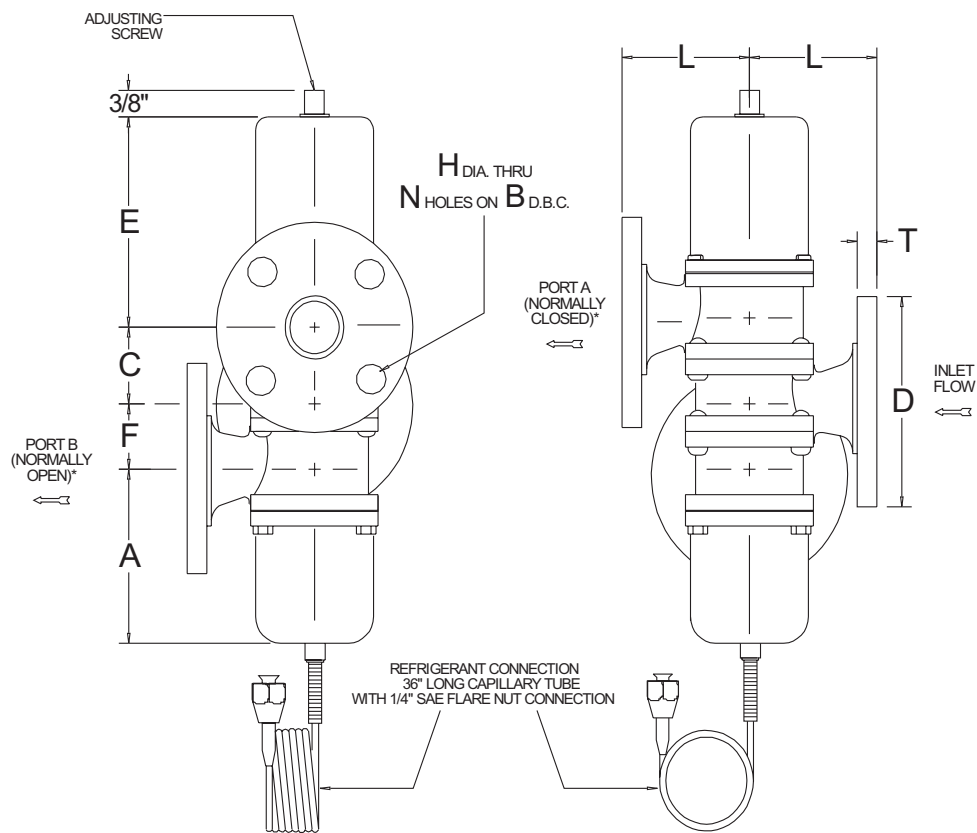


## SELECTION CRITERIA

- Marine water use
- Direct acting
- Actuation by pressure
- Open on pressure increase
- Optional open on pressure decrease
- Flanged end connections
- 3-Way configuration
- 2" & 2-1/2" sizes
- 225, 338, & 375 PSI proof pressure
- 150, 225, & 250 PSI water pressure rating

## CONSTRUCTION DETAILS

- Monel internals
- Buna-N diaphragms & seals
- Body material: See Table II
- Flange: See Table II



\*NOTE: Normally closed valves open on pressure increase, normally open valves close on pressure increase.

Reference Metrex drawing M900P-FL-3W

## VALVE SIZING CHART

VALVE PART NUMBER	VALVE SIZE	C <sub>v</sub>	VALVE DIMENSIONS				
			A	C	F	E	L
M90_P-200-FL_-3W	2"	26	4-15/16"	1-15/16"	1-15/16"	5-31/32"	3-5/8"
M90_P-250-FL_-3W	2-1/2"	38	5-5/16"	2-1/2"	2-1/2"	6-3/8"	4-1/8"

## ORDERING INFORMATION

- Use the valve sizing chart on the preceding page, tables, and charts below to determine the complete part number.

**BASIC PART NO.: M90 P - - FL -3W**



## BELLOWS OPTIONS

- The optional ammonia actuator is designated by an "A" after the P.

Example: M900PA-200FL1-3W

The optional reverse acting configuration (closes on a pressure increase) is designated by an "R" after the P.

Example: M900PR-250FL2-3W.

The optional 1/4" male SAE flare fitting for refrigerant pressure connection is designated by an "F" after the P. The 1/4" SAE flare fitting replaces the 36" long capillary tube with 1/4" SAE flare nut connection.

Example: M901PE-200FL1-3W.

VALVE FLOW DATA

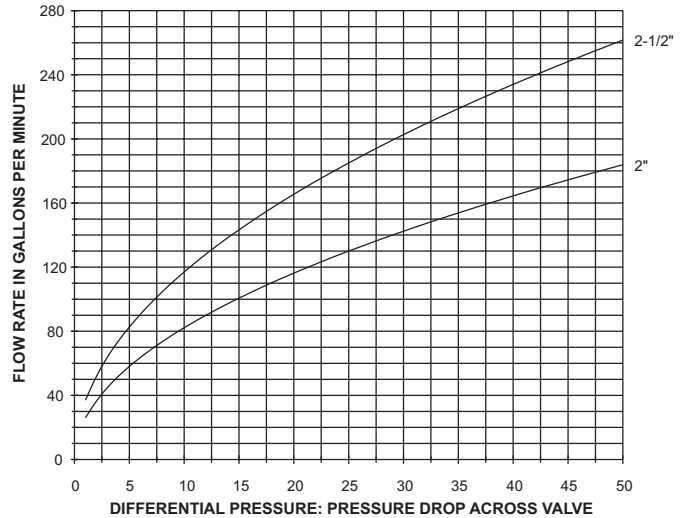


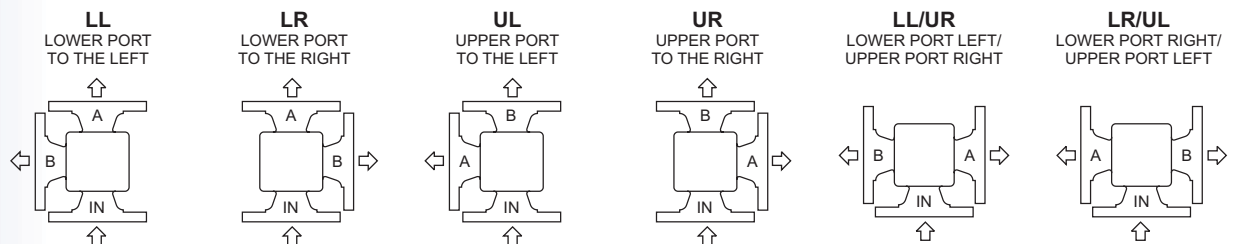
TABLE I

ASSEMBLY NUMBER	CRACK POINT ADJ. RANGE	PRESS. RISE FOR FULL OPEN
M901P	25 to 150, for R-12	35 PSI
M902P	80 to 210, for R-22	43 PSI
M903P	150 to 250 PSI	50 PSI

TABLE II

ASSEMBLY NUMBER	MATERIAL	FLANGE SPECIFICATION	DESIGN PRESS.	PROOF PRESS.	FLANGE DIMENSIONS				
					N	H	B	D	T
200-FL8-	BRONZE ASTM-B61	MIL-F-20042, 150 LB.	150 PSI	225 PSI	6	0.56"	4.43"	5.56"	0.50"
200-FL9-	BRONZE ASTM-B61	MIL-F-20042, 250 LB.	250 PSI	375 PSI	6	0.68"	4.43"	5.56"	0.93"
200-FL2-	BRONZE 85-5-5-5	ANSI B16.24 CLASS 150 LB.	225 PSI	338 PSI	4	0.75"	4.75"	6.00"	0.50"
250-FL8-	BRONZE ASTM-B61	MIL-F-20042, 150 LB.	150 PSI	225 PSI	6	0.56"	5.00"	6.12"	0.50"
250-FL9-	BRONZE ASTM-B61	MIL-F-20042, 250 LB.	250 PSI	375 PSI	6	0.68"	5.00"	6.12"	0.93"
250-FL2-	BRONZE 85-5-5-5	ANSI B16.24 CLASS 150 LB.	225 PSI	338 PSI	4	0.75"	5.00"	7.00"	0.56"

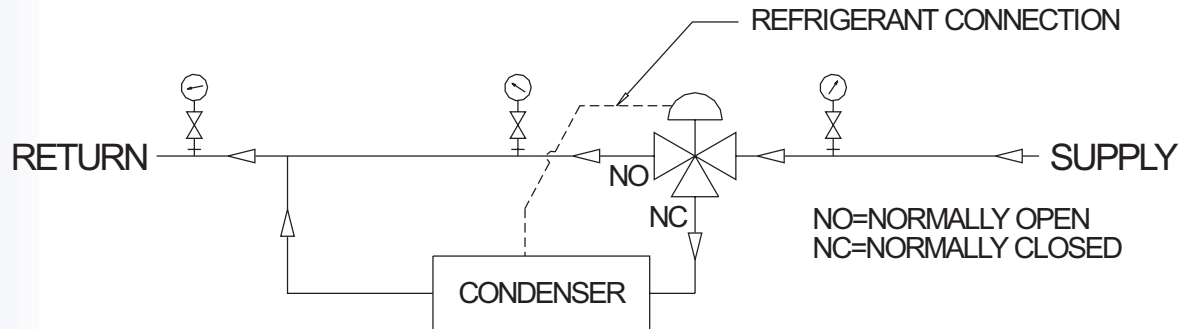
## VALVE CONFIGURATION



## 3-WAY HEAD PRESSURE REGULATOR TYPICAL APPLICATION

PAGE 3 OF 3

- Typically used to modulate the cooling water through a condenser in response to a pressure signal from the condenser. Refrigerant head pressure is maintained over a wide range of operating conditions for a maximum system operating efficiency.



## INSTALLATION INSTRUCTIONS

- Valves can be mounted in any position without affecting performance. However, for ease of adjustment consider the accessibility of the adjusting screw.
- Connect the incoming water line to the valve inlet. Direction of water flow (see drawing) is indicated by the arrow cast on the side of the valve body.
- Connect capillary tube (1/4" flare nut) to refrigerant head pressure connection on condenser.

## GENERAL DESCRIPTION

- The M900 series valves are direct acting, modulating water regulating valves utilizing a diaphragm construction to give a smooth, well balanced action. The pressure-balanced design and low frictional co-efficient of the diaphragm assure fast response to changes in refrigerant pressure and protection against both gradual and sudden water pressure changes. All sliding parts and adjustment springs are isolated from the water flow by the leak proof diaphragms.

## ADJUSTMENT

- All valves in 2" and 2-1/2" sizes are multi-range valves applicable to both R-12 and R-22 service (see Table I). The refrigerant pressure at which the valve begins to open can be adjusted from (see Table I). A 35-50 PSI increase of pressure (depending on range option) is required to open the valve fully.

To adjust condensing head pressure, use wrench and turn adjusting screw on top of the spring housing. Turn to the right (counter clockwise) to raise the opening point and the left (clockwise) to lower.

## MANUAL OVERRIDE

- All valves may be manually flushed by inserting a screwdriver in openings at opposite sides of the spring housing and lifting the lower spring plate to open the valve. The valve adjustment is not affected by manual flushing.

