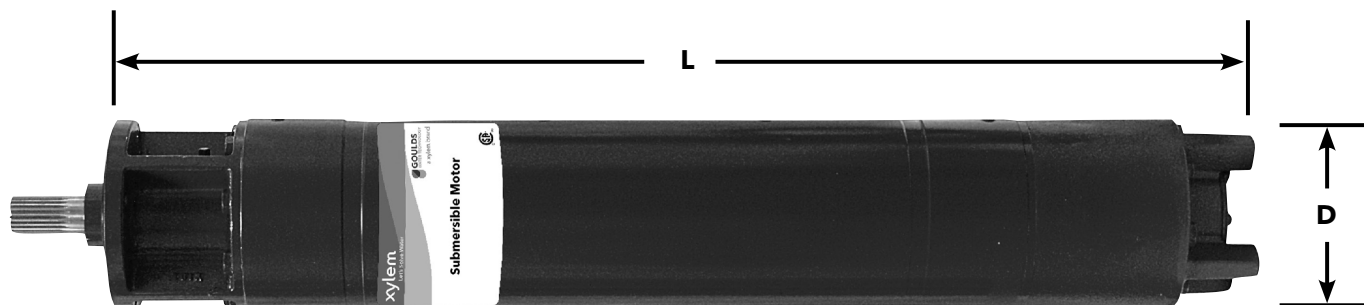


6" GOULDS WATER TECHNOLOGY REPLACEMENT MOTOR LEADS

Order No.	Description	Used On
CPML-12	150", 12 / 4	5-15 HP 1Ø; 5 - 25 and 40 HP, 460V, 3Ø
CPML-10	150", 10 / 4	30 HP, 230/460V and 50 HP, 3Ø
CPML-8	150", 8 / 4	Optional for 30-50 HP, 3Ø, any voltage

REWINDABLE WATER-TIGHT DESIGN MOTORS

SIZE AND WEIGHT - 2 POLE 3600 RPM 60 Hz – 3000 RPM 50 Hz



Motor Size	Output		D inch (mm)	L		Net Weight	
	HP	kW		inch	mm	lbs.	kg
8"	75	55	7.52 (191)	53.15	1350	463	210
	100	75		58.27	1480	518	235
	125	90		66.14	1680	595	270
	150	110		70.08	1780	661	300
10"	200	150	8.52 (216.5)	69.68	1770	816	370

(*) 6 inch flange. **Gross Weight: See page 12.

CABLE SIZE AND TYPE - 2 POLE 3600 RPM 60 Hz – 3000 RPM 50 Hz

200 inch (5 m) - Lead Wire Standard Length (Round 1 Stranded Conductor)

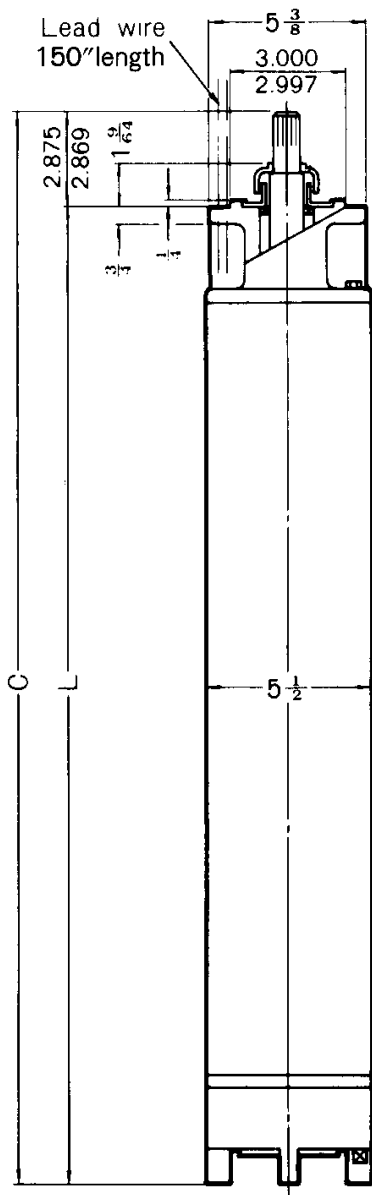
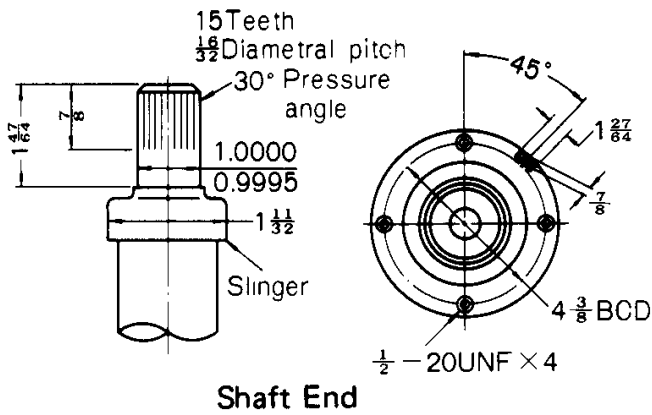
Motor Size	Output		460V, 415V, 400V, 380V			
	HP	kW	Lead Wire Size		Cable Diameter	
			mm ²	AWG	inch	mm
8"	75	30-55	8	#8	0.362	9.2
	100-125	75-90	14	#6	0.433	11.0
	150	110	22	#4	0.531	13.5
10"	200	150	30	#2	0.591	15.0

Type of Lead Wire - 600V Class

Ethylene Propylene rubber insulated chloroprene cabtyre cable.

DIMENSIONAL DATA

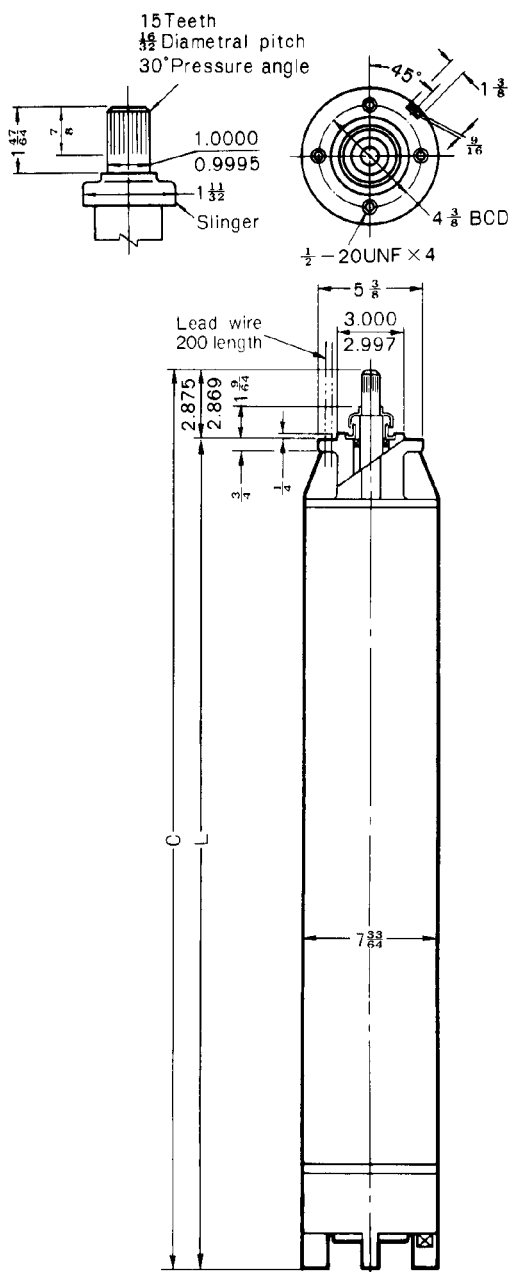
6", 3600 RPM, 2 POLE



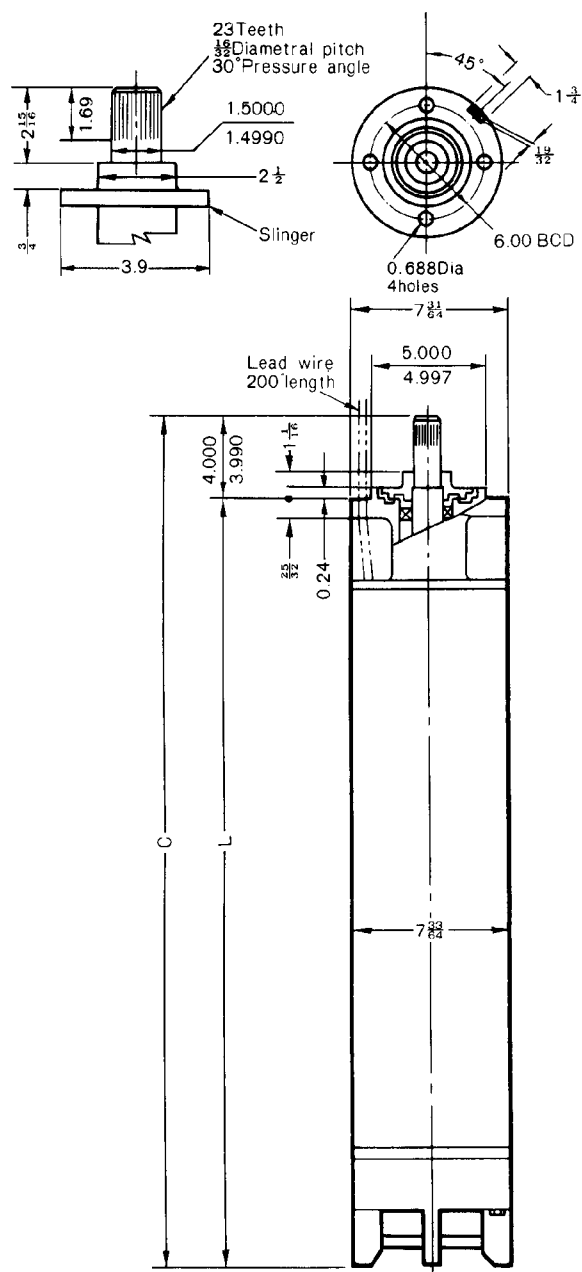
Output		Phase	C		L	
HP	kW		inch	mm	inch	mm
5	3.7	1	29.84	758	26.97	685
7.5	5.5		32.79	833	29.92	760
10	7.5		32.79	833	29.92	760
15	11		36.33	923	33.46	850
5	3.7	3	25.82	656	22.95	583
7.5	5.5		27.67	703	24.80	630
10	7.5		29.84	758	26.97	685
15	11		32.79	833	29.92	760
20	15		34.37	873	31.50	800
25	18.5		39.09	993	36.22	920
30	22		41.06	1043	38.19	970
40	30		43.42	1103	40.55	1030
50	37		44.60	1133	41.73	1060

DIMENSIONAL DATA

8", 3600 RPM, 2 POLE (6" FLANGE)



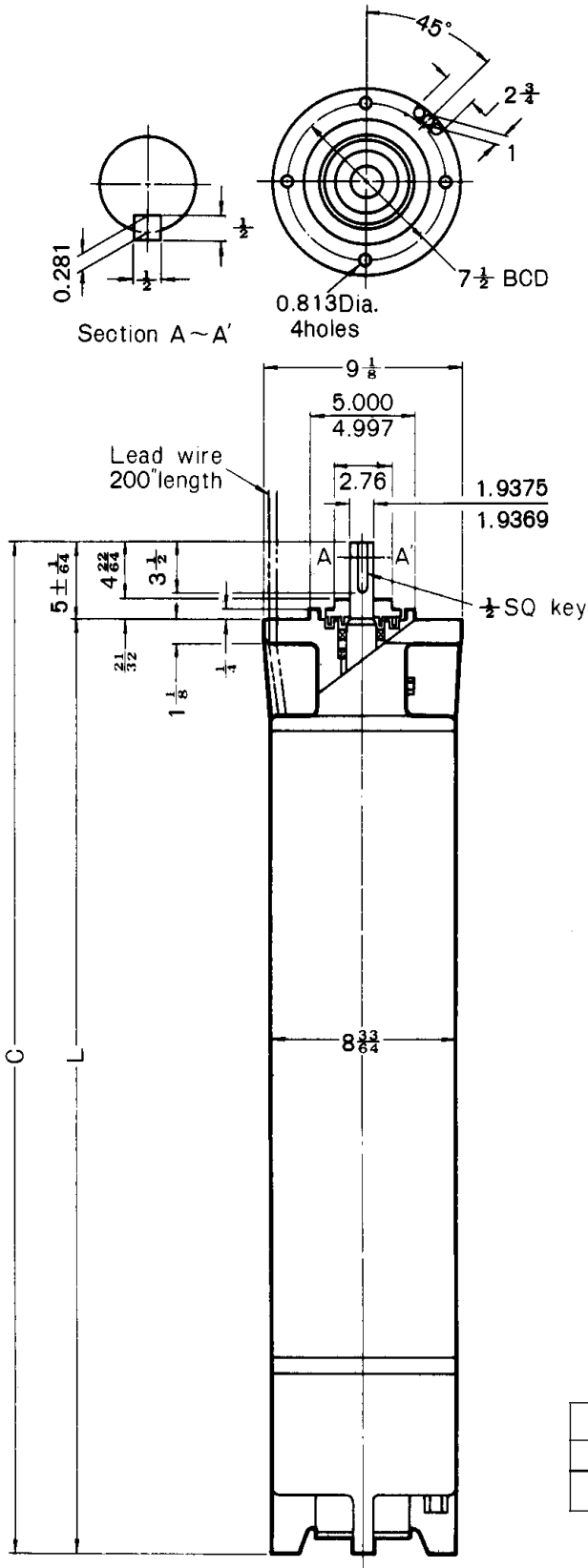
8", 3600 RPM, 2 POLE (8" FLANGE)



Size	Output		Phase	C		L	
	HP	kW		inch	mm	inch	mm
8"x8"	50	37	3	48.15	1223	45.28	1150
	60	45		50.91	1293	48.03	1220
	75	55		57.13	1451	53.15	1350
	100	75		62.24	1581	58.27	1480
	125	90		70.12	1781	66.14	1680
	150	110		74.06	1881	70.08	1780
8"x6"	50	37	3	44.48	1130	41.61	1057
	60	45					

DIMENSIONAL DATA

10", 3600 RPM, 2 POLE (10"-B FLANGE)



Output		Phase	C		L	
HP	kW		inch	mm	inch	mm
200	150	3	74.70	1897	69.68	1770



FEATURES

- Encapsulated, water-filled design
- Engineered, assembled and tested in the USA
- Leading motor efficiencies yield lower cost of ownership
- NSF/ANSI 61 certified for potable water
- Variable frequency drive capable*
- Horizontal and vertical installation*
- Class F rated insulation
- Stainless steel bolting and fasteners

* See detail reported in the instruction manual



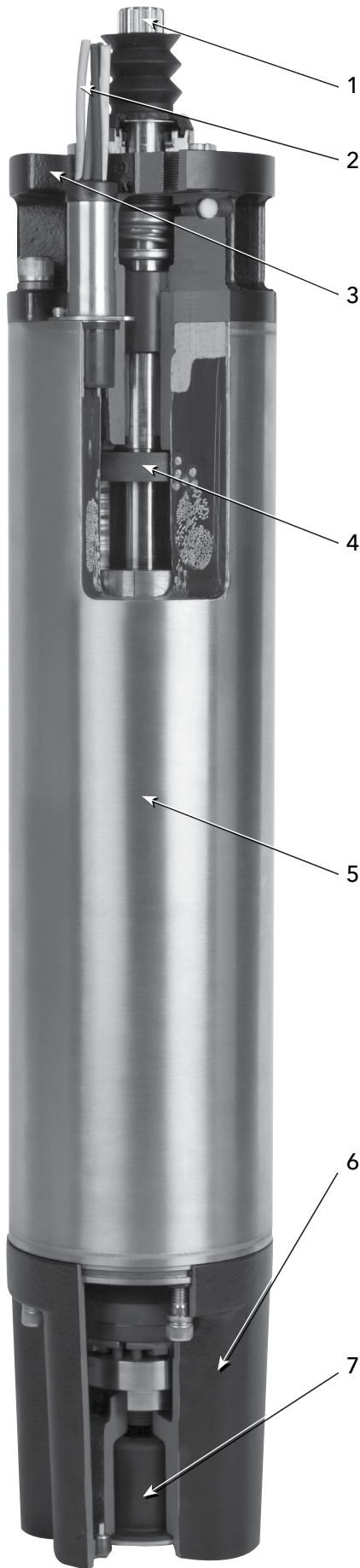
TECHNICAL BROCHURE

BCPFMSERIE R7

FM Series Motors

6" - 8" MOTORS





Industry Leading Designs

Thrust Handling

The FM Series Kingsbury-type bi-directional thrust bearing can handle down-thrust values greater than other 6" submersible motors.

Up to 30 hp - 3600 lbs

40 hp to 50 hp - 6750 lbs

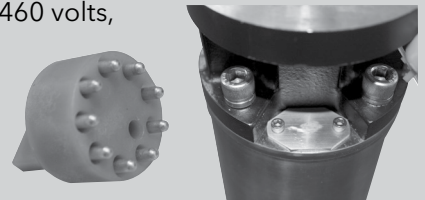
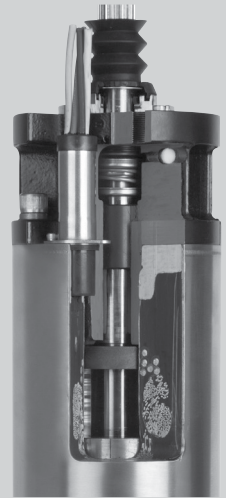
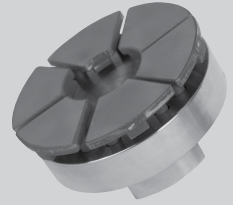
50 hp to 150 hp - 10000 lbs

Sealing System

The most robust sealing system available on the market provides protection against sediment intrusion in the most difficult of applications. Sealing system includes specially designed rubber slinger, upgraded mechanical seal as standard with Silicon Carbide / Silicon Carbide material, and a lip seal.

Voltage Change Device

All three-phase units, 5-30 hp, 230/460 volts, are supplied with a voltage change device to reduce volume of part numbers for stock.



1. 17-4 PH stainless steel shaft.
Shaft extension and coupling dimensions per NEMA standards.
2. Fully replaceable XLPE lead wire
17 ft (5.18 m) lead length.
3. Dual-flange style upper bracket provides easier handling and faster assembly to the pump.
4. Upthrust ring prevents upthrust damage during start-up.
5. 300 series stainless steel casing.
6. Epoxy-coated upper and lower bracket, TNEC 140 standard, provides excellent resistance to water and corrosion.
7. Pressure equalizing diaphragm regulates internal pressure with static pressure and ensures motor is full of fluid.

MATERIALS OF CONSTRUCTION

Component	Material
Castings	Gray Iron
Shell and Liner	300 Series Stainless Steel
Shaft Extension	17-4 Ph Stainless Steel
Fasteners	300 Series Stainless Steel
Seal	300 Series Stainless Steel
Mechanical Seal	SiC/SiC Faces
Elastomers	Nitrile Rubber
Diaphragm Cover	300 Series Stainless Steel
Lead Wire	XLPE
Lead Potting	Epoxy
Filter	Polyester
Paint	Epoxy
Rotor	Copper Bar
Insulation	Class F

MOTOR DATA

Part No.	HP	kW	Phase	Volts	Motor Dia. vs Flange Dia	Service Factor	Rated Input		Maximum Load (SF Load)		L. R. Amps			
							Amps	Watts	Amps	Watts				
6F051	5	3.7	1	230	6" x 6"	1.15	22.8	4975	26.0	5625	104			
6F071	7.5	5.5					35.2	7300	40.0	8300	162			
6F101	10	7.5					45.7	9700	52.4	11175	202			
6F151	15	11					62.4	13725	72.5	15825	296			
6F058	5	3.7	3	200-208	6" x 6"	1.15	16.1	4830	18.0	5490	96			
6F078	7.5	5.5					23.3	7000	26.8	8070	140			
6F108	10	7.5					31.5	9090	35.0	10400	187			
6F158	15	11					44.9	13440	50.8	15460	268			
6F208	20	15					59.0	17850	67.1	20630	354			
6F258	25	19					76.8	22110	86.5	25520	445			
6F308	30	22					91.7	26420	103.3	30450	530			
6F0524*	5	3.7					230/460	14.4	4830	16.1	5490	87		
6F0724*	7.5	5.5		21.5				7000	24.1	8070	127			
6F1024*	10	7.5		28.0				9090	31.5	10400	164			
6F1524*	15	11		40.9				13440	46.3	15460	237			
6F2024*	20	15		53.2				17850	60.8	20630	312			
6F2524*	25	19		66.7				22110	76.0	25520	387			
6F3024*	30	22		79.3				26420	90.2	30450	458			
6F0524*	5	3.7		7.0				4830	8.0	5490	44			
6F0724*	7.5	5.5		10.0				7000	11.3	8070	62			
6F1024*	10	7.5		13.1				9090	14.8	10400	82			
6F1524*	15	11		20.4				13440	23.0	15460	117			
6F2024*	20	15		25.8				17850	29.4	20630	151			
6F2524*	25	19		32.8				22110	36.8	25520	187			
6F3024*	30	22		39.3				26420	44.6	30450	226			
6F404	40	30		460				51.3	35030	58.6	40500	302		
6F504	50	37						65.8	44350	75.1	51200	385		
6F055	5	3.7		575			5.8	4830	6.5	5490	35			
6F075	7.5	5.5					8.2	7000	9.3	8070	51			
6F105	10	7.5					10.5	9090	11.8	10400	61			
6F155	15	11					15.0	13440	17.1	15460	88			
6F205	20	15					20.9	17850	23.7	20630	122			
6F255	25	19					26.2	22110	29.7	25520	153			
6F305	30	22					31.0	26420	35.0	30450	179			
6F405	40	30					41.5	35030	47.3	40500	247			
6F505	50	37					53.0	44350	61.0	51200	323			
86F504	50	37					460	8" x 6"	1.15	65	43675	74	49950	540
86F604	60	45								78	52225	89	59825	645
8F504	50	37								8" x 8"	65	43675	74	49950
8F604	60	45		78							52225	89	59825	645
8F754	75	56		95				64850			109	74650	803	
8F1004	100	75		128				85075			146	98350	1080	
8F1254	125	93		165				110125		188	126825	1410		
8F1504	150	112		203				133025		228	151100	1643		
86F505	50	37		575			8" x 6"	52		43675	60	49950	439	
86F605	60	45						61		52225	70	59825	518	
8F505	50	37						52		43675	60	49950	439	
8F605	60	45						61		52225	70	59825	518	
8F755	75	56					8" x 8"	76		64850	88	74650	645	
8F1005	100	75						100		85075	115	98350	855	
8F1255	125	93						129		110125	148	126825	1133	
8F1505	150	112						159		133025	178	151100	1320	

* Same motors with voltage change device

MOTOR DATA

Part No.	Rating		Phase	Volts	% Efficiency		KVA Code	Line-Line Resistance (Ohms)	Fuse Sizing Based on NEC		
	HP	kW			FL	SF			Standard Fuse	Dual Element Time Delay Fuse	Circuit Breaker
6F058	5	3.7	3	200-208	77.5	78.5	H	.86 - 1.1	60	35	50
6F078	7.5	5.5			80.0	80.0		.66 - .81	90	50	70
6F108	10	7.5			82.5	82.5		.37 - .46	110	70	100
6F158	15	11			83.5	83.5		.26 - .32	175	100	125
6F208	20	15			83.0	83.0		.19 - .24	225	125	175
6F258	25	19			84.0	84.0		.13 - .17	300	150	200
6F308	30	22			84.5	84.5		.10 - .13	350	200	250
6F0524*	5	3.7		230	77.5	78.5	G	1.1 - 1.4	60	35	45
6F0724*	7.5	5.5			80.0	80.0		.73 - .90	80	45	70
6F1024*	10	7.5			82.5	82.5		.50 - .62	100	60	90
6F1524*	15	11			83.5	83.5		.33 - .41	150	90	125
6F2024*	20	15			83.0	83.0		.25 - .31	200	110	175
6F2524*	25	19			84.0	84.0		.18 - .22	225	150	200
6F3024*	30	22			84.5	84.5		.15 - .19	300	175	225
6F0524*	5	3.7		460	77.5	78.5	H	4.4 - 5.4	30	15	25
6F0724*	7.5	5.5			80.0	80.0		2.9 - 3.6	40	25	35
6F1024*	10	7.5			82.5	82.5		1.9 - 2.4	50	30	40
6F1524*	15	11			83.5	83.5	G	1.1 - 1.4	70	45	60
6F2024*	20	15			83.0	83.0		.9 - 1.1	90	50	80
6F2524*	25	19			84.0	84.0		.69 - .85	110	70	100
6F3024*	30	22			84.5	84.5		.58 - .72	150	80	110
6F404	40	30			85.0	85.0		.45 - .56	175	100	150
6F504	50	37			84.0	84.0		.35 - .43	225	150	175
6F055	5	3.7		575	77.5	78.5	H	5.8 - 7.2	25	15	20
6F075	7.5	5.5			80.0	80.0		3.6 - 4.4	30	20	25
6F105	10	7.5			82.5	82.5	G	2.8 - 3.5	40	25	30
6F155	15	11			83.5	83.5		1.9 - 2.4	60	30	45
6F205	20	15			83.0	83.0		1.4 - 1.7	80	45	60
6F255	25	19			84.0	84.0		1.0 - 1.3	90	60	80
6F305	30	22			84.5	84.5		.83 - 1.0	110	70	90
6F405	40	30			85.0	85.0		.64 - .79	150	90	125
6F505	50	37			84.0	84.0	H	.53 - .71	175	100	150

* Same motors with voltage change device

MOTOR DATA

Part No.	Rating		Phase	Volts	% Efficiency		KVA Code	Winding		Fuse Sizing Based on NEC		
	HP	kW			FL	SF		Main Resistance (BL-Y)	Start Resistance (R-Y)	Standard Fuse	Dual Element Time Delay Fuse	Circuit Breaker Size
6F051	5	3.7	1	230	74.5	75.5	E	.54-.67	1.7-2.1	80	50	70
6F071	7.5	5.5			77.0	77.5	F	.36-.44	.76-.94	125	80	110
6F101	10	7.5			76.5	76.5	E	.25 - .31	.69 - .85	175	90	125
6F151	15	11			81.5	81.5	E	.22 - .28	.61 - .75	225	150	200

Part No.	Rating		Volts	% Efficiency		KVA Code	Line-Line Resistance (Ohms)	Fuse Sizing Based on NEC		
	HP	kW		FL	SF			Standard Fuse	Dual Element Time Delay Fuse	Circuit Breaker
86F504	50	37	460	85.5	86.0	K	.19 - .24	250	175	225
86F604	60	45		85.5	86.0		.17 - .21	350	200	250
8F504	50	37		85.5	86.0		.19 - .24	250	175	225
8F604	60	45		85.5	86.0		.17 - .21	350	200	250
8F754	75	56		86.5	86.5		.12 - .15	400	225	350
8F1004	100	75		87.5	87.5		.08 - .11	500	300	450
8F1254	125	93		84.5	85.0		.06 - .08	700	400	600
8F1504	150	112		84.5	85.0		.04 - .06	800	450	700
86F505	50	37	575	85.5	86.0		.32 - .39	225	125	175
86F605	60	45		85.5	86.0		.26 - .32	250	150	200
8F505	50	37		85.5	86.0		.32 - .39	225	125	175
8F605	60	45		85.5	86.0		.26 - .32	250	150	200
8F755	75	56		86.5	86.5		.20 - .25	350	200	250
8F1005	100	75		87.5	87.5		.16 - .20	400	250	350
8F1255	125	93		84.5	85.0	L	.10 - .13	600	350	450
8F1505	150	112		84.5	85.0	K	.08 - .10	700	400	500

* Maximum water temperature 35°C / 95°F

MOTOR LEAD LENGTH

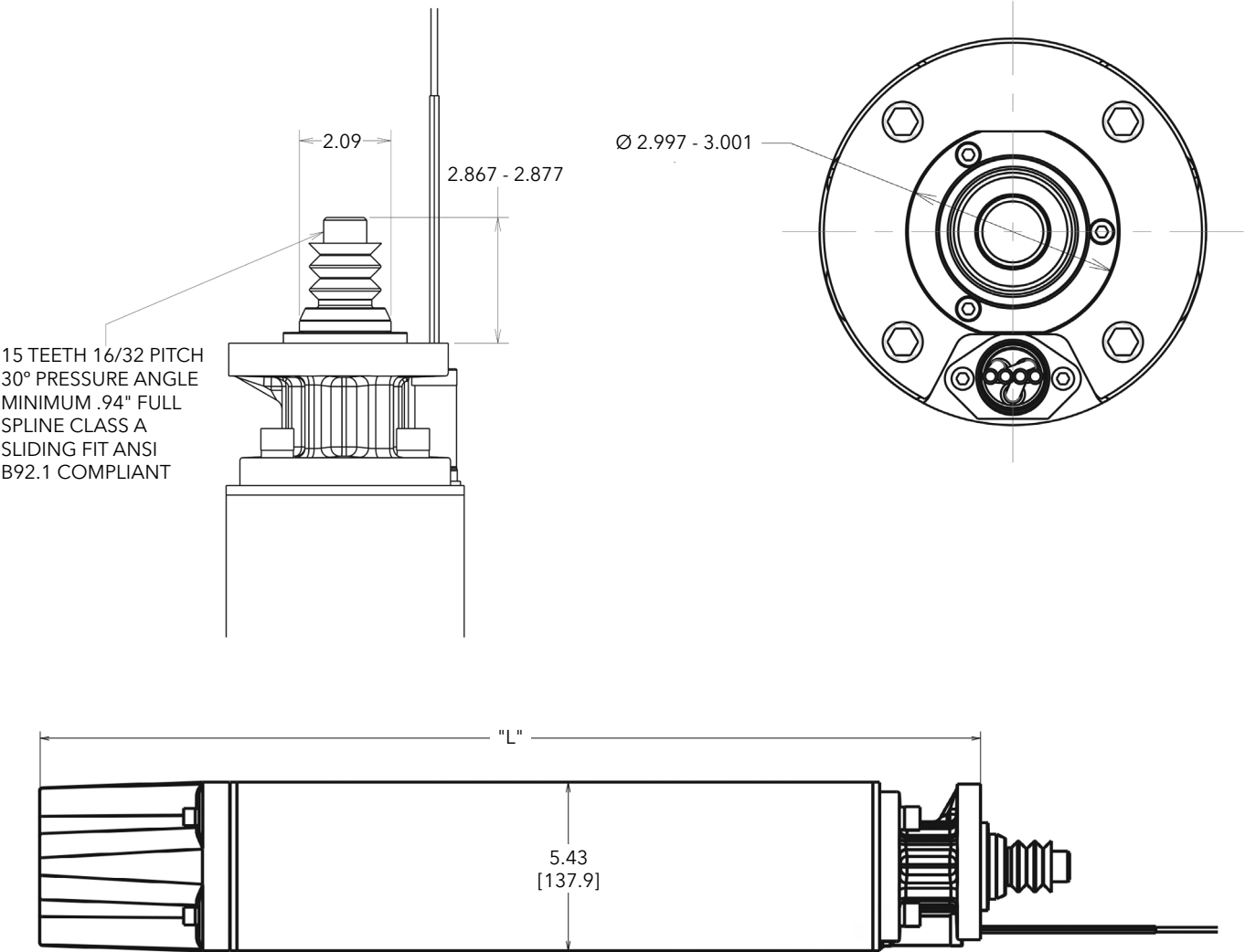
6" Motor Leads

HP	Phase	Gage	Length
5-15	1	10	17'
5-25	3	10	
30-50	3	8	

8" Motor Leads

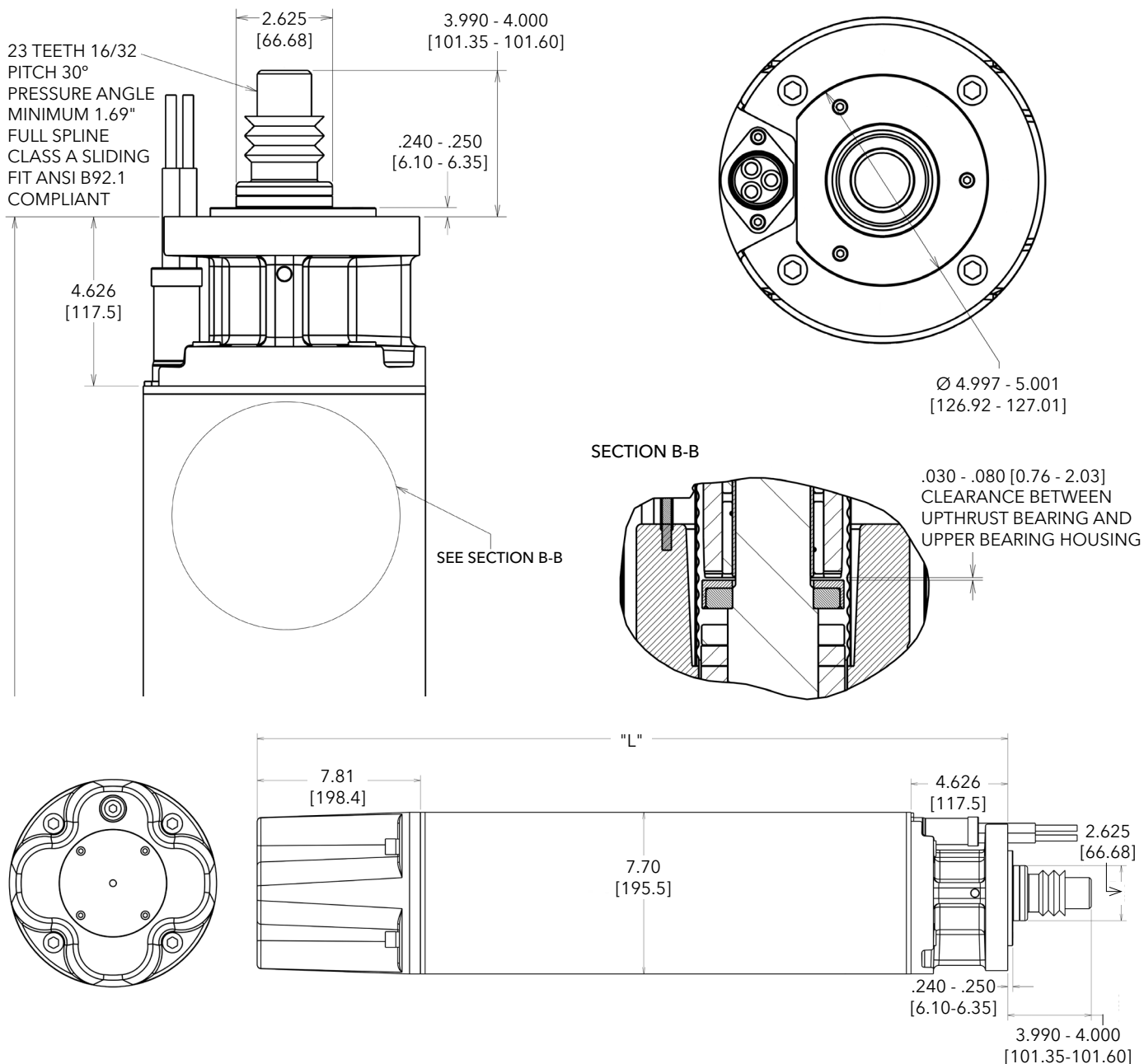
HP	Phase	Gage	Length
50	3	8	17'
60			
75			
100			
125			
150			

6" MOTOR DIMENSIONS AND WEIGHTS



HP	Phase	Length		Motor Weight		Ship Weight	
		Inches	mm	Lb	Kg	Lb	Kg
5	1	25.6	650	104	47.2	134	61
7.5		28.1	714	117	53.1	151	68
10		30.3	770	132	59.9	166	75
15		32.8	833	144	65.3	180	82
5	3	23	584	87	39	115	52
7.5		24.3	617	97	44	127	58
10		25.6	650	104	47	134	61
15		28.1	714	117	53	151	68
20		30.3	770	132	60	166	75
25		32.8	833	144	65	180	82
30		35.6	904	165	75	207	94
40		39.3	998	187	85	229	104
50		54.1	1374	265	120	319	145

8" MOTOR DIMENSIONS AND WEIGHTS



Motor Dia. vs Flange Dia.	HP	Length		Motor Weight		Ship Weight	
		Inches	mm	Lb	Kg	Lb	Kg
8" X 6"	50	38.9	987	330	150	407	185
	60	41.6	1057	371	168	448	203
8" X 8"	50	38.9	987	344	156	421	191
	60	41.6	1057	385	175	462	210
	75	46.6	1184	444	201	521	236
	100	58.6	1488	525	238	602	273
	125	66.9	1699	819	371	917	416
	150	75.1	1908	932	423	1030	467

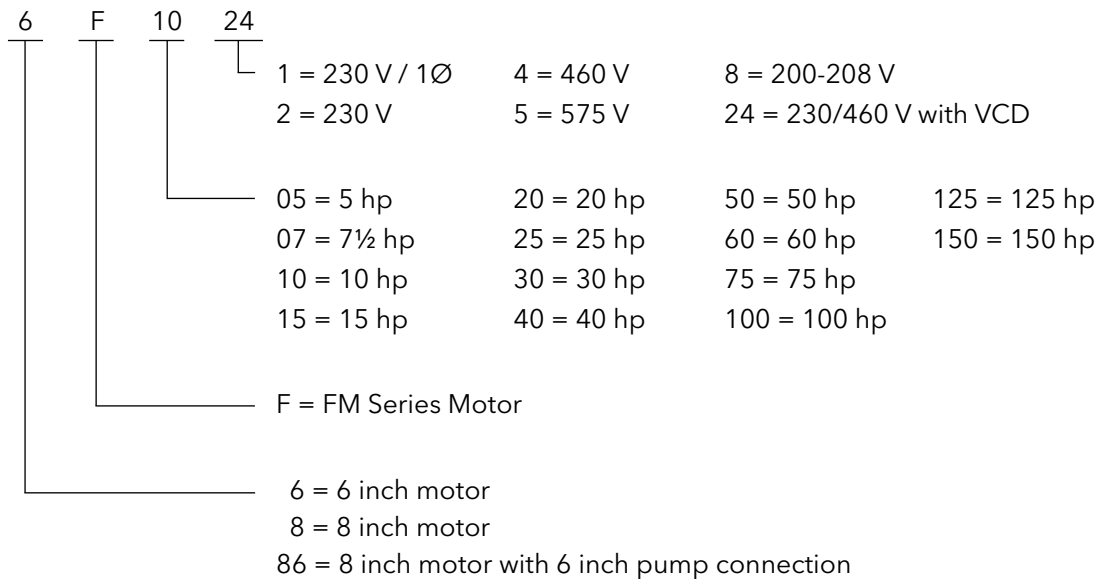
MINIMUM FLOW RATES FOR PROPER MOTOR COOLING

Well or Sleeve Diameter (inches)	FM = 5.43" Dia. 6" FM Motor	FM = 7.70" Dia. 8" FM Motor
	GPM Required	
6	9	–
7	25	–
8	45	10
10	90	55
12	140	110
14	200	170
16	280	245

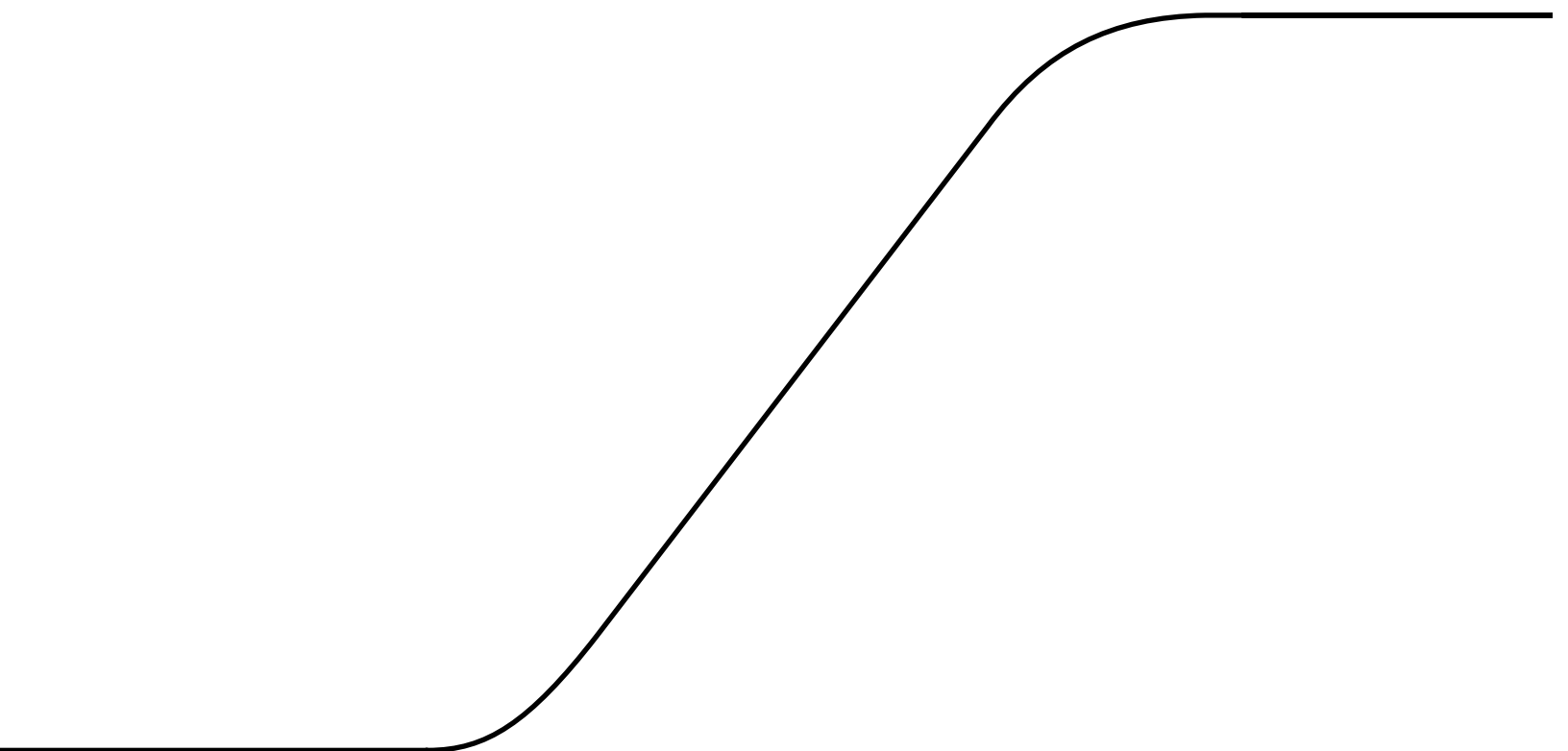
Multiply gpm by .2271 for m³/Hr.

Multiply gpm by 3.785 for l/min.

MOTOR NOMENCLATURE



Residential booster





ResiBoost

COMPLETE PACKAGED RESIDENTIAL CONSTANT PRESSURE
BOOSTING SYSTEM, FOR THE WAY YOU LIVE

FEATURES

Powered for Continuous Operation: All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

VFD: Built-in protection against various system and electrical faults. Comes with internal transducer with digital indicator, additional parts not necessary. Pre-wired to e-HM pump.

Energy Savings: Precise speed control to operate pump for best energy efficiency.

Ease of installation: Complete system with pump, motor and controller assembled. Tank included separate from assembly for shipping. Plug and Play compact system.

Built-in Check Valve: Completely assembled ResiBoost includes a uniquely designed fitting including a spring loaded check valve.

Built-in Memory: Stored data - operating hours, number of starts, connection to the power supply, faults.

Electrical Protection: Protects against over-current, incorrect power supply, and short circuit.

Display: Control with LCD display and simple push button settings.

Stainless Steel Pump: e-HM series stainless steel pump with small footprint designed for longer life.

Offerings: Six SKU's to cover all residential boosting applications up to 35 GPM.

Model	Pump Designation	Max GPM	Stages	Output Phase	Output Voltage	Weight
13159RB115	13 GPM AT 60 PSI	22	5	1	115	30
2294RB115	22 GPM AT 38 PSI	40	3			
13120RB230	13 GPM AT 48 PSI	22	4			
22125RB230	22 GPM AT 50 PSI	40	4			
13150RB3	13 GPM AT 65 PSI	22	5	3	230	
22157RB3	22 GPM AT 68 PSI	40	5			

INCLUDED IN KIT

NUMBER CODE

13 159 RB 115

Output Voltage =
115 (1 PH 115V),
230 (1 PH 230V),
3 (3 PH 230V)

Series = RB

Pump Designation Selection =
94, 120, 125, 150, 157, 159

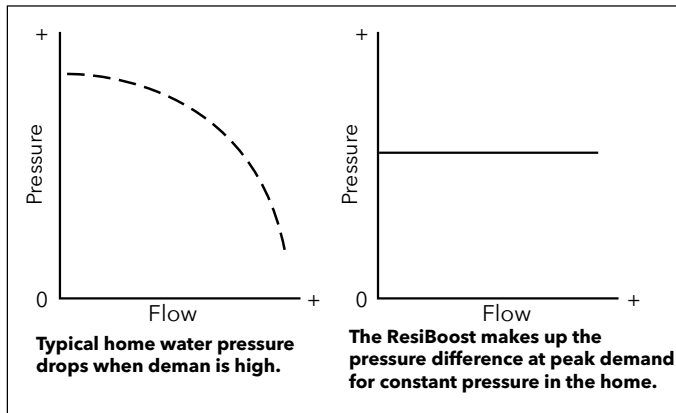
GPM at BEP = 13, 22

Kit	Pump	Controller	Union with Check Valve	Tank
13159RB115	3HM05N07M6BQQE	RB111512	15K112	V2L
2294RB115	5HM03N07M6BQQE			
13120RB230	3HM04N05M6FQQE	RB12309		
22125RB230	5HM04N11M6FQQE			
13150RB3	3HM05N07T6PQQE	RB32309		
22157RB3	5HM05N15T6PQQE			

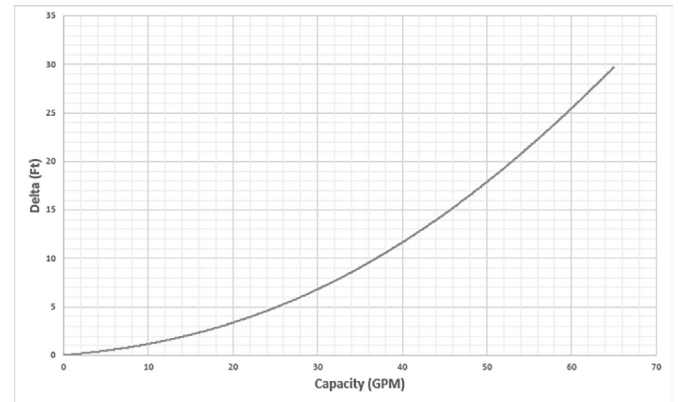


THE RESIBOOST ADVANTAGE

The ResiBoost constant pressure system provides an economical solution for municipal water users that suffer from low pressure. In addition the ResiBoost constant pressure system can also be used for applications requiring repressurizing water from a storage tank. As your household water needs change, our drive will change the speed of the motor to accomodate the need.



LOSS CURVE



Note: Above curve reflects friction loss of the controller as water passes through the controller.

RESIBOOST CONTROLLER



FEATURES

Input Power: Single Phase 115 and 230 V

Output Power: Single Phase 115 and 230 V,
3 phase 230 V

Programming: Pre-programmed

Input Controls: HMI with push button control

Signal Lights: Red LED

Protection Against: No Water, Motor Over Current,
Open Lead, Low System Pressure, Over Heating,
Short Circuit, Over Voltage, Under Voltage

Temperature Rating: 32° - 122°F

Approvals: cCSA_{US}, NSF

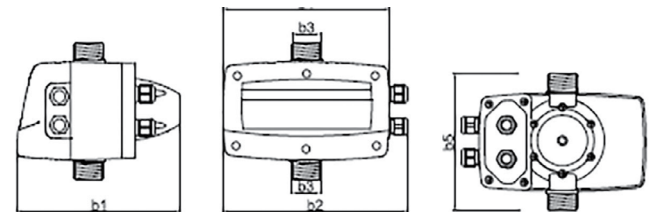
Enclosure: Type 3

Power Lead: 230V plug (NEMA 6-20) on 230 V, 115 V
plug (NEMA 5-15) on 115 V selections

ResiBoost Controller Part #	Input Voltage	Output Voltage	Max Amps	Weight lbs
RB111512	1/115	1/115	12	6.4
RB12309	1/230	1/230	9	
RB32309	1/230	3/230	9	

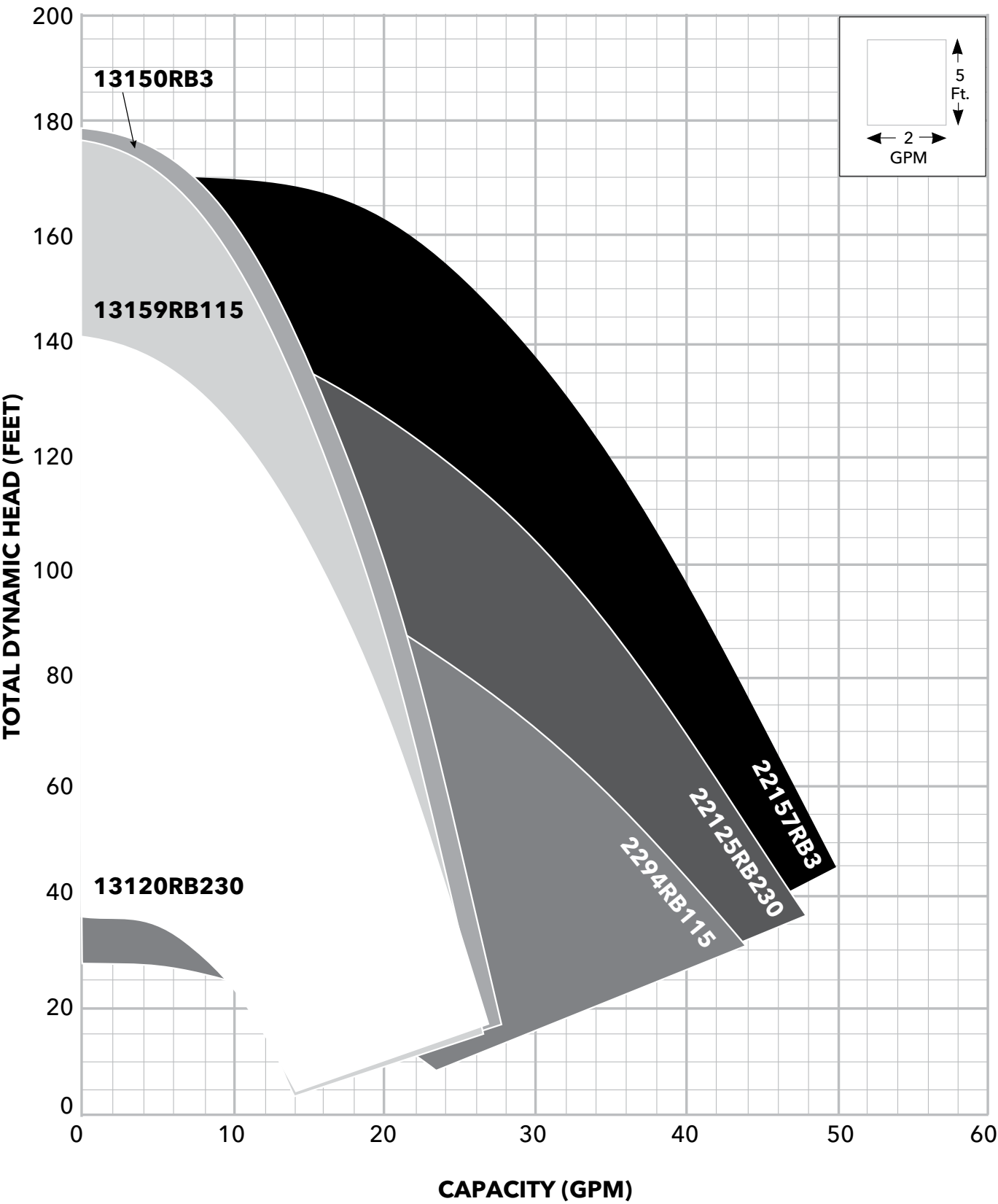
* ResiBoost controller cannot be used on all surface motors. Check IOM for correct applications.

DIMENSIONS

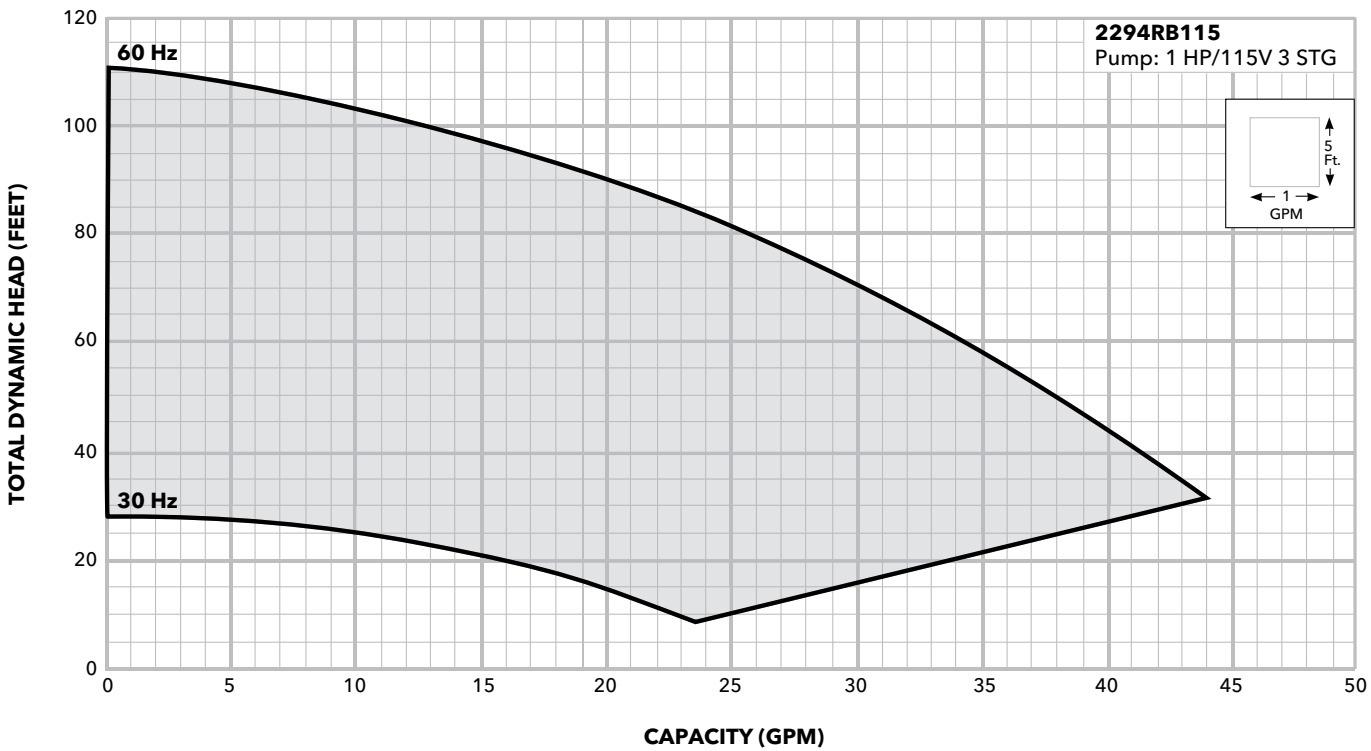
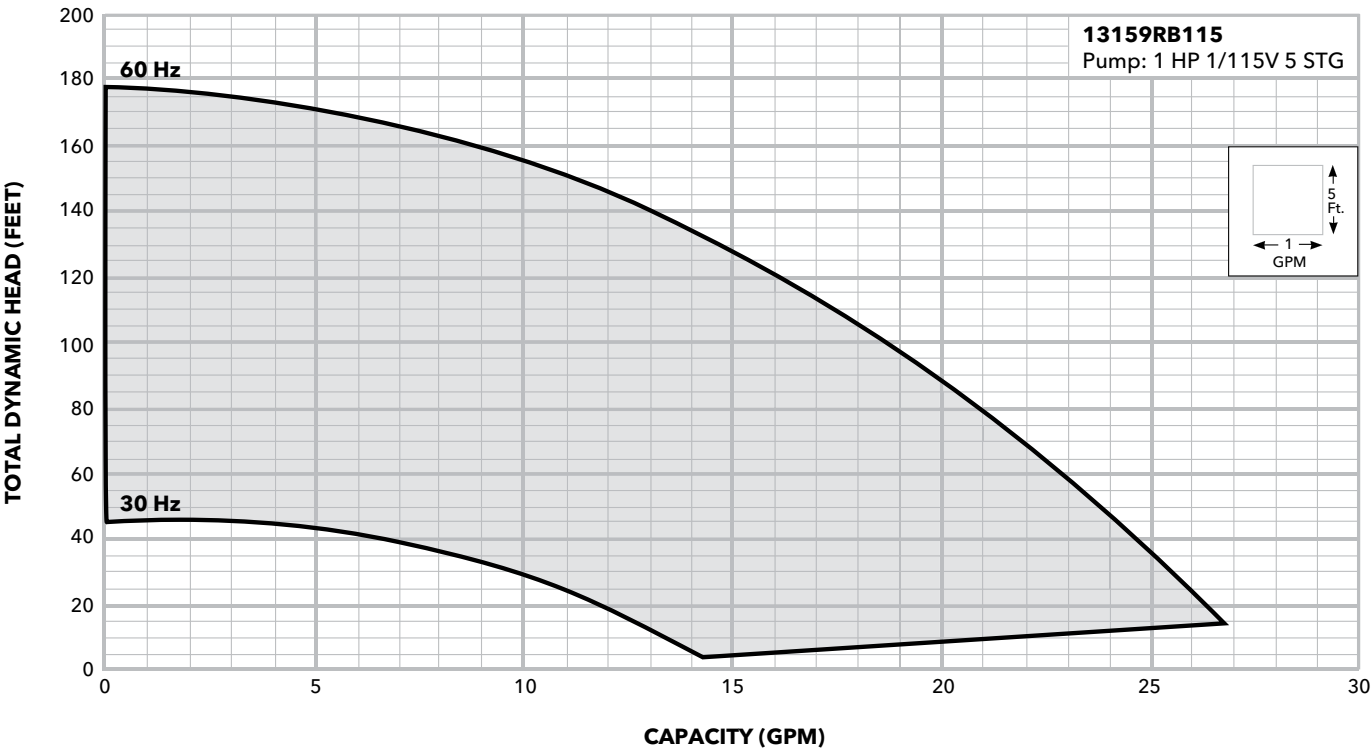


Model	lbs	b1 [in]	b2 [in]	b3 [in]	b4 [in]	b5 [in]
1Ø	6.4	9.1	10.4	1¼" MNPT	9.4	7.7
3Ø						

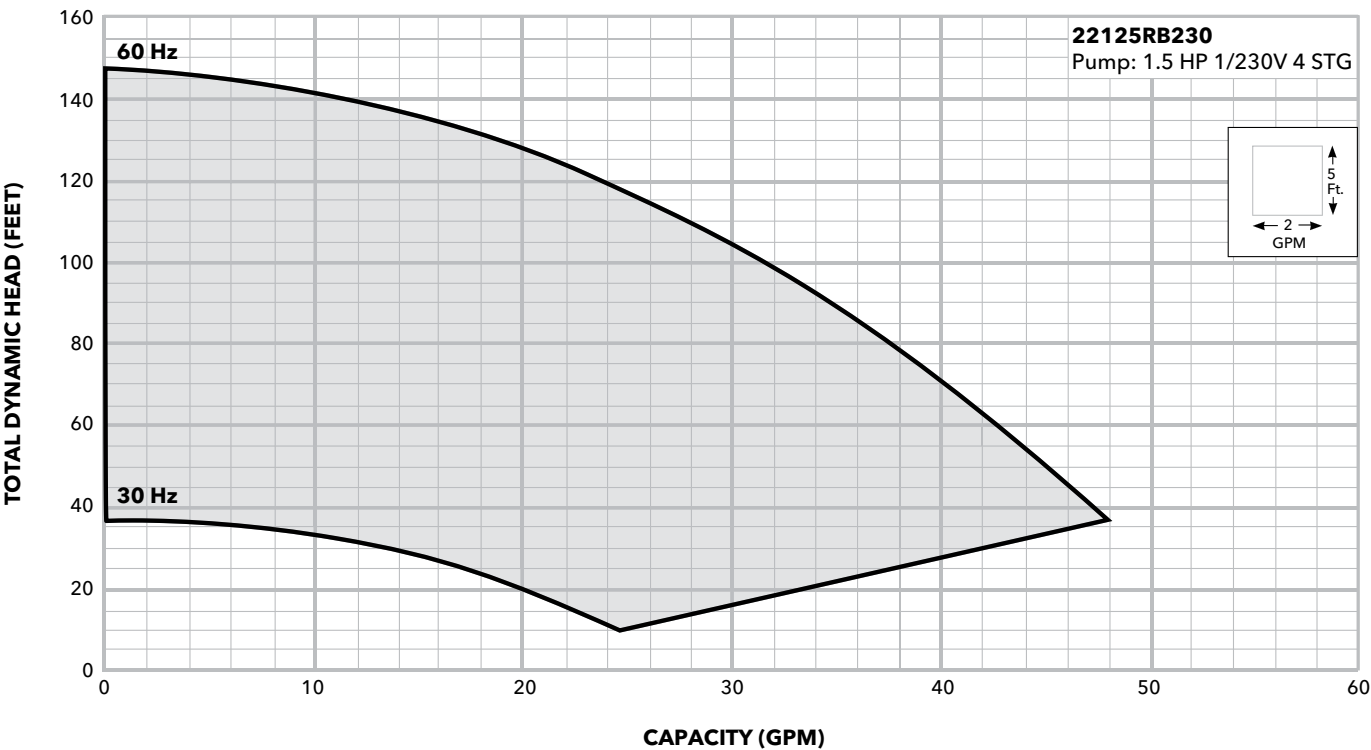
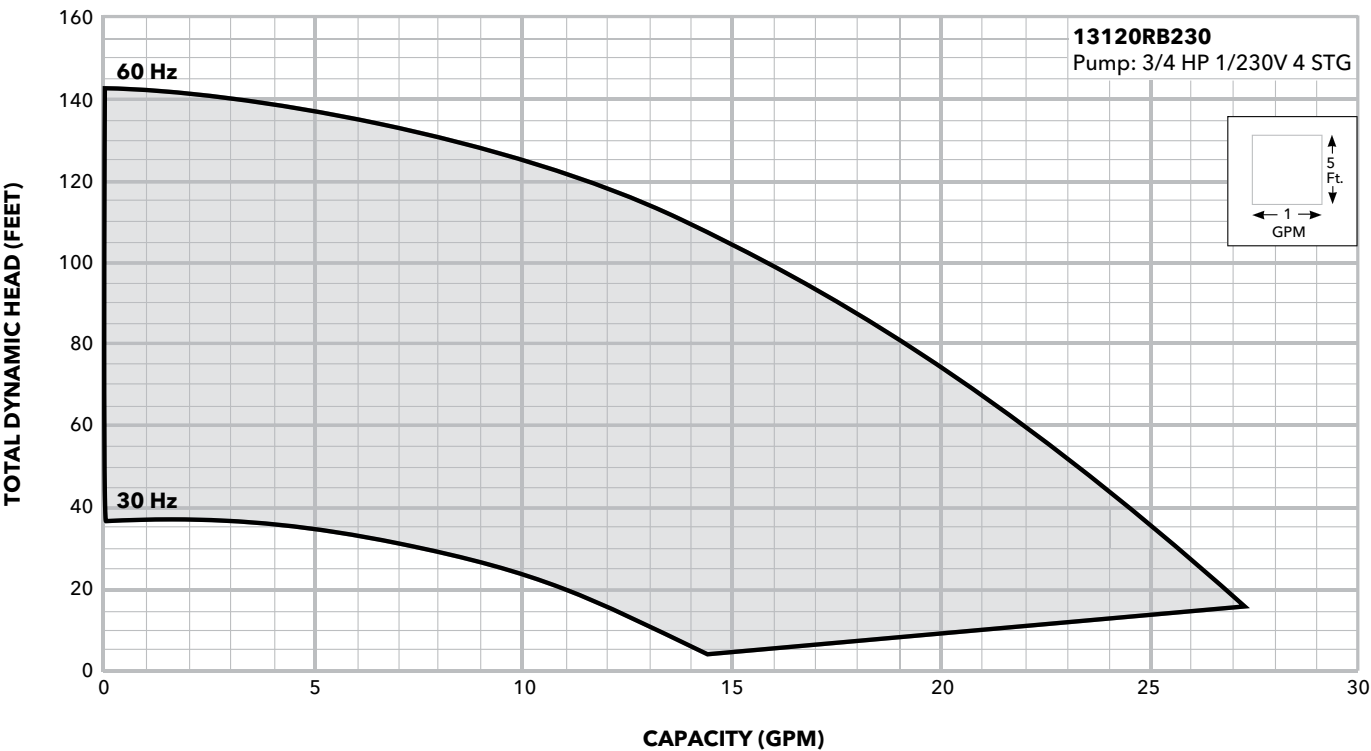
FAMILY CURVE



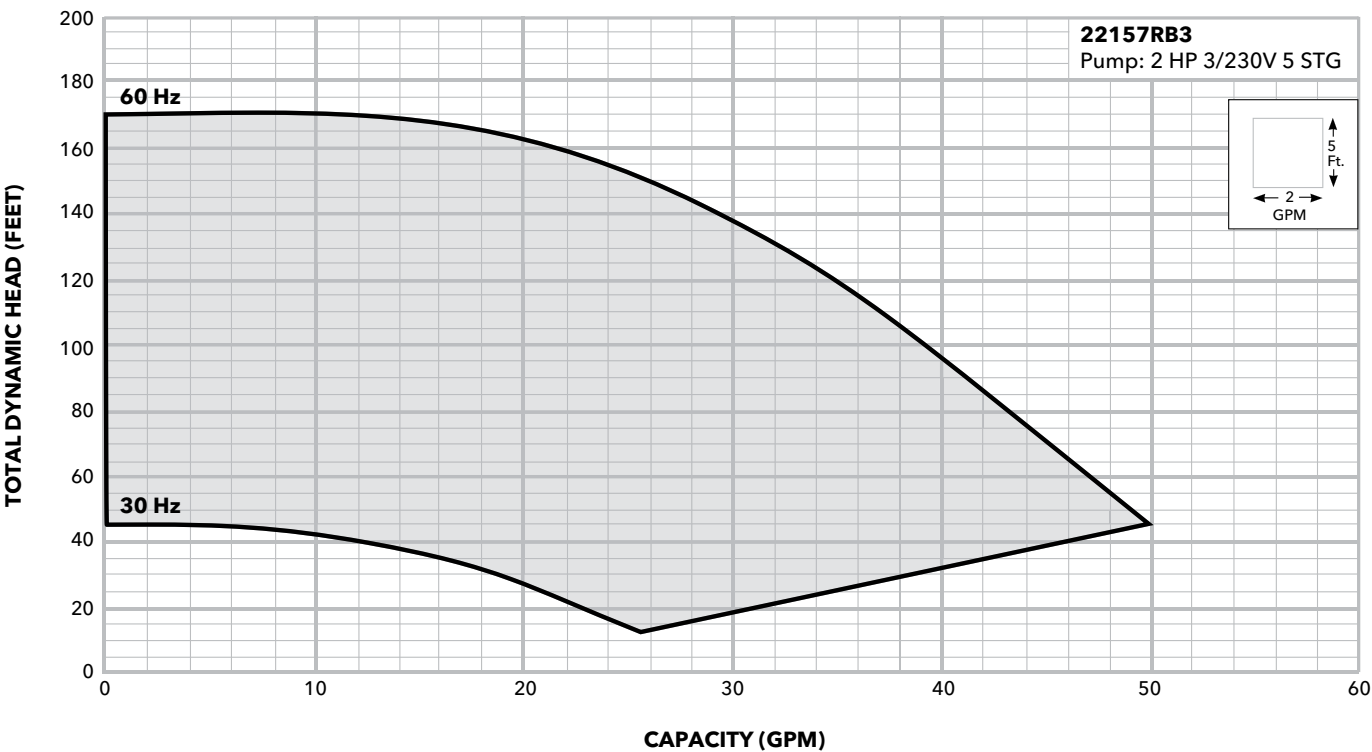
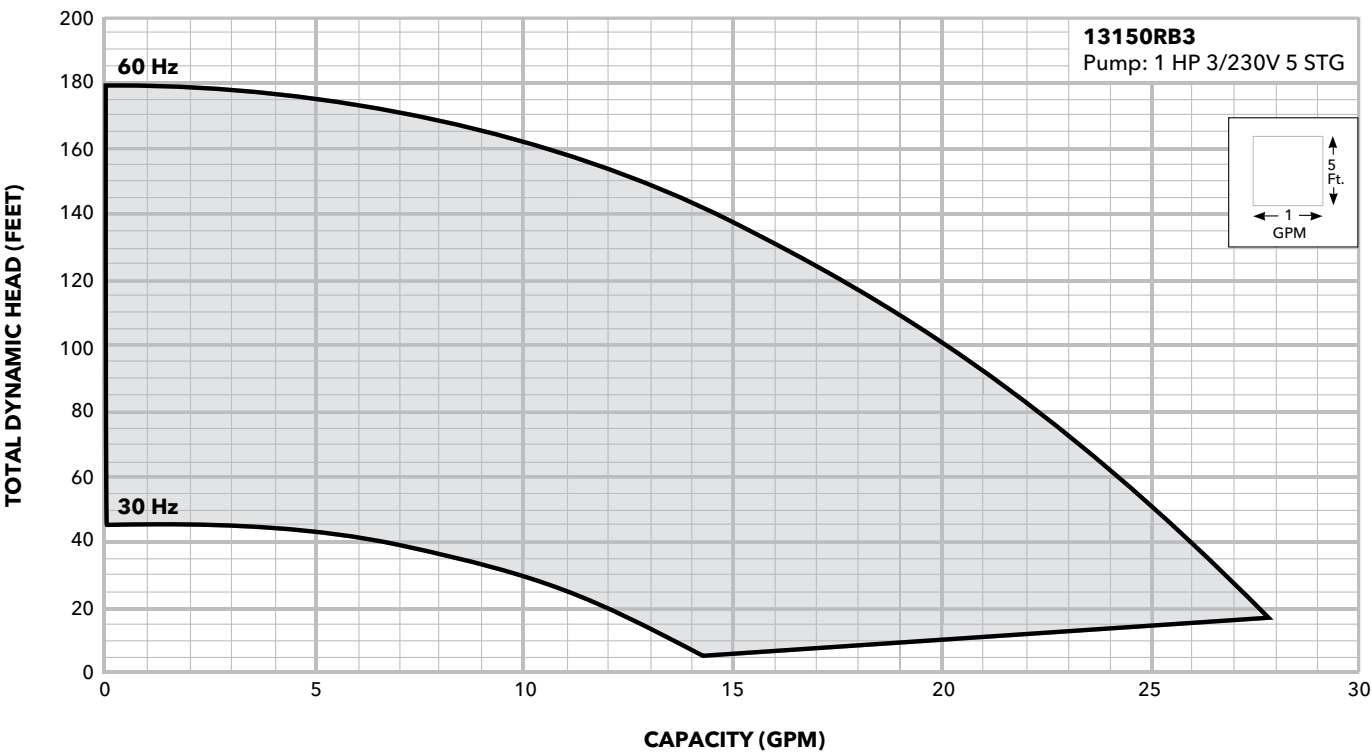
PERFORMANCE CURVES



PERFORMANCE CURVES



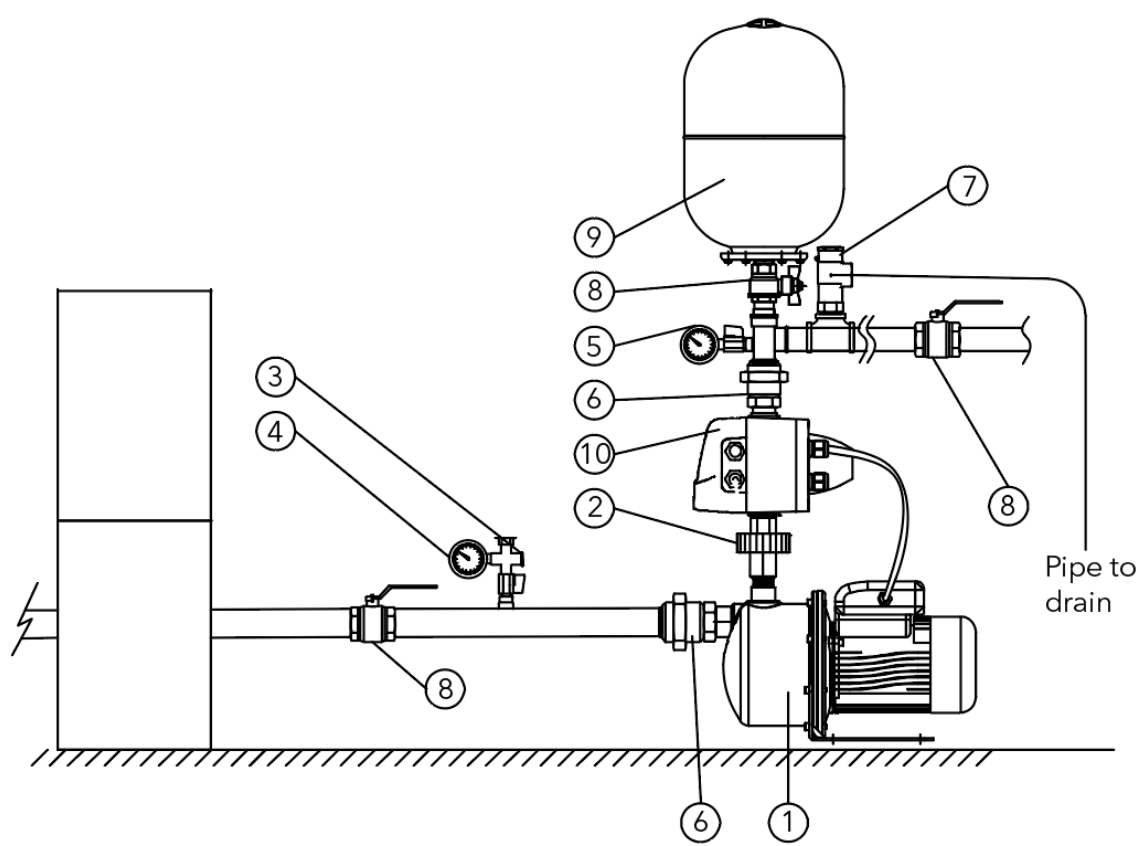
PERFORMANCE CURVES



NOTE: For complete pump information, please reference the BeHM R11 on www.goulds.com.

TYPICAL MUNICIPAL WATER INSTALLATION

No.	Component	Included in the kit
1	Electric pump	√
2	Union with check valve	√
3	Priming port	
4	Vacuum pressure gauge	
5	Discharge pressure gauge	
6	Union	
7	Pressure relief valve	
8	Gate valve	
9	Diaphragm tank	√
10	ResiBoost controller	√





** Available up to 100 GPM systems*

AQUAVAR® e-AB2

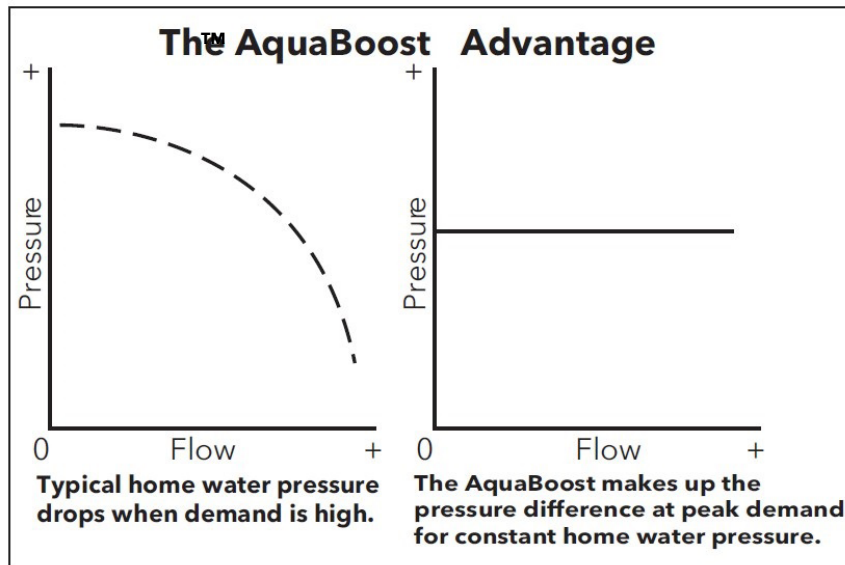
VARIABLE SPEED CONSTANT PRESSURE SYSTEMS

- 3 HP and 5HP Pressure Booster Packages

FEATURES

The e-AB2 variable speed pump controller and complete booster package kits, provide an economical answer for municipal water district customers with low water pressure. Both domestic and light commercial applications can benefit. As water use increases, the controller changes pump speed to maintain pressure. Large supply tanks are eliminated and less wear and tear on your pump and motor.

Think of it as "Cruise Control" for your pump! The e-AB2 is available with a range of flow rates to handle homes with up to four baths, irrigation, filtration and fire suppression systems. Light commercial applications up to 100 GPM at 55 PSI boost. The e-AB2 is available as either a separate controller or as part of a complete pump package with everything you need to plumb it to a domestic water line.



3 HP and 5 HP Controller

AQUAVAR IPC CONTROLLER PROVIDES CONSTANT PRESSURE CONTROL PLUS MORE FOR THE 3 HP AND 5 HP MOTOR SIZES (REPLACES 3AB2 AND 5AB2 CONTROLLER)

FEATURES

- Programmed to motor electrical characteristics; just select set pressure.
- Application specific "Start-Up Genie" guides you through quick and easy commissioning
- Removable, graphical control panel with display
- Alarm Log records the last 5 alarms
- Hand on, Auto on, and Off buttons for easy pump operation at the keypad - No toggling between local and remote operation!
- Capable of controlling up to 2 fixed speed pumps, with one standard drive
- Duplex variable speed pumping control with auto lead/lag and alternate

e-AB2 HYDRAULIC SELECTION (e-HM and MCS)

FEET	PSI BOOST	GPM								
		20	30	40	50	60	70	80	90	100
46	20								5	5
58	25							5	5	5
69	30					5	5	5	5	5
81	35					5	5	5	5	5
92	40			2	2	5	5	5	5	5
104	45			2	2	5	5	5	5	5
116	50			2	2	5	5	5	5	6
127	55			2	2	5	5	6	6	6
139	60			3	3	6	6	6	6	
150	65			3	3	6	6	6		
162	70			3	3	6	6	6		
173	75	1	1	3	3	4				
185	80	1	1	3	4	4				

e-AB2 CONFIGURATIONS (e-HM and MCS)

Selection	Part Number	Description
1	3AVN35HM07	230V 3HP 1" disch, 1.25" suct IPC-N3R
	3AVN15HM07	230V 3HP 1" disch, 1.25" suct IPC-N1
2	3AVN310HM03	230V 3HP 1.25" disch, 1.5" suct IPC-N3R
	3AVN110HM03	230V 3HP 1.25" disch, 1.5" suct IPC-N1
3	5AVN310HM04	230V 5HP 1.25" disch, 1.5" suct IPC-N3R
	5AVN110HM04	230V 5HP 1.25" disch, 1.5" suct IPC-N1
4	5AVN310HM05	230V 5HP 1.25" disch, 1.5" suct IPC-N3R
	5AVN110HM05	230V 5HP 1.25" disch, 1.5" suct IPC-N1
5	5AVN3125MS1J2B2	230V 5HP 1.25" disch, 1.5" suct IPC-N3R
	5AVN1125MS1J2B2	230v 5HP 1.25" disch, 1.5" suct IPC-N1
6	5AVN315HM03	230V 5HP 1.5" disch, 2" suct IPC-N3R
	5AVN115HM03	230V 5HP 1.5" disch, 2" suct IPC-N1

* Selections do not include tank. Recommend bladder tank, sized to 20% of pump flow (gpm). Pressure Transducer supplied with all configurations.

NOTE: PSI is boosting pressure, NOT total system pressure.

ADDENDUM: e-AB2 WITH HSC SELECTION

PSI	FEET	GPM				
		10	20	30	40	50
60	139				1	
70	162			1		
80	185		1			
90	208					
95	219	1				

	Part Number	Description
1	3AVN1HSC30B	230V 3HP 1" disch, 1.25" suct IPC-N1
	3AVN3HSC30B	230V 3HP 1" disch, 1.25" suct IPC-N3R

NOTES:

- MAWP is 125 PSI; performance per chart accounts for zero lift conditions
- Motors are 230V three-phase, ODP design
- Tank not included and wiring by others; supplied with AQUAVAR IPC drive
- Pressure transducer supplied with all configurations.

INPUT AND OUTPUT POWER (VOLTAGE AND PHASE)

- All require single-phase input power
 - All will work on 1Ø, 208-230V input power
- All controllers output three-phase, 230 Volt power
- All pumps are equipped with three-phase motors

3AVN35HM07

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (AQUAVAR IPC); Nema 3R
- Pump (e-HM 7 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

3AVN15HM07

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (AQUAVAR IPC); Nema 1
- Pump (e-HM 7 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

3AVN310HM03

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (AQUAVAR IPC); Nema 3R
- Pump (e-HM 3 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

3AVN110HM03

- 230v SINGLE PHASE INPUT
- 3 HP variable speed controller (AQUAVAR IPC); Nema 1
- Pump (e-HM 3 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN310HM04

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 3R
- Pump (e-HM 4 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN110HM04

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 1
- Pump (e-HM 4 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN310HM05

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 3R
- Pump (e-HM 5 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN110HM05

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 1
- Pump (e-HM 5 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN3125MS1J2B2

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 3R
- Pump (MCS) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN1125MS1J2B2

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 1
- Pump (MCS) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN315HM03

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 3R
- Pump (e-HM 3 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

5AVN115HM03

- 230v SINGLE PHASE INPUT
- 5 HP variable speed controller (AQUAVAR IPC); Nema 1
- Pump (e-HM 3 stg) and Transducer (included)
- Tank (not included) and wiring (by others)

CONTROLLERS ONLY

AVA10030COF0X0X1

- 10.6 Amp, 230v 3HP Nema 3R, transducer & cable
- Single phase Input; Three phase Output

AVA10030A0F0X0X1

- 10.6 Amp, 230v 3HP Nema 1, transducer & cable
- Single phase Input; Three phase Output

AVA10050COF0X0X1

- 16.7 Amp, 230v 3HP Nema 3R, transducer & cable
- Single phase Input; Three phase Output

AVA10050A0F0X0X1

- 16.7 Amp, 230v 3HP Nema 1, transducer & cable
- Single phase Input; Three phase Output

INPUT AND OUTPUT POWER (VOLTAGE AND PHASE) WITH HSC

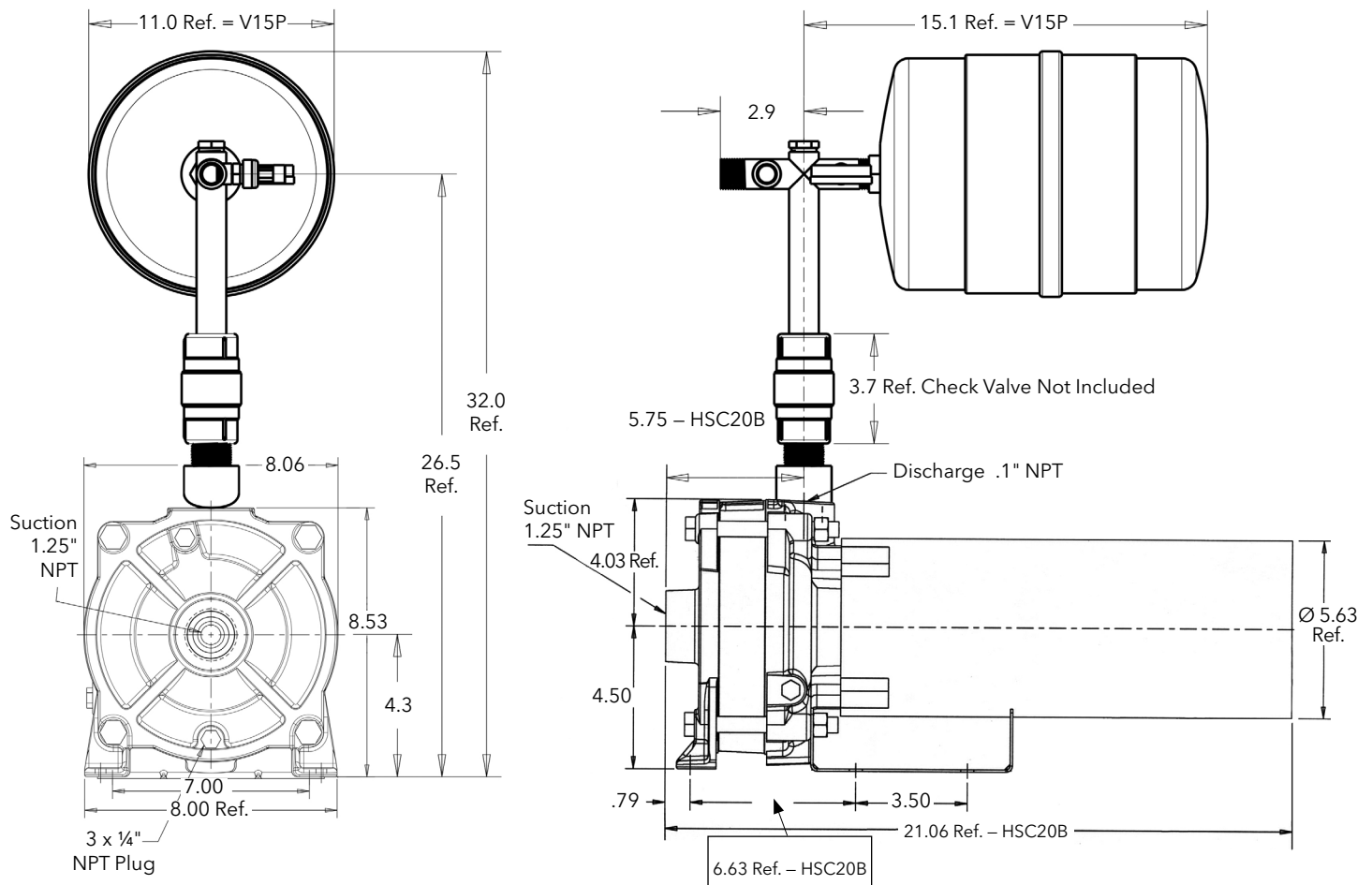
- All require single-phase input power
 - All will work on 1Ø, 208-230V input power
- All controllers output three-phase, 230 Volt power
- All pumps are equipped with three-phase motors

3AVN1HSC20B

- 230V SINGLE PHASE INPUT
- 3 HP variable speed controller (AQUAVAR IPC);
Nema 1
- Pump (HSC20B) and Transducer included
- Tank (not included) and wiring (by other)

3AVN3HSC20B

- 230V SINGLE PHASE INPUT
- 3 HP variable speed controller (AQUAVAR IPC);
Nema 3R
- Pump (HSC20B) and Transducer included
- Tank (not included) and wiring (by other)



SUGGESTED AB2 INSTALLATION FOR MUNICIPAL WATER SYSTEM

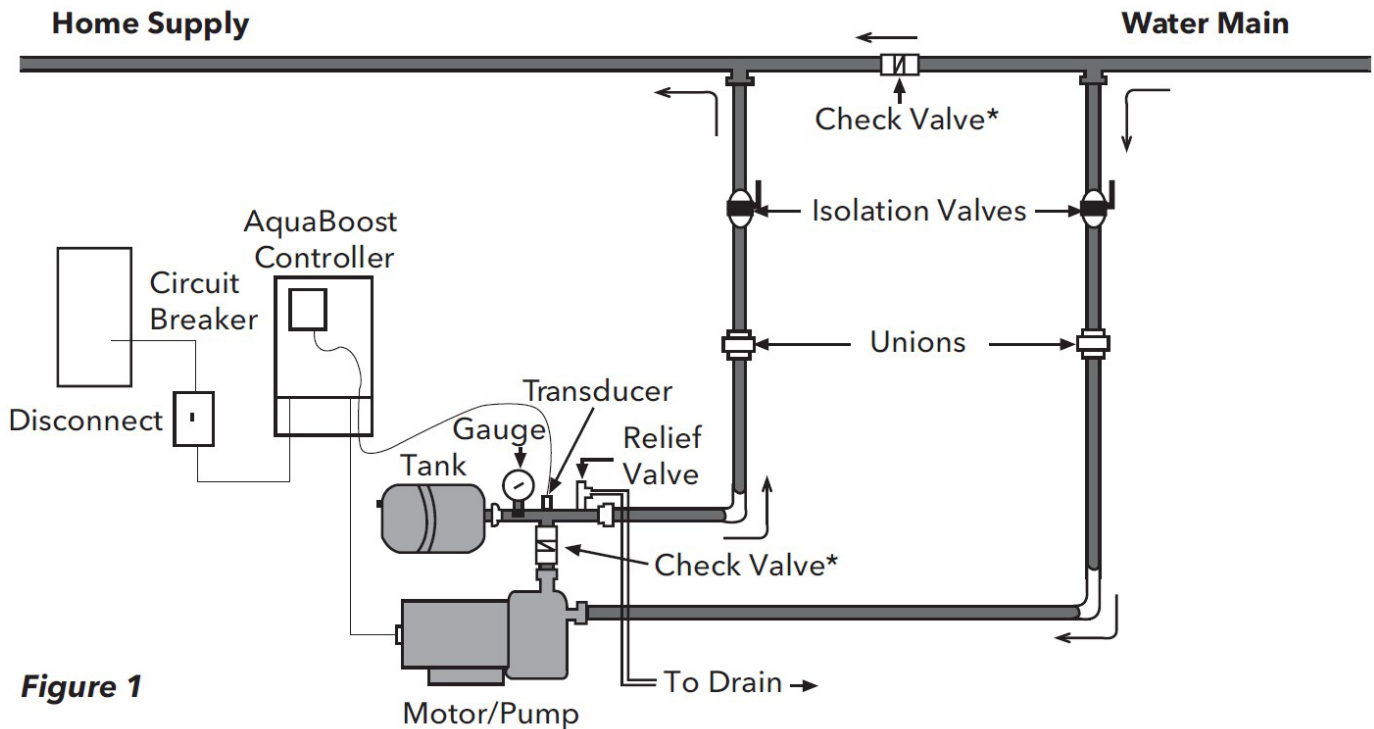


Figure 1

*Spring check valve - provided by installer

SUGGESTED AQUABOOST INSTALLATION FOR WELL PUMP SYSTEM

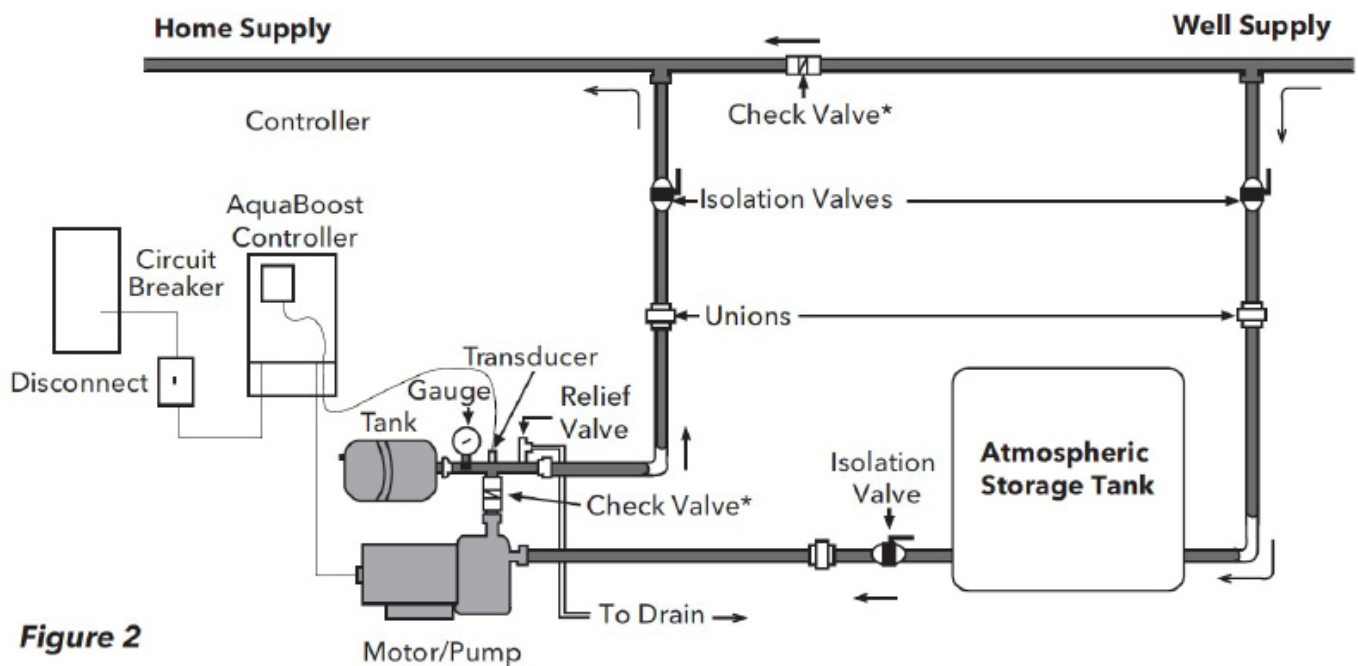
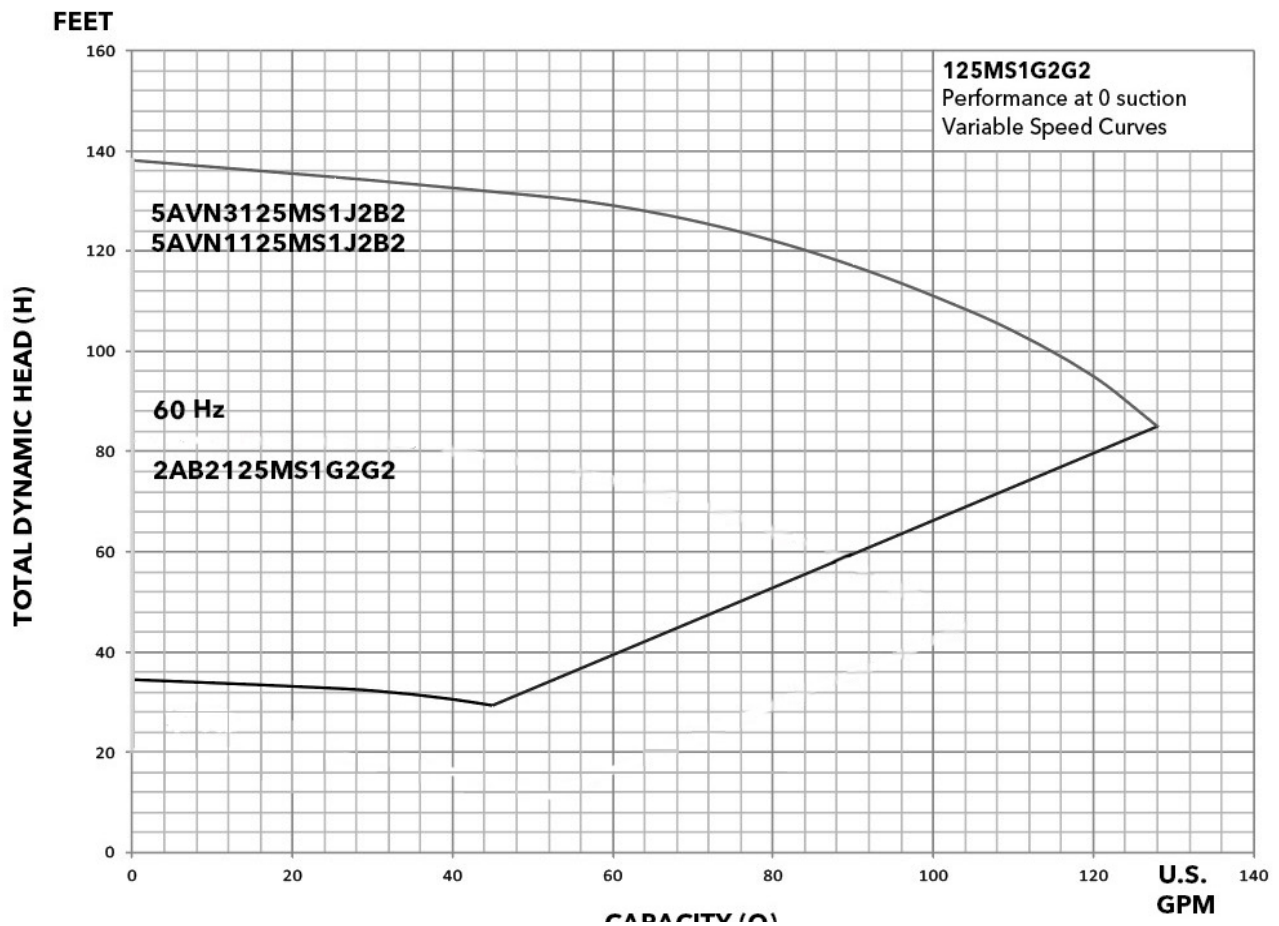
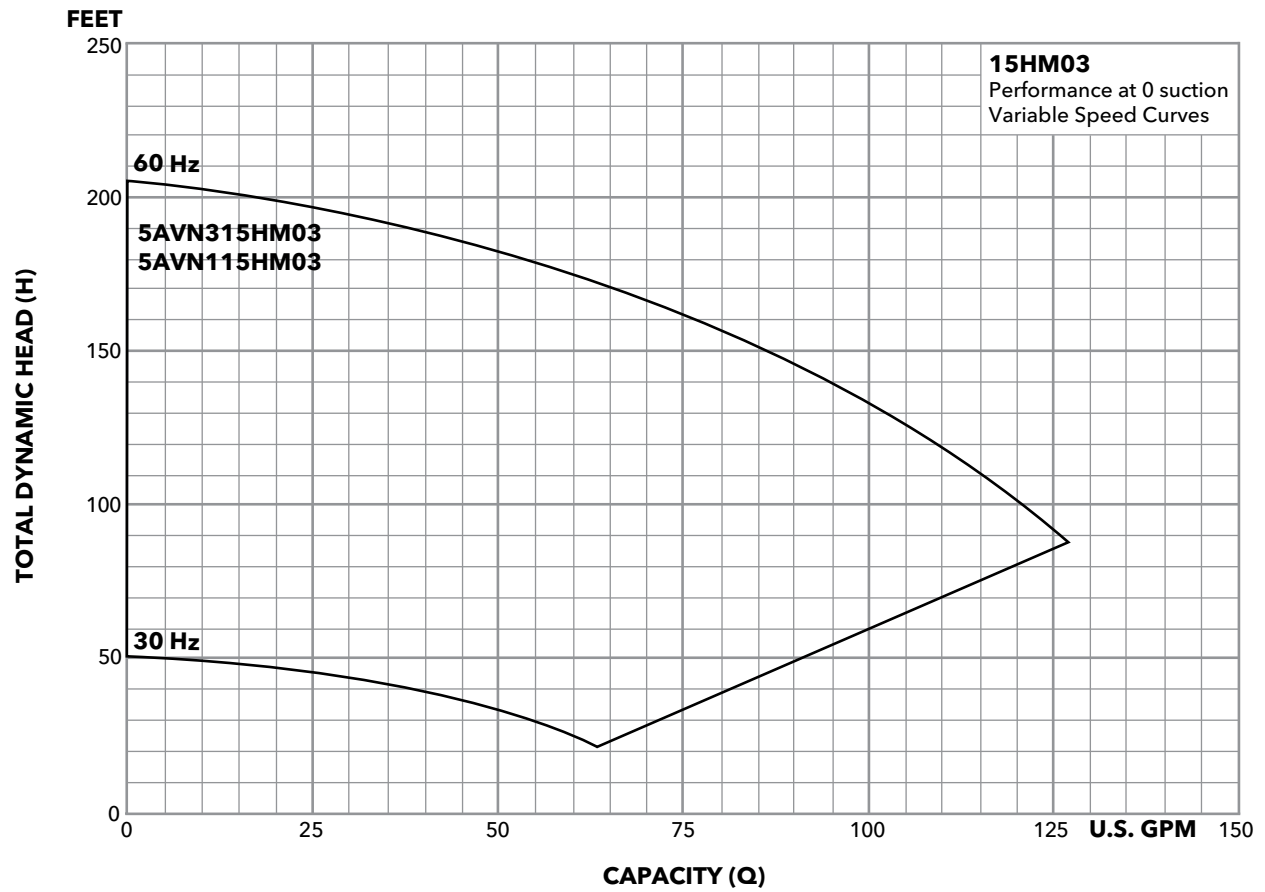
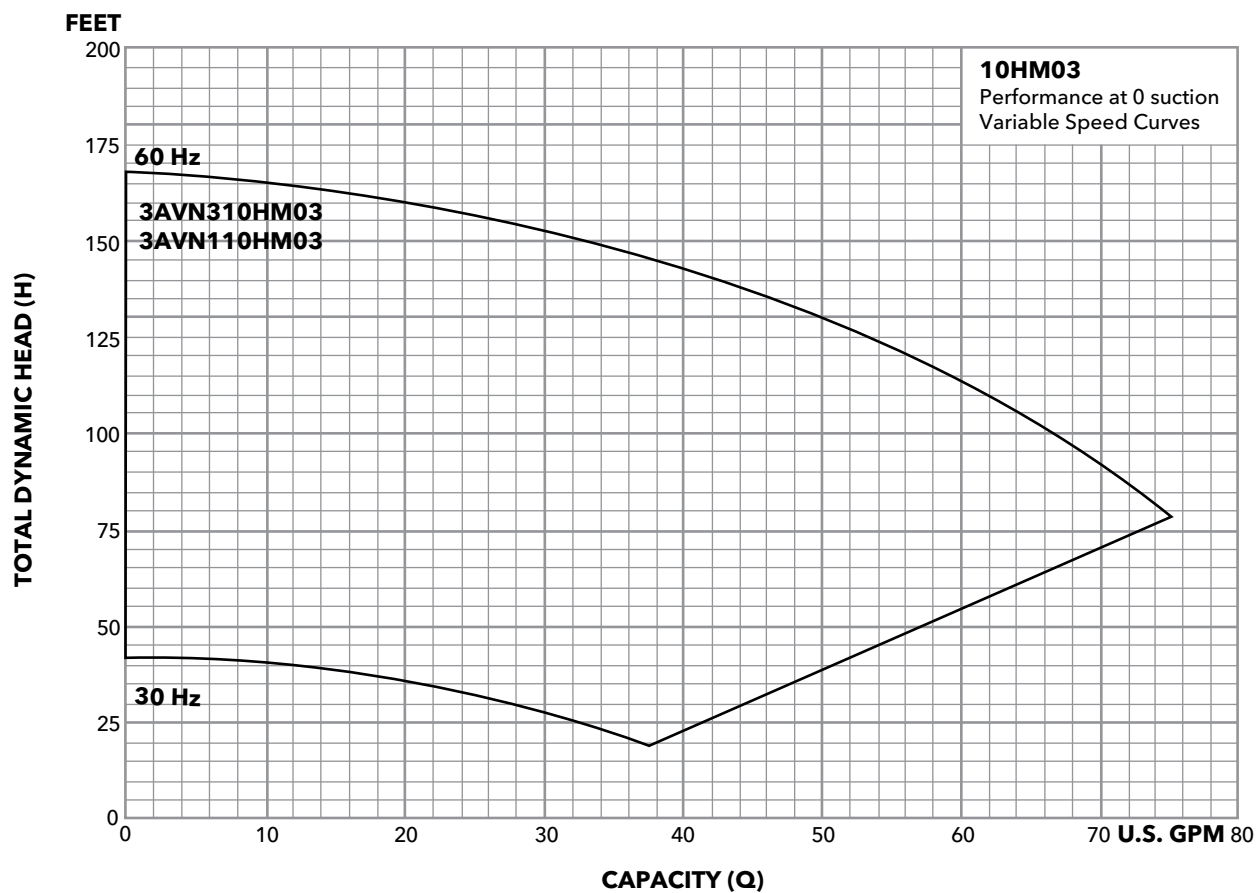
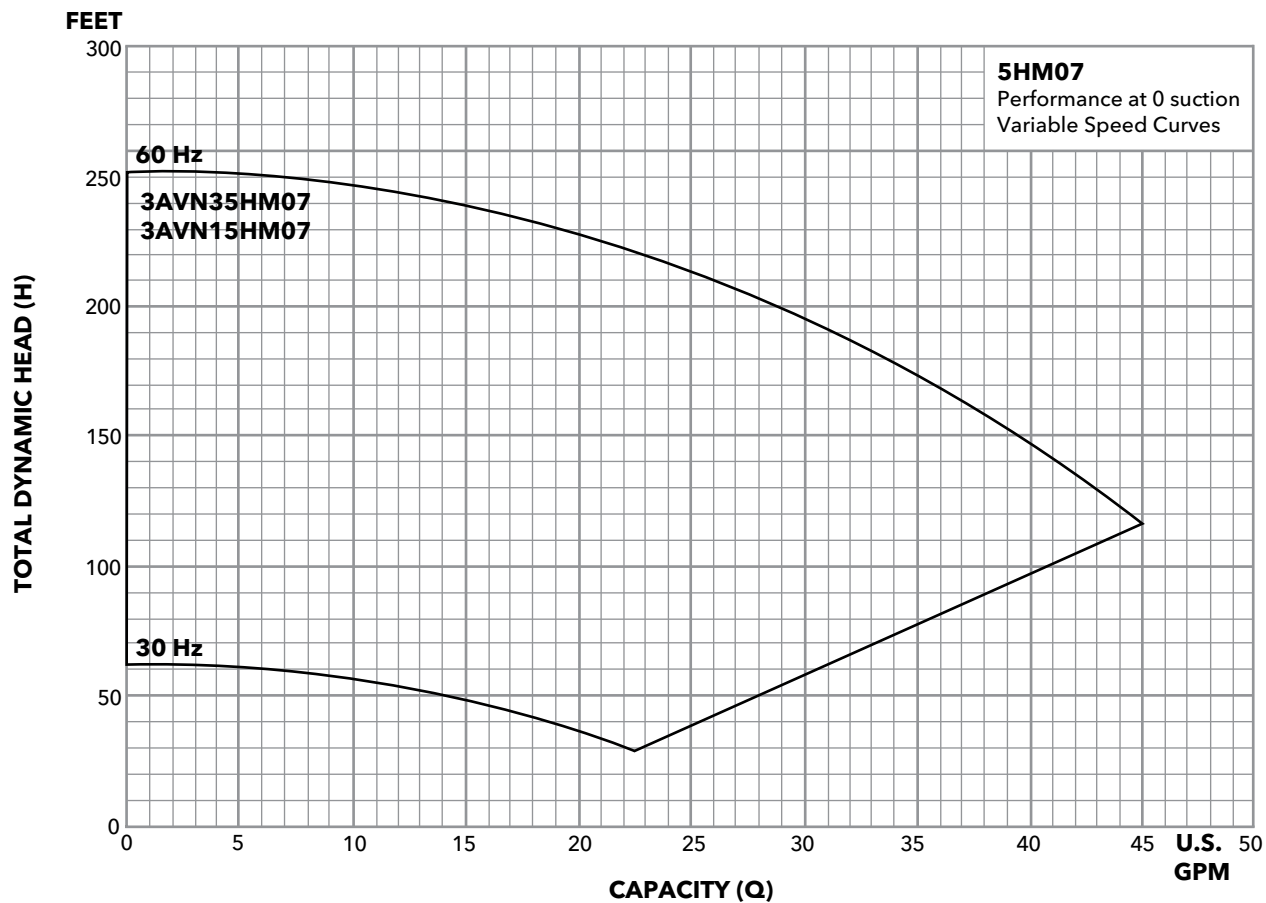
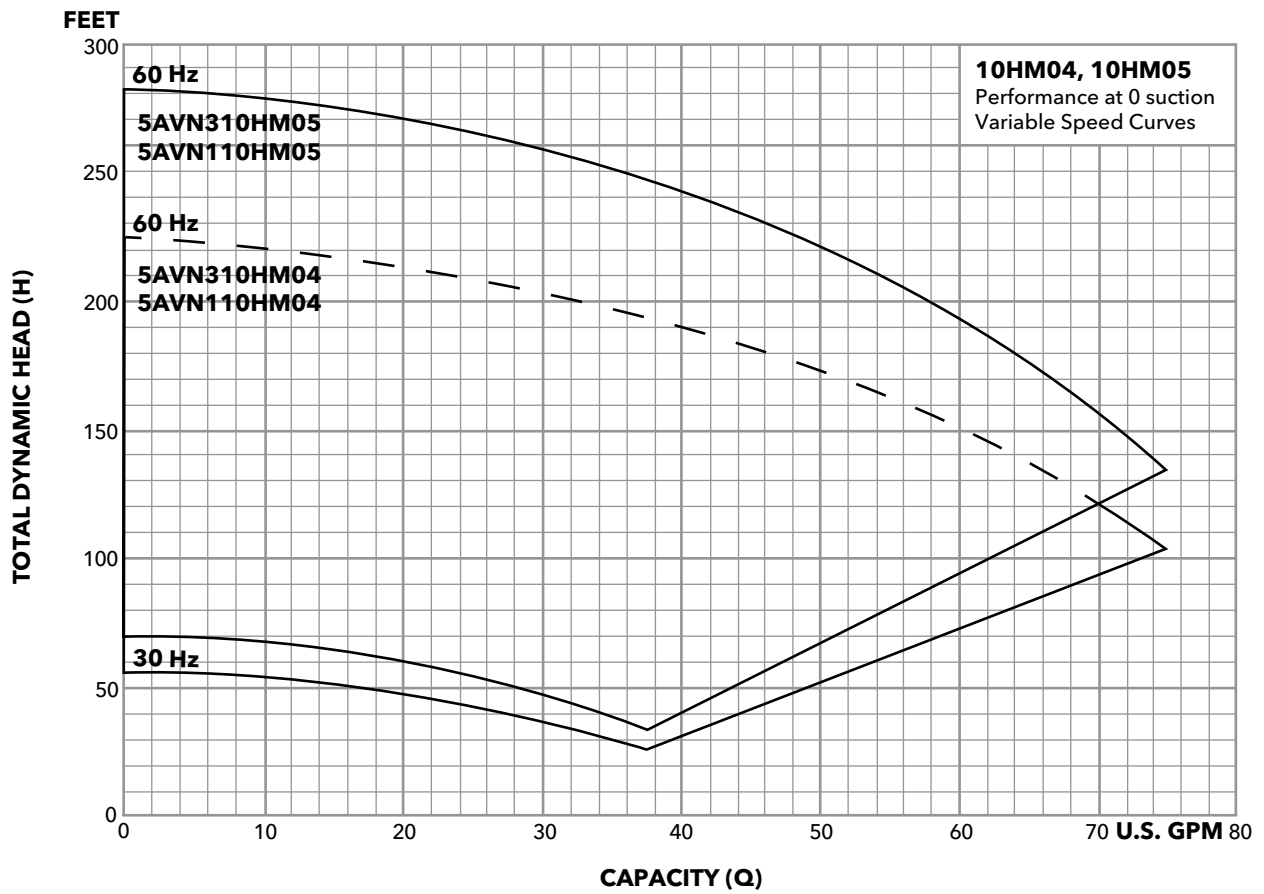


Figure 2

*Spring check valve - provided by installer







AQUAVAR IPC FEATURES

Input Power* – 200V to 240V $\pm 10\%$, single phase (controller only)

Output Power – Up to 230V three phase (based on input voltage).

Maximum Output Current – 10.6 amps (3 HP)
– 16.7 amps (5 HP)

Input Controls – Keypad; LCD graphical display

Signal Lights – Power on, inverter stopped, standby, warning/alarms; auto ON.

Electrical Efficiency – Over 95% at full load

Protection Against – MOTOR: Ground Fault, Motor Stall, Motor Over Temperature, Motor Condensation, Motor Overload. PUMP: Pump No-Flow, Under Pressure, No Water / Loss of Prime, Short-Cycle.

Ambient Temperature – 34° F to 114° F

Maximum Humidity – 93% at 114° F, non-condensing

Air Pollution – Avoid mounting in areas with excessive dust, acids, corrosives and salts.

Approvals –   (Listing on Controller Only)

Controller Enclosure – Outdoor, NEMA 3R, IP 43 (Rain-tight); Indoor, NEMA 1, IP 21

Mounting – Wall mount

Cooling – Convection with cast aluminum heat sink.
– With temperature fan

Transducer – 4-20 mA power supply, 300 psi range, 16-foot shielded cable.

Input Wire – Supplied by installer, refer to instruction manual

Output Wire – Supplied by installer, refer to instruction manual

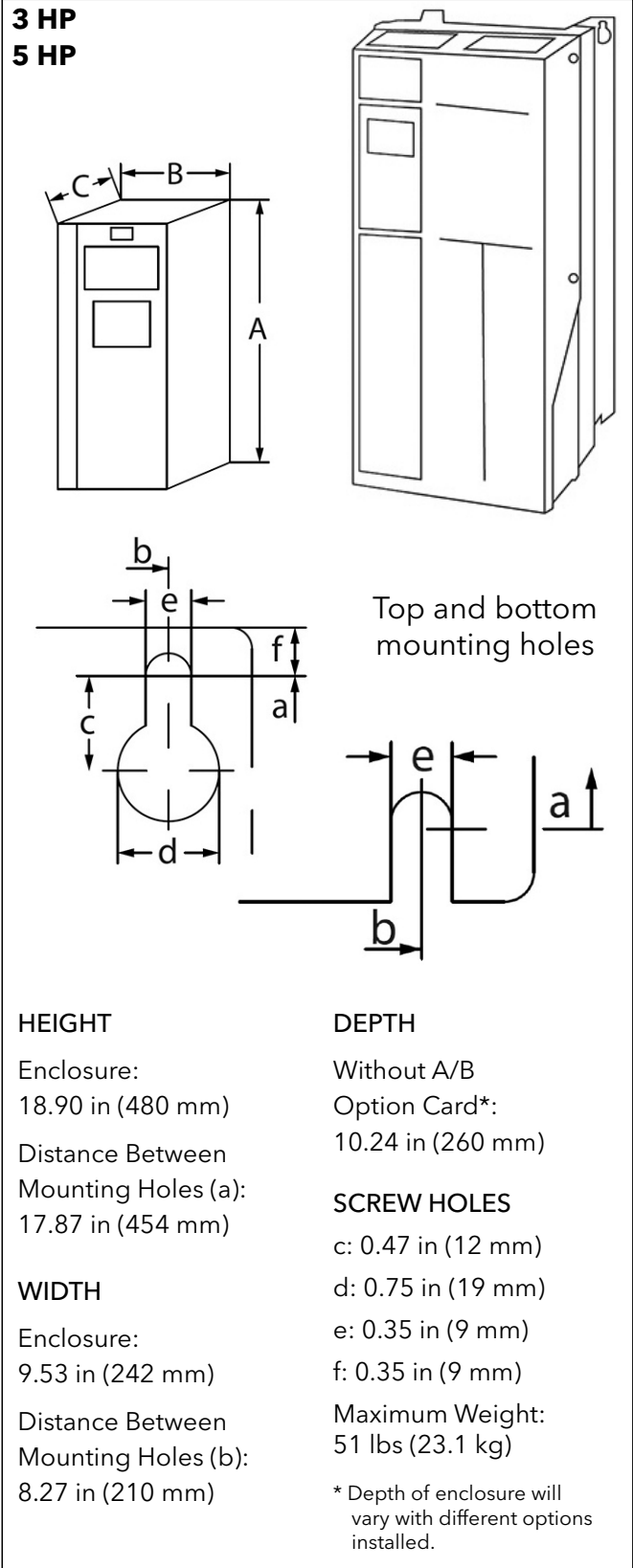
*Low input voltage may affect motor operation.

PRESSURE RANGE

Nominal Range – Field adjustable through 300 psi, total system pressure.



DO NOT SET REQUIRED SYSTEM PRESSURE ABOVE 85 PSI. SEVERE DAMAGE TO PLUMBING COULD RESULT. PLUMB RELIEF VALVE OUTSIDE OR TO A DRAIN.



DIMENSIONS (For Reference Only - Do not use for construction purposes)

MCS PUMP WITH TANK AND TEE

Capacities – to 120 GPM

Rotation – Right hand clockwise,
viewed from motor end

Materials – 316L stainless steel casing
316L impeller

Motor – 5 HP, ODP, Three Phase,
208-230/460V

Pump Connections – 1¼ x 1½ NPT

Maximum Temperature of Water – 120° F

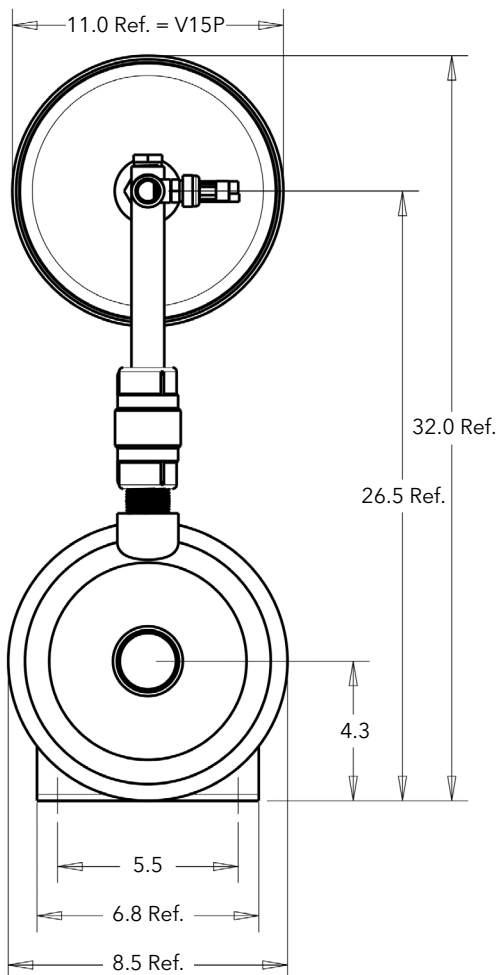
NOTE: Tank Liquid Temperature Limit is 120° F
Pump Liquid Temperature Limit is 140° F

Maximum System Working Pressure – 125 psi

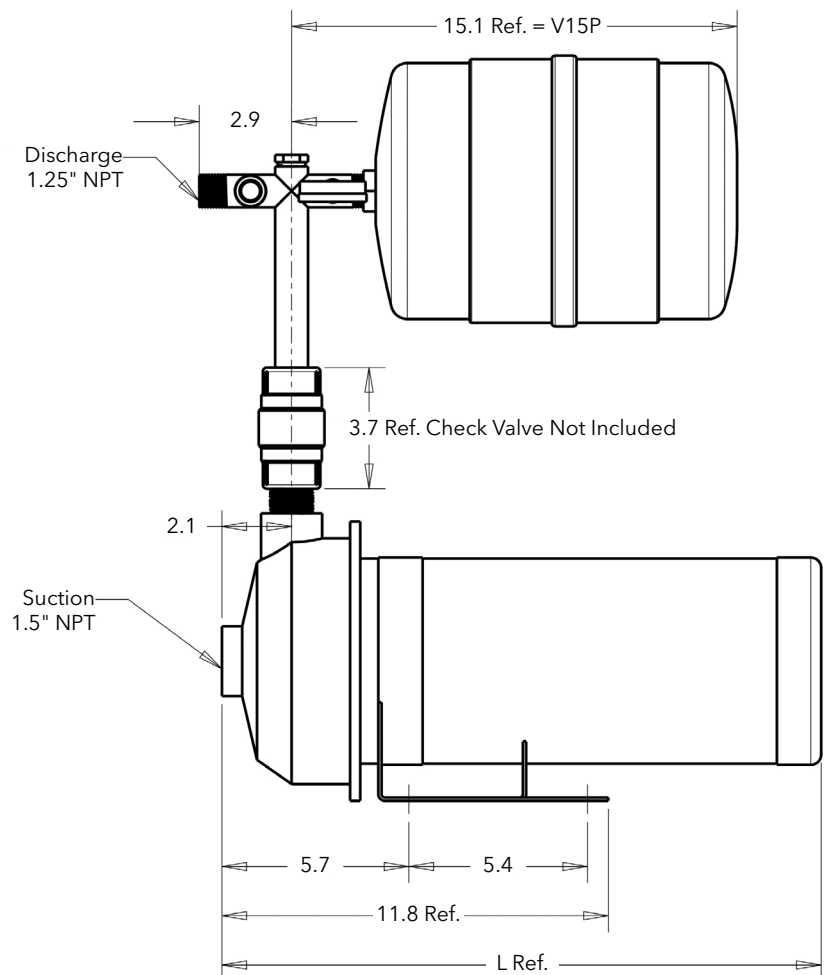
Seal – Carbon / Silicon Carbide / EPR

Overload protection, starters, heaters not required.

Dimensions are in inches.



Tank and tee not included



DIMENSIONS (For Reference Only - Do not use for construction purposes)

e-HM PUMPS

Capacities – to 45 GPM (5HM)
to 75 GPM (10HM)
to 127 GPM (15HM)

Rotation – Right hand clockwise,
viewed from motor end

Materials – 316L stainless steel for all liquid
handling components

Motor – 3 HP, TEFC, Three Phase, 208-230/460V
(5HM)
– 3 HP, TEFC, Three Phase, 208-230/460V (10HM)
– 4 HP, TEFC, Three Phase, 208-230/460V (10HM)
– 5.5 HP, TEFC, Three Phase, 208-230/460V
(10HM/15HM)

Pipe Connections – 1 x 1½ NPT (5HM)
– 1¼ x 1½ NPT (10HM)
– 1½ x 2 NPT (15HM)

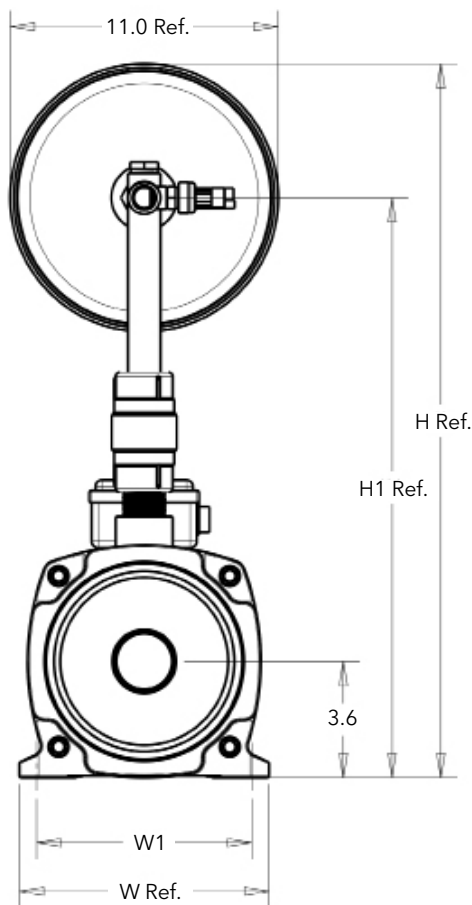
Maximum Temperature of Water – 120° F

NOTE: Tank Liquid Temperature Limit is 120° F
Pump Liquid Temperature Limit is 212° F

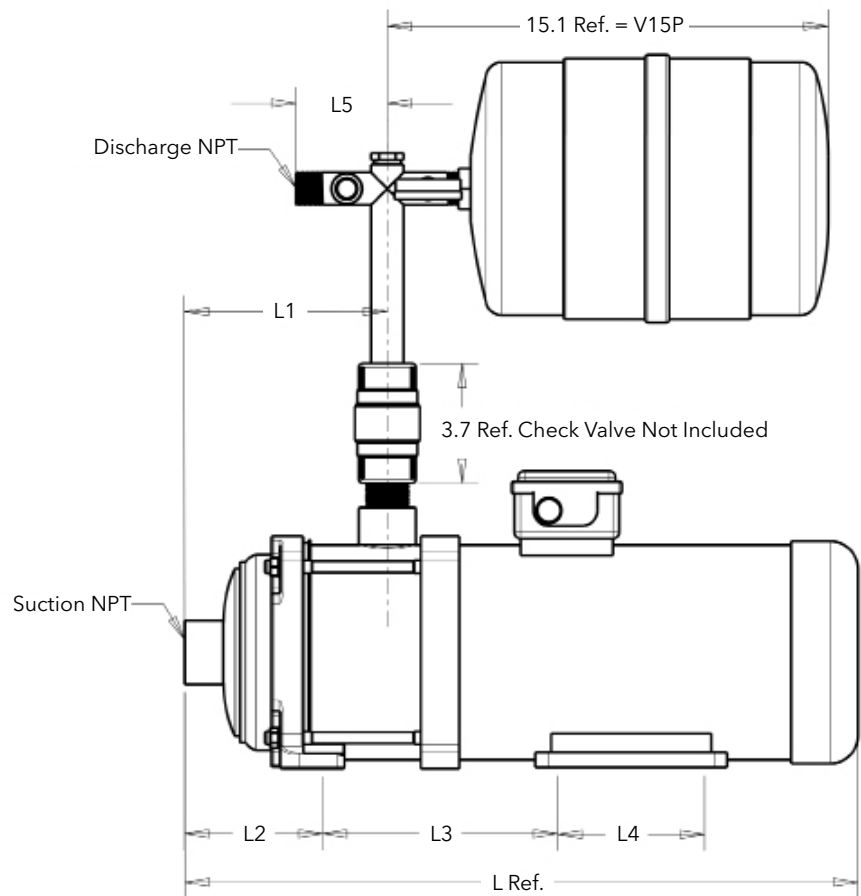
Maximum System Working Pressure – 85 psi

Seal – Carbon / Silicon Carbide / EPR

Overload protection, starters, heaters not required. Dimensions are in inches.



Tank and tee not included



ELEVATION DIMENSIONS - REFERENCES PAGES 14 - 16

	Tank and Tee assembly incl.	L	L1	L2	L3	L4	L5	D	H			Suction NPT	Discharge NPT	Page
125MS1J2B2BP	No	18.3												12
		L	L1	L2	L3	L4	L5	H	H1	W	W1	Suction NPT	Discharge NPT	Page
5HM07N22T6PBQEBP	No	25.1	7.2	4.2	14.7	4.9	2.8	23.4	17.9	6.5	5.5	1.25"	1"	13
10HM03N22T6PBQEBP	No	19.5	4.9	4.3	5.7	4.9	2.9	30.7	25.2	7.7	6.6	1.5"	1.25"	13
10HM04N30T6PBQEBP	No	20.8	6.2	4.3	6.9	4.9	2.9	30.7	25.2	7.7	6.6	1.5"	1.25"	13
10HM05N40T6PBQEBP	No	23.3	7.5	4.3	9.0	5.5	2.9	30.7	25.2	7.7	6.6	1.5"	1.25"	13
15HM03N40T6PBQEBP	No	22.2	5.8	4.3	6.9	5.5	2.9	30.7	25.2	7.7	6.6	2"	1.5"	13

SUBMERSIBLE PUMPS: Use AQUAVAR SOLO² or S-Drive controllers for submersible applications, they have filters built-in and are programmed for submersibles; alternatively AQUAVAR IPC with use with DV/DT filter can be used for submersible applications.

PACKAGED HARDWARE WITHOUT PUMP AND MOTOR (SEE PRICING PAGE)

Part Number 15K40

KIT INCLUDES:

- 1) Tank - V6P (2 gallons)
- 2) 1" Bronze Discharge Tee - AV20-6
- 3) Pipe Plug - ½", 6K68
- 4) Pressure Gauge

Part Number 15K108

KIT INCLUDES:

- 1) Tank - V15P
- 2) 1¼" Bronze Discharge Tee - AV20-12
- 3) Pipe Plug - ½", 6K68
- 4) Pressure Gauge



** Available up to 100 GPM systems*

Aquavar e-AB3

INTEGRATED VARIABLE SPEED CONSTANT PRESSURE SYSTEMS

½ HP thru 2 HP – Pressure Booster Packages

FEATURES

The e-AB3 smart pump range packaged pumping system is a constant pressure booster system that is specifically designed for customers of municipal water districts with low water pressure, or those seeking a boost from a local storage tank. Featuring the e-HM pump and the Xylem Smart Motor, an ultra-premium IE5 permanent, magnet motor, the e-AB3 provides pumping efficiency well above a standard IE3 NEMA premium efficient asynchronous induction motor.



As water flows to your house, it loses some of its pressure to friction inside the pipe. The higher the flow, the more the friction reduces your water pressure. This flow increase can be caused by more homes and businesses on your water main, the size of your home piping system or increased water use in your house. As water use increases, the e-AB3 changes pump speed to keep line pressure constant. Large supply tanks are eliminated and up to 50% of the energy required by a full speed pump is saved. The e-AB3 is available with a range of flow rates to handle residential homes, irrigation systems, and office buildings.

It's a HIGH PERFORMANCE solution for both residential and commercial customers who need to increase their water pressure when water demand is high.

Pump Protection: safety and monitoring

The Smart Motor comes with a wide range of monitoring, control and safety features right out of the box with no need to configure.

Controls, safety features and monitoring tools

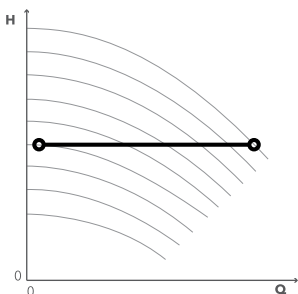
Available control modes include:

- Control for constant pressure
- Control to match a system curve
- Control according to an external signal

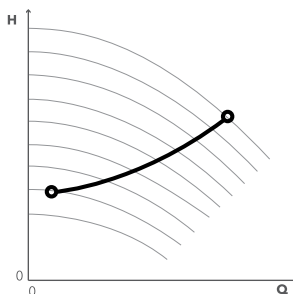
In addition to these regulation functions, the Smart Motor also:

- Stops the pump at zero demand
- Stops the pump in case of water failure
- Has failure and over-temperature sensors for both the inverter and motor, which protects the pump and motor from under or over-voltage

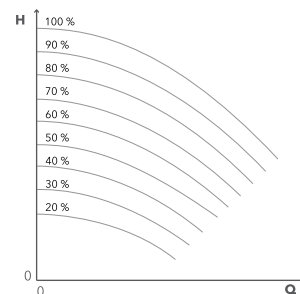
The Smart Motor offers a complete set of supervision and metering tools such as automatic test starts, auto smart cyclic change of lead and lag pump units, a memory for any inverter fault signals, and an operating-hours run counter. There's no need to configure the product; all the listed features are already included in the standard package.



Control for constant pressure



Control to match a system curve in multistage pumps such as the e-SVE or e-HME



Control according to an external signal

e-AB3 FEATURES AND BENEFITS:

- **Wide range:**
 - An ideal solution for most buildings; from family houses up to 10 floor apartment buildings, commercial building services and OEM applications
- **Ultra-premium efficiency:**
 - State-of-the-art hydraulics with best-in-class efficiency mean the lowest possible operating costs
 - Features the Xylem Smart Motor an ultra-premium IE5 permanent, magnet motor:
 - Provides efficiency well above a standard IE3 NEMA premium efficient asynchronous induction motor
 - Provides users an average of 15% in energy savings when compare to similar pumps in the market
 - Programmed to motor electrical characteristics; just select “set pressure”
 - Exceeds hydraulic performance of fixed speed versions in a more compact design
- **Quiet operation:**
 - Almost silent, even when it’s working at its peak.
 - High efficiency hydraulics, motor and thick metal pump body keep the noise level to a minimum.
- **Expanded applications:**
 - Available in six models for a wide range of applications, including chillers, heating, air conditioning and vehicle washing.
 - The broad hydraulic coverage meets flow and head needs in a wide range of applications – flows up to 75 GPM/heads up to 290'.
- **Easy to Install:**
 - Includes a complete kit for installation—pump, Smart Motor, gauge, tank and tee.
- **Variable speed pumping control:**
 - Can operate single or multipump systems with auto lead/lag and alternate for up to three pumps with no need for an external control panel or PLC.
- **Certifications include:** UL778, NSF 61, NSF 372

INDUSTRIES/APPLIATIONS:

- **Applications:**
 - Pressure boosting and water supply systems
 - Industrial washing and cleaning
 - Water treatment
 - Reverse Osmosis Systems
 - Food and Beverage
 - Car Wash
 - OEM
- **Markets:**
 - Residential, Commercial Building Services, OEM

e-AB3 HYDRAULIC SELECTION

FEET	PSI BOOST	GPM				
		5-10	20	30	40	50
46	20	1	4	4	7	7
58	25	1	4	4	7	7
69	30	1	4	4	7	7
81	35	1	4	5	7	
92	40	2	5	5		
104	45	2	5	5		
116	50	2	5	5		
127	55	2	5	6		
139	60	3	6	6		
150	65	3	6	6		
162	70	3	6			
173	75	3	6			
185	80	3				

e-AB3 CONFIGURATIONS

Selection	Part Number	Description
1	1AB31HME04	230V ½ HP 1" discharge, 1" suction V6P N3R
2	1AB31HME06	230V ¾ HP 1" discharge, 1" suction V6P N3R
3	2AB33HME08	230V 2 HP 1" discharge, 1" suction V6P N3R
4	1AB35HME03	230V 1 HP 1" discharge, 1.25" suction V15P N3R
5	2AB35HME05	230V 2 HP 1" discharge, 1.25" suction V15P N3R
6	2AB35HME06	230V 2 HP 1" discharge, 1.25" suction V15P N3R
7	2AB310HME02	230V 2 HP 1.25" discharge, 1.5" suction V15P N3R

Recommend bladder tank, sized to 20% of pump flow (gpm). Pressure Transducer supplied with all configurations.

NOTE: PSI is boosting pressure, NOT total system pressure.

INPUT AND OUTPUT POWER (VOLTAGE AND PHASE)

- All 1AB3 and 2AB3 require single-phase input power
 - All will work on 1Ø, 208-230V input power

1AB31HME04

- 230V SINGLE PHASE INPUT
- ½ HP variable speed controller; NEMA Type 3R
- Pump (e-HM 4 stg) and Tank (V6P) included
- Transducer

1AB31HME06

- 230V SINGLE PHASE INPUT
- ¾ HP variable speed controller; NEMA Type 3R
- Pump (e-HM 6 stg) and Tank (V6P) included
- Transducer

2AB33HME08

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 8 stg) and Tank (V6P) included
- Transducer

1AB35HME03

- 230V SINGLE PHASE INPUT
- 1 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 3 stg) and Tank (V15P) included
- Transducer

2AB35HME05

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 5 stg) and Tank (V15P) included
- Transducer

2AB35HME06

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 6 stg) and Tank (V15P) included
- Transducer

2AB310HME02

- 230V SINGLE PHASE INPUT
- 2 HP variable speed controller; NEMA Type 3R
- Pump (e-HM 2 stg) and Tank (V15P) included
- Transducer

SUGGESTED e-AB3 INSTALLATION FOR MUNICIPAL WATER SYSTEM

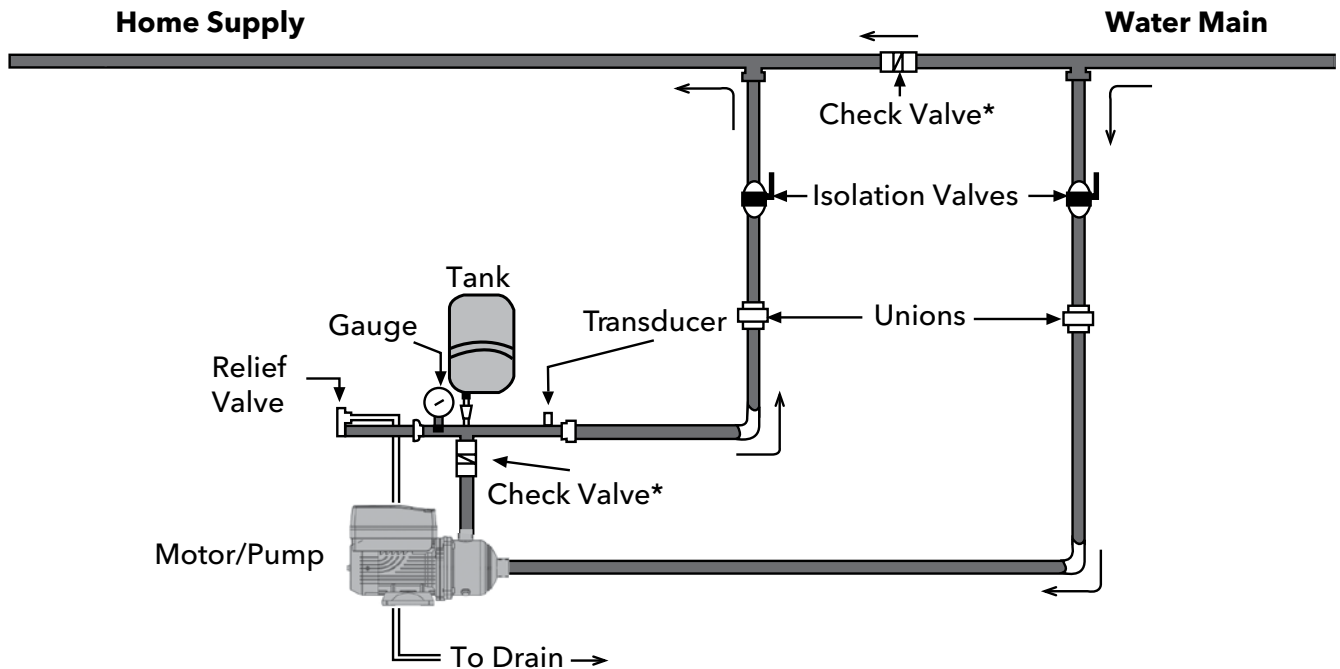


Figure 1

*Spring check valve - provided by installer

SUGGESTED e-AB3 INSTALLATION FOR WELL PUMP SYSTEM

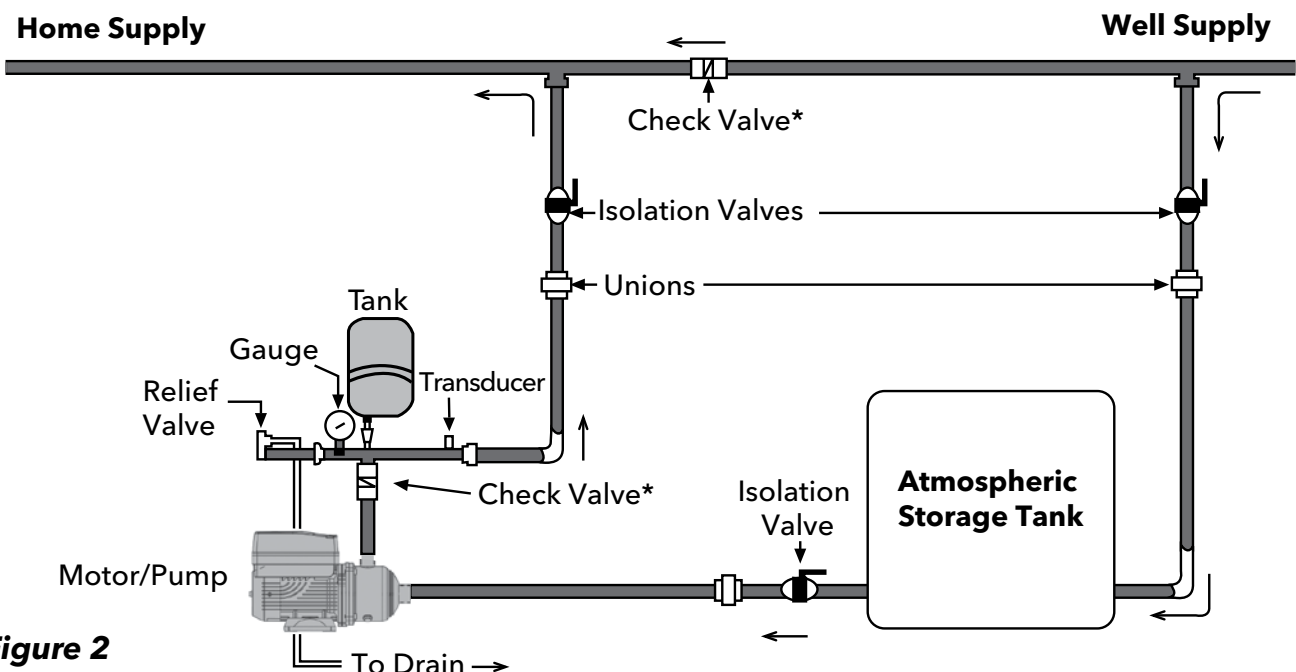
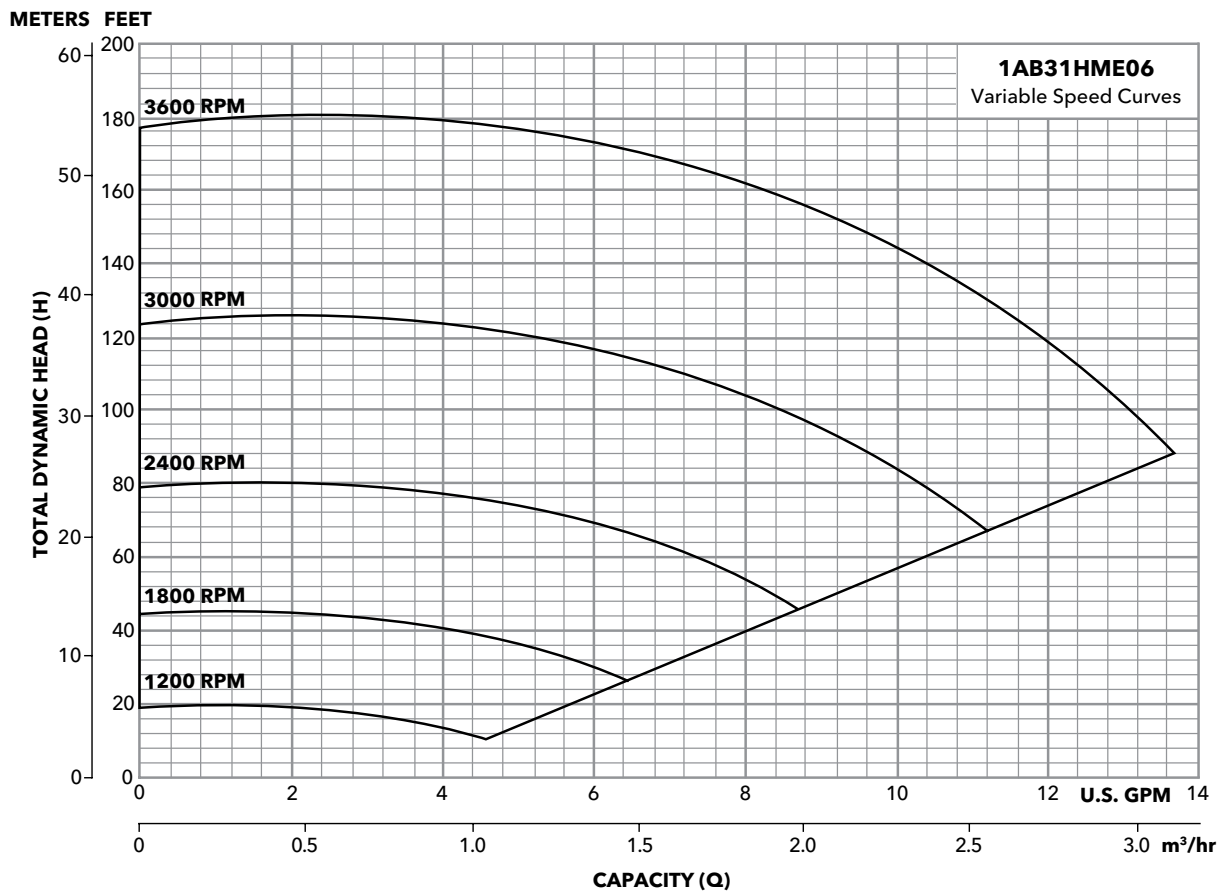
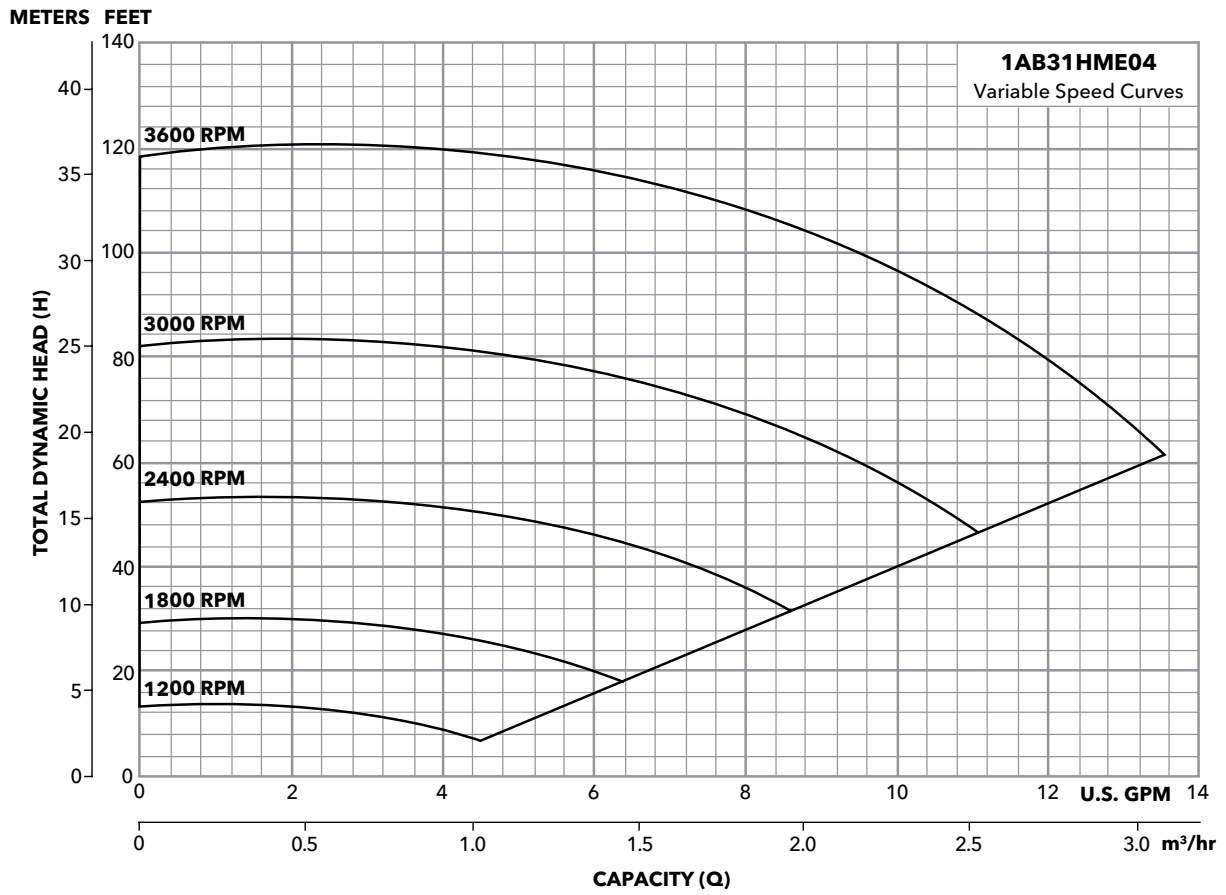
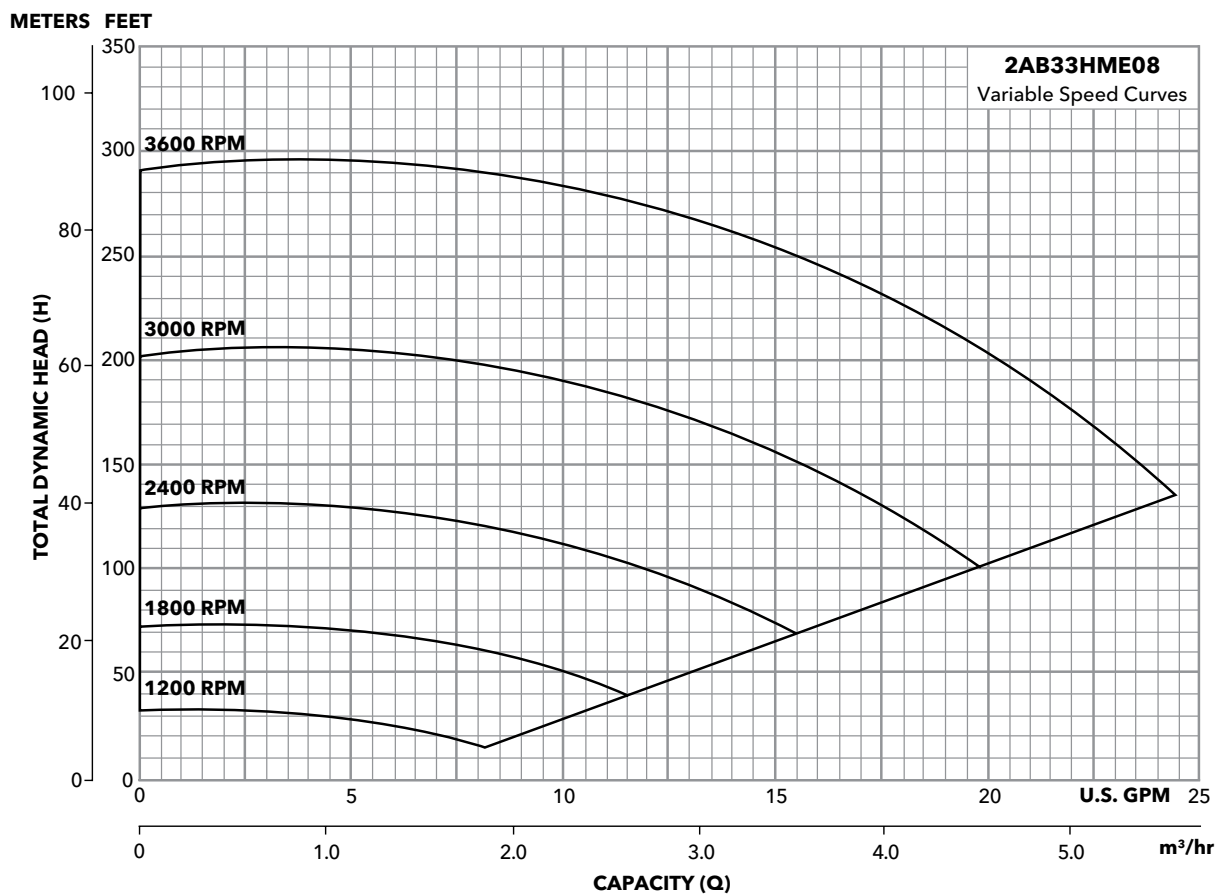
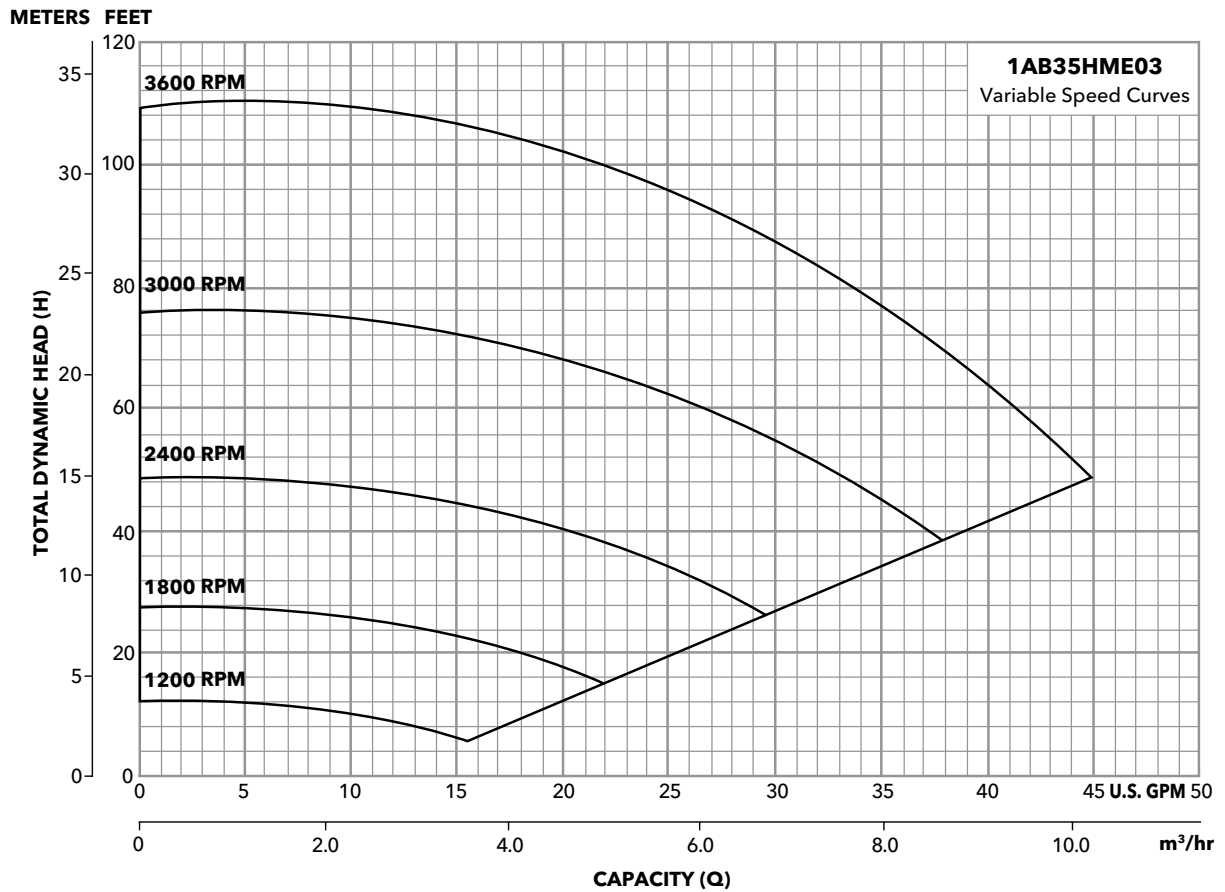
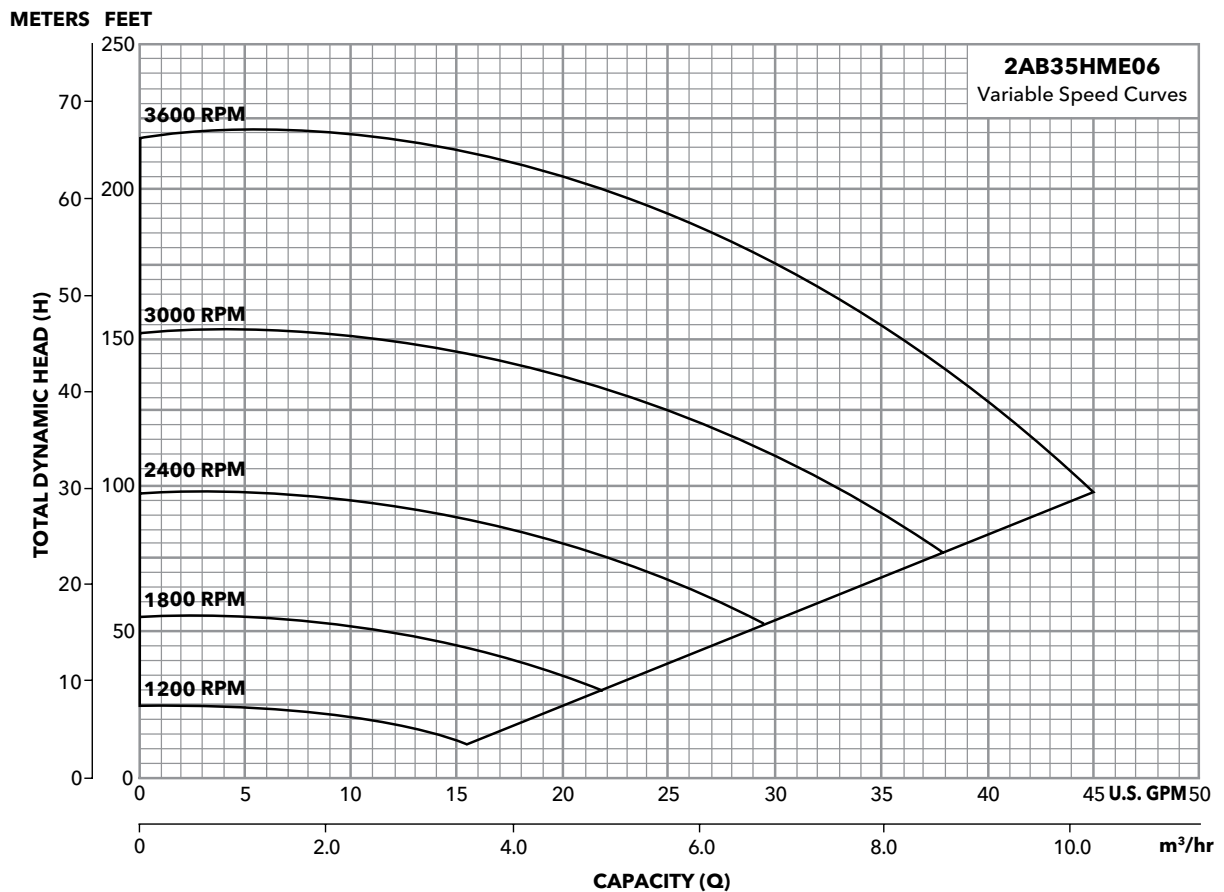
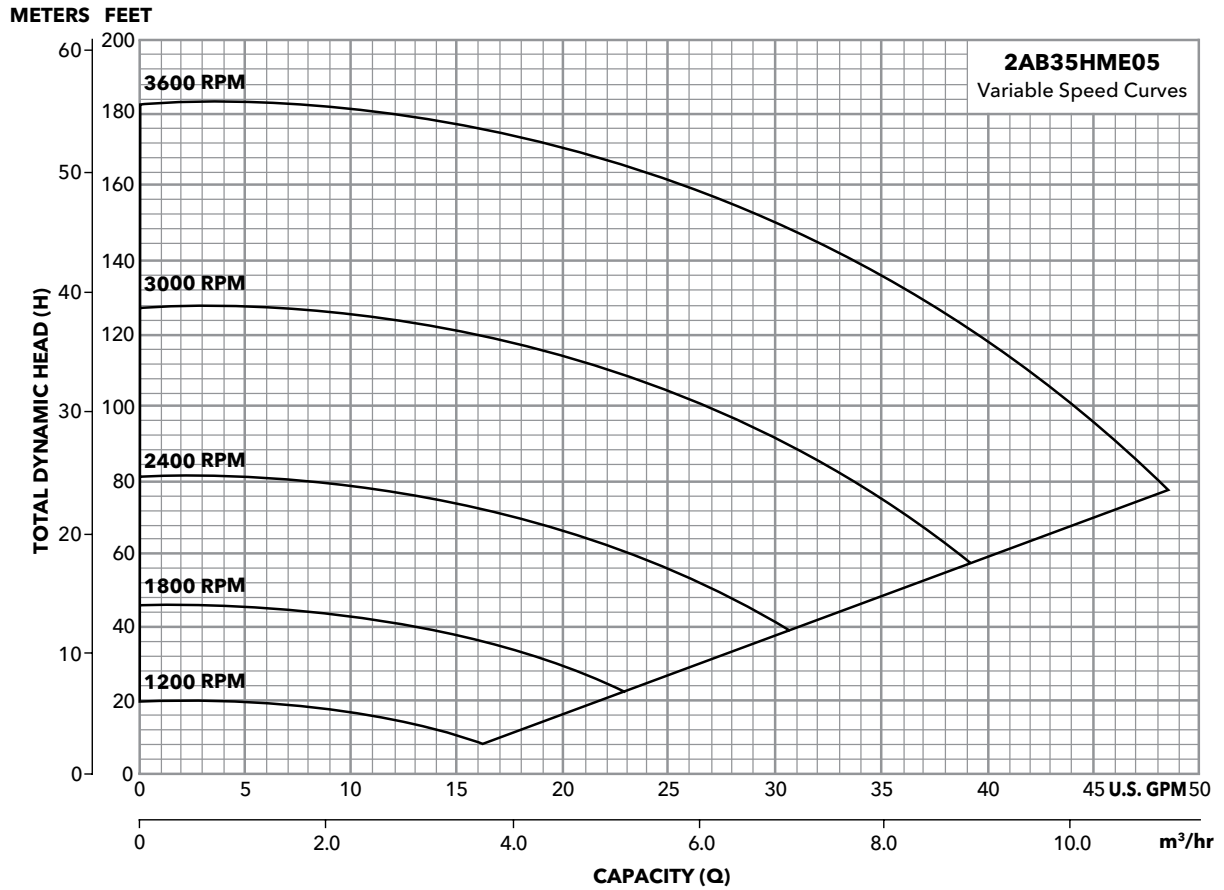


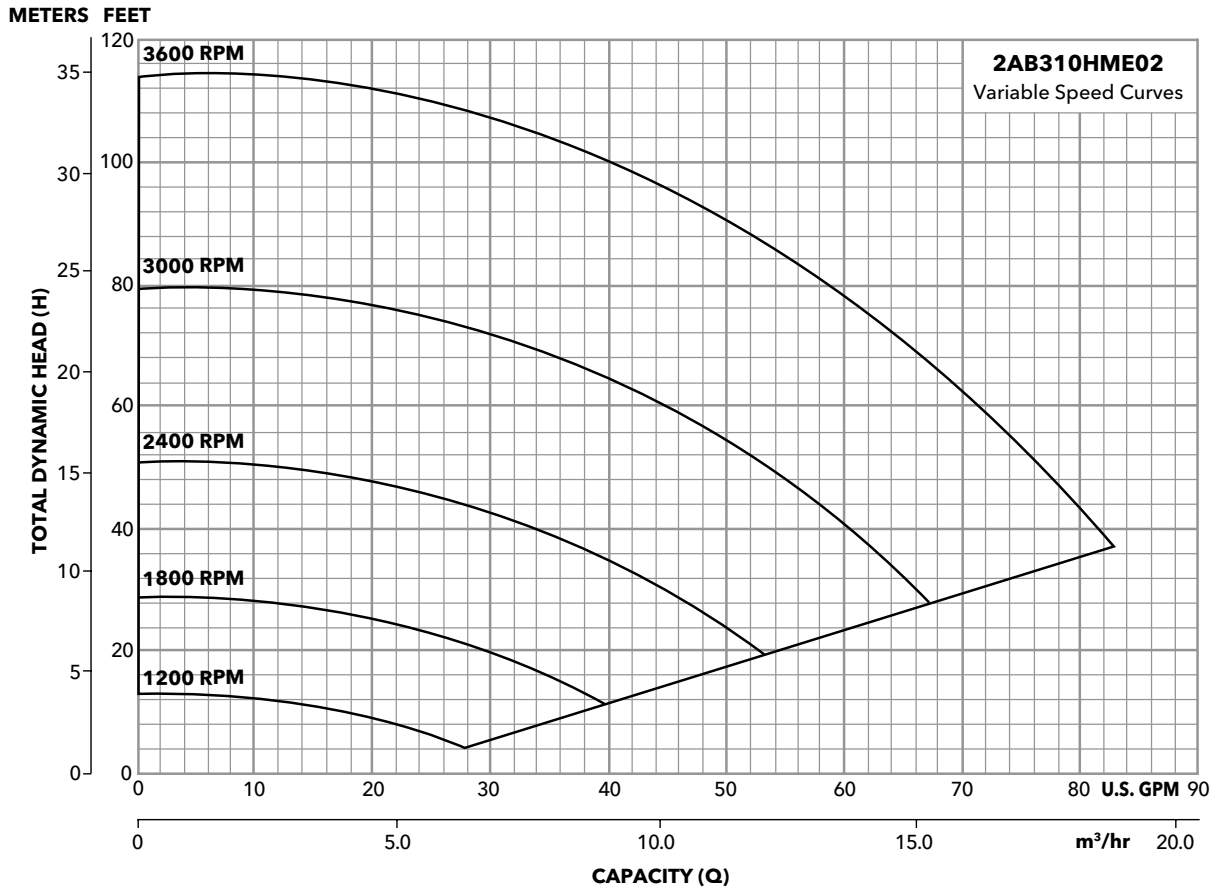
Figure 2

*Spring check valve - provided by installer









e-AB3 INTEGRATED SYSTEM FEATURES

Input Power*: 208-230V $\pm$ 15%, single phase
(controller only)

Input Controls: + and – buttons to set pressure and
Menu button for menu access.

Signal Lights: Power on, communication, status, speed
LED display for menu, faults/errors.

Electrical Efficiency: Over 95% at full load

Protection Against: Short circuit phase loss, under
voltage, overload, motor temperature, suction loss,
sensor fault, bound pump, over voltage, static discharge.

Ambient Temperature: 5° F to 122° F

Maximum Humidity: 95% at 122° F, non-condensing

Air Pollution: Avoid mounting in areas with excessive
dust, acids, corrosives and salts.

Approvals:  (Listing on motor and controller)

System Approvals:   DRINKING WATER
NSF/ANSI 61 & 372

Controller Enclosure: Outdoor, Type 3R, IP 55
(Rain-tight)

Cooling: Totally Enclosed Fan cooled

Transducer: 4-20mA, 300 psi range, 15 foot 2-wire
shielded cable.

Input Wire: 18 with ferrules or 14 AWG

*Low input voltage may affect motor operation.

PRESSURE RANGE

Nominal Range – Field adjustable from 20 – 85 psi, total system pressure.

⚠ WARNING DO NOT SET REQUIRED SYSTEM PRESSURE ABOVE 85 PSI. SEVERE DAMAGE TO
PLUMBING COULD RESULT. PLUMB RELIEF VALVE OUTSIDE OR TO A DRAIN.

DIMENSIONS (For Reference Only - Do not use for construction purposes)

e-HM PUMPS

Capacities – to 12 GPM (1HM)
to 45 GPM (5HM)

Rotation – Right hand clockwise,
viewed from motor end

Materials – 316L stainless steel for all liquid
handling components

Motor – 1 HP, TEFC, Single Phase, 208-230
– 1.5 HP, TEFC, Single Phase, 208-230
– 2 HP, TEFC, Single Phase, 208-230

Pipe Connections – 1 x 1 NPT (1HM)
– 1 x 1½ NPT (5HM)

Maximum Temperature of Water – 120° F

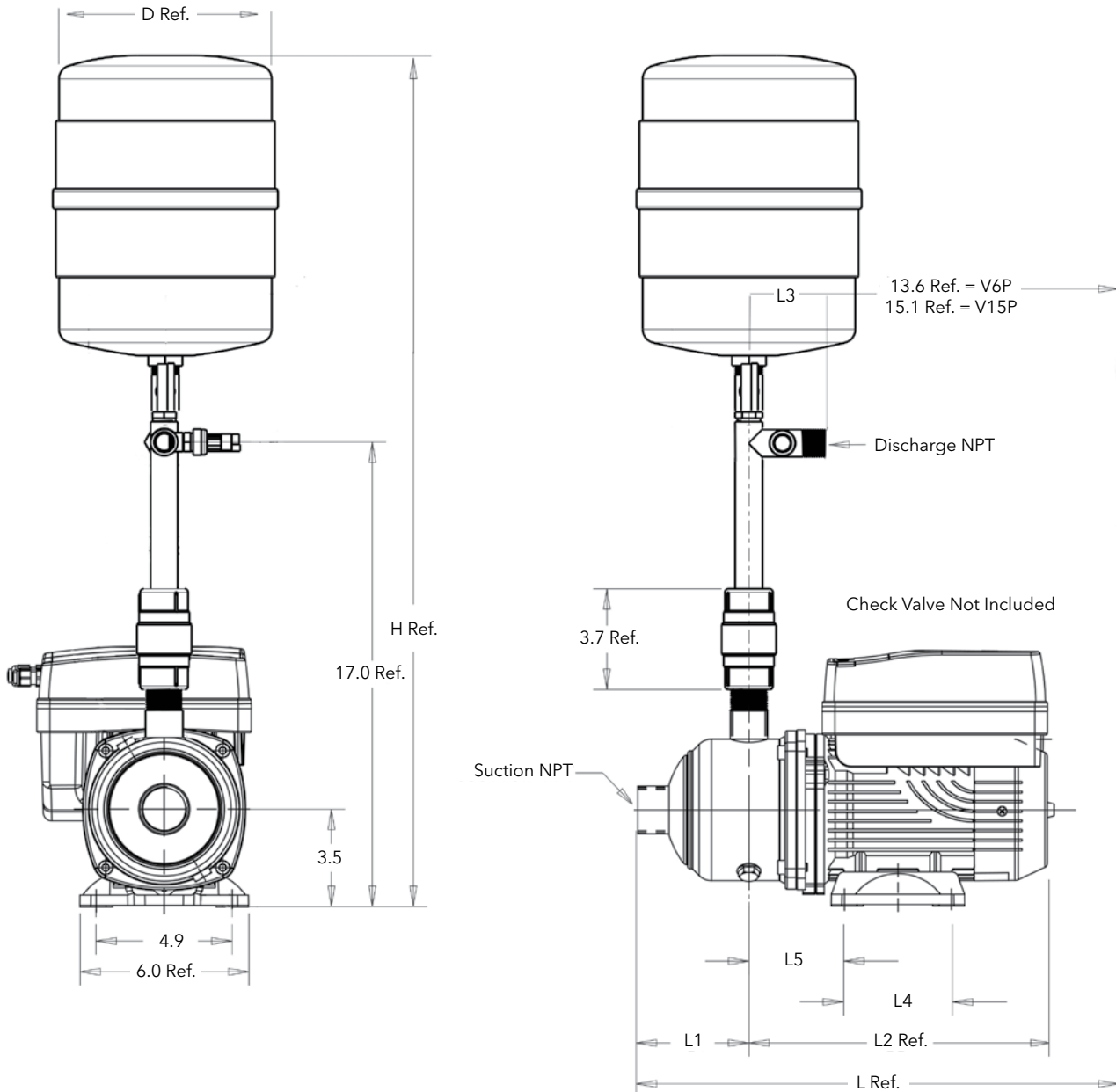
NOTE: Tank Liquid Temperature Limit is 120° F
Pump Liquid Temperature Limit is 194° F

Maximum System Working Pressure – 145 psi

NOTE: Tank Max Working Pressure – 125 psi.

Seal – Carbon / Silicon Carbide / EPR

Overload protection, starters, heaters not required. Dimensions are in inches.



DIMENSIONS (For Reference Only - Do not use for construction purposes)

e-HM PUMPS

Capacities – to 23 GPM (3HM)
to 45 GPM (5HM)
to 75 GPM (10HM)

Rotation – Right hand clockwise,
viewed from motor end

Materials – 316L stainless steel for all liquid
handling components

Motor – 2 HP, TEFC, Single Phase, 208-230
(5HM/10HM)

Pipe Connections – 1 x 1 NPT (3HM)
– 1 x 1¼ NPT (5HM)
– 1¼ x 1½ NPT (10HM)

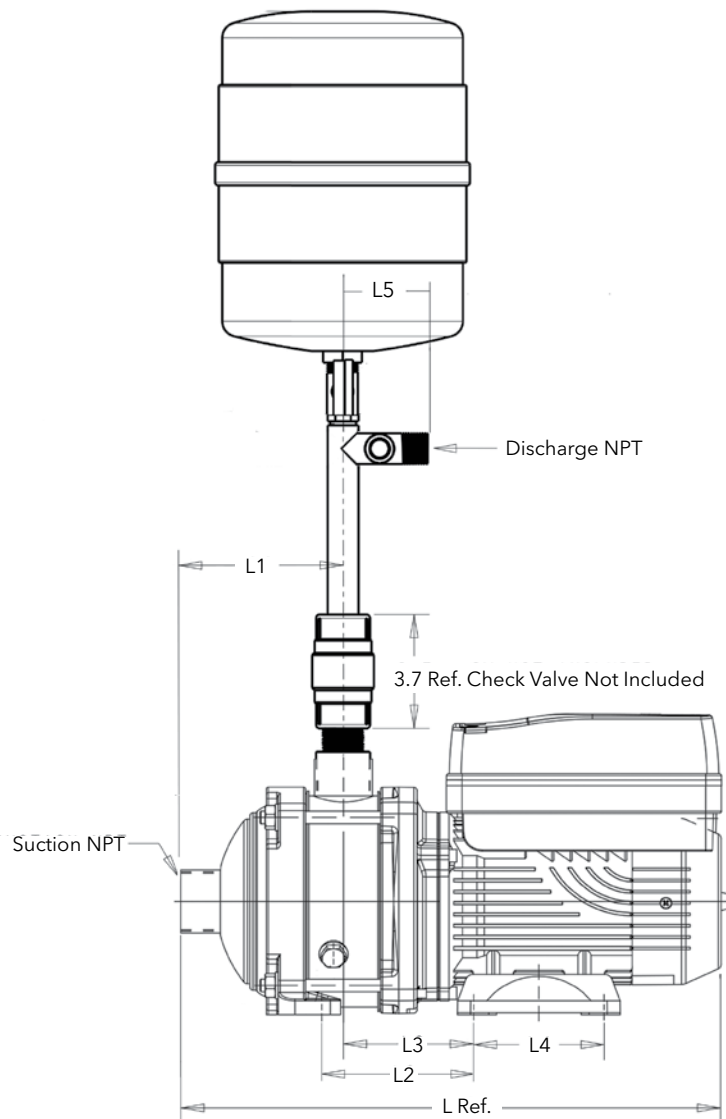
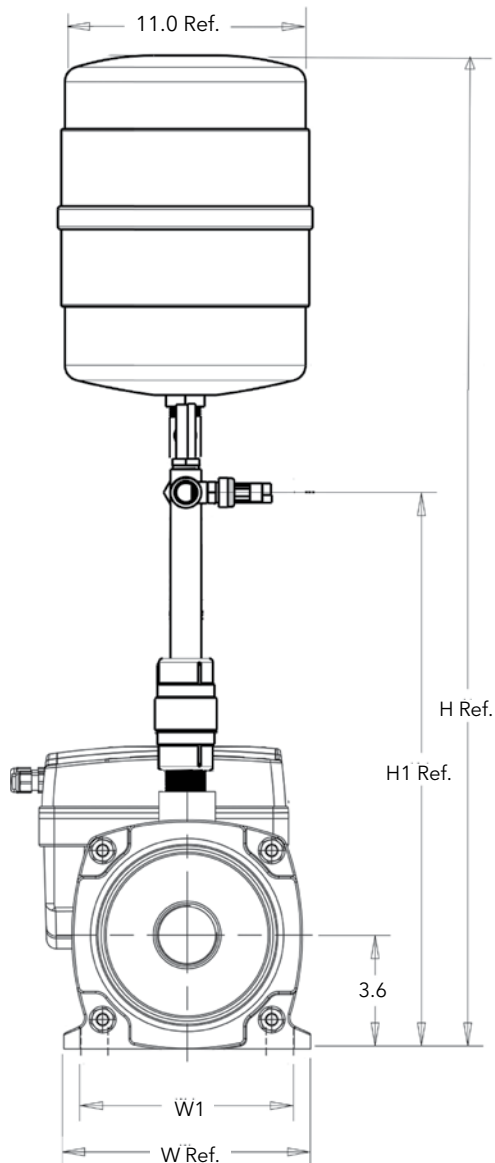
Maximum Temperature of Water – 120° F

NOTE: Tank Liquid Temperature Limit is 120° F
Pump Liquid Temperature Limit is 194° F

Maximum System Working Pressure – 85 psi

Seal – Carbon / Silicon Carbide / EPR

Overload protection, starters, heaters not required. Dimensions are in inches.



ELEVATION DIMENSIONS - REFERENCES PAGES 10 - 11

	Tank and Tee assembly incl.	L	L1(A)	L2	L3	L4	L5	D	H	W	W1	Suction NPT	Discharge NPT	Page
1HME04N03MM1BQEBP	Yes	17.8	4.2	11.3	2.8			8.25"	21.1			1"	1"	14
1HME06N05MM1BQEBP	Yes	19.4	5.8	11.3	2.8			8.25"	21.1			1"	1"	14
5HME03N07MM1BQEBP	Yes	19.2	4.1	11.3	2.8			11"	22.5			1.25"	1"	14
5HME05N15MM1BQEBP	Yes	21.2	6.1	11.3	2.8			11"	22.5			1.25"	1"	14
		L	L1	L2	L3	L4	L5	H	H1	W	W1	Suction NPT	Discharge NPT	Page
3HME08N15MM1BQEBP	Yes	20.3	6.7	6.6	3.9	3.9	2.8	23.3"	17.8	6.5	5.5	1"	1"	15
5HME06N15MM1BQEBP	Yes	21.3	6.2	6.0	3.9	3.9	2.8	23.3	17.8	6.5	5.5	1.25"	1"	15
10HME02N15MM1BQEBP	Yes	20.0	4.9	4.6	3.9	3.9	2.9	30.6	25.1	7.7	6.6	1.5"	1.25"	15

SUBMERSIBLE PUMPS: Use Aquavar SOLO or S-Drive controllers for submersible applications, they have filters built-in and are programmed for submersibles; alternatively Aquavar IPC with use with DV/DT filter can be used for submersible applications.

PACKAGED HARDWARE WITHOUT PUMP AND MOTOR (See Hydrovar Price Book)

Part Number 15K40

KIT INCLUDES:

- 1) Tank - V6P (2 gallons)
- 2) 1" Bronze Discharge Tee - AV20-6
- 3) Pipe Plug - ½", 6K68
- 4) Pressure Gauge

Part Number 15K108

KIT INCLUDES:

- 1) Tank - V15P
- 2) 1¼" Bronze Discharge Tee - AV20-12
- 3) Pipe Plug - ½", 6K68
- 4) Pressure Gauge

TECHNICAL BROCHURE

BCQD R3



FEATURES

- Voltage Relays for installer convenience
- 115 and 230 volt models
- 208 volt relay available for low voltage applications
- Start Capacitors with resistors
- NEMA 3R enclosure for indoor or outdoor mounting
- Quick disconnect cover design will retrofit with other Q-D control boxes
- Multiple knockouts
- Two grounding lugs

AGENCY LISTINGS



TESTED TO UL AND CSA STANDARDS BY UL.

Quick Disconnect Control Boxes

FOR 4", 1Ø, 3-WIRE SUBMERSIBLE MOTORS

GOULDS ORDER NUMBERS ORDER NUMBERS

Control Box Order Number	HP	KW	Volts	Replaces old #	May Replace FE #	Standard Circuit Breaker	Standard Fuse	Dual Element Time Delay Fuse	Enclosure Dimensions W x D x H (in)	Shipping Wt. (lbs)
CB05411	.5	.37	115	00043	280 104 49	30 A	35 A	20 A	4.8 x 2.9 x 8.4	4
CB05412	.5	.37	230	00044	280 105 49	15 A	20 A	10 A	4.8 x 2.9 x 8.4	4
CB07412	.75	.55	230	00054	280 107 49	20 A	25 A	15 A	4.8 x 2.9 x 8.4	4
CB10412	1	.75	230	00064	280 108 49	25 A	30 A	20 A	4.8 x 2.9 x 8.4	4

"K" REPAIR PARTS FOR QUICK DISCONNECT STYLE CONTROL BOXES*

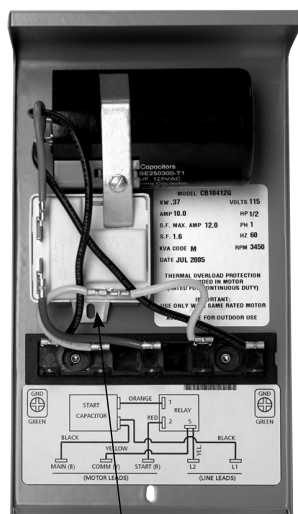
Goulds Control Box Order Number	HP	Volts	Capacitor Repair Part Order Number	Start Capacitor Mfd.	Capacitor Voltage	Capacitor Quantity	Start Relay Order Number
CB05411	.5	115	9K450	250-300	125	1	① 9K457 ② 9K566
CB05412		230	9K448	59-71	250		① 9K462 ② 9K567
CB07412	.75		9K449	86-103			
CB10412	1		9K447	105-126			

* Repair parts above will work in new voltage relay control boxes as well as in control boxes shown in "Replaces Column" above.

① First Design - Up to June 2009 - Relay tab on bottom, capacitor held by bracket and screw. See pictures below. 208 V use 9K461 relay.

② Current Design - Starting June 2009 - Relay tab on top and capacitors, all held by one screw. See pictures below. The relays are designed for operation in a specific orientation, therefore there are two different numbers now. 208 V use 9K568 relay.

First Design



Tab Down ①

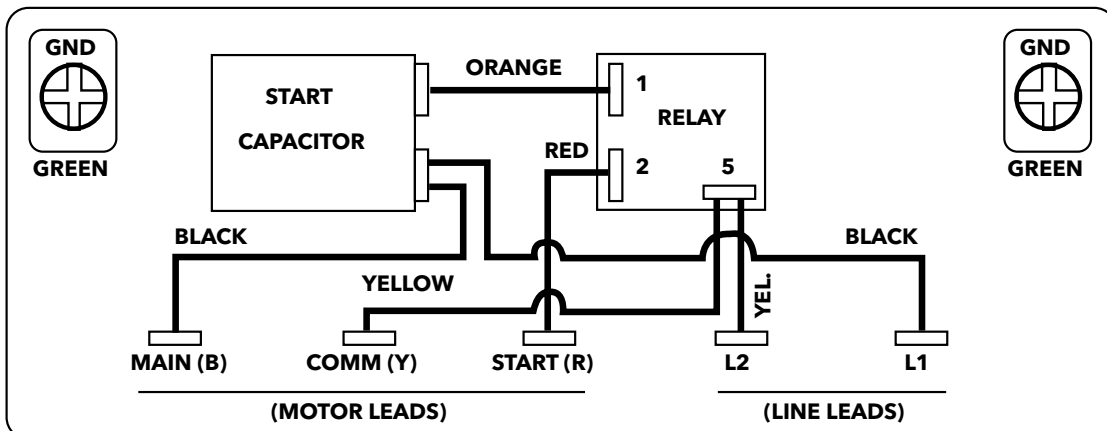
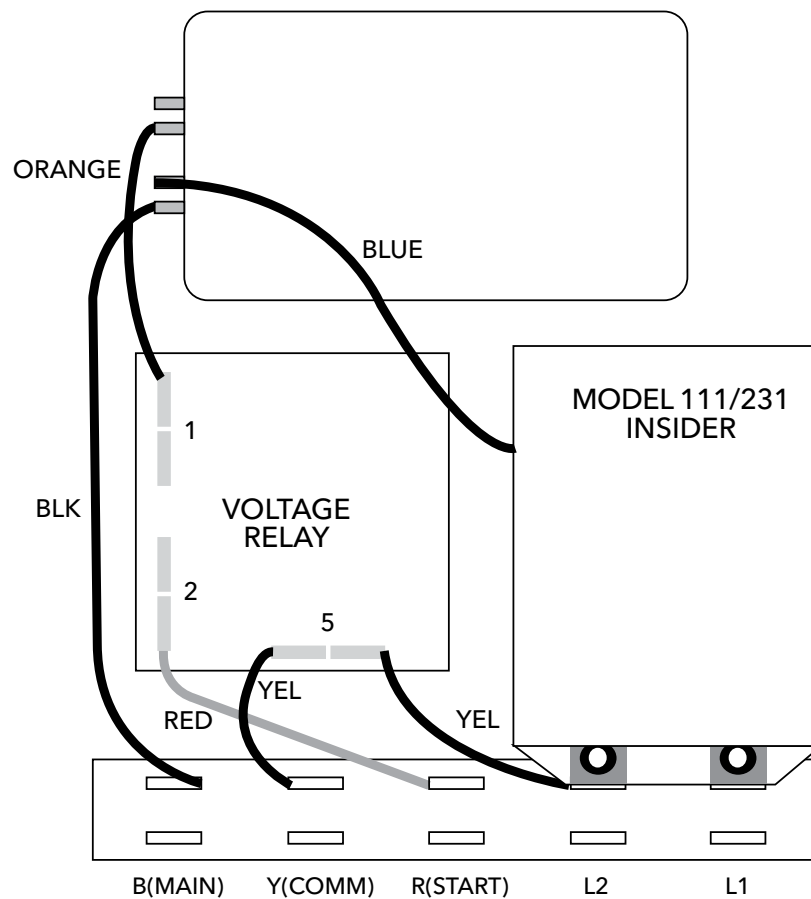
Current Design



Tab Up ②

INSTALLING A PumpSaver® INSIDER

1. Remove the cover from the front of the 3-wire Goulds control box.
2. Remove the yellow wire from the terminal strip at L2.
3. Remove the black wire from L1 to the capacitor.
4. Press the PumpSaver onto the L1 and L2 terminals.
5. Reconnect the yellow wire to L2 on the PumpSaver.
6. Connect the blue wire attached to the PumpSaver to the dual-lug terminal (with the black wire) of the capacitor.





FEATURES

Voltage Relay for installer convenience

230 volt models - 208 volt relay, 9K479, available for low voltage applications

Start Capacitors for starting torque

Run Capacitors for efficiency and quiet operation

Type 3R enclosure for indoor or outdoor mounting

Accepts up to #2 AWG wire

Multiple knockouts and two ground terminals

Higher HP models require heavy duty pressure switches - See Magnetic Contactor version to use standard pressure switches

Manual reset overloads on 1½ - 5 HP models

AGENCY LISTINGS



TESTED TO UL AND CSA STANDARDS BY UL.

CSCR 1Ø Control Boxes

CAPACITOR START - CAPACITOR RUN FOR 3-WIRE, ½ - 5 HP SUBMERSIBLE MOTORS

FOR USE WITH 3 WIRE, 1Ø, 4" GOULDS MOTORS

Control Box Order Number	HP	KW	Volts	May Replace GP #	May Replace RJ #	Standard Circuit Breaker	Standard Fuse	Dual Element Time Delay Fuse	Enclosure Dimensions W x D x H (in)	Shipping Wt. (lbs)
CB05412CR	0.5	.37	230	—	50F311CB S50N1CB, A50N1CB	10	15	10	8.1 x 5.9 x 9.3	7
CB07412CR	.75	.55		—	75F311CB S75N1CB, A75N1CB	15	20			
CB10412CR	1	.75		—	S100F311CB S100N1CB, A100N1CB					
CB15412CR	1.5	1.1		00074	150F311CB S150N1CB, A150N1CB	25	30	15		
CB20412CR	2	1.5		00084	200F311CB S200N1CB, AS200T1CB			20		
CB30412CR	3	2.2		00094	300F311CB S300N1CB	40	45	25		
CB50412CR	5	3.7		00104	500F311CB S500N1CB	60	80	45		8

"K" REPAIR PARTS

Control Box Order Number	HP	Volts	Old Control Box Order Number	Capacitor Repair Part Number	Capacitor Mfd.	Capacitor Type	Capacitor Voltage	Capacitor Quantity	Overload Order Number ②	Start Relay Order Number ①
CB05412CR	.5	230	—	9K465	43-53	Start	250	1	N/A	9K458
				9K466	15	Run	370			
CB07412CR	.75		—	9K448	59-71	Start	250		N/A	9K458
				9K467	23	Run	370			
CB10412CR	1		—	9K449	86-103	Start	250		N/A	9K458
				9K467	23	Run	370			
CB15412CR	1.5		00074	9K447	105-126	Start	250		9K471	9K458
				9K466	15	Run	370			
CB20412CR	2		00084	9K447	105-126	Start	250		9K481	9K458
				9K451	20	Run	370			
CB30412CR	3		00094	9K453	208-250	Start	250		9K482	9K459
				9K454	45	Run	370			
CB50412CR	5		00104	9K455	270-324	Start	330		9K483	
				9K456	40	Run	370	2		

① If supply voltage is between 200V-210V a 208V start relay, order no. 9K479, is required.

② Overload for 2, 3, and 5 HP CSCR boxes are sold prewired and soldered as an assembly. No field soldering or wiring required.



1½ - 3 HP

5 HP is in larger enclosure

FEATURES

Built-in Magnetic Contactors allow the use of standard pressure switches, prolong switch life and eliminate the need to source and install separate contactors, saving installation time and reducing total system component costs.

Voltage Relay for installer convenience

230 volt standard models - 208 volt relay, 9K479 available for low voltage applications

Start Capacitors for starting torque

Run Capacitors for efficiency and quiet operation

Type 3R enclosure for indoor or outdoor mounting

Accepts up to #2 AWG wire

Multiple knockouts and two ground terminals

Manual reset overloads on 1½ - 5 HP models

AGENCY LISTINGS



TESTED TO UL AND CSA STANDARDS BY UL.

Magnetic Contactor 1Ø Control Boxes

FOR 3-WIRE, 1½ - 5 HP SUBMERSIBLE MOTORS

MAGNETIC CONTACTOR (MC) CONTROL BOXES FOR 3 WIRE, 1Ø, 4" GOULDS WATER TECHNOLOGY MOTORS AND 4" (6", 5 HP) FRANKLIN ELECTRIC MOTORS

Control Box Order Number	HP	KW	Volts	Replaces GWT #	Replaces RJ #	May Replace FE #	Standard Circuit Breaker	Standard Fuse	Dual Element Time Delay Fuse	Enclosure Dimensions W x D x H (in)	Shipping Wt. (lbs)
CB15412MC	1.5	1.1	230	No Equal	No Equal	No Equal	30	35	20	8.1 x 5.9 x 9.3	8
CB20412MC	2	1.5	230	00084MC	No Equal	2823018310	25	30	20		
CB30412MC	3	2.2	230	00094MC	S300N1CBC	2823028310	40	45	30		
CB50412MC	5	3.7	230	00104MC	S500N1CBC	2821139310	60	80	45	11 x 6.7 x 12.5	15

"K" REPAIR PARTS FOR MAGNETIC CONTACTOR "MC" CONTROL BOXES

Control Box Order Number	HP	KW	Volts	Capacitor Repair Part Number	Capacitor Type	Capacitor Mfd.	Capacitor Voltage	Capacitor Quantity	Contactor Order Number	Overload Order Number	Start Relay Order Number ①
CB15412MC	1.5	1.1	230	9K447	Start	105-126	250	1	9K485	9K493	9K458
				9K466	Run	15	370				
CB20412MC	2	1.5		9K447	Start	105-126	250			9K480 (S) 9K472 (M)	
				9K451	Run	20	370				
CB30412MC	3	2.2		9K453	Start	208-250	250		9K486	9K473 (S) 9K474 (M)	9K459
				9K454	Run	45	370				
CB50412MC	5	3.7		9K455	Start	270-324	330	1		9K475 (S)	
				9K456	Run	40	370	2		9K476 (M)	

Repair parts above are compatible with and replace parts in Goulds Water Technology or Franklin Electric control boxes.

① If supply voltage is between 200 V – 210 V a 208 V start relay, order no. 9K479, is required.

FEATURES

Built-in magnetic contactors allow the use of standard pressure switches, prolong switch life and eliminate the need to source and install separate contactors. This will save installation time and reduce total system component costs.

Voltage Relay for installer convenience

230 volt standard models

Start capacitors for starting torque

Run capacitors for efficiency and quiet operation

Type N3R enclosure for indoor or outdoor mounting

Multiple knockouts and two ground terminals

Manual reset overload circuit breakers

AGENCY LISTINGS



TESTED TO UL AND CSA STANDARDS BY UL.

Magnetic Contactor 1Ø Control Boxes

FOR 6", 5 - 15 HP GOULDS WATER TECHNOLOGY SUBMERSIBLE MOTORS

CONTROL BOXES FOR 6" GOULDS WATER TECHNOLOGY (HITACHI) SINGLE-PHASE MOTORS*

Control Box Order Number	Use On Motor No.	HP	Volts	Capacitor Ratings (Mfd)		Contactor Rating	Overload Circuit Breaker	Enclosure Dimensions	Shipping Weight (lbs.)
				Start Caps	Run Caps				
CB05MC3R	6M051	5	230	189-227 / 330V	30 / 440V	30A	30A	12.5" H x 11" W x 6.7" D	15
CB07MC3R	6M071	7.5		243 - 292 / 330V	40 / 440V	50A	50A		
CB10MC3R	6M101	10		161 - 193 / 330V (Qty 2)	(2) 25 / 440V	75A	60A	17.5" H x 11" W x 6.7" D	27
CB15MC3R	6M151	15		216 - 260 / 330V (Qty 2)	(2) 35 / 440V	90A	90A		
CB15MC3R100 ①							100A		

① Overload circuit breaker is rated at 100 amps versus 90 amp standard in CB15MC. Use in areas with high ambient temperatures to reduce nuisance tripping.

CONTROL BOXES FOR 6" FM SERIES SINGLE-PHASE MOTORS

Control Box Order Number	Use On Motor No.	HP	Volts	Capacitor Ratings (Mfd)		Contactor Rating	Overload Circuit Breaker	Enclosure Dimensions	Shipping Weight (lbs.)
				Start Caps	Run Caps				
CB05MC3RF	6F051	5	230	216-260	(2) 30	30A	30A	12.5"H x 11"W x 6.7"D	15
CB07MC3RF	6F071	7.5		(2) 189-227	(1) 60	50A	50A		
CB10MC3RF	6F101	10		216-260	(2) 50	70A	60A	17.5"H x 11"W x 6.7"D	27
CB15MC3RF	6F151	15			(2) 70	90A	80A		

Note: FM Series control boxes are designed for use with FM Series 6" motors only. Use with motor part numbers "6F...".

Motor overload circuit breaker size based on FLA of motor. FM Series motor can only use 80 A O.L. breaker.

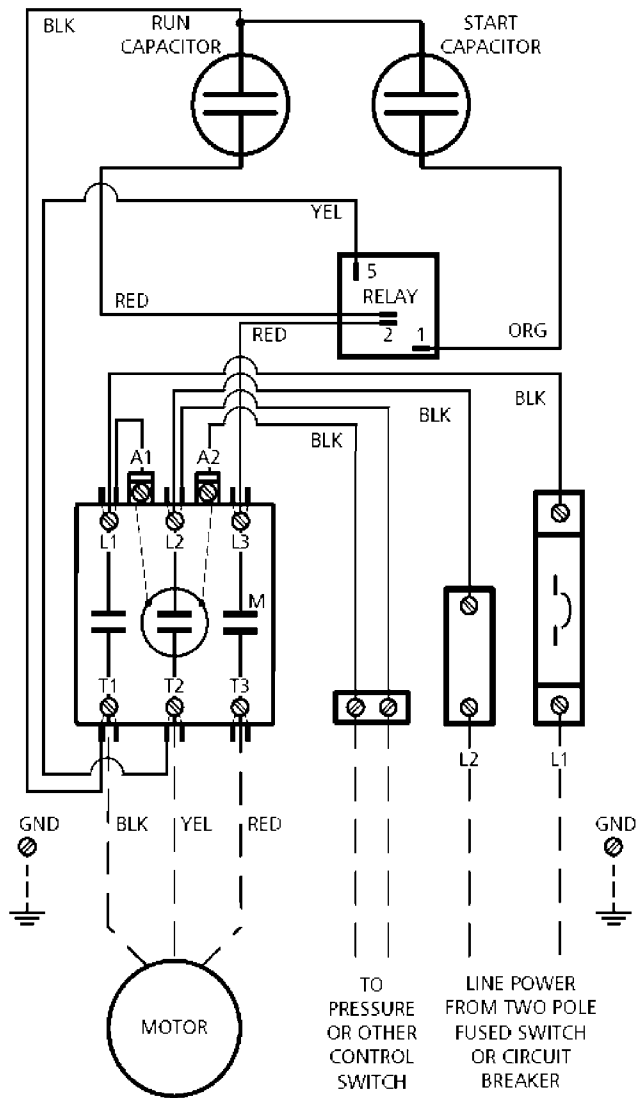
Do not use these control boxes on Franklin Electric 6" motors as the overloads and capacitors are not the same as used by Franklin Electric. Using these will void Franklin Electric's warranty.

6" MOTOR CONTROL BOX PART LIST

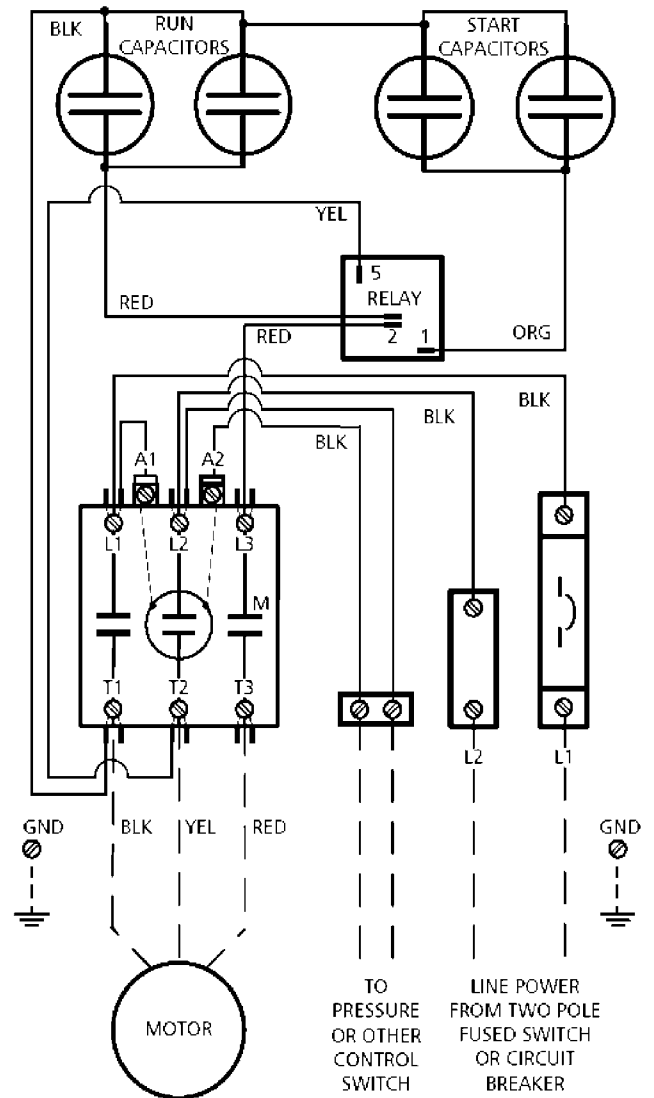
Order No.	Part Description	Where Used
9K580	Relay	ALL
9K581	Run Capacitor 35uF at 450V	CB15MC3R & CB15MC3R100
9K582	Start Capacitor 216-260uF at 330V	CB05MC3RF, CB10MC3RF, CB15MC3R, CB15MC3RF & CB15MC3R100
9K608	Start Capacitor 161-193uf at 330VAC	CB10MC3R
9K609	Start Capacitor 243-292uf at 330VAC	CB07MC3R
9K610	Start Capacitor 189-227uf at 330VAC	CB05MC3R
9K611	Run Capacitor 25uf at 450VAC	CB10MC3R
9K612	Run Capacitor 40uf at 450VAC	CB07MC3R
9K613	Run Capacitor 30uf at 450VAC	CB05MC3R
9K614	DP Mag Contactor 90 FLA, 3 pole	CB10MC3R, CB10MC3RF, CB15MC3R, CB15MC3R100 & CB15MC3RF
9K616	DP Mag Contactor 50 FLA, 3 pole	CB05MC3R, CB05MC3RF, CB07MC3R & CB07MC3RF
9K618	Circuit Breaker 100A	CB15MC3R100
9K619	Circuit Breaker 90A	CB15MC3R
9K620	Circuit Breaker 60A	CB10MC3R & CB10MC3RF
9K621	Circuit Breaker 50A / 45A	CB07MC3R & CB07MC3RF
9K622	Circuit Breaker 30A	CB05MC3R & CB05MC3RF
9K826	Circuit Breaker 80A	CB15MC3RF
9K827	DP Mag Contactor 40 FLA, 2 pole	CB10MC3RF & CB15MC3RF
9K828	Run Capacitor 70uf at 440VAC	CB15MC3RF
9K829	Run Capacitor 60uf at 440VAC	CB07MC3RF
9K830	Run Capacitor 50uf at 440VAC	CB10MC3RF
9K831	Start Capacitor, 189-227uf, 330uf	CB07MC3RF
9K832	Run Capacitor 30uf at 440VAC	CB05MC3RF

GOULDS WATER TECHNOLOGY MOTOR DIAGRAMS

5 AND 7.5 HP WIRING DIAGRAM

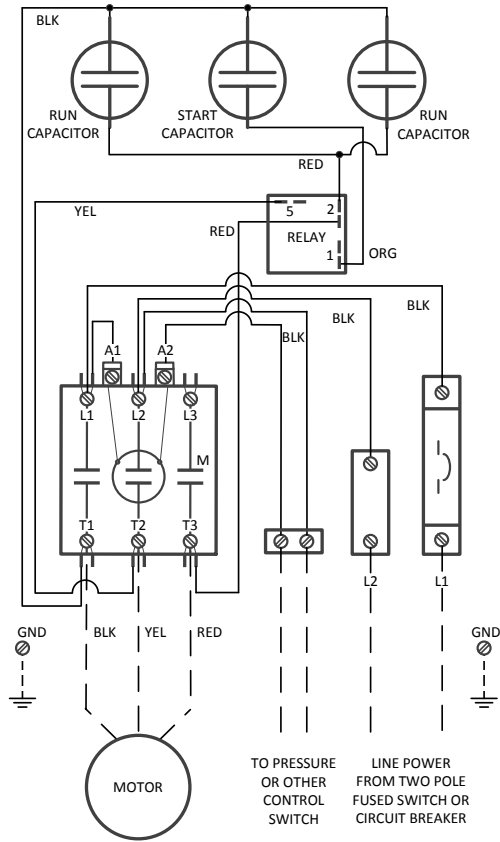


10 AND 15 HP WIRING DIAGRAM

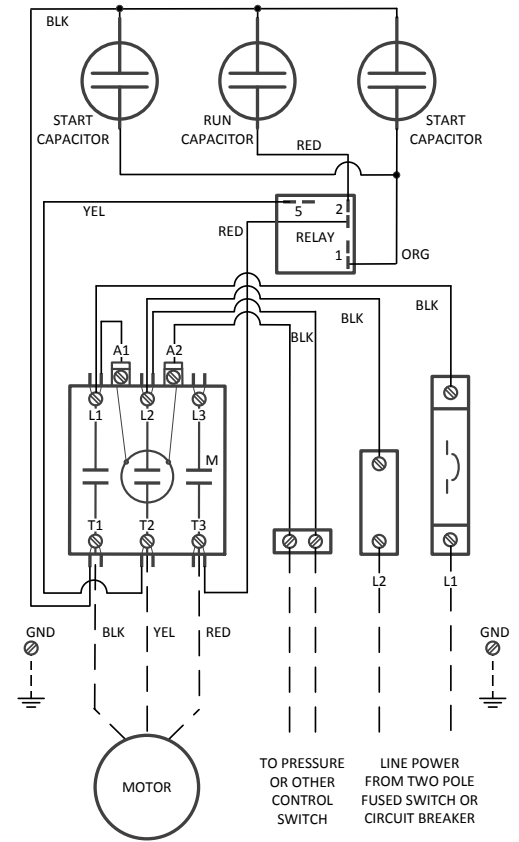


FM SERIES MOTOR DIAGRAMS

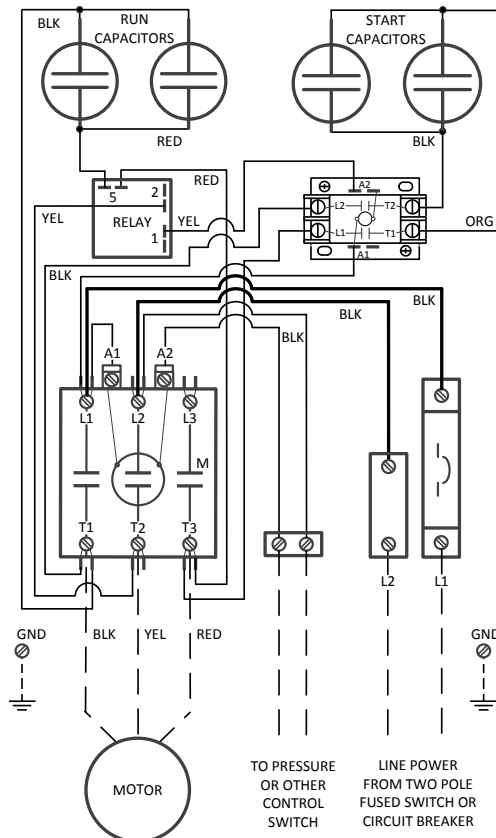
5 HP WIRING DIAGRAM



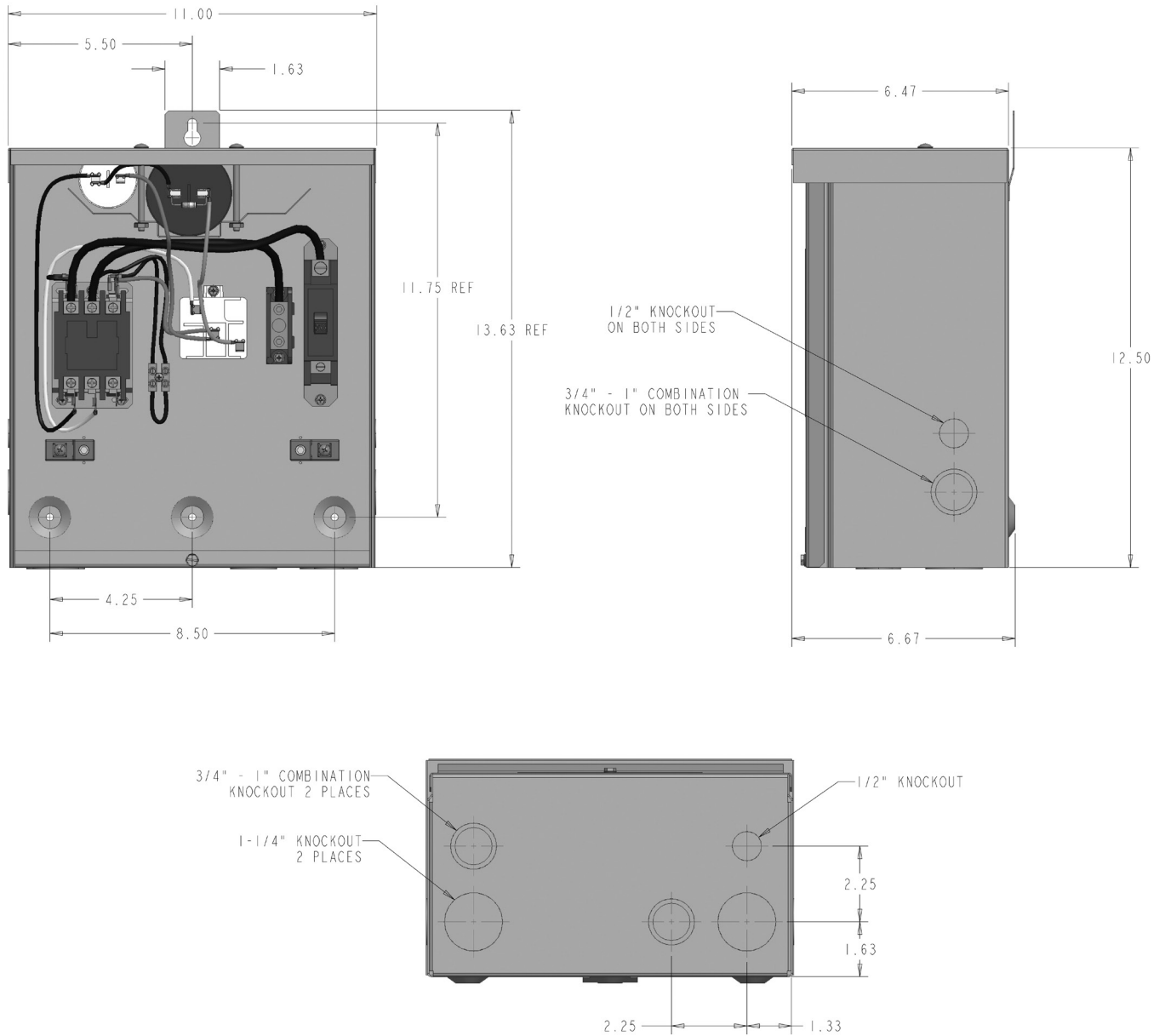
7.5 HP WIRING DIAGRAM



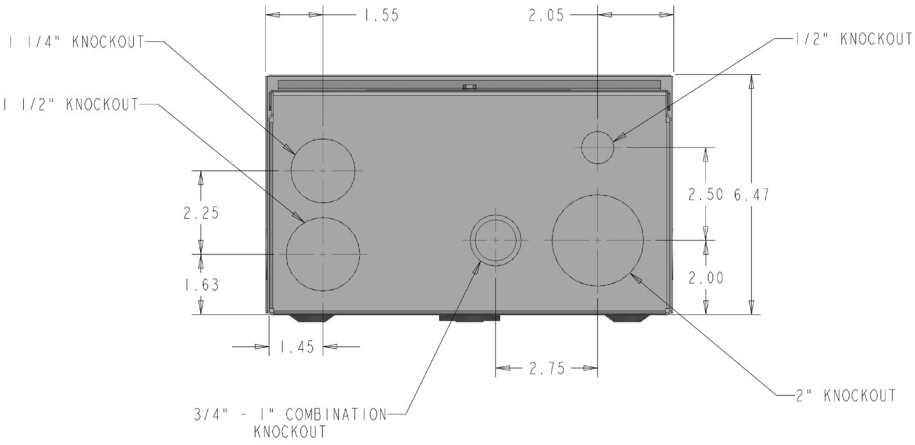
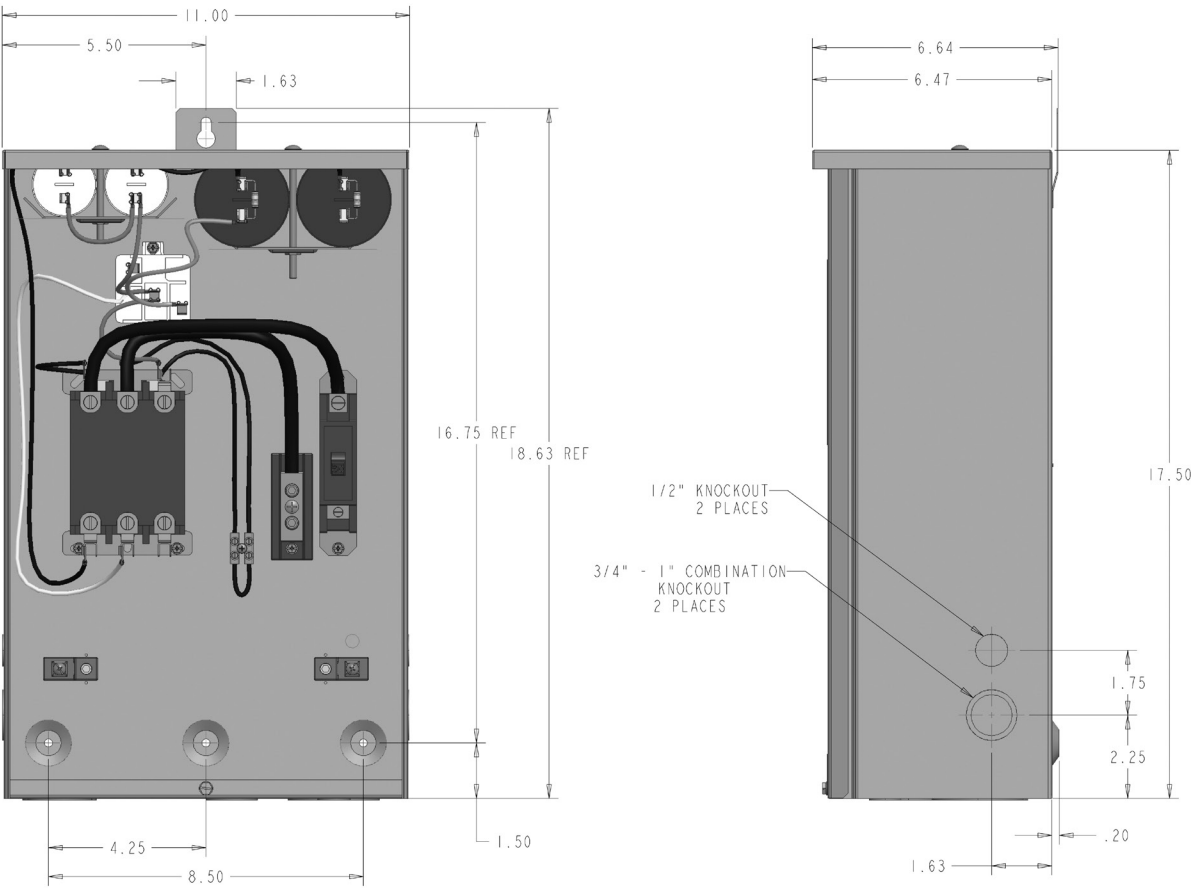
10 AND 15 HP WIRING DIAGRAM



5 AND 7.5 HP DIMENSIONS

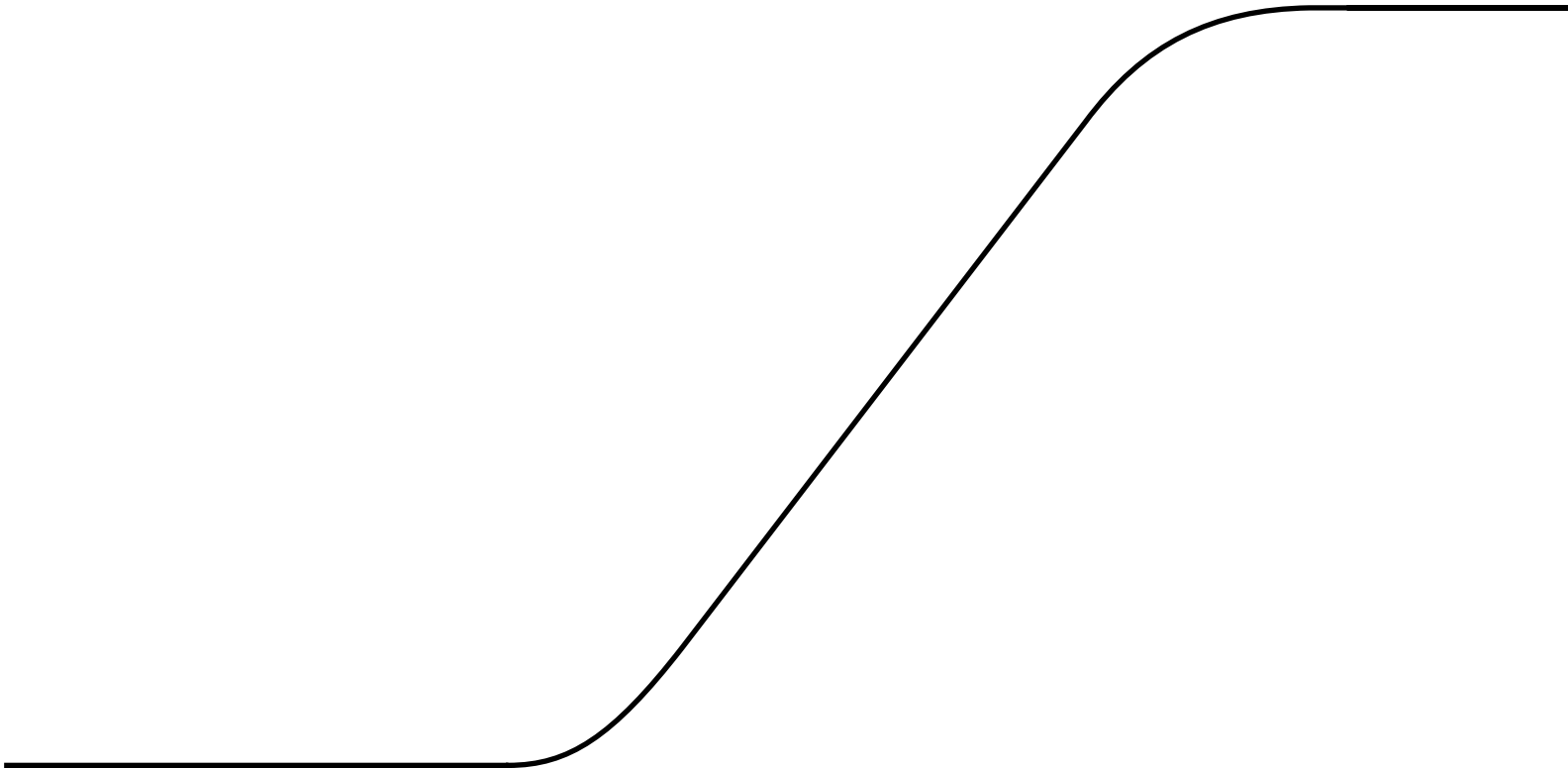


10 AND 15 HP DIMENSIONS



xylem

Variable speed





AQUAVAR SOLO²™

CONSTANT PRESSURE CONTROLLERS FOR: 1Ø - 3-WIRE MOTORS,
1Ø - 2-WIRE GOULDS WATER TECHNOLOGY MOTORS, 3Ø MOTORS



FEATURES

LED display clearly indicates actual system pressure, output frequency, current draw and error log.

Dual system set points for advanced system application.

Programmable output relay can be configured to run optional accessories such as a chlorinator, or link to a home monitoring system.

NEMA 3R Enclosure: Rainproof, outdoor/indoor rated enclosure.

Current Limit Selector Switch: Rotary switch to set current limit to match motor Service Factor Amps (SFA).

Dry Well Sensitivity Switch: Choice of low or high sensitivity.

Pressure Drop: Choose a 5 or 20 PSI pressure drop for restarts.

Low Pressure Cut-Off: Set on or off depending on application.

Constant Pressure: Provides consistent pressure even as flow requirements vary.

Controller acts as a pump protection and troubleshooting device. Flashing lights indicate system faults.

Standard pressure sensor cable is 10' long. Optional lengths of 25', 50', 100', 150' and 200' are available.

Integrated output motor filter protects the motor from voltage spikes and limits electrical interference with devices such as portable telephones, radios, televisions and garage door openers.

Cooling Fan: Allows operation in ambient temperatures up to 122°F.

AGENCY LISTINGS



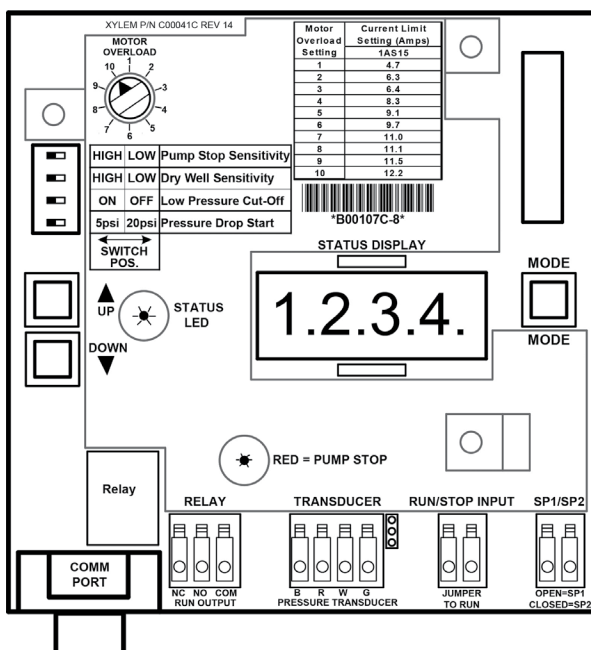
Tested to UL 508C and CSA 22.2 0-M91, 14-95 and 0.4-M1982 Standards By Canadian Standards Association File #LR38549



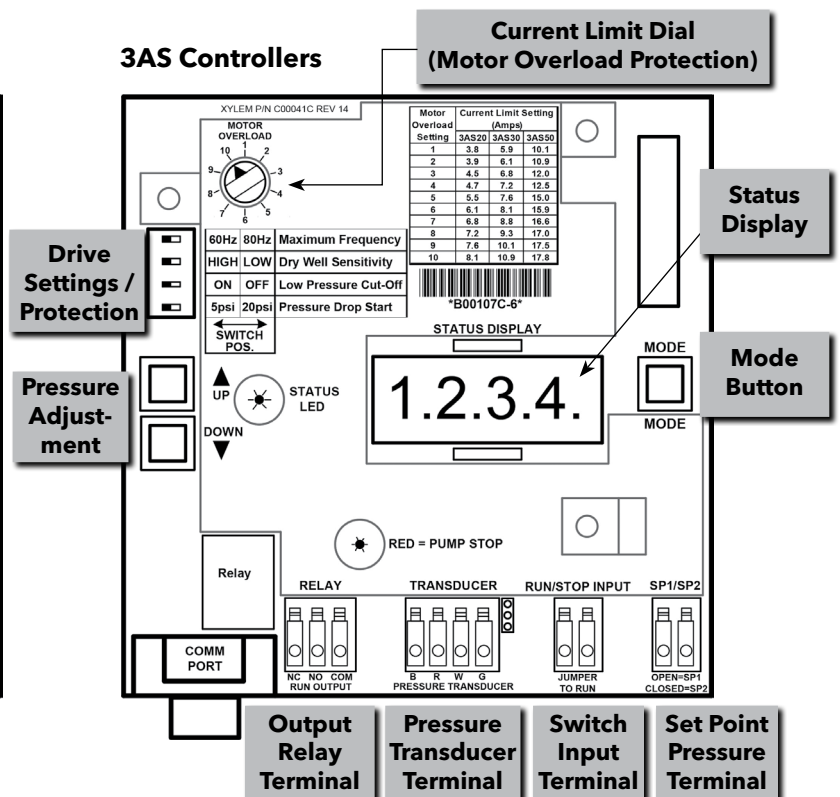
Drinking Water System Components - Health Effects & Optional Annex G - Class 6861 18 - Mechanical Devices - NSF/ANSI 61 - Certified to NSF/ANSI 61 Sect. 8 (including optional Annex G)

USER INTERFACE BOARD

1AS Controllers



3AS Controllers



SPECIFICATIONS - 3Ø MODELS / 1Ø INPUT AND 3Ø OUTPUT

Controller Temperature Range:

- Minimum Ambient Temperature: -4°F (-20°C)
- Maximum Ambient Temperature: +122°F (+50°C)

Input Voltage: single-phase, 230 Volt, two (2) wire grounded system.

Output Voltage: variable frequency, variable voltage, three-phase power to the motor.

Speed Selector Switch: Selects Output Frequency of either -

- 30 - 60 Hz - Use matched HP Water End and Motor
- 30 - 80 Hz - Use mis-matched Water End and Motor

Enclosure Dimensions:

- Height: 18.6"
- Width: 9.9"
- Depth: 5.3"

Packaged Dimensions:

- Height: 21"
- Width: 13"
- Depth: 8"

Motor Compatibility with 3AS_ _ Models

HP	Three Phase	
	Goulds & Pentek XE	Franklin & Grundfos
¾	Yes	Yes
1	Yes	Yes
1½	Yes	Yes
2	Yes	Yes
3	Yes	Yes
5	Yes	①

① Amps may be higher than controller overload range - use of these motors will current limit and provide reduced performance.

3AS20 SPECIFICATIONS

- HP Range: ¾ to 2
- Unit Weight: 19 lbs.
- Packaged Weight: 23 lbs.
- Pressure Set point adjustable from 20 - 85 psi using the standard 100 psi sensor. ①

3AS30 SPECIFICATIONS

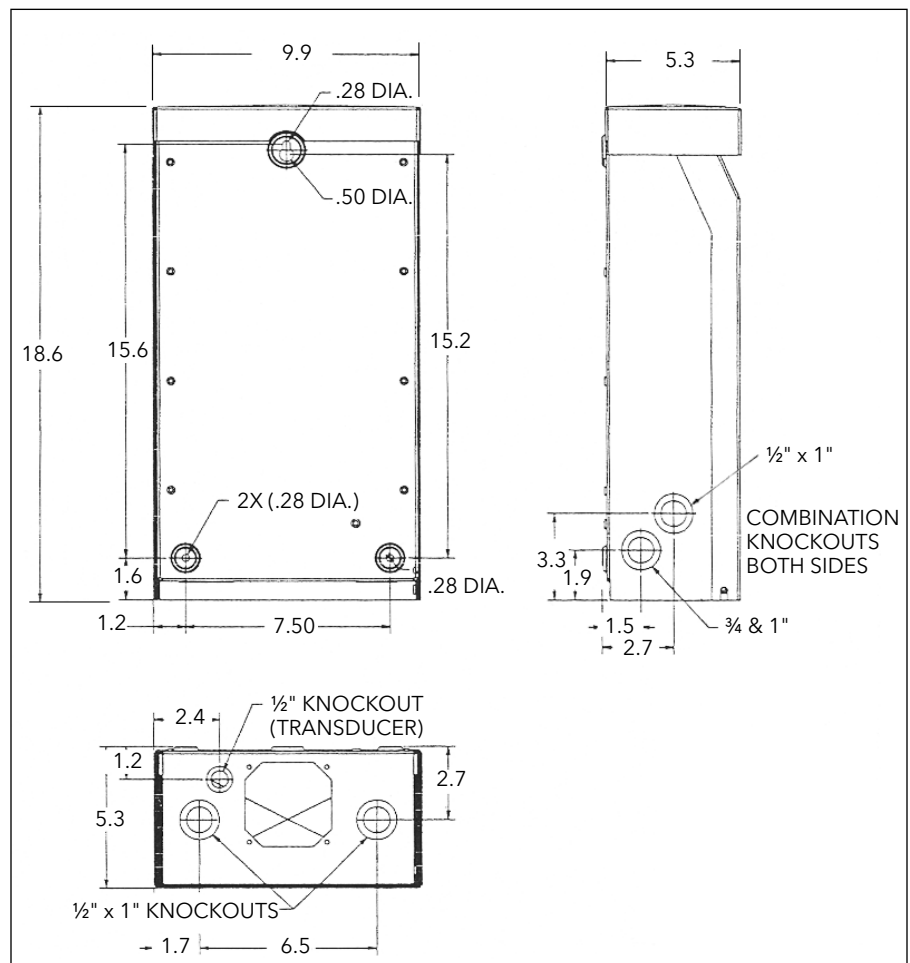
- HP Range: 1½ to 3
- Unit Weight: 20 lbs.
- Packaged Weight: 24 lbs.
- Pressure Set point adjustable from 20 - 85 psi using the standard 100 psi sensor. ①

3AS50 SPECIFICATIONS

- HP Range: 3 to 5
- Unit Weight: 25 lbs.
- Packaged Weight: 29 lbs.
- Pressure Set point adjustable from 20 - 100 psi using the standard 200 psi sensor. ①

① Higher pressures are available using a higher pressure sensor. See page 4.

DIMENSIONS (inches) - ALL MODELS



SPECIFICATIONS - 1AS15 - 1Ø MODEL - 1Ø INPUT AND 1Ø OUTPUT

Controller Temperature Range:

- Minimum Ambient Temperature: 14°F (-10°C)
- Maximum Ambient Temperature: 122°F (50°C)

Input Voltage: single-phase, 230 Volt, two (2) wire grounded system.

Output Voltage: 1Ø, variable voltage, variable frequency, single phase power to the 2-wire or 3-wire motor

Speed/Frequency: 30-60 only

Enclosure Dimensions:

- Height: 18.6"
- Width: 9.9"
- Depth: 5.3"

Packaged Dimensions:

- Height: 21"
- Width: 13"
- Depth: 8"

1AS15 SPECIFICATIONS

- Unit Weight: 19 lbs.
- Packaged Weight: 23 lbs.
- Pressure Set point adjustable from 20 - 85 psi using the standard 100 psi transducer.
- HP Range:

Motor Compatibility with AQUAVAR SOLO 1AS15

HP	Single Phase 2-Wire		Single Phase 3-Wire	
	Goulds & Pentek XE	Franklin, Grundfos and Flint & Walling	Goulds & Pentek XE	Franklin, Grundfos and Flint & Walling
½	Yes	Yes	Yes	Yes
¾	Yes	Yes	Yes	Yes
1	Yes	Yes	Yes	Yes
1½	Yes	Yes	Yes	Yes
2	No	No	Yes	①

① Amps are higher than controller overload range - use of these motors will current limit and provide reduced performance.

TANK SIZING

Diaphragm Tank Sizing and Pre-Set Pressure Recommendations:

Diaphragm type (captive air) tanks are required on these systems.

Table 1: Tank Sizing Selection

Maximum Pump GPM	Recommended Tanks	
	Total Volume	Order Number
10	1.9	V6P
24	4.9	V15P
36	7.3	V25P
70	13.9	V45
100	19.9	V60

Use Total Tank Volume, not drawdown volume, to select the proper tank size. The total tank volume should be approximately 20% of the pump's maximum flow. For example, when using a 10 gpm pump the system requires a minimum 2 gallon (total volume) tank.

The tank sizing recommendations are field proven to prevent objectionable pressure drops on start-up and provide smooth operation for the majority of variable speed pump systems.

When using the default, 5 PSI pressure drop, setting: Set the tank pressure, while tank is empty of water, to 20 psi below the desired system pressure setting. Ex. for a 50 psi system pressure, charge the tank to 30 psi.

See IOM for other settings or if using a large tank.

Table 2: Controller, Breaker, Generator Sizing

Motor		Controller Model ②				Circuit Breaker ③	Generator (VA) ④
HP	Voltage ①	1AS15	3AS20	3AS30	3AS50		
½	230					15	2200
	200						
¾	230						2900
	200						
1	230						3500
	200						
1½	230					20	4400
	200						
2	230					30	6100
	200						
3	230						8100
	200						
5	230					40	
	200					50	13300

① Supply voltage must be 196 VAC – 265 VAC.

② Shaded areas indicate which controller models can be used with which motors. Lighter shading indicates combinations where controller will limit peak performance to 85% of catalog value for pump/motor.

③ Circuit Breaker or Dual Element Time Delay Fuse Size (Amps) protecting branch circuit supplying controller.

④ Minimum size of single phase 240 V generator required.

Table 3: Service Factor Amps All Motors

HP	230 Volt									200 Volt	
	1Ø 2-Wire			1Ø 3-Wire			3Ø			3Ø	
	Goulds	Franklin	Grundfos	Goulds	Franklin	Grundfos	Goulds	Franklin	Grundfos	Goulds	Franklin
½	4.8	6	6	5	6	6	N/A	N/A	N/A	N/A	N/A
¾	6.4	8	8.4	6.1	8	8.4	4	3.8	N/A	4.7	4.4
1	8.2	9.8	9.8	7.4	9.8	9.8	4.9	4.7	N/A	5.7	5.4
1½	10.5	13.1*	13.1*	11	11.5	11.6	6.6	5.9	7.3	7.6	6.8
2	N/A	N/A	N/A	12.2	13.2*	13.2*	8	8.1	8.7	9.3	9.3
3	N/A	N/A	N/A	N/A	N/A	N/A	10.1	10.9	12.2	12	12.5
5	N/A	N/A	N/A	N/A	N/A	N/A	17.5	17.8	19.8*	20.2*	20.5*

* Amps are higher than controller overload range - use of these motors will current limit and provide reduced performance.

PRESSURE RANGES FOR ALL AVAILABLE TRANSDUCERS

Transducer	Minimum PSI	Maximum PSI
100 PSI ①	20	85
200 PSI ②	20	170
300 PSI	20	255

① Standard on 1AS15/3AS20, 3AS30

② Standard on 3AS50

Warning! Exploding tank can injure or kill, some combinations of Transducer and Controller allow system pressure adjustment to exceed the maximum working pressure of the tank and piping.

Ensure system pressure is set below the maximum working pressure of the tank and system piping.

Protect tank and piping against overpressure, install a properly sized pressure relief valve (PRV) able to pass full pump flow at the maximum working pressure of the tank. In finished basements or where PRV blow-off can cause property damage, pipe the PRV to a suitable drain.

Table 4: Wire Sizing
Maximum Cable Lengths in Feet to Limit Voltage Drop to 5% for 230 V Systems ①

1AS15 Controller to Motor - Controllers with 2-Wire 1Ø Motors

Motor Lead Lengths - Goulds water technology 2-Wire Motors - Based on Service Factor Amps, 30° C Ambient and 5% Voltage Drop														
Motor Rating				60° C & 75° C Insulation - AWG Copper Wire Size										
Volts	HP	kW	SFA	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0
230	½	0.37	4.8	457	726	1158	1835	2855	4551	7225	11489	14803	18688	23544
	¾	0.55	6.4	342	545	869	1376	2141	3413	5419	8617	10871	13724	17290
	1	0.75	8.2	267	425	678	1074	1671	2664	3349	6725	8485	10711	12160
	1½	1.1	10.5	209	332	530	839	1305	2080	3303	4161	6626	8365	10060

1AS15 Controller to Motor - Controllers with 3-Wire 1Ø Motors

Motor Lead Lengths - Goulds water technology 3-Wire Motors (CSIR) - Based on Service Factor Amps, 30° C Ambient and 5% Voltage Drop														
Motor Rating				60° C & 75° C Insulation - AWG Copper Wire Size										
Volts	HP	kW	SFA	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0
230	½	0.37	5	438	697	1112	1761	2740	4369	6936	11029	11044	13942	17564
	¾	0.55	6.1	359	571	912	1444	2246	3581	5685	9040	11406	10582	13332
	1	0.75	7.4	296	471	751	1190	1852	2952	4686	7452	9402	9055	11408
	1½	1.1	11.1	199	317	505	801	1246	1986	3153	5013	6325	7913	9969
	2	1.5	12.2	180	286	456	722	1123	1790	2843	4520	5703	7199	9070

All Models - Service Entrance to Controller

Controller Input	Motor HP	Copper Wire Size 75°C Insulation Exposed to a Maximum of 50°C (122°F) Ambient Temperature ②																	
		14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500
230V 1 PH	¾	279	445	706	1020	1608	2552	3186	4019	5065	6383	8055							
	1	226	360	571	824	1300	2064	2576	3250	4095	5161	6513	8201						
	1½	*	286	455	657	1036	1644	2052	2589	3262	4111	5188	6533	8236	9710				
	2	*	*	331	478	754	1197	1495	1886	2376	2995	3779	4759	5999	7073	8455	9852		
	3	*	*	246	355	561	890	1111	1401	1766	2225	2808	3536	4458	5256	6283	7321	8343	
	5	*	*	*	218	343	545	680	858	1081	1363	1720	2165	2730	3219	3847	4483	5109	6348

3AS20, 30, 50 Controller to Motor - Controllers with 3Ø Motors

Controller Output	Motor HP	Copper Wire Size 75°C Insulation Exposed to a Maximum of 50°C (122°F) Ambient Temperature ②																	
		14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500
230V 3 PH	0.75	633	1006	1605	2542	3956	6306	7927	10011										
	1	516	821	1310	2075	3229	5148	6471	8172										
	1.5	383	610	973	1541	2397	3822	4804	6067	7643	9648								
	2	316	503	803	1271	1978	3153	3964	5006	6306	7960	10042							
	3	251	399	636	1007	1567	2497	3140	3965	4995	6305	7954	10042	12651					
	5	145	230	367	581	904	1441	1812	2288	2883	3639	4591	5795	7301	7964	9520			

① Reduce lengths by 13% for 200 V systems. * Wire does not meet the N.E.C. ampacity requirement.

② Lengths in bold require 90° C wire. ■ Shading indicates 40° C maximum ambient.

The lengths in each of the Wire Sizing tables represent 100% of the allowable voltage drop when motor is running at full load. When sizing wire, the voltage drop of each wire segment must be included. The total must not exceed 100% of the allowable drop. Take for example a 1.5 HP motor with a distance from Service Entrance to Controller of 100' and 500' between the Controller and Motor.

- Service Entrance to Controller = 100' of 10 AWG (100/455) = 22 % (455' is from the S.E. to Controller chart)
 - Controller to Motor = 500' of 12 AWG (500/709) = 71 % (709' is from the Controller to Motor chart)
- Total Drop (must be ≤ 100%) 93 %

If the distance from the Controller to Motor was 600' (600/709) = 85% + 22% = 107%, we would need to use #10 wire for that segment, ex. 600/1126 = 53% + 22% (for 100' of #10) = 75% which is acceptable. It is also acceptable to use different wire sizes for the Buried and Well sections of wire.

3Ø, 4" MOTORS - ELECTRICAL DATA, 60 HERTZ 3450 RPM

Goulds water technology #	Red Jacket #	HP	kW	Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Line - Line Resistance
						Amps	Watts	Amps	Watts		
M07430	75C323	0.75	0.55	200	1.5	3.8	812	4.5	1140	32	2.6-3.0
M10430	100C323	1	0.75		1.4	4.6	1150	5.5	1500	29	3.4-3.9
M15430	150C323	1.5	1.1		1.3	6.3	1560	7.2	1950	40	1.9-2.5
M20430	200C323	2	1.5		1.25	7.5	2015	8.8	2490	51	1.4-2.0
M30430	300C323	3	2.2		1.15	10.9	2890	12.0	3290	71	0.9-1.3
M50430	500C323	5	3.7		1.15	18.3	4850	20.2	5515	113	0.4-0.8
M75430	750C323	7.5	5.5		1.15	27.0	7600	30.0	8800	165	0.5-0.6
M07432	75C313	0.75	0.55	230	1.5	3.3	850	3.9	1185	27	3.3-4.3
M10432	100C313	1	0.75		1.4	4.0	1090	4.7	1450	26.1	4.1-5.1
M15432	150C313	1.5	1.1		1.3	5.2	1490	6.1	1930	32.4	2.8-3.4
M20432	200C313	2	1.5		1.25	6.5	1990	7.6	2450	44	1.8-2.4
M30432	300C313	3	2.2		1.15	9.2	2880	10.1	3280	58.9	1.3-1.7
M50432	500C313	5	3.7		1.15	15.7	4925	17.5	4925	93	.83-1.25
M75432	750C313	7.5	5.5		1.15	24	7480	26.4	8570	140	.55-.85

1Ø, 4" MOTORS - ELECTRICAL DATA, 60 HERTZ 3450 RPM

Type	Motor Order Number		HP	KW	Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Winding Resistance	
	Goulds	Red Jacket					Amps	Watts	Amps	Watts		Main	Start
2 Wire PSC	M05422	50C211	0.5	0.37	230	1.6	4.3	845	4.8	1035	16	6.1-7.2	-
	M07422	75C211	0.75	0.55		1.5	5.0	1100	6.4	1375	18	5.9-6.9	-
	M05422	100C211	1.0	0.75		1.4	6.7	1450	8.2	1770	23.5	4.2-5.2	-
	M15422	150C211	1.5	1.1		1.3	9.1	1950	10.5	2300	43	1.8-2.4	-
3 Wire	M05412	50C311	0.5	0.37		1.6	4.4	715	6.3	950	21	5.1-6.1	12.4-13.7
	M07412	75C311	0.75	0.55		1.5	4.6	920	8.3	1235	32	2.6-3.3	10.4-11.7
	M10412	100C311	1	0.75		1.4	6.2	1165	9.7	1490	41	2.0-2.6	9.3-10.4
	M15412	150C311	1.5	1.1		1.3	9.2	1660	11.1	2110	49	2.1-2.5	10.0-10.8
	M20412	200C311	2	1.5		1.25	9.9	2170	68	2660	49	1.6-2.2	4.8-5.9

The AQUAVAR SOLO²™ 1AS15 model 30-60 hertz speeds only.

The AQUAVAR SOLO²™ 3AS models provide the option of operating the system at either 30-60 or 30-80 hertz speeds.

Controller	30 - 60 Hertz (Standard Speed) Setting		30 - 80 Hertz (High Speed) Setting	
	Water End	Motor HP	Water End	Motor HP
3AS20	1	1	½	1
3AS20	1½	1½	¾	1½
3AS20	2	2	1	2
3AS30	1½	1½	¾	1½
3AS30	2	2	1	2
3AS30	3	3	1½	3
3AS50	5	5	3	5

When using the "80 hertz" setting with mis-matched water ends and motors, use the larger pump curve as the top curve. The bottom, or 30 hertz, curve is calculated using the smaller wet end curve and the Affinity Laws. The ProPak Bulletins define performance curves. See BGPROPAK60 or BGPROPAK80 for curves.

TECHNICAL BROCHURE

BAQWIFI R2



FEATURES

- Outdoor enclosure
- Wi-Fi communication to Solo²
- Compatible with smart devices made by Apple and Android
- Cloud data storage
- Add multiple customers to dealer accounts for monitoring
- Range to 250 ft. line of sight

AqWiFi

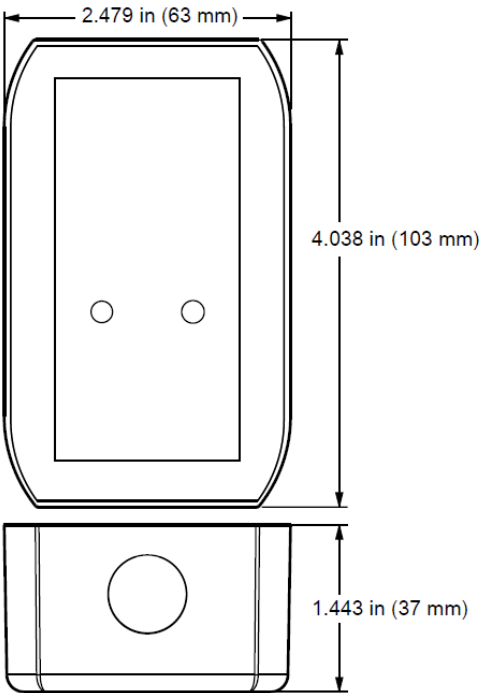
REMOTE MONITORING SYSTEM

AqWiFi is a monitoring device for AQUAVAR® SOLO² Solo enabling remote monitoring of the system performance

MONITORS

- AqWiFi allows dealers/installers to monitor a customer's drive remotely as well as customers/end users to monitor their own equipment
- Stores drive parameters, changes, system events, faults and system trend data
- Date/time for all faults on drive
- Instant email and/or text message alert for all faults
- View all drive settings remotely

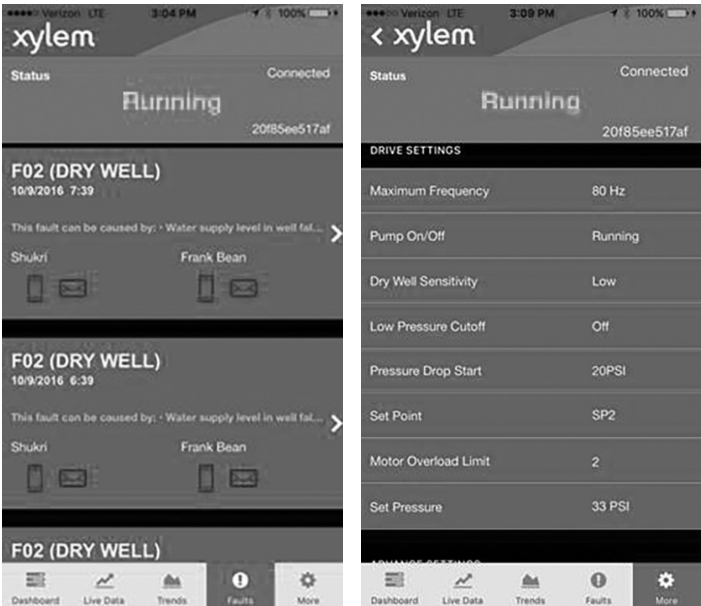
DIMENSIONS: Provided with 5' cable



ORDER NUMBER: AqWiFi

MONITORING FUNCTIONS

- Pressure
- Speed
- Output current
- Input voltage
- Pump motor run time
- Historical trends saved up to a year



Xylem Product Cybersecurity

Xylem values your system security and the availability of your critical services. For more information on Xylem cybersecurity practices or to contact the cybersecurity team please visit xylem.com/security.

TECHNICAL BROCHURE

GWT-BCPVFDACC R7

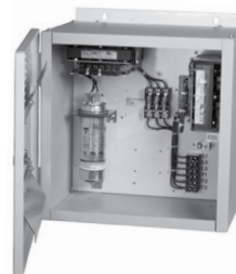
Float Switches -
tested for use with
AQUAVAR SOLO
Controllers



6K210 Gauge Guard



9K585 Moisture
Sensor with Relay



Filters



9K589 Over-Pressure
Switch for use with
AQUAVAR SOLO



**Line / Load
Reactors**



**Sine Wave
Filters**

VFD Accessories

9K585 MOISTURE SENSOR WITH RELAY

- 5 VDC power supply is provided by VFD
- Will detect any conductive non-flammable liquid
- Ideal anywhere water damage could occur
- Automatic reset



Undetected water damage, such as that caused by leaking pipes or corroded water heaters, cost homeowners tens of thousands of dollars each year. Such repairs are time consuming and costly to correct. Applications could include computer room sub-floor areas, telephone equipment rooms, bathrooms, laundry rooms, any areas adjacent to a water storage tank or piping. Also evaporative air conditioners, drip pans, overflows and /or drains.

Using no mechanical parts, the GRI Water Sensors are triggered by a moisture bridge across the sensor contacts. The GRI Water Sensors can be installed to detect a layer of water as minute as 1/16 of an inch in depth.

The 9K585 Closed Loop Sensors use an external power source to energize a built-in relay contact so battery power is not recommended. Used in a closed loop configuration, an alarm condition will occur when moisture is detected, or if power to the sensor is lost, and if the sensor should fail. The relay output can be wired directly to any alarm panel or can be used to actuate an external device, i.e. transmitter, annunciator, etc.

See IM234 for wiring instructions.

9K589 OVER-PRESSURE SWITCH FOR USE WITH AQUAVAR SOLO

Features

- Range scale from 60 - 120 PSI
- Factory set at 80 PSI
- Lead-free brass construction
- Gold plated contacts for long life
- Use as over-pressure protection on AQUAVAR SOLO
- Normally Closed contacts - connect leads to Secondary (dry) Contact Switch
- Wire length - 72 inches
- Use a 5/32" Allen wrench to unlock barrel to change pressure setting
- Snap action, opens and closes on $\pm 1 - 2$ PSI range, not a differential pressure switch.
- Installation instructions and applications are detailed in the AQUAVAR SOLO IOM, IM229.
- NEMA 4, 13 (outdoor use)



This is the only pressure switch we have tested and approved for use with our variable speed drives. Standard pressure switch contacts tend to corrode and malfunction when used with dry contacts.

FLOAT SWITCHES - Tested For Use with AQUAVAR SOLO Controllers

The A2X Series of Float Switches have been tested and approved for use with Goulds Water Technology Variable Speed Controllers. The Float Switches come in various lengths and in Normally Open (N.O.) type for pumping down or emptying a tank as well as Normally Closed (N.C.) type, identified by a U Suffix, for pumping up, filling a tank or pond. Instructions for using these switches are in the SOLO IOM, IM229. The Float Switch bulletin is in the SES catalog and the wastewater section of our website, literature code is BCPFS.

Float Switch Order Numbers

Normally Open

A2X13 10'

A2X33 20'

A2X53 30'

Normally Closed

A2X33U 20'

A2X53U 30'

Features

- Gold plated contacts for low current applications
- Operates on a 45° differential, above or below horizontal
- Includes a mounting clamp for attaching to pipe (as shown)
- Not sensitive to rotation
- 18 gauge, 2 conductor wire
- Maximum submergence is 30'
- Maximum water temperature 140° F
- Polypropylene float housing is impact and corrosion resistant
- Installation and application information is in the AQUAVAR SOLO IOM.



6K210 GAUGE GUARD

Features

- Low unit cost - makes it feasible to protect even moderate priced instruments.
- Compact size makes these isolators ideal for limited-space installations.
- + 4% accuracy, will handle most applications.
- Hermetically-sealed, molded uni-body construction - avoids possibility of leaks.
- Glass-filled Polypro bodies for chemical compatibility and maximum temperatures to 100° F
- Housing is glass filled Polypropylene.
- Each Gauge Guard features a durable and flexible Buna-N diaphragm which serves as a protective barrier between the process fluid and instrument.
- Simple to fill and install. Completely fill the internal space on the instrument side of the diaphragm with mineral or vegetable oil in order to transmit the process pressure to the instrument.



Maximum Pressure Ratings

Liquids

200 PSI (13.8 bars)

Gases

100 PSI (6.9 bars)

Maximum Temperature: 100°F (38°C)

TCI MODEL KDR OPTIMIZED LINE REACTOR

KDR line reactors reduce harmonic current and help prevent nuisance tripping.

FEATURES

- High Z (Application where 5% reactor would be applied)
- 208/240V
- NEMA 3R Enclosure
- Ambient Temperature 40° C
- Fundamental Frequency: 50/ 60Hz
- Agency Approvals: UL, cUL; UL Recognized, CE Marked
- Short term overload rating - 200% rated current for minimum of 3 minutes
- Inductance Characteristics
 - Min 95% L at 110% Load
 - Min 80% L at 150% Load
- Maximum Altitude: 6,000 feet (Derate for applications above 6,000 feet)

BENEFITS

- Cost effective
- Improve power factor of supply
- Increase life of drive
- Reduce nuisance tripping
- Protect drives and other sensitive equipment
- Reduce transient voltages
- Dampen overshoot peak voltage
- Balance drive input currents
- Reduce motor heating
- Reduce motor noise



TCI MODEL KLR HEAVY DUTY LINE / LOAD REACTOR

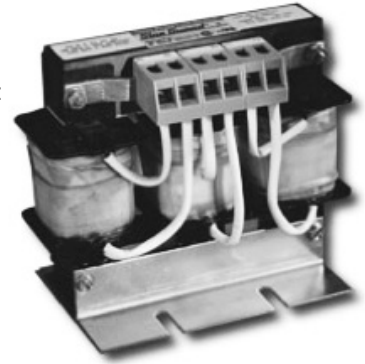
TCI KLR™ series three phase AC reactors are intended for use as input or output filters for AC-PWM variable frequency drives.

FEATURES

- 3 Phase 240 - 600V
- NEMA 3R Enclosure
- 6% Reactor
- Ambient Temperature 40° C
- Gapped Iron Core Inductor - All Copper Windings
- K-Rated, UL/ULC Recognized; CSA Certified; RoHS Compliant
- Short term overload rating - 200% rated current for min. of 3 minutes
- Inductance Characteristics
 - Min 95% L at 110% Load
 - Min 80% L at 150% Load
- *Maximum Altitude: 3,000 feet (Derate for applications above 3,000 feet)

BENEFITS

- Reduce voltage notching
- Limit magnitude of inrush current
- Prevent drive shutdown / overcurrent tripping
- Reduce harmonic distortion
- Improve phase to phase voltage imbalance
- Improve true power factor
- Protect VFD from damage



Goulds Drive Model Number	Part Number	Current Rating (Amps)
1AS15	KDRULD21HE3R	30.8
3AS20	KDRULD21HE3R	30.8
3AS30	KDRULD21HE3R	30.8
3AS50	KDRULD22HE3R	46.2
1151AB2	KDRULB25HE3R	16.7
1AB2	KDRULB25HE3R	16.7
2AB2	KDRULB26HE3R	24.2

KDR Reactor is designed for three phase use. For single phase use, connect input to Terminals A and C.

Controller Model Number	Part Number	Current Rating (Amps)
1AS15	KLRUL25ATBE3R	25
3AS20	KLRUL25ATBE3R	25
3AS30	KLRUL35ATBE3R	35
3AS50	KLRUL45ATBE3R	45
1151AB2	KLRUL18ATBE3R	18
1AB2	KLRUL18ATBE3R	18
2AB2	KLRUL18ATBE3R	18

KLR Reactor is designed for three phase use. For single phase use, connect input to Terminals A and C.

TCI MODEL HG7 HARMONIC FILTER

HG7 harmonic filter provides a low impedance path for the major harmonic currents demanded by the drive.

FEATURES

- Meets IEEE-519 1992
- 3 Phase 240 – 600V
- NEMA 3R Enclosure
- Ambient Temperature 40° C
- Typical Efficiency: 98 – 99%
- Internal fusing protection
- Fundamental Frequency: 60Hz (50Hz for 400V)
- Agency Approvals: UL, cUL
- Maximum Altitude: 6,000 feet (Derate for applications above 6,000 feet)
- Performance guarantee

BENEFITS

- Harmonic Reduction: < 7%
- High quality capacitors
 - Designed, built and tested specifically for use in harmonically rich environments
- Easy Installation
 - Fits easily into motor control centers and ships ready to install
- Uninterrupted operation
 - Drive continues to operate in the event of an HG7 shutdown
- Protect drives and other sensitive equipment
- Eliminates nuisance tripping
- Increase drive uptime dramatically
- Improves power factor
- Improves system efficiency and reliability
- Extends equipment life



TCI Part Number	Current Rating (Amps)
-----------------	-----------------------

HG8BW03ST	22
HG10BW03ST	28
HG15BW03ST	42
HG20BW03ST	54

TCI MODEL HSP SINGLE PHASE HARMONIC FILTER

The TCI HSP Single-Phase Line to Line Harmonic Filter is an optimal solution for mitigating harmonics in single-phase applications.

FEATURES

- 60Hz, 1 Phase, 240 & 480 Volt
- NEMA 3R Enclosure
- Ambient Temperature: -40° C to 50° C
- *Agency Approvals: UL, cUL
- Maximum Altitude: 3,300 feet (Derate for applications above 3,300 feet)

BENEFITS

- Harmonic Reduction to 12% THID
- High quality capacitors
 - Designed, built and tested specifically for use in harmonically rich environments
- Small footprint and rugged outdoor enclosure
- Large range of amp ratings to meet varying demands
- Easy Installation
- Protects inverter against voltage spikes caused by capacitor switching and other rapidly changing loads
- Protects upstream components (circuit breakers, fuses, conductors, transformers) from damage caused by harmonics



Controller Model Number	Part Number	Current Rating (Amps)
1AS15	HSP028BG3SC	28
3AS20	HSP028BG3SC	28
3AS30	HSP042BG3SC	42
3AS50	HSP052BG3SC	52

TCI MODEL V1K DV/DT MOTOR PROTECTION OUTPUT FILTERS

V1K provides motor protection by limiting voltage spikes below 1,000 volts for long lead applications. For lead lengths above 1500 feet, consult factory.

FEATURES

- 2 - 130 amps; 240V - 600V; 2 - 125HP
- NEMA 3R Enclosure
- Carrier Frequency: 1 - 12 kHz
- Fundamental Frequency: 0 - 60Hz
- Efficiency: > 98%
- Insulation Rating 600V Class
- Agency Approvals: UL, cUL
- Maximum Altitude: 6,000 feet (Derate for applications above 6,000 feet)



Order Number	Rated AMPS	Nominal HP* (240V)	Nominal HP* (480V)	Nominal HP* (600V)
V1K8A03	8	2	5	5
V1K12A03	12	3	7.5	10
V1K16A03	16	5	10	15
V1K18A03	18		15	20
V1K21A03	21		20	25
V1K25A03	25	7.5	25	30
V1K27A03	27		30	40
V1K35A03	35	10	40	50
V1K45A03	45	15	50 - 60	75
V1K55A03	55	20	75	100
V1K80A03	80	25 - 30	100	125
V1K110A03	110	40		
V1K130A03	130	50		

* Horsepower values are for reference purposes only.

SINEWAVE OUPUT FILTERS



Sinewave Filters improves system performance by protecting the motor from the harmful effects of reflected waves and preventing motor failure associated with insulation failure, overheating, and noise. These filters are designed to extend motor life in variable torque applications such as fans

and pumps with lead lengths up to 15,000 feet.

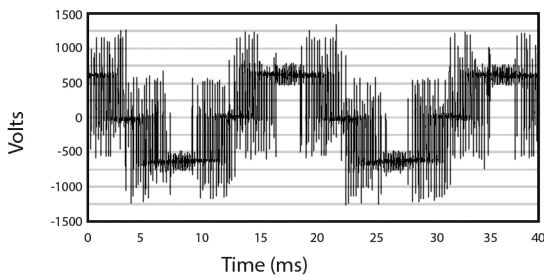
TYPICAL APPLICATIONS

- Mining
- Power Plants
- Material Handling
- Oil & Gas
- Data Centers
- HVAC Systems
- Pulp & Paper
- Renewable Energy
- Chemical Processing

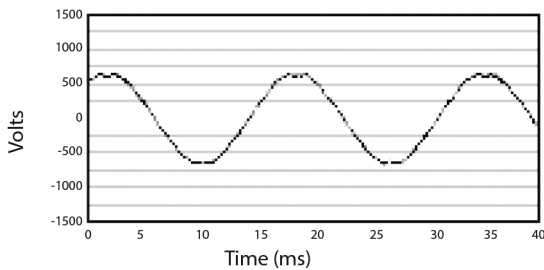
OTHER FEATURES

- Nema 3R Enclosure
- Output Frequency to 80 Hz
- UL & cUL Listed
- Carrier Frequency 2 kHz to 16 kHz

Motor Input Waveform Without MotorShield



Motor Input Waveform With MotorShield



460 Volt

Part Numbers	Description	Enclosure
MSD0009A300	5 HP 9AMP 460V Sine Wave Filter	NEMA 3R
MSD0012A300	7.5 HP 12AMP 460V Sine Wave Filter	
MSD0016A300	10 HP 16AMP 460V Sine Wave Filter	
MSD0023A300	15 HP 23AMP 460V Sine Wave Filter	
MSD0030A300	20 HP 30AMP 460V Sine Wave Filter	
MSD0035A300	25 HP 35AMP 460V Sine Wave Filter	
MSD0045A300	30 HP 45AMP 460V Sine Wave Filter	
MSD0055A300	40 HP 55AMP 460V Sine Wave Filter	
MSD0065A300	50 HP 65AMP 460V Sine Wave Filter	
MSD0080A300	60 HP 80AMP 460V Sine Wave Filter	
MSD0110A300	75 HP 110AMP 460V Sine Wave Filter	
MSD0130A300	100 HP 130AMP 460V Sine Wave Filter	
MSD0160A300	125 HP 160AMP 460V Sine Wave Filter	
MSD0200A300	150 HP 200AMP 460V Sine Wave Filter	
MSD0250A300	200 HP 250AMP 460V Sine Wave Filter	
MSD0305A300	250 HP 305AMP 460V Sine Wave Filter	
MSD0362A300	300 HP 362AMP 460V Sine Wave Filter	
MSD0420A300	350 HP 420AMP 460V Sine Wave Filter	
MSD0480A300	400 HP 480AMP 460V Sine Wave Filter	

575 Volt

Part Numbers	Description	Enclosure
MSD0008C300	5 HP 8AMP 575V SINEWAVE FILTER	NEMA 3R
MSD0010C300	10 HP 10AMP 575V SINEWAVE FILTER	
MSD0012C300	15 HP 12 AMP 575V SINEWAVE FILTER	
MSD0020C300	15 HP 20 AMP 575V SINEWAVE FILTER	
MSD0025C300	20 HP 25 AMP 575V SINEWAVE FILTER	
MSD0028C300	25 HP 28 AMP 575V SINEWAVE FILTER	
MSD0035C300	30 HP 35 AMP 575V SINEWAVE FILTER	
MSD0045C300	40 HP 45 AMP 575V SINEWAVE FILTER	
MSD0055C300	50 HP 55 AMP 575V SINEWAVE FILTER	
MSD0065C300	60 HP 65 AMP 575V SINEWAVE FILTER	
MSD0080C300	75 HP 80 AMP 575V SINEWAVE FILTER	
MSD0110C300	100 HP 110 AMP 575V SINEWAVE FILTER	
MSD0130C300	125 HP 130 AMP 575V SINEWAVE FILTER	
MSD0160C300	150 HP 160 AMP 575V SINEWAVE FILTER	
MSD0200C300	200 HP 200 AMP 575V SINEWAVE FILTER	
MSD0250C300	250 HP 250 AMP 575V SINEWAVE FILTER	
MSD0305C300	300 HP 305 AMP 575V SINEWAVE FILTER	
MSD0362C300	350 HP 362 AMP 575V SINEWAVE FILTER	
MSD0420C300	400 HP 420 AMP 575V SINEWAVE FILTER	
MSD0450C300	450 HP 450 AMP 575V SINEWAVE FILTER	

Xylem Product Cybersecurity:

Xylem values your system security and the availability of your critical services. For more information on Xylem cybersecurity practices or to contact the cybersecurity team please visit xylem.com/security.



AQUAVAR[®] ProPak

30-60 HZ KITS

FEATURES

Simple, fast sizing and installation.

Range curves and selection charts generated from actual R&D tests.

Kits configured for 30 hz minimum and 60 hz maximum operation.

Controller must be set for 60 hz operation.

Kits use matched water end and motor (see component chart).

Wiring is as easy as standard three-wire control box:

- L1, L2 and Ground in from power supply
- Red, Yellow, Black and Ground out to motor

60 PSI Factory Preset Pressure - easily adjusted to higher pressures.

AQUAVAR® SOLO² CONTROLLER FEATURES

More versatile user interface board

- Provides switch connection for optional pressure or level switch
- Current limit settings for Goulds Water Technology and F.E. motors
- Dry well sensitivity switch
- Low pressure cut-off protection
- 5 or 20 PSI pressure drop restart switch
- Transducer better protected from transient power surges

Pressure factory preset at 60 PSI - simple, fast, field adjustability for higher pressures.

Three phase output to motor reduces wire cost.

Goulds Water Technology model GS features the Guardian bearing system and field proven sand and abrasive handling floating stack design.

Switch Input for connecting a pressure switch or float switch.

Grounding provisions for transducer and transducer cable.

KITS INCLUDE:

- Three Phase Motor 1.5 - 5 HP, 230 V
- Aquavar SOLO² Controller with Transducer
- GS Water End (pump)

Order pressure tank separately, not included in kit.

PROPAK PERFORMANCE RANGE AND COMPONENTS

MODEL	HP	Shut-Off Head (ft)	at Best Efficiency		at Maximum Runout		WE	Motor	Controller
			Flow (GPM)	TDH (ft)	Flow (GPM)	TDH (ft)			
7GP1515	1.5	688	7	538	10	386	7GS15	M15432	3AS20
10GP1515	1.5	555	10	440	16	239	10GS15		
18GP1515	1.5	348	18	255	28	126	18GS15		
5GP2020	2	1060	5	740	7.5	440	5GS20	M20432	
7GP2020	2	959	7	701	10	480	7GS20		
10GP2020	2	660	10	546	16	287	10GS20		
18GP2020	2	444	18	324	28	160	18GS20		
25GP2020	2	340	25	227	33	120	25GS20		
7GP3030	3	1200	7	890	10	615	7GS30	M30432	3AS30
10GP3030	3	876	10	700	16	368	10GS30		
13GP3030	3	662	13	519	20	250	13GS30		
18GP3030	3	605	18	422	28	215	18GS30		
25GP3030	3	464	25	310	33	165	25GS30		
35GP3030	3	405	35	260	50	75	35GS30		
18GP5050	5	960	18	712	28	365	18GS50	M50432	3AS50
25GP5050	5	800	25	525	33	280	25GS50		
35GP5050	5	659	35	428	50	100	35GS50		

PROPAK KIT DIMENSIONS AND WEIGHTS

Controller	Sh. Weight (lb)	Dimensions - All
3AS20	23	Height: 21"
3AS30	24	Width: 13"
3AS50	29	Depth: 8"

Pump	Sh. Weight (lb)	W. E. Length (in)
7GS15	12	23.6
10GS15	12	18.4
18GS15	10	16.1
5GS20	19	31.6
7GS20	13	27.2
10GS20	13	21.7
18GS20	11	18.6
25GS20	10	17.2
7GS30	18	33.2
10GS30	18	27.5
13GS30	15	22.3
18GS30	15	24.1
25GS30	14	20.9
35GS30	13	24.0
18GS50	21	34.4
25GS50	21	33.4
35GS50	19	35.2

Motors	Sh. Weight (lb)	Motor Length (in)	L x W x H (in)
M15432	23	11.7	19 x 4.1 x 4.1
M20432	28	13.8	20.5 x 6.5 x 6.5
M30432	32	15.3	20.5 x 6.5 x 6.5
M50432	55	21.7	27.5 x 6.5 x 6.5

ProPak Carton Dimensions and Weights

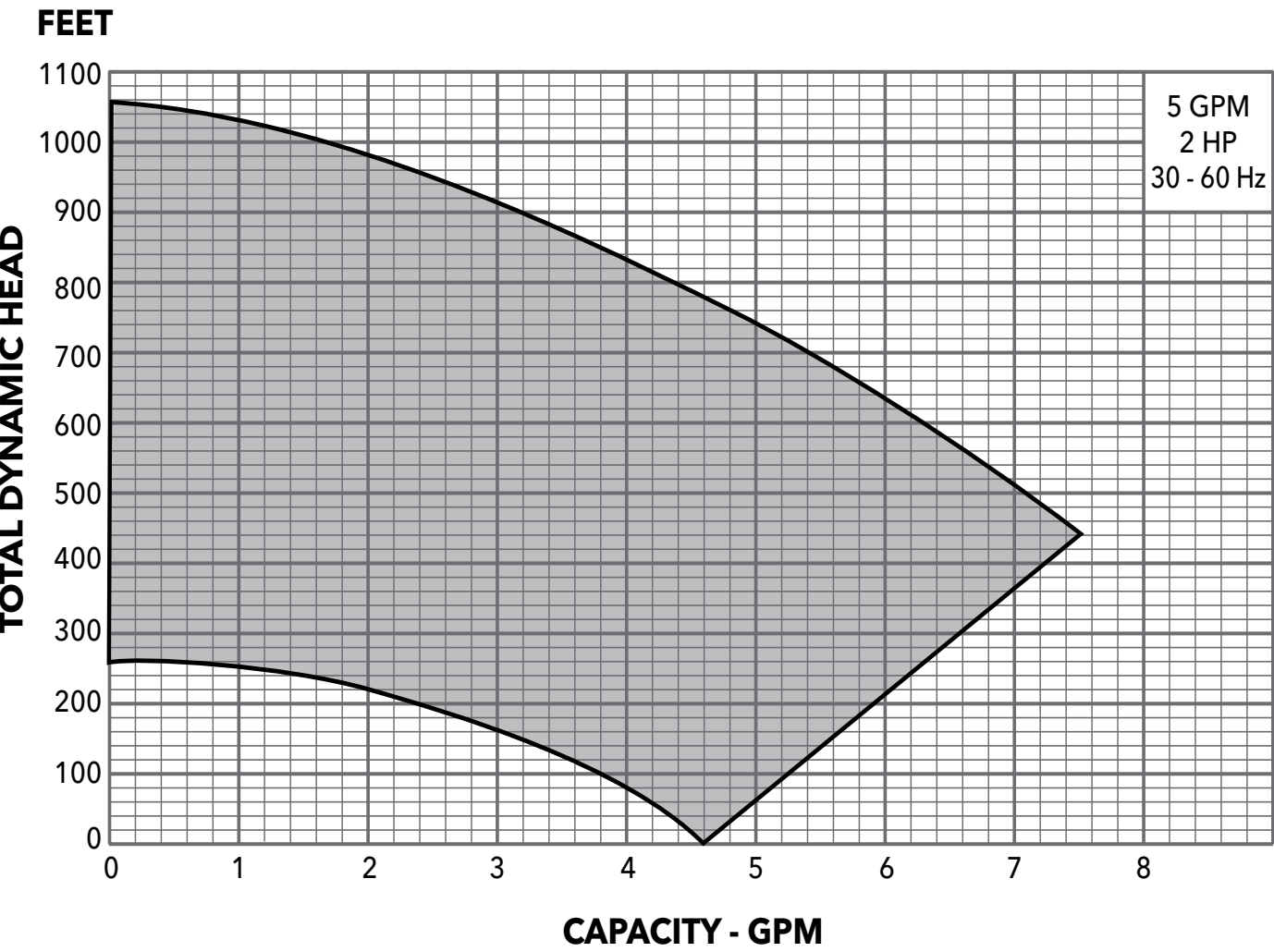
Kit No.	Sh. Weight (lb)	No. cartons	L x W x H (in)
7GP1515	60	1	34.2" x 15.1" x 17.9"
10GP1515	60		
18GP1515	58		
5GP2020	72	1	40.7" x 15.1" x 17.9"
7GP2020	66	1	34.2" x 15.1" x 17.9"
10GP2020	66		
18GP2020	64		
25GP2020	63		
7GP3030	76	1	40.7" x 15.1" x 17.9"
10GP3030	76	1	34.2" x 15.1" x 17.9"
13GP3030	73		
18GP3030	73		
25GP3030	72		
35GP3030	71	1	34.2" x 15.1" x 17.9"
18GP5050	107	2①	40.7" x 15.1" x 17.9"
25GP5050	107		
35GP5050	105		

① The 5 HP units have the controller and pump in one carton and the motor is shipped separately due to weight. See M50432 for motor weight and dimensions.

MODEL 5GS20 30-60 Hz with 2 HP Motor and 3AS20

SELECTION CHART

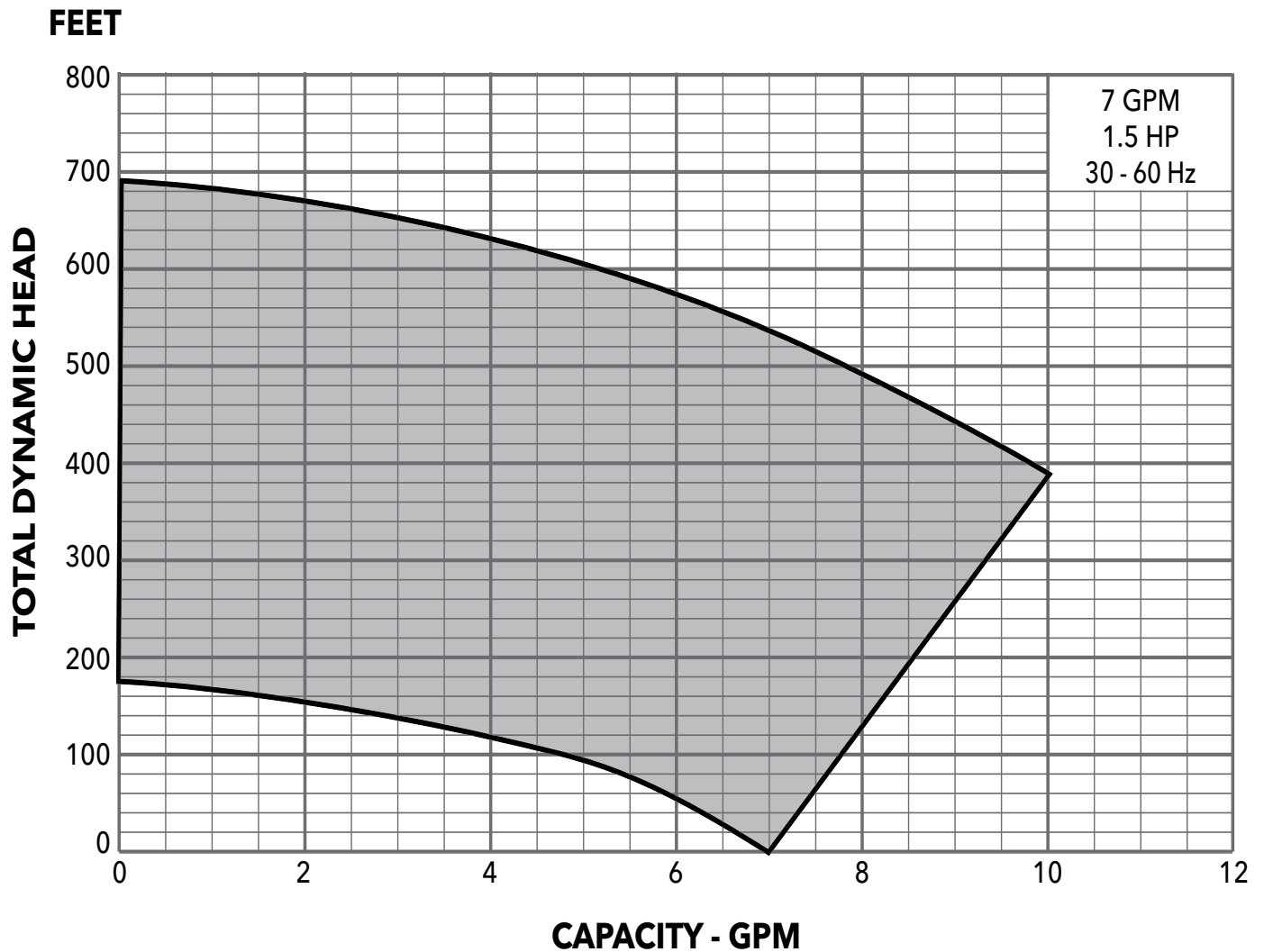
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																
			300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	940
5GS20	2	0					7.4	7.1	6.8	6.4	6.1	5.7	5.4	5.0	4.7	4.3	3.9	3.3	2.7
		50		7.5	7.2	6.8	6.5	6.1	5.8	5.4	5.1	4.7	4.3	3.9	3.4	2.8	2.1		
		60	7.6	7.3	7.0	6.6	6.3	5.9	5.6	5.2	4.9	4.5	4.1	3.6	3.1	2.4	1.6		
Shut-off PSI			328	311	293	276	259	242	224	207	190	172	155	138	120	103	86	68	51



MODEL 7GS15 30-60 Hz with 1.5 HP Motor and 3AS20

SELECTION CHART

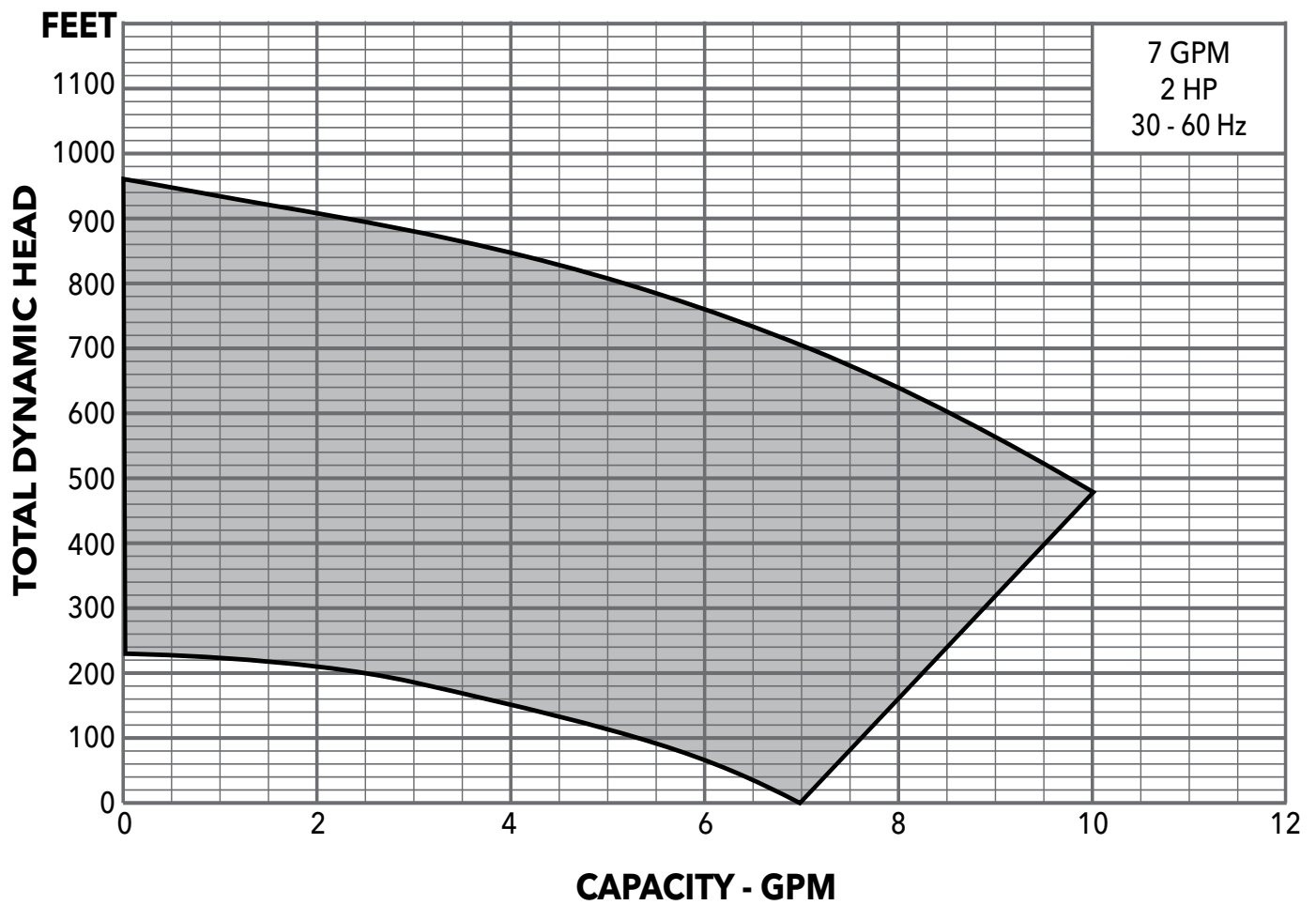
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)												
			240	260	280	300	340	380	420	460	500	540	580	620	660
7GS15	1½	0						10.2	9.3	8.5	7.6	6.8	5.9	4.7	2.6
		50		10.3	9.9	9.4	8.6	7.7	6.9	6.0	4.9	2.9			
		60	10.2	9.8	9.4	8.9	8.1	7.2	6.4	5.4	3.9				
Shut-off PSI			194	186	177	168	151	134	116	99	82	64	47	30	12



MODEL 7GS20 30-60 Hz with 2 HP Motor and 3AS20

SELECTION CHART

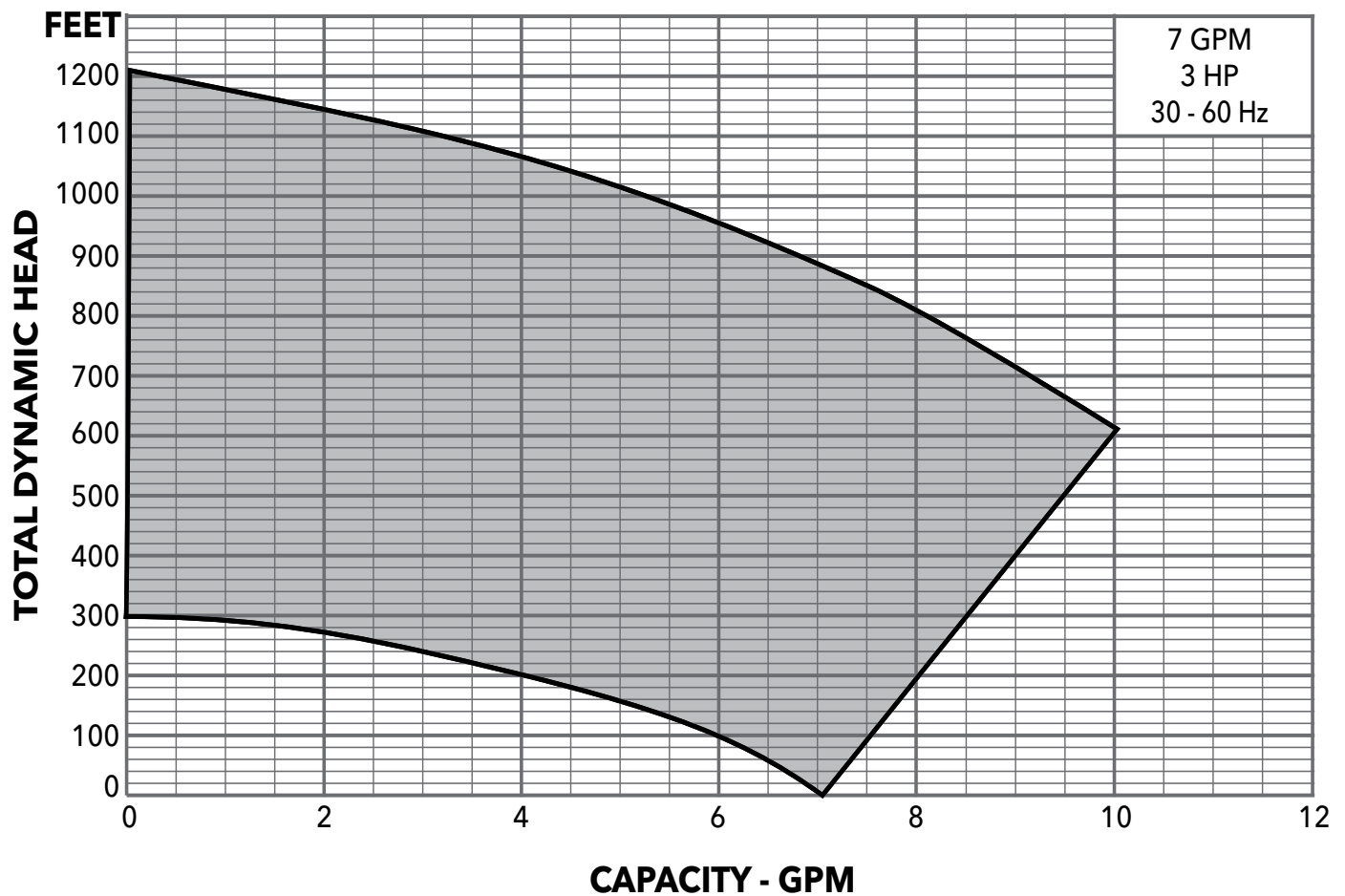
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)														
			340	380	420	460	500	540	580	620	660	700	740	780	820	860	900
7GS20	2	0					9.8	9.3	8.7	8.4	7.8	7.1	6.3	5.4	4.5	3.5	2.2
		50		9.9	9.4	8.9	8.5	7.8	7.2	6.3	5.5	4.7	3.5				
		60	10.0	9.6	9.1	8.7	8.2	7.4	6.6	5.8	5.0	4.0					
Shut-off PSI			268	251	234	216	199	182	165	147	130	113	95	80	61	43	26



MODEL 7GS30 30-60 Hz with 3 HP Motor and 3AS30

SELECTION CHART

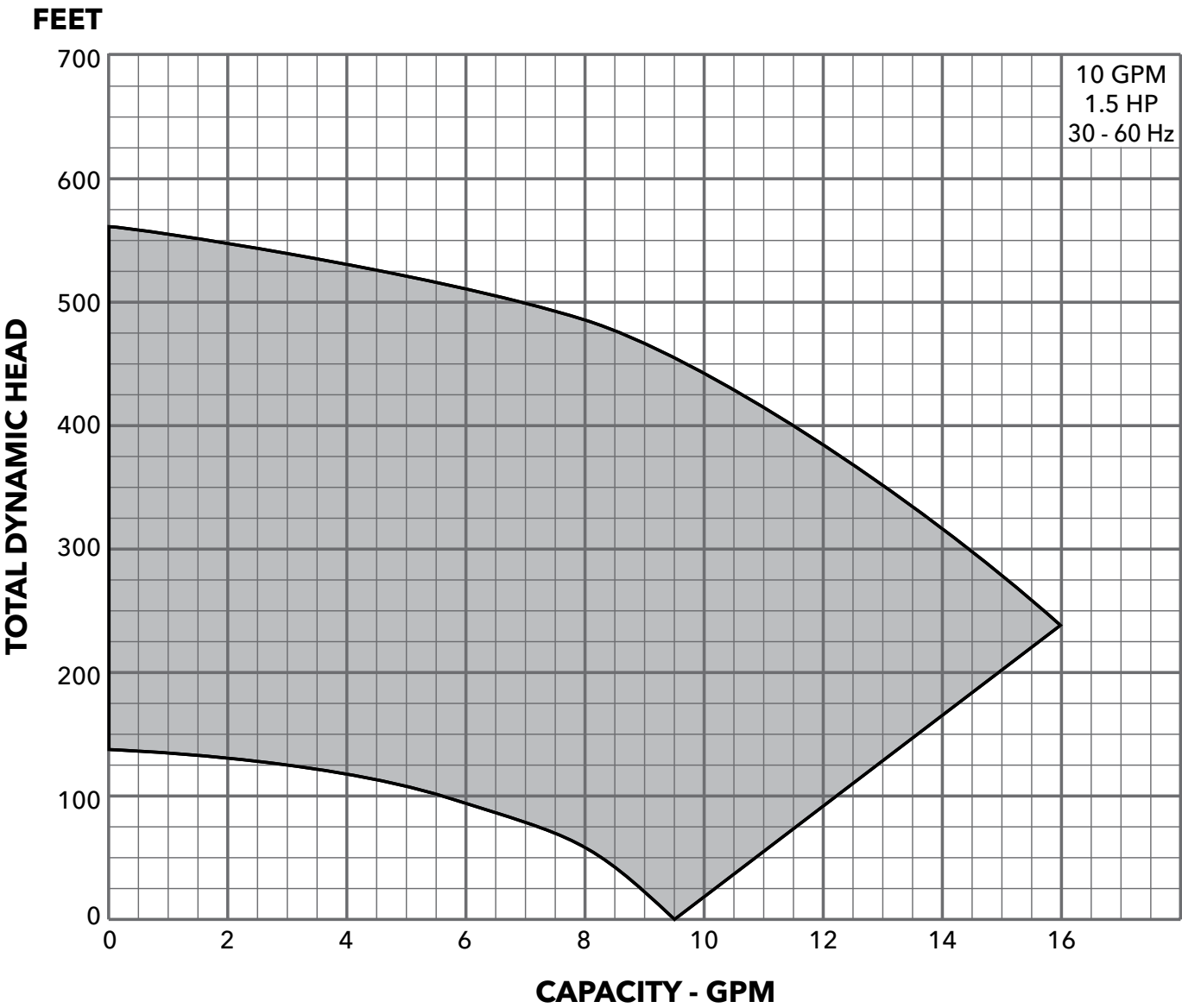
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																	
			460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020	1060	1100	1140
7GS30	3	0					9.8	9.5	9.2	8.7	8.3	7.9	7.4	6.8	6.2	5.4	4.7	3.9	3.0	2.0
		50		9.9	9.5	9.2	8.7	8.4	7.9	7.4	6.8	6.3	5.5	4.8	3.9	3.1	2.2			
		60	10.0	9.7	9.3	9.0	8.6	8.1	7.6	7.0	6.5	5.8	5.1	4.2	3.4	2.5	1.5			
Shut-off PSI			320	303	286	268	251	234	216	199	182	165	147	130	113	95	78	61	43	27



MODEL 10GS15 30-60 Hz with 1.5 HP Motor and 3AS20

SELECTION CHART

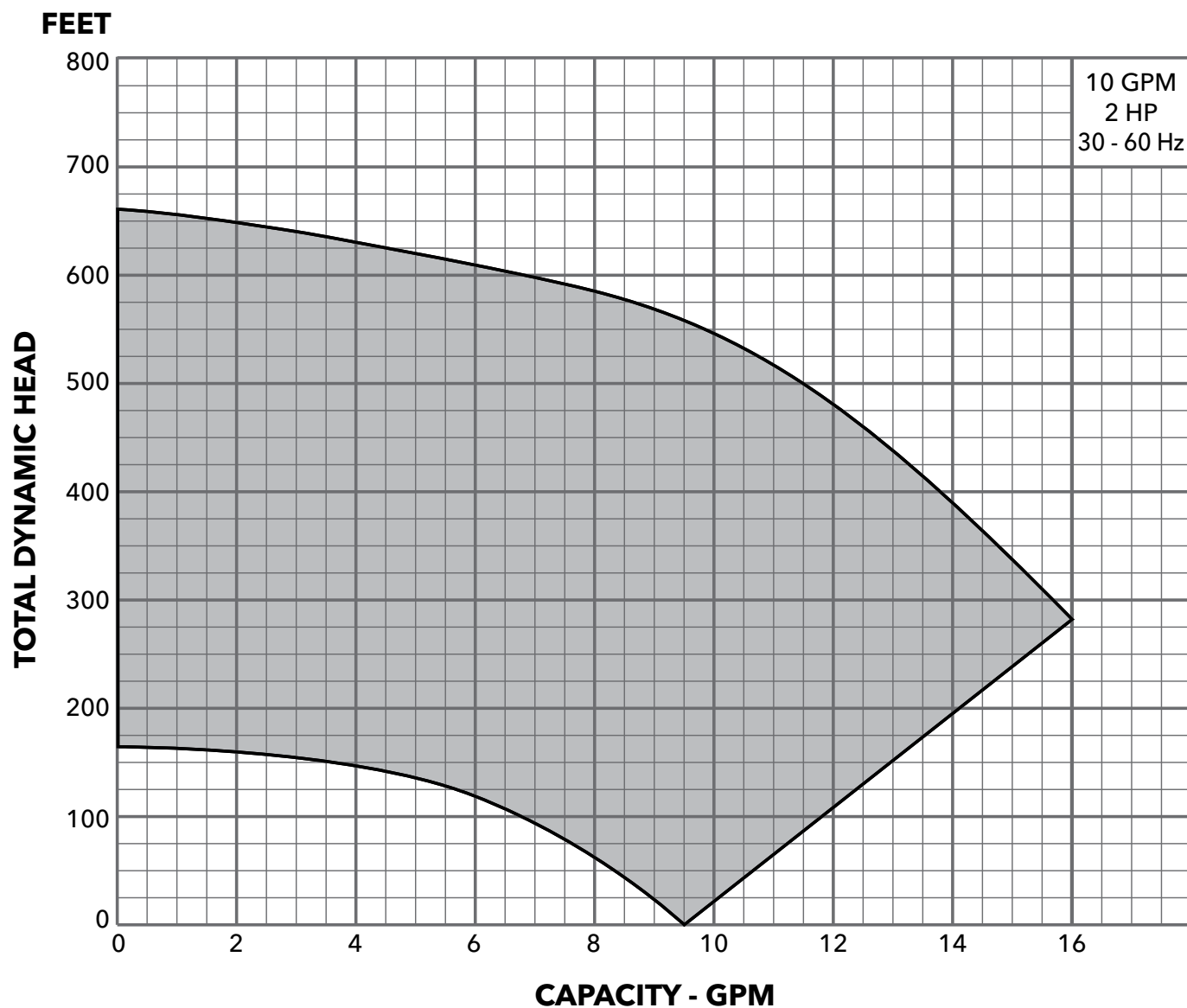
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																
			100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540
10GS15	1½	0								15.7	15.3	14.8	14.4	13.3	12.2	10.9	9.3	7.1	3.0
		50		15.7	15.4	14.9	14.5	14.0	13.4	12.8	12.3	11.7	11.0	9.4	7.4	3.4			
		60	15.7	15.3	14.8	14.4	13.9	13.3	12.8	12.2	11.6	10.9	10.1	8.1	5.6				
Shut-off PSI			197	188	180	171	162	154	144	136	128	119	110	93	76	58	41	24	6



MODEL 10GS20 30-60 Hz with 2 HP Motor and 3AS20

SELECTION CHART

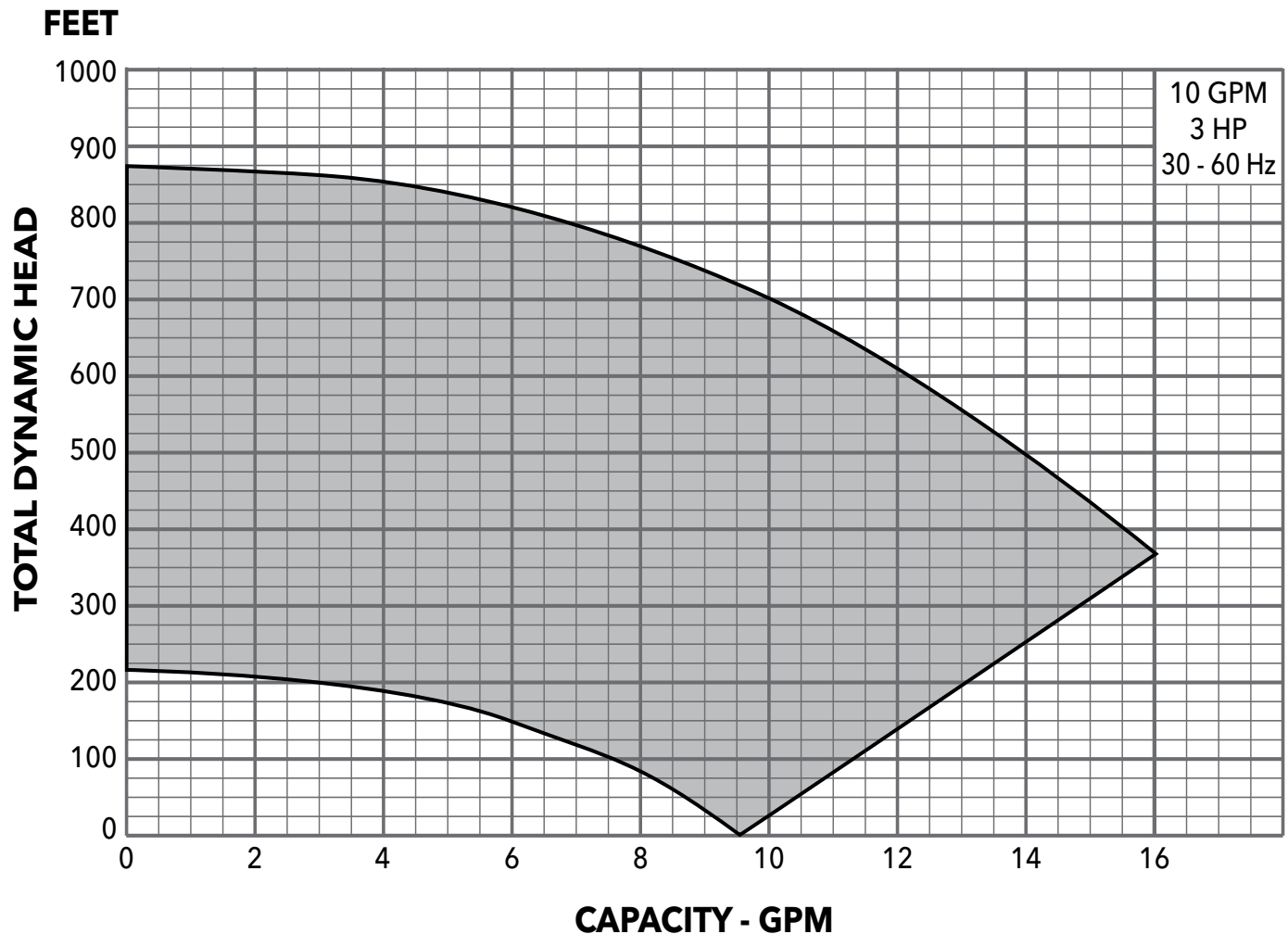
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																
			140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620
10GS20	2	0								16.0	15.7	14.9	14.2	13.4	12.4	11.4	10.0	8.2	5.8
		50		16.1	15.7	15.3	15.0	14.6	14.2	14.0	13.4	12.5	11.5	10.1	8.5	6.0			
		60	16.0	15.7	15.3	14.9	14.5	14.2	13.8	13.4	12.8	11.8	10.7	9.1	7.2	3.4			
Shut-off PSI			225	216	208	199	190	182	173	164	156	139	121	104	87	69	52	35	17



MODEL 10GS30 30-60 Hz with 3 HP Motor and 3AS30

SELECTION CHART

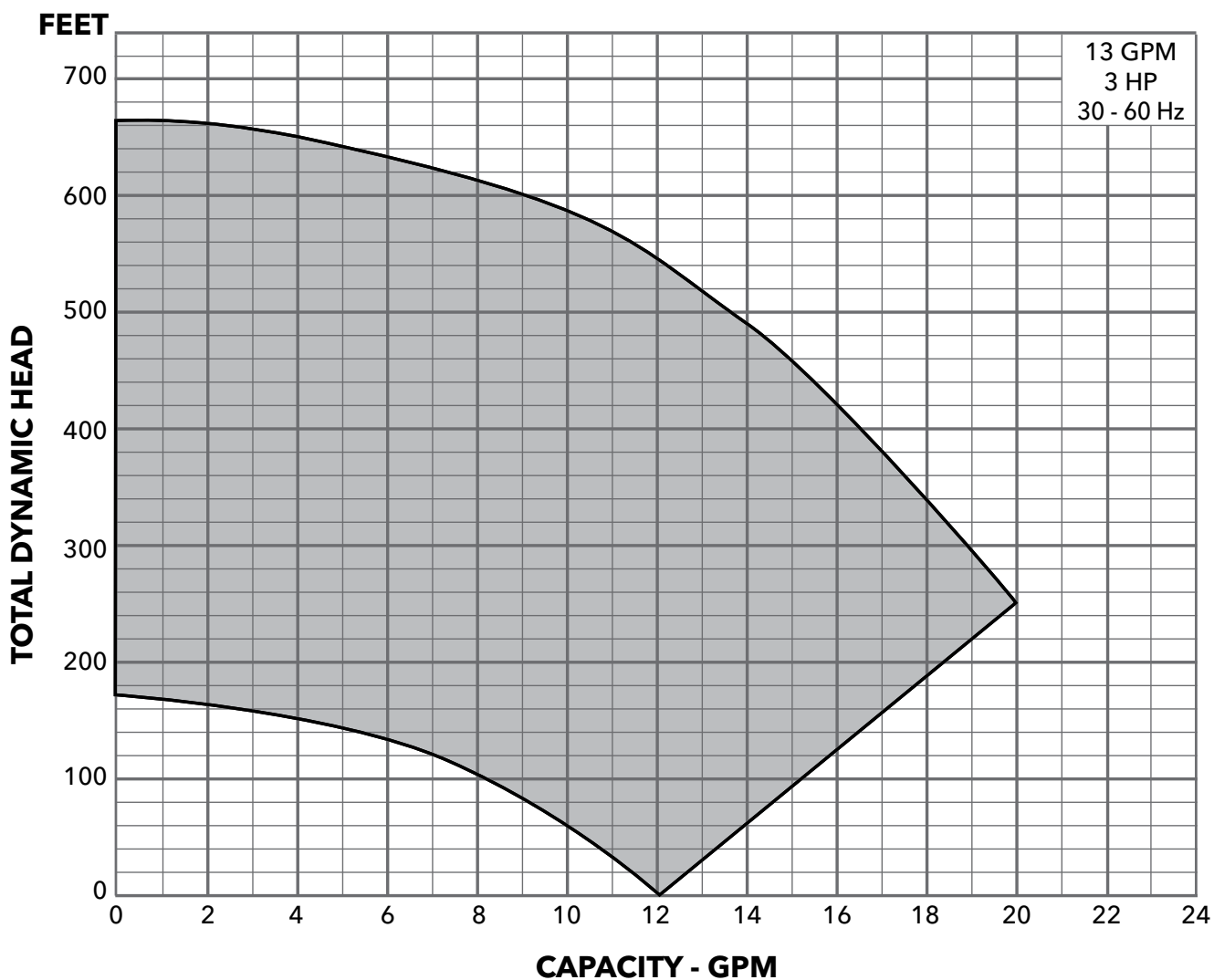
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																	
			220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820
10GS30	3	0							15.8	15.2	14.6	14.0	13.3	12.6	11.9	11.0	10.0	9.0	7.5	5.8
		50		16.0	15.8	15.6	15.3	14.7	14.1	13.3	12.7	11.9	11.0	10.2	9.1	7.8	6.0	3.0		
		60	16.0	15.8	15.5	15.2	14.8	14.3	13.7	12.9	12.3	11.4	10.6	9.6	8.3	6.8	4.5			
Shut-off PSI			284	275	267	258	249	232	215	197	180	163	145	128	111	94	76	59	42	24



MODEL 13GS30 30-60 Hz with 3 HP Motor and 3AS30

SELECTION CHART

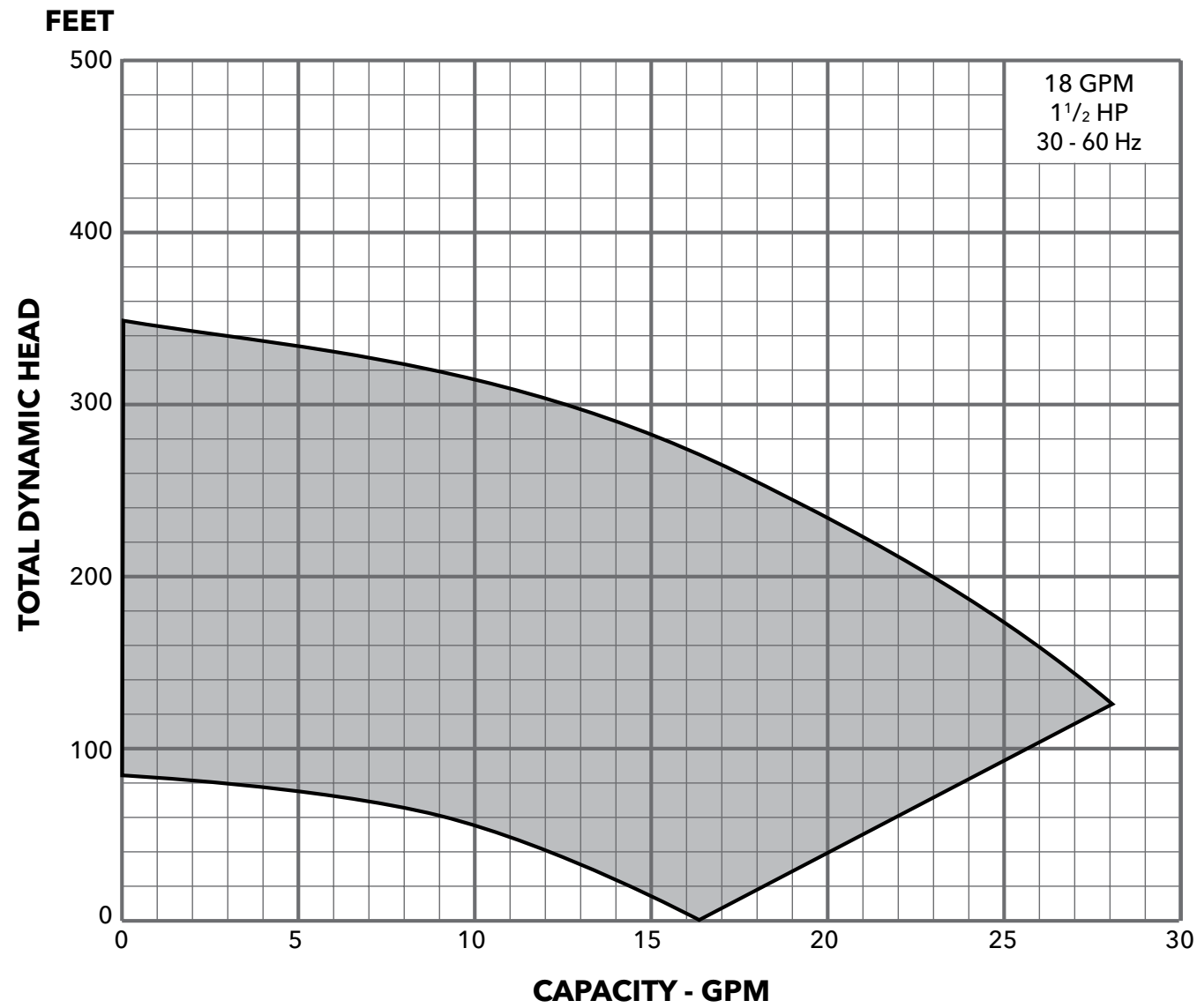
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																	
			120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620
13GS30	3	0								19.8	19.4	18.9	18.0	17.1	16.0	14.6	13.5	11.9	10.0	7.3
		50		19.9	19.5	19.0	18.6	18.1	17.7	17.2	16.7	16.1	14.9	13.7	12.0	10.1	7.9			
		60	19.8	19.4	18.9	18.5	18.0	17.5	17.1	16.6	16.0	15.4	14.2	12.9	11.0	9.0	5.0			
Shut-off PSI			235	226	217	209	200	191	183	174	165	157	139	122	104	87	70	53	35	18



MODEL 18GS15 30-60 Hz with 1.5 HP Motor and 3AS20

SELECTION CHART

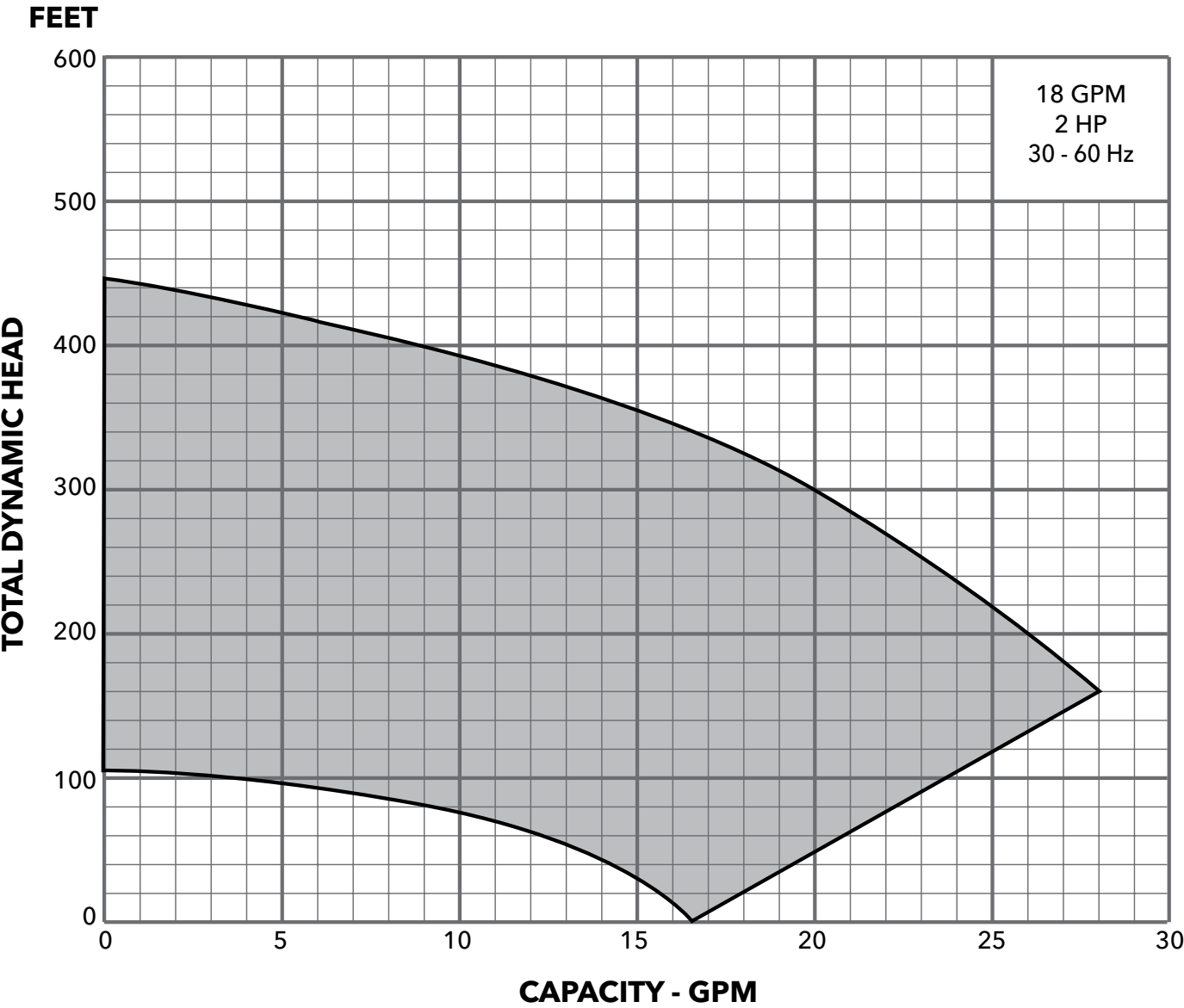
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)														
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
18GS15	1½	0						28.4	27.2	26.0	24.8	23.0	21.4	19.6	17.5	15.0	12.1
		50	27.6	26.4	25.0	23.4	21.8	20.0	18.0	15.5	13.0	9.2					
		60	26.0	24.6	23.0	21.2	19.5	17.5	15.0	12.0	7.9						
Shut-off PSI			143	134	126	117	108	100	91	82	74	65	56	48	39	30	22



MODEL 18GS20 30-60 Hz with 2 HP Motor and 3AS20

SELECTION CHART

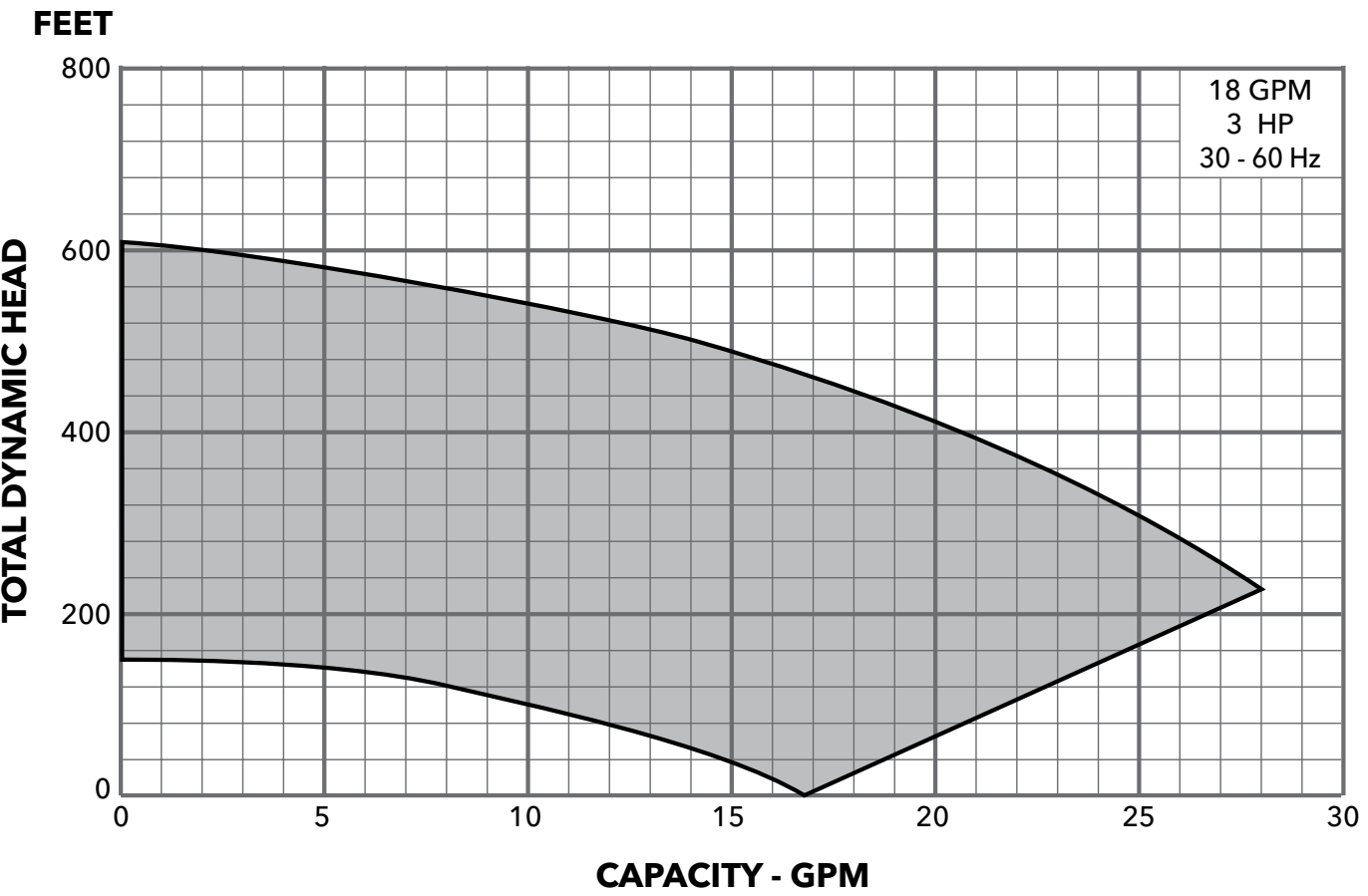
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380
18GS20	2	0								28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	16.8	12.8
		50		28.0	27.2	26.2	25.3	24.3	23.0	21.8	20.3	18.7	17.0	15.3	13.1	10.5	6.0		
		60	28.0	27.1	26.2	25.1	24.0	22.9	21.4	20.0	18.3	16.8	14.8	12.8	9.5				
Shut-off PSI			183	174	165	157	148	139	131	122	113	105	96	87	79	70	61	44	27



MODEL 18GS30 30-60 Hz with 3 HP Motor and 3AS30

SELECTION CHART

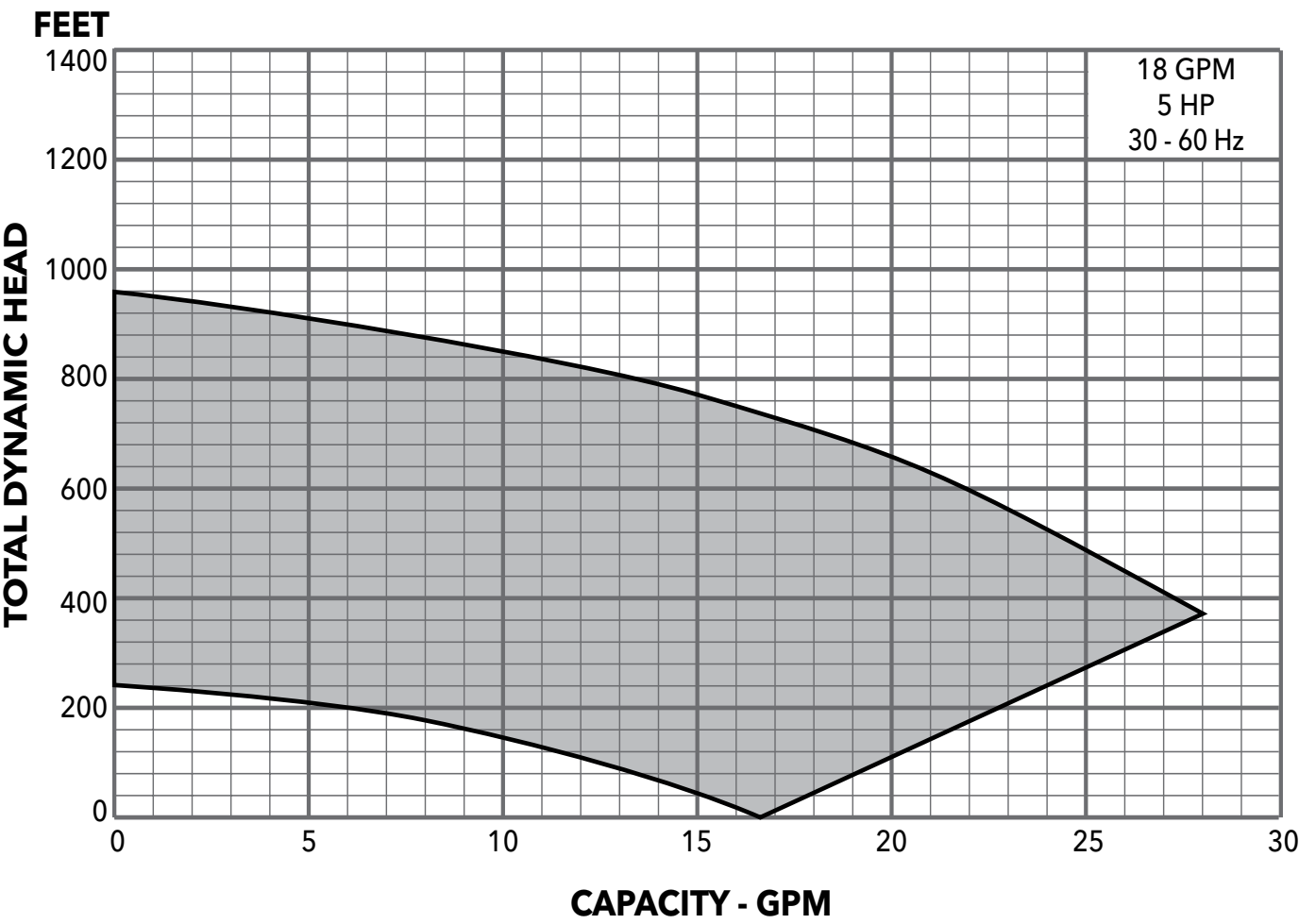
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																	
			80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540
18GS30	3	0								28.0	27.4	26.7	26.0	25.0	23.5	21.5	19.2	16.9	14.2	10.5
		50			27.4	26.8	26.0	25.2	24.5	23.6	22.6	21.7	20.6	19.5	17.3	14.5	11.0			
		60	28.0	27.4	26.7	26.0	25.0	24.3	23.5	22.5	21.5	20.5	19.2	18.0	15.7	12.8	7.0			
Shut-off PSI			225	216	208	199	190	182	173	164	156	147	139	130	113	95	78	61	43	26



MODEL 18GS50 30-60 Hz with 5 HP Motor and 3AS50

SELECTION CHART

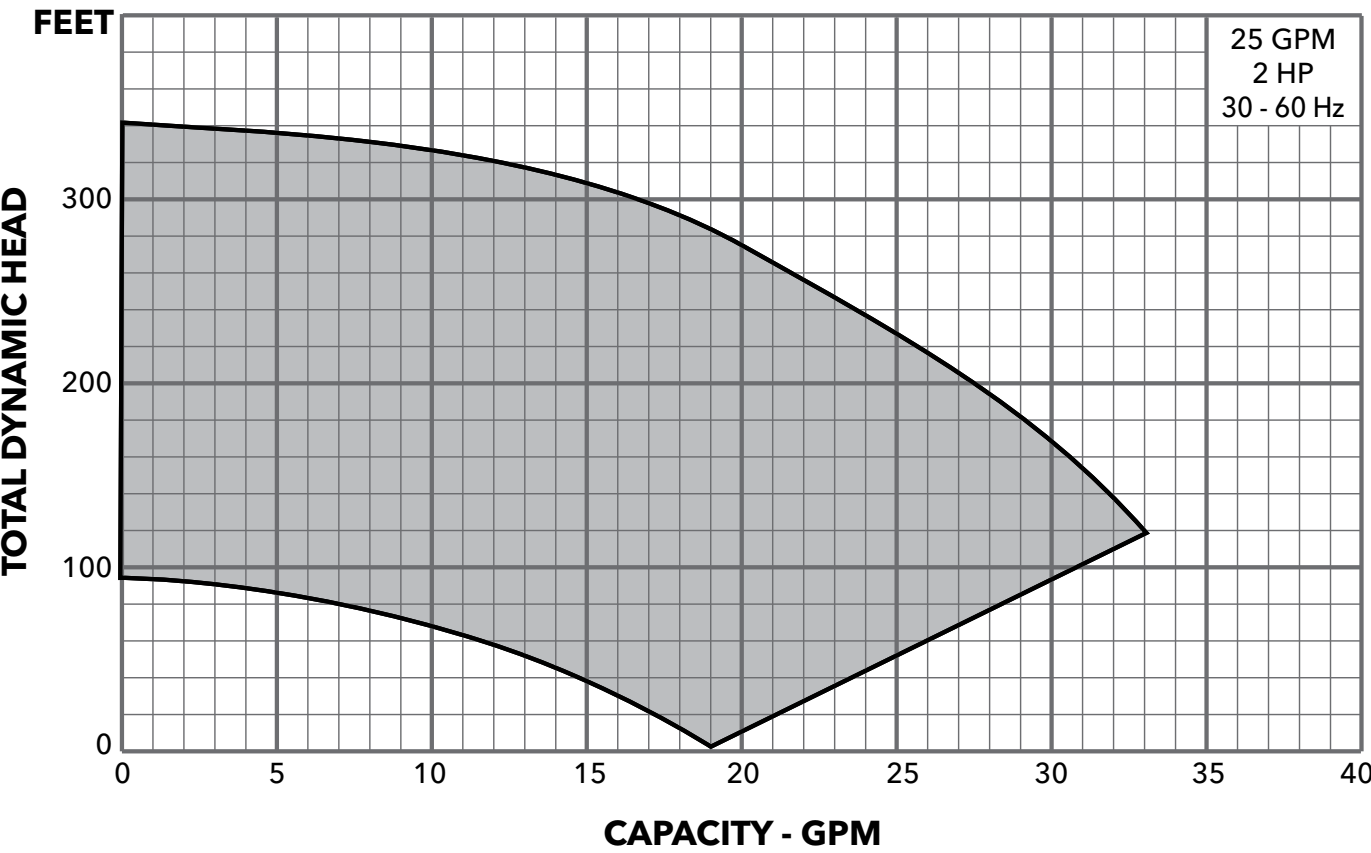
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																	
			240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860
18GS50	5	0						27.9	26.8	25.8	24.8	23.7	22.6	21.2	19.9	18.4	16.8	14.8	12.4	9.7
		50		27.9	27.3	26.8	25.9	24.9	23.8	22.7	21.3	20.1	18.5	16.9	14.9	12.8	10.0	6.0		
		60	27.9	27.2	26.8	26.2	25.2	24.1	23.0	21.9	20.7	19.2	17.5	15.8	13.6	11.0	7.8			
Shut-off PSI			307	298	290	281	264	246	229	212	195	177	160	143	125	108	91	73	56	39



MODEL 25GS20 30-60 Hz with 2 HP Motor and 3AS20

SELECTION CHART

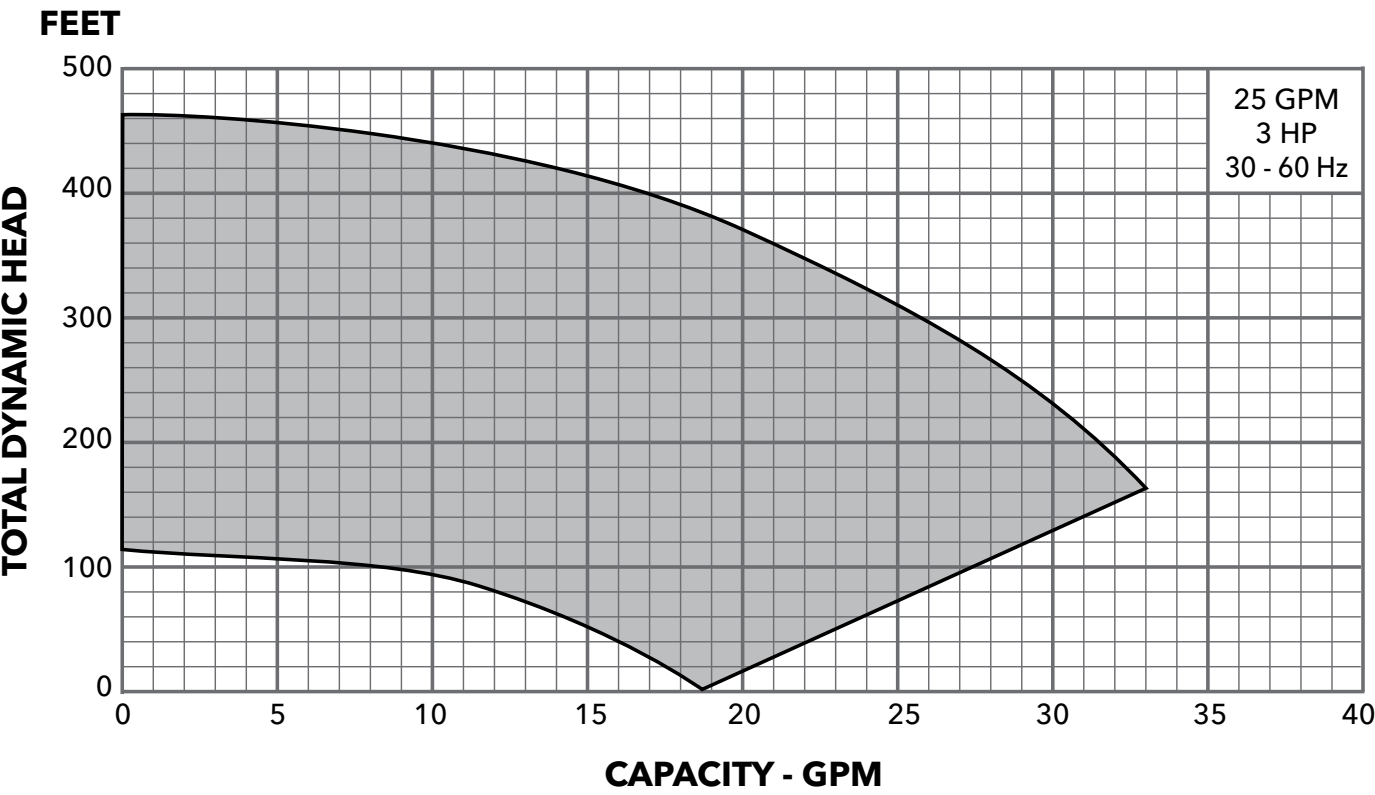
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)														
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
25GS20	2	0						33.0	31.8	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4
		50		30.5	29.4	28.0	26.0	24.1	22.1	20.0	17.2	13.2					
		60	30.4	29.0	27.4	25.7	22.6	21.5	19.3	15.4	12.2						
Shut-off PSI			139	130	121	113	104	95	87	78	69	61	52	43	35	26	17



MODEL 25GS30 30-60 Hz with 3 HP Motor and 3AS30

SELECTION CHART

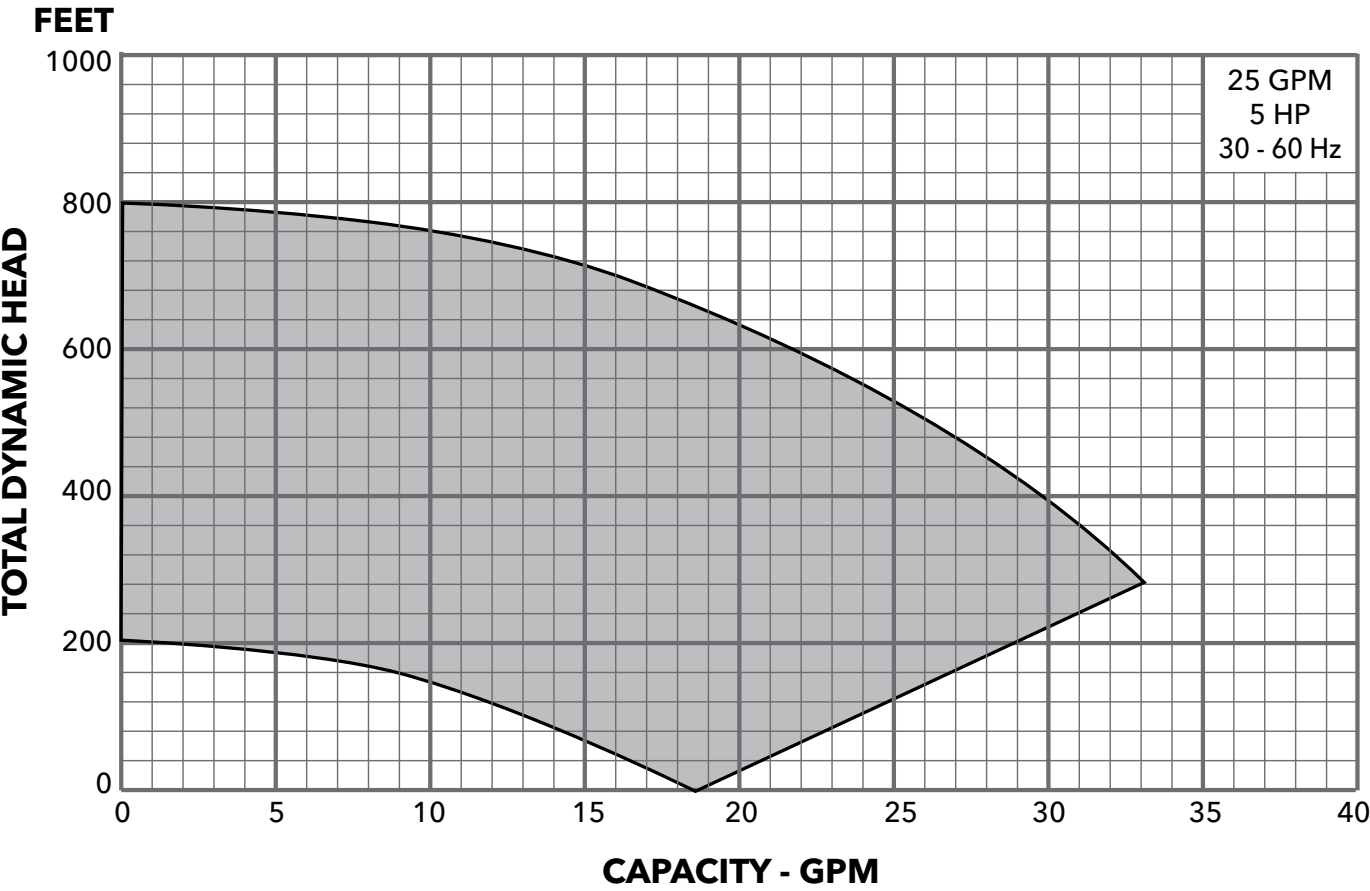
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																	
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420
25GS30	3	0								33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	22.6	19.0	14.0
		50			32.3	31.6	30.8	29.8	28.5	27.3	26.0	24.5	23.0	21.2	19.5	17.4	11.5			
		60	33.0	32.2	31.5	30.5	29.6	28.3	27.1	25.8	24.1	22.6	20.9	19.0	16.9	14.0	10.0			
Shut-off PSI			191	183	174	165	157	148	139	131	122	113	105	96	87	79	70	53	35	18



MODEL 25GS50 30-60 Hz with 5 HP Motor and 3AS50

SELECTION CHART

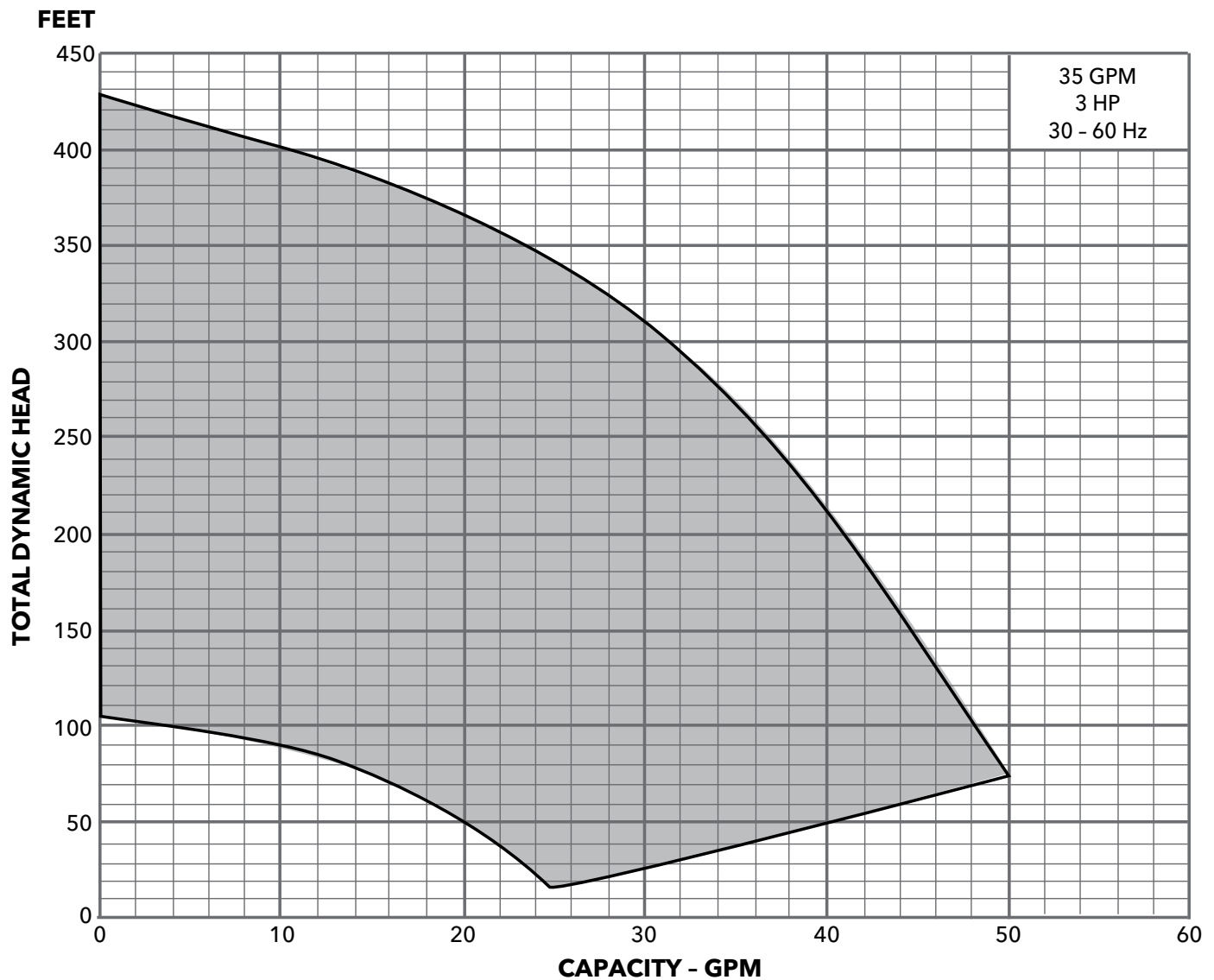
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																			
			140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740
25GS50	5	0								33.0	32.5	31.5	30.2	29.0	27.6	26.0	24.2	22.4	20.5	18.3	15.8	12.0
		50			32.6	32.1	31.6	31.0	30.3	29.9	29.2	27.8	26.3	24.5	22.6	21.8	18.7	16.0	12.7			
		60	33.0	32.5	32.0	31.5	30.8	30.2	29.8	29.0	28.3	26.9	25.1	23.3	21.5	19.5	17.0	14.0	9.5			
Shut-off PSI			286	277	268	260	251	242	234	225	216	199	182	165	147	130	113	95	78	61	43	26



MODEL 35GS30 30-60 Hz with 3 HP Motor and 3AS30

SELECTION CHART

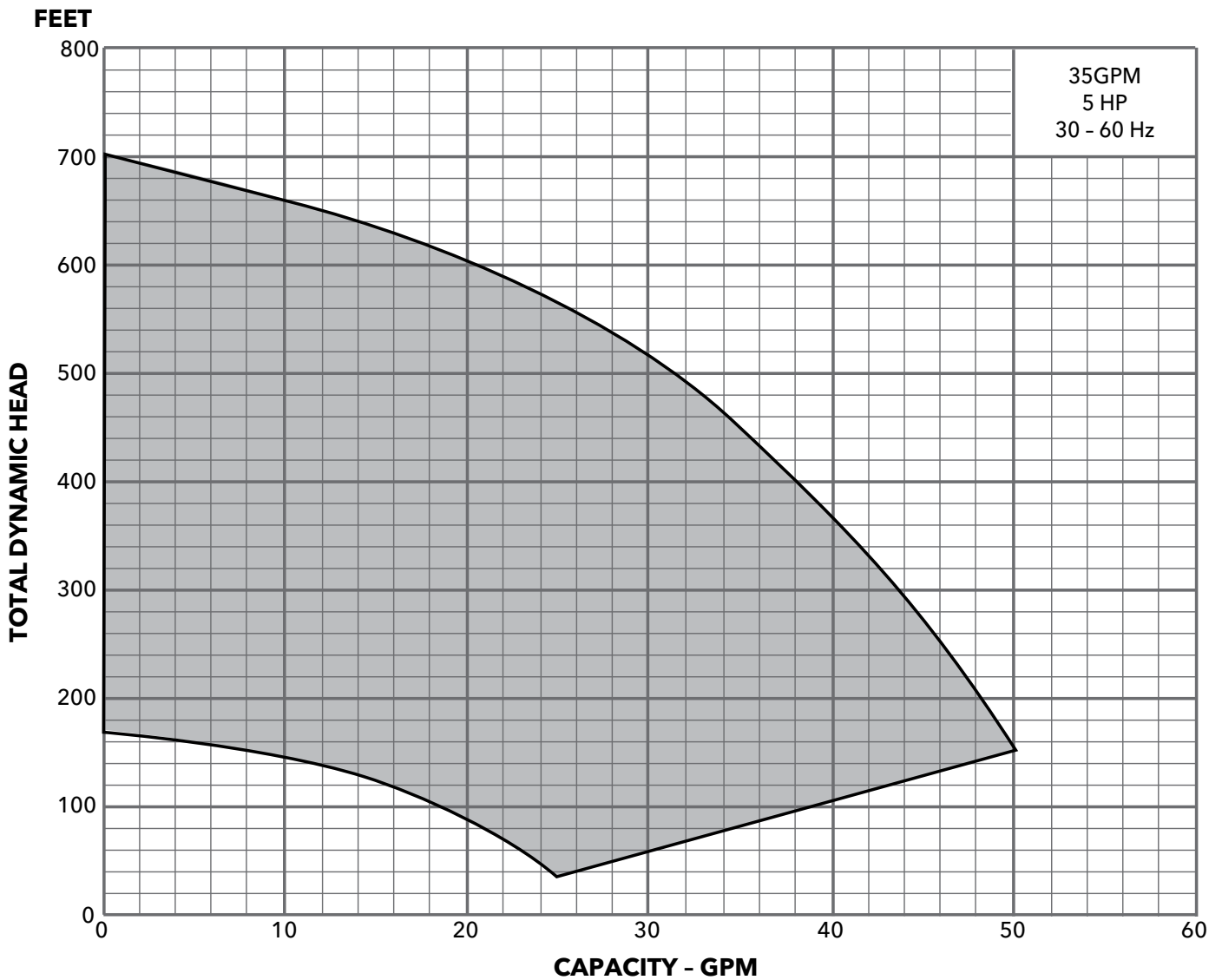
Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																			
			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400
35GS30	3	0				50	48	47	45	44	42	41	39	38	36	34	31	28	25	21	16	10
		20		49	48	46	45	43	42	40	39	37	35	33	30	27	24	19	14			
		30	49	47	46	45	43	42	40	39	37	35	33	30	27	23	18	13				
		40	47	46	44	43	41	40	38	37	35	32	30	26	22	18	12					
		50	46	44	43	41	40	38	36	34	32	29	26	22	17	11						
		60	44	42	41	39	38	36	34	31	29	25	21	16	10							
Shut-off PSI			176	168	159	150	142	133	124	116	107	98	90	81	72	64	55	46	38	29	20	12



MODEL 35GS50 30-60 Hz with 5 HP Motor and 3AS50

SELECTION CHART

Pump Model	HP	PSI	Depth to Water in Feet/Ratings in GPM (Gallons per Minute)																											
			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	
35GS50	5	0			50	48	46	43	41	38	35	31	26	19	11															
		20		50	48	46	44	41	38	35	31	26	20	12																
		30		49	47	45	42	40	37	33	29	24	16																	
		40	50	48	46	44	41	38	35	31	27	20	12																	
		50	49	47	45	43	40	37	34	29	24	17																		
			48	46	44	41	39	35	32	27	21	13																		
Shut-off PSI			280	259	237	215	194	172	150	129	107	85	64	42																



WIRE SIZING - MAXIMUM CABLE LENGTHS IN FEET TO LIMIT VOLTAGE DROP TO 5% FOR 230 V SYSTEMS^⑤

Service Entrance to Controller

Controller Input	Motor HP	Copper Wire Size 75°C Insulation Exposed to a Maximum of 50°C (122°F) Ambient Temperature ^⑥															
		14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	300	350	400	500
230V 1 PH	¾	279	445	706	1020	1608	2552	4019	6383	8055							
	1	226	360	571	824	1300	2064	3250	5161	6513	8201						
	1½	*	286	455	657	1036	1644	2589	4111	5188	6533	8236	9710				
	2	*	*	331	478	754	1197	1886	2995	3779	4759	5999	7073	8455	9852		
	3	*	*	246	355	561	890	1401	2225	2808	3536	4458	5256	6283	7321	8343	
	5	*	*	*	218	343	545	858	1363	1720	2165	2730	3219	3847	4483	5109	6348

Controller to Motor

Controller Output	Motor HP	Copper Wire Size 75°C Insulation Exposed to a Maximum of 50°C (122°F) Ambient Temperature®												
		14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	300
230V 3 PH	¾	690	1100	1748	2523	3978	6316	9945						
	1	558	890	1413	2040	3216	5106	8041						
	1½	445	709	1126	1625	2562	4068	6406						
	2	324	516	820	1184	1866	2963	4666	7410	9351				
	3	241	384	609	880	1387	2202	3467	5506	6949	8750			
	5	*	235	373	539	849	1348	2123	3372	4255	5358	6755	7964	9520

⑤ Reduce lengths by 13% for 200 V systems. ⑥ Lengths in bold require 90°C wire. Shading indicates 40° C maximum ambient.
* Wire does not meet the N.E.C. ampacity requirement.

The lengths in each of the Wire Sizing tables represent 100% of the allowable voltage drop when motor is running at full load. When sizing wire, the voltage drop of each wire segment must be included. The total must not exceed 100% of the allowable drop. Take for example a 1.5 HP motor with a distance from Service Entrance to Controller of 100' and 500' between the Controller and Motor.

- Service Entrance to Controller = 100' of 10 AWG (100/455) = 22 % (455' is from the S.E. to Controller chart)
 - Controller to Motor = 500' of 12 AWG (500/709) = 71 % (709' is from the Controller to Motor chart)
- Total Drop (must be ≤ 100%) 93 %

If the distance from the Controller to Motor was 600' (600/709) = 85% + 22% = 107%, we would need to use #10 wire for that segment, ex. 600/1126 = 53% + 22% (for 100' of #10) = 75% which is acceptable. It is also acceptable to use different wire sizes for the Buried and Well sections of wire.

Controller, Breaker, Generator Sizing

Motor		Controller Model ②				Circuit Breaker ③	Generator ④ (VA)	① Supply voltage must be 196 VAC - 265 VAC. ② Shaded areas indicate which controller models can be used with which motors. Lighter shading indicates combinations where controller will limit peak performance to 85% of catalog value for pump/motor. ③ Circuit Breaker or Dual Element Time Delay Fuse Size (Amps) protecting branch circuit supplying controller. ④ Minimum size of single phase 240 V generator required.
HP	Voltage ①	1AS15	3AS20	3AS30	3AS50			
½	230					15	2200	
	200							
¾	230						2900	
	200							
1	230						3500	
	200							
1½	230					20	4400	
	200							
2	230					30	6100	
	200							
3	230						8100	
	200							
5	230					40		
	200					50	13300	

THREE PHASE, 4", MOTOR DATA

Electrical Data, 60 Hertz, 3450 RPM, 4" Motors

GWT #	Red Jacket #	HP	kW	Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Line - Line Resistance
						Amps	Watts	Amps	Watts		
M07430	75C323	0.75	0.55	200	1.5	3.8	812	4.5	1140	32	2.6-3.0
M10430	100C323	1	0.75		1.4	4.6	1150	5.5	1500	29	3.4-3.9
M15430	150C323	1.5	1.1		1.3	6.3	1560	7.2	1950	40	1.9-2.5
M20430	200C323	2	1.5		1.25	7.5	2015	8.8	2490	51	1.4-2.0
M30430	300C323	3	2.2		1.15	10.9	2890	12.0	3290	71	0.9-1.3
M50430	500C323	5	3.7		1.15	18.3	4850	20.2	5515	113	0.4-0.8
M07432	75C313	0.75	0.55	230	1.5	3.3	850	3.9	1185	27	3.3 - 4.3
M10432	100C313	1	0.75		1.4	4.0	1090	4.7	1450	26.1	4.1-5.1
M15432	150C313	1.5	1.1		1.3	5.2	1490	6.1	1930	32.4	2.8-3.4
M20432	200C313	2	1.5		1.25	6.5	1990	7.6	2450	44	1.8-2.4
M30432	300C313	3	2.2		1.15	9.2	2880	10.1	3280	58.9	1.3-1.7
M50432	500C313	5	3.7		1.15	15.7	4925	17.5	5650	93	.85-1.25

Diaphragm Tank Sizing and Pre-Set Pressure Recommendations:

Diaphragm type (captive air) tanks are required on these systems.

Table 1: Tank Sizing Selection

Maximum Pump GPM	Recommended Tanks		
	Total Volume	Order No.	or Order No.
10	2	V6P	TP6P
23	4.5	V15P	TP15P
41	8.2	V25P	TP25P
70	13.9	V45	TP45
100	19.9	V60	TP60

Use Total Tank Volume, not drawdown volume, to select the proper tank size. The total tank volume should be approximately 20% of the pump's maximum flow. For example, when using a 10 gpm pump the system requires a minimum 2 gallon (total volume) tank.

The tank sizing recommendations are field proven to prevent objectionable pressure drops on start-up and provide smooth operation for the majority of variable speed pump systems.

Set the tank pressure, while tank is empty of water, to 20 psi below the desired system pressure setting. Ex. for a 50 psi system pressure, charge the tank to 30 psi.

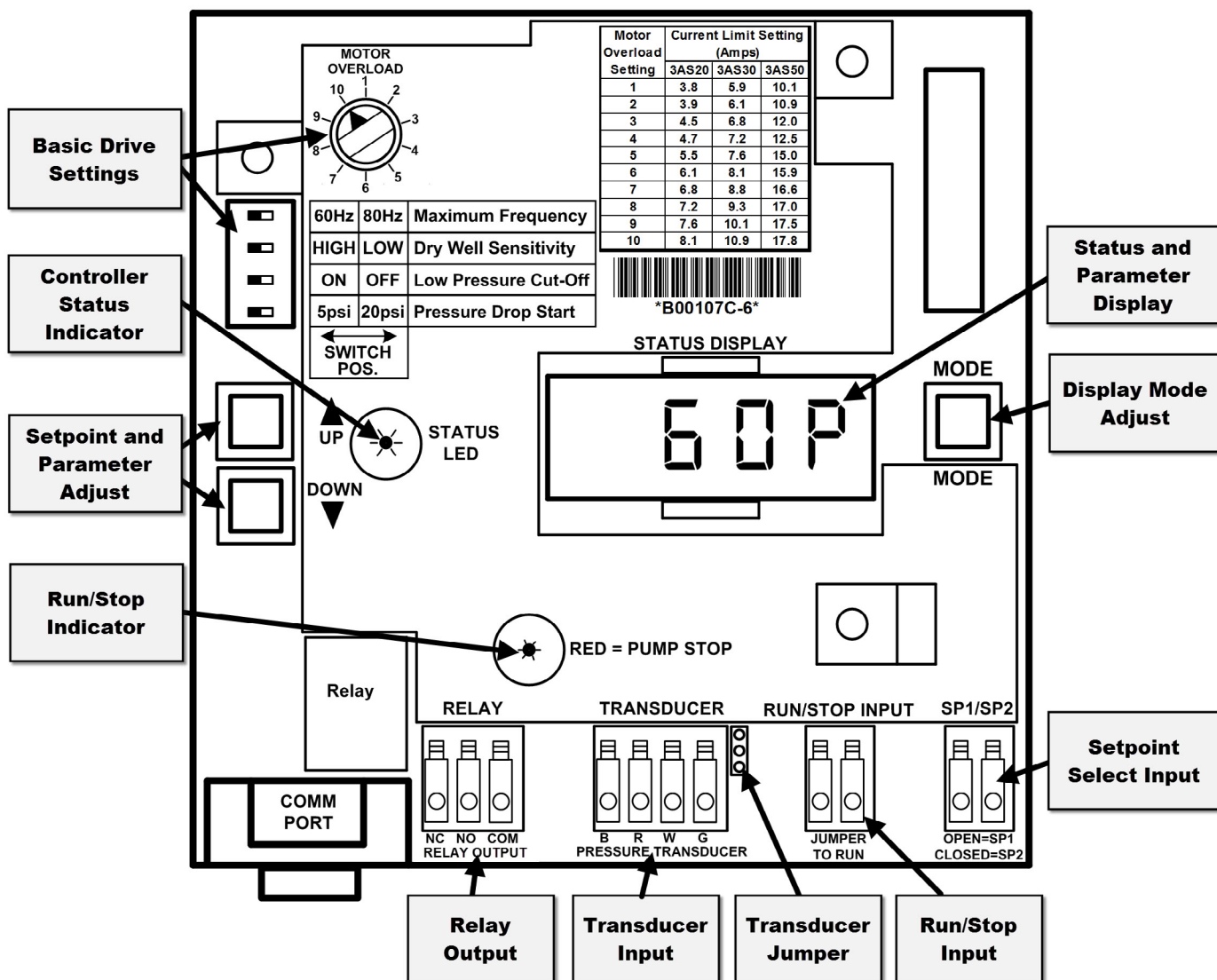
Service Factor Amps All Motors

HP	230 Volt									200 Volt	
	1Ø 2-Wire			1Ø 3-Wire			3Ø			3Ø	
	GWT ¹	Franklin	Grundfos	GWT	Franklin	Grundfos	GWT	Franklin	Grundfos	GWT	Franklin
½	4.7/4.7	6	6	6.3	6	6	N/A	N/A	N/A	N/A	N/A
¾	6.4/6.2	8	8.4	8.3	8	8.4	3.9	3.8	N/A	4.5	4.4
1	9.1/8.1	9.8	9.8	9.7	9.8	9.8	4.7	4.7	N/A	5.5	5.4
1½	11.0/10.4	13.1	13.1	11.1	11.5	11.6	6.1	5.9	7.3	7.2	6.8
2	N/A	N/A	N/A	12.2	13.2 ²	13.2 ²	7.6	8.1	8.7	8.8	9.3
3	N/A	N/A	N/A	N/A	N/A	N/A	10.1	10.9	12.2	12	12.5
5	N/A	N/A	N/A	N/A	N/A	N/A	17.5	17.8	19.8	20.2	20.5

1. Goulds Water Technology 2-Wire motors have Generation 1 and Generation 2 amp ratings, see motor nameplate or motor data sticker that was supplied with motor.

2. Amps are higher than controller overload range - use of these motors will current limit and provide reduced performance.

3AS_ _ UIB CONTROLLERS



PRESSURE RANGES FOR ALL AVAILABLE TRANSDUCERS

Transducer	1AS15 / 3AS20		3AS30		3AS50	
	Minimum PSI	Maximum PSI	Minimum PSI	Maximum PSI	Minimum PSI	Maximum PSI
100 PSI ①	20	85	20	85	10	50
200 PSI ②	40	170	40	170	20	100
300 PSI	60	255	60	255	30	150

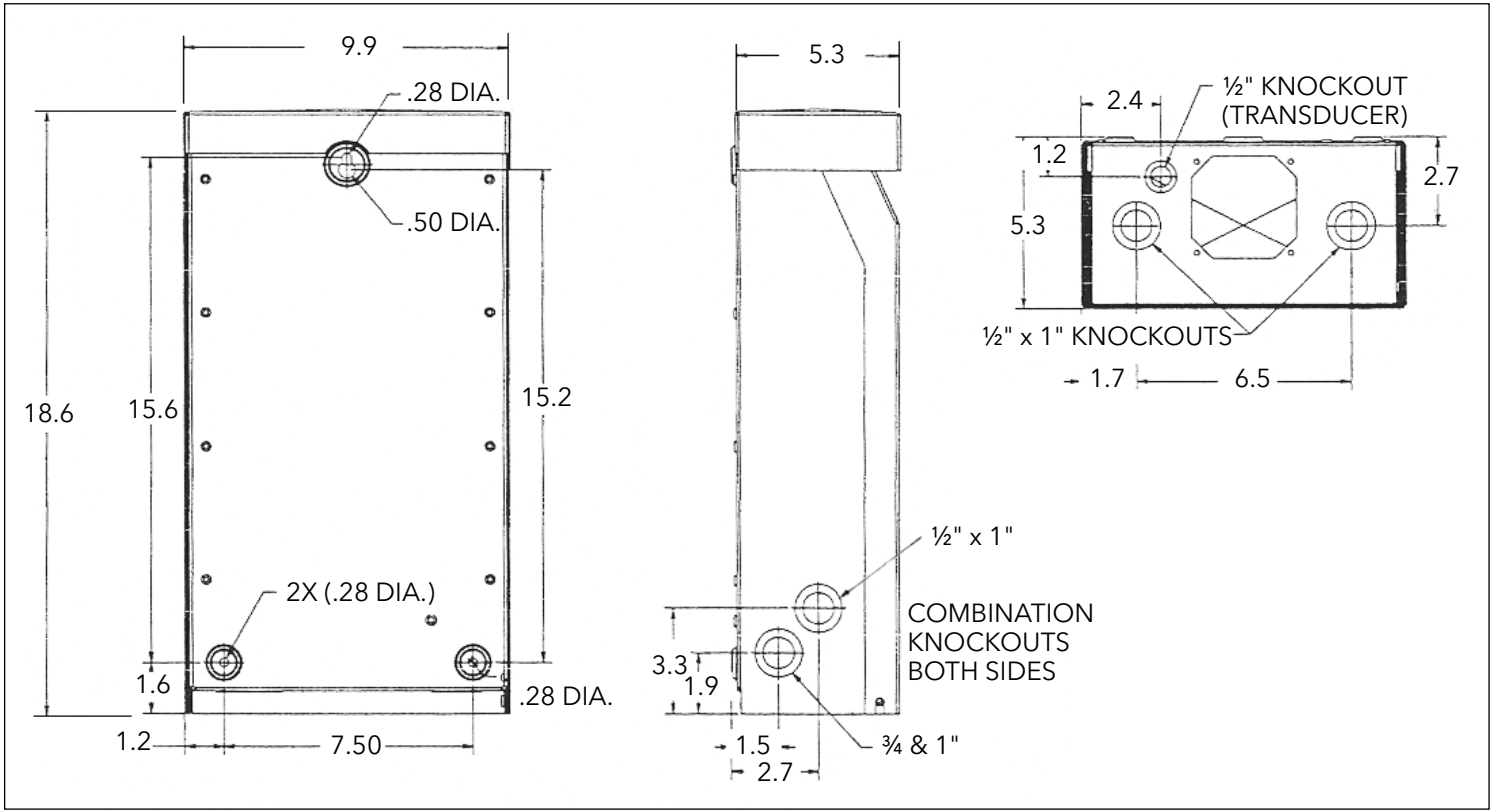
① Standard on 1AS15/3AS20, 3AS30 ② Standard on 3AS50

Warning! Exploding tank can injure or kill, some combinations of Transducer and Controller allow system pressure adjustment to exceed the maximum working pressure of the tank and piping.

Ensure system pressure is set below the maximum working pressure of the tank and system piping.

Protect tank and piping against overpressure, install a properly sized pressure relief valve (PRV) able to pass full pump flow at the maximum working pressure of the tank. In finished basements or where PRV blow-off can cause property damage, pipe the PRV to a suitable drain.

DIMENSIONS (inches) - ALL MODELS





AQUAVAR ProPak

30-80 HZ KITS

FEATURES

Simple, fast sizing and installation.

Range curves and selection charts generated from actual R&D tests.

Kits configured for 30 Hz minimum and 80 Hz maximum operation.

Kits use matched water end and motor (see component chart).

Wiring is as easy as standard three-wire control box:

- L1, L2 and Ground in from power supply
- Red, Yellow, Black and Ground out to motor

Pressure is factory preset at 60 psi with simple, fast, field adjustability for higher pressures.

Three phase output to motor reduces wire cost.

Goulds Water Technology model GS features the Guardian bearing system and field proven sand and abrasive handling floating stack design.

Switch Input for connecting a pressure switch or float switch.

Grounding provisions for transducer and transducer cable.

KITS INCLUDE:

- Three Phase Motor 1.5 – 5 HP, 230 V
- Aquavar SOLO² Controller with Transducer
- GS Water End (pump)

ProPak kits do not include pressure tanks, order tanks separately.

PROPAK PERFORMANCE RANGE AND COMPONENTS

MODEL	HP	Shut-Off Head (ft)	at Best Efficiency		at Maximum Runout		WE	Motor	Controller
Flow (GPM)	TDH (ft)	Flow (GPM)	TDH (ft)	Flow (GPM)	TDH (ft)				
7GP0715	1.5	665	7	480	16	110	7GS07	M15432	3AS20
10GP0715	1.5	540	10	438	20	117	10GS07		
18GP0715	1.5	315	18	237	37	55	18GS07		
7GP1020	2	880	7	640	16	146	7GS10	M20432	
10GP1020	2	660	10	488	20	160	10GS10		
18GP1020	2	428	18	306	37	70	18GS10		
25GP1020	2	358	25	238	40	69	25GS10		
7GP1530	3	1140	7	820	16	175	7GS15	M30432	3AS30
10GP1530	3	923	10	650	20	205	10GS15		
18GP1530	3	582	18	420	37	87	18GS15		
25GP1530	3	466	25	317	40	100	25GS15		
35GP1530	3	390	35	230	60	70	35GS15		
18GP3050	5	990	18	680	37	140	18GS30	M50432	3AS50
25GP3050	5	770	25	528	40	158	25GS30		
35GP3050	5	681	35	390	60	120	35GS30		

Order pressure tank separately, not included in kit

AQUAVAR® SOLO² CONTROLLER

New, more versatile user interface board

- Provides switch connection for optional pressure or level switch
- Current limit settings for all Goulds Water Technology motors
- Dry well sensitivity switch
- Low pressure cut-off protection
- 5 or 20 PSI pressure drop restart switch
- Transducer better protected from transient power surges

PROPAK KIT DIMENSIONS AND WEIGHTS

Controller	Sh. Weight (lb)	Dimensions - All
3AS20	23	Height: 21"
3AS30	24	Width: 13"
3AS50	29	Depth: 8"

Pump	Sh. Weight (lb)	W. E. Length (in)
7GS07	8	16.0
10GS07	8	16.4
18GS07	7	11.8
7GS10	9	18.8
10GS10	9	17.7
18GS10	8	13.5
25GS10	8	13.4
7GS15	12	23.6
10GS15	12	18.4
18GS15	10	16.1
25GS15	9	15.3
35GS15	9	16.6
18GS30	15	24.1
25GS30	14	20.9
35GS30	13	24.0

Motors	Sh. Weight (lb)	Motor Length (in)	L x W x H (in)
M15432	23	11.7	19 x 4.1 x 4.1
M20432	28	13.8	20.5 x 6.5 x 6.5
M30432	32	15.3	20.5 x 6.5 x 6.5
M50432	55	21.7	27.5 x 6.5 x 6.5

ProPak Carton Dimensions and Weights

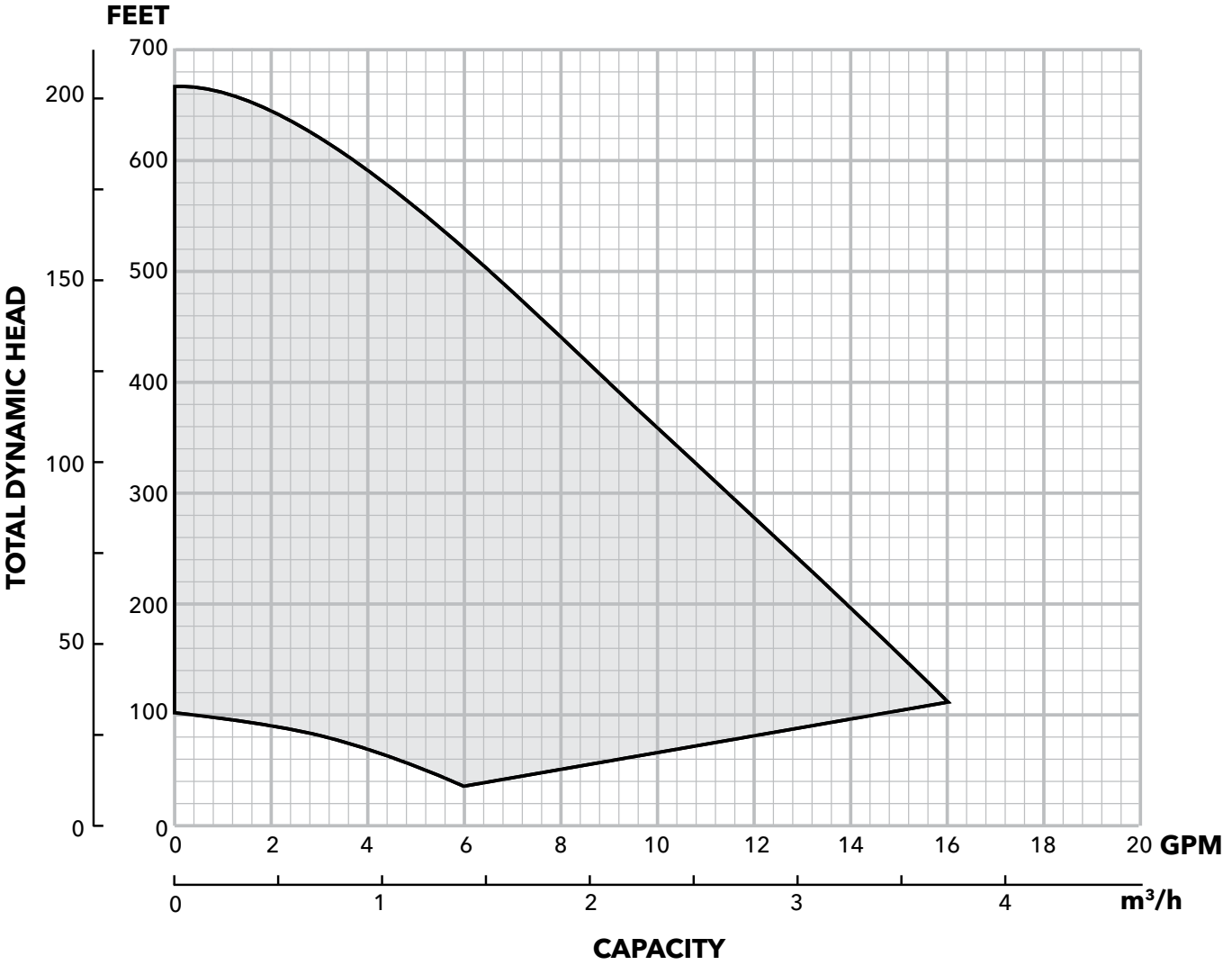
Kit No.	Sh. Weight (lb)	No. cartons	L x W x H (in)
7GP0715	56	1	33.9 x 21.4 x 11.5
10GP0715	56	1	
18GP0715	55	1	
7GP1020	62	1	
10GP1020	62	1	
18GP1020	61	1	
25GP1020	61	1	
7GP1530	70	1	
10GP1530	70	1	
18GP1530	68	1	
25GP1530	67	1	
35GP1530	67	1	
18GP3050	101	2 ①	
25GP3050	100	2 ①	
35GP3050	99	2 ①	

① The 5 HP units have the controller and pump in one carton and the motor is shipped separately due to weight. See M50432 for motor weight and dimensions.

MODEL 7GS07 30-80 Hz with 1.5 HP Motor and 3AS20

SELECTION CHART

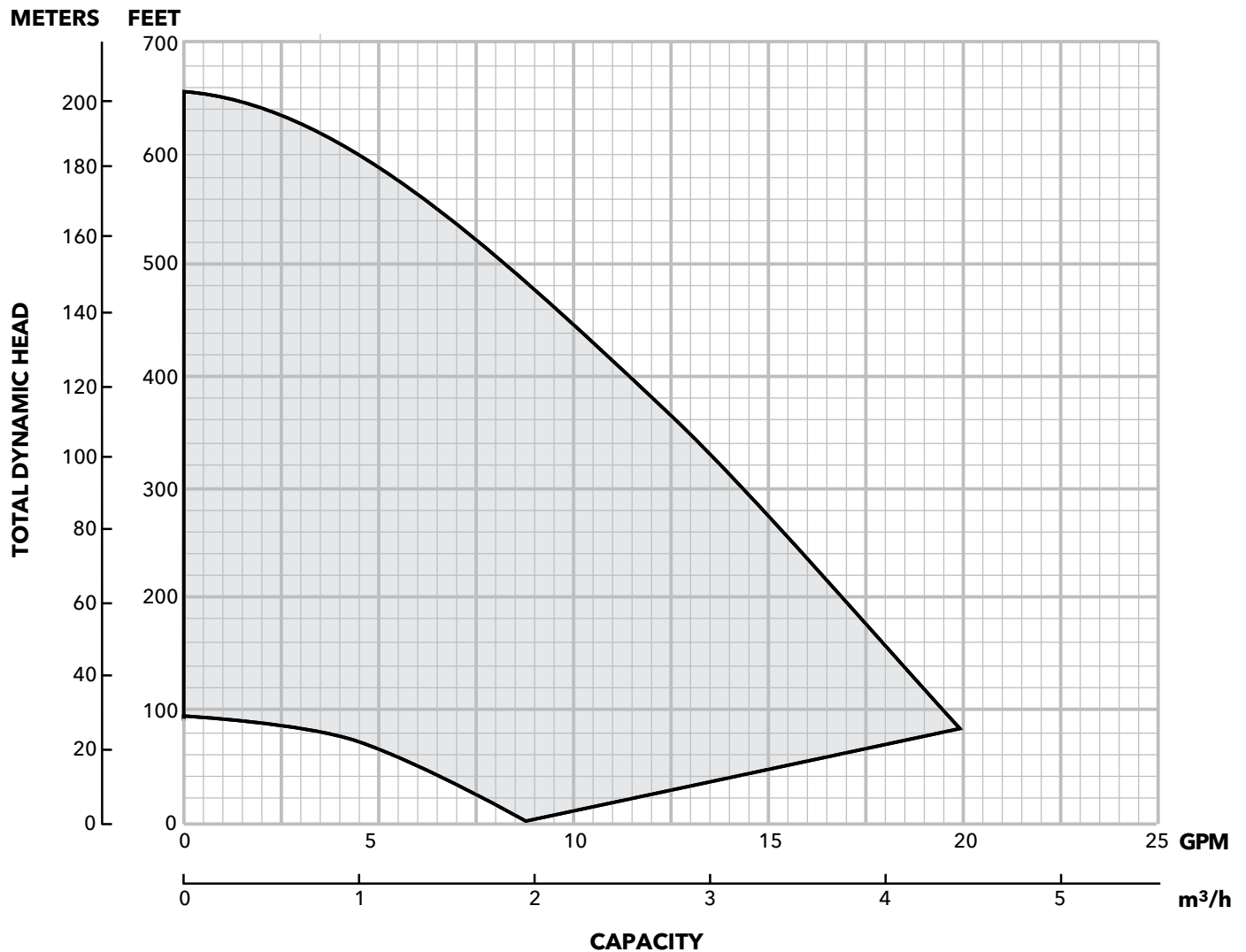
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																						
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620
7GS07	0						16.1	15.6	15.0	14.5	13.9	13.4	12.9	12.3	11.8	11.3	10.3	9.4	8.5	7.6	6.7	5.6	4.4	2.8
	50	15.7	15.2	14.6	14.1	13.5	13.0	12.4	11.9	11.4	10.9	10.4	10.0	9.5	9.1	8.6	7.7	6.8	5.8	4.5	3.0			
	60	15.1	14.5	14.0	13.4	12.9	12.4	11.8	11.3	10.8	10.4	9.9	9.4	9.0	8.5	8.1	7.2	6.2	5.1	3.7				
	70	14.4	13.9	13.4	12.8	12.3	11.8	11.2	10.8	10.3	9.8	9.4	8.9	8.5	8.0	7.6	6.6	5.6	4.3	2.7				
Shut-off PSI		281	272	264	255	247	238	229	221	212	203	195	186	177	169	160	143	125	108	91	73	56	39	21



MODEL 10GS07 30-80 Hz with 1.5 HP Motor and 3AS20

SELECTION CHART

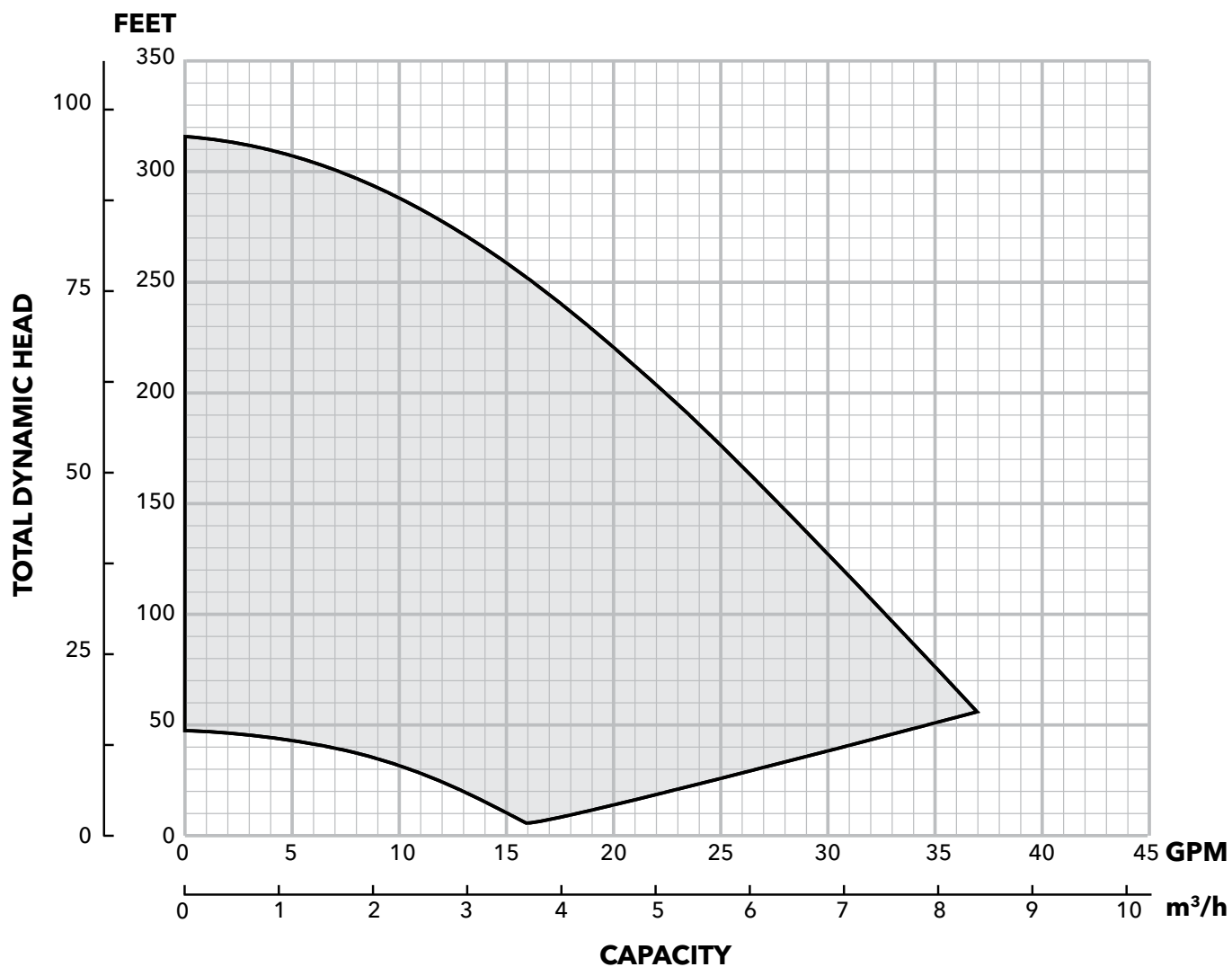
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																			
		20	40	60	80	100	120	140	160	180	200	240	280	320	360	400	440	480	520	560	600
10GS07	0			20.0	19.7	19.3	19.0	18.6	18.2	17.7	17.3	16.3	15.2	14.1	12.8	11.5	10.1	8.6	7.0	5.3	3.5
	50	18.7	18.3	17.8	17.4	16.9	16.4	15.9	15.3	14.8	14.2	13.0	11.6	10.2	8.7	7.2	5.5	3.7			
	60	18.2	17.8	17.3	16.8	16.3	15.8	15.3	14.7	14.1	13.5	12.2	10.8	9.4	7.8	6.2	4.5	2.7			
	70	17.7	17.2	16.7	16.2	15.7	15.2	14.6	14.0	13.4	12.8	11.4	10.0	8.5	6.9	5.2	3.4	1.6			
Shut-off PSI		275	267	258	249	241	232	223	215	206	197	180	163	145	128	111	93	76	59	42	24



MODEL 18GS07 30-80 Hz with 1.5 HP Motor and 3AS20

SELECTION CHART

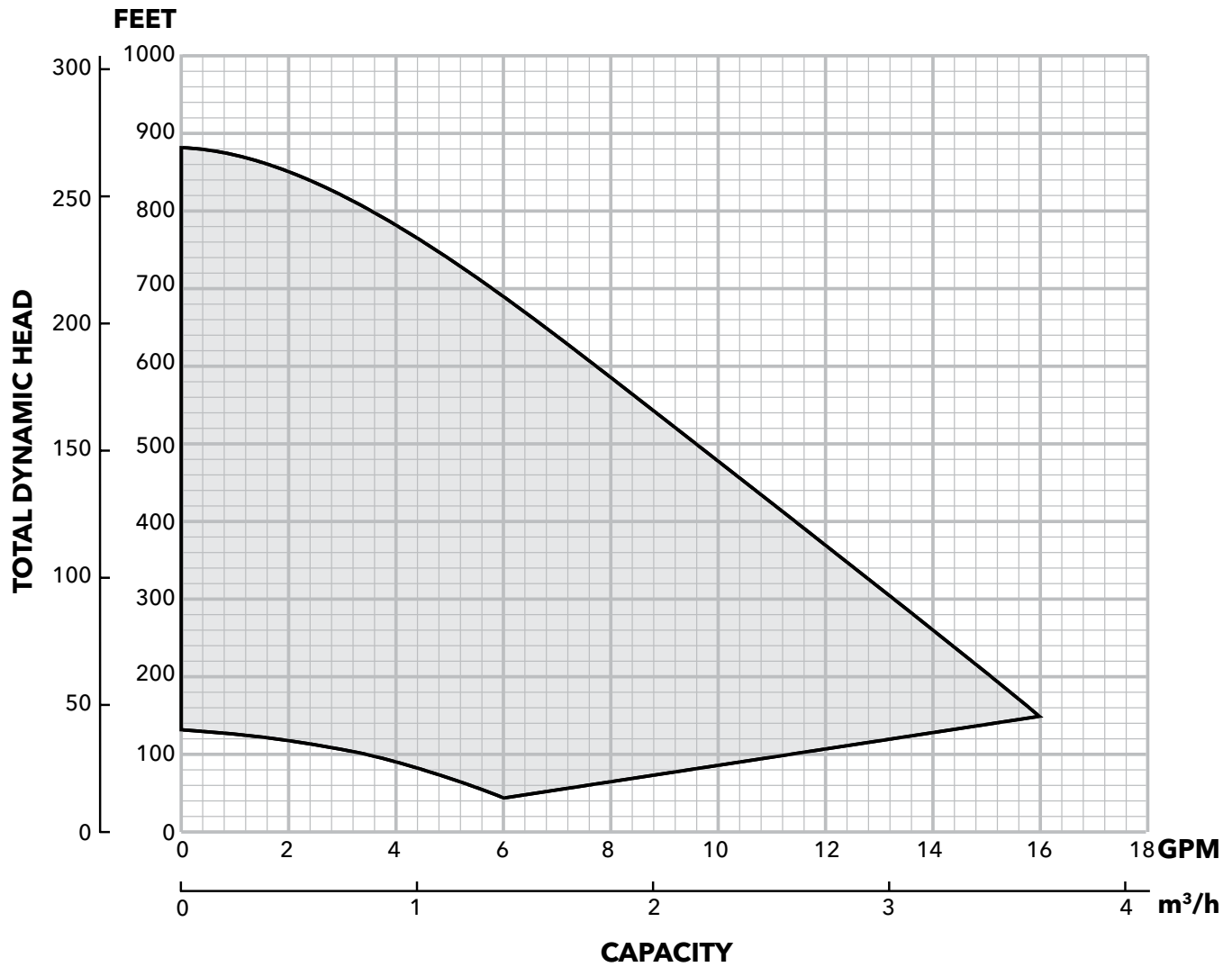
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)														
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
18GS07	0				35.1	32.8	30.5	28.3	26.2	24.2	22.4	20.4	18.1	15.2	11.5	6.3
	50	28.7	26.6	24.7	22.8	20.8	18.7	16.0	12.4	7.6						
	60	26.3	24.4	22.5	20.5	18.3	15.5	11.8	6.8							
	70	24.1	22.2	20.2	17.9	15.0	11.1	5.8								
Shut-off PSI			129	120	111	103	94	85	77	68	59	51	42	34	25	168



MODEL 7GS10 30-80 Hz with 2 HP Motor and 3AS20

SELECTION CHART

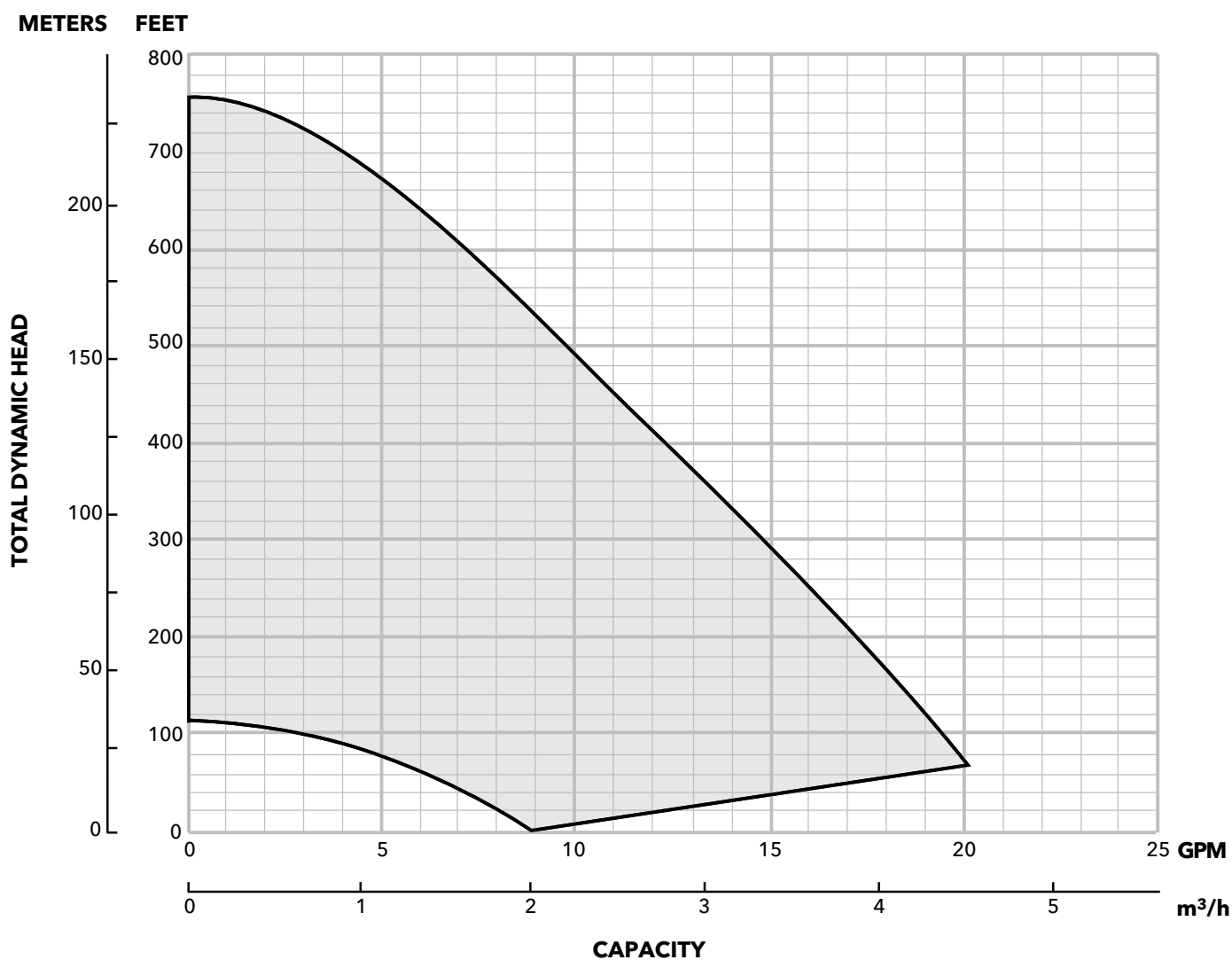
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																							
		80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780
7GS10	0				16.0	15.8	15.6	15.3	14.9	14.6	14.2	13.8	13.4	12.5	11.7	10.9	10.1	9.4	8.7	8.1	7.4	6.7	6.0	5.1	4.1
	50			14.7	14.3	13.9	13.5	13.1	12.6	12.2	11.8	11.4	11.0	10.2	9.5	8.8	8.1	7.5	6.8	6.1	5.2	4.2	3.0		
	60		14.6	14.2	13.8	13.4	13.0	12.6	12.2	11.7	11.3	10.9	10.5	9.8	9.1	8.4	7.8	7.1	6.4	5.6	4.7	3.5	2.1		
	70	14.6	14.2	13.8	13.4	12.9	12.5	12.1	11.7	11.3	10.9	10.5	10.1	9.4	8.7	8.0	7.4	6.7	6.0	5.1	4.0	2.7			
Shut-off PSI		348	339	330	322	313	304	296	287	278	270	261	252	235	218	200	183	166	148	131	114	96	79	62	45



MODEL 10GS10 30-80 Hz with 2 HP Motor and 3AS20

SELECTION CHART

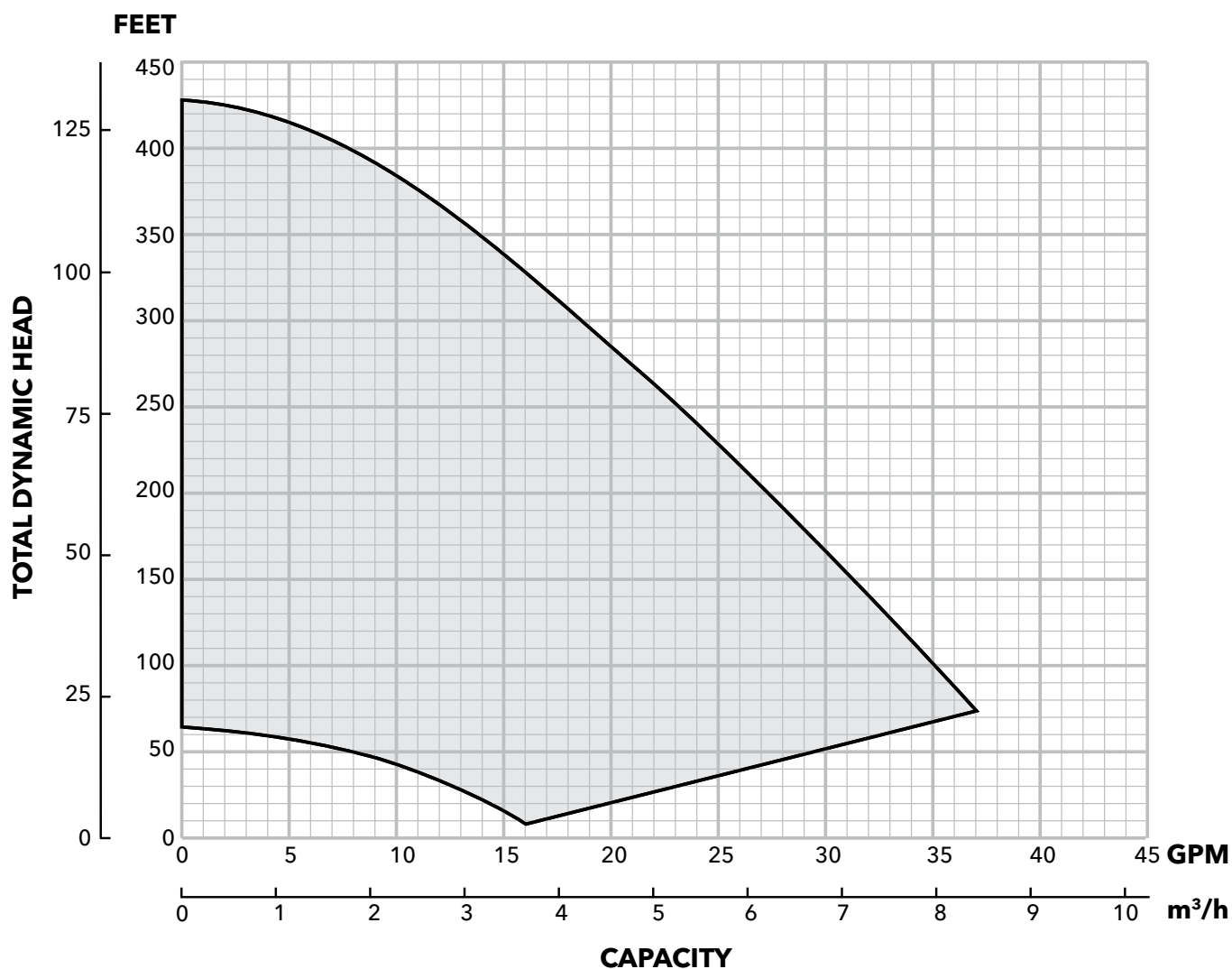
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																			
		20	40	60	80	100	120	140	160	200	240	280	320	360	400	440	480	520	560	600	640
10GS10	0			20.0	19.6	19.3	18.9	18.6	18.2	17.4	16.5	15.6	14.6	13.6	12.6	11.5	10.3	9.1	7.8	6.5	5.1
	50	18.6	18.3	17.9	17.5	17.0	16.6	16.2	15.7	14.7	13.7	12.7	11.6	10.4	9.2	8.0	6.7	5.3	3.9		
	60	18.2	17.8	17.4	17.0	16.5	16.1	15.6	15.2	14.2	13.1	12.1	10.9	9.7	8.5	7.2	5.9	4.5			
	70	17.7	17.3	16.9	16.5	16.0	15.6	15.1	14.6	13.6	12.5	11.4	10.2	9.0	7.8	6.5	5.1	3.7			
Shut-off PSI		318	310	301	292	284	275	266	258	240	223	206	189	171	154	137	119	102	85	67	50



MODEL 18GS10 30-80 Hz with 2 HP Motor and 3AS20

SELECTION CHART

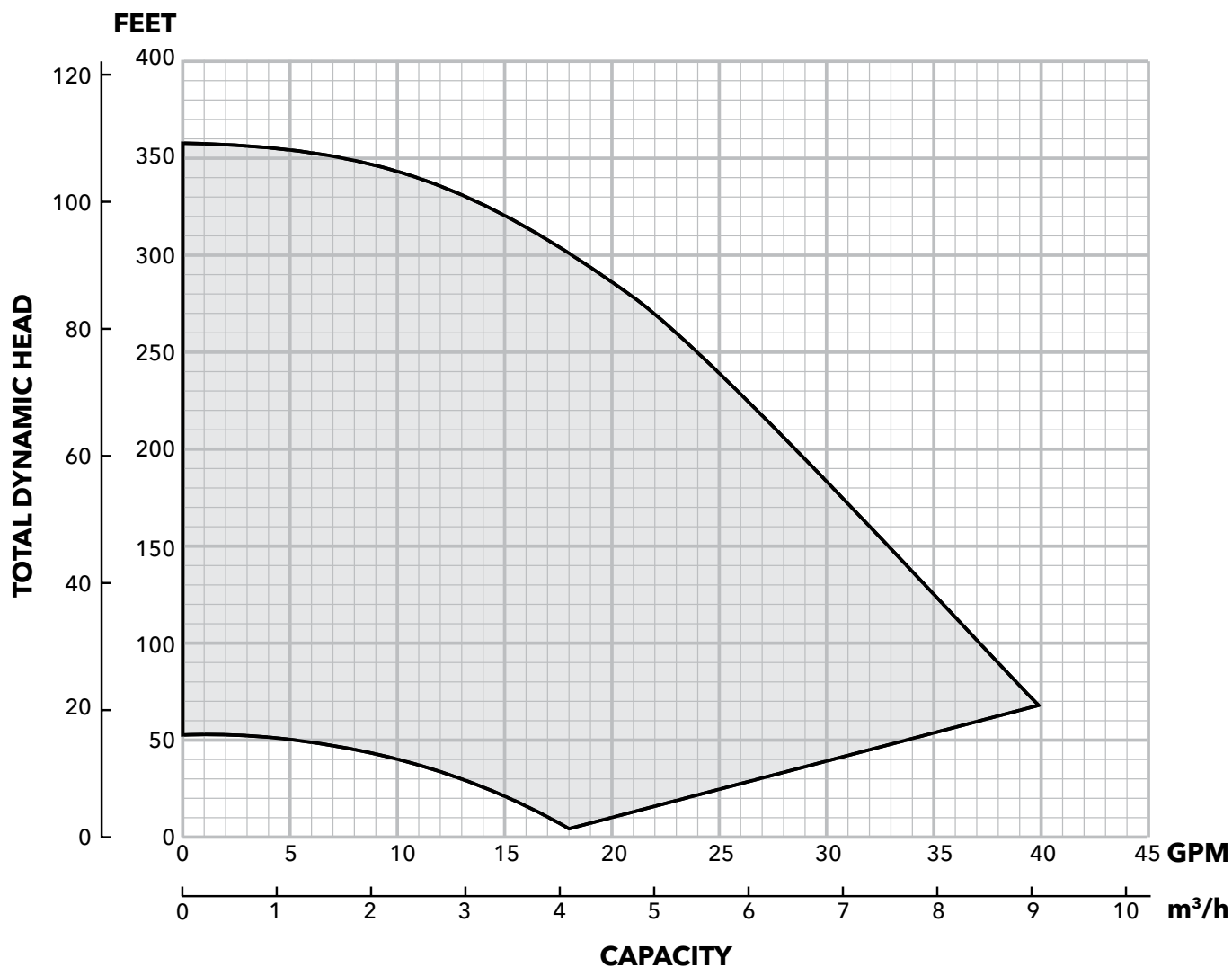
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380
18GS10	0				37.0	35.4	33.7	31.9	30.1	28.4	26.7	25.1	23.5	22.0	20.5	19.0	15.3	10.2
	50	32.3	30.5	28.7	27.1	25.4	23.9	22.4	20.9	19.3	17.6	15.8	13.5	10.9	7.6			
	60	30.2	28.5	26.8	25.2	23.7	22.2	20.6	19.1	17.4	15.4	13.2	10.4	7.1				
	70	28.2	26.5	25.0	23.4	21.9	20.4	18.8	17.1	15.1	12.8	9.9	6.5					
Shut-off PSI		177	168	159	151	142	133	125	116	107	99	90	82	73	64	56	38	21



MODEL 25GS10 30-80 Hz with 2 HP Motor and 3AS20

SELECTION CHART

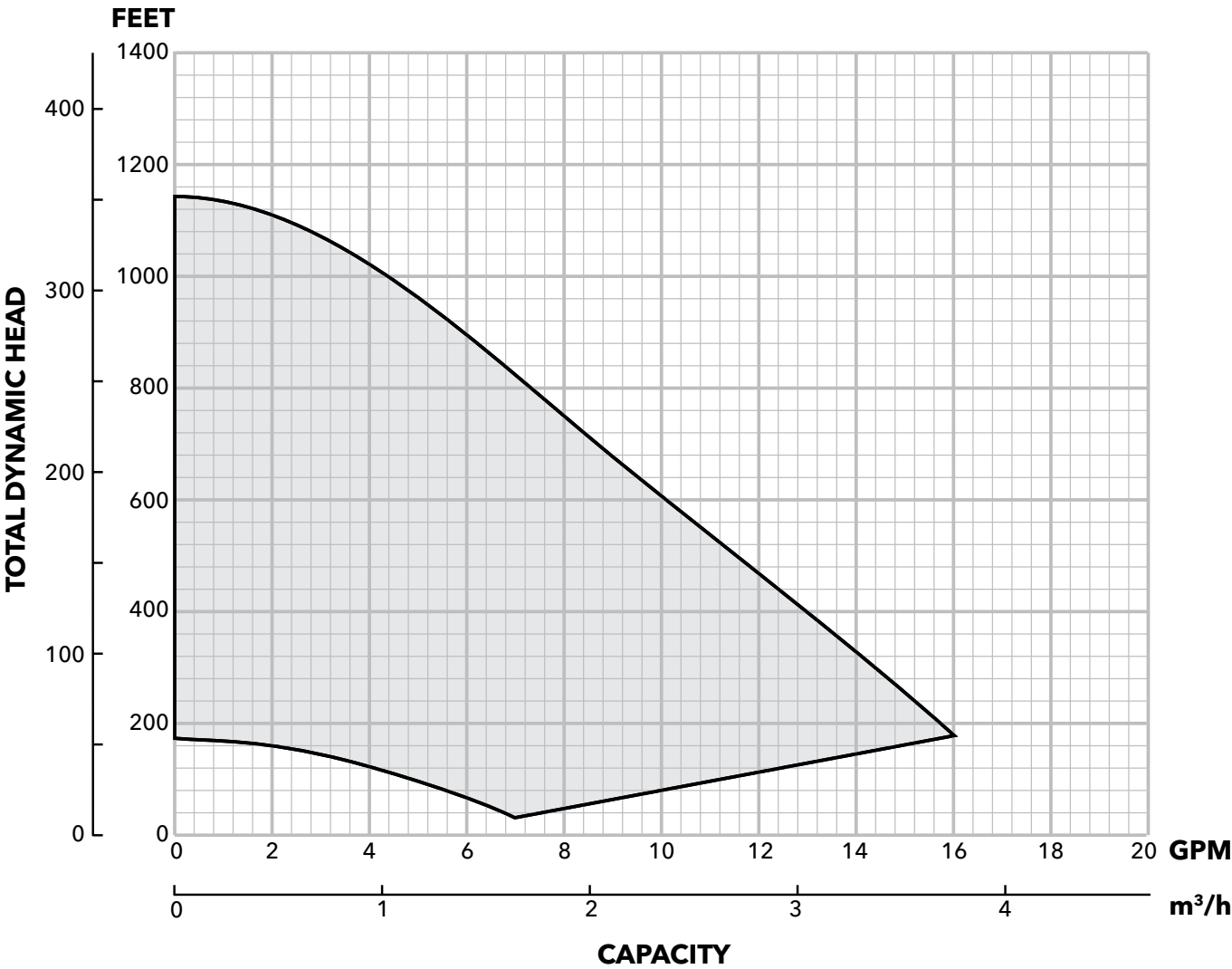
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)															
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340
25GS10	0			39.7	39.7	38.4	36.5	34.2	31.9	29.8	28.0	26.4	25.0	23.5	21.7	19.1	9.4
	50	34.7	32.4	30.3	28.4	26.8	25.3	23.9	22.2	19.8	16.2	10.9					
	60	32.1	30.0	28.1	26.5	25.1	23.6	21.8	19.3	15.5	9.9						
	70	29.7	27.9	26.3	24.9	23.4	21.5	18.8	14.8	8.8							
Shut-off PSI		146	137	129	120	112	103	94	86	77	68	60	51	42	34	25	8



MODEL 7GS15 30-80 Hz with 3 HP Motor and 3AS30

SELECTION CHART

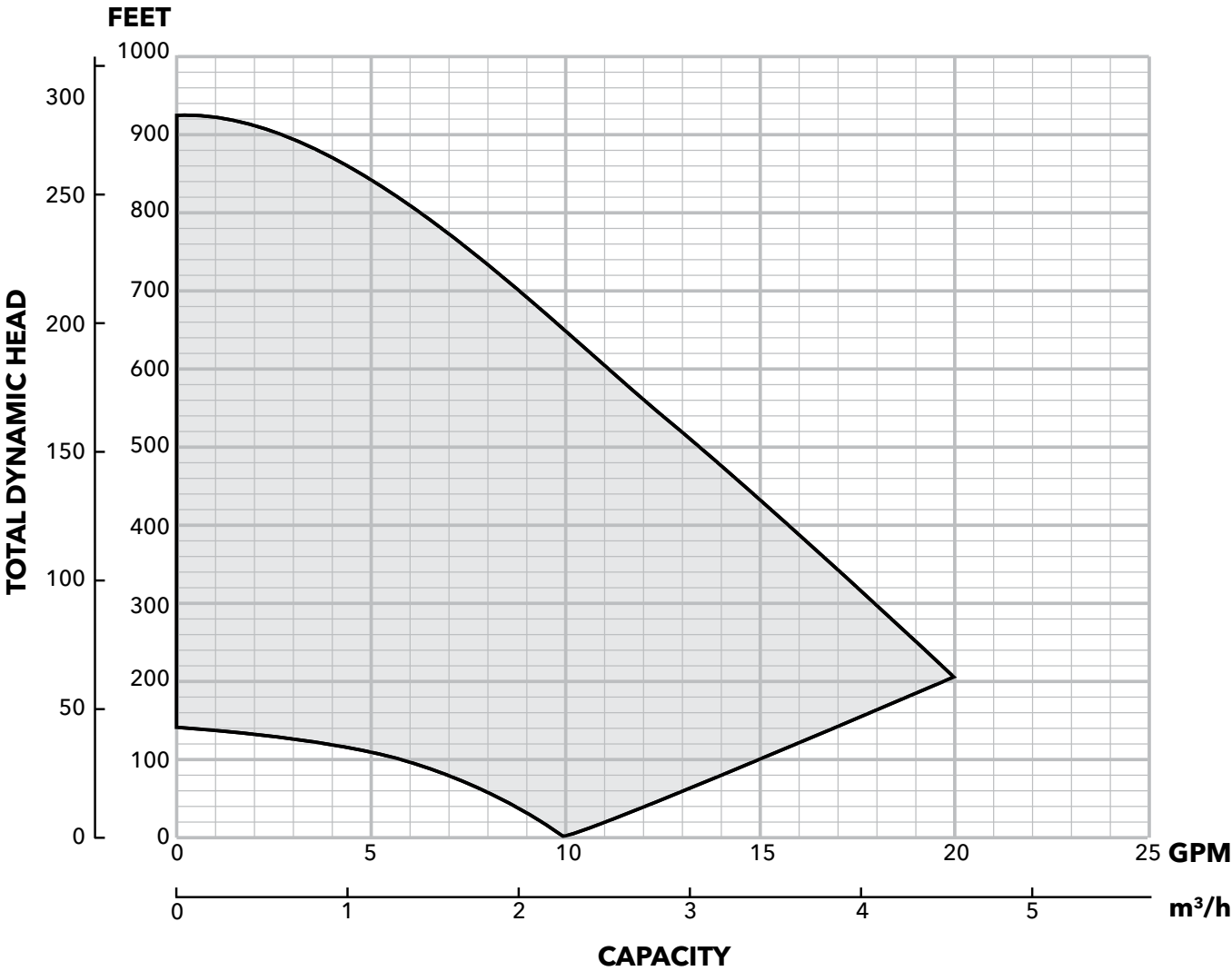
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																														
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860	900	980
7GS15	0						15.8	15.9	15.9	15.9	15.8	15.6	15.5	15.3	15.0	14.7	14.2	13.5	12.8	12.1	11.5	10.8	10.2	9.6	9.0	8.5	8.1	7.6	7.1	6.7	6.1	4.9
	50	15.9	15.9	15.9	15.8	15.7	15.5	15.3	15.1	14.8	14.5	14.2	13.9	13.6	13.2	12.9	12.2	11.5	10.9	10.2	9.7	9.1	8.6	8.1	7.6	7.2	6.7	6.2	5.6	5.0	4.2	2.0
	60	15.9	15.9	15.8	15.6	15.5	15.3	15.0	14.8	14.5	14.2	13.9	13.5	13.2	12.8	12.5	11.8	11.1	10.5	9.9	9.3	8.8	8.3	7.8	7.4	6.9	6.4	5.9	5.3	4.5	3.6	
	70	15.9	15.8	15.6	15.4	15.2	15.0	14.7	14.4	14.1	13.8	13.5	13.1	12.8	12.5	12.1	11.4	10.8	10.2	9.6	9.0	8.5	8.0	7.6	7.1	6.6	6.1	5.5	4.9	4.0	3.0	
Shut-off PSI		486	477	469	460	452	443	434	426	417	408	400	391	382	374	365	348	330	313	296	278	261	244	226	209	192	174	157	140	123	105	71



MODEL 10GS15 30-80 Hz with 3 HP Motor and 3AS30

SELECTION CHART

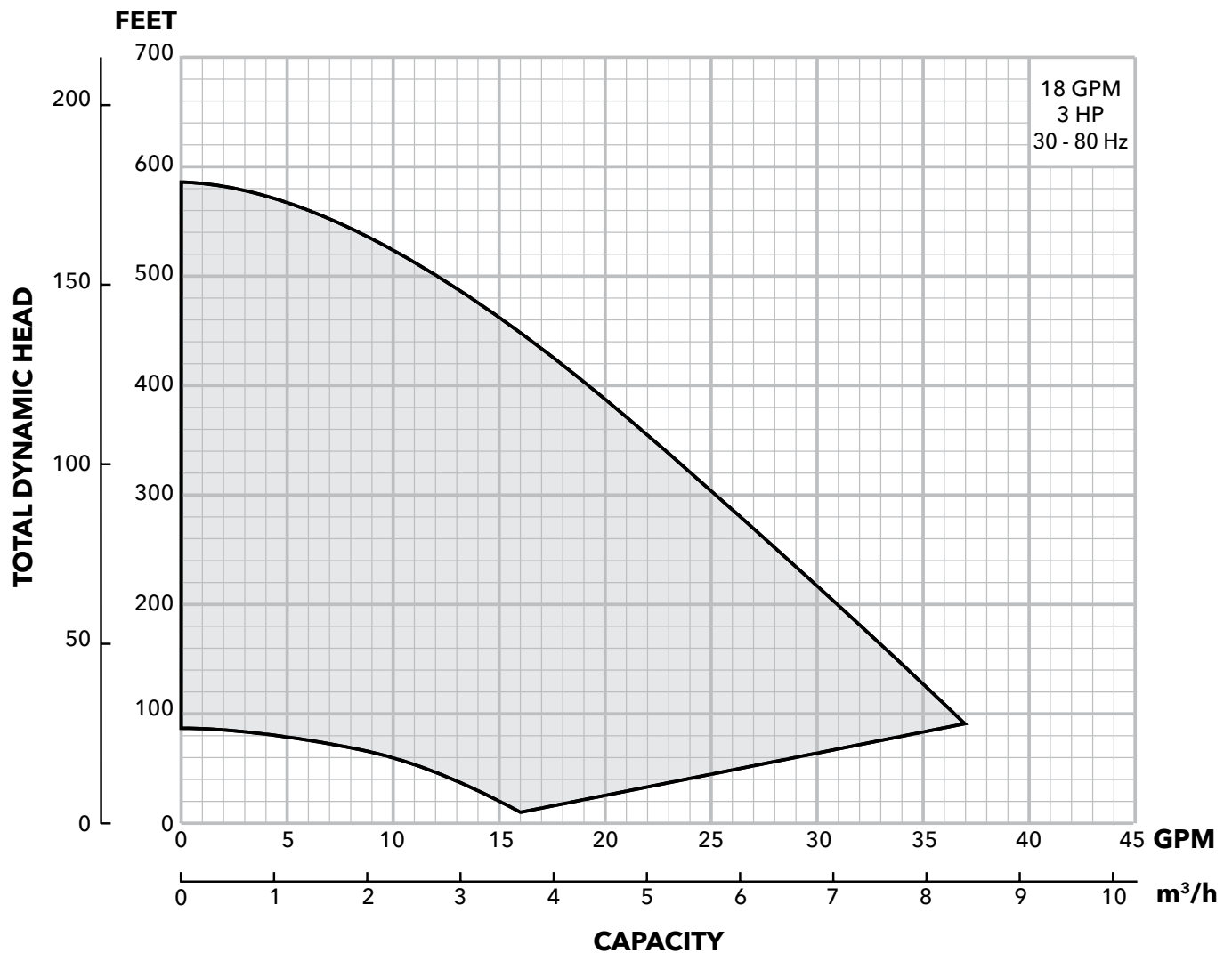
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																									
		80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	
10GS15	0								19.9	19.5	19.0	18.5	18.0	17.0	16.0	15.0	14.1	13.2	12.4	11.6	10.8	10.0	9.2	8.2	7.1	5.8	
	20						19.8	19.3	18.9	18.4	17.8	17.3	16.8	15.8	14.8	13.9	13.0	12.2	11.4	10.7	9.9	9.0	8.1	6.9	5.6	3.9	
	30					19.7	19.3	18.8	18.3	17.8	17.2	16.7	16.2	15.2	14.3	13.4	12.6	11.8	11.0	10.2	9.4	8.5	7.4	6.2	4.6		
	40			20.1	19.7	19.2	18.7	18.2	17.7	17.2	16.7	16.2	15.7	14.7	13.8	12.9	12.1	11.3	10.6	9.8	8.9	7.9	6.7	5.3	3.6		
	50		20.0	19.6	19.1	18.6	18.1	17.6	17.1	16.6	16.1	15.6	15.1	14.2	13.3	12.4	11.7	10.9	10.1	9.3	8.3	7.3	6.0	4.4			
	60	20.0	19.5	19.0	18.5	18.0	17.5	17.0	16.5	16.0	15.5	15.0	14.5	13.6	12.8	12.0	11.2	10.4	9.6	8.7	7.7	6.5	5.1	3.3			
	70	19.4	19.0	18.5	18.0	17.4	16.9	16.4	15.9	15.4	14.9	14.5	14.0	13.1	12.3	11.5	10.8	10.0	9.1	8.2	7.1	5.7	4.1				
Shut-off PSI		368	359	350	342	333	324	316	307	298	290	281	272	255	238	220	203	186	169	151	134	117	99	82	65	47	



MODEL 18GS15 30-80 Hz with 3 HP Motor and 3AS30

SELECTION CHART

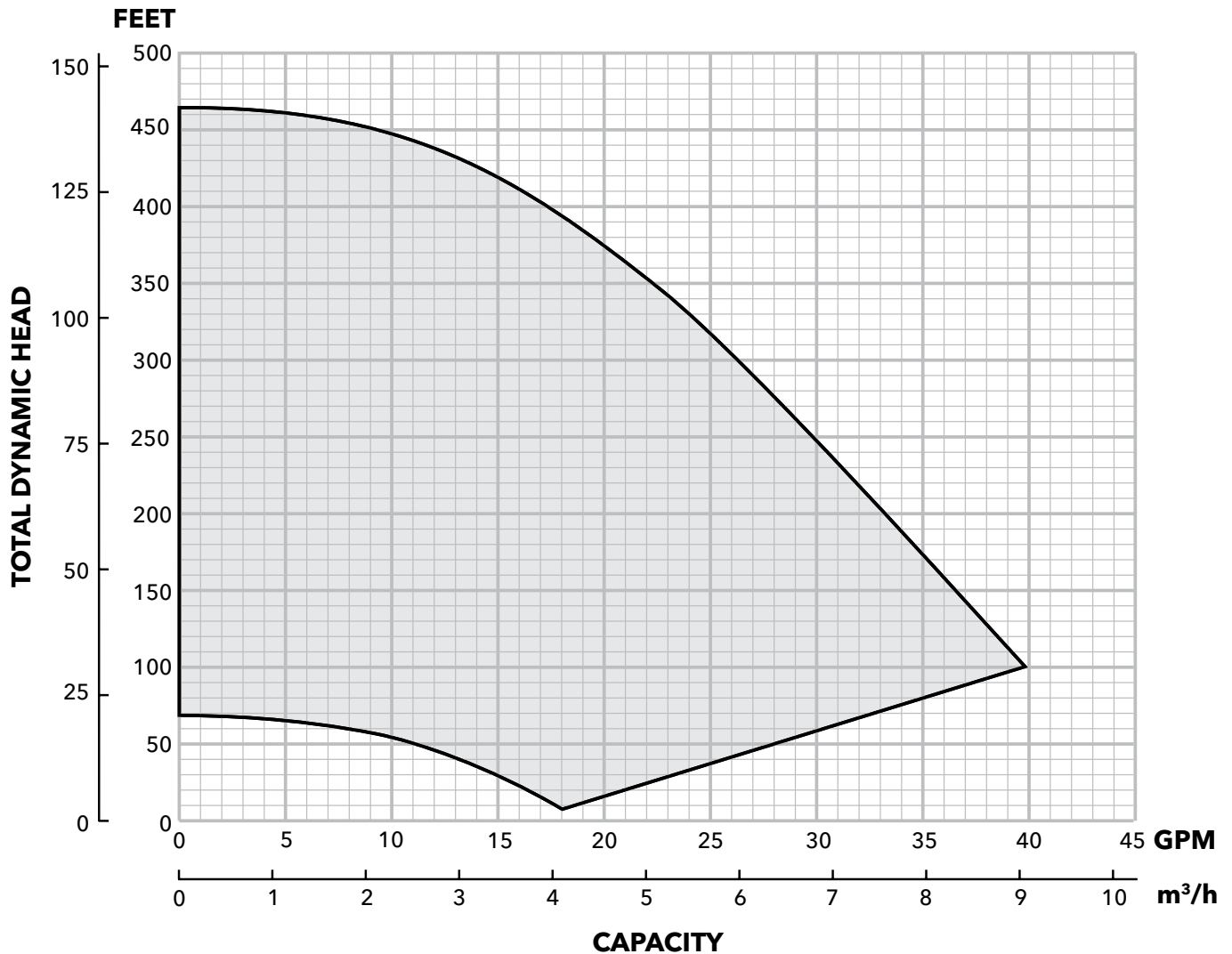
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																				
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540
18GS15	0					37.1	35.9	34.6	33.3	32.0	30.7	29.4	28.2	27.0	25.8	24.7	22.6	20.5	18.3	15.7	12.4	7.9
	50	34.9	33.6	32.3	31.0	29.7	28.4	27.2	26.1	24.9	23.8	22.8	21.8	20.7	19.7	18.5	16.0	12.8	8.5			
	60	33.4	32.1	30.8	29.5	28.2	27.0	25.9	24.8	23.7	22.6	21.6	20.6	19.5	18.4	17.1	14.3	10.5	5.3			
	70	31.9	30.6	29.3	28.1	26.9	25.7	24.6	23.5	22.5	21.4	20.4	19.3	18.2	16.9	15.6	12.2	7.7				
Shut-off PSI		246	237	229	220	211	203	194	185	177	168	159	151	142	133	125	107	90	73	55	38	21



MODEL 25GS15 30-80 Hz with 3 HP Motor and 3AS30

SELECTION CHART

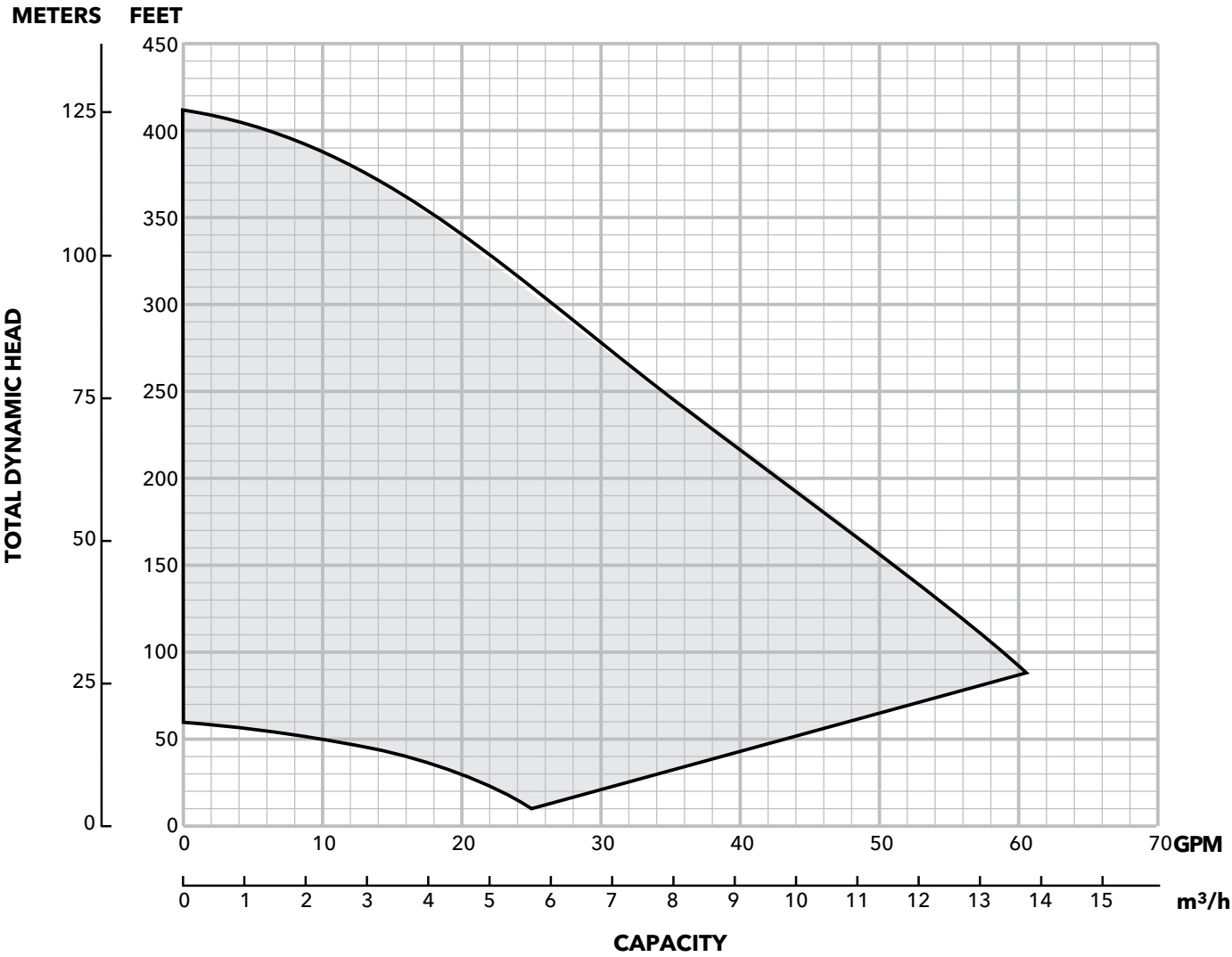
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																
		40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420
25GS15	0							37.0	35.2	33.2	31.3	29.6	28.1	26.8	25.7	23.7	20.9	15.2
	50			33.7	31.7	30.0	28.4	27.0	25.9	24.9	24.0	22.8	21.3	19.2	16.1			
	60		33.4	31.5	29.7	28.2	26.9	25.8	24.8	23.8	22.6	21.1	18.8	15.5	10.8			
	70	33.1	31.2	29.4	27.9	26.7	25.6	24.6	23.6	22.4	20.8	18.3	14.9	10.0				
Shut-off PSI		184	175	166	158	149	140	132	123	114	106	97	88	80	71	54	36	19



MODEL 35GS15 30-80 Hz with 3 HP Motor and 3AS30

SELECTION CHART

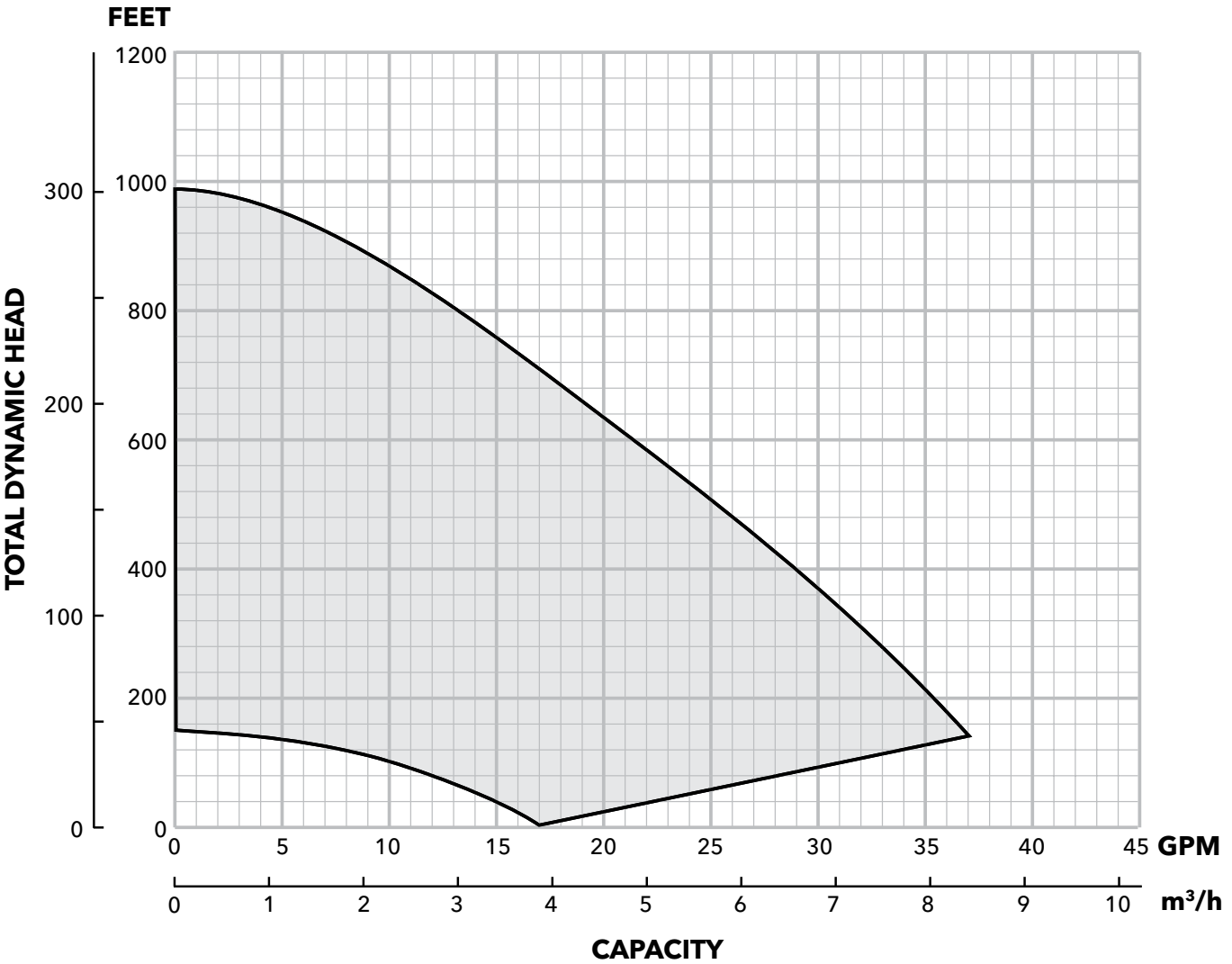
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																			
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400
35GS15	0				61	58	56	53	50	47	44	40	37	33	30	26	22	18	14	10	5
	50	54	51	48	44	41	38	34	31	27	23	19	15	11	6	2					
	60	50	47	44	41	37	34	30	26	22	18	14	10	6	1						
	70	47	43	40	37	33	29	26	22	18	13	9	5								
Shut-off PSI		170	161	153	144	135	127	118	109	101	92	83	75	66	57	49	40	31	23	14	5



MODEL 18GS30 30-80 Hz with 5 HP Motor and 3A550

SELECTION CHART

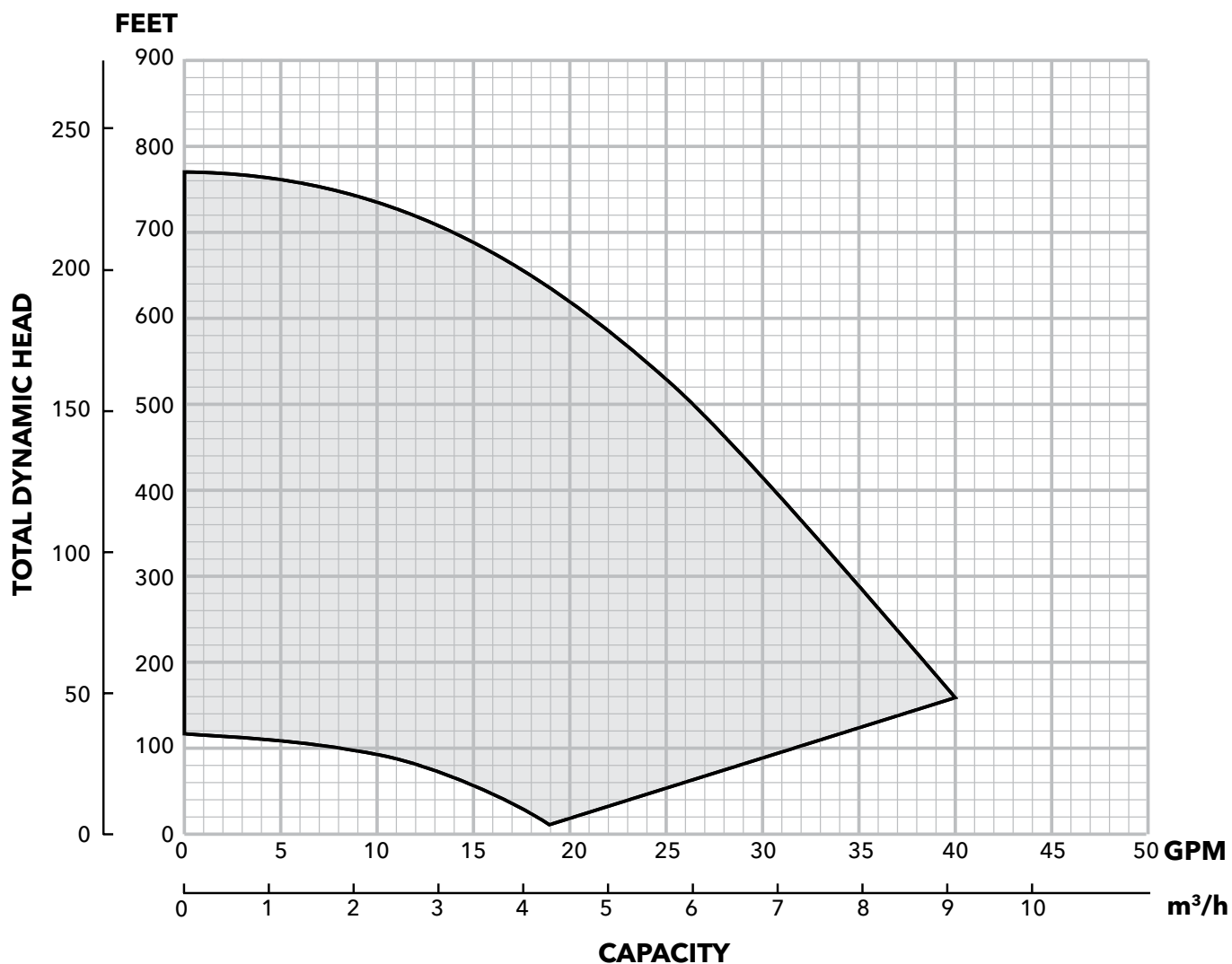
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																										
		60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700	740	780	820	860
18GS30	0							36.6	35.9	35.2	34.5	33.8	33.0	32.3	30.7	29.2	27.7	26.2	24.7	23.3	21.9	20.6	19.2	17.7	16.2	14.5	12.6	10.4
	50			35.4	34.7	33.9	33.2	32.4	31.7	30.9	30.1	29.4	28.6	27.8	26.3	24.9	23.5	22.1	20.7	19.3	17.9	16.4	14.7	12.8	10.6	8.2	5.3	
	60		35.3	34.6	33.8	33.1	32.3	31.5	30.8	30.0	29.2	28.5	27.7	27.0	25.5	24.1	22.7	21.3	19.9	18.5	17.0	15.4	13.6	11.6	9.3	6.5		
	70	35.2	34.5	33.7	33.0	32.2	31.4	30.7	29.9	29.1	28.4	27.6	26.9	26.1	24.7	23.3	21.9	20.5	19.1	17.7	16.1	14.4	12.5	10.3	7.7			
Shut-off PSI		403	394	385	377	368	359	351	342	333	325	316	307	299	281	264	247	229	212	195	177	160	143	125	108	91	74	56



MODEL 25GS30 30-80 Hz with 5 HP Motor and 3A550

SELECTION CHART

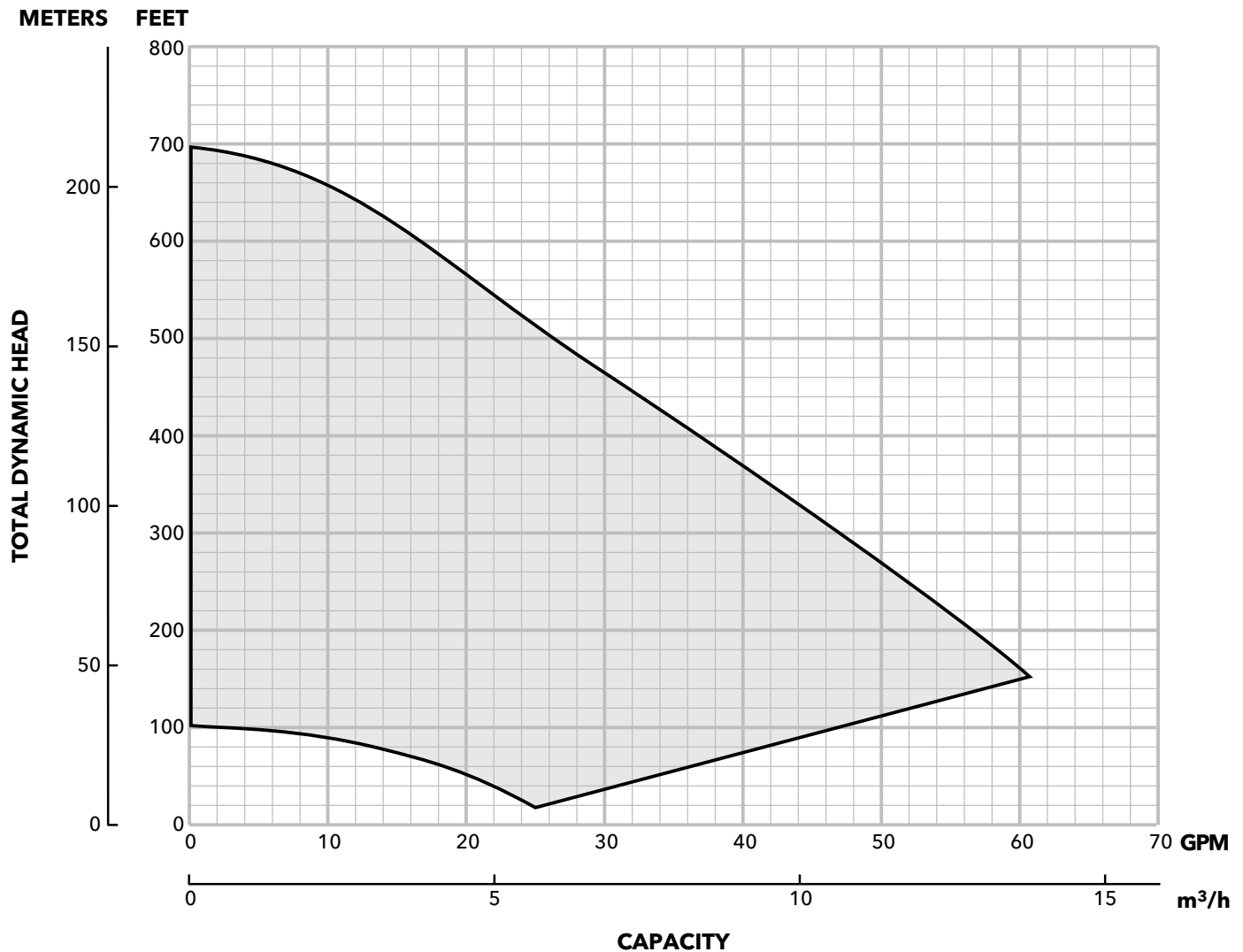
Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																		
		140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	660	700
25GS30	0		39.5	39.0	38.4	37.8	36.9	36.1	34.9	33.9	32.2	30.7	29.3	28.0	26.8	25.4	23.6	21.2	18.0	13.5
	50			34.2	33.2	32.4	31.6	30.8	30.1	29.4	28.2	26.9	25.5	23.8	21.5	18.4	14.1	8.3		
	60		34.0	33.1	32.3	31.5	30.7	30.0	29.3	28.7	27.5	26.1	24.6	22.6	19.8	16.1	11.0			
	70	33.9	33.0	32.1	31.3	30.6	29.9	29.2	28.6	28.0	26.7	25.3	23.5	21.1	17.8	13.3				
Shut-off PSI		273	264	256	247	238	230	221	212	204	186	169	152	134	117	100	83	65	48	31



MODEL 35GS30 30-80 Hz with 5 HP Motor and 3AS50

SELECTION CHART

Pump Model	PSI	Depth to Water in Feet/Ratings in GPM (Gallons Per Minute)																							
		20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	340	380	420	460	500	540	580	620	
35GS30	0							61	60	58	56	55	53	51	49	47	43	39	35	31	26	22	17	12	
	50		60	58	57	55	53	51	49	48	46	44	42	40	38	35	31	27	22	17	13	8	3		
	60	60	58	56	55	53	51	49	47	45	43	41	39	37	35	33	29	24	19	15	10	5			
	70	58	56	54	53	51	49	47	45	43	41	39	37	35	33	30	26	21	17	12	7	2			
Shut-off PSI		293	284	275	267	258	249	241	232	223	215	206	197	189	180	171	154	137	120	102	85	68	50	33	



WIRE SIZING - MAXIMUM CABLE LENGTHS IN FEET TO LIMIT VOLTAGE DROP TO 5% FOR 230 V SYSTEMS ^⑤

Service Entrance to Controller

Controller Input	Motor HP	Copper Wire Size 75°C Insulation Exposed to a Maximum of 50°C (122°F) Ambient Temperature ^⑥															
		14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	300	350	400	500
230V 1 PH	½	366	583	925	1336	2107	3345	5267	8364								
	¾	279	445	706	1020	1608	2552	4019	6383	8055							
	1	226	360	571	824	1300	2064	3250	5161	6513	8201						
	1½	*	286	455	657	1036	1644	2589	4111	5188	6533	8236	9710				
	2	*	*	331	478	754	1197	1886	2995	3779	4759	5999	7073	8455	9852		
	3	*	*	246	355	561	890	1401	2225	2808	3536	4458	5256	6283	7321	8343	
	5	*	*	*	218	343	545	858	1363	1720	2165	2730	3219	3847	4483	5109	6348

Controller to Motor

Controller Output	Motor HP	Copper Wire Size 75°C Insulation Exposed to a Maximum of 50°C (122°F) Ambient Temperature ⑥													
		14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	300	
230V 3 PH	½	905	1442	2290	3306	5213	8276								
	¾	690	1100	1748	2523	3978	6316	9945							
	1	558	890	1413	2040	3216	5106	8041							
	1½	445	709	1126	1625	2562	4068	6406							
	2	324	516	820	1184	1866	2963	4666	7410	9351					
	3	241	384	609	880	1387	2202	3467	5506	6949	8750				
	5	*	235	373	539	849	1348	2123	3372	4255	5358	6755	7964	9520	

^⑤ Reduce lengths by 13% for 200 V systems. ^⑥ Lengths in bold require 90°C wire. Shading indicates 40° C maximum ambient. * Wire does not meet the N.E.C. ampacity requirement.

The lengths in each of the Wire Sizing tables represent 100% of the allowable voltage drop when motor is running at full load. When sizing wire, the voltage drop of each wire segment must be included. The total must not exceed 100% of the allowable drop. Take for example a 1.5 HP motor with a distance from Service Entrance to Controller of 100' and 500' between the Controller and Motor.

- Service Entrance to Controller = 100' of 10 AWG (100/455) = 22 % (455' is from the S.E. to Controller chart)
- Controller to Motor = 500' of 12 AWG (500/709) = 71 % (709' is from the Controller to Motor chart)
- Total Drop (must be ≤ 100%) 93 %

If the distance from the Controller to Motor was 600' (600/709) = 85% + 22% = 107%, we would need to use #10 wire for that segment, ex. 600/1126 = 53% + 22% (for 100' of #10) = 75% which is acceptable. It is also acceptable to use different wire sizes for the Buried and Well sections of wire.

AQUAVAR SOLO² DATA

Controller, Breaker, Generator Sizing

3 Phase Motor		Controller Model ^②			Circuit Breaker ^③	Generator ^④ (VA)
HP	Voltage ^①	3AS20	3AS30	3AS50		
¾	230				15	2900
	200					
1	230				20	4400
	200					
1½	230				30	6100
	200					
2	230				40	8100
	200					
3	230				50	13300
	200					

Service Factor Amps 3 Phase Motors

HP	230 Volt, 3Ø		200 Volt, 3Ø	
	GWT SFA	Franklin SFA	GWT SFA	Franklin SFA
¾	3.9	3.8	4.5	4.4
1	4.7	4.7	5.5	5.4
1½	6.1	5.9	7.2	6.8
2	7.6	8.1	8.8	9.3
3	10.1	10.9	12	12.5
5	17.5	17.8	20.2	20.5

NOTES:

- ① Motor Nameplate must be the same as supply voltage.
- ② Shaded areas indicate which controller models can be used with which motors. Lighter shading indicates combinations where controller will limit peak performance to 85% of catalog value for pump/motor.
- ③ Circuit Breaker or Dual Element Time Delay Fuse Size (Amps) protecting branch circuit supplying controller.
- ④ Minimum size of single phase 240 V generator required.

THREE PHASE, 4", MOTOR DATA

Electrical Data, 60 Hertz, 3450 RPM, 4" Motors

Goulds Water Technology #	Red Jacket #	HP	kW	Volts	SF	Full Load		Service Factor		Locked Rotor Amps	Line - Line Resistance
						Amps	Watts	Amps	Watts		
M07430	75C323	0.75	0.55	200	1.5	3.8	812	4.5	1140	32	2.6-3.0
M10430	100C323	1	0.75		1.4	4.6	1150	5.5	1500	29	3.4-3.9
M15430	150C323	1.5	1.1		1.3	6.3	1560	7.2	1950	40	1.9-2.5
M20430	200C323	2	1.5		1.25	7.5	2015	8.8	2490	51	1.4-2.0
M30430	300C323	3	2.2		1.15	10.9	2890	12.0	3290	71	0.9-1.3
M50430	500C323	5	3.7		1.15	18.3	4850	20.2	5515	113	0.4-0.8
M07432	75C313	0.75	0.55	230	1.5	3.3	850	3.9	1185	27	3.3 - 4.3
M10432	100C313	1	0.75		1.4	4.0	1090	4.7	1450	26.1	4.1-5.1
M15432	150C313	1.5	1.1		1.3	5.2	1490	6.1	1930	32.4	2.8-3.4
M20432	200C313	2	1.5		1.25	6.5	1990	7.6	2450	44	1.8-2.4
M30432	300C313	3	2.2		1.15	9.2	2880	10.1	3280	58.9	1.3-1.7
M50432	500C313	5	3.7		1.15	15.7	4925	17.5	5650	93	.85-1.25

Diaphragm Tank Sizing and Pre-Set Pressure Recommendations:

Diaphragm type (captive air) tanks are required on these systems.

Table 1: Tank Sizing Selection

Maximum Pump GPM	Recommended Tanks		
	Total Volume	Order No.	or Order No.
10	2	V6P	TP6P
23	4.5	V15P	TP15P
41	8.2	V25P	TP25P
70	13.9	V45	TP45
100	19.9	V60	TP60

Use Total Tank Volume, not drawdown volume, to select the proper tank size. The total tank volume should be approximately 20% of the pump's maximum flow. For example, when using a 10 gpm pump the system requires a minimum 2 gallon (total volume) tank.

The tank sizing recommendations are field proven to prevent objectionable pressure drops on start-up and provide smooth operation for the majority of variable speed pump systems.

Set the tank pressure, while tank is empty of water, to 20 psi below the desired system pressure setting. Ex. for a 50 psi system pressure, charge the tank to 30 psi.



Water system accessories



FEATURES

Gauges

Pressure Control Valves

Well Seals

Air Volume Controls

Valves and Fittings

Motor Adapter

Gauge Guard

Air Relief Valve

ACCESSORIES - FITTINGS

GAUGES



AG5 Pressure Gauge:
Quality 100 lb. pressure gauge for pneumatic tank service. Threaded 1/4" male pipe.

AG2 Pressure Gauge:
Quality 200 lb. pressure gauge for pneumatic tank service. Threaded 1/4" male pipe.

TURNED COUPLING



64655 Turned Coupling:
1 1/4" for use with Packer System P-2 Packages, where well diameter does not permit use of standard coupling.

PRESSURE CONTROL VALVES



AV1: For use with Goulds Water Technology Series GH Deep Well Water System.



AV21: For use with Series SJ.

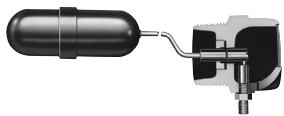


AV22KIT: For use with Series JRD, J+, HSJ Deep Well Jet Systems.

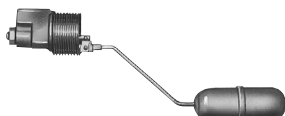
Part No. **ADAPT46** is available for installations where a 6" motor is desired. The kit contains a 4" x 6" adapter, a 4" to 6" splined shaft extension and required bolts. Connects a 4" water end to a 6" motor.



AIR VOLUME CONTROLS



AA1 Air Volume Control for Series BF Pumps: The AA1 air volume control admits air when needed and automatically maintains the proper volume. Control body threaded 1 1/4" pipe size. Weight 1 lb. Tubing not included.



AA4 Air Escape Control for Submersible Pumps: Excess air is vented from the tank through the body of the air volume control. Control body threaded 1 1/4" pipe size for mounting in hole on side of the tank. Has 1/4" pipe tapping on the top side of the body for gauge or pressure switch installation. Control good for 150 lbs. maximum working pressure. Weight 1 1/4 lbs.



AA8-7 Air Volume Control for Jet Pumps: Diaphragm type air volume control for mounting on side of tank. Plastic spring insert protects against scratching. Threaded 3/8" male for tank connection. 1/8" x 1/4" connector for 1/4" copper tubing. No tubing or fittings included.



AA7 Air Valve: For use in connection with air volume control AA1 or AA2. Also used with floating disc style tanks.



4K170 Snifter Valve: Installed in check valve AV9 used on submersible installations with drain and "Y" fitting.

Note: replaces AA10.

6K210 GAUGE GUARD

Features:

- Protects transducers and pressure switches from dirt, corrosion and vacuum conditions.
- Hermetically-sealed, molded unibody construction - avoids possibility of leaks.
- Glass-filled Polypro® bodies for chemical compatibility and maximum temperatures to 100° F.
- Housing is glass-filled Polypropylene.
- Each gauge guard features a durable and flexible Buna-N diaphragm which serves as a protective barrier between the process fluid and instrument.

Maximum Pressure Ratings:

<u>Liquids</u>	<u>Maximum Temperature</u>
200 PSI (13.8 bars)	100° F (38° C)



VALVES AND FITTINGS



AV5 Foot Valves: Lead-free silicon bronze body with stainless steel strainer.

Order No.	Pipe Size	Outside Diameter
AV5-07	¾"	1 11⁄16"
AV5-10	1"	1 15⁄16"
AV5-12	1 ¼"	2 ¼"
AV5-15	1 ½"	2 7⁄8"
AV5-20	2"	3 ½"



AV6 Check Valves: Lead-free silicon bronze construction.

Order No.	Pipe Size
AV6-10	1"
AV6-12	1 ¼"
AV6-15	1 ½"
AV6-20	2"
AV6-30I (iron)	3"
AV6-40I (ductile iron body)	4"



AV11 Drain and "Y" Fittings: The drain fitting set at a 45° angle in the "Y" fitting to insure positive action in the air charging cycle. Its simple construction is designed to provide trouble-free service. Includes AV11-21 ball valve.

Order No.	Pipe Size
AV11-10	1"

AV11-21 Ball Valve Assembly: For all AV-11 drain and "Y" fittings.



AV12 Relief Valves: It is desirable to use this lead-free silicon bronze relief valve with any pump capable of producing more than 75 psi at the tank. Relief valve must be sized for pump capacity in GPH.

Order No.	Size	Pressure Setting	Capacity GPM
AV12-05	½"	75±10 PSI	up to 12
AV12-07	¾"	75±10 PSI	13-17
AV12-10	1"	75±10 PSI	17-28
AV12-12	1 ¼"	65±10 PSI	28-38



AV19 Check Valve Control Center: Has two ¼" pipe tappings and two ⅛" pipe tappings. Lead-free silicon bronze construction.

Order No.	Pipe Size
AV19-10	1"

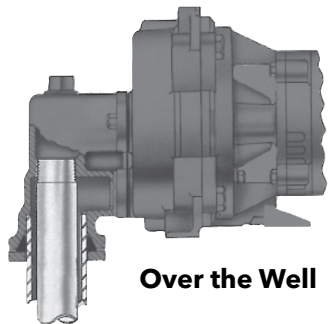


Tank Cross Tees

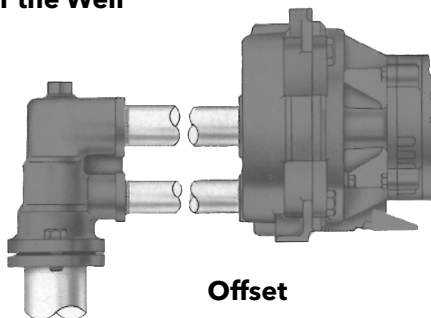
Order No.	Description
AV20-10	1" x 10" with (2) ¼" and (1) ½" holes
AV20-11	1" x 10" with (2) ¼" and (2) ½" holes
AV20-12	1 ¼" x 13" with (2) ¼" and (1) ¾" holes

TYPICAL INSTALLATIONS

Horizontal Jet Pumps



Over the Well



Offset

Vertical Jet Pumps

With AWD Adapter



AW42 - Adapter is used to comply with State of Michigan requirements for enclosed suction line. It can be used as an offset adapter for 2" wells instead of using a well casing tee.

Deep Well Packer Adapter

FOR USE WITH JET PUMPS

WELL HEAD FITTINGS



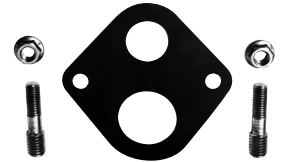
AWJ2 - 2" Packer Adapter:
Well casing adapter for
Goulds Water Technology
Series J+, JRD and HSJ jet
pumps

AW42:** Well casing adapter
for Goulds Water Technology
Series SJ pumps



AW40*: Well casing adapter
for Goulds Water Technology
Series J+, JRD and HSJ jet
pumps

SRPA: Converts Goulds Water
Technology Series SJ Pumps
to Sta-Rite 2" Packer Pumps



AWD2: Well casing adapter
for Goulds Water Technology
Series SJ jet pumps

*AW40 is used to comply with State of Michigan requirements for offset installations from 2" or 3" diameter wells.

**AW42 can be used to comply with State of Michigan requirements for offset installations from 2" or 3" diameter wells.

AW42 cannot be used as well casing adapter for 3" diameter wells.

PRESSURE SWITCHES

FEATURES

- AS3 Blue - 20/40
 - AS4 Blue - 30/50
 - AS5 Blue - 40/60
 - AS10 Blue - 30/50
 - AS14 Gray - 30/50
 - AS16 Black - 20/40
- Individually cartoned switches designed for aftermarket sales
 - All Models feature adjustable cut-in and cut-out settings
 - Differential is pre-set at 20 psi with some adjustment capability
 - Plumbing connection - 1/4" NPT female threads



PRESSURE SWITCH OFFERING 2008

Order No. Individually Cartoned	Brand	Cover Color	PSI Setting / Maximum Pressure	Maximum HP Rating			
				1Ø		3Ø	
				115V	230V	230V	460V/575V
AS3	Goulds	Blue	20-40 / 100	1.5	2	3	—
AS4			30-50 / 100				
AS5			40-60 / 100				
AS10			30-50 / 100	2	3	5	
AS14	Square "D"	Gray	30-50 / 200	2	5	5	5
AS16 ¹		Black	20-40 / 65	1.5	2	3	—

¹ Low pressure cut-out switch, turns off (cuts-out) on 10 PSI drop in pressure

IMPORTANT: When used with motors which exceed ratings given, switch must be wired to the pilot circuit of a magnetic starter or contactor.

■



FEATURES

Quickly and easily calibrates any submersible or centrifugal pump to jobsite conditions (voltage and current).

Available installed in new QD style, NEMA 3R Rainproof (outside) enclosures or shipped loose for installation in existing control panels.

Single phase units work with the hand held Informer for simple, fast troubleshooting and system diagnostics.

Available in single and three phase models.

Insider Plus models fit in Goulds Water Technology, Pentair and Franklin Electric Quick Disconnect type control boxes from ½ - 1 HP. Insider Plus units include a Fiber Optic Kit as standard. It is used to signal the optional Informer.

Protect against dry wells, low and high voltage, over and under current, rapid cycling, jammed pump, dead heading (flow restriction).

Automatic reset selectable, 2-225 minutes or can be set on manual reset.

Adjustable underload sensitivity on Plus models.

PumpSaver® Plus Insiders

PumpSaver Plus 111 and 233

777KWHP - 3 Phase

PUMPSAVER PLUS 111 / 233 AND 23315



APPLICATIONS - SINGLE PHASE ONLY

- All submersible pumps, regardless of motor manufacturer
- Centrifugal pumps
- Circulating pumps
- Cooling pumps
- Environmental pumps
- Residential water wells
- Commercial water wells
- Irrigation wells
- Golf course systems

Protects From:

- Dry well (run dry condition)
- Flow restrictions (dead head)
- Over current (jammed impeller)
- Over voltage
- Under voltage
- Rapid cycling

PLUS MODEL FEATURES

- Can be calibrated to specific pump / motor combinations and various conditions
- Will work with destaged pump models ending in 05R
- Infrared LED communication with the INFORMER makes diagnostics simple
- "Run Light" indicates the unit is functioning
- "Run Light" and "Cal. Light" used as diagnostic indicators
- Restart delay can be set up to 225 minutes or placed in manual reset mode
- Micro-controller provides better accuracy and higher reliability than analog designs
- Plus units feature more data storage memory which is viewable using an Informer
- Sensitivity adjustment for dry well trip point
- Installing PumpSaver Plus equipment on all your installations allows fast, simple troubleshooting with an Informer, eliminate guesswork, get all the data within minutes of arriving at a jobsite.
- 5-year warranty

ORDER NUMBERS AND SPECIFICATIONS

						Enclosure Provided	
Order No.	SymCom New Part Numbers **	Phase	Notes	HP Range	Voltage	Yes / No	Type
111Insider	111-Insider-P	1	1	1/3 - 1	115	N/A	N/A
231Insider	231-Insider-P		1		230	N/A	N/A
111	111P		–		115	No	–
1113RL	111P-ENCL		2		115	Yes	QD - ENCL
233153RL	233P-1.5-ENCL		2	1/3 - 1½	230	Yes	QD - ENCL
2333RL	233P-ENCL		2	1/3 - 3	230	Yes	QD - ENCL
777KWHP		3	–	1/3 - 150	200-480	No	–

** - P signifies the Plus version which has enhanced electronic features and memory.

** - ENCL denotes the new, N3R QD Enclosure effective July/August 2009.

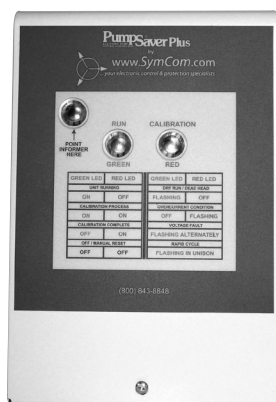
NOTES:

- 1 - The Insiders install in submersible single phase quick disconnect control boxes and require no enclosure.
- 2 - Models with a ...3RL suffix are installed in a NEMA 3R enclosure which has both Run and Calibrate lights.
- 3 - Models contain a current transformer.

ACCESSORY ORDER NUMBERS

INFORMER	Hand Held Diagnostic Tool
----------	---------------------------

OUTSIDE OF NEW N3R - ENCL



INSIDE OF NEW N3R - ENCL WITH A 233P INSTALLED



Dimensions: 3.5" deep, 5.4" wide, 8" high
 Knockouts: ½" (1 each side, 2 bottom)
 ¾" (1 each side, 1 bottom)

PUMPSAVER 111INSIDER (115V) AND 231INSIDER (230V)



APPLICATION

- Submersible pump with a quick disconnect style control box

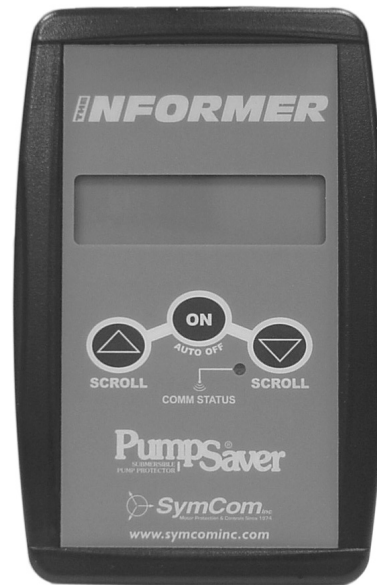
Protects From:

- Dry well (run dry condition)
- Flow restrictions (dead head)
- Over current (jammed impeller)
- Over voltage
- Under voltage

FEATURES

- Fits inside a 3 wire quick disconnect style control box
- Can be calibrated to specific pump / motor combinations and various conditions
- Will work with destaged pump models ending in 05R
- Infrared LED communication with the INFORMER makes diagnostics simple
- Quick and easy installation - less than 30 seconds
- "Run Light" indicates the unit is functioning
- "Run Light" and "Cal. Light" used as diagnostic indicators
- Restart delay can be set up to 225 minutes or placed in manual reset mode
- 5-year warranty

INFORMER



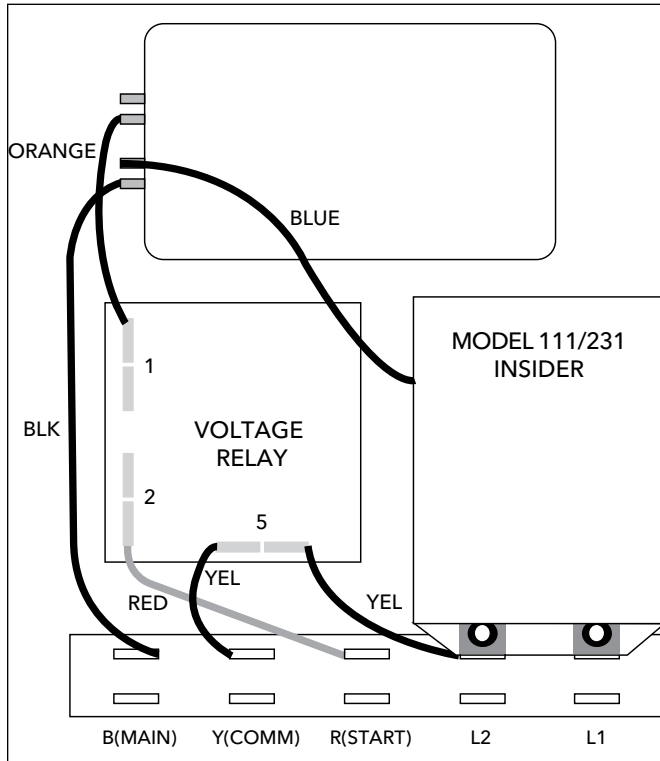
FEATURES

- The Informer is a handheld diagnostic tool designed for use with single-phase PumpSaver models.
- The Informer uses an infrared receiver to access data sent from the PumpSaver, which can be helpful for troubleshooting the system.

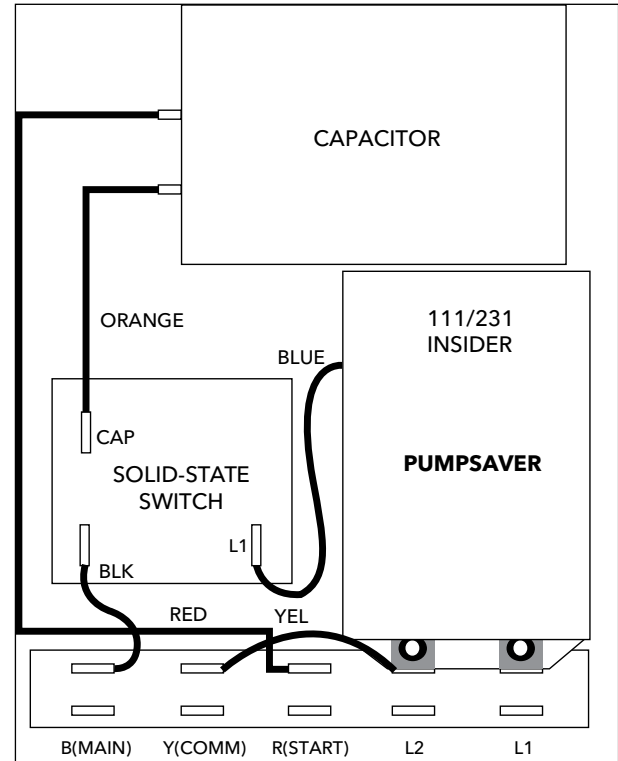
The Informer displays parameters including:

- Real-time voltage, current and power
- Dry-well and overload trip points
- Calibration voltage
- Last 20 fault conditions
- Voltage, current and power at last fault condition
- Highest/lowest voltage and current since last calibration
- Line power and dry well trip point
- Total pump run time
- Number of pump starts
- Restart delay setting and time maining (if tripped)
- Pump amperage

GOULDS WATER TECHNOLOGY CONTROL BOX WITH INSIDER INSTALLED



INSIDER MOUNTED IN FE, Q-D SUBMERSIBLE CONTROL BOX



To install in CP, QD control box:

- Remove the cover from the front of the 3-wire Goulds Water Technology control box.
- Remove the yellow wire from the terminal strip at L2.
- Remove the black wire between L1 and the capacitor.
- Press the PumpSaver onto the L1 and L2 terminals.
- Reconnect the yellow wire to L2 on the PumpSaver.
- Connect the blue wire attached to the PumpSaver to the dual-lug terminal (with the black wire) of the capacitor.

To install in FE, QD control box:

- Remove blue wire from terminal strip and solid state switch (blue relay) and set aside.
- Remove yellow jumper wire from terminal L2.
- Install Insider by aligning tabs with upper L2 and L1 tabs and pushing onto tabs.
- Connect yellow wire onto L2 terminal on Insider.
- Connect blue wire attached to Insider to L1 on solid state switch (blue relay).

PUMPSAVER 777KWHP



APPLICATIONS

The Model 777-KW/HP can be used on ANY 3-phase motor. Some examples include: Can Pumps, Mag Drive Pumps, Fractional Horsepower Pumps and Motors, Submersible Pumps and Coal Bed Methane Wells.

DESCRIPTION

The Model 777-KW/HP is a fully-programmable motor and pump protection relay with power-monitoring capability. Voltage, current and power measurements are displayed on the three-digit display, as well as fault information and setpoints. The display simplifies troubleshooting and allows the user to easily and precisely configure setpoints. The Model 777-KW/HP has the following adjustable protection features:

STANDARD FEATURES OF 777KWHP

- UL Listed as an overload device
- Digitally programmable for precise customization
- 15 parameters can be programmed for maximum protection
- Alphanumeric LED diagnostic display
- Last fault memory provides instant troubleshooting diagnostics
- Recordable voltage, current, last four faults, KWh usage, and power factor with communications package.
- Compact design saves panel space
- Agency Listings: UL, cUL, CSA, CE
- RS485 communication port
- Tamper guard
- Remote reset
- Surface and DIN rail mount
- 5-year warranty
- Made in U.S.A.

ADJUSTABLE PROTECTION FEATURES OF 777KWHP:

- Low voltage
- High voltage
- Voltage unbalance
- UL Listed/CSA approved overload
- Trip class (5, 10, 15, 20, 30)
- Current unbalance
- Ground fault
- Low power
- High power (via network only)
- Rapid-cycle timer
- Fault/overload restart delay
- Underload restart delay
- Underpower/overpower trip delay

Other user adjustable features include:

- CT/loop multiplier so overcurrent and power setpoints can be made in actual amps, kW or HP.
- Number of restarts after faults - manual, automatic and semiautomatic options.
- Number of restarts after underload - manual, automatic and semiautomatic options
- Network address

Adding the optional RS485MS-2W communications module activates the built-in Modbus RTU bus capabilities.



AWA Alternator Panels

FOR SUBMERSIBLE AND CENTRIFUGAL PUMPS

FEATURES

NEMA 1 steel enclosure

One or two pressure switch operation

Auxiliary contacts - may be used for chemical feed pumps

Includes: Two hand-off-auto switches, two pump run lights, alternator circuit and terminal blocks for external wiring connections

Single Phase Features:

Two motor contactors

$\frac{1}{3}$ - 5 HP, 115/230, 230V

SINGLE PHASE

Model No.	HP	Volts
AWA501	$\frac{1}{3}$ - 3	115/230
AWA502	5	230

OPTIONS

A = NEMA 3R enclosure ①	Please request a quote for a panel with any of these options
B = NEMA 4X enclosure ①	
D = Elapsed time meters (2)	

① Enclosures listed above are dead-front type. All switches and indicator lights would be mounted inside of panel on permanent mounting bracket.

APPLICATIONS

Duplex alternator panel may be used to alternate two submersible or centrifugal pumps.

1. Use one switch for a simple alternating system
2. Use two switches when the system is required to:

Alternate two pumps and start the second pump in the event the first pump cannot meet the system demand.

Auxiliary contacts allow the operation of one or two chemical feed pumps, such as chlorine or ozone injectors.

Custom panels are available for larger motors.

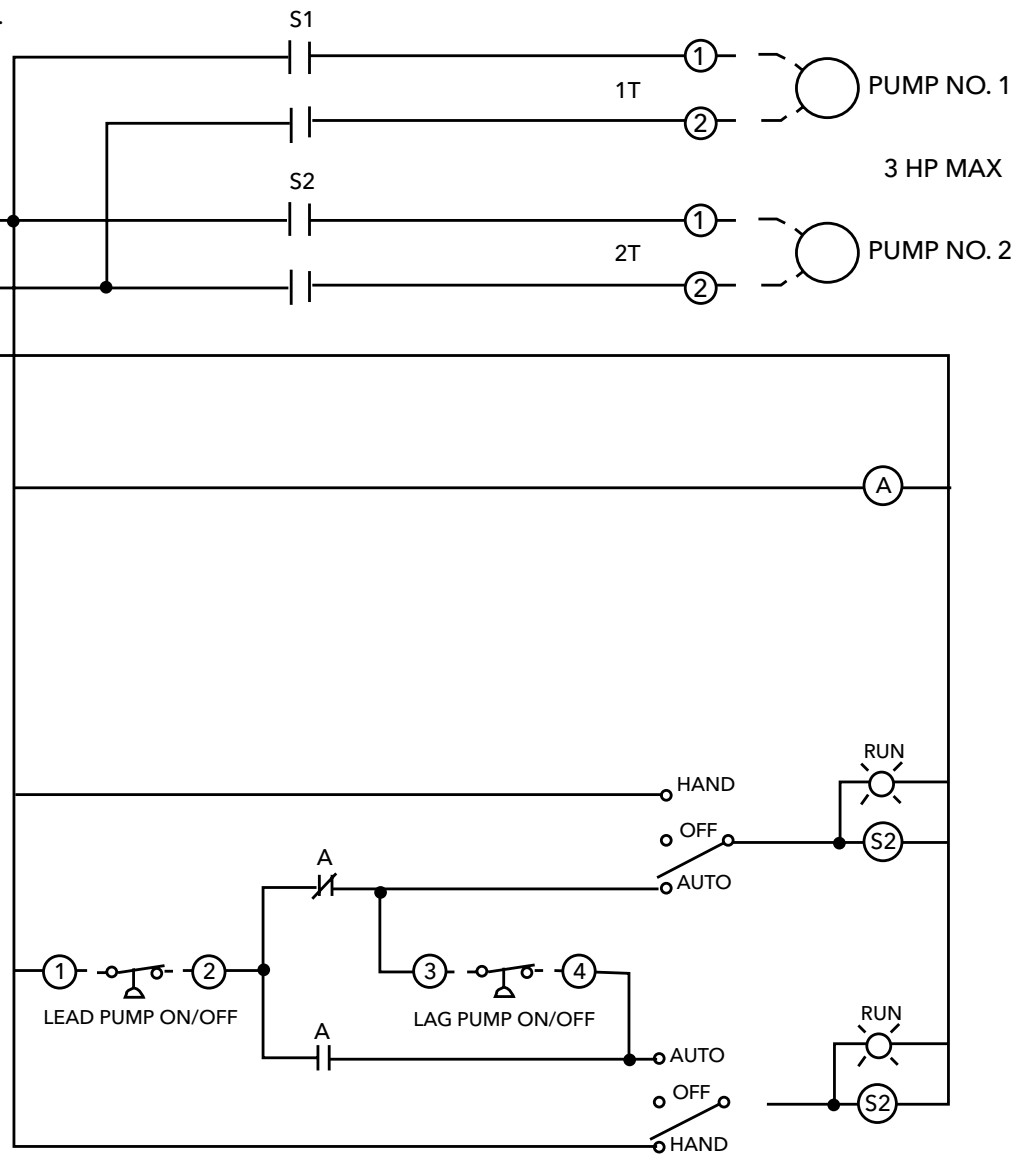
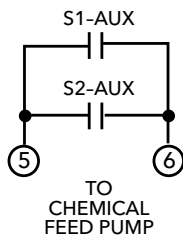
Please fax requests with required enclosure ratings, HP, voltage, phase and any special requirements to Technical Support at (315) 568-7644.

WIRING DIAGRAMS AWA501 / AWA502

FACTORY WIRED FOR 230 VAC.
FOR 115 VAC POWER SUPPLY,
WIRE HOT LEG TO (L1) AND
NEUTRAL TO (L2), JUMP
(L2) TO (N).

230 VAC
SINGLE PHASE
60 HZ

A 230 VOLT SYSTEM
REQUIRES A 4 WIRE
POWER SUPPLY LINE
L1, L2, N AND GND.
WITHOUT A NEUTRAL THE
CONTROL CIRCUIT
WILL NOT WORK.



Electrical Accessories

- REPLACEMENT MOTOR LEADS • CABLE ACCESSORIES
- LIGHTNING PROTECTION DEVICES • BULK CABLE • PACKAGED CABLE

FEATURES

Motor Leads: 4" and 6" Goulds Water Technology Motor Leads

Cable Accessories: Heat Shrink Kits

Packaged Cable for 4" Goulds Water Technology Motors

- No splice required, connector threads into motor
- 2- and 3-wire with ground
- Lengths from 50' to 150'
- Twisted design stranded wire

4" GOULDS WATER TECHNOLOGY MOTOR LEADS

Order No.	Description
AW348C	3-wire 48" with ground and (2) screws
AW3100C	3-wire 100" with ground and (2) screws
AW248C	2-wire 48" with ground and (2) screws
AW2100C	2-wire 100" with ground and (2) screws

6" GOULDS WATER TECHNOLOGY MOTOR LEADS

Order No.	Description	Used On
CPML-10	150", 10 / 4	30 and 50 HP, 3Ø
CPML-8	150", 8 / 4	Optional for 30-50 HP, 3Ø

**Packaged Cable for 4" Submersible Motors
FOR GOULDS WATER TECHNOLOGY 4" MOTORS**

Length in Feet	3-wire Order No.	2-wire Order No.
50	ACPC3050	ACPC2050
100	ACPC3100	ACPC2100
150	ACPC3150	ACPC2150

- AWG 12, stranded copper, twisted design with ground
- XLPE - suitable for potable water
- No underwater splice required
- Goulds Water Technology motor connector attached



HEAT SHRINK TYPE WIRE SPLICE KITS

Order No.	Shrink Tubes	Butt Connectors	Use on
AW25-3	4	(4) # 8	#8 - #12 Wire
AW25-4	4	(4) # 10 - #12	#10 - #14 Wire
AW25-5	3	(3) #10 - #12	#10 - #14 Wire
AW25-6	3 Large & 3 Small	None	#6 - #14

Use for making waterproof connections on submersible cable. Mandatory for use on underwater splices where variable speed drives are used.

Bulk Cable with Ground

AWP15

- Reel lengths 500' or 1000', 2 or 3 wire with ground
- UL listed, NEC standard
- PVC insulated, 600 V, 60°C
- Twisted design
- Solid copper conductor size 14AWG

BULK CABLE

PVC insulation with ground

Order No.	Size No.	Length
AWP15 145	14 3-wire	500 ft.
AWP15 141		1000 ft.
AWP152 145	14 2-wire	500 ft.
AWP152 141		1000 ft.

Sold only in reels

Single Phase Surge Protector

PART NO. AW25-1

- Type 1 rated device
- Flexibility to be used with or without an Overcurrent Protection Device
- Surge suppression for equipment from severe transient activity
- NEMA Type 4X rating suitable for installing indoors, outdoors, or in other harsh environments
- US and Canadian UL Listed
- Complies with requirements of CSA 233.1-8 and CSA C22.2
- LED indicates operational status
- Short circuit current rating: 25 kA





B/W TYPE L.H. RELAY - AW21

Submersible Pump Monitoring Controls

FEATURES

Complete installation requires two electrodes and suspension wire in addition to relay.

Electrodes AW22 – Type E-1S Brass, with plastic insulating shield 5/8" diameter (2 required).

Suspension Wire – No.18 stranded wire with 1/16" vinyl insulation. Sold only in 500' rolls.

ORDER NUMBERS

Relay Order No.	Volts	Rating
AW21-1	115V 1Ø	up to 1 HP*
AW21-2	230V 1Ø 230V 3Ø	
AW21-3	460V 3Ø	

* When used with motors which exceed their ratings, controls must be wired to pilot circuit of a magnetic starter or contactor.

Order No.	Description
AW23R5	500' #18 Red Wire
AW23B5	500' #18 Black Wire
AW22	(2) Type E-1S Electrodes



Diaphragm Tanks

HYDRO-PRO® Water System Tank

xylem

Features

Horizontal models: Feature a universal jet pump bracket and two (2) bolt-on, corrosion-resistant, high density polypropylene feet for installations with limited headspace, such as under mobile homes.

Deep drawn steel shells: Provide maximum material strength.

Inner shell: Prevents diaphragm from over-expanding.

Heavy duty parabolic diaphragm: this new diaphragm design has improved diaphragm life by reducing abrasive wear. The diaphragm separates air and water to maintain the tank's air charge. The Butyl rubber diaphragm is an FDA approved material and also meets NSF / ANSI 61 – G standards.

Interior tank lining:

- Stand models and V45P feature durable polypropylene liner. Meets FDA requirements.
- Mounted pump models and V6P, V15P, V25P, V25H, and V100S feature fusion bonded polymeric lining. Meets FDA requirements.

Maximum working pressure: 125 psi (except mounted pump models, 100 psi).

Temperature rating: Maximum 120° F

Stainless steel system connection: On all Stand, In-Line, Buried and Horizontal models. Excludes the V6P, V15P and V25P, which are powder coated.

Appliance appearance exterior finish: Blue color, high durability exterior finish of tough, powder coat over a zinc phosphate surface treatment.

Tanks are designed for installation indoors or where they are protected from rain, irrigation overspray, salt air and other corrosive environments. Always protect tanks from freezing.

Heavy duty base: Made of high density polypropylene on stand models only.

Pre-charge: All tanks charged to 38 PSI.



Certified to NSF/ANSI 61-G



Stand models

V45	V140
V60	V200
V80	V250
V100	V260
V100S	V350



In-line models

V6P	V15P
V25P	V45P



Horizontal models with pump mounting
V25H V45H V60H



Stand model
with base extension
V80EX

Model	Model no.	Total volume gals. (L)	Drawdown in gals. at system operating pressure range of			Max drawdown gals. (L)	Pre-charge PSI	System connection in. (mm)	Dimensions in. (mm)		Shipping weight lbs. (kg)	Height from floor to center of base opening in. (mm)
			20/40 PSIG	30/50 PSIG	40/60 PSIG				Diameter	Height		
Stand models	V45	13.9 (53)	5.1	4.3	3.7	8.4 (32)	38	1" NPTF (25)	15 ³ / ₈ (391)	24 ¹⁵ / ₁₆ (633)	23 (10)	3 ¹ / ₈ (79)
	V60	19.9 (75)	7.3	6.1	5.3	12.1 (46)	38	1" NPTF (25)	15 ³ / ₈ (391)	32 ³ / ₈ (822)	34 (15)	
	V80	25.9 (98)	8.9	7.7	6.7	13.9 (53)	38	1" NPTF (25)	15 ³ / ₈ (391)	39 ⁹ / ₁₆ (1005)	43 (20)	
	V80EX	25.9 (98)	8.9	7.7	6.7	13.9 (53)	38	1" NPTF (25)	15 ³ / ₈ (391)	42 ⁵ / ₈ (1083)	43 (20)	7 ¹ / ₄ (184)
	V100	31.8 (120)	11.8	9.9	8.6	13.8 (52)	38	1" NPTF (25)	15 ³ / ₈ (391)	47 ¹ / ₄ (1200)	52 (24)	3 ¹ / ₈ (79)
	V100S ①	36 (136)	13.3	11.2	9.7	15.3 (58)	38	1" NPTF (25)	20 (508)	32 (813)	54 (24)	3 ³ / ₈ (86)
	V140	45.2 (171)	16.5	13.9	12.1	27.3 (103)	38	1 ¹ / ₄ " NPTF (32)	22 (559)	36 ⁹ / ₁₆ (929)	64 (29)	
	V200	65.1 (246)	23.9	20.0	17.4	39.3 (149)	38	1 ¹ / ₄ " NPTF (32)	22 (660)	48 ⁵ / ₁₆ (1235)	89 (40)	
	V250	83.5 (316)	30.9	25.9	22.5	50.8 (192)	38	1 ¹ / ₄ " NPTF (32)	26 (391)	46 (1168)	116 (53)	3 ¹ / ₂ (89)
	V260	84.9 (321)	31.2	26.2	22.8	44.7 (169)	38	1 ¹ / ₄ " NPTF (32)	22 (559)	60 ¹¹ / ₁₆ (1541)	113 (51)	3 ³ / ₈ (86)
	V350	115.9 (439)	42.9	35.9	31.3	70.5 (267)	38	1 ¹ / ₄ " NPTF (32)	26 (660)	61 ⁵ / ₁₆ (1557)	161 (73)	3 ¹ / ₂ (89)
Buried models ②	V60B	19.9 (75)	7.3	6.1	5.3	12.1 (46)	38	1" NPTF (25)	15 ³ / ₈ (391)	28 ¹ / ₂ (724)	33 (15)	63 (29)
	V140B	45.2 (171)	16.5	13.9	12.1	27.3 (103)	38	1 ¹ / ₄ " NPTF (32)	22 (559)	32 ³ / ₁₆ (818)	63 (29)	
In-line ① models	V6P	1.9 (7)	0.7	0.6	0.5	1.3 (4.9)	38	³ / ₄ " NPTM (19)	8 ¹ / ₄ (210)	10 ³ / ₁₆ (259)	7 (3)	20 (9)
	V15P	4.9 (19)	1.8	1.5	1.4	3.1 (11.7)	38	³ / ₄ " NPTM (19)	11 (279)	14 ³ / ₄ (375)	11 (5)	
	V25P	7.3 (28)	2.7	2.3	2.1	3.1 (11.7)	38	³ / ₄ " NPTM (19)	11 (279)	21 ¹ / ₁₆ (535)	16 (7)	
	V45P	13.9 (53)	5.1	4.3	3.7	8.4 (32)	38	1" NPTF (25)	15 ⁵ / ₈ (391)	21 ¹ / ₁₆ (535)	24 (11)	
Horizontal models with bracket	V25H ①	7.3 (28)	2.7	2.3	2.1	3.1 (11.7)	38	³ / ₄ " NPTM (19)	11 (279)	21 ¹ / ₁₆ (535)	20 (9)	26 (12)
	V45H	13.9 (53)	5.1	4.3	3.7	8.4 (32)	38	1" NPTF (25)	15 ³ / ₈ (391)	22 ⁹ / ₁₆ (573)	26 (12)	
	V60H	19.9 (75)	7.3	6.1	5.3	12.1 (46)	38	1" NPTF (25)	15 ³ / ₈ (391)	33 ⁷ / ₈ (860)	36 (16)	

(All dimensions are in inches and weight in lbs. Do not use for construction purposes.)

Notes:

* Compatible with only certain Goulds jet pumps.

P = Pipe mounted EX = With base extension B = Buried H = Horizontal with bracket

① V6P, V15P, V25P, V25H and V100S are produced at the Charlotte, NC plant after January 2013, resulting in minor dimensional changes.

② Buried models are not approved for the state of Michigan, USA.

Accessories



AW39 bracket: Universal pump mounting bracket for use on all stand model tanks.



AWT1 base extension: For use on 15 ³/₈" models. Provides 4 ¹/₈" base elevation. Supplied in quantities of six (6) per carton.

Order no.	Description	Wt. (lbs.)
AW39	Universal jet pump bracket	2
AWT1	Tank base extension (Qty. 6)	5



**Stand model
(vertical)**



**In-line pipe
mounted model**

T Series

Epoxy coated diaphragm tanks

Features

Deep drawn steel shells: provide maximum material strength.

Inner shell: Prevents diaphragm from over-expanding.

Heavy duty parabolic diaphragm: this new diaphragm design has improved diaphragm life by reducing abrasive wear. The diaphragm separates air and water to maintain the tank's air charge. The butyl rubber diaphragm is an FDA approved material and also meets NSF / ANSI 61 – G standards.

Interior tank lining: Tank features a durable fusion bonded polymeric lining. Meets FDA requirements.

Maximum working pressure: 100 PSI.

Temperature rating: Maximum 120° F.

Epoxy coated system connection: On all stand and in-line models.

Appliance appearance exterior finish: Tan color, high durability exterior finish of tough, powder coat over a zinc phosphate surface treatment.

Tanks are designed for installation indoors or where they are protected from rain, irrigation overspray, salt air and other corrosive environments. Always protect tanks from freezing.

Heavy duty high density polypropylene base: Eliminates corrosion due to condensation and exposure to the elements.

Tanks have a 5-year limited warranty. See instruction manual for complete warranty details.

Model	Model no.	Total volume gals. (L)	Drawdown in gals. at system operating pressure range of			Max drawdown gals. (L)	Pre-charge PSI	System connection in. (mm)	Dimensions in. (mm)		Shipping weight lbs. (kg)	Height from floor to center of base opening in. (mm)
			20/40 PSIG	30/50 PSIG	40/60 PSIG				Diameter	Height		
Stand models	T45	13.9 (53)	5.1	4.3	3.7	8.4 (32)	38	1" NPTF (25)	15 3/8 (391)	24 15/16 (633)	23 (10)	3 1/8 (79)
	T60	19.9 (75)	7.3	6.1	5.3	12.1 (46)	38	1" NPTF (25)	15 3/8 (391)	32 3/8 (822)	34 (15)	
	T80	25.9 (98)	8.9	7.7	6.7	13.9 (53)	38	1" NPTF (25)	15 3/8 (391)	39 9/16 (1005)	43 (20)	
	T100	31.8 (120)	11.8	9.9	8.6	13.8 (52)	38	1" NPTF (25)	15 3/8 (391)	47 1/4 (1200)	52 (24)	
	T140	45.2 (171)	16.5	13.9	12.1	27.3 (103)	38	1 1/4" NPTF (32)	22 (559)	36 9/16 (929)	64 (29)	3 3/8 (86)
	T200	65.1 (246)	23.9	20.0	17.4	39.3 (149)	38	1 1/4" NPTF (32)	22 (660)	48 5/8 (1235)	89 (40)	
	T250	83.5 (316)	30.9	25.9	22.5	50.8 (192)	38	1 1/4" NPTF (32)	26 (391)	46 (1168)	116 (53)	3 1/2 (89)
	T260	84.9 (321)	31.2	26.2	22.8	44.7 (169)	38	1 1/4" NPTF (32)	22 (559)	60 11/16 (1541)	113 (51)	3 3/8 (86)
	T350	115.9 (439)	42.9	35.9	31.3	70.5 (267)	38	1 1/4" NPTF (32)	26 (660)	61 5/16 (1557)	161 (73)	3 1/2 (89)
In-line models ①	T15P	4.9 (19)	1.8	1.5	1.4	3.1 (11.7)	38	3/4" NPTM (19)	11 (279)	14 3/4 (375)	11 (5)	
	T25P	7.3 (28)	2.7	2.3	2.1	3.1 (11.7)	38	3/4" NPTM (19)	11 (279)	21 1/16 (535)	16 (7)	
	T45P	13.9 (53)	5.1	4.3	3.7	8.4 (32)	38	1" NPTF (25)	15 3/8 (391)	21 1/16 (535)	24 (11)	

NOTES:

P = Pipe connection (All dimensions are in inches and weight in lbs. Do not use for construction purposes.)

① T15P and T25P are produced at the Charlotte, NC plant after January 2013, resulting in minor dimensional changes.

Accessories

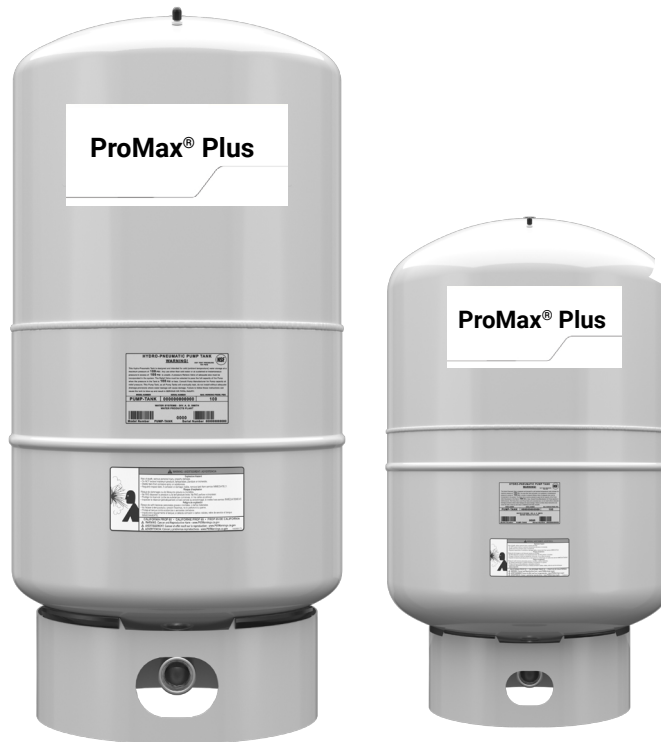


AW39T bracket:
Universal pump mounting bracket for use on all tan stand model tanks.

Order no.	Description	Wt. (lbs.)
AW39T	Universal Jet Pump Bracket - Tan	2



Certified to ANSI/NSF 61



Diaphragm Tanks

ProMax® Plus water system tank

xylem

Introduction

ProMax® Series Diaphragm Pump Tanks are designed to deliver reliable and efficient water storage solutions for residential, commercial, and agricultural applications. Engineered with a durable diaphragm design, these tanks ensure consistent pressure performance while reducing pump cycling, extending the life of your pump system.

Features

Horizontal models: Feature a universal jet pump bracket and two (2) bolt-on, corrosion-resistant, high density polypropylene feet for installations with limited headspace, such as under mobile homes.

Uni-weld design: Two-piece construction (on many models) creates only one weld on the tank.

Powder coated water chamber: Provides maximum protection against corrosion.

Heavy duty parabolic diaphragm: this diaphragm design has improved diaphragm life by reducing abrasive wear. The diaphragm separates air and water to maintain the tank's air charge. The Butyl rubber diaphragm is an FDA approved material and also meets NSF / ANSI 61 – G standards.

Maximum working pressure: 125 psi (except horizontal pump models and PM45, 100 psi).

304 Stainless-steel connection: On all stand models (except horizontal pump models and PM45, galvanized lead-free connection)

Powder coated exterior: Provides positive protection against corrosion, UV resistance, and certified to ASTM automotive salt test standards.

Pre-charge: All tanks charged to 38 PSI.



Certified to NSF/ANSI 61-G



22" steel base ProMax Plus



15" steel base ProMax Plus

Built-to-last

Air change valve

- Metal air valve with "O" ring cap seal for added protection
- Projection Welded

Powder coated exterior

- Provides positive protection against corrosion
- An attractive addition to any home
- High UV resistance
- Certified to ASTM Automotive Salt Test Standards

Butyl rubber parabolic diaphragm

- Strong and flexible with smooth operation for long life
- Eliminates rubbing the tank wall or rolling over on itself

Double draw uniweld design

- Allows two piece construction

Internal powder coating

- Powder coating permanently bonded to the shell
- Proven protection against internal corrosion
- Eliminates clinch rings and plastic liners

Exclusive no-weld Rust-Guard® steel base

- Eliminates weld in the base area
- Reduces corrosion in the base or lower tank

Positive diaphragm seal

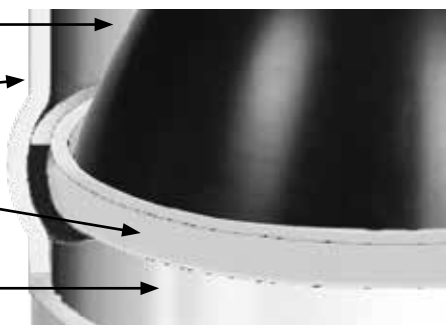
Seals diaphragm directly to shell, ensuring permanent separation of water and air. No liners needed.

Diaphragm

Steel shell

Steel retaining ring

Powder coating



AW39 Bracket

Universal pump mounting bracket for use on all stand model tanks.



Specifications

Models	Model no.	Total volume gals. (L)	Drawdown in gallons at system operating pressure range of:			System connection in. (mm)	Dimensions in. (mm)		Weight lbs (kg)	Height from floor to center of connection in. (mm)
			20/40 PSIG	30/50 PSIG	40/60 PSIG		Diameter	Height		
Stand models	PM45	14 (53)	5.2	4.3	3.8	1" NPTF (25)	15.375 (391)	27.125 (689)	25 (11)	2.25 (57)
	PM60	20 (76)	7.4	6.2	5.4	1" NPTF (25)	15.375 (391)	33.75 (857)	30 (14)	2.25 (57)
	PM100	32 (121)	11.5	9.6	8.4	1" NPTF (25)	15.375 (391)	45 (1143)	40 (18)	2.25 (57)
	PM140	52 (197)	19.2	16.1	14	1.25" NPTF (32)	23 (584)	40 (1016)	77 (35)	2.25 (57)
	PM200	65 (246)	24	20	17.5	1.25" NPTF (32)	23 (584)	46.6 (1184)	87 (40)	2.25 (57)
	PM260	86 (326)	31.8	26.7	23.2	1.25" NPTF (32)	23 (584)	59.25 (1507)	100 (45)	2.25 (57)
Horizontal models w/ bracket	PM45H	14 (53)	5.2	4.3	3.8	1" NPTM (25)	15.375 (391)	27.125 (689)	25 (11)	9.69 (246)
	PM60H	20 (76)	7.4	6.2	5.4	1" NPTM (25)	15.375 (391)	30.875 (785)	30 (14)	9.69 (246)

HYDRO-PRO cross reference:		
V45	→	PM45
V60	→	PM60
V100	→	PM100
V140	→	PM140
V200	→	PM200
V260	→	PM260
V45H	→	PM45H
V60H	→	PM60H

T-Series cross reference:		
T45	→	PM45
T60	→	PM60
T100	→	PM100
T140	→	PM140
T200	→	PM200
T260	→	PM260

Goulds Water Technology part number		ProMax part number
PM45	=	PMX-14 (ProMax)
PM60	=	PMXP-20 (ProMax Plus)
PM100	=	PMXP-32 (ProMax Plus)
PM140	=	PMXP-52 (ProMax Plus)
PM200	=	PMXP-65 (ProMax Plus)
PM260	=	PMXP-86 (ProMax Plus)
PM45H	=	PMX-14H (ProMax)
PM60H	=	PMX-20H (ProMax)

*Order using the Goulds Water Technology part number. You will receive the ProMax part number.

Note the following tanks are still available:
V6P
V15P
V25P
V25H
V100S
T15P
T25P



Friction Loss Tables



SCH 40 – PLASTIC PIPE: FRICTION LOSS (IN FEET OF HEAD) PER 100 FT.

GPM	GPH	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	2"	2 $\frac{1}{2}$ "	3"	4"	6"	8"	10"
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
1	60	4.25	1.38	.356	.11									
2	120	15.13	4.83	1.21	.38	.10								
3	180	31.97	9.96	2.51	.77	.21	.10							
4	240	54.97	17.07	4.21	1.30	.35	.16							
5	300	84.41	25.76	6.33	1.92	.51	.24							
6	360		36.34	8.83	2.69	.71	.33	.10						
8	480		63.71	15.18	4.58	1.19	.55	.17						
10	600		97.52	25.98	6.88	1.78	.83	.25	.11					
15	900			49.68	14.63	3.75	1.74	.52	.22					
20	1,200			86.94	25.07	6.39	2.94	.86	.36	.13				
25	1,500				38.41	9.71	4.44	1.29	.54	.19				
30	1,800					13.62	6.26	1.81	.75	.26				
35	2,100					18.17	8.37	2.42	1.00	.35	.09			
40	2,400					23.55	10.70	3.11	1.28	.44	.12			
45	2,700					29.44	13.46	3.84	1.54	.55	.15			
50	3,000						16.45	4.67	1.93	.66	.17			
60	3,600						23.48	6.60	2.71	.93	.25			
70	4,200							8.83	3.66	1.24	.33			
80	4,800							11.43	4.67	1.58	.41			
90	5,400							14.26	5.82	1.98	.52			
100	6,000								7.11	2.42	.63	.08		
125	7,500								10.83	3.80	.95	.13		
150	9,000									5.15	1.33	.18		
175	10,500									6.90	1.78	.23		
200	12,000									8.90	2.27	.30		
250	15,000										3.36	.45	.12	
300	18,000										4.85	.63	.17	
350	21,000										6.53	.84	.22	
400	24,000											1.08	.28	
500	30,000											1.66	.42	.14
550	33,000											1.98	.50	.16
600	36,000											2.35	.59	.19
700	42,000												.79	.26
800	48,000												1.02	.33
900	54,000												1.27	.41
950	57,000													.46
1000	60,000													.50

FRICTION LOSS

STEEL PIPE: FRICTION LOSS (IN FEET OF HEAD) PER 100 FT.

GPM	GPH	$\frac{3}{8}$ " ft.	$\frac{1}{2}$ " ft.	$\frac{3}{4}$ " ft.	1" ft.	1 $\frac{1}{4}$ " ft.	1 $\frac{1}{2}$ " ft.	2" ft.	2 $\frac{1}{2}$ " ft.	3" ft.	4" ft.	5" ft.	6" ft.	8" ft.	10" ft.
1	60	4.30	1.86	.26											
2	120	15.00	4.78	1.21	.38										
3	180	31.80	10.00	2.50	.77										
4	240	54.90	17.10	4.21	1.30	.34									
5	300	83.50	25.80	6.32	1.93	.51	.24								
6	360		36.50	8.87	2.68	.70	.33	.10							
7	420		48.70	11.80	3.56	.93	.44	.13							
8	480		62.70	15.00	4.54	1.18	.56	.17							
9	540			18.80	5.65	1.46	.69	.21							
10	600			23.00	6.86	1.77	.83	.25	.11	.04					
12	720			32.60	9.62	2.48	1.16	.34	.15	.05					
15	900			49.70	14.70	3.74	1.75	.52	.22	.08					
20	1,200			86.10	25.10	6.34	2.94	.87	.36	.13					
25	1,500				38.60	9.65	4.48	1.30	.54	.19					
30	1,800				54.60	13.60	6.26	1.82	.75	.26					
35	2,100				73.40	18.20	8.37	2.42	1.00	.35					
40	2,400				95.00	23.50	10.79	3.10	1.28	.44					
45	2,700					30.70	13.45	3.85	1.60	.55					
70	4,200					68.80	31.30	8.86	3.63	1.22	.35				
100	6,000						62.20	17.40	7.11	2.39	.63				
150	9,000							38.00	15.40	5.14	1.32				
200	12,000							66.30	26.70	8.90	2.27	.736	.30	.08	
250	15,000							90.70	42.80	14.10	3.60	1.20	.49	.13	
300	18,000								58.50	19.20	4.89	1.58	.64	.16	.0542
350	21,000								79.20	26.90	6.72	2.18	.88	.23	.0719
400	24,000								103.00	33.90	8.47	2.72	1.09	.279	.0917
450	27,000								130.00	42.75	10.65	3.47	1.36	.348	.114
500	30,000								160.00	52.50	13.00	4.16	1.66	.424	.138
550	33,000								193.00	63.20	15.70	4.98	1.99	.507	.164
600	36,000								230.00	74.80	18.60	5.88	2.34	.597	.192
650	39,000									87.50	21.70	6.87	2.73	.694	.224
700	42,000									101.00	25.00	7.93	3.13	.797	.256
750	45,000									116.00	28.60	9.05	3.57	.907	.291
800	48,000									131.00	32.40	10.22	4.03	1.02	.328
850	51,000									148.00	36.50	11.50	4.53	1.147	.368
900	54,000									165.00	40.80	12.90	5.05	1.27	.410
950	57,000									184.00	45.30	14.30	5.60	1.41	.455
1000	60,000									204.00	50.20	15.80	6.17	1.56	.500

FRICITION LOSS

COPPER PIPE: FRICTION LOSS (IN FEET OF HEAD) PER 100 FT.

1	60	6.2	1.8	.39							
2	120	19.6	6.0	1.2							
5	300		30.0	5.8	1.6						
7	420		53.0	11.0	3.2	2.2					
10	600			19.6	5.3	3.9					
15	900			37.0	9.9	6.2	2.1				
18	1,080			55.4	16.1	6.9	3.2				
20	1,200				18.5	10.4	3.9				
25	1,500				27.7	14.3	5.3	1.5			
30	1,800				39.3	18.7	7.6	2.1			
35	2,100				48.5	25.4	10.2	2.8			
40	2,400					30.0	13.2	3.5	1.2		
45	2,700					39.3	16.2	4.2	1.6		
50	3,000						19.4	5.1	1.8		
60	3,600						27.7	6.9	2.5	1.1	
70	4,200						40.0	9.2	3.5	1.4	
75	4,500						41.6	9.9	3.7	1.6	
80	4,800						45.0	11.6	4.2	1.8	
90	5,400						50.8	13.9	4.8	2.2	
100	6,000							16.9	6.2	2.8	
125	7,500							25.4	8.6	3.7	
150	9,000							32.3	11.6	4.8	1.2
175	10,500							41.6	16.2	6.9	1.7
200	12,000							57.8	20.8	9.0	2.2
250	15,000								32.3	13.9	3.5
300	18,000								41.6	18.5	4.6
350	21,000									32.3	5.8
400	24,000									39.3	7.2
450	27,000									44.0	9.2
500	30,000										11.1
750	45,000										23.1
1000	60,000										37.0

RUBBER HOSE: FRICTION LOSS (IN FEET OF HEAD) PER 100 FT.

15	70	23	5.8	2.5	.9	.2		
20	122	32	10	4.2	1.6	.5		
25	182	51	15	6.7	2.3	.7		
30	259	72	21.2	9.3	3.2	.9	.2	
40		122	35	15.5	5.5	1.4	.7	
50		185	55	23	8.3	2.3	1.2	
60		233	81	32	11.8	3.2	1.4	
70			104	44	15.2	4.2	1.8	
80			134	55	19.8	5.3	2.5	
90			164	70	25	7	3.5	.7
100			203	85	29	8.1	4	.9
125			305	127	46	12.2	5.8	1.4
150			422	180	62	17.3	8.1	1.6
175				230	85	23.1	10.6	2.5
200				308	106	30	13.6	3.2

GPM	Actual Inside Diameter in Inches							
	¾"	1"	1¼"	1½"	2"	2½"	3"	4"
250					162	44	21	4.9
300					219	62	28	6.7
350					292	83	39	9.3
400						106	49	11.8
500						163	74	17.1
600						242	106	23
700						344	143	30
800						440	182	40
900							224	51
1000							270	63
1250							394	100
1500							525	141
1750								185
2000								230

FRICITION LOSS

EQUIVALENT NUMBER OF FEET STRAIGHT PIPE FOR DIFFERENT FITTINGS

Size of fittings, Inches	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"
90° Ell	1.5	2.0	2.7	3.5	4.3	5.5	6.5	8.0	10.0	14.0	15	20	25
45° Ell	0.8	1.0	1.3	1.7	2.0	2.5	3.0	3.8	5.0	6.3	7.1	9.4	12
Long Sweep Ell	1.0	1.4	1.7	2.3	2.7	3.5	4.2	5.2	7.0	9.0	11.0	14.0	
Close Return Bend	3.6	5.0	6.0	8.3	10.0	13.0	15.0	18.0	24.0	31.0	37.0	39.0	
Tee-Straight Run	1	2	2	3	3	4	5						
Tee-Side Inlet or Outlet or Pitless Adapter	3.3	4.5	5.7	7.6	9.0	12.0	14.0	17.0	22.0	27.0	31.0	40.0	
① Ball or Globe Valve Open	17.0	22.0	27.0	36.0	43.0	55.0	67.0	82.0	110.0	140.0	160.0	220.0	
① Angle Valve Open	8.4	12.0	15.0	18.0	22.0	28.0	33.0	42.0	58.0	70.0	83.0	110.0	
Gate Valve-Fully Open	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.7	2.3	2.9	3.5	4.5	
Check Valve (Swing)	4	5	7	9	11	13	16	20	26	33	39	52	65
In Line Check Valve (Spring) or Foot Valve	4	6	8	12	14	19	23	32	43	58			

① There are many new, full port valve designs available today which are more efficient and create much less friction loss, consult with valve suppliers for new data.

Example:

(A) 100 ft. of 2" plastic pipe with one (1) 90° elbow and one (1) swing check valve.

90° elbow – equivalent to 5.5 ft. of straight pipe
Swing check – equivalent to 13.0 ft. of straight pipe
100 ft. of pipe – equivalent to 100 ft. of straight pipe
118.5 ft. = Total equivalent pipe

(B) Assume flow to be 80 GPM through 2" plastic pipe.

- Friction loss table shows 11.43 ft. loss per 100 ft. of pipe.
- In step (A) above we have determined total ft. of pipe to be 118.5 ft.
- Convert 118.5 ft. to percentage $118.5 \div 100 = 1.185$
- Multiply 11.43×1.185
13.54455 or 13.5 ft. = Total friction loss in this system.

Figure friction loss for 118.5 ft. of pipe.

Where the jet pump is offset horizontally from the well site, add the additional friction loss from the chart below to the vertical lift to approximate what capacity the pump will produce.

PIPE FRICTION FOR OFFSET JET PUMPS

Additional Friction Loss in Feet Per 100 Feet Offset

JET SIZE HP	SUCTION AND PRESSURE PIPE SIZES (in inches)									
	1¼ x 1	1¼ x 1¼	1½ x 1¼	1½ x 1½	2 x 1½	2 x 2	2½ x 2	2½ x 2½	3 x 2½	3 x 3
⅓	12	8	6	4						
½	18	12	8	6	3	2				
¾		22	16	11	6	4				
1			25	16	9	6				
1½					13	8	5	3		
2					20	13	7	5		
3							13	9	6	4

NOTE: The amount of additional Friction Loss from the Table above is added to the Total Suction Lift on a Shallow Well System or the Depth to Jet Assembly on a Deep Well System.

Example: If using a 1 HP jet pump with a 150' offset from a deep well. Using 1 ½" and 1 ½" pipes will be the same as having an extra 16' of lift per 100' of pipe, so with a 150' offset ($150'/100' = 1.5$), you will have $1.5 \times 16' = 24'$ of additional lift. Add the 24' to the Depth to Jet Assembly to see what the performance will be. If you upsize to 2" & 2" pipe the additional friction loss will only be $1.5 \times 6' = 9'$.

Pipe and Plastic Well Casing Manufacturer's websites:

www.shur-align.com or www.modernproducts.net

- Drop pipe - many types

www.certainteed.com

- Kwik-set® threaded drop pipe in Sch 80 and 120
- Solvent weld pressure pipe in Sch 40 and 80, class 160 (SDR26), class 200 (SDR 21) and class 315 (SDR 13.5)
- PVC sewer and drain pipe

www.pweaglepipe.com

- PW Eagle PVC Pipe - many types

www.flomatic.com

- Danfoss Flomatic Valves

www.simmonsmfg.com

- Simmons Mfg.

Xylem Inc.:

www.xylem.com/goulds

- Goulds Water Technology Water and Waste-water Products
- Accessories, Control Boxes, and wastewater panels

Check Valve Manufacturer's websites:

3/8	0.500	0.0413
1/2	0.625	0.0535
3/4	0.875	0.1023
1	1.125	0.1689

FRICITION LOSSES

Insert fitting friction losses are shown in table below. Consult manufacturer for other fitting friction losses.

METAL INSERT FITTING FRICTION LOSS

Type of Fitting	Equivalent Length of Tubing (ft.)			
	3/8" size	1/2" size	3/4" size	1" size
Coupling	2.9	2.0	0.6	1.3
Elbow 90°	9.2	9.4	9.4	10.0
Tee-branch	9.4	10.4	8.9	11.0
Tee-run	2.9	2.4	1.9	2.3

* 1" fittings have an increased total length

FRICITION LOSS AND VELOCITY VS. FLOW RATE PEX PLUMBING TUBING (CTS) (ASTM F-876/877)

Tubing water flow rate, velocity and frictional losses are given in the following table. Long-radius tubing bends have the same head loss as straight tubing.

Nominal Size Average ID	3/8" 0.350		1/2" 0.475		3/4" 0.671		1" 0.863	
GPM	Friction Loss	Velocity	Friction Loss	Velocity	Friction Loss	Velocity	Friction Loss	Velocity
1	7.0	3.33	1.6	1.81	0.3	0.96	0.1	0.55
2	25.4	6.67	5.8	3.62	1.1	1.81	0.3	1.10
3	53.9	10.00	12.2	5.43	2.3	2.72	0.7	1.65
4	91.8	13.34	20.8	7.24	3.9	3.63	1.1	2.19
5			31.4	9.05	5.9	4.54	1.7	2.74
6			44.0	10.86	8.2	5.44	2.4	3.29
7			58.6	12.67	10.9	6.35	3.2	3.84
8					14.0	7.26	4.1	4.39
9					17.4	8.17	5.1	4.94
10					21.1	9.07	6.2	5.48
11					25.2	9.98	7.4	6.03
12					29.6	10.89	8.7	6.58
13					34.3	11.79	10.1	7.13
14					39.4	12.70	11.6	7.68
15							13.2	8.23
16							14.8	8.78

NOTE: Friction Loss based on Hazen-Williams Formula (C=150). CTS Tubing manufactured per ASTM F-876/877. Friction Loss - psi per 100 ft. of tubing. Velocity (VEL) feet per second.

PRIVATE RESIDENCES

Outlets	Flow Rate GPM	Total Usage Gallons	Bathrooms in Home			
			1	1½	2-2½	3-4
Shower or Bathtub	5	35	35	35	53	70
Lavatory	4	2	2	4	6	8
Toilet	4	5	5	10	15	20
Kitchen Sink	5	3	3	3	3	3
Automatic Washer	5	35	-	18	18	18
Dishwasher	2	14	-	-	3	3
Normal seven minute* peak demand (gallons)			45	70	98	122
Minimum sized pump required to meet peak demand without supplemental supply			7 GPM (420 GPH)	10 GPM (600 GPH)	14 GPM (840 GPH)	17 GPM (1020 GPH)

Notes:

Values given are average and do not include higher or lower extremes.

* Peak demand can occur several times during morning and evening hours.

** Count the number of fixtures in a home including outside hose bibs. Supply one gallon per minute each.

YARD FIXTURES

Garden Hose – ½"	3 GPM
Garden Hose – ¾"	6 GPM
Sprinkler – Lawn	3-7 GPM

FARM USE

Horse, Steer	12 Gallons per day
Dry Cow	15 Gallons per day
Milking Cow	35 Gallons per day
Hog	4 Gallons per day
Sheep	2 Gallons per day
Chickens/100	6 Gallons per day
Turkeys/100	20 Gallons per day
Fire	20-60 GPM

Pump Capacity Required in U.S. Gallons per Minute per fixture for Public Buildings							
Type of Building	Total Number of Fixtures						
	25 or Less	26-50	51-100	101-200	201-400	401-600	Over 600
Hospitals	1.00	1.00	.80	.60	.50	.45	.40
Mercantile Buildings	1.30	1.00	.80	.71	.60	.54	.48
Office Buildings	1.20	.90	.72	.65	.50	.40	.35
Schools	1.20	.85	.65	.60	.55	.45	
Hotels, Motels	.80	.60	.55	.45	.40	.35	.33
Apartment Buildings	.60	.50	.37	.30	.28	.25	.24

- For less than 25 fixtures, pump capacity should not be less than 75% of capacity required for 25 fixtures.
- Where additional water is required for some special process, this should be added to pump capacity.
- Where laundries or swimming pools are to be supplied, add approximately 10% to pump capacity for either.
- Where additional occupancy is greater than normal, add approximately 20% to pump capacity.

Boiler HP GPM		Boiler HP GPM		Boiler HP GPM		Boiler HP GPM		Boiler HP GPM	
20	1.38	55	3.80	90	6.21	160	11.1	275	19.0
25	1.73	60	4.14	100	6.90	170	11.7	300	20.7
30	2.07	65	4.49	110	7.59	180	12.4	325	22.5
35	2.42	70	4.83	120	8.29	190	13.1	350	24.2
40	2.76	75	5.18	130	8.97	200	13.8	400	27.6
45	3.11	80	5.52	140	9.66	225	15.5	450	31.1
50	3.45	85	5.87	150	10.4	250	17.3	500	34.5

- Boiler Horsepower equals 34.5 lb. water evaporated at and from 212°F, and requires feed water at a rate of 0.069 gpm.

Select the boiler feed pump with a capacity of 2 to 3 times greater than the figures given above at a pressure 20 to 25% above that of boiler, because the table gives equivalents of boiler horsepower without reference to fluctuating demands.

HYDROPRO TANK SELECTION

- See your Full Line Catalog Tank Bulletins for a listing of all available models.

Model No.	Total Volume (Gals.)	① Drawdown in Gals. at System Operating Pressure Range of			Maximum Drawdown Vol. (Gals.)
		18/40 PSIG	28/50 PSIG	38/60 PSIG	
V6P	2.0	0.8	0.7	0.6	1.2
V15P	4.5	1.8	1.5	1.3	2.7
V25P	8.2	3.3	2.8	2.4	4.5
V45P	13.9	5.6	4.7	4.1	8.4
V45B	13.9	5.6	4.7	4.1	8.4
V45	13.9	5.6	4.7	4.1	8.4
V60B	19.9	8.0	6.8	5.8	12.1
V60	19.9	8.0	6.8	5.8	12.1
V80	25.9	10.4	8.8	7.6	13.9
V80EX	25.9	10.4	8.8	7.6	13.9
V100	31.8	12.8	10.8	9.4	13.8
V100S	31.8	12.8	10.8	9.4	13.8
V140B	45.2	18.2	15.4	13.3	27.3
V140	45.2	18.2	15.4	13.3	27.3
V200B	65.1	26.2	22.1	19.2	39.3
V200	65.1	26.2	22.1	19.2	39.3
V250	83.5	33.6	28.4	25.6	50.8
V260	84.9	34.1	28.9	25.0	44.7
V350	115.9	46.6	39.4	34.1	70.5

Tank Drawdown Pressure Factors Using an "Extra" 2 PSI of Drawdown

Pressure Differential	Factor with extra 2 psi*
18 - 40	.402
28 - 50	.340
38 - 60	.295
48 - 70	.260

To Calculate drawdown capacity multiply: Factor x Tank Volume.

① Drawdown based on a 22 psi differential and Boyle's Law. Temperature, elevation and pressure can all affect drawdown volume.

TABLE 2 – PRESSURE FACTORS

		Pump Cut-In Pressure - PSIG																			
		20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115
Pump Cut-Out Pressure - PSIG	30	.22																			
	35	.30	.20																		
	40	.37	.27	.18																	
	45	.42	.34	.25	.17																
	50	.46	.39	.31	.23	.15															
	55	.50	.43	.36	.29	.22	.14														
	60	.54	.47	.40	.33	.27	.20	.13													
	65		.50	.44	.38	.31	.25	.19	.13												
	70		.53	.47	.41	.35	.30	.24	.18	.12											
	75			.50	.45	.39	.33	.28	.22	.17	.11										
	80			.53	.48	.42	.37	.32	.26	.21	.16	.11									
	85				.50	.45	.40	.35	.30	.25	.20	.15	.10								
	90				.53	.48	.43	.38	.33	.29	.24	.19	.14	.10							
	95					.50	.46	.41	.36	.32	.27	.23	.18	.14	.09						
	100					.52	.48	.44	.39	.35	.31	.26	.22	.17	.13	.09					
	105						.50	.46	.42	.38	.33	.29	.25	.21	.17	.13	.08				
	110						.52	.46	.44	.40	.36	.32	.28	.24	.20	.16	.12				
	115							.50	.46	.42	.39	.35	.31	.27	.23	.19	.15	.12	.06		
	120							.52	.48	.45	.41	.37	.33	.30	.26	.22	.19	.15	.11		
	125								.50	.47	.43	.39	.36	.32	.29	.25	.21	.16	.14	.11	.07

To determine tank drawdown of operating pressure ranges other than those listed in table, use following procedure:
Multiply total tank volume (table 1) by pressure factor (table 4).

Example: Operating range: 35/55
Tank being used: V-200

65.1 = Total volume of tank (table 1)

x .29 Pressure factor (table 4)

18.9 = Drawdown in gallons at 35/55 PSI operating range.

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