VT Series 3-Way Ball Valves

Submittal Data Sheet

Job or Customer: .....

Engineer: .....

Contractor: .....

Submitted by: ..... Date

Approved by: ..... Date

Order No: ..... Date

Specification: .....

introduction

< STANDARDS >

ASTM D1784
ASTM D4101-86
ASTM D2466
ASTM D2467
ASTM D2464
ASTM F1498

ISO 3609

ANSI B1.20.1
ANSI B16.5

IPEX VT Series 3-Way Ball Valves can be used for flow diverting, mixing, or on/off isolation. They will replace a Tee + 2 valve linkage assembly at reduced cost and space, along with shorter installation and maintenance time. Molded features on the body allow for simple mounting and actuation while in-line ball seat adjustments are easily achieved by tightening the union nuts. VT Series 3-Way Ball Valves are part of our complete systems of pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards

Valve Availability

Body Material:	PVC, PP
Size Range:	1/2" through 2"
Pressure:	150 psi
Seats:	Teflon® (PTFE)
Seals:	EPDM or Viton® (FPM)
End Connections:	Socket (IPS) Threaded (FNPT), Flanged (ANSI 150) Socket (Metric)

VT Series 3-Way Ball Valves

Valve Selection

Size (inches)	Body Material	Port Style	O-ring Material	IPEX Part Number IPS Socket	FNPT Threaded	ANSI Flanged	Pressure Rating @ 73°F
1/2	PVC	T	EPDM	053403		053770	150 psi
			Viton®	053429		053776	
		L	EPDM	053455		053782	
			Viton®	053481		053788	
3/4	PVC	T	EPDM	053404		053771	
			Viton®	053430		053777	
		L	EPDM	053456		053783	
			Viton®	053482		053789	
1	PVC	T	EPDM	053405		053772	
			Viton®	053431		053778	
		L	EPDM	053457		053784	
			Viton®	053483		053790	
1-1/4	PVC	T	EPDM	053406		053773	
			Viton®	053432		053779	
		L	EPDM	053458		053785	
			Viton®	053484		053791	
1-1/2	PVC	T	EPDM	053407		053774	
			Viton®	053433		053780	
		L	EPDM	053459		053786	
			Viton®	053485		053792	
2	PVC	T	EPDM	053408		053775	
			Viton®	053434		053781	
		L	EPDM	053460		053787	
			Viton®	053486		053793	

Size (inches)	Metric Size	Body Material	Port Style	O-ring Material	IPEX Part Number Metric Socket	ANSI Flanged	Pressure Rating @ 73°F
1/2	20mm	PP	T	EPDM	053794	053806	150 psi
				Viton®	053800	053812	
			L	EPDM	053818	053830	
				Viton®	053824	053836	
3/4	25mm	PP	T	EPDM	053795	053807	
				Viton®	053801	053813	
			L	EPDM	053819	053831	
				Viton®	053825	053837	
1	32mm	PP	T	EPDM	053796	053808	
				Viton®	053802	053814	
			L	EPDM	053820	053832	
				Viton®	053826	053838	
1-1/4	40mm	PP	T	EPDM	053797	053809	
				Viton®	053803	053815	
			L	EPDM	053821	053833	
				Viton®	053827	053839	
1-1/2	50mm	PP	T	EPDM	053798	053810	
				Viton®	053804	053816	
			L	EPDM	053822	053834	
				Viton®	053828	053840	
2	63mm	PP	T	EPDM	053799	053811	
				Viton®	053805	053817	
			L	EPDM	053823	053835	
				Viton®	053829	053841	

Body Material:

❑ PVC ❑ PP

Port:

❑ T ❑ L

Size (inches):

❑ 1/2 ❑ 1-1/4

❑ 3/4 ❑ 1-1/2

❑ 1 ❑ 2

❑ 20mm ❑ 40mm

❑ 25mm ❑ 50mm

❑ 32mm ❑ 63mm

Seals:

❑ EPDM

❑ Viton® (FPM)

End Connections:

❑ Socket (IPS)

❑ Threaded (FNPT)

❑ Flanged (ANSI 150)

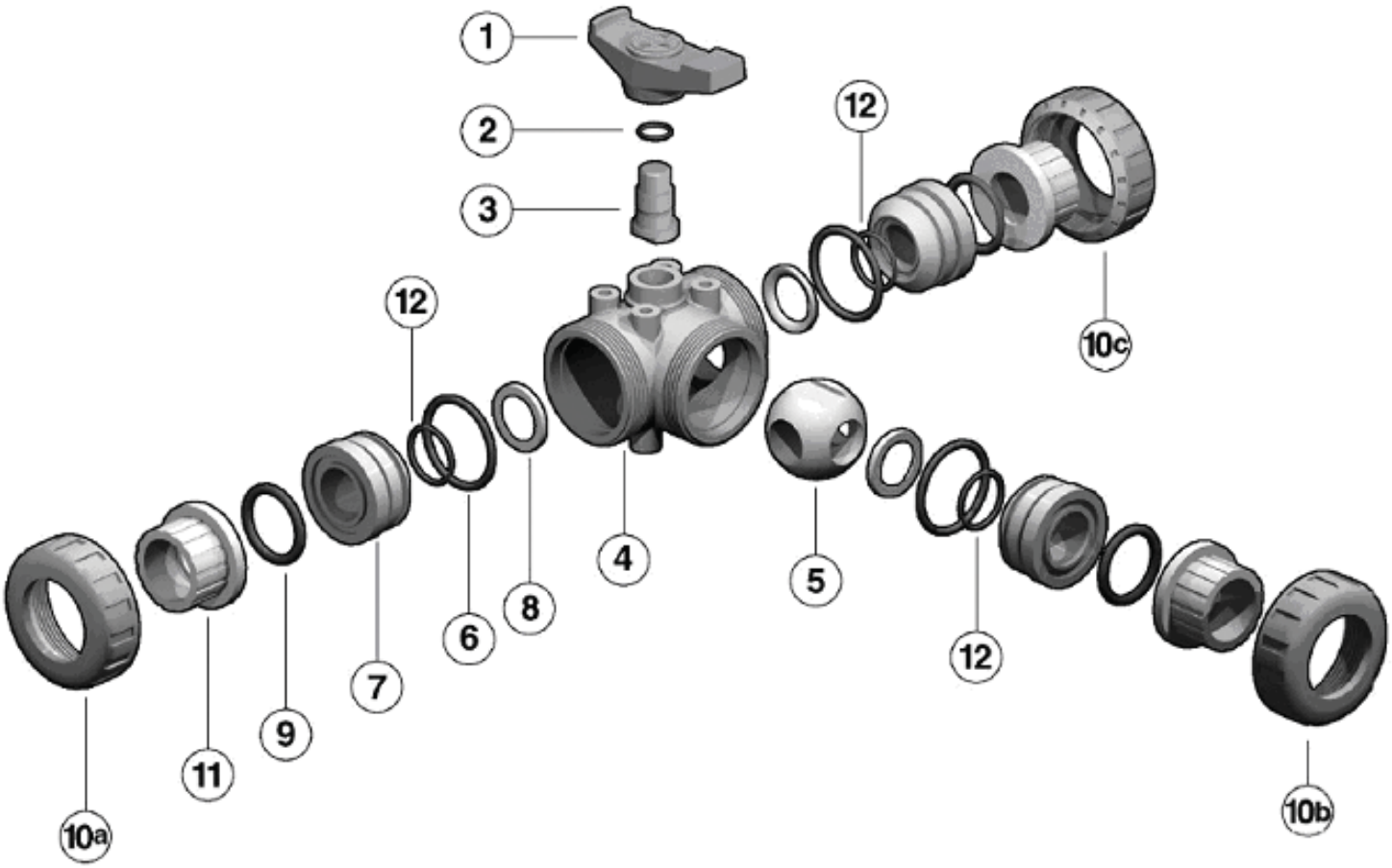
❑ Socket (Metric)

IPEX Part Number:

_____

VT Series 3-Way Ball Valves

Components



#	Component	Material	Qty
1*	handle	High Impact PVC	1
2*	stem o-ring	EPDM or Viton®	1
3*	stem	PVC / PP	1
4	body	PVC / PP	1
5*	ball	PVC / PP	1
6*	body o-ring	EPDM or Viton®	3
7	support for ball seat	PVC / PP	3
8*	ball seat	PTFE	3
9*	socket o-ring	EPDM or Viton®	3
10*	union nut	PVC / PP	3
11*	end connector	PVC / PP	3
12	backing o-ring	EPDM or Viton®	3

** Spare parts available.*

VT Series 3-Way Ball Valves

Installation Procedures

1. For socket and threaded style connections, remove the union nuts (part #10 on previous page) and slide them onto the pipe. For flanged connections, remove the union nut / flange assemblies from the valve.

2. Please refer to the appropriate connection style sub-section:

   a. For socket style, solvent cement the end connectors (11) onto the pipe ends. For correct joining procedure, please refer to the section entitled, *"Joining Methods – Solvent Cementing"* in the IPEX Industrial Technical Manual Series, *"Volume I: Vinyl Process Piping Systems"*. **Be sure to allow sufficient cure time before continuing with the valve installation.**

   b. For threaded style, thread the end connectors (11) onto the pipe ends. For correct joining procedure, please refer to the section entitled, *"Joining Methods – Threading"* in the IPEX Industrial Technical Manual Series, *"Volume I: Vinyl Process Piping Systems".*

   c. For flanged style, join the union nut / flange assemblies to the pipe flanges. For correct joining procedure, please refer to the section entitled, *"Joining Methods – Flanging"* in the IPEX Industrial Technical Manual Series, *"Volume I: Vinyl Process Piping Systems"*.

3. Ensure that the socket o-rings (9) are properly fitted in their grooves then carefully place the valve in the system between the end connections.

4. Tighten the union nut on the side marked "TIGHTEN" (10a). Hand tightening is typically sufficient to maintain a seal for the maximum working pressure. **Over-tightening may damage the threads on the valve body and/or the union nut, and may even cause the union nut to crack.**

5. Tighten the remaining two union nuts (10b and 10c). Tightening the union nuts in this order results in the best possible valve performance due to optimum positioning and sealing of the ball and seat support system.

6. Open and close the valve to ensure that the cycling performance is adequate. If adjustment is required, loosen and/or tighten only the 10b and 10c union nuts.

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Testing and Operating

The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

An onsite pressure test procedure is outlined in the IPEX Industrial Technical Manual Series, *"Volume I: Vinyl Process Piping Systems"* under the section entitled, *"Testing"*. The use of this procedure should be sufficient to assess the quality of a valve installation. **In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.**

Important points:

- Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.
- When testing, do not exceed the rated maximum operating pressure of the valve.
- Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.

Please contact IPEX customer service and technical support with regard to any concern not addressed in this data sheet or the technical manual.

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Notes