



MARSHALL ENGINEERED PRODUCTS CO.

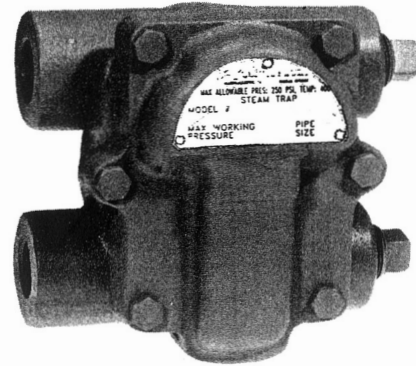
# SPECIALTIES

## Float & Thermostatic Trap, Double Inlet/Double Outlet - Series 44 & 45

### APPLICATION

The MEPCO Series 44 & 45, Float & Thermostatic Trap with Double Inlet/Double Outlet configuration, is applicable to all types of steam heating systems and steam process equipment. These traps operate efficiently with pressures up to 15 lbs. for lower pressure applications and up to 125 PSI for higher pressure applications. Their purpose is to move air and water while preventing steam from entering the return piping.

These traps are manufactured in four sizes (3/4", 1", 1-1/4" & 1-1/2") for handling capacities of 300 to 4,300 lbs. of condensate per hour. Four (4) possible connections allow a greater flexibility in piping. These traps can be piped in and out from either side, for a total of four piping combinations depending on your particular needs. All working parts are made of non-corrosive metals especially adapted for this service, and each trap is individually tested for reliable operation.



Series 44 Float & Thermostatic Trap (Double Inlet/Double Outlet)

## FEATURES & BENEFITS

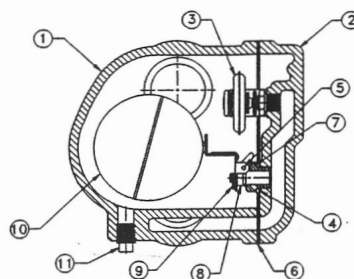
- 1. Simple, rugged construction.** This *MEPCO* trap consists of a body, cover and float valve assembly. Body and cover are cast iron; all working parts are made of non-corrosive metals especially adapted for this service.
- 2. Sensitive thermostatic action.** Charging the thermostatic disc under high vacuum assures sensitive and positive response to temperature and pressure over entire operating range. Disc corrugations are shaped to reduce hinge action at the rim of the disc and evenly distribute disc motion.
- 3. Instantaneous valve action.** Design of the float valve assembly permits rapid and positive valve action.

Location of the valve assures a deep water seal at all times.

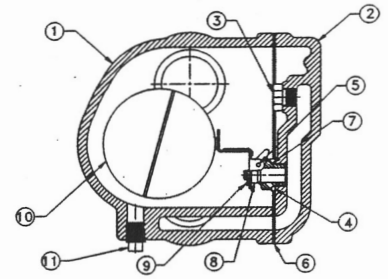
- 4. Continuous rapid flow of water.** A lever operated discharge valve opens wide so that large volumes of water can flow continuously from trap.
- 5. Thorough testing.** In addition to tests made of the completed trap, each thermostatic disc is tested before it is assembled into the trap.
- 6. Minimum maintenance.** All working parts may be inspected, removed or repaired without disturbing piping connections. Clean-out plug at bottom of trap body permits easy flushing of dirt.

### PARTS/MATERIALS - 44 & 45 series traps

ITEM	PART	MATERIAL
1	Body	Class 30 Cast Iron
2	Cap	Class 30 Cast Iron
3	Disc (series 44)	Stainless Steel & Brass
3	Plug (series 45)	Brass
4	Hinge	Brass
5	Pin, hinge	Stainless Steel
6	Gasket	Non-asbestos Fiber
7	Seat	SST, Brass holder
8	Valve	Stainless Steel
9	Clip	Stainless Steel
10	Lever & Float Assy	Stainless Steel
11	Plug 1/4" NPT	Steel

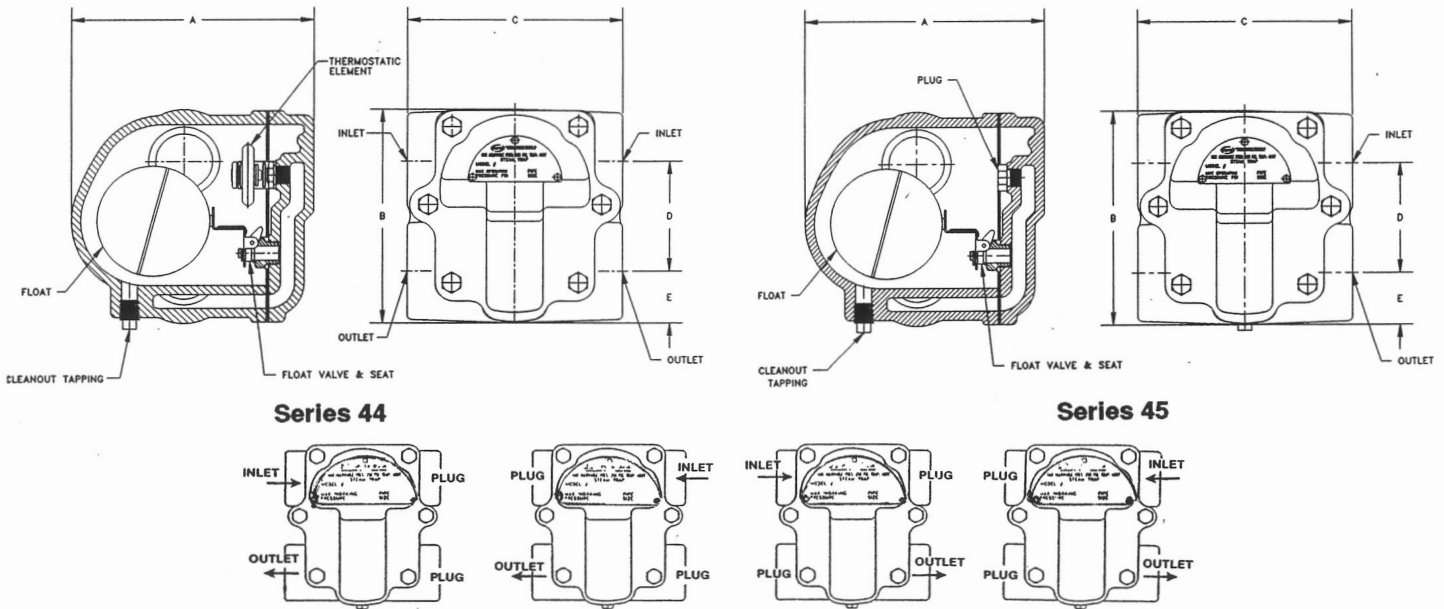


44 SERIES F&T TRAPS ASSEMBLY DRAWING



45 SERIES FLOAT TRAPS ASSEMBLY DRAWING

# Dimensions and Capacities



## Dimensions

TRAP NO.	TAPPING	A	B	C	D	E	F	G	NET WGT.(lb.)
44/45-2	3/4"	5-3/4	5-11/16	4-7/8	3-3/8	1-5/32	5-13/16	--	12
44/45-4	1"	5-3/4	5-11/16	4-7/8	3-3/8	1-5/32	5-13/16	-	12
44/45-5	1-1/4"	6-3/8	5-3/4	5-3/8	3	1-3/8	6-3/4	--	17
44/45-7	1-1/2"	6-3/8	5-3/4	5-3/8	3	1-3/8	6-3/4	--	17

## Capacities

	Model -215A			-230A			-275A			-2125A		
	No. -415A	-515A	-715A	-430A	-530A	-730A	-475A	-575A	-775A	-4125A	-5125A	-7125A
NPT Size	3/4"/1"	1-1/4"	1-1/2"	3/4"/1"	1-1/4"	1-1/2"	3/4"/1"	1-1/4"	1-1/2"	3/4"/1"	1-1/4"	1-1/2"
Orifice	.313	.344	.391	.250	.313	.391	.141	.188	.219	.109	.141	.172
1/4	600	750	980	425	600	800	300	375	400	275	300	350
1/2	825	1,000	1,365	600	825	1,100	375	500	525	310	375	450
1	1,000	1,200	1,855	750	1,000	1,450	425	600	675	350	425	550
2	1,225	1,400	2,410	900	1,225	1,800	500	710	825	390	525	650
5	1,575	1,900	3,150	1,250	1,575	2,400	625	935	1,075	450	625	800
10	1,875	2,300	3,750	1,500	1,875	2,900	725	1,050	1,250	500	725	950
15	2,175	2,700	4,075	1,725	2,175	3,400	825	1,225	1,425	540	825	1,050
20				1,900	2,500	3,750	900	1,375	1,575	600	900	1,150
25				2,050	2,750	4,050	975	1,525	1,725	660	975	1,275
30				2,300	3,000	4,300	1,000	1,675	1,850	725	1,100	1,400
40							1,200	1,825	2,000	850	1,200	1,500
50							1,350	1,950	2,200	1,000	1,350	1,625
60							1,500	2,100	2,400	1,100	1,500	1,780
75							1,650	2,400	2,700	1,280	1,650	1,950
90										1,410	1,825	2,100
100										1,500	1,900	2,275
125										1,650	2,100	2,500

Capacities given are continuous discharge in pounds of condensate per hour at pressure differential indicated, determined by tests conducted according to ASME Performance test Code 39.1-1980. Apply Safety Factor as required per application. Condensate within 5 degrees of steam temperature.

MARSHALL ENGINEERED PRODUCTS CO.

3056 Walker Ridge Drive, Suite C, Grand Rapids, Michigan 49544  
 Phone 616.246.1431 Fax 616.246.1445 www.mepcollc.com



# SPECIALTIES

## Float and Thermostatic Trap - Series 46 & 48

### APPLICATION

The **MEPCO** Series 46 & 48, Float & Thermostatic Traps are applicable to all types of steam heating systems and steam process equipment that produce exceptionally large amounts of condensate. These traps operate efficiently for low, medium & high pressure applications. Their purpose is to discharge air and condensate while preventing steam from entering the return piping.

These traps are manufactured in two sizes (1-1/2" & 2") for handling capacities of 425 to 24,000 lbs. of condensate per hour. Four (4) possible connections allow a greater flexibility in piping.



Series 46 & 48 Float & Thermostatic Trap (Double Inlet/Outlet with Stainless Steel Internals)

## FEATURES & BENEFITS

**1. Heavy duty construction throughout.** Body and cover are rugged cast iron; all working parts are made of non-corrosive metals especially adapted for this service.

**2. Instantaneous valve action.** Design of the float valve assembly permits rapid and positive valve action. Location of the valve assures a deep water seal at all times.

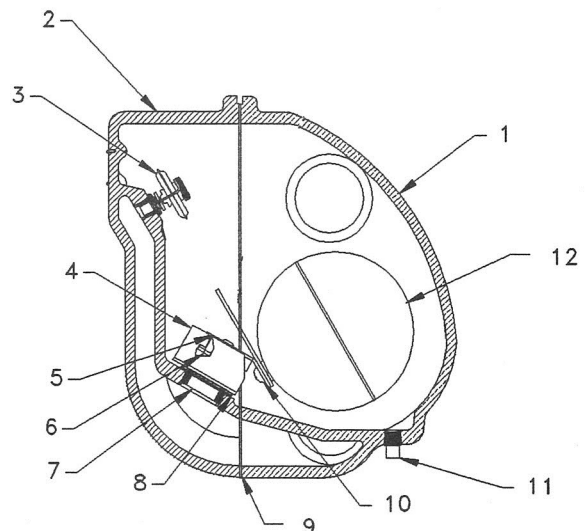
*MEPCO reserves the right to make changes in specifications and design without notice.*

### PARTS/MATERIALS - 46 & 48 series trap (48 series shown in picture)

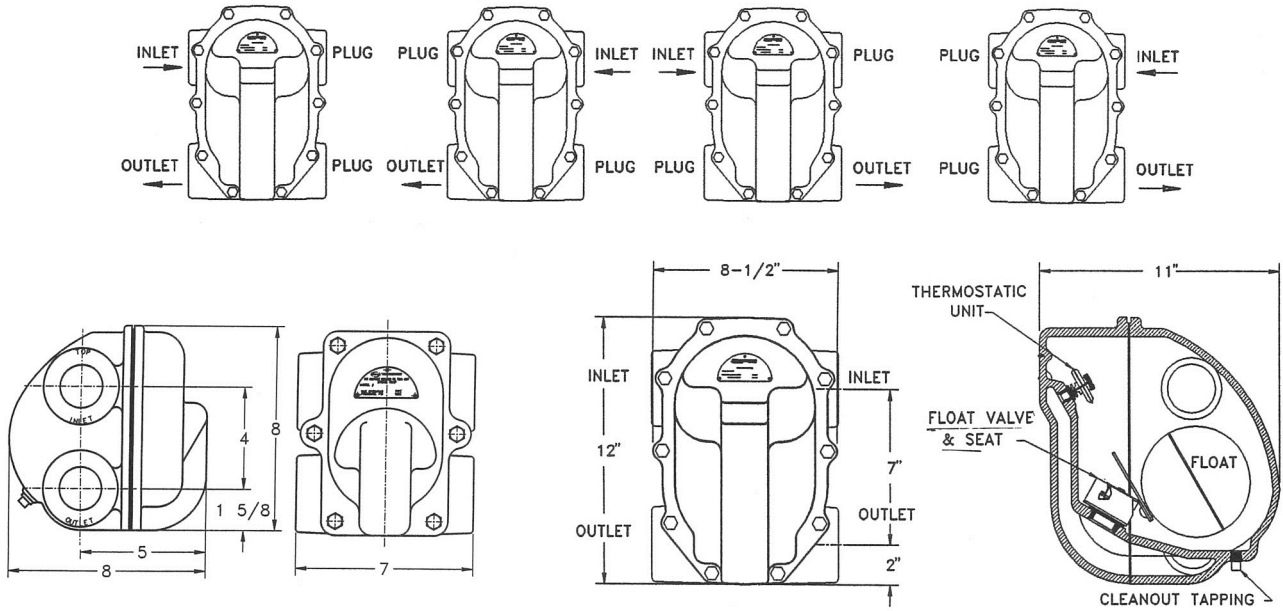
ITEM	PART	MATERIAL
1	Body	Cast Iron
2	Cap	Cast Iron
3	Thermal Element	Stainless Steel & Brass
4	Bracket	Stainless Steel
5	Lever	Stainless Steel
6	Valve	Stainless Steel
7	Seat	Stainless Steel
8	Gasket	Cellulose, Aramid Fiber
9	Gasket	Cellulose, Aramid Fiber
10	Washer & Screw	Stainless Steel
11	Plug 1/4" NPT	Steel (Grade 2)
12	Float	Stainless Steel

**3. Continuous rapid flow of condensate.** A lever operated discharge valve opens wide so that large volumes of condensate can flow continuously from trap. Increased full flooded condensate capacity with quick and positive action is assured by the float mechanisms double fulcrum design.

**4. Minimum maintenance.** All working parts may be inspected, removed or repaired without disturbing piping connections. Clean-out plug at bottom of trap body permits easy flushing.



# Dimensions and Capacities



**SERIES 46 F & T TRAP - WGT. 24 lbs.**

**SERIES 48 F & T TRAP - WGT. 48 LBS.**

## Capacities

MODEL NO.	46-715 46-815	48-715 48-815	46-730 46-830	48-730 48-830	46-775 46-875	48-775 48-875	46-7125 46-8125	48-7125 48-8125	
NPT SIZE	1-1/2" 2"	1-1/2" 2"	1-1/2" 2"	1-1/2" 2"	1-1/2" 2"	1-1/2" 2"	1-1/2" 2"	1-1/2" 2"	
ORIFICE SIZE	.625	1.032	.500	.762	.312	.500	.250	.328	
PRESSURE DIFFERENTIAL PSI	1/4	2700	6400	1500	2575	600	1500	425	625
	1/2	3000	7500	2750	4500	825	2750	600	825
	1	4000	9300	3500	5650	1000	3500	750	1100
	2	5000	13000	4750	8750	1225	4750	900	1550
	5	7500	16500	6300	11800	1575	6300	1250	2100
	10	10000	21000	7750	14500	1875	7750	1600	3000
	15	11750	24000	9250	17500	2175	9250	1750	3500
	20			10500	19500	2500	10500	2100	3900
	25			11500	20600	2750	11500	2250	4200
	30			12500	21600	3000	12500	2500	4400
	40					3500	13500	2750	5000
	50					4000	14500	3000	5500
	60	THIS MODEL NUMBER TRAP IS NOT APPLICABLE BEYOND THIS PRESSURE DIFFERENTIAL				4500	15500	3250	6250
	75					5000	17000	3600	6750
90								3900	7500
100								4100	7750
125							4500	8700	

Capacities given are continuous discharge capacities in pounds of condensate per hour at pressure differential indicated, determined by tests conducted according to ASME Performance test Code 39.1-1980. Apply Safety Factor as required per application. Condensate within 5 degrees of steam temperature.

3695 44th Street SE, Grand Rapids, MI 49512 (P) 616.971.

3420 (F) 616.971.3421 www.mepcollc.com



# In-Line Float & Thermostatic Steam Traps

(VAC - 125 PSIG)  
Series 42

## Features

- Straight through piping connections
- Unaffected by sudden or wide pressure changes
- Responds quickly to condensate load changes
- Continuous discharge
- Function is not impaired by high back pressure
- Energy efficient
- Simple construction
- On-line repair
- Large air handling capacity
- Conforms to Federal Spec. WWT-696

## Description

The Mepco In-Line Float & Thermostatic Traps Series 42 are designed for all types of low pressure or vacuum steam heating systems and steam process equipment. Typical applications include: unit heaters, space heaters, water heaters, pressing machines, low pressure mains and risers, and replacement of inefficient inverted bucket traps.

In-line float and thermostatic traps are especially well suited for apartments, hospitals, office buildings, and schools or wherever quiet operation is necessary.

## Materials

PART	DESCRIPTION
Head	Cast Iron, ASTM-A278B Class 30
Body	Cast Iron, ASTM-A278B Class 30
Bolting	Steel, Grade 5
Gaskets	Compressed Graphite
Foat	Stainless Steel
Plug	Stainless Steel
Seat	Stainless Steel

## Operation

The opening and closing of the valve is caused by changes in the condensate level within the trap shell. When the water level drops, the weight of the float closes the valve. As condensate enters the traps, the float rises and opens the valve, allowing the condensate to be discharged. The float is designed to provide sufficient buoyancy to overcome the differential pressure across the valve. The internal float and valve configuration is such that the condensate level is always above the valve, creating a continuous water seal at the seat.

Air and other gases are freely discharged as they reach the trap through the air vent. The calibrated thermostatic element will close the air vent immediately when the temperature surrounding the element reaches saturated steam temperature.

## Construction

Mepco In-Line Float and Thermostatic Traps are compact, of rugged design, with easy access to all interior parts. The body is cast with in-line pipe connections for simple straight through pipe hook-ups. The air vent valve, seat, and the complete valve mechanism are manufactured from stainless steel. The repair kit consists of a complete factory assembled head which simply bolts on to the body for ease of repair. No pipe connections need to be broken.



# Capacities (Gross) lbs. condensate per hour

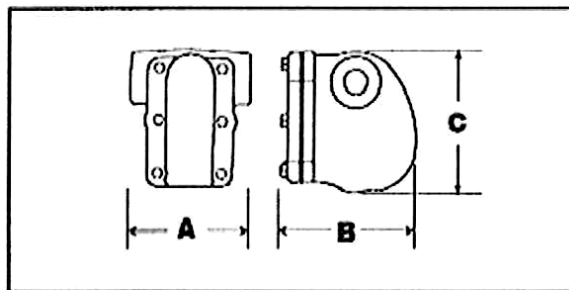
PIPE SIZE	MODEL NO.	PRESSURE DIFFERENTIAL (PSIG)														
		1/4	1/2	1	2	5	10	15	20	25	30	40	50	75	100	125
1/2"	42-115A	293	387	513	683	824	1050	1129	-	-	-	-	-	-	-	-
3/4"	42-215A	293	387	513	683	824	1050	1129	-	-	-	-	-	-	-	-
1"	42-415A	293	387	513	683	824	1050	1129	-	-	-	-	-	-	-	-
1-1/4"	42-515A	630	808	1029	1302	1722	2100	2457	-	-	-	-	-	-	-	-
1-1/2"	42-715A	1155	1785	2620	3465	5250	6930	7980	-	-	-	-	-	-	-	-
2"	42-815A	2415	2940	3780	4883	7245	9450	11445	-	-	-	-	-	-	-	-
1/2"	42-130A	293	387	513	583	824	1050	1129	1271	1375	1439	-	-	-	-	-
3/4"	42-230A	293	387	513	683	824	1050	1129	1271	1375	1439	-	-	-	-	-
1"	42-430A	293	387	513	683	824	1050	1129	1271	1375	1439	-	-	-	-	-
1-1/4"	42-530A	394	525	725	950	1280	1575	1764	1890	1995	2100	-	-	-	-	-
1-1/2"	42-730A	1050	1365	1785	2415	3570	4830	5775	6300	6930	7350	-	-	-	-	-
2"	42-830A	1365	1820	2625	3570	5460	7140	8190	9030	9765	10500	-	-	-	-	-
1/2"	42-175A	168	224	294	383	546	735	835	919	977	1019	1176	1292	1523	-	-
3/4"	42-275A	168	224	294	383	546	735	835	919	977	1019	1176	1292	1523	-	-
1"	42-475A	168	224	294	383	546	735	835	919	977	1019	1176	1292	1523	-	-
1-1/4"	42-575A	410	570	667	956	1397	1943	2258	2520	2730	2940	3203	3465	3990	-	-
1-1/2"	42-775A	557	701	1008	1365	1995	2783	3203	3570	3885	4200	4620	4988	5670	-	-
2"	42-875A	893	1155	1575	2100	3255	4358	4987	5460	5775	6090	6720	7140	8085	-	-
1/2"	42-1125A	105	142	184	242	347	436	525	593	651	698	788	872	1019	1166	1249
3/4"	42-2125A	105	142	184	242	347	436	525	593	651	698	788	872	1019	1166	1249
1"	42-4125A	105	142	184	242	347	436	525	593	651	698	788	872	1019	1166	1249
1-1/4"	42-5125A	294	389	504	662	956	1200	1523	1733	1864	1995	2179	2363	2783	3098	3308
1-1/2"	42-7125A	420	546	714	935	1365	1785	2153	2415	2625	2835	3150	3360	3990	4410	4725
2"	42-8125A	578	709	924	1286	2048	2730	3160	3413	3675	3990	4410	4850	5775	6405	6830

Note on capacity: Trap capacities are based on continuous discharge at steam temperatures. The published figures are the result of an extensive testing program conducted in accordance with ANSI/ASME PTC 39-1-1980. Condensate Removal Devices for Steam Systems, at the Mepco factory. Significantly greater applications are realized when condensate temperature is below saturated steam temperature. A safety factor between 2-4 should be applied to these ratings.

**NOTE:** FLOAT TRAPS are available for these applications where draining liquids is the only requirement of the trap. In those instances the thermostatic air vent is replaced by a solid plug. All pipe sizes and pressure ratings are available.

## Series 42 Dimensions

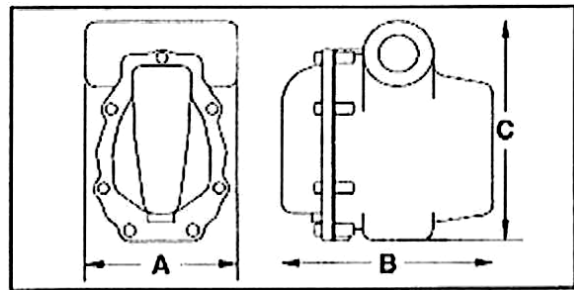
SIZE	MODELS	A	B	C	WT.
1/2" -1"	15 PSIG	5"	6.25"	6.5"	11 lb.
1/2" -1"	30 PSIG	5"	6.25"	6.5"	11 lb.
1/2" -1"	75 PSIG	5"	6.25"	6.5"	11 lb.
1/2" -1"	125 PSIG	5"	6.25"	6.5"	11 lb.
1"-1/4"	15 PSIG	5"	6.25"	6.5"	11 lb.
1"-1/4"	30 PSIG	5"	6.25"	6.5"	11 lb.



1/2", 3/4", 1", 1-1/4", (15/30 PSIG)

## Series 42 Dimensions

SIZE	MODELS	A	B	C	WT.
1"-1/4"	75 PSIG	7.5"	10.5"	11.5"	48 lb.
1"-1/4"	125 PSIG	7.5"	10.5"	11.5"	48 lb.
1 1/2" -2"	15 PSIG	7.5"	10.5"	11.5"	47 lb.
1 1/2" -2"	30 PSIG	7.5"	10.5"	11.5"	47 lb.
1 1/2" -2"	75 PSIG	7.5"	10.5"	11.5"	47 lb.
1 1/2" -2"	125 PSIG	7.5"	10.5"	11.5"	47 lb.



1-1/4" (75/125 PSIG) all 1-1/2" and all 2"

