

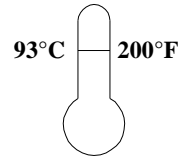
MODEL 412P, A413P, A414P, A416P & A418P SOLENOID VALVE INSTALLATION INSTRUCTIONS

LINE STRAINER:

A strainer, with an 80-mesh or finer screen, should be installed in the line ahead of the solenoid valve. This will assure tight seating and reliable closing action.

FLUIDS:

Valves are intended for water, air, light oil, and other noncorrosive fluids. They should *not* be used for gasoline and other hazardous or explosive fluids. Maximum fluid temperature is 200° F (93.3°C). Ambient temperature shall not exceed 120°F (48.8°C).



WARNING: NOT FOR USE WITH HAZARDOUS OR CORROSIVE OR EXPLOSIVE FLUIDS.

INSTALLATION:

DEMA valves may be installed in either horizontal or vertical lines and in any position other than with the coil lower than the body.

MODEL NO.	WATTS AC	VOLTS AC	AMPERES				D C		
			INRUSH		HOLDING		RATED WATTS	VOLTS	AMP.
			50 Hz	60Hz	50 Hz	60 Hz			
412P	15	24	3.7	3.0	1.6	1.2	18	12	1.5
A413P		120	0.73	0.60	0.33	0.24		24	0.7
A414P		208	0.41	0.35	0.19	0.14		32	0.6
A416P		240	0.36	0.30	0.16	0.12		115	0.15
A418P									

VALVE MODEL	Cv	NPT (inches)	ORIFICE DIA. (inches)
412P	1.20	3/8	0.281
A413P	2.00	3/8	0.313
A414P	3.10	1/2	0.438
A416P	5.00	3/4	0.593
A418P	8.00	1	0.750

PRESSURE DIFFERENTIAL:

412P is 1 PSI Min. (0.068 Bar) and 150 PSI Max. (10.2 Bar)

A413P, A414P, A416P & A418P are 3 PSI Min. (0.204 Bar) and 150 PSI Max. (10.2 Bar)

SERVICING:

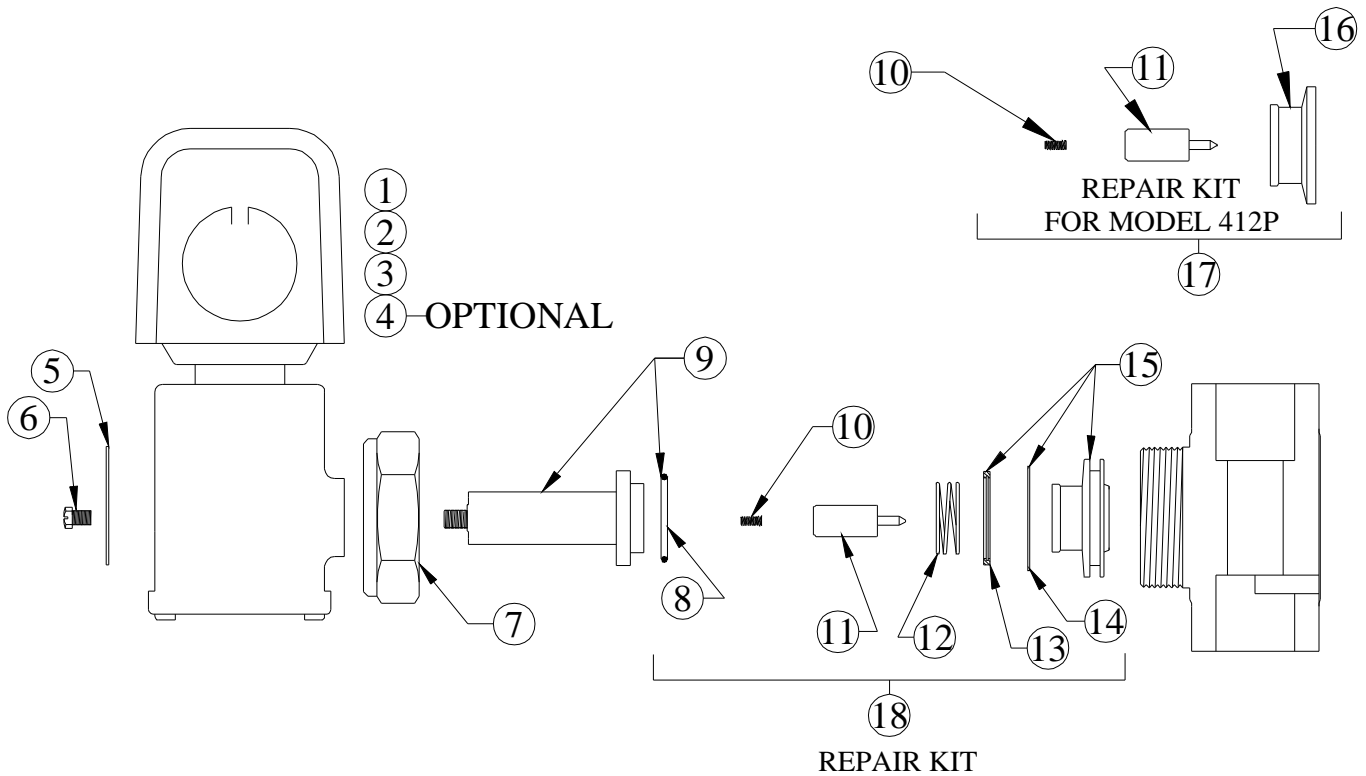
1. Failure to open.
 - a. No power, or low voltage.
 - b. Open circuit.
 - c. Burned-out coil (usually due to wrong voltage. See stamping opposite junction box).
 - d. Pressure differential too high (see M.O.P.D. on nameplate).
 - e. Moving parts jammed by dirt or damaged solenoid stainless steel tube.

2. Failure to close.
 - a. Coil is still energized.
 - b. Valve is installed backward.
 - c. Dirt is on valve seat or pilot seat.
 - d. Dirt is in piston ring or in groove (some models).
 - e. Moving parts jammed by dirt or damaged solenoid stainless steel tube.

**MODEL 412P, A413P, A414P, A416P & A418P SOLENOID VALVE
INSTALLATION INSTRUCTIONS**

SOLENOID VALVES, GENERAL PURPOSE

MODELS 412P, A413P, A414P, A416P, A418P



NO.	PART NO.	DESCRIPTRION	VALVE MODEL NUMBER				
			412P	A413P	A414P	A416P	A418P
1	41-9-2	Coil Assembly (Specify Voltage)	*	*	*	*	*
2	41-9C-2	(Optional) Coil Assembly With Conduit Boss (Specify Voltage)	*	*	*	*	*
3	41-9D-2	Din Coil (Specify Voltage)	*	*	*	*	*
4	41-77-100110	(Optional) Din Female Connector	*	*	*	*	*
5	41-13-7	Nameplate	*				
	41-13-8	Nameplate			*		
	41-13-9	Nameplate		*			
	41-13-10	Nameplate				*	
	41-13-11	Nameplate					*
6	41-14-1	Top Plug Screw	*	*	*	*	*
7	41-17-1	Enclosing Tube Locknut	*				
	41-17-2	Enclosing Tube Locknut		*	*		
	41-17-3	Enclosing Tube Locknut				*	
	41-17-4	Enclosing Tube Locknut					*

MODEL 412P, A413P, A414P, A416P & A418P SOLENOID VALVE INSTALLATION INSTRUCTIONS

NO.	PART NO.	DESCRIPTRION	VALVE MODEL NUMBER				
			412P	A413P	A414P	A416P	A418P
8	41-12-1	Tetraseal Ring		*	*		
	41-12-2	Tetraseal Ring				*	
	41-12-3	Tetraseal Ring					*
	41-12-5	Tetraseal Ring	*				
9	41-7-2	Enclosing Tube With Tetreseal Ring		*	*		
	41-7-3	Enclosing Tube With Tetreseal Ring				*	
	41-7-4	Enclosing Tube With Tetreseal Ring					*
	41-7-7	Enclosing Tube With Tetreseal Ring	*				
10	41-1-2	Plunger Spring		*	*	*	*
	41-1-3	Plunger Spring	*				
11	41-10-2	Plunger Assembly	*				
	41-10-4	Plunger Assembly		*			
	41-10-5	Plunger Assembly			*		*
	41-10-6	Plunger Assembly				*	
12	41-4-4	Closing Spring		*	*		
	41-4-5	Closing Spring				*	*
13	41-19-1	Piston Ring		*	*		
	41-19-3	Piston Ring				*	
	41-19-4	Piston Ring					*
14	41-20-2	Backup Spring		*	*		
	41-20-2	Backup Spring				*	
	41-20-2	Backup Spring					*
15	41-11-2	Piston Assembly With Ring & Backup Spring		*			
	41-11-3	Piston Assembly With Ring & Backup Spring			*		
	41-11-4	Piston Assembly With Ring & Backup Spring				*	
	41-11-7	Piston Assembly With Ring & Backup Spring					*
16	41-3-1	Piston Assembly	*				
17	41-26	412P Repair Kit	*				
18	41-27	413P Repair Kit		*			
	41-28	414P Repair Kit			*		
	41-29	416P Repair Kit				*	
	41-30	418P Repair Kit					*

MODEL 412P, A413P, A414P, A416P & A418P SOLENOID VALVE INSTALLATION INSTRUCTIONS

RETURNS: **NO MERCHANDISE MAY BE RETURNED FOR CREDIT WITHOUT DEMA'S WRITTEN PERMISSION. RETURN MERCHANDISE AUTHORIZATION NUMBER REQUIRED IN ADVANCE OF RETURN.**

WARRANTY: DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products which have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, improper voltage supply, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "o"- rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty will be void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number, to return units for repair or replacement, must be granted in advance of return.