

SUCTION & DISCHARGE REFERENCE SHEET

SPACER

(4) 7/16-14 TAPPED MOUNTING HOLES ON 4.38 DIA. BOLT CIRCLE

2.50 INSIDE DIA.

6.75

4.00

4.00

STD. DISCHARGE VALVE FLANGE

STD. 5 1/4 DIA FLANGE (4) .469 HOLES ON 4.38 BOLT CIRCLE

PART NUMBER 159-0010-10-0

OTHER SPACER LENGTHS ARE AVAILABLE PLEASE CONSULT THE FACTORY

OFFSET DISCHARGE SPACER

(2) "C" WASHERS (P/N 097-0440-00-0) FURNISHED WITH OFFSET ADAPTERS TO BRIDGE MOUNTING FLANGE SLOTS AND ALLOW FOR ADJUSTMENT

FLANGE ALLOWS SPACER TO ROTATE +/- 6° RELATIVE TO MOUNTING HOLES SO THAT VALVE CAN BE ALIGNED WITH PANEL (PUMP IS TYPICALLY INCLINED AT APPROX. 4° TO MATCH DRIVE LINE ANGLE)

CAST PAD(S) - CAN BE MACHINED FOR FLOWMETER BY TRUCK BUILDER

(4) HOLES 7/16-14 X 3/4 DP 4.38 B.C.

5.75

4.50

PART NUMBER LENGTH FLOWMETER PADS

159-0010-08-0	5.75 PAD ON FAR SIDE ONLY
159-0570-00-0	4.50 PADS ON BOTH SIDES

5" & 6" VICTAULIC ADAPTER

(12) HOLES .469 THRU

9.25

8.25 B.C.

GASKET: 046-0040-00-0 DIM-"A"

5" VICTAULIC	007-3490-00-0	4.25
6" VICTAULIC	007-3480-00-0	2.75

5" & 6" VICTAULIC ADAPTER 4 DEG. ANGLE

(12) HOLES .469 THRU

9.25

8.25 B.C.

GASKET: 046-0040-00-0 DIM-"A"

5" VICTAULIC	007-3490-01-0	4.50
6" VICTAULIC	007-3480-01-0	2.75

2417 SERIES FLANGE

(12) .469 MTG. HOLES ON Ø 8.25 BOLT CIRCLE

9.40

1.88

GASKET: 046-0040-00-0 DIM-"A"

115-0420-00-0	4" NPT
115-0441-01-0	5" NPT
115-0441-00-0	6" NPT

SUCTION TUBES

(12) HOLES .469 THRU ON 8.25 B.C.

LENGTH

THREAD SIZE

GASKET: 046-0040-00-0

PART NUMBER	THREAD SIZE STD / OPT - LENGTH
007-0010-00-0	4-1/2" NST STANDARD - 6" LONG
007-0020-00-0	5" NST STANDARD - 6" LONG
007-0030-00-0	6" NST STANDARD - 6" LONG
007-0030-10-0	6" NST OPTIONAL - 7" LONG
007-0030-06-0	6" NST OPTIONAL - 4" LONG
007-0110-00-0	4-1/2" NST OPTIONAL - 9" LONG
007-0120-00-0	5" NST OPTIONAL - 9" LONG
007-0130-00-0	6" NST OPTIONAL - 9" LONG

2433 SERIES FLANGES

NPT THREAD (PER PART NO.)

(8) .469 MTG. HOLES ON 5.75 DIA. BOLT CIRCLE

6.75

6.50

T

THICKNESS

A° MOUNTING FLANGE ANGLE (PART NO'S. AS NOTED **)

2433 SERIES FLANGES USE GASKET NO. 046-0060-00-0

PART NUMBER	THREAD SIZE THICKNESS - ANGLE
115-0010-00-0	BLANK 5/8" THICK
115-0020-00-0	2-1/2" NPT 1-3/8" THICK
*115-0020-02-0	2-1/2" NPT ** T = 1-3/8" - 4°
115-0030-00-0	3" NPT 1-3/8" THICK
115-0030-02-0	3" NPT ** T = 1-3/8" - 4°
115-0040-00-0	4" NPT 1-3/8" THICK
*115-0040-02-0	4" NPT ** T = 1-3/8" - 4°

115 SERIES FLANGES

NPT THREAD (PER PART NO.)

(4) .469 MTG. HOLES ON 4.38 DIA. BOLT CIRCLE

THICKNESS

4° MOUNTING FLANGE ANGLE (PART NO'S. AS NOTED **)

SG 4.25

115 SERIES FLANGES USE SEAL RING NO. 142-0390-00-0 OR GASKET: 046-0050-00-0

PART NUMBER	THREAD SIZE THICKNESS - ANGLE
115-0050-00-0	BLANK 3/4" THICK
115-1260-00-0	1-1/4" NPT 3/4" THICK
115-0060-00-0	2" NPT 3/4" THICK
115-0070-00-0	2-1/2" NPT 1-5/16" THICK
115-0070-02-0	2-1/2" NPT ** T = 1-9/16" - 4°
115-0080-00-0	3" NPT 1-41/64" THICK
115-0080-02-0	3" NPT ** T = 1-11/16" - 4°

SUCTION TUBE EXTENSIONS

IDENTIFIES SERIES OF MATING HALE FLANGES

STANDARD 178-0063-00-0

OPTIONAL 178-0063-01-0 (CAST IRON) 178-0063-03-0 (BRONZE)

"A" PANEL WIDTH

24" CENTER LINE OF PUMP COMPARTMENT

7.25

3.38 MIV

"B" SUCTION TUBE LENGTH

SUCTION TUBE CENTER LINE

1.56

2.94

4.56 REF

3.00

7.94

1.3 REF.

"C" SUCTION TUBE EXPOSED LENGTH

SUCTION TUBE LENGTH "B"	W/OUT MIV	TRUCK PANEL WIDTH "A"					
		70"	72"	74"	76"	78"	81"
4"	W/OUT MIV	3.63	2.63	1.63			
	W/MIV	2.25	1.25				
6"	W/OUT MIV	5.63	4.63	3.63	2.63	1.63	
	W/MIV	3.25	2.25	1.25			
7"	W/OUT MIV	6.63	5.63	4.63	3.63	2.63	1.13
	W/MIV	5.25	4.25	3.25	2.25	1.25	
9"	W/OUT MIV	8.63	7.63	6.63	5.63	4.63	3.13
	W/MIV						

MINI-MANIFOLD 178-0320-02-0

(4) 7/16-14 X 4.38 B.C.

1" NPT

4.38 SQ TYP

3.00

3.00

3.00

6.00

5.19

3.00

7.375

3.00

115 X 3" VICTAULIC 098-0140-00-0 ELBOW

(4) HOLES DRILL - Ø.469 THRU X 4.38 B.C.

FOOT HOLE HT.

4.38

4.30

3.00

4.38

2.63

4.88

3.25

115 X 2-1/2 NPT 098-0050-00-0 ELBOW

4.25 SQ

(4) HOLES .47 DIA. X 4.38 B.C.

4.00

3.88

2.88

2-1/2 NPT

098-0020-00-0 115 X 115 ELBOW * 098-0020-04-0 115 X 115 ELBOW

* 1-1/4 NPT

(8) HOLES 15/32 THRU X 4.38 B.C.

5.00

2.38

3.00

3.00

4.25 SQ

Ø 2.50

098-0190-00-0 2433 X 4" VICTAULIC

(8) HOLES Ø .469 THRU ON A 5.75 B.C.

22.5°

3" NPT

4.63

4" VIC

4.50

4.00

.63

6.50

PLATE NO. 831AF

NOTE:
 1. MUST CONTACT HALE PRODUCTS FOR AVAILABILITY OF BRONZE EQUIVALENTS
 2. ALL DIMENSION ARE IN INCHES
 3. DO NOT USE THIS DRAWING FOR PART TEMPLATES.

ECD NO	REV	CHANGED FROM	BY	DATE	APVD
98-5	C	CORRECTED TO 7% OFFSET DISCHARGE SPACER PART NUMBER. ADDED 6-RING GRADE TO SPACER. ADDED 6" NPT 1.7" LONG SUCTION TUBE	PRW	01-08-98	MD
98-80	D	UPDATED SUCTION TUBE EXTENSIONS	DLM	04-23-98	RET
00-637	E	UPDATED W/ADDITIONAL OPTIONS	TC	10-10-00	MAL
03-319	F	ADDED NEW SUCTION EXTENSION/NEW LAYOUT	TC	11-12-03	MAL

HALE HALE PRODUCTS, INC. A Unit of IDEX Corporation Conshohocken, PA 19428 USA

DATE 10-24-95

DRAWN | AJO | CHECKED | ROT | DATE 10-24-95 | SIZE | SCALE : NTS