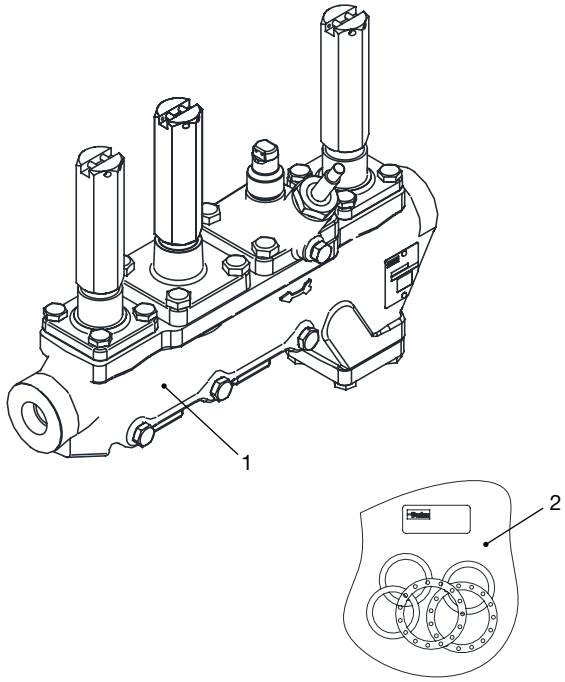
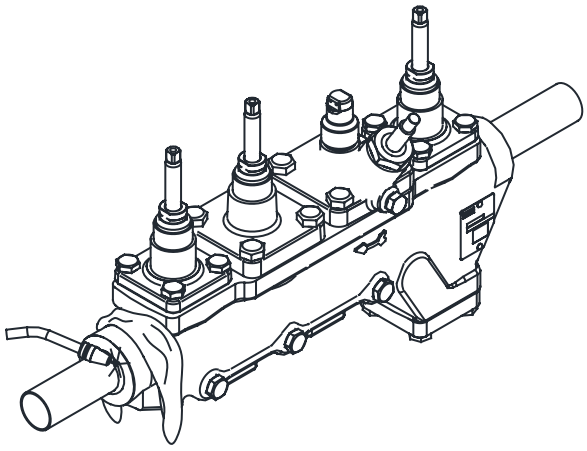
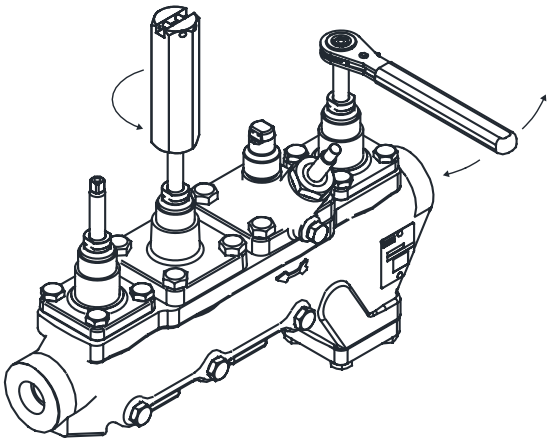
1



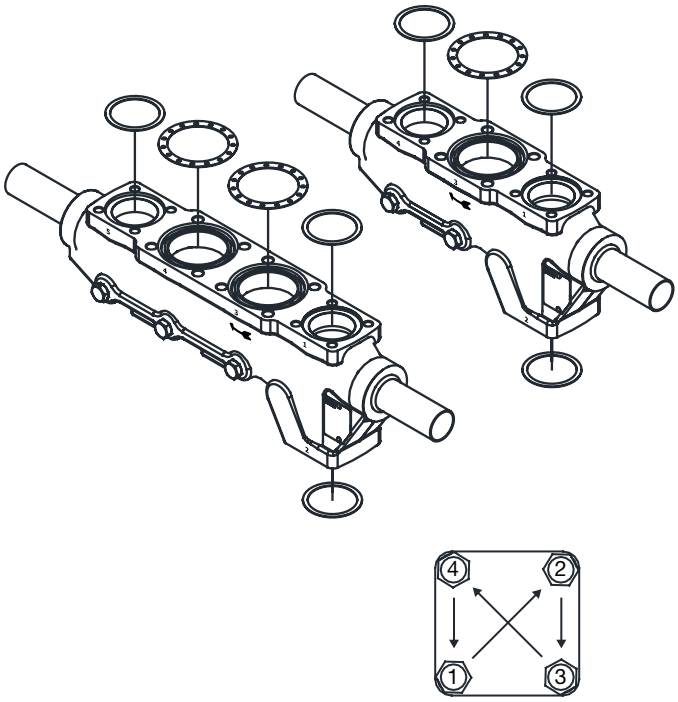
3



2



4



Parker Hannifin Corporation
Refrigerating Specialties Division
2445 South 25th Avenue
Broadview, IL 60155-3891 USA
Phone: (708) 681-6300
Fax: (708) 681-6306

ISO 9001 CERTIFIED

P/N 314071RSD A Date: 09-17 ECO: 0218065

ENGLISH

Parker Valve Station (PVS) Installation Information

Operation
Prior to installing PVS valves the included safety bulletin must be read and understood.

Refrigerants
Suitable for ammonia, CO_2 and halocarbon refrigerants

Liquid Temperature Range
-60ºC to 120ºC (-76ºF to 248ºF)

Ambient Temperature Range
-60ºC to 60ºC (-76ºF to 140ºF)

Maximum Rated Pressure (MRP)
52 barg (754 psig)

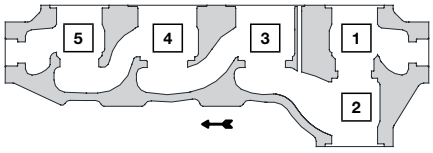
Maximum Operating Pressure Differential (MOPD)
20.7 bard (300 psid)

Connection Types
Socket Weld (SW)
Butt Weld (BW) ANSI
Butt Weld (BW) DIN

Figure 1: Components
1 - Valve Assembly (modules will vary)
2 - Bonnet Gasket Kit

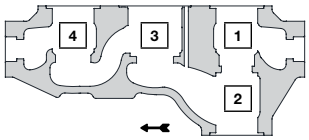
Figure 2: Hand shut-off & expansion modules welding position

Five Position Valve Station



1. Shut-Off Module
2. Strainer Module
3. Control Module (Solenoid/Regulator Option)
4. Parker Electronic Valve (PEV) or Hand Expansion Valve Module
5. Shut-Off or Stop/Check Module

Four Position Valve Station



1. Shut-Off Module
2. Strainer Module
3. Control Module (PEV/Solenoid/Regulator Option)
4. Shut-Off or Stop/Check Module

Figure 4: Bonnet & Port Plate Torque Specs

Valve Body	Port Size		Bolt Size	Module Position	Torque	
	mm	inch			Nm	ft. lb.
PVS4	20, 25	¾,1	M10 x 1.5	1, 2 & 4	41	30
			M12 x 1.75	3	61	45
	32, 40	1¼,1½	M12 x 1.75	1, 2 & 4	61	45
			M16 x 2	3	149	110
PVS5	20, 25	¾,1	M10 x 1.5	1, 2 & 5	41	30
			M12 x 1.75	3 & 4	61	45
	32, 40	1¼,1½	M12 x 1.75	1, 2 & 5	61	45
			M16 x 2	3 & 4	149	110

Installation
All personnel working on valves must be qualified to work on refrigeration systems. If there are any questions contact Refrigerating Specialties before proceeding with the installation.

All valves are packed for a maximum protection. Unpack carefully. Check the carton to make sure all items are unpacked, see Figure 1 for the list of items included. If purchased PVS has the electronic option, the acutator comes with its own check list.

The valve should be installed in a location where it is easily accessible for adjustment and maintenance. The location should be such that the valve can not be easily damaged by material handling equipment. When it is necessary to insulate the valve the insulation should be installed to provide access for adjustment and maintenance. Do not insulate solenoid coils, this aslo applies to pressure regulators with pilot solenoid options. Pressure gauges should be installed to be easily visible to the operating engineer for system checks and adjustment purposes.

The PVS series valves must be mounted in the upright horizontal position with the manual opening stems on the top. The valve must be installed with the arrow pointing in the direction of flow for the valve to function properly.

It is not necessary to disassemble the PVS before welding. The hand shut-off, expansion and electronic modules should be positioned in the mid position, off the seat. To gain access to the adjustments stems for the hand shut-off and expansion modules remove the seal caps, as shown in Figure 2, prior to welding. The electronic module can be moved using the actuator or manual opening tool (sold separately).

Note: The stop/check module can not be back seated, so a wet rag around the valve near the weld location is recommended, as shown in Figure 3.

Contractors need to follow a WPS (Welding Procedure Specification) for all welding. The procedure must be qualified and the welder doing the weld must be qualified to perform that procedure.

The codes applicable to the welding of socket weld valves require that the pipe be inserted into the socket until bottomed against the stop. The pipe is then to be backed out approximately 1/16 of an inch before welding. Use of welding rings is optional, but recommended for butt weld valves. They help align, control the width of the gap for full penetration welding and reduce welding debris entry.

Note: When welding carbon steel and stainless steel the welded joint should be painted to prevent galvanic corrosion. Use American Welding Society (AWS) standards for proper welding wire or weld rod.

After welding the valve in place back seat the hand shut-off modules and put the seal caps back to the correct location. The expansion and electronic models can be adjusted at a later time. Seal caps are color coded: red for the stop/check module, yellow for the hand expansion module and non-painted for the hand shut-off module. Reference the module identifying sections in this literature for correct seal cap locations.

Installation (Disassembled)
If you choose to disassemble the valve station prior to welding protect the inside of the valve station body, bonnet assemblies, cartridge port plate and strainer from welding debris and dirt. Place the components in a plastic bag, plastic container or use a rust protection agent, such as refrigerant oil, and store them in an area where they will not be damaged.

Remove welding debris and any dirt from the valve body before reassembling the valve. Check all contact surfaces, teflon seats, and cartridge o-rings for damage. Apply some silicon grease on the o-rings for protection and for ease installation.

Note: Refrigerating Specialties provides new bonnet gaskets for each module to be use as a replacement if valve is disassembled for welding, see Figure 4 for gasket location.

Insert the control module cartridge into station 3, for both the 5 and 4 position valve, prior to inserting all other modules. Next place the larger diameter gaskets with multiple holes in stations 3 and 4 in the 5 position valve and station 3 in the 4 position valve. Smaller diameter gaskets, with no holes, are used in stations 1, 2 and 5 for the 5 position valve and stations 1, 2, and 4 for the 4 position valve.

When installing the control module port plate assembly, the gauge port should always be on the side of the valve as shown in Figure 3. Tighten the port plate bolts with a torque wrench, evenly in a X configuration, shown in Figure 4, to provide proper seating. Refer to the product bulletin for bolt torque specs.

Before putting valves into service, all pipe connections, valve seats, bonnet seals, and stem seals should be tested for leaks at pressure levels called for in appropriate codes.

See bulletin 10-00 and 24-00 for information on the PVS and PEV valves.