SSCF® Stainless Steel Heat Exchangers

Compact.

Rugged.

Thermally Efficient.

All 316 SS.

ITT Standard

A unit of ITT Fluid Technology Corporation

Durable.

Flexible design.

SSCF heat exchangers are compact, rugged, and ideal for heating or cooling corrosive fluids in chemical, pharmaceutical, and refining processes.

Every SSCF unit is pre-engineered, with 316 stainless steel on all fluid contact areas on both the shell and tube sides. Bolting and support feet on standard units are carbon steel, with the option of stainless steel. Optional bonnets are also available in cast iron or cast bronze. In addition, most models can be furnished to meet ASME code, if required.

With the choice of one-, two-, and four-pass configurations, and with heat transfer surfaces ranging from 1.2 to 576 square feet, SSCF offers a low-cost, thermally efficient, dependable solution to your process fluid temperature control needs.

Expertise.

Quality.

The benefit of more than seventy-five years of research, design capability, and experience in heat transfer is behind the construction of every SSCF unit. That experience is evident in a manufacturing process that yields consistently high results and has received ISO 9001 registration.

If you need a special solution to a difficult heat transfer problem, call us first. Our pre-engineered designs often permit special problems to be solved with standard solutions.

Service.

Fast delivery.

When your heating or cooling process application requires a stainless steel heat exchanger, it shouldn't take months to get it. With SSCF it won't.

To meet your specific needs in the shortest amount of time, parts and subassemblies, as well as on-the-shelf heat exchangers, are kept in stock. This means you can have a pre-engineered or precision-crafted unit made quickly to suit your application. Even replacement parts are available on short notice.

2-inch

SINGLE-PASS ONLY

Figure 1 Single-pass

3-, 4-, 5-, 6-, and 8-inch

SINGLE, TWO, OR FOUR-PASS

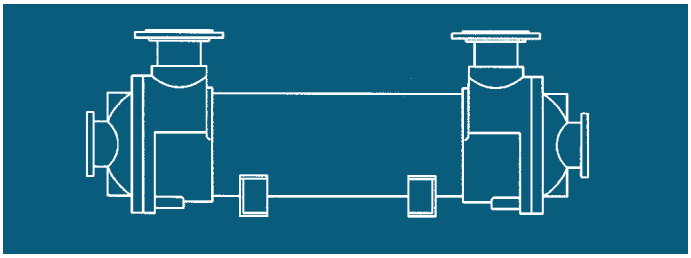
ASME code if required.*

Figure 2 & 3 Single-pass

Figure 4 Two-pass

Figure 5 & 6 Four-pass

10- and 12-inch

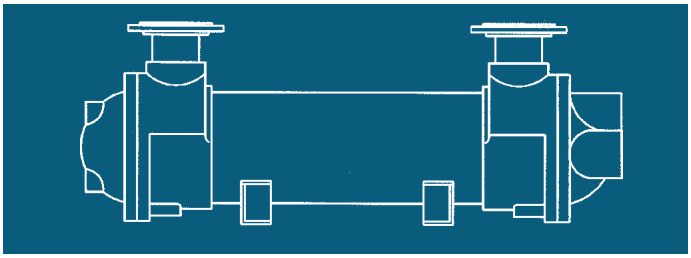


FLANGED CONNECTIONS. SINGLE PASS

Flanged shell side connections.
Flanged tube side connections.

Figure 7 Single-pass

10- and 12-inch



TWO OR FOUR-PASS

Flanged shell side connections.
NPT connections on 10" two- and four-pass units.
NPT connections on tube side of 12" four-pass units.
Flanged tube side connections on tube side of 12" two-pass units.

Figure 8 Two-pass (threaded)

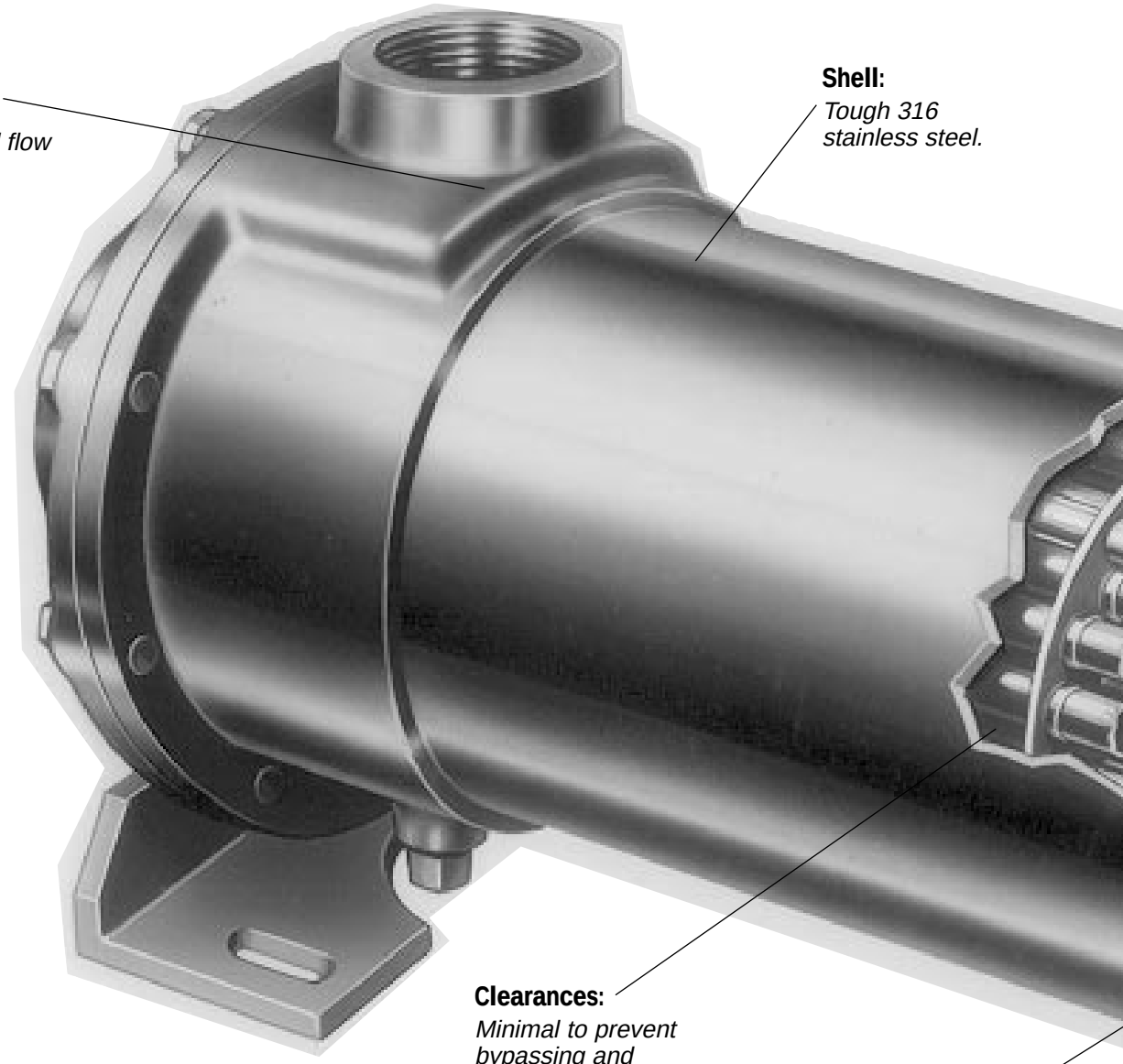
Figure 10 Four-pass (threaded)

Figure 9 Two-pass (flanged)

See detailed information on last two pages of this brochure.

* 4-inch through 12-inch can be furnished to ASME Code Section VIII, Division 1, if required.

SSCF Stainless Stee



Entrance Ports:
Enlarged under connections for unrestricted fluid flow into bundle.

Shell:
Tough 316 stainless steel.

Clearances:
Minimal to prevent bypassing and ineffective areas.

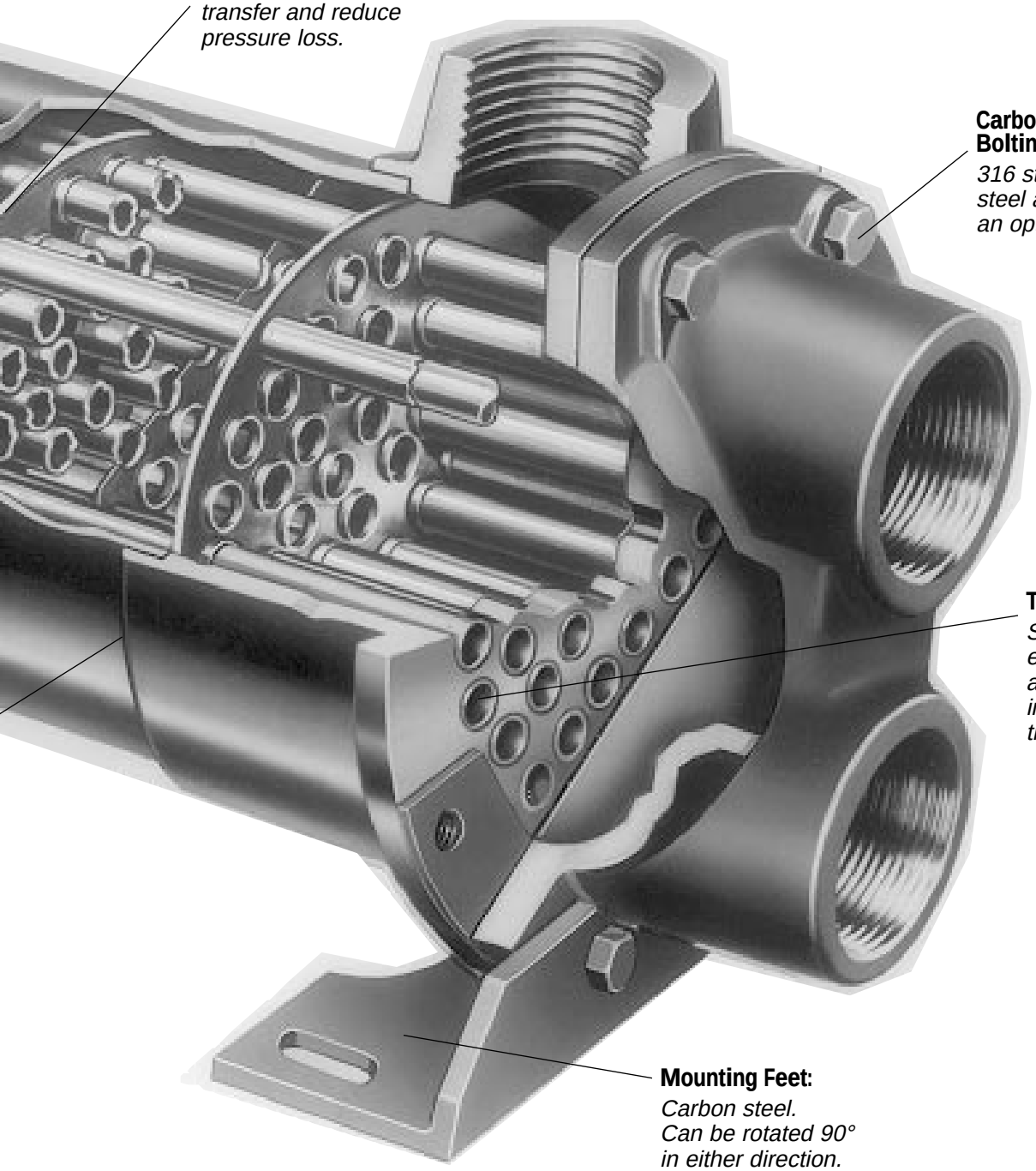
Baffles:
Close tolerance baffles with flanged lips ensure large tube contact area.

NOTE: Diagram represents 2" - 8" units.

EL HEAT EXCHANGERS

The SSCF is the perfect low-cost and dependable solution to your process fluid temperature control problems.

Baffles:
The spacing is set to optimize heat transfer and reduce pressure loss.



Carbon Steel Bolting:
316 stainless steel available as an option.

Tubes:
Straight tubes are easy to clean and are roller expanded into tube sheets for tight, leakproof fit.

Mounting Feet:
Carbon steel. Can be rotated 90° in either direction.

SSCF 2-3-4-5-6-8-inch

DESIGN TEMPERATURES AND PRESSURES

SSCF PRESSURE AND TEMPERATURE RATINGS

		DESIGN PRESSURE PSI	DESIGN PRESSURE Kg/Cm²	TEST PRESSURE PSI	TEST PRESSURE Kg/Cm²	DESIGN TEMPERATURE °F	DESIGN TEMPERATURE °C
2-inch 3-inch 4-inch 5-inch 6-inch 8-inch	Shell Side	225	15.8	338	23.8	450	232
	Tube Side	150	10.5	225	15.8	450	232

NOTE:
For steam service, steam in shell only, maximum steam pressure 225 PSI For all fluids at temperature above 150° circulate hot fluid on shell side only. Avoid temperature shock from abrupt changes in fluid temperatures.

UNIT SIZE	SURF. Sq. Ft. *	A	B	C	D	G	H	J	K	SINGLE-PASS ONLY L	M	P	U	Y	TWO-PASS ONLY L	M	P	U	Y	FOUR-PASS ONLY L	M	P	U	Y	Z	N	O	T	W	X	WT. LBS.
02008	1.2	2⅛	2⁹⁄₁₆	1½	—	—	—	—	—	½	¾	2⁹⁄₁₆	11	⅜	—	—	—	—	—	—	—	—	—	—	—	—	—	6⅞	—	—	6
02008	1.2			1¹¹⁄₁₆	—	—	—	—	—	1		2⅜	11		—	—	—	—	—	—	—	—	—	—	—	—	—	6¼	—	—	6
02014	2.1			1½	—	—	—	—	—	½		2⁹⁄₁₆	17		—	—	—	—	—	—	—	—	—	—	—	—	—	12⅝	—	—	8
02014	2.1			1¹¹⁄₁₆	—	—	—	—	—	1		2⅜	17		—	—	—	—	—	—	—	—	—	—	—	—	—	12¼	—	—	8
03008	2.4	3⅛	4³⁄₁₆	2¹⁄₁₆	2⅜	3¼	4	⅜ x ⅝	⅛	1	1½	2¹⁄₁₆	11¼	⅜	1	1	2¹⁄₁₆	10½	1	1	¾	2⁵⁄₁₆	10⅜	1	1	⅜	⅜	6⅜	7⅝	1⅛	12
03014	4.3							⅜ x ⅝					17¼					16½					16⅜					12⅛	13⅜		15
03024	7.3							⅜ x ⅝					27¼					26½					26⅜					22⅛	23⅜		20
03036	11							⅜ x ⅝					39¼					38½					38⅜					34⅛	35⅜		26
04014	8.3	4⅛	5⅛	3⅜	3½	3½	4¾	½ x 1⅜	³⁄₁₆	1½	2	3¹⁄₁₆	18	½	1½	1¼	3¹⁄₁₆	17⅞	1³⁄₁₆	1½	¾	3⁷⁄₁₆	17⅞	1¹⁄₁₆	1¹⁄₁₆	⅜	⅜	11⅛	12⅛	2⁹⁄₁₆	41
04024	14.1												28					27⅞					27⅞					21⅛	22⅛		50
04036	21.1												40					39⅝					39⅝					33⅛	34⅛		60
05014	9.1	5⅛	6½	3⅝	3½	4	5	½ x ⅞	³⁄₁₆	1½	2½	3¹⁄₁₆	18½	—	1½	1½	3¹⁄₁₆	17¹⁵⁄₁₆	1½	1½	1	3⁹⁄₁₆	17¹³⁄₁₆	1¹³⁄₁₆	1¹³⁄₁₆	¼	½	11⅛	11¾	3⅜	50
05024	15.7												28½	—				27¹⁵⁄₁₆					27¹³⁄₁₆					21⅛	21¾		60
05036	23.5												40½	—				39¹⁵⁄₁₆					39¹³⁄₁₆					33⅛	33¾		84
06024	23	6⅛	7½	4¼	4⅛	5	6	½ x ⅞	³⁄₁₆	2	3	4	28½	—	2	2	4	28⅛	1¹³⁄₁₆	2	1½	4	28⅛	2	2	⅜	½	20½	21½	3½	80
06036	34												40½	—				40⅛					40⅛					32½	33½		105
06048	46												52½	—				52⅛					52⅛					44½	45½		130
08024	41	8⅛	9¼	5⅝	5⅛	7	8¼	⅝ x 1⅛	³⁄₁₆	3	3	4⅝	28½	—	3	2½	4⅝	28	2¼	3	2	4⅝	28	1³⁄₃₂	2½	½	¾	19¼	20½	4	115
08036	62												40½	—				40					40					31¼	32½		200
08048	83												52½	—				52					52					43¼	44½		240
08060	103												64½	—				64					64					55¼	56½		280
08072	124												76½	—				76					76					67¼	68½		320
08084	145												88½	—				88					88					79¼	80½		360
08096	166												100½	—				100					100					91¼	92½		400

- All dimensions are in inches.
- All connections are NPT.
- Use only certified drawings for construction.

* Surface areas are based on the use of
¼" tubes in 2-4" dia. units and
⅜" tubes in 5-, 6-, and 8" dia. units.

SSCF TUBE LAYOUTS

NOMINAL UNIT SIZE	TUBE SIZE ¼" OD	⅜" OD	⅝" OD
2	28	14	—
3	56	28	—
4	108	48	—
5	168	80	28
6	252	116	40
8	438	210	72
10	—	328	112
12	—	488	172

SSCF 10-12-inch

SSCF PRESSURE AND TEMPERATURE RATINGS

		DESIGN PRESSURE PSI	DESIGN PRESSURE Kg/Cm²	TEST PRESSURE PSI	TEST PRESSURE Kg/Cm²	DESIGN TEMPERATURE °F	DESIGN TEMPERATURE °C
10-inch	Shell Side	225	15.8	353	24.8	400	204
12-inch	Tube Side	150	10.5	295	20.7	400	204

NOTE:
For steam service, steam in shell only, maximum steam pressure 225 PSI For all fluids at temperature above 150° circulate hot fluid on shell side only. Avoid temperature shock from abrupt changes in fluid temperatures.

UNIT SIZE	SURF. Sq. Ft. *	A	B	C	D	E	F	G	H	J	K	† L	N	O	T	W	SINGLE-PASS ONLY M	P	U	X	Y	Z	TWO-PASS ONLY M	P	U	X	Y	Z	FOUR-PASS ONLY M	P	U	X	Y	Z	WT. LBS.
10024	64	10¾	13	12	7½	1⅜	2¼	5½	8	⅝ x ⅞	⅜	4	¾	¾	17	3½	4	8½	34	15¼	—	—	3	6¾	29¾	13½	3	—	2½	6¾	29¾	13½	3	3	265
10036	96														29	15½			46						41¾						41¾				320
10048	128														41	27½			58						53¾						53¾				375
10060	160														53	39½			70						65¾						65¾				430
10072	192														65	51½			82						77¾						77¾				485
12024	96	12¾	15	13	8½	1⅜	2¼	6½	9	⅝ x ⅞	⅜	4	¾	¾	17	3½	6	9	35	15¾	—	—	4	10½	34⅛	17¼	4 ¾	—	3	7¼	30⅛	14	3½	3½	365
12036	144														29	15½			47						46⅛						42⅛				445
12048	192														41	27½			59						58⅛						54⅛				525
12060	240														53	39½			71						70⅛						66⅛				605
12072	288														65	51½			83						82⅛						78⅛				685

All dimensions are in inches. Use only certified drawings for construction.

*For 10000 and 12000 series, tube surfaces are based on ⅜" OD tubes.
†300 LB A.N.S. for temperatures 300°F to 400°F.

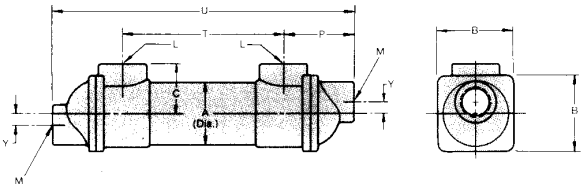


Fig. 1 2" DIAMETER, SINGLE-PASS

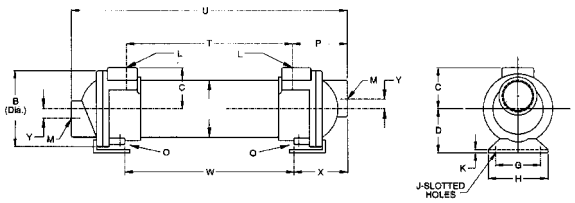


Fig. 2 3" DIAMETER, SINGLE-PASS

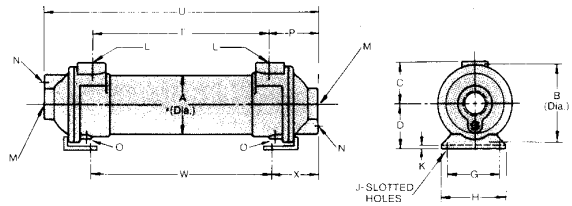


Fig. 3 4", 5", 6", & 8" DIAMETER, SINGLE-PASS

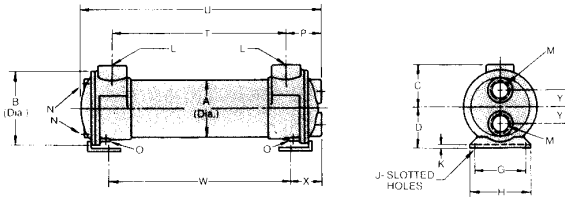


Fig. 4 3", 4", 5", 6", & 8" DIAMETER, TWO-PASS

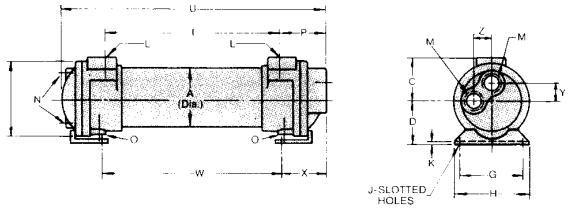


Fig. 5 3", 4", 5" & 6" DIAMETER, FOUR-PASS

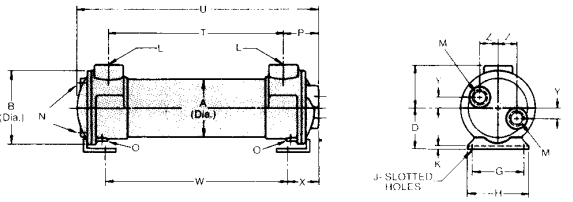


Fig. 6 8" DIAMETER, FOUR-PASS

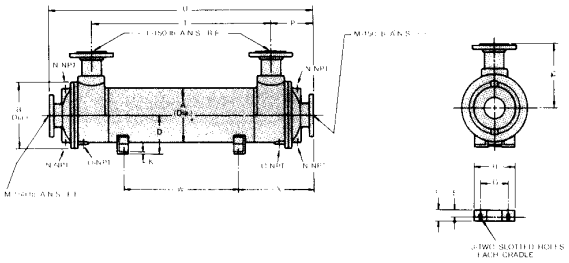


Fig. 7 10" & 12" DIAMETER, SINGLE-PASS

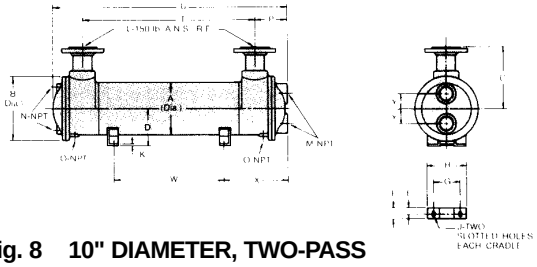


Fig. 8 10" DIAMETER, TWO-PASS

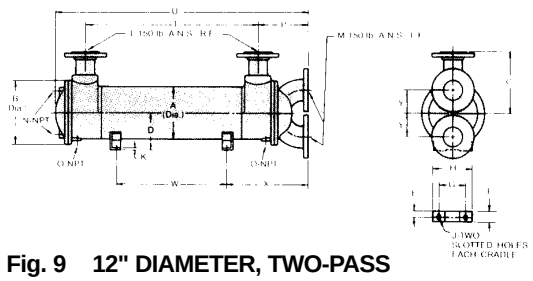


Fig. 9 12" DIAMETER, TWO-PASS

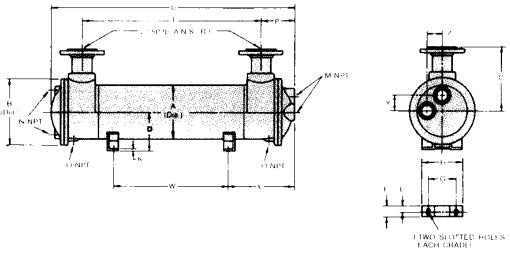


Fig. 10 10" & 12" DIAMETER, FOUR-PASS (threaded tubeside connections)