Part Numbering System

Ball Valve Assemblies Using SmartX 5xx Actuators

V x - 2 x x 3 - 5 x x - 9 - x x

Control Signal Type
A = Two Position
F = Floating
S = Proportional
B = Valve Body & Linkage[a] (less actuator)

Configuration
2 = 2 Way
3 = 3 Way Mixing

Material
1 = Nickel/Chromium Plated Brass
5 = Stainless Steel △3

Connection
3 = Threaded NPT

Port Code
Refer to separate Port Code table

Actuator Code △1 △2				Valves Used On △3					
				1/2 to 1"		1-1/4"		1-1/2" to 3"	1-1/2" to 2"
Model	**Code**	**Normal Position**	**Voltage**	**2-way**	**3-way**	**2-way**	**3-Way**	**2-Way**	**3-way**
Two-Position									
MA40 7040	**522**	SR Close	120 Vac	X	X	X	X	X	X
MA40 7040	**532**	SR Open	120 Vac	X	X	X	X	X	X
MA40 7043	**526**	SR Close	24 Vac	X	X	X	X	X	X
MA40 7043	**536**	SR Open	24 Vac	X	X	X	X	X	X
Floating									
MF41 6043	**505**	NSR	24 Vac	X	X	X	X		
MF41 6083	**506**	NSR	24 Vac					X	X
MF40 7043	**526**	SR Close	24 Vac	X	X	X	X	X	X
MF40 7043	**536**	SR Open	24 Vac	X	X	X	X	X	X
Proportional									
MS41 6043	**505**	NSR	24 Vac	X	X	X	X		
MS41 6083	**506**	NSR	24 Vac					X	X
MS40 7043	**526**	SR Close	24 Vac	X	X	X	X	X	X
MS40 7043	**536**	SR Open	24 Vac	X	X	X	X	X	X
Valve Body/Linkage Assembly [a]			**VB-22x3-500-9-xx, VB-2313-500-9-xx**						

△1 Normal position for 3 way spring return ball valve assemblies refers to A to AB ports.

△3 Stainless steel ball is available only on 2 way versions.

SR = Spring Return
NSR = Non Spring Return

[a] Includes valve body, linkage, and anti rotation clips for spring return and non spring return SmartX actuators, listed above. Ordered separately.

Note: Not all model configurations are available as factory assemblies. You can purchase the the actuator and a VB 22x3 500 9 xx valve body and linkage separately for field assembly.

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Port Codes

2-Way Ball Valve Assemblies with SmartX Actuators

Table-1. 2-Way Ball Valve Assemblies - Sizes, Port Codes, and Cvs.

Size in.	2-Way		
	Port Code	Cv[a]	Kvs[a]
1/2	01	0.38	0.33
	02	0.68	0.59
	03	1.3	1.1
	04	2.6	2.2
	05	4.7	4.1
	06	8.0	6.9
	07	11.7[b]	10.1
¾	11	0.31	0.27
	12	0.63	0.54
	13	1.2	1.0
	14	2.5	2.2
	15	4.3	3.7
	16	10.1	8.7
	17	14.7[b]	12.7
	18	28.6[b]	24.7
1	21	4.4	3.8
	22	9.0	7.8
	23	15.3	13.2
	24	26.1	22.6
	25	28.4[b]	24.6
	26	43.9[b]	38.0
	27	54.2[b]	46.9
1¼	41	4.4	3.8
	42	8.3	7.2
	43	14.9	12.9
	44	36.5	31.6
	45	41.1[b]	35.6
	46	102.3[b]	88.5
1½	51	22.8	19.7
	52	41.3	35.7
	53	73.9[b]	63.9
	54	171.7[b]	148.5
2	61	41.7	36.1
	63	71.1	61.5
	65	108[b]	93.4
	66	210	181.7
	67	266[b]	230.1
2½	71	45	38.9
	72	55	47.6
	73	72.3	62.5
	74	101	87.4
	75	162	140.1
	76	202[b]	174.7
3	82	63	54.5
	85	145[b]	125.4

a - $Cv = \frac{gpm}{\sqrt{\Delta P}}$ (where DP is measured in psi) $kvs = \frac{Cv}{1.156}$

$kvs = \frac{m^3/h}{\sqrt{\Delta P}}$ (where DP is measured in bar; 1 bar = 100 kPa)

b - Denotes a full port valve, without the characterized insert.

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3-Way Ball Valve Assemblies with SmartX Actuators

Table-2. 3-Way Ball Valve Assemblies - Sizes, Port Codes, and Cvs

Size in.	3-Way		
	Port Code	A Port Cv[a b]	Kvs[a]
1/2	01	0.33	0.28
	02	0.59	0.51
	03	1	0.86
	04	2.4	2.1
	05	4.3	3.7
	06	8.0[c]	6.9
¾	11	0.40	0.35
	12	0.66	0.57
	13	1.3	1.1
	14	2.4	2.1
	15	3.8	3.3
	16	11[c]	9.5
1	21	0.40	0.35
	22	0.65	0.56
	23	1.3	1.1
	24	2.3	2.0
	25	3.5	3.0
	26	4.5	3.9
	27	8.6	7.4
	28	10	8.6
	29	14.9	12.9
	30	22.3[c]	19.3
	31	30.8[c]	26.6
1¼	41	4.1	3.5
	43	8.7	7.5
	44	12.7	11.0
	45	19.4[c]	16.8
	46	34.1[c]	29.5
1½	51	4	3.5
	52	8.3	7.2
	53	13.4	11.6
	54	23.5	20.3
	55	32[c]	27.7
	56	61.1[c]	52.8
2	61	23.9	20.7
	62	38.2	33.0
	63	56.7[c]	49.0
	64	108.5[c]	93.8

a - $Cv = \frac{gpm}{\sqrt{\Delta P}}$ (where DP is measured in psi) $kvs = \frac{Cv}{1.156}$

$kvs = \frac{m^3/h}{\sqrt{\Delta P}}$ (where DP is measured in bar; 1 bar = 100 kPa)

b - B port Cv is 80% of A port Cv.

c - Denotes a full port valve, without the characterized insert.