

Zone Valve Kit

332140C

EN

Used to control when various zones or sections of a lubrication system receive lubricant.
For professional use only.

Part No.:

24P977 - Zone Valve, with Pressure Relief, 24 VDC, NC

24P978 - Zone Valve, with Pressure Relief, 12 VDC, NC

Maximum Working Pressure: 3500 psi (24.1 MPa, 241 bar)

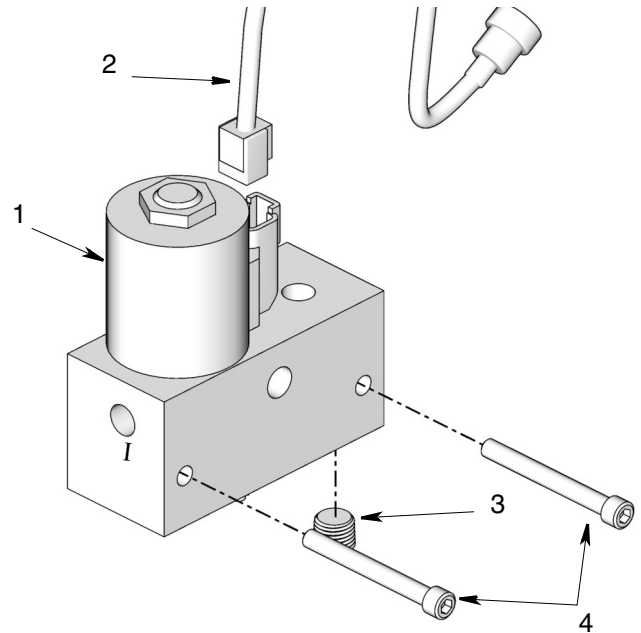


Important Safety Instructions

Read all warnings and instructions in this manual and the Pump instruction manual included with your unit. Save all instructions.

NOTICE

All user supplied tubing must be rated for the same pressure or equipment could be damaged.



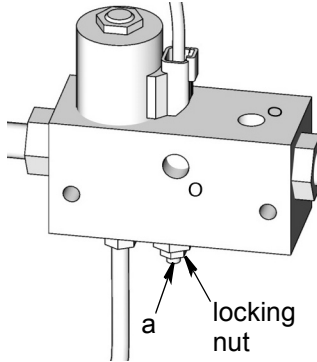
Kit Parts:

Ref.	Description	24P978		24P977	
		Part Number	Qty.	Part Number	Qty.
1	VALVE, vent, 12 VDC, NPT	124350	1	-	-
	VALVE, vent, 24 VDC, NPT	-	-	124349	1
2	CABLE, 6 ft, vent valve, 2 pin	24N402	1	24N402	1
3	PLUG, dryseal, 1/4 NPTF	557391	3	557391	3
4	SCREW, cap, socket	C19817	2	C19817	2

Installation

Pressure Relief Valves

The pressure relief valve uses a pressure adjustment screw (a) to set the pressure release point. **It is not intended as a way to relieve pressure during normal operation** but as a protective measure in the event there is an unintended pressure increase in the system.



NOTE:

- **Do not use this pressure relief valve as a means of relieving pressure in day-to-day, normal cycle operation. Use the pressure relief procedure described in the next section of this manual to relieve pressure during normal cycle operation.**
- **Factory set to 3000 psi (207 bar, 20.7 MPa).**

The pressure adjustment screw (a) will require periodic adjustments. Whenever the valve is set/adjusted (after the set point is found) it is important to ensure that the valve is not set at it's lowest point and there is at least 1/2 turn of adjustment remaining. This is determined by turning the screw (a) as far as possible and then turning it 1/2 turn out again.

NOTE: Turning adjustment screw (a) clockwise, increases pressure.

Pressure Relief Procedure

SKIN INJECTION HAZARD					
High-pressure fluid from dispense device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.					
Follow Pressure Relief Procedure in this section, when you stop dispensing and before cleaning, checking, or servicing equipment.					

Relieve pressure in system by loosening pressure supply line (marked "I") and outlet line (marked "O") at the zone valve.

Assembly

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Reference numbers used in these instructions correspond to parts included in kit and are provided on page 1. Parts identified with an alpha character are user provided or already installed components.

1. Disconnect power source.
2. If unit has already been in service, relieve pressure.

3. Mount zone valve block to a fixed surface using mounting holes (a) and two socket screws.

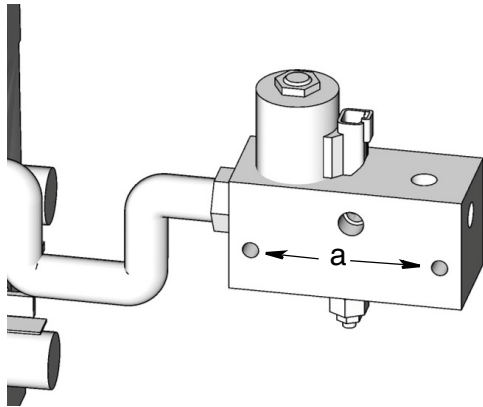


FIG. 1: Mounting Dimension a = 3.25 inches (8.255 cm).

4. Connect the pressure supply line (b) and inlet fitting (c) to manifold port (marked "I") (FIG. 2). Wrench tight only.

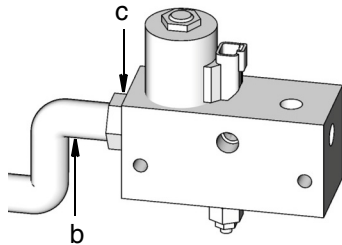


FIG. 2

5. Connect main lubrication line (d) to any manifold outlet (e) (stamped with an "O") and lubricator inlet (f) (FIG. 3).

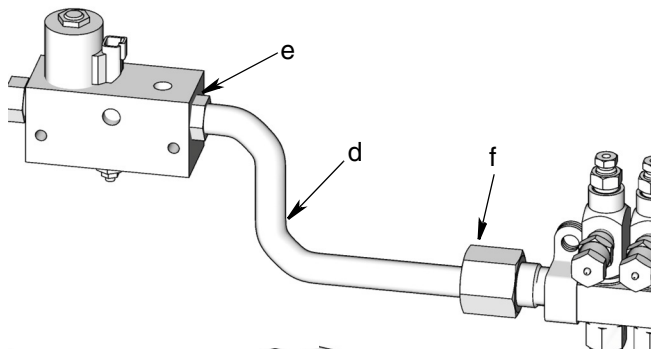


FIG. 3

6. Install vent tube (g) between vent port (h) and return fitting (FIG. 4).

NOTE: A vent line must be connected between the zone valve vent port (h) (FIG. 4), marked "V" on the vent valve block and the lubrication reservoir.

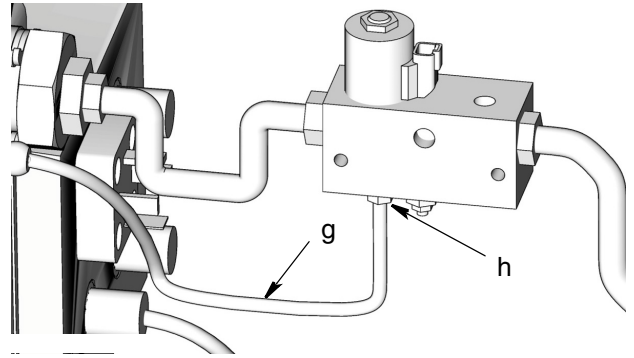


FIG. 4

7. Install plugs(3) in the remaining outlet ports on the manifold block.

NOTE: Any port not used MUST have a plug (3) installed in the opening.

8. Connect end of cable (2) to the lubrication system controller.

Connect cable connector (2) to solenoid valve (1) (FIG. 5).

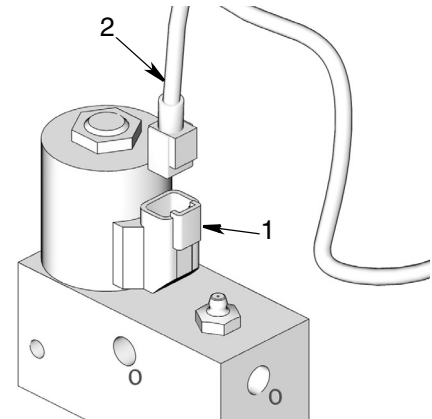


FIG. 5

Retrofitting Existing Installations



NOTE: These instructions assume grease is already loaded in the lubrication system

Installation

1. Disconnect power source.
2. Relieve pressure, page 2.
3. Remove existing plumbing installed between pressure supply and lubricator inlet (h) (FIG. 3).
4. Continue installation following Assembly Instructions, Steps 3 - 8, on pages 3 - 3.

Operation

Normally Closed

A normally closed valve that is not receiving power from a controller, diverts lubricant flow to the metering device.

When a controller supplies power to a normally closed valve, lubricant flow is diverted back to the reservoir.

Power	Flow Direction
ON	Flow to Reservoir
OFF	Flow to Metering Device

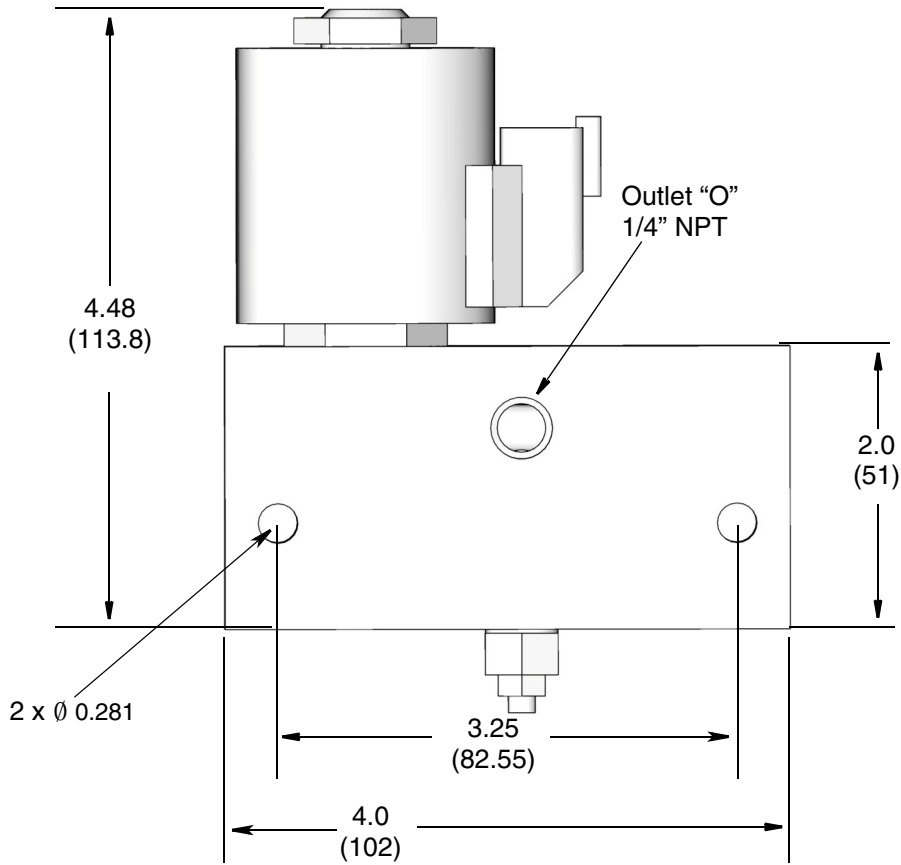
The built-in pressure relief protects the lubrication line from extreme pressure build up. When activated, it diverts lubricant from the lubrication line back to the pump reservoir.

Technical Data

Zone Valve Kit		
	US	Metric
Maximum Operating Pressure	3500 psi	24.1 MPa, 241 bar
Temperature Range	-40°F to 250°F	-40°C to 120°C
Voltage	12 VDC, 24 VDC	
Current		
12 VDC	1.7 Amps	
24 VDC	0.8 Amps	
Power		
12 VDC	20.5 Watts	
24 VDC	18.2 Watts	
Inlet/Outlet	1/4 in. npt	
Wetted Parts	Carbon Steel, Buna-N rubber	
Recommended Fluids	Grease N.L.G.I. grades #000 - #2	
Dimensions	See below	
Electrical Connections	Deutsch DT 2-way	
Ratings	IP69K	

Dimensions

inches (mm)



All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

For patent information, see www.graco.com/patents

Original instructions. This manual contains English. MM 332140

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