

Description

The KMC VCP-5360 Series are 3-way, mixing valves designed to control hot or chilled water.

These valves are available in 2-1/2" to 6" sizes with Cv ratings of 68 to 340. Valves with positive positioners are available.

The VCP-5360 Series feature, self-adjusting V-ring Teflon packing, and stainless steel stems. Their design makes them ideal for applications that require a leak rate of <0.1%. The VCP-5360 Series meet ANSI Class 125 or 250 specifications.



Features

- ◆ Three-way mixing
- ◆ Self-adjusting V-ring Teflon packing and stainless steel stems
- ◆ Leak rate of <0.1%
- ◆ Meet ANSI Class 125 or 250 specifications

Accessories/Repair Parts

- CMC-1002 Positive positioner
- HPO-5016 Positioner Kit (43.4) sq. in.
- HPO-5113 43.4 sq.in. silicone diaphragm
- HPO-5115 43.4 sq.in. neoprene diaphragm
- HPO-5119 84 sq.in. diaphragm
- HPO-5118 115 sq.in. diaphragm
- HPO-5038 Packing kit, 3/8" stem
- HPO-5088 Packing kit, V-ring
- HPO-5039 Packing kit for valves with 115" top

Model

Choose the specifications that match your application. Refer to the tables and diagrams on the back page for additional information.

NOTES:

^a Do not use Bronze Trim if water service exceeds 100 psid, or steam inlet pressure exceeds 40 psig, or with 115 sq.in. actuator.

^bThe 43.4 sq. in. with positioner contains an 8 to 13 psi internal spring and a 5 psi feedback spring. The 84 and 115 sq. in. with positioners contain 9-15 psi internal springs.

VCP-53-WW-X-YY-Z

"WW" Size

- 62: 2-1/2"
- 63: 3"
- 64: 4"
- 65: 5"
- 66: 6"

"X" Flange Range

- 1: 125# Flange w/Bronze trim (see Model NOTES: ^a)
- 2: 250# Flange w/Stainless Steel trim
- 3: 125# Flange w/Stainless Steel trim
- 4: 250# Flange w/Bronze trim (see Model NOTES: ^a)

"YY" Actuator Size

- 27: 43.4 sq.in
- 71: 84 sq.in
- 72: 115 sq.in (graphite packing, not V-ring)

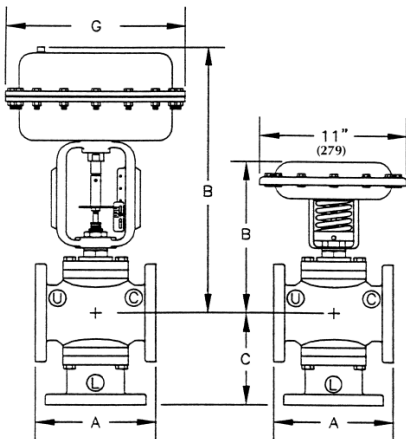
"Z" Actuator Range

- 0: Positioner (see Model NOTES: ^b)
- 1: 3 to 8 psi
- 2: 8 to 13 psi
- 5: 3 to 15 psi
- 6: 3 to 9 psi
- 7: 9 to 15 psi

Details

All dimensions in inches (mm).

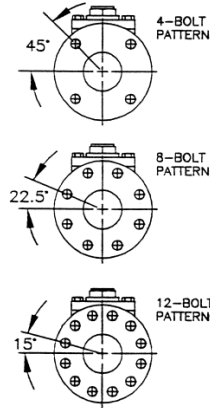
"G" = 13.812 (351 mm) on the 84 sq.in. Actuator
 "G" = 16.75 (425 mm) on the 115 sq.in. Actuator



VCP-5360 Series with 84 sq.in. Actuator VCP-5360 Series with 43.4 sq.in. Actuator

FLANGE DATA

"D"=DIA. OF HOLES
 "E"=BOLT CIRCLE DIA.
 "F"=QTY. OF HOLES



PRODUCT INFORMATION												
SIZE	FLANGE	VALVE DIMENSIONS in inches (mm)				F Qty. of Holes	43.3 sq.in. Actuator		84 sq.in. Actuator		115 sq.in. Actuator	
		A	C	D	E		B	Weight lbs. (kg)	B	Weight lbs. (kg)	B	Weight lbs. (kg)
2-1/2"	125	9.00 (229)	7.13 (181)	0.75 (19)	5.50 (140)	4	12.16 (309)	65 (29)	20.88 (530)	104 (47)	32.63 (829)	137 (62)
	250	9.63 (245)	7.38 (187)	0.88 (22)	5.88 (149)	8	-	76 (34)	-	118 (54)	-	148 (67)
3"	125	10.00 (254)	8.00 (203)	0.75 (19)	6.0 (152)	4	12.79 (325)	76 (34)	21.5 (546)	123 (56)	33.25 (845)	148 (67)
	250	10.75 (273)	8.38 (213)	0.88 (22)	6.63 (168)	8	-	89 (40)	-	139 (63)	34.25 (870)	161 (73)
4"	125	13.00 (330)	9.88 (251)	0.75 (19)	7.50 (191)	8	-	-	22.5 (572)	176 (80)	34.25 (870)	196 (89)
	250	13.63 (346)	10.25 (266)	0.88 (22)	7.88 (200)	8	-	-	-	202 (92)	-	215 (98)
5"	125	15.75 (400)	9.25 (235)	0.88 (22)	8.50 (216)	8	-	-	21.38 (543)	195 (89)	33.13 (842)	215 (98)
	250	16.63 (422)	10.38 (264)	0.88 (22)	9.25 (235)	8	-	-	-	256 (116)	-	250 (113)
6"	125	17.75 (451)	9.88 (251)	0.88 (22)	9.50 (241)	8	-	-	22.13 (562)	247 (112)	34.00 (864)	257 (117)
	250	18.63 (473)	11.00 (279)	0.88 (22)	10.63 (278)	12	-	-	-	328 (149)	-	317 (144)

Temperature/Pressure Chart		
Medium Temperature °F (°C)	Body Ratings: psi (kPa)	
	125# Flange	250# Flange
32° (0) to 150° (66)	175 (1207)	400 (2758)
175° (79)	170 (1172)	385 (2654)
200° (93)	165 (1138)	370 (2551)
225° (107)	157 (1082)	355 (2448)
250° (121)	150 (1034)	340 (2344)
350° (177)	125 (862)	280 (1931)
400° (204)	—	250 (1724)

Cv & CLOSE-OFF RATINGS IN PSI (kPa)**							
Size	Cv	43.4 sq. in Actuator					
		Lower Port (L)			Upper Port (U)		
		8-13 psi Range		3-8 psi Range		8-13 psi Range	
		20 psi (kPa)*	25 psi (kPa)*	20 psi (kPa)*	25 psi (kPa)*	0 psi (kPa)*	0 psi (kPa)*
2-1/2"	68	43 (296)	87 (600)	87 (600)	131 (903)	52 (359)	7 (48)
3"	91	28 (193)	58 (400)	58 (400)	89 (614)	34 (234)	3 (21)

* Pressure applied to actuator ** Not to exceed body rating

Cv & CLOSE-OFF RATINGS IN PSI (kPa) **													
Size	Cv	84 sq. in Actuator						115 sq. in Actuator					
		Lower Port (L)			Upper Port (U)			Lower Port (L)		Upper Port (U)			
		9-15 & 3-15 psi Range		3-9 psi Range	3-9 & 3-15 psi Range		9-15 psi Range	9-15 & 3-15 psi Range		3-9 psi Range	3-9 & 3-15 psi Range	9-15 psi Range	
		20 psi (kPa)*	25 psi (kPa)*	20 psi (kPa)*	25 psi (kPa)*	0 psi (kPa)*	0 psi (kPa)*	20 psi (kPa)*	25 psi (kPa)*	20 psi (kPa)*	25 psi (kPa)*	0 psi (kPa)*	0 psi (kPa)*
2-1/2"	75	66 (455)	132 (1047)	169 (1164)	255 (1757)	32 (220)	135 (930)	98 (676)	215 (1482)	238 (1541)	355 (2448)	51 (352)	192 (1324)
3"	105	44 (303)	103 (710)	115 (792)	174 (1199)	20 (138)	91 (627)	66 (455)	147 (1014)	163 (1124)	245 (1689)	33 (228)	131 (903)
4"	190	22 (151)	56 (386)	62 (427)	96 (661)	9 (62)	49 (337)	35 (241)	80 (552)	89 (614)	135 (931)	16 (110)	71 (409)
5"	280	13 (89)	34 (234)	-	-	-	30 (206)	20 (138)	50 (345)	55 (379)	85 (586)	9 (62)	44 (303)
6"	340	8 (55)	22 (152)	-	-	-	20 (138)	13 (90)	34 (234)	37 (255)	58 (400)	5 (34)	29 (200)

Specifications

Action/Flow
 Stem up w/o air 3-way mixing
 Stem down w/air From port "L" to port "C"
 From port "U" to port "C"

Rangeability 50 to 1

Body Rating See Chart

Body Type 3-way, flanged connections

Material

Valve Iron body, 316 Stainless Steel stem; Bronze or 316 Stainless Steel trim and V-ring type self adjusting Teflon packing (except 115 sq.in. with graphite packing);

Actuators

43.4 sq.in. Steel top, epoxy coated, EPDM diaphragm*

84 sq.in. Ductile iron yoke, steel diaphragm chamber and Buna-N fabric reinforced diaphragm

115 sq.in. Aluminum yoke and steel diaphragm chamber and Buna-N fabric reinforced diaphragm

Connections 1/4" FPT

Signal Input 25 psi (172 kPa) maximum

Actuator Size 43.4, 84 and 115 sq.in. pneumatic, direct action

Temperature Limits

Medium** 43.3 sq.in. w/neoprene 32° to 250° F (0° to 121° C)
 43.3 sq.in. w/silicone 32° to 400° F (0° to 204° C)

Ambient 35° to 175° F (1.7° to 79° C)

Shipping -40° to 180° F (-40° to 82° C)

** See Temperature/Pressure chart above for body pressure rating versus medium temperature.

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* Consult factory for silicone diaphragm