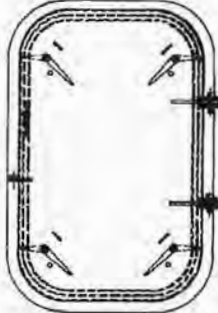
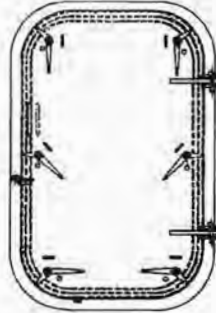


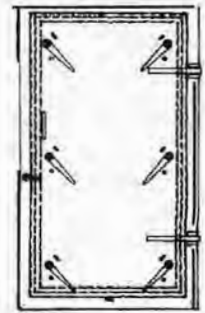
**#100 2-DOG
FUMELIGHT DOOR**



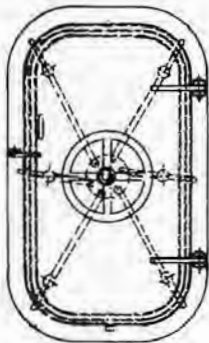
**#101 4-DOG
WEATHERTIGHT DOOR**



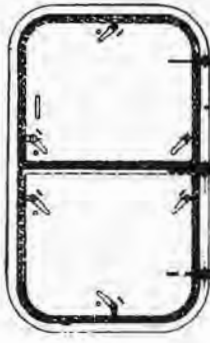
**#102 6-DOG
WATERTIGHT DOOR**



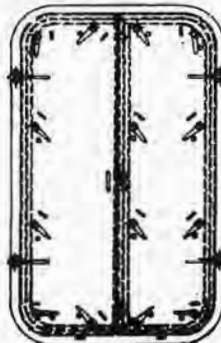
**#103 6-DOG
SQUARE CORNER DOOR**



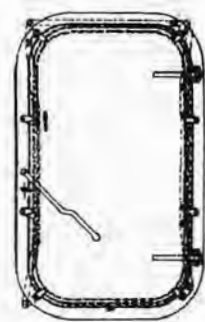
**#104 6-DOG
QUICK ACTING DOOR**



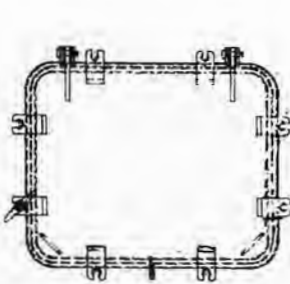
**#105 6-DOG
DUTCH DOOR**



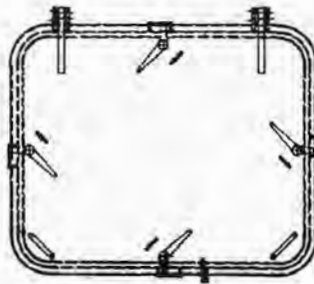
**#106
DOUBLE DOOR**



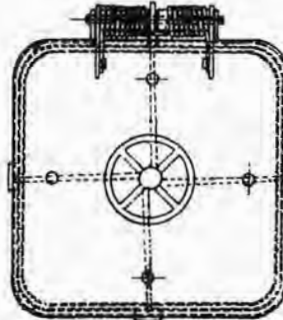
**#109
QUICK ACTING LEVER
OPERATED DOOR**



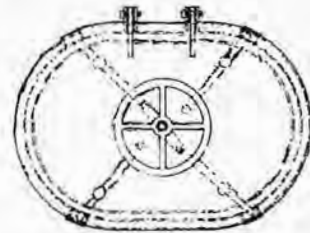
**#200
DROP BOLT HATCH**



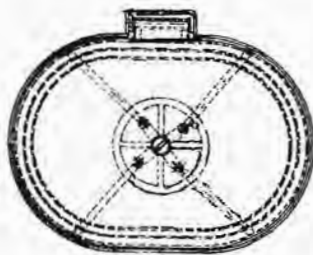
**#201
WATERTIGHT HATCH**



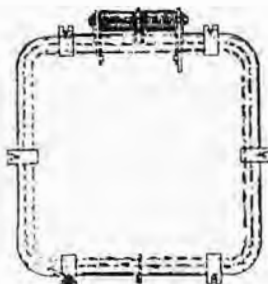
**#202
QUICK ACTING SPRING
BALANCED HATCH**



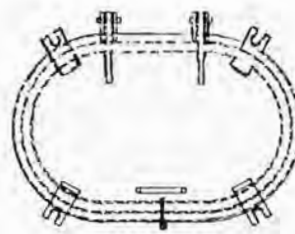
**#203
QUICK ACTING OVAL
HATCH**



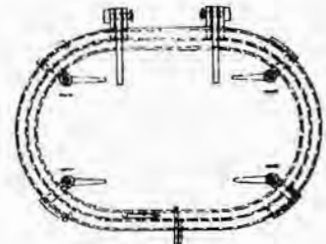
**#204
QUICK ACTING FLUSH
OVAL HATCH**



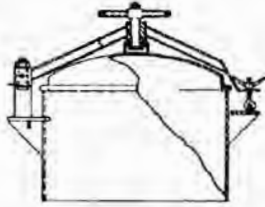
**#207
SPRING BALANCED
DROP BOLT HATCH**



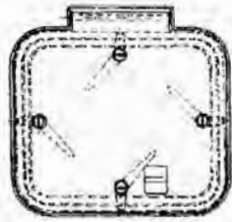
**#208
OVAL DROP BOLT
HATCH**



**#209
OVAL DOGGED HATCH**



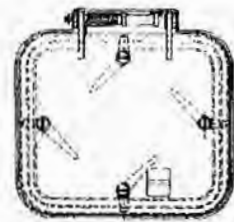
#210
OIL CARGO HATCH



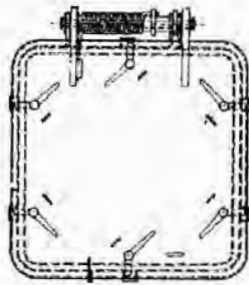
#211
FLUSH HATCH



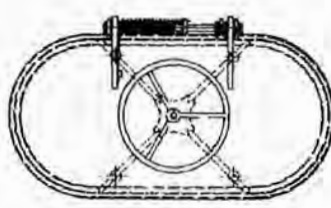
#212
FLUSH OVAL
HATCH



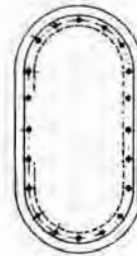
#213
SPRING BALANCED
FLUSH HATCH



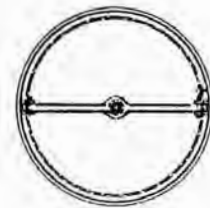
#214
SPRING BALANCED
DOGGED HATCH



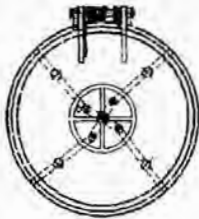
#215
SPRING BALANCED
OVAL QUICK ACTING
HATCH



#300
BOLTED PLATE
MANHOLE



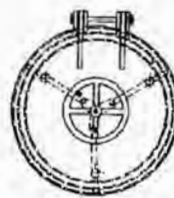
#301
SINGLE BOLT
MANHOLE



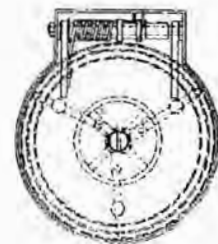
#400
SPRING BALANCED
QUICK ACTING
SCUTTLE



#401
QUICK ACTING
FLUSH SCUTTLE



#402
QUICK ACTING RAISED
SCUTTLE



#403
QUICK ACTING
SPRING BALANCED
FLUSH SCUTTLE



#403
DROP BOLT
RAISED
SCUTTLE



#405
DOGGED
RAISED
SCUTTLE



#406
FLUSH TOP
RAISED
SCUTTLE

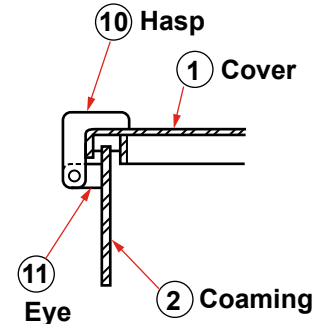
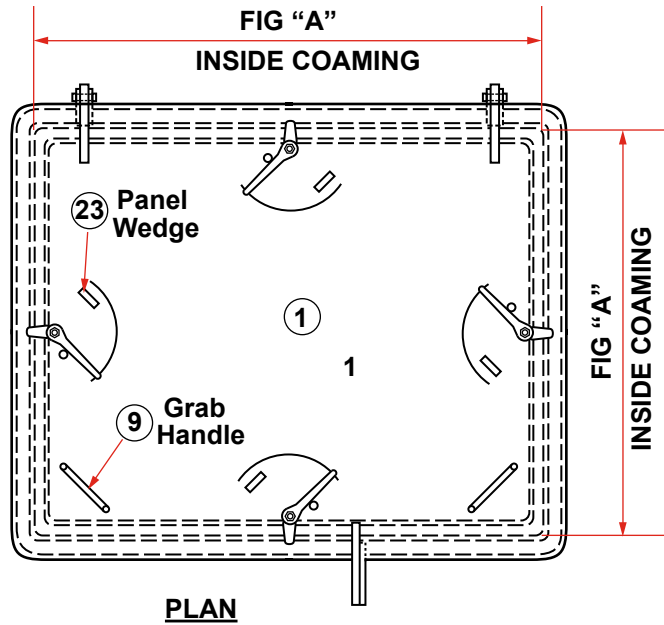


#407
DOGGED
FLUSH
SCUTTLE

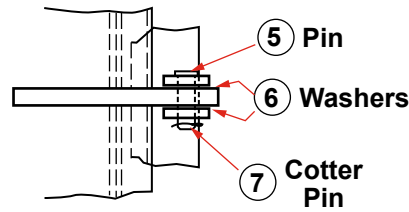


#500 FIXED
LIGHT

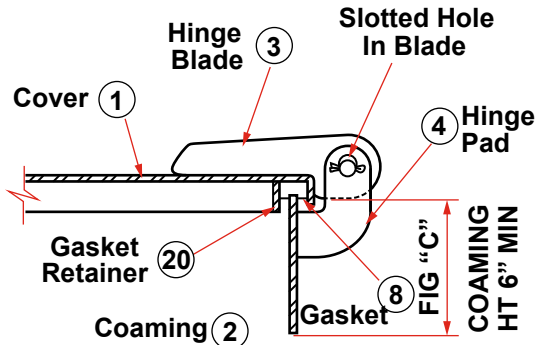
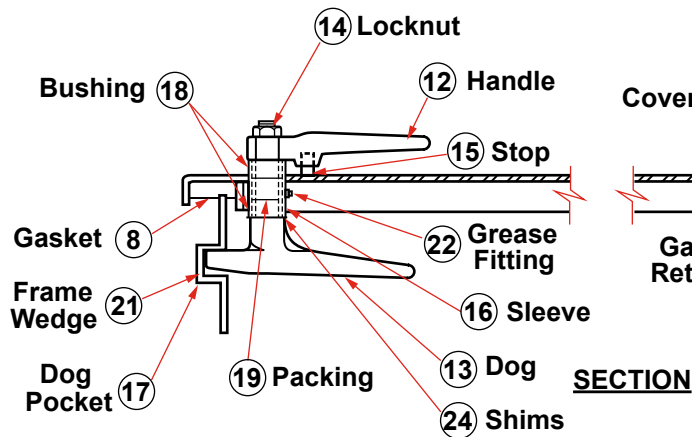
DRAWING NO. 201



DETAIL OF HASP & EYE



DETAIL OF HINGE



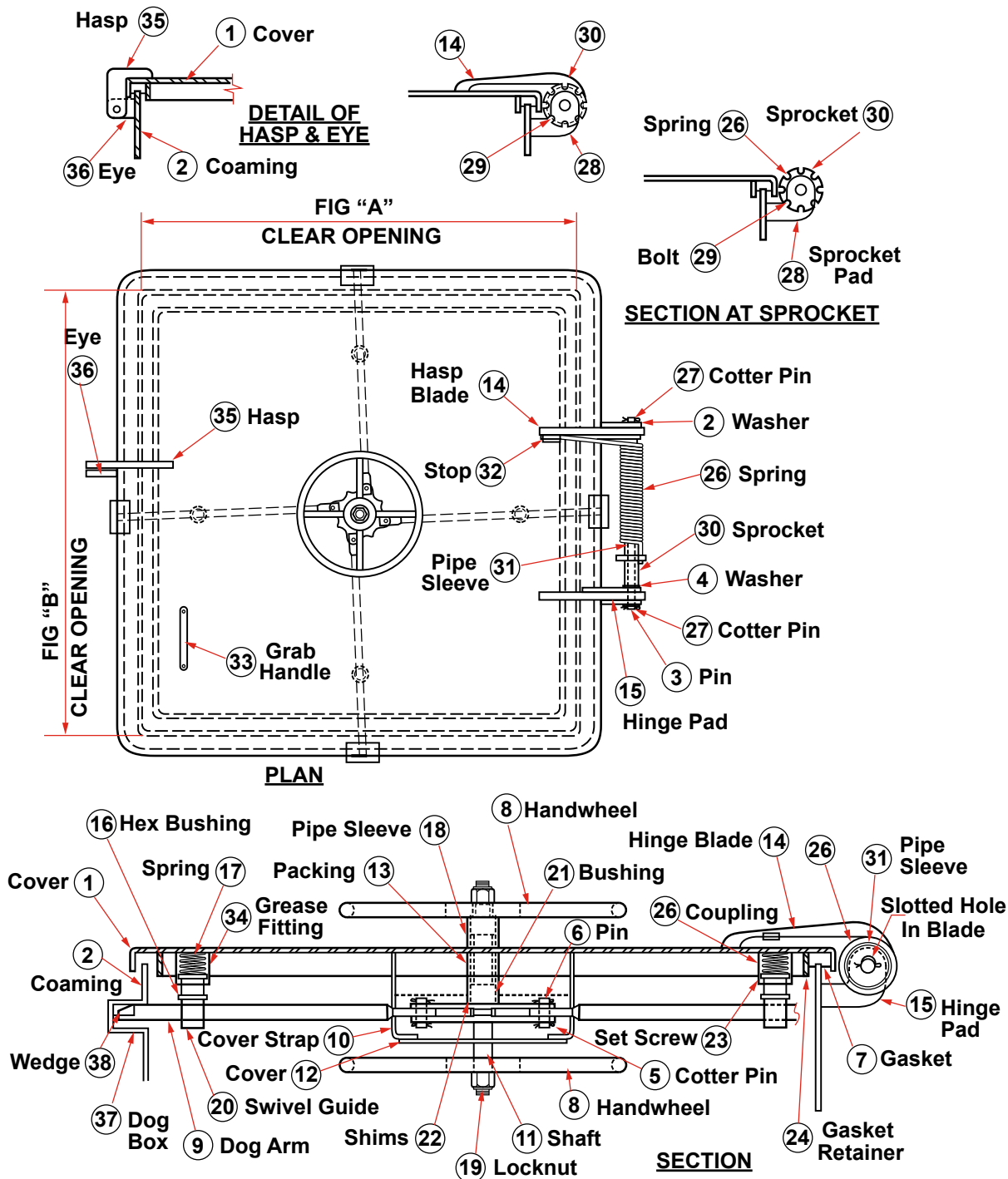
SCHEDULE OF MATERIAL

PC. NO.	MATERIAL
1	Mild Steel
2	Mild Steel
3	Mild Steel
4	Mild Steel
5	Brass
6	Stainless
7	Stainless
8	Neoprene
9	Steel
10	Mild Steel
11	Mild Steel
12	Frg. Stl.
13	Frg. Stl.
14	Plated Steel
15	Steel
16	Steel
17	Steel
18	Delrin
19	Teflon
20	Mild Steel
21	Frg. Stl.
22	Plated Steel
23	Mild Steel
24	Stainless

SPRING BALANCE QUICK ACTING WATERTIGHT HATCH DRAWING NO. 202

SCHEDULE OF MATERIAL

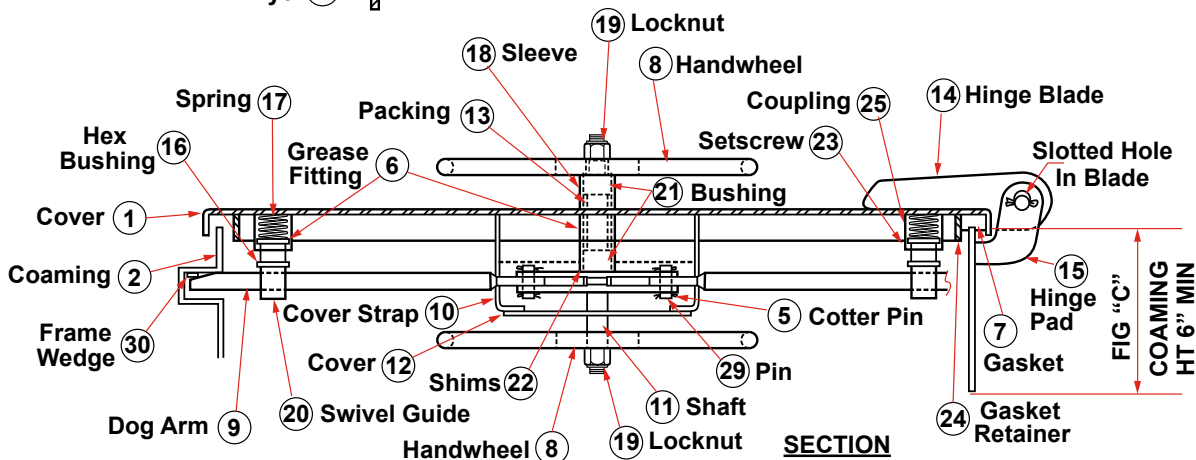
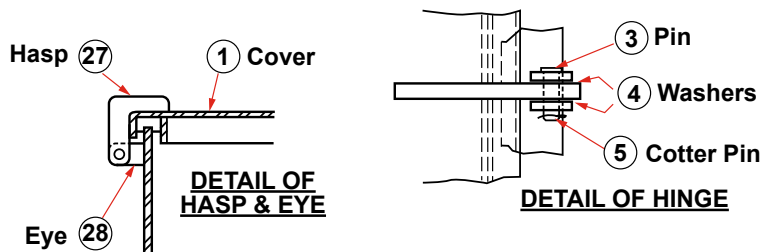
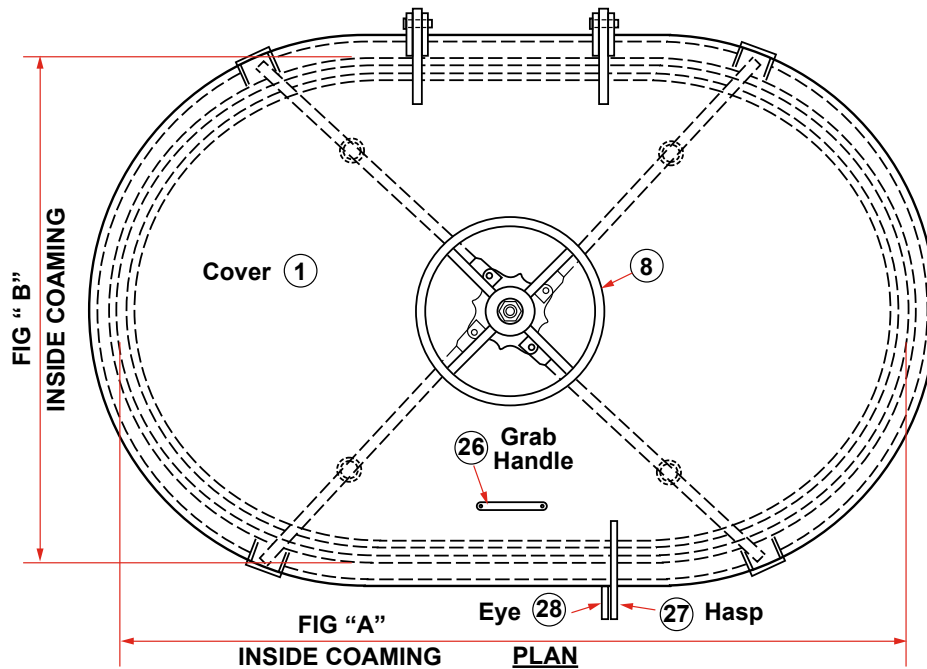
PC. NO.	MATERIAL
1	Mild Steel
2	Mild Steel
3	Cold Finish
4	Stainless
5	Stainless
6	Brass
7	Neoprene
8	Mild Steel
9	Mild Steel
10	Mild Steel
11	Cold Finish
12	Mild Steel
13	Teflon
14	Mild Steel
15	Mild Steel
16	Brass
17	Plated Steel
18	Mild Steel
19	Plated Steel
20	Brass
21	Derlin
22	Stainless
23	Plated Steel
24	Mild Steel
25	Mild Steel
26	Stainless
27	Stainless
28	Mild Steel
29	Brass
30	Mild Steel
31	Mild Steel
32	Mild Steel
33	Mild Steel
34	Plated Steel
35	Mild Steel
36	Mild Steel
37	Mild Steel
38	Mild Steel
39	Stainless
40	Mild Steel
41	Mild Steel



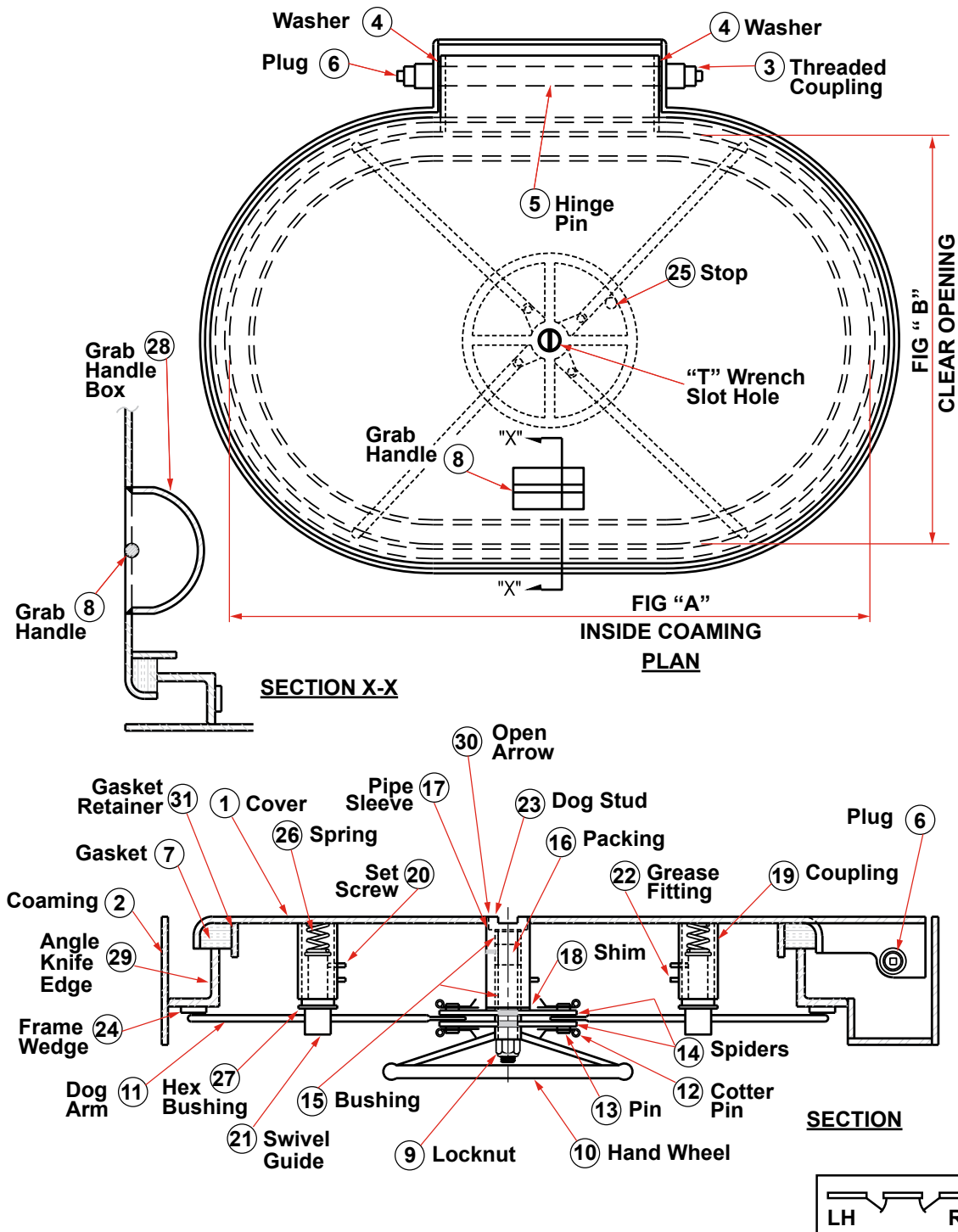
QUICK ACTING OVAL HATCH DRAWING NO. 203

SCHEDULE OF MATERIAL

PC. NO.	MATERIAL
1	Mild Steel
2	Mild Steel
3	Brass
4	Brass
5	Brass
6	Brass
7	Neoprene
8	Mild Steel
9	Mild Steel
10	Mild Steel
11	Cold Finish
12	Mild Steel
13	Graphite
14	Mild Steel
15	Mild Steel
16	Mild Steel
17	Spring Steel
18	Mild Steel
19	Mild Steel
20	Brass
21	Delrin
22	Brass
23	Steel
24	Mild Steel
25	Mild Steel
26	Mild Steel
27	Mild Steel
28	Mild Steel
29	Brass
30	Mild Steel



QUICK ACTING FLUSH OVAL HATCH DRAWING NO. 204



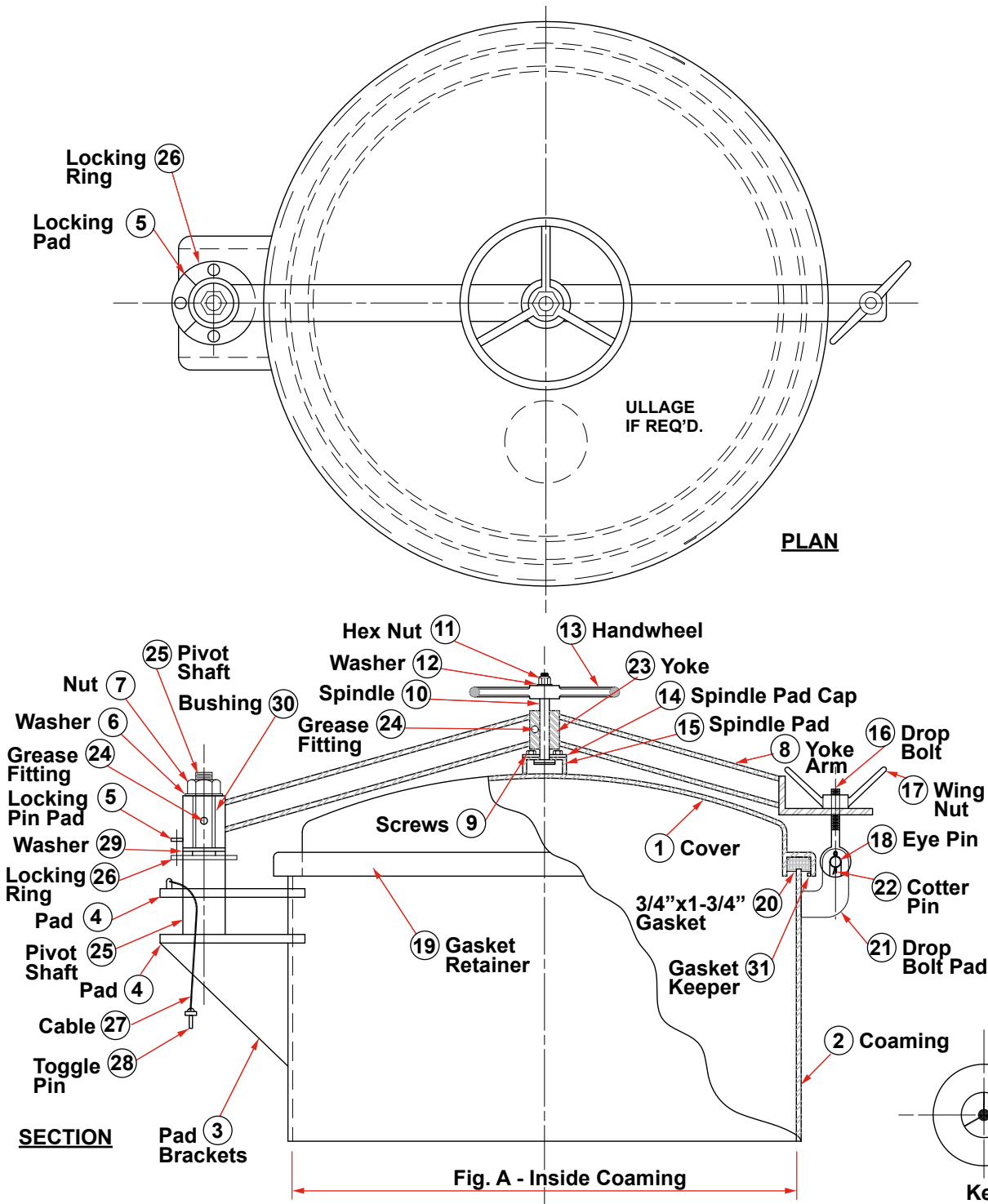
SCHEDULE OF MATERIAL

PC. NO.	MATERIAL
1	Mild Steel
2	Mild Steel
3	Mild Steel
4	Stainless
5	Cold Finish
6	Steel
7	Neoprene
8	Mild Steel
9	Plated Steel
10	Mild Steel
11	Mild Steel
12	Stainless
13	Brass
14	Mild Steel
15	Delrin
16	Teflon
17	Mild Steel
18	Brass
19	Mild Steel
20	Plated Steel
21	Brass
22	Plated Steel
23	Brass
24	Mild Steel
25	Mild Steel
26	Plated Steel
27	Brass
28	Steel
29	Mild Steel
30	Stainless
31	Mild Steel

OIL CARGO HATCH DRAWING NO. 210

SCHEDULE OF MATERIAL

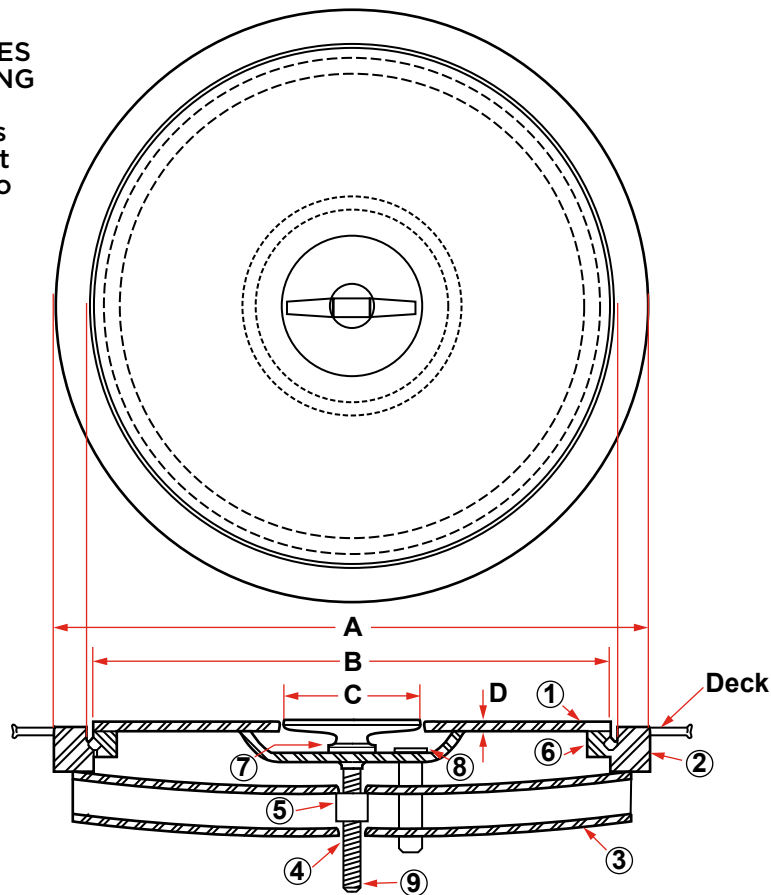
PC. NO.	MATERIAL
1	Mild Steel
2	Mild Steel
3	Mild Steel
4	Mild Steel
5	Mild Steel
6	Plated Steel
7	Plated Steel
8	Mild Steel
9	Stainless
10	Brass
11	Plated Steel
12	Stainless
13	Mild Steel
14	Mild Steel
15	Mild Steel
16	Manganese Bronze
17	Manganese Bronze
18	Brass
19	Mild Steel
20	Neoprene
21	Mild Steel
22	Stainless
23	Steel
24	Plated Steel
25	Steel
26	Steel
27	Stainless
28	Stainless
29	Plated Steel
30	Brass
31	Steel



FLUSH WATERTIGHT T-HANDLE HATCH

NOTE 1: INCLUDES ALL PIECES
EXCEPT PC. NO. 2 - DECK RING

The specifications and details
described by drawings or text
in this literature are subject to
change without notice



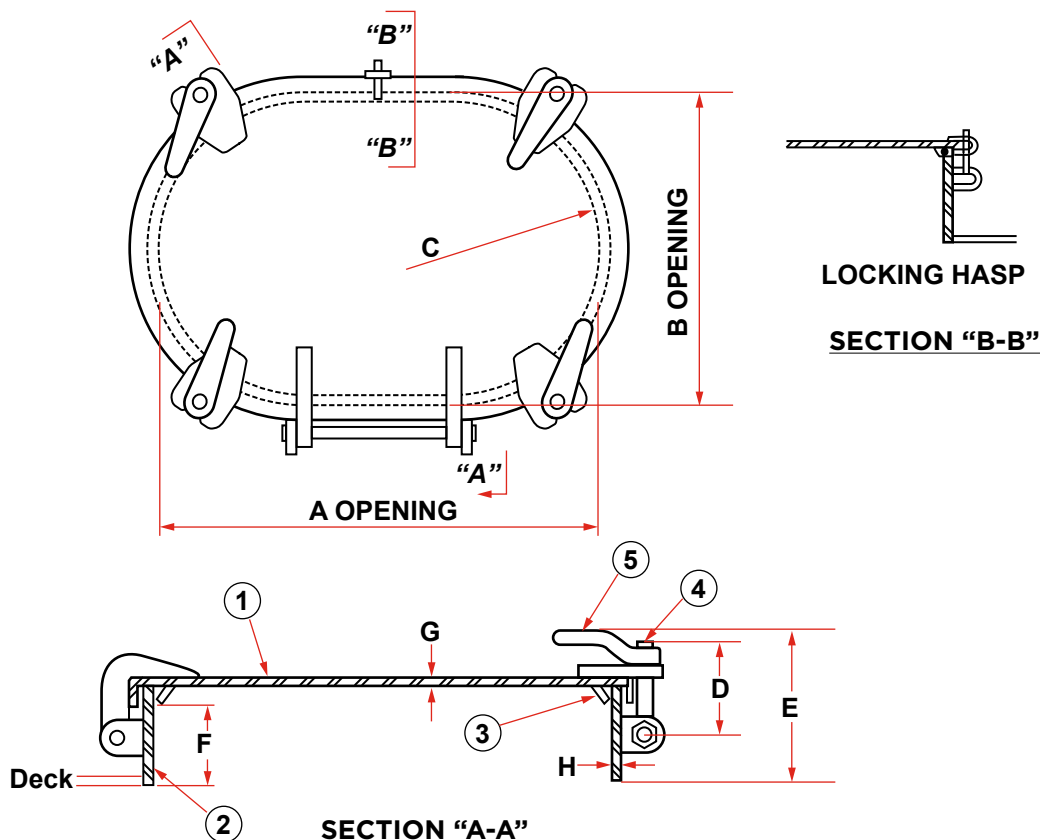
PIECE NO.	DESCRIPTION	PART NUMBER		MATERIAL
		DF-430-18D	DF-430-24D	
1	Cover Assembly	6769	15342	See Note 1 above
2	Deck Ring	6750	15334	Mild Steel
3	Strongback	6300	13870	Galvanized Steel
4	Tee Handle	16993	16993	Stainless Steel
5	Nut	507	507	Brass
6	Gasket	17256	6548	Neoprene
7	Washer	604	604	Brass
8	Washer Gasket	6556	6556	Neoprene
9	Pin	21636	21636	Stainless Steel

MODEL NO.	PART NO.	SIZE	A	B	C	D	WT. (lbs.)
DF-430-18D	6297	18	20-3/4	18	5	3/8	70
	6335 (Galvanized)						74
DF-430-24D	6270	24	26-3/4	24	5	3/8	116
	6289 (Galvanized)						120

* Actual values for above sizes may vary +/- 15% due to variations in materials and tolerances.

Dimensions are in inches unless otherwise noted.

RAISED WATERTIGHT HATCH



PIECE NO.	DESCRIPTION	PART NUMBER		MATERIAL
		DF-174-5	DF-464-5	
1	Cover Assembly**	77887	78484	Mild Steel
2	Coaming	74897	19551	Mild Steel
3	Gasket	74497	78530	Neoprene†
4	Tumble Bolt	10774	10774	Bronze
5	Dog Handle	74837	74837	Malleable Iron
	Flame Screen*	17051	19445	Stainless Steel

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	G	H	WT. (lbs.)
DF-174-5	72451	15 x 23	23	15	7-1/2	5-1/4	8-5/8	5	5/16	3/8	95
DF-464-5	78514	18 x 24	24-1/4	18-1/4	9-1/8	5-1/4	8-5/8	5	5/16	3/8	105

*OPTIONAL EXTRA

** Gasket included w/cover assembly

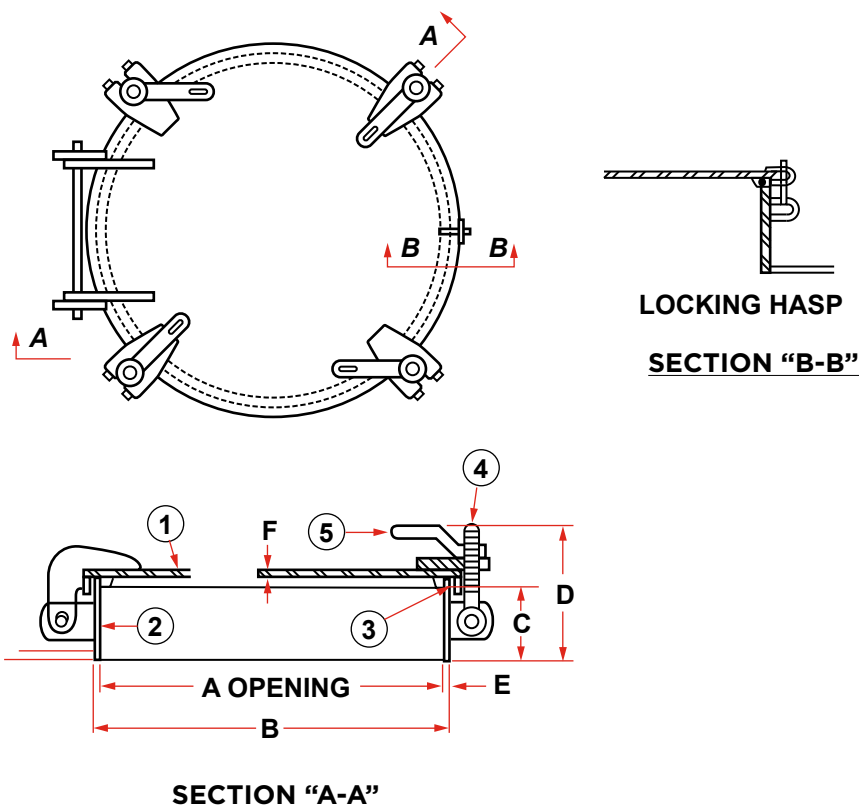
† Other gasket material available

Other optional extras include galvanized finish, a flame screen and a variety of coaming heights.

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Dimensions are in inches unless otherwise noted.

RAISED WATERTIGHT HATCH



PIECE NO.	DESCRIPTION	PART NUMBER	MATERIAL
1	Cover Assembly**	77895	Mild Steel
2	Coaming	75026	Mild Steel
3	Gasket	74497	Neoprene†
4	Tumble Bolt	10774	Bronze
5	Dog Handle	74837	Malleable Iron

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	WT. (lbs.)
DF-343-5	74950	19	19	19-3/4	5	8-5/8	3/8	5/16	90

*OPTIONAL EXTRA

** Gasket included w/cover assembly

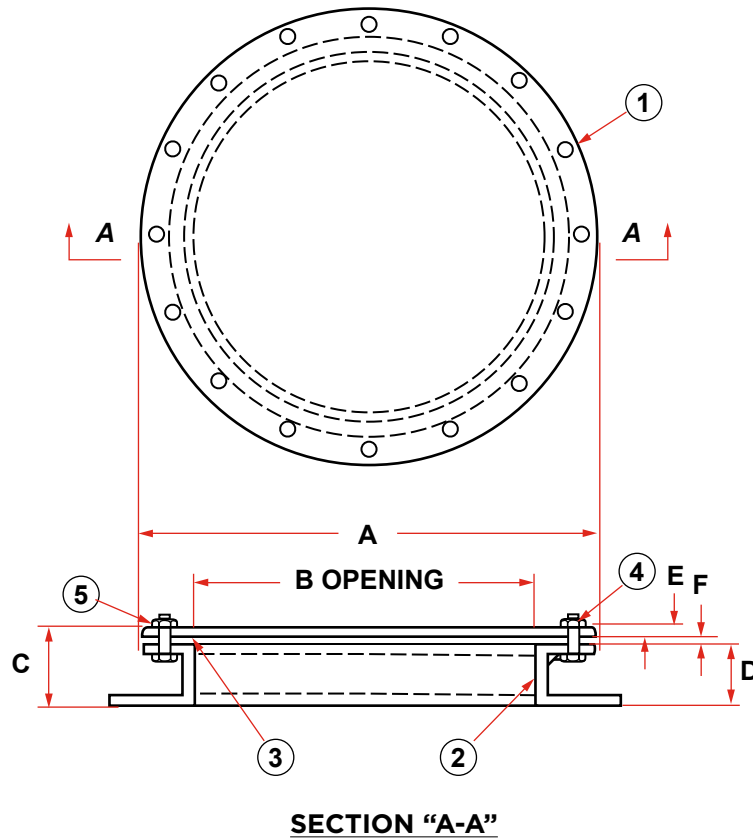
† Other gasket material available

Other optional extras include galvanized finish, a flame screen and a variety of coaming heights.

The specification and details described by drawings or text in this literature are subject to change without notice.

Dimensions are in inches unless otherwise noted.

CLEAN OUT HATCH



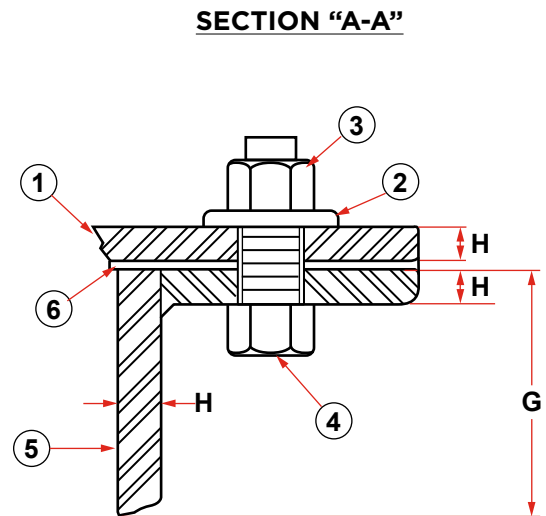
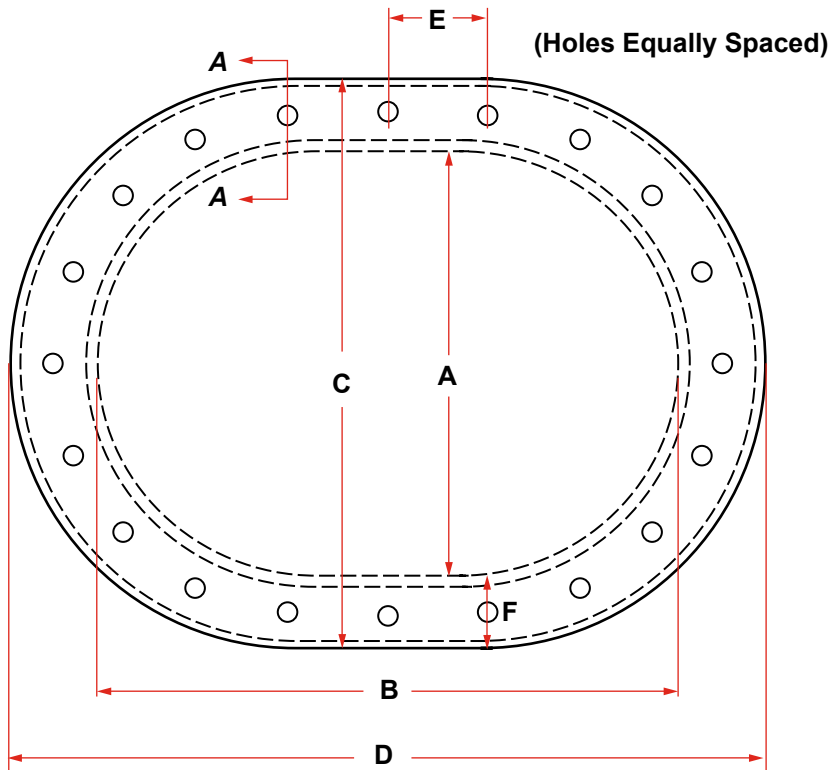
PIECE NO.	DESCRIPTION	PART NUMBER		MATERIAL
		DF-154-18	DF-154-14	
1	HATCH COVER	77216	76767	MILD STEEL
2	COAMING	77232	76783	MILD STEEL
3	GASKET	77224	76775	NEOPRENE
4	5/8" BOLT	14613	14613	STEEL
5	5/8" NUT	16179	16179	BRASS

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	WT. (lbs.)
DF-154-14	15407	14	19	14	3-1/4	2-1/2	3/8	3/8	60
DF-154-18	77240	18	23	18	3-1/4	2-1/2	3/8	3/8	78

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Dimensions are in inches unless otherwise noted.

RAISED BOLTED HATCH



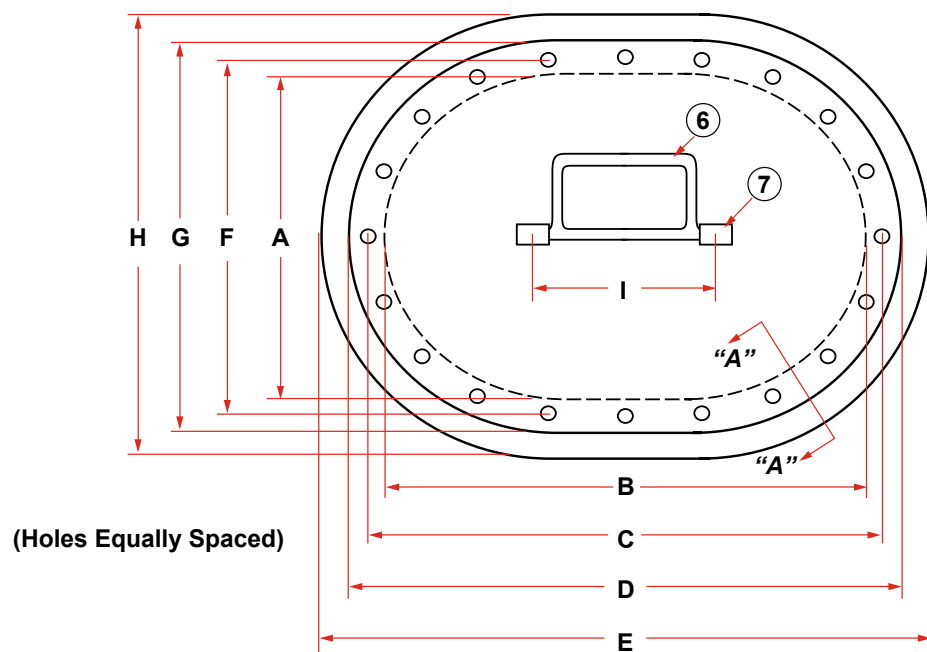
PIECE NO.	DESCRIPTION	PART NUMBER		MATERIAL
		DF-501	DF-502	
1	COVER PLATE	21342	21350	STEEL
2	WASHER	21237	21237	BRASS
3	HEX NUT	21245	21245	STAINLESS
4	HEX BOLT	14605	14605	STEEL
5	COAMING	21369	21377	STEEL
6	GASKET	21385	21393	NEOPRENE

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	G	H	WT. (lbs.)
DF-501	21091	15 X 23	15	23	20	28-3/4	3-5/8	2-1/2	2-1/2	3/8	85
DF-502	21105	18 X 24	18	24	23	29-3/4	3-1/4	2-1/2	2-1/2	3/8	106

The specification and details described by drawings or text in this literature are subject to change without notice.

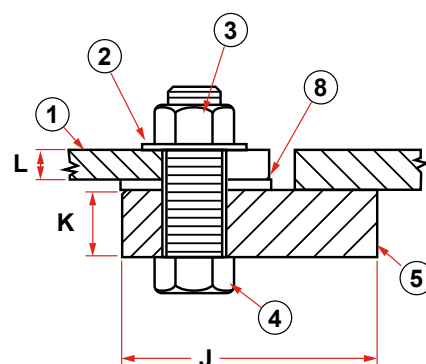
Dimensions are in inches unless otherwise noted.

FLUSH BOLTED HATCH



NOTE: Lampwick grommet furnished by others if required.

SECTION "A-A"



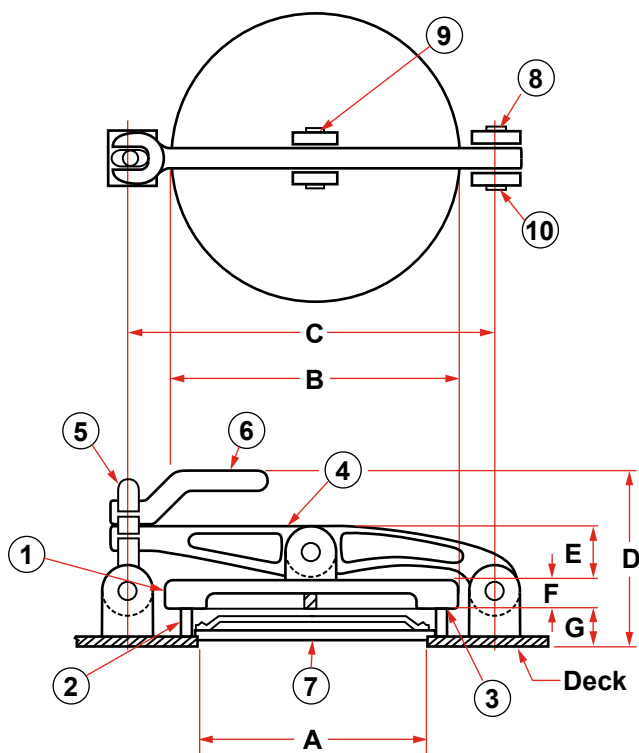
PIECE NO.	DESCRIPTION	PART NUMBER		MATERIAL
		DF-503	DF-504	
1	COVER	21229	21318	MILD STEEL
2	WASHER	21237	21237	BRASS
3	NUT	21245	21245	STAINLESS STEEL
4	BOLT	14613	14613	STEEL
5	DECK RING	21253	21326	MILD STEEL
6	HANDLE	21261	21261	MILD STEEL
7	HANDLE RETAINER	21288	21288	MILD STEEL
8	GASKET	21296	21334	NEOPRENE

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	WT. (lbs.)
DF-503	21113	15 X 23	15	23	24-1/4	26-1/2	29	16-1/4	18-1/2	21	9	3	3/4	3/8	95
DF-504	21121	18 X 24	18	24	25-1/4	27-1/2	30	19-1/4	21-1/2	24	9	3	3/4	3/8	112

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Dimensions are in inches unless otherwise noted.

ULLAGE HATCH

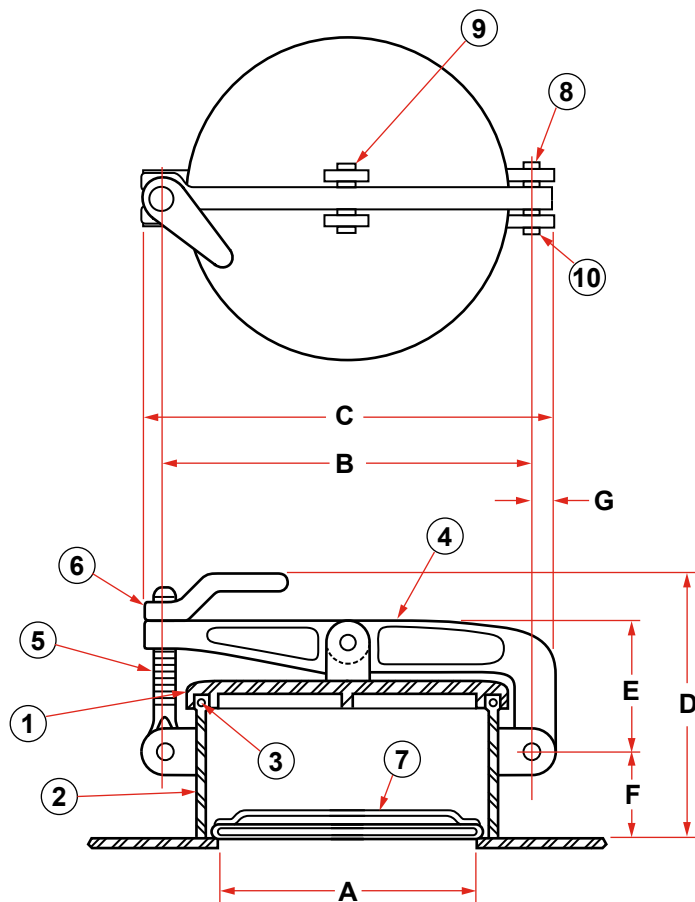


PIECE NO.	DESCRIPTION	PART NUMBER	MATERIAL
1	COVER	6637	CAST IRON
2	COAMING	75671	MILD STEEL
3	GASKET	17167	NEOPRENE
4	ARM	6831	MALLEABLE IRON
5	TUMBLE BOLT	10774	BRONZE
6	DOG HANDLE	74837	MALLEABLE IRON
7	FLAME SCREEN	6629	STAINLESS STEEL
8	HEX HEAD BOLT	20842	BRONZE
9	HEX HEAD BOLT	20850	BRONZE
10	ESNA NUT	20869	STAINLESS

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	G	WT. (lbs.)
DF-144	6645	8	7-1/2	9-1/2	12	5-5/16	1-7/8	13/16	7/8	22

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Dimensions are in inches unless otherwise noted.



ULLAGE HATCH

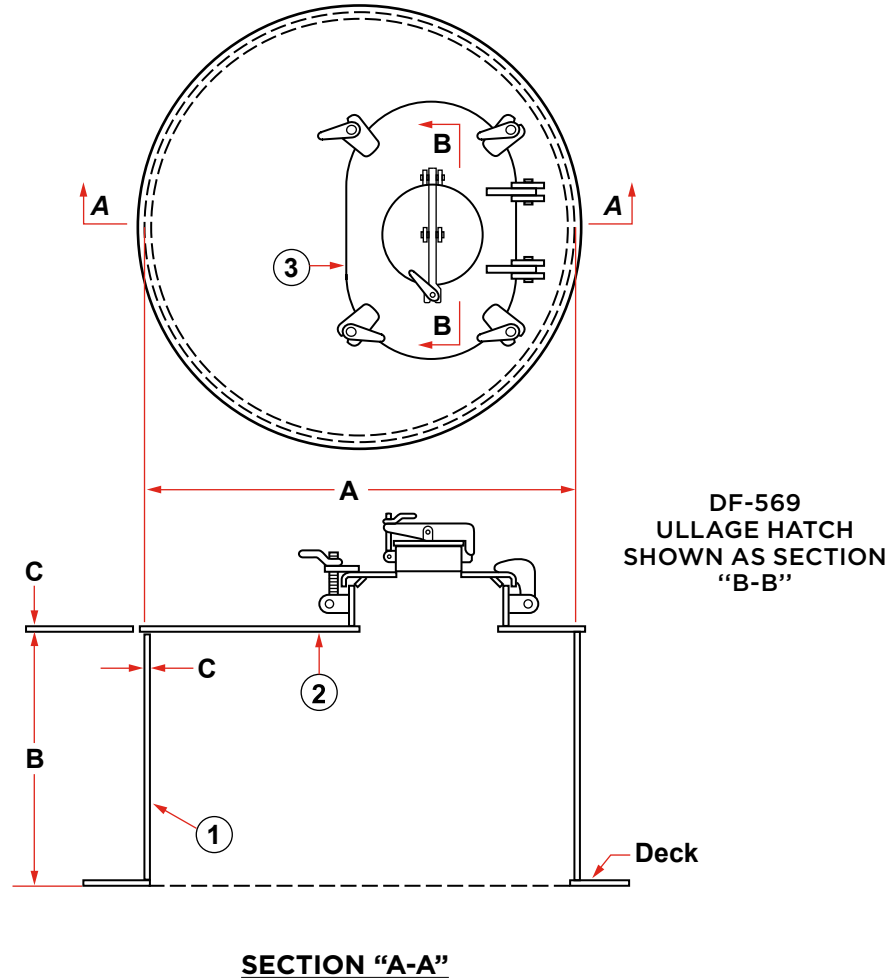
PIECE NO.	DESCRIPTION	PART NUMBER	MATERIAL
1	COVER	83062	CAST IRON
2	COAMING	19526	MILD STEEL
3	GASKET	82449	NEOPRENE
4	ARM	19461	MALLEABLE IRON
5	TUMBLE BOLT	10774	BRONZE
6	DOG HANDLE	74837	MALLEABLE IRON
7	FLAME SCREEN	19496	STAINLESS STEEL
8	HEX HEAD BOLT	20842	BRONZE
9	HEX HEAD BOLT	20850	BRONZE
10	ESNA NUT	20869	STAINLESS STEEL

MODEL NO.	PART NO.	SIZE	A	B	C	D	E	F	G	WT. (lbs.)
DF-569	83097	10	9-1/2	13-1/2	14-3/4	9-5/8	4-3/8	3-1/2	3/4	42

The specification and details described by drawings or text in this literature are subject to change without notice.

Dimensions are in inches unless otherwise noted.

EXPANSION TRUNK



PIECE NO.	DESCRIPTION	PART NUMBER		MATERIAL
		DF-470	DF-449	
1	COAMING	76171	76171	MILD STEEL
2	COVER	76163	76163	MILD STEEL
3	RAISED HATCH w/ULLAGE HATCH	85316	8214	MILD STEEL

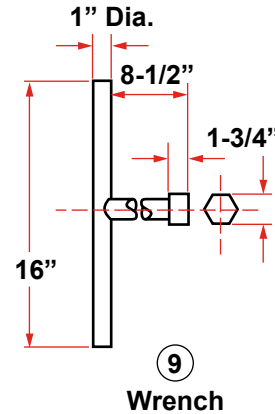
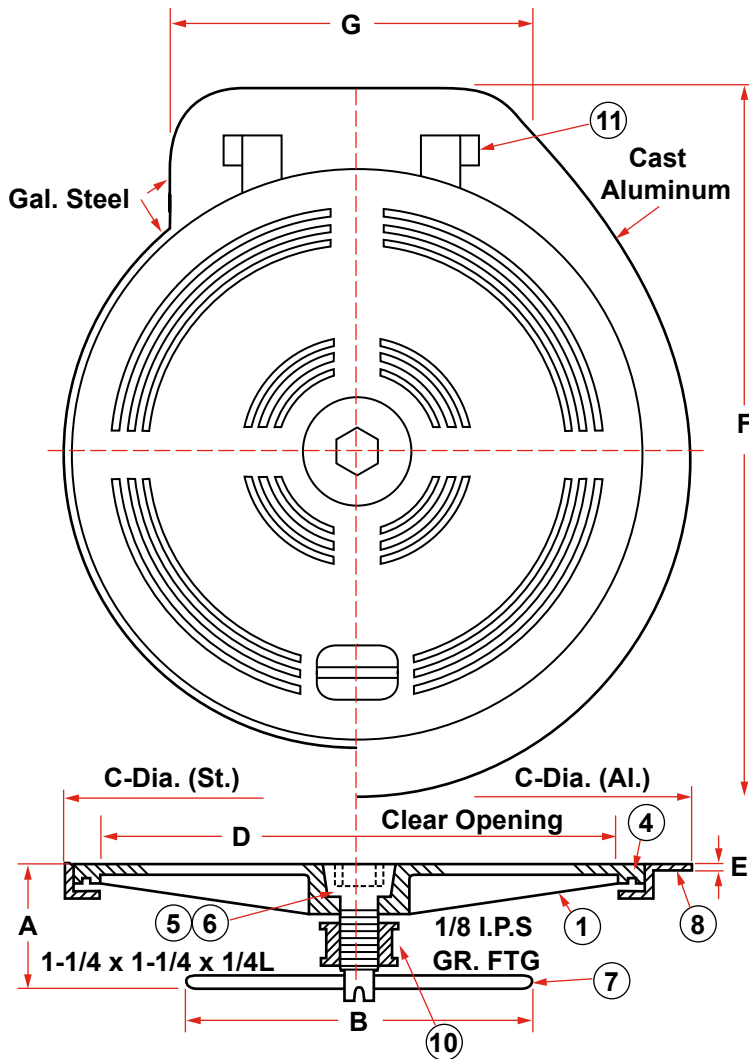
MODEL NO.	PART NO.	SIZE	A	B	C	WT. (lbs.)
DF-449	6238	24 H X 42 Dia W/DF-144	42	24	5/16	520
DF-470	85308	24 H X 42 Dia W/DF-569	42	24	5/16	540

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Dimensions are in inches unless otherwise noted.

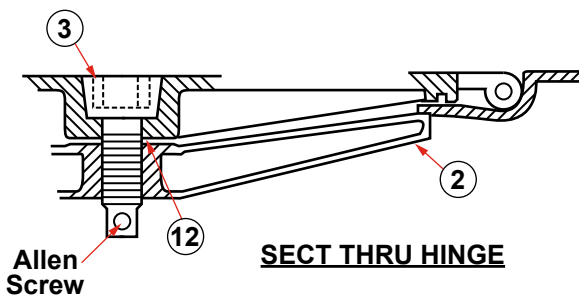
HINGED ROUND-DOGGED TYPE

CLEAR OPENING - 22", TYPE "C" POSITIVE LOCKING



BILL OF MATERIAL		
NO.	DESC.	MAT'L
1	Cover	*
2	Yoke	* 3 arms
3	Bolt	Bronze
4	Gasket	Neoprene
5	Washer	St. Steel
6	Washer	Neoprene
7	Rod-1/2" DIA.	Steel
8	Deck Ring	*
9	Wrench	Galv. Steel
10	Lube Zerk	Anodized Steel
11	Hinge Pin	Stainless Steel
12	Spring	Stainless Steel

*Available in corrosion resistant aluminum or galv. steel

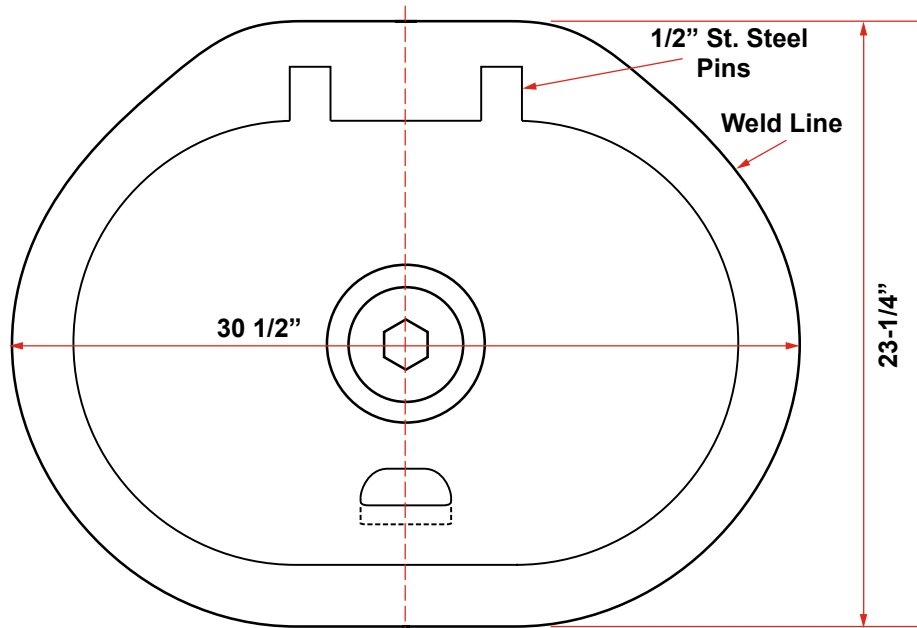


Dimensions are in inches unless otherwise noted.

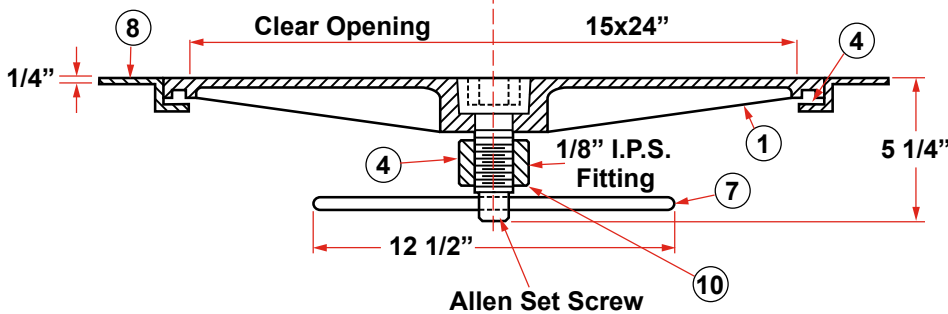
MODEL NO.	SIZE.	WEIGHT (LBS.)		DIMENSIONS - (INCHES)						
		COVER	RING	A	B	C	D	E	F	G
AL.	22"	21	13	5-1/2	12-1/2	28-1/2	22	1/4	30-1/4	14
ST.		63	27			23-3/4				

WEIGHT ARE FOR ALUMINUM - FOR G. STEEL, MANUF. BY 3.0

HINGED FLUSH TYPE

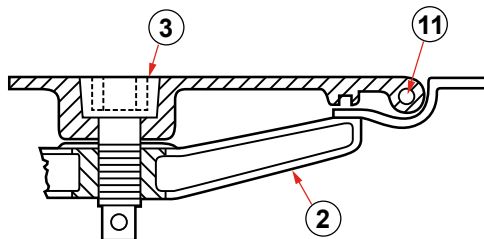


HINGED OVAL DOGGED TYPE
15X24 CLEAR OPENING
TYPE "C" POSITIVE LOCKING



BILL OF MATERIAL		
NO.	DESC.	MAT'L
1	Cover	*
2	Strongback	*
3	Bolt	Bronze
4	Gasket	Neoprene
5	Washer	St. Steel
6	Washer	Neoprene
7	Rod-1/2" ø	Steel
8	Deck Ring	*
9	Wrench	Galv. Steel
10	Lube Zerk	Ann. Steel
11	Hinge Pins	St. Steel

*Available in corrosion resistant aluminum or galv. steel



SECT THRU HINGE

Dimensions are in inches unless otherwise noted.