



Type "OC"
Heat Exchangers
Straight Tube—Channel Head Design

JOB _____	B & G REPRESENTATIVE _____	
UNIT TAG NO. _____	ORDER NO. _____	DATE _____
ENGINEER _____	SUBMITTED BY _____	DATE _____
CONTRACTOR _____	APPROVED BY _____	DATE _____

DUTY:

OPERATING DATA

1. Type of Service	Condenser _____	Evaporator _____	Cooler _____	Heater _____
	TUBE SIDE		SHELL SIDE	
2. Fluid Circulated	_____	_____	_____	_____
3. Total Flow*	_____	_____	_____	_____
4. Specific Gravity	_____	_____	_____	_____
5. Specific Heat	_____	_____	_____	_____
6. Latent Heat	_____	_____	_____	_____
7. Viscosity**	_____	_____	_____	_____
8. Thermal Conductivity	_____	_____	_____	_____
9. Temperature In/Out	_____	_____	_____	_____
10. Heat Load BTU/hr.	_____	_____	_____	_____
11. Openings (Flanged) (Threaded)	_____	_____	_____	_____
12. Operating Pressure	_____	_____	_____	_____
13. Design Pressure	_____	_____	_____	_____
14. Maximum Operating Temperature of Unit	_____	_____	_____	_____
15. Pressure Drop (Maximum)	_____	_____	_____	_____
16. Fouling Factor or Percentage of Additional Surface	_____	_____	_____	_____

*Expressed in GPM, GPH, SCFM, SCFH, lbs./min. or lbs./hr.
**Expressed in Proper Units and Temperature such as centipoises @ °F.

MATERIALS:

1. Heads _____ (Channel) _____	5. Tube Size O. D. & Gauge $\frac{5}{8}$ $\frac{3}{4}$ _____
2. Shell _____	6. Baffles _____
3. Tube Sheets _____	7. Gaskets _____
4. Tubes _____	CODE: ASME _____ Other _____

DESCRIPTION

B&G Type "OC" Heat Exchangers are of the shell and tube type. Tube bundles are removable and tubes are easily cleaned both inside and outside. Tube ends are roller expanded into both the front and rear tube sheets. Floating tube sheet construction within the rear head compensates for expansion or contraction of the entire bundle regardless of temperature variations. Baffles are stamped to close tolerances, minimizing the slippage of liquids or gases between the baffles and shell wall.

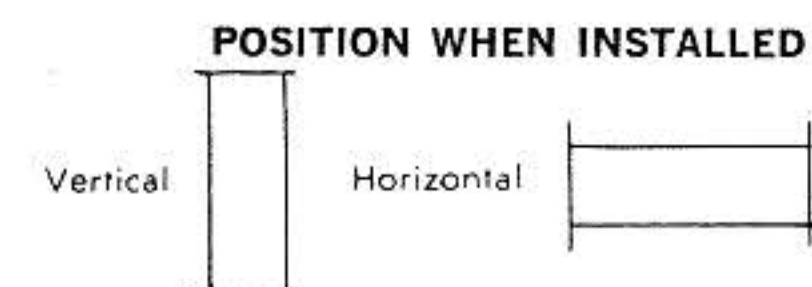
CONSTRUCTION MATERIALS

B&G "OC" Heat Exchangers are constructed according to ASME requirements for pressures and temperature. A Manufacturer's Data Report for Pressure Vessels, Form No. U-1 as required by the provisions of the ASME Code Rules is furnished with each unit upon request. This form is signed by an authorized inspector, holding a National Board Commission, and who is employed by an authorized inspection agency, certifying that construction conforms to the latest ASME Code for pressure vessels. The ASME "U" symbol is stamped on each vessel. In addition, each unit is registered with the National Board of Boiler and Pressure Vessel Inspectors.

TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

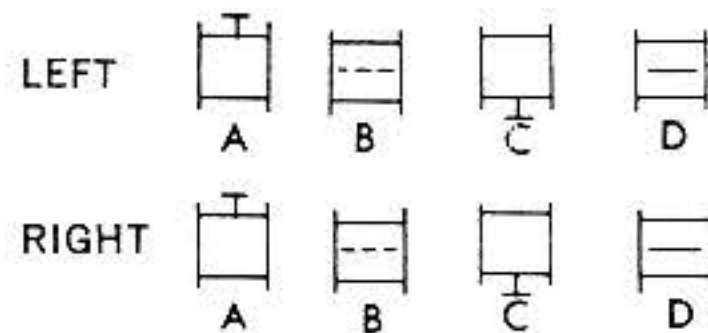
ARRANGEMENT WANTED

SHELL AND HEAD CONNECTION DETAILS



CHANNEL FABRICATED HEADS

ONE PASS—SIDE VIEW



TWO PASS LEFT END VIEW RIGHT SIDE VIEW

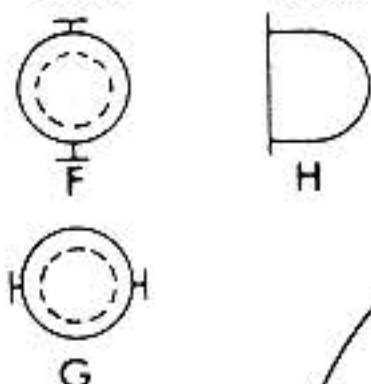
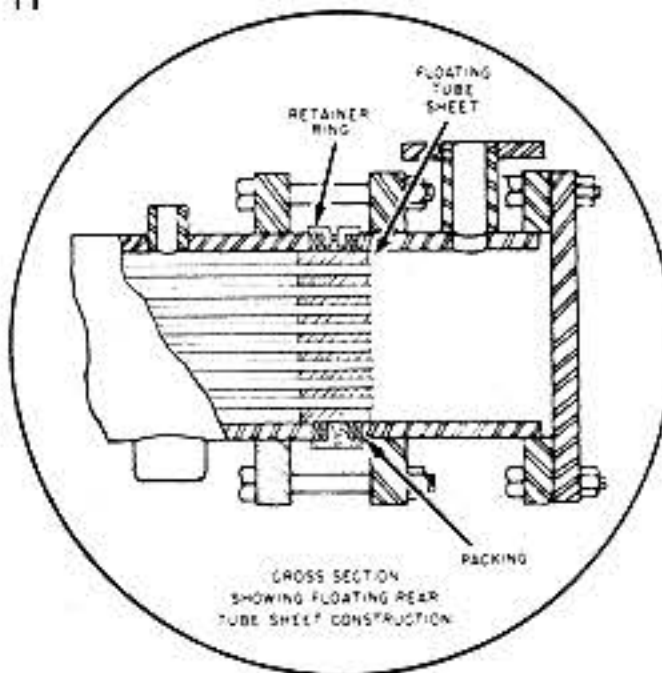
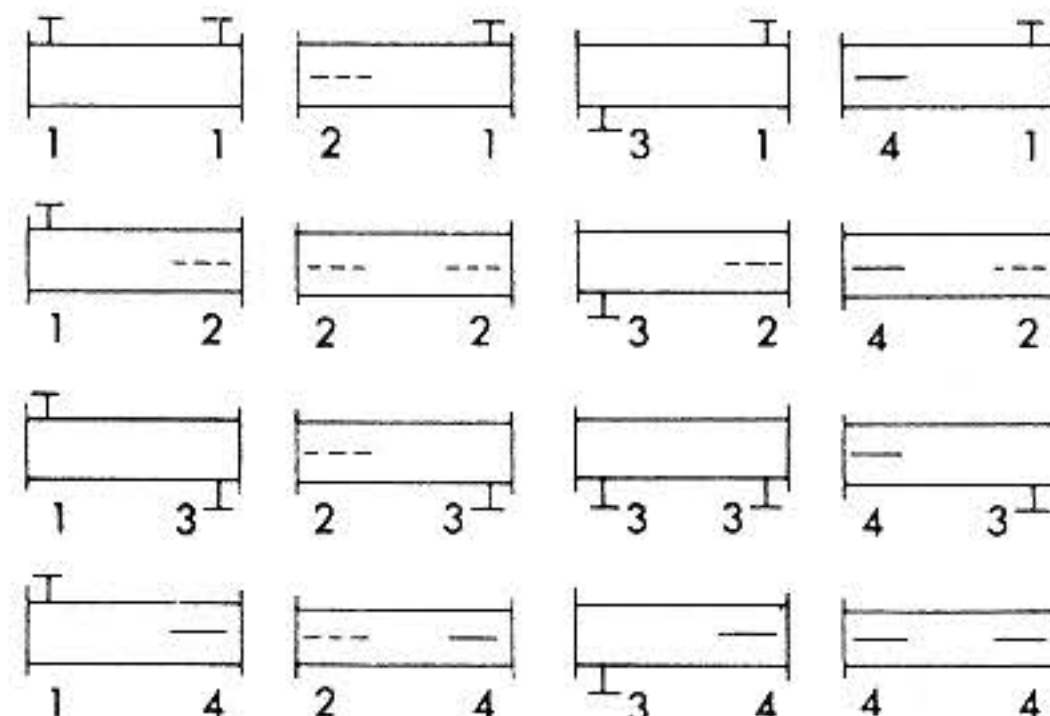


Figure H shows bonnet but channel with cover can be furnished



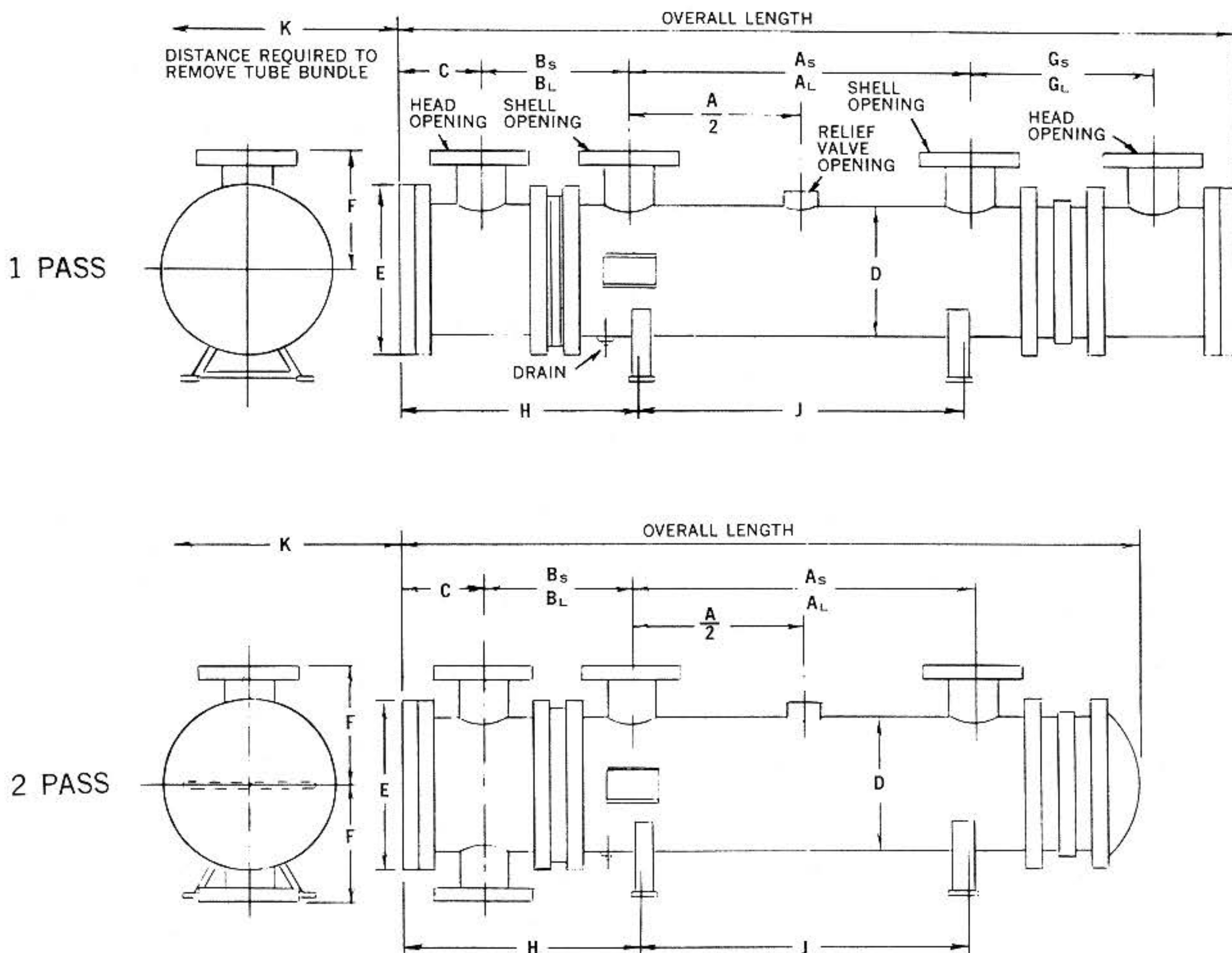
SHELL VARIATIONS SIDE VIEW SINGLE PASS



NOTES: One pass connection arrangement A-A and 1-1 shell will be furnished unless otherwise specified. Two pass connection arrangement F-H and 1-1 shell will be furnished unless otherwise specified. Shell and head connection sizes given on front page. Materials of construction listed on front page.

IMPORTANT: Indicate connection orientation required.

DIMENSIONS



NOTE: Flanges for field connections drilled and faced per 150# ANSI standards.

TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

DIMENSIONS

"OC" type straight tube—floating head
—outside packed lantern
Shell diameter in inches
Tube length in feet
Number of tube passes

Complete sales number consists of example: OC-86.

UNIT NUMBER	HEAD CONN. 150# ANSI FLANGES		SHELL CONN. 150# ANSI FLANGES		OVERALL LENGTH (INCHES)		DIMENSIONS IN INCHES												
	1 PASS	2 PASS	SMALL	LARGE	1 PASS	2 PASS	A _S	A _L	B _S	B _L	C	D	E	F Max.	G _S	G _L	H	J	K
OC-62-*	3	2-N.P.T.	2½	3	47	38⅞	14¼	13¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	7	17
OC-63-*	3	2-N.P.T.	2½	3	59	50⅞	26¼	25¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	19	29
OC-64-*	3	2-N.P.T.	2½	3	71	62⅞	38¼	37¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	31	41
OC-65-*	3	2-N.P.T.	2½	3	83	74⅞	50¼	49¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	43	53
OC-66-*	3	2-N.P.T.	2½	3	95	86⅞	62¼	61¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	55	65
OC-67-*	3	2-N.P.T.	2½	3	107	98⅞	74¼	73¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	67	77
OC-68-*	3	2-N.P.T.	2½	3	119	110⅞	86¼	85¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	79	89
OC-69-*	3	2-N.P.T.	2½	3	131	122⅞	98¼	97¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	91	101
OC-610-*	3	2-N.P.T.	2½	3	143	134⅞	110¼	109¾	9¾	10	5¼	6⅝	10½	7¾	12½	12¾	19	103	113
OC-83-*	4	2½	3	4	61⅞	52½	25¾	24¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	16	28
OC-84-*	4	2½	3	4	73⅞	64½	37¾	36¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	28	40
OC-85-*	4	2½	3	4	85⅞	76½	49¾	48¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	40	52
OC-86-*	4	2½	3	4	97⅞	88½	61¾	60¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	52	64
OC-87-*	4	2½	3	4	109⅞	100½	73¾	72¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	64	76
OC-88-*	4	2½	3	4	121⅞	112½	85¾	84¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	76	88
OC-89-*	4	2½	3	4	133⅞	124½	97¾	96¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	88	100
OC-810-*	4	2½	3	4	145⅞	136½	109¾	108¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	100	112
OC-811-*	4	2½	3	4	157⅞	148½	121¾	120¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	112	124
OC-812-*	4	2½	3	4	169⅞	160½	133¾	132¼	10⅝	11⅜	5⅞	8⅝	12½	8¾	13¼	14	21	124	136
OC-104-*	6	4	4	6	78⅝	67⅜	35¾	33¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	24	38
OC-105-*	6	4	4	6	90⅝	79⅜	47¾	45¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	36	50
OC-106-*	6	4	4	6	102⅝	91⅜	59¾	57¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	48	62
OC-107-*	6	4	4	6	114⅝	103⅜	71¾	69¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	60	74
OC-108-*	6	4	4	6	126⅝	115⅜	83¾	81¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	72	86
OC-109-*	6	4	4	6	138⅝	127⅜	95¾	93¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	84	98
OC-1010-*	6	4	4	6	150⅝	139⅜	107¾	105¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	96	110
OC-1011-*	6	4	4	6	162⅝	151⅜	119¾	117¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	108	122
OC-1012-*	6	4	4	6	174⅝	163⅜	131¾	129¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	120	134
OC-1013-*	6	4	4	6	186⅝	175⅜	143¾	141¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	132	146
OC-1014-*	6	4	4	6	198⅝	187⅜	155¾	153¾	12⅞	13⅞	7¼	10¾	14⅝	9¾	15½	16½	26	144	158
OC-126-*	6	4	4	6	104¼	92⅞	59¼	57¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	47	62
OC-127-*	6	4	4	6	116¼	104⅞	71¼	69¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	59	74
OC-128-*	6	4	4	6	128¼	116⅞	83¼	81¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	71	86
OC-129-*	6	4	4	6	140¼	128⅞	95¼	93¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	83	98
OC-1210-*	6	4	4	6	152¼	140⅞	107¼	105¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	95	110
OC-1211-*	6	4	4	6	164¼	152⅞	119¼	117¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	107	122

NOTES: Bolt holes straddle center lines on flanged openings. Legs available at extra cost. Removable bundle. Removable heads. Channel covers removable. Dimensions are subject to change. If exact dimensions are needed for layout, write for certified drawings. See front page for flange connection sizes and construction materials.

IMPORTANT: Designate 1 or 2 pass where asterisk appears. A_S, B_S, G_S with smaller listed shell openings. A_L, B_L, G_L with larger listed shell openings.

Different size Shell Connections available to suit flow requirement.

B_S, B_L, C and overall length dimensions are based upon one-pass head connections.

(continued next page)

TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

DIMENSIONS

"OC" type straight tube—floating head
 —outside packed lantern
 Shell diameter in inches
 Tube length in feet
 Number of tube passes

Complete sales number consists of example: OC-86-

UNIT NUMBER	HEAD CONN. 150# ANSI FLANGES		SHELL CONN. 150# ANSI FLANGES		OVERALL LENGTH (INCHES)		DIMENSIONS IN INCHES												
	1 PASS	2 PASS	SMALL	LARGE	1 PASS	2 PASS	As	AL	BS	BL	C	D	E	F	Gs	GL	H	J	K
OC-1212-*	6	4	4	6	176¼	164⅞	131¼	129¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	119	134
OC-1213-*	6	4	4	6	188¼	176⅞	143¼	141¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	131	146
OC-1214-*	6	4	4	6	200¼	188⅞	155¼	153¼	13½	14½	7¾	12¾	16⅝	10¾	16	17	28	143	158
OC-146-*	6	6	4	6	110¾	100½	59	57	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	47	59
OC-147-*	6	6	4	6	122¾	112½	71	69	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	59	71
OC-148-*	6	6	4	6	134¾	124½	83	81	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	71	83
OC-149-*	6	6	4	6	146¾	136½	95	93	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	83	95
OC-1410-*	6	6	4	6	158¾	148½	107	105	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	95	107
OC-1411-*	6	6	4	6	170¾	160½	119	117	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	107	119
OC-1412-*	6	6	4	6	182¾	172½	131	129	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	119	131
OC-1413-*	6	6	4	6	194¾	184½	143	141	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	131	143
OC-1414-*	6	6	4	6	206¾	196½	155	153	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	143	155
OC-1415-*	6	6	4	6	218¾	208½	167	165	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	155	167
OC-1416-*	6	6	4	6	230¾	220½	179	177	15⅝	16⅝	9¼	14	17⅞	11½	18⅝	19⅝	33	167	179
OC-167-*	8	6	6	8	123⅞	110⅞	68¾	66	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	54	69
OC-168-*	8	6	6	8	135⅞	122⅞	80¾	78	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	66	81
OC-169-*	8	6	6	8	147⅞	134⅞	92¾	90	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	78	93
OC-1610-*	8	6	6	8	159⅞	146⅞	104¾	102	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	90	105
OC-1611-*	8	6	6	8	171⅞	158⅞	116¾	114	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	102	117
OC-1612-*	8	6	6	8	183⅞	170⅞	128¾	126	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	114	129
OC-1613-*	8	6	6	8	195⅞	182⅞	140¾	138	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	126	141
OC-1614-*	8	6	6	8	207⅞	194⅞	152¾	150	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	138	153
OC-1615-*	8	6	6	6	219⅞	206⅞	164¾	162	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	150	165
OC-1616-*	8	6	6	8	231⅞	218⅞	176¾	174	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	162	177
OC-1617-*	8	6	6	8	243⅞	230⅞	188¾	186	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	174	189
OC-1618-*	8	6	6	8	255⅞	242⅞	200¾	198	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	186	201
OC-1619-*	8	6	6	8	267⅞	254⅞	212¾	210	16⅜	17¾	9⅜	16	19⅞	12½	19¼	20⅝	33	198	213
OC-188-*	8	6	6	8	135½	122¾	80½	77¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	66	82
OC-189-*	8	6	6	8	147½	134¾	92½	89¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	78	94
OC-1810-*	8	6	6	8	159½	146¾	104½	101¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	90	106
OC-1811-*	8	6	6	8	171½	158¾	116½	113¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	102	118
OC-1812-*	8	6	6	8	183½	170¾	128½	125¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	114	130
OC-1813-*	8	6	6	8	195½	182¾	140½	137¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	126	142
OC-1814-*	8	6	6	8	207½	194¾	152½	149¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	138	154
OC-1815-*	8	6	6	8	219½	206¾	164½	161¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	150	166
OC-1816-*	8	6	6	8	231½	218¾	176½	173¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	162	178
OC-1817-*	8	6	6	8	243½	230¾	188½	185¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	174	190
OC-1818-*	8	6	6	8	255½	242¾	200½	197¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	186	202
OC-1819-*	8	6	6	8	267½	254¾	212½	209¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	198	214
OC-1820-*	8	6	6	8	279½	266¾	224½	221¾	16⅝	18	9½	18	22	13½	19⅜	20¾	34	210	226

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Different size Shell Connections available to suit flow requirement.

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TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

DIMENSIONS

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—outside packed lantern
—Shell diameter in inches
—Tube length in feet
—Number of tube passes

Complete sales number consists of example: OC-86.*

UNIT NUMBER	HEAD CONN. 150# ANSI FLANGES		SHELL CONN. 150# ANSI FLANGES		OVERALL LENGTH (INCHES)		DIMENSIONS IN INCHES												
	1 PASS	2 PASS	SMALL	LARGE	1 PASS	2 PASS	A _s	A _L	B _s	B _L	C	D	E	F	G _s	G _L	H	J	K
OC-208-*	10	6	8	10	141 $\frac{7}{8}$	126 $\frac{1}{2}$	77 $\frac{1}{2}$	75	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	61	78
OC-209-*	10	6	8	10	153 $\frac{7}{8}$	138 $\frac{1}{2}$	89 $\frac{1}{2}$	87	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	73	90
OC-2010-*	10	6	8	10	165 $\frac{7}{8}$	150 $\frac{1}{2}$	101 $\frac{1}{2}$	99	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	85	102
OC-2011-*	10	6	8	10	177 $\frac{7}{8}$	162 $\frac{1}{2}$	113 $\frac{1}{2}$	111	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	97	114
OC-2012-*	10	6	8	10	189 $\frac{7}{8}$	174 $\frac{1}{2}$	125 $\frac{1}{2}$	123	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	109	126
OC-2013-*	10	6	8	10	201 $\frac{7}{8}$	186 $\frac{1}{2}$	137 $\frac{1}{2}$	135	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	121	138
OC-2014-*	10	6	8	10	213 $\frac{7}{8}$	198 $\frac{1}{2}$	149 $\frac{1}{2}$	147	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	133	150
OC-2015-*	10	6	8	10	225 $\frac{7}{8}$	210 $\frac{1}{2}$	161 $\frac{1}{2}$	159	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	145	162
OC-2016-*	10	6	8	10	237 $\frac{7}{8}$	222 $\frac{1}{2}$	173 $\frac{1}{2}$	171	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	157	174
OC-2017-*	10	6	8	10	249 $\frac{7}{8}$	234 $\frac{1}{2}$	185 $\frac{1}{2}$	183	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	169	186
OC-2018-*	10	6	8	10	261 $\frac{7}{8}$	246 $\frac{1}{2}$	197 $\frac{1}{2}$	195	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	181	198
OC-2019-*	10	6	8	10	273 $\frac{7}{8}$	258 $\frac{1}{2}$	209 $\frac{1}{2}$	207	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	193	210
OC-2020-*	10	6	8	10	285 $\frac{7}{8}$	270 $\frac{1}{2}$	221 $\frac{1}{2}$	219	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	205	222
OC-2021-*	10	6	8	10	297 $\frac{7}{8}$	282 $\frac{1}{2}$	233 $\frac{1}{2}$	231	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	217	234
OC-2022-*	10	6	8	10	309 $\frac{7}{8}$	294 $\frac{1}{2}$	245 $\frac{1}{2}$	243	19 $\frac{3}{4}$	21	11 $\frac{1}{8}$	20	24	15 $\frac{1}{2}$	22 $\frac{3}{8}$	23 $\frac{5}{8}$	39	229	246
OC-229-*	12	8	8	12	153 $\frac{1}{2}$	139	84 $\frac{5}{8}$	80 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	64	92
OC-2210-*	12	8	8	12	165 $\frac{1}{2}$	151	96 $\frac{5}{8}$	92 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	76	104
OC-2211-*	12	8	8	12	177 $\frac{1}{2}$	163	108 $\frac{5}{8}$	104 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	88	116
OC-2212-*	12	8	8	12	189 $\frac{1}{2}$	175	120 $\frac{5}{8}$	116 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	100	128
OC-2213-*	12	8	8	12	201 $\frac{1}{2}$	187	132 $\frac{5}{8}$	128 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	112	140
OC-2214-*	12	8	8	12	213 $\frac{1}{2}$	199	144 $\frac{5}{8}$	140 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	124	152
OC-2215-*	12	8	8	12	225 $\frac{1}{2}$	211	156 $\frac{5}{8}$	152 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	136	164
OC-2216-*	12	8	8	12	237 $\frac{1}{2}$	223	168 $\frac{5}{8}$	164 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	148	176
OC-2217-*	12	8	8	12	249 $\frac{1}{2}$	235	180 $\frac{5}{8}$	176 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	160	188
OC-2218-*	12	8	8	12	261 $\frac{1}{2}$	247	192 $\frac{5}{8}$	188 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	172	200
OC-2219-*	12	8	8	12	273 $\frac{1}{2}$	259	204 $\frac{5}{8}$	200 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	184	212
OC-2220-*	12	8	8	12	285 $\frac{1}{2}$	271	216 $\frac{5}{8}$	212 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	196	224
OC-2221-*	12	8	8	12	297 $\frac{1}{2}$	283	228 $\frac{5}{8}$	224 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	208	236
OC-2222-*	12	8	8	12	309 $\frac{1}{2}$	295	240 $\frac{5}{8}$	236 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	220	248
OC-2223-*	12	8	8	12	321 $\frac{1}{2}$	307	252 $\frac{5}{8}$	248 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	232	260
OC-2224-*	12	8	8	12	333 $\frac{1}{2}$	319	264 $\frac{5}{8}$	260 $\frac{5}{8}$	20	22	11 $\frac{7}{8}$	22	26 $\frac{1}{8}$	15 $\frac{1}{2}$	25 $\frac{5}{8}$	27 $\frac{1}{8}$	42	244	272

NOTES: Bolt holes straddle center lines on flanged openings. Legs available at extra cost. Removable bundle. Removable heads. Channel covers removable. Dimensions are subject to change. If exact dimensions are needed for layout, write for certified drawings. See front page for flange connection sizes and construction materials.

IMPORTANT: Designate 1 or 2 pass where asterisk appears. A_s, B_s, G_s with smaller listed shell openings. A_L, B_L, G_L with larger listed shell openings.

Different size Shell Connections available to suit flow requirement.

B_s, B_L, C and overall length dimensions are based upon one-pass head connections.

(continued next page)

TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

DIMENSIONS

"OC" type straight tube—floating head
—outside packed lantern
Shell diameter in inches
Tube length in feet
Number of tube passes

Complete sales number consists of example: OC-86*

UNIT NUMBER	HEAD CONN. 150# ANSI FLANGES		SHELL CONN. 150# ANSI FLANGES		OVERALL LENGTH (INCHES)		DIMENSIONS IN INCHES												
	1 PASS	2 PASS	SMALL	LARGE	1 PASS	2 PASS	A _S	A _L	B _S	B _L	C	D	E	F	G _S	G _L	H	J	K
OC-249-*	14	10	8	12	157	141 $\frac{5}{8}$	83 $\frac{7}{8}$	79 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	63	91
OC-2410-*	14	10	8	12	169	153 $\frac{5}{8}$	95 $\frac{7}{8}$	91 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	75	103
OC-2411-*	14	10	8	12	181	165 $\frac{5}{8}$	107 $\frac{7}{8}$	103 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	87	115
OC-2412-*	14	10	8	12	193	177 $\frac{5}{8}$	119 $\frac{7}{8}$	115 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	99	127
OC-2413-*	14	10	8	12	205	189 $\frac{5}{8}$	131 $\frac{7}{8}$	127 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	111	139
OC-2414-*	14	10	8	12	217	201 $\frac{5}{8}$	143 $\frac{7}{8}$	139 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	123	151
OC-2415-*	14	10	8	12	229	213 $\frac{5}{8}$	155 $\frac{7}{8}$	151 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	135	163
OC-2416-*	14	10	8	12	241	225 $\frac{5}{8}$	167 $\frac{7}{8}$	163 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	147	175
OC-2417-*	14	10	8	12	253	237 $\frac{5}{8}$	179 $\frac{7}{8}$	175 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	159	187
OC-2418-*	14	10	8	12	265	249 $\frac{5}{8}$	191 $\frac{7}{8}$	187 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	171	199
OC-2419-*	14	10	8	12	277	261 $\frac{5}{8}$	203 $\frac{7}{8}$	199 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	183	211
OC-2420-*	14	10	8	12	289	273 $\frac{5}{8}$	215 $\frac{7}{8}$	211 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	195	223
OC-2421-*	14	10	8	12	301	285 $\frac{5}{8}$	227 $\frac{7}{8}$	223 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	207	235
OC-2422-*	14	10	8	12	313	297 $\frac{5}{8}$	239 $\frac{7}{8}$	235 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	219	247
OC-2423-*	14	10	8	12	325	309 $\frac{5}{8}$	251 $\frac{7}{8}$	247 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	231	259
OC-2424-*	14	10	8	12	337	321 $\frac{5}{8}$	263 $\frac{7}{8}$	259 $\frac{3}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	12 $\frac{7}{8}$	24	28 $\frac{1}{8}$	16 $\frac{1}{2}$	26	28 $\frac{1}{8}$	45	243	271
OC-269-*	16	10	8	14	161 $\frac{7}{8}$	144 $\frac{3}{4}$	83 $\frac{1}{4}$	78 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	60	90
OC-2610-*	16	10	8	14	173 $\frac{7}{8}$	156 $\frac{3}{4}$	95 $\frac{1}{4}$	90 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	72	102
OC-2611-*	16	10	8	14	185 $\frac{7}{8}$	168 $\frac{3}{4}$	107 $\frac{1}{4}$	102 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	84	114
OC-2612-*	16	10	8	14	197 $\frac{7}{8}$	180 $\frac{3}{4}$	119 $\frac{1}{4}$	114 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	96	126
OC-2613-*	16	10	8	14	209 $\frac{7}{8}$	192 $\frac{3}{4}$	131 $\frac{1}{4}$	126 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	108	138
OC-2614-*	16	10	8	14	221 $\frac{7}{8}$	204 $\frac{3}{4}$	143 $\frac{1}{4}$	138 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	120	150
OC-2615-*	16	10	8	14	233 $\frac{7}{8}$	216 $\frac{3}{4}$	155 $\frac{1}{4}$	150 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	132	162
OC-2616-*	16	10	8	14	245 $\frac{7}{8}$	228 $\frac{3}{4}$	167 $\frac{1}{4}$	162 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	144	174
OC-2617-*	16	10	8	14	257 $\frac{7}{8}$	240 $\frac{3}{4}$	179 $\frac{1}{4}$	174 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	156	186
OC-2618-*	16	10	8	14	269 $\frac{7}{8}$	252 $\frac{3}{4}$	191 $\frac{1}{4}$	186 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	168	198
OC-2619-*	16	10	8	14	281 $\frac{7}{8}$	264 $\frac{3}{4}$	203 $\frac{1}{4}$	198 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	180	210
OC-2620-*	16	10	8	14	293 $\frac{7}{8}$	276 $\frac{3}{4}$	215 $\frac{1}{4}$	210 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	192	222
OC-2621-*	16	10	8	14	305 $\frac{7}{8}$	288 $\frac{3}{4}$	227 $\frac{1}{4}$	222 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	204	234
OC-2622-*	16	10	8	14	317 $\frac{7}{8}$	300 $\frac{3}{4}$	239 $\frac{1}{4}$	234 $\frac{5}{8}$	23	25 $\frac{5}{8}$	14 $\frac{1}{4}$	26	30 $\frac{5}{8}$	17 $\frac{1}{2}$	27 $\frac{1}{8}$	29 $\frac{3}{8}$	49	216	246

NOTES: Bolt holes straddle center lines on flanged openings. Legs available at extra cost. Removable bundle. Removable heads. Channel covers removable. Dimensions are subject to change. If exact dimensions are needed for layout, write for certified drawings. See front page for flange connection sizes and construction materials.

IMPORTANT: Designate 1 or 2 pass where asterisk appears. A_S, B_S, G_S with smaller listed shell openings. A_L, B_L, G_L with larger listed shell openings.

Different size Shell Connections available to suit flow requirement.

B_S, B_L, C and overall length dimensions are based upon one-pass head connections.

(continued next page)

TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

DIMENSIONS

"OC" type straight tube—floating head
—outside packed lantern
Shell diameter in inches
Tube length in feet
Number of tube passes

Complete sales number consists of example: OC-86*

UNIT NUMBER	HEAD CONN. 150# ANSI FLANGES		SHELL CONN. 150# ANSI FLANGES		OVERALL LENGTH (INCHES)		DIMENSIONS IN INCHES												
	1 PASS	2 PASS	SMALL	LARGE	1 PASS	2 PASS	As	AL	BS	BL	C	D	E	F	Gs	GL	H	J	K
OC-289-*	16	12	10	14	162 $\frac{1}{4}$	145 $\frac{3}{8}$	81 $\frac{3}{4}$	78 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	60	90
OC-2810-*	16	12	10	14	174 $\frac{1}{4}$	157 $\frac{3}{8}$	93 $\frac{3}{4}$	90 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	72	102
OC-2811-*	16	12	10	14	186 $\frac{1}{4}$	169 $\frac{3}{8}$	105 $\frac{3}{4}$	102 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	84	114
OC-2812-*	16	12	10	14	198 $\frac{1}{4}$	181 $\frac{3}{8}$	117 $\frac{3}{4}$	114 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	96	126
OC-2813-*	16	12	10	14	210 $\frac{1}{4}$	193 $\frac{3}{8}$	129 $\frac{3}{4}$	126 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	108	138
OC-2814-*	16	12	10	14	222 $\frac{1}{4}$	205 $\frac{3}{8}$	141 $\frac{3}{4}$	138 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	120	150
OC-2815-*	16	12	10	14	234 $\frac{1}{4}$	217 $\frac{3}{8}$	153 $\frac{3}{4}$	150 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	132	162
OC-2816-*	16	12	10	14	246 $\frac{1}{4}$	229 $\frac{3}{8}$	165 $\frac{3}{4}$	162 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	144	174
OC-2817-*	16	12	10	14	258 $\frac{1}{4}$	241 $\frac{3}{8}$	177 $\frac{3}{4}$	174 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	156	186
OC-2818-*	16	12	10	14	270 $\frac{1}{4}$	253 $\frac{3}{8}$	189 $\frac{3}{4}$	186 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	168	198
OC-2819-*	16	12	10	14	282 $\frac{1}{4}$	265 $\frac{3}{8}$	201 $\frac{3}{4}$	198 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	180	210
OC-2820-*	16	12	10	14	294 $\frac{1}{4}$	277 $\frac{3}{8}$	213 $\frac{3}{4}$	210 $\frac{1}{2}$	24 $\frac{1}{8}$	25 $\frac{3}{4}$	14 $\frac{3}{8}$	28	32 $\frac{5}{8}$	18 $\frac{1}{2}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	49	192	222
OC-309-*	18	12	10	16	166 $\frac{7}{8}$	148 $\frac{3}{8}$	81 $\frac{1}{2}$	76 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	56	90
OC-3010-*	18	12	10	16	178 $\frac{7}{8}$	160 $\frac{3}{8}$	93 $\frac{1}{2}$	88 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	68	102
OC-3011-*	18	12	10	16	190 $\frac{7}{8}$	172 $\frac{3}{8}$	105 $\frac{1}{2}$	100 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	80	114
OC-3012-*	18	12	10	16	202 $\frac{7}{8}$	184 $\frac{3}{8}$	117 $\frac{1}{2}$	112 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	92	126
OC-3013-*	18	12	10	16	214 $\frac{7}{8}$	196 $\frac{3}{8}$	129 $\frac{1}{2}$	124 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	104	138
OC-3014-*	18	12	10	16	226 $\frac{7}{8}$	208 $\frac{5}{8}$	141 $\frac{1}{2}$	136 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	116	150
OC-3015-*	18	12	10	16	238 $\frac{7}{8}$	220 $\frac{3}{8}$	153 $\frac{1}{2}$	148 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	128	162
OC-3016-*	18	12	10	16	250 $\frac{7}{8}$	232 $\frac{3}{8}$	165 $\frac{1}{2}$	160 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	140	174
OC-3017-*	18	12	10	16	262 $\frac{7}{8}$	244 $\frac{3}{8}$	177 $\frac{1}{2}$	172 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	152	186
OC-3018-*	18	12	10	16	274 $\frac{7}{8}$	256 $\frac{3}{8}$	189 $\frac{1}{2}$	184 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	164	198
OC-3019-*	18	12	10	16	286 $\frac{7}{8}$	268 $\frac{3}{8}$	201 $\frac{1}{2}$	196 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	176	210
OC-3020-*	18	12	10	16	298 $\frac{7}{8}$	280 $\frac{3}{8}$	213 $\frac{1}{2}$	208 $\frac{1}{4}$	25 $\frac{1}{2}$	28 $\frac{1}{8}$	15 $\frac{5}{8}$	30	34 $\frac{5}{8}$	19 $\frac{1}{2}$	28 $\frac{5}{8}$	31 $\frac{1}{4}$	54	188	222

NOTES: Bolt holes straddle center lines on flanged openings. Legs available at extra cost. Removable bundle. Removable heads. Channel covers removable. Dimensions are subject to change. If exact dimensions are needed for layout, write for certified drawings. See front page for flange connection sizes and construction materials.

IMPORTANT: Designate 1 or 2 pass where asterisk appears. As, Bs, Gs with smaller listed shell openings. AL, BL, GL with larger listed shell openings.

Different size Shell Connections available to suit flow requirement.

Bs, BL, C and overall length dimensions are based upon one-pass head connections.

TYPE "OC" HEAT EXCHANGERS (Straight Tube—Channel Head Design)

TYPICAL SPECIFICATIONS

Furnish and install approximately where shown on plans and with manufacturers' recommendations; heat exchangers according to the following specifications:

1. DUTY

Condenser _____ Cooler _____
Evaporator _____ Heater _____

2. OPERATING CONDITIONS

	Tube Side	Shell Side
a. Fluid Circulated	_____	_____
b. Total Flow	_____	_____
c. Temperature	Inlet _____ Outlet _____	Inlet _____ Outlet _____
d. Heat Load BTU/Hr.	_____	_____
e. Operating Pressure	_____	_____
f. Maximum Pressure Drop	_____	_____
g. Minimum Tube Surface	_____	_____
h. Minimum Shell Diameter	_____	_____

3. TYPE

Shell and tube, straight tube—floating head—outside packed lantern ring. Equipped with _____ cast iron saddles _____ steel legs.

4. MATERIALS

a. Heads (Channel) _____
b. Tube Sheets _____ c. Baffles _____
d. Tubes _____ OD _____ Wall Thickness _____

5. CONSTRUCTION* (See bottom of page)

- A manufacturer's data report for pressure vessels, form No. U-1 as required by the provisions of the ASME Code Rules, is to be furnished with each unit upon request. This form must be signed by an authorized inspector, holding a National Board commission, certifying that construction conforms to the latest ASME Code for pressure vessels for:
Shell _____ PSIG design pressure at _____ °F.
Head _____ PSIG design pressure at _____ °F.
as detailed in form No. U-1. The ASME "U" symbol is also to be stamped on the heat exchanger.
- The manufacturer shall register the vessel with the National Board.
- Tube rolling will be controlled for uniform expansion into tube sheets.
- Gasket surfaces will be prepared with surface grinder.

6. MANUFACTURERS

Exchangers shall be as manufactured by Bell & Gossett with factory No. _____
Model No. _____ or approved equal.

SYSTEM DESIGN NOTE: To protect unit, a relief valve should be provided on the heated water side.

*Compliance with this part of the specification will insure acceptance of the vessel by any state or local jurisdiction in the United States.

For further information, contact Bell & Gossett Heat Transfer Products, 175 Standard Parkway, Cheektowaga, NY 14227,
Phone: (716) 862-4171 — Facsimile: (716) 862-4176.

Bell & Gossett