

Honeywell

V5013B,C,F THREE-WAY VALVES



V5013

V5013F AND B VALVES ARE THREE-WAY MIXING VALVES (TWO INLETS AND ONE OUTLET) FOR CONTROL OF HOT AND COLD WATER. THE V5013C IS FOR DIVERTING APPLICATIONS (ONE INLET AND TWO OUTLETS).

☐ V5013B ☐ V5013C ☐ V5013F

- Valves require a (Q618 or (Q601 Linkage and control motor to position the valve.
- Constant total flow through full plug travel.
- Spring-loaded, self-adjusting, Teflon cone or Teflon/rubber packing allows a wide range of water temperature and pressure.
- Stainless steel stem prevents corrosion.

NOTE: Mixing and diverting valves are not interchangeable. Misapplication will result in unbalanced flow pressures on valve plug configurations that can result in the valve slamming shut, pipe vibration, and rapid wear on valve plugs.

SPECIFICATIONS

MODELS:

V5013F-Three-Way Mixing Valve with screwed valve and connections.
V5013B-Three-Way Mixing Valve with flanged valve and

connections.
V5013C-Three-Way Diverting Valve with flanged valve end connections.

Table 1.

Model No.	Service	Pipe Size (in.)	Capacity Index (Cv)	Close-Off Ratings ^a When Used With Linkages			Valve Dimensions				Valve End Connections
				Q618A 80 lb. Linkage	Q618A 160 lb. Linkage	Q601P, Q 300 lb (e)(f)	Face-To-Face		Center Line To Bottom		
							in.	mm	in.	mm	
V5013F	Mixing ^c	1/2	2.5	140 psig	150 psig	200	3-1/8	79.5	2-1/2		Screwed b
		1/2	4.0	130 psig	150 psig	200	3-1/8	79.5	2-1/2		
		3/4	6.3	120 psig	150 psig	200	3-3/8	85.5	2-5/8		
		1	10.0	70 psig	150 psig	200	3-7/8	98.5	2-5/8		
		1-1/4	16.0	50 psig	146 psig	200	4-1/4	108	2-5/8		
		1-1/2	25.0	35 psig	98 psig	185	4-3/4	120.5	2-3/4		
V5013B	Mixing ^c	2	40.0	20 psig	67 psig	150	5-7/8	149	3-1/8		Flanged b
		2-1/2	63.0	16 psig	32 psig	64	9-1/2	241.5	6-7/16	163.5	
		3	100.0	10 psig	22 psig	44	11	279.5	6-5/8	168.5	
		4	160.0	—	—	20	13	330	8-11/16	220.5	
		5	250.0	Not recommended for tight close-off		13	15	381	9-5/8	244.5	
V5013C	Diverting ^d	6	360.0	Not recommended for tight close-off		8	16-1/2	419	10-11/16	271.5	Flanged b
		2-1/2	63.0	—	32 psig	64	9-1/2	241.5	6-7/16	163.5	
		3	100.0	—	22 psig	44	11	279.5	6-5/8	168.5	
		4	160.0	—	—	20	13	330	8-11/16	220.5	
		5	250.0	Not recommended for tight close-off		13	15	381	9-5/8	244.5	

^a Represents maximum pressure difference between the outlet and either of the two inlets (or between the inlet and either of the two outlets).
^b Flanged bodies conform to A.N.S.I. specifications for Class 125 cast-iron pipe flanges and flanged fittings. Valve flanges are flat faced with a smooth finish. Screwed bodies conform to A.N.S.I. specifications for Class 150 bronze valves and fittings.
^c For mixing service only.
^d For diverting service only.
^e Q601 P is for use with 4" to 6" V5013's, Q601 Q is for use with 1/2" to 3" V5013.
^f For use with 300 lb. in Modutrol Motors.

VALVE LIFT: 3/4 in. [19 mm] for models up to 3 inches; 1-1/2 in. [38 mm] for 4 to 6 inch models, 2 in. [51 mm] for 8 inch models.
 PRESSURE-TEMPERATURE RATINGS: See Fig. 1.

MATERIALS:

Components	Body Type	
	V5013F	V5013B,C
Valve Body ^a	Cast-bronze	Cast-iron
Stem	Stainless Steel	Stainless Steel
Plug	Brass	Bronze
Seat	Brass	Bronze, Removable
Packing	Teflon/Rubber	Teflon Cone

a Body material should be similar to that of the system in which the valve is installed.

For quiet water service—20 psig maximum differential at any position.

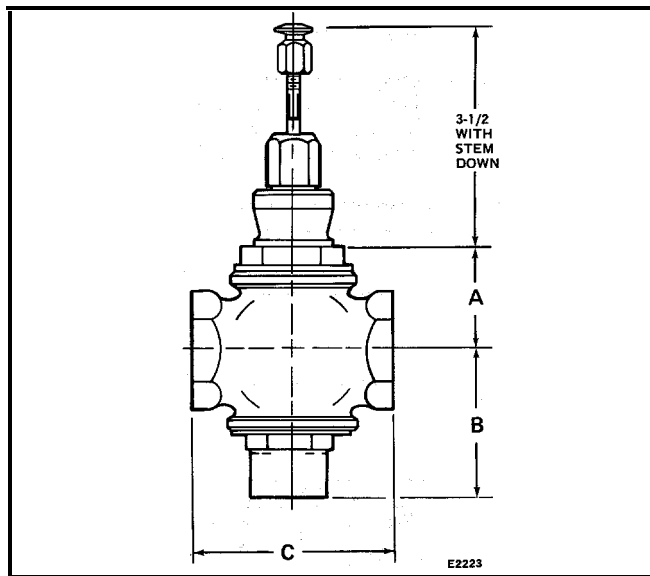


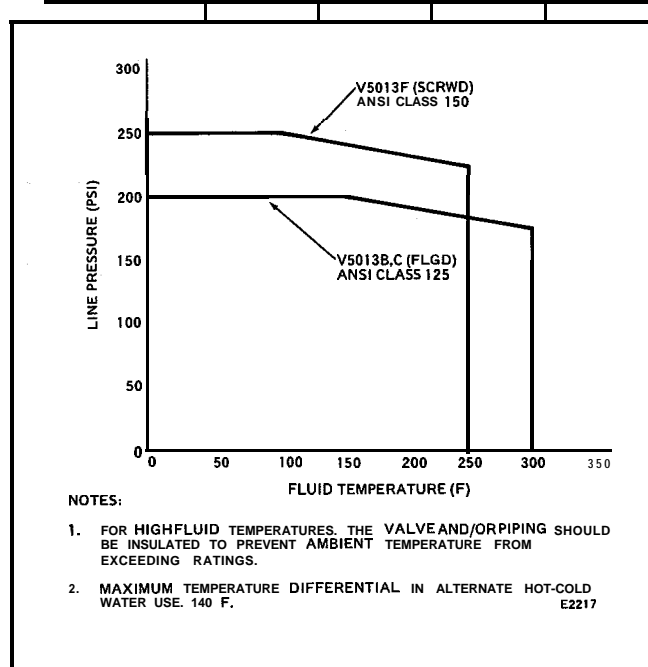
Fig. 1—V5013F SCREWED BODY DIMENSIONS AND CROSS REFERENCE.

TABLE 3—ADDENDUM/CROSS REFERENCE V5011F,G VALVES.

O.S. Number	Valve	Dim "A"	Dim "B"	Dim "C"
*V5011C1565	1/2"	1 13/16"	1 12/16"	3 6/16"
V5011G1187	1/2"	2	1 12/16"	3 6/16"
*V5011A6386	1/2"	1 13/16"	1 12/16"	3 6/16"
V5011F1139	1/2"	2"	1 12/16"	3 6/16"
*V5011C1599	3/4"	1 9/16"	1 12/16"	3 6/16"
V5011G1194	3/4"	1 12/16"	1 12/16"	3 6/16"
*V5011A6394	3/4"	1 9/16"	1 12/16"	3 6/16"
V5011F1147	3/4"	1 12/16"	1 12/16"	3 6/16"
*V5011C1623	1"	1 11/16"	1 12/16"	4 4/16"
V5011G1202	1"	1 14/16"	1 12/16"	4 4/16"
*V5011A6402	1"	1 11/16"	1 12/16"	4 4/16"
V5011F1164	1"	1 14/16"	1 12/16"	4 4/16"
*V5011C1656	1-1/4"	1 13/16"	1 10/16"	4 14/16"
V5011G1210	1-1/4"	2"	1 10/16"	4 14/16"
*V5011A6410	1-1/4"	1 13/16"	1 10/16"	4 14/16"
V5011F1162	1-1/4"	2"	1 10/16"	4 14/16"
*V5011C1680	1-1/2"	2 11/16"	1 10/16"	5 10/16"
V5011G1228	1-1/2"	2 14/16"	1 10/16"	5 10/16"
*V5011A6428	1-1/2"	2 11/16"	1 10/16"	5 10/16"
V5011F1170	1-1/2"	2 14/16"	1 10/16"	5 10/16"
*V5011C1391	2"	2 15/16"	2"	5 10/16"
V5011G1103	2	3 2/16"	2	5 10/16"
*V5011A6436	2	2 15/16"	2	5 10/16"
V5011F1188	2	3 2/16"	2	5 10/16"
*V5011C1458	2-1/2"	2 9/16"	2 6/16"	7 8/16"
V5011G1111	2-1/2"	2 12/16"	2 6/16"	7 8/16"
*V5011A6444	2-1/2"	2 9/16"	2 6/16"	7 8/16"
V5011F1196	2-1/2"	2 12/16"	2 6/16"	7 8/16"
*V5011C1516	3	2 15/16"	2 10/16"	8 14/16"
V5011G1129	3	3 2/16"	2 10/16"	8 14/16"
● V5011A6451	3"	2 15/16"	2 10/16"	8 14/16"
V5011F1204	3	3 2/16"	2 10/16"	8 14/16"

Table P—ADDENDUM/CROSS REFERENCE V5013F VALVES.

O.S. Number	Valve	Dim "A"	Dim "B"	Dim "C"
● V5013A1187	1/2"	1 9/16"	2 12/16"	3 8/16"
V5013F1079	1/2"	1 12/16"	2 10/16"	3 8/16"
*V5013A1195	3/4"	1 9/16"	2 10/16"	3 6/16"
V5013F1087	3/4"	1 12/16"	2 8/16"	3 6/16"
*V5013A1203	1"	1 11/16"	2 13/16"	3 14/16"
V5013F1095	1"	1 14/16"	2 10/16"	6 14/16"
*V5013A1211	1-1/4"	1 13/16"	2 12/16"	4 4/16"
V5013F1103	1-1/4"	2"	2 10/16"	4 4/16"
V5013A1229	1-1/2"	2 3/16"	2 14/16"	4 12/16"
V5013F1111	1-1/2"	2 6/16"	2 12/16"	4 12/16"
*V5013A1237	2	2 7/16"	3 4/16"	5 14/16"
V5013F1129	2	2 10/16"	3 2/16"	5 14/16"



NOTES:

- FOR HIGH FLUID TEMPERATURES, THE VALVE AND/OR PIPING SHOULD BE INSULATED TO PREVENT AMBIENT TEMPERATURE FROM EXCEEDING RATINGS.
- MAXIMUM TEMPERATURE DIFFERENTIAL IN ALTERNATE HOT-COLD WATER USE, 140 F.

Fig. 3—A.N.S.I. LINE PRESSURE FLUID TEMPERATURE P.S.I. CHART.

Table 4—A.N.S.I. LINE PRESSURE FLUID TEMPERATURE

Item	V5011F,G V5013F
PRESSURE RATINGS	
—VALVE BODY	ANSI CLASS 150 psi
—STEM PACKING	V5011F 250 psi @ 100° F
—STEM PACKING	V5011G 100 psi
—STEM PACKING	V5013F 250 psi @ 100° F
BONNET NUT	OCTAGON
DIMENSIONS	REFER TO FIG. 1&2
WHITE PLASTIC COLLAR TAG	YES

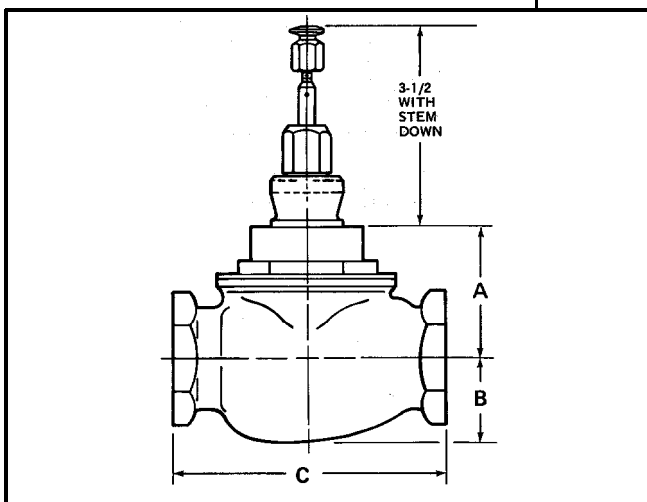


Fig. 2—V5011F,G SCREWED BODY DIMENSIONS AND CROSS REFERENCE.