

Three-way Mixing Valve Model V5065A

General

The three-way mixing valve with case iron body, flanged end connections, sizes of 25 to 150 (A) in. The valve can be used for mixing control of non-combustible water in combinations with a modutrol motor, high-torque actuator or pneumatic actuator.



Specifications

Item	Specifications			
Model	Three-way mixing valve, flanged body			
Close-off ratings	Refer to Table 1 and Figs. 1 to 4			
Materials	Body: Cast iron — JIS FC200 Plug, Seat: Stainless steel — JIS SCS13 Stem: Stainless steel — JIS SUS304 Packing, Gasket: Non Asbestos (June 2001 ~)			
Body pressure ratings	JIS 10 K (1.0 MPa)			
Fluid temperature	0 to 200 °C Notes: Due to heat transfer affection, etc., an actuator being combined may not satisfy the fluid specifications. Refer to the instruction of the actuator.			
Maximum fluid temperature differential between port	70 °C			
End connections	JIS 10 K flat faced flange			
Flow characteristics	Linear for each port			
Plug shape	Mixing V-ported			
Available operators	Modutrol motors: Model M604, M904F+R7000A, M6284 etc. (Used with Q455 valve linkage.) High torque actuators: Model MY9402, MY9403 (Used with Model QMY9400 yoke assembly.) Pneumatic valve actuators: Model MP912, MP953			
Standard repair parts (Order separately, if required.)	Name	Ordering no.	Applicable valve size (A)	Description
	Stem button	228895	25 to 80	M8 x 1 threaded
		221867	100 to 150	M10 x 1.25 threaded
	Packing set	83164120-001	25, 40	For 8 mm dia. stem
83164120-002		50 to 100	For 10 mm dia. stem	
83164120-003		125, 150	For 13 mm dia. stem	
Ordering specification	1. Model number 2. Operator and linkage (if necessary)			

Model No.

Model no.	Valve size x Port size (A)	Pipe size (A)	Flow capacity (Cv)	Lift (mm)	Weight (kg)
V5065A6011	25 x 20	25	6.3	19	8.6
V5065A6019	25 x 25		11		8.7
V5065A6027	40 x 32		18		13.6
V5065A6035	40 x 40	40	28		13.5
V5065A6043	50 x 50		50		19
V5065A6050	65 x 65		65		26
V5065A6068	80 x 80	80	102	33.5	
V5065A6076	100 x 100	100	188	38	50
V5065A6084	125 x 125	125	280		69
V5065A6092	150 x 150	150	360		101.4

Table 1 Close-off ratings kPa – when using with electric actuators

Valve		Actuators and linkages						
Valve size x Port size (A)	Cv	Modutrol motor*			M640B,M940B		MY9402	MY9403
		Q455C	Q455D	Q455F	QN130A	QN130B	QMY 9400A	QMY 9400B
25 x 20	6.3	980	/	539	980	/	980	
25 x 25	11	980	/	539	980	/	980	
40 x 32	18	470	/	225	902	/	902	
40 x 40	28	470	/	225	902	/	902	
50 x 50	50	314	/	137	578	/	578	
65 x 65	72	186	/	85	353	/	353	
80 x 80	102	127	/	56	235	/	235	
100 x 100	188	/	82	/	/	142	/	
125 x 125	280	/	47	/	/	98	98	
150 x 150	360	/	33	/	/	69	69	

* Refer to the instruction of Model Q455 to select a correct combination of motor and linkage.












Safety Instructions

Please read instructions carefully and use the product properly. Please keep this instruction on hand for reference at any time.

Usage Restrictions

This product is targeted for general air conditioning. Do not use this product in a situation where human life may be affected. If this product is used in clean rooms or places where reliability or control accuracy is particularly required, please contact Yamatake's sales representatives. Yamatake Building Systems Co., Ltd. bears no responsibility for any benefit, or lack of benefit, derived from the operation by the customer.

 CAUTION

-  Installer must be a trained, experienced service technician.
-  Check the ratings given in this instructions to prevent equipment damage.
-  Check the environment given in this instructions to prevent equipment damage.
-  Do not stack boxes when storing products.
-  Prevent freezing of fluid. Equipment damage and leakage may result.
-  Install the product considering proper flow direction and installation orientation referring to the instructions. Excessive screwing and improper installation location may result equipment damage.
-  Flush the pipe so that no foreign substance remains. Attach strainer at upstream side as required to prevent equipment damage.
-  After piping work completed, check for leaks at connections.
-  Use full gasket for flat face flange.
-  Prevent excessive operating cycle. May shorten effective operating life.
-  Do not dissolve this product. Equipment damage may result.

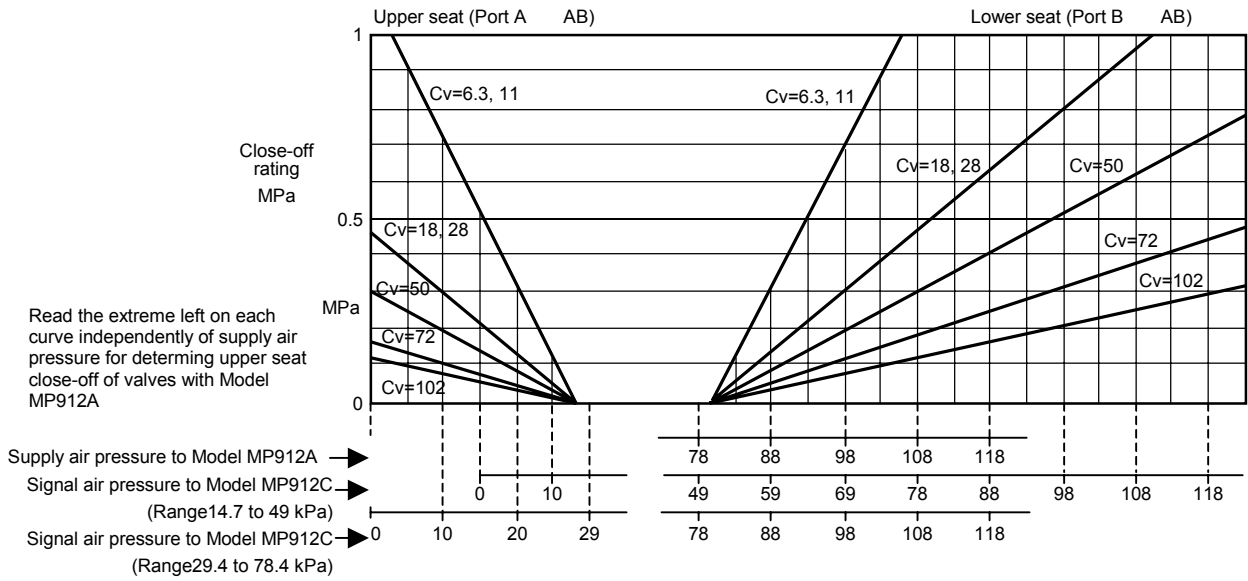


Fig. 1 Close-off ratings – when using with Model MP912A,C

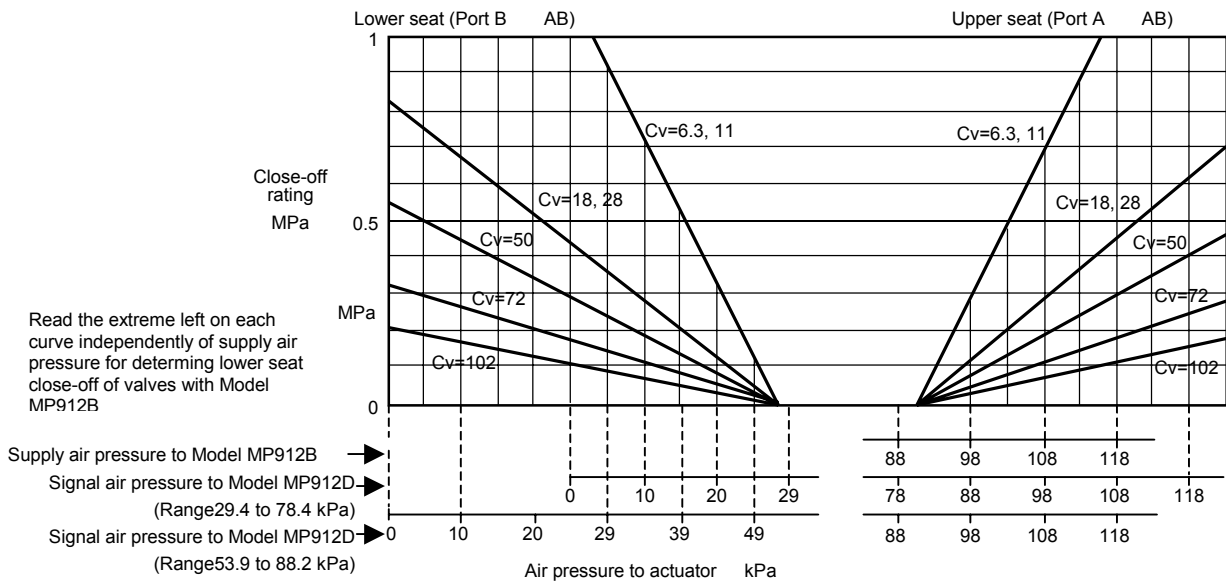


Fig. 2 Close-off ratings – when using with Model MP912B,D

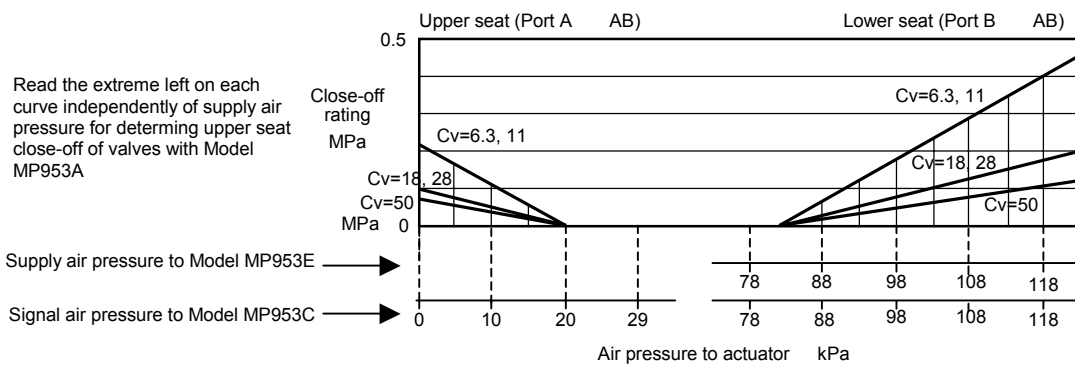


Fig. 3 Close-off ratings – when using with Model MP953C,E 125 (A)

Upper seat (Port A AB)	
Cv	Close-off rating kPa
188	176
280	108
360	78

Note: Independently of supply air pressure.

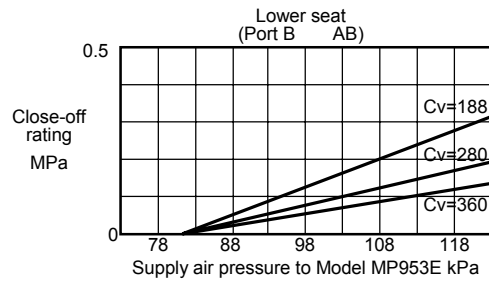


Fig. 4 Close-off ratings – when using with Model MP953E 325 (A)

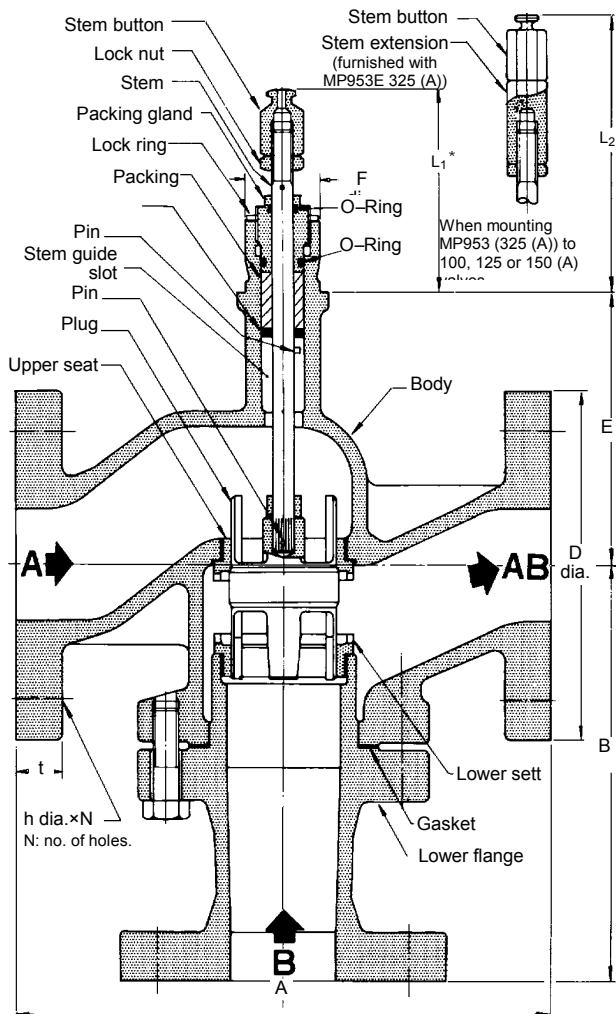


Fig. 5 Dimension (mm)

Size (A)	25	40	50	65	80	100	125	150
L ₁ *	107	107	107	107	107	170.5	170.5	170.5
L ₂ *						227.5	227.5	227.5
A	184	222	254	276	298	352	403	451
B	115	160	185	225	240	250	270	310
E	88	103	117	140	152	168	190	210
D dia.	125	140	155	175	185	210	250	280
t	18	20	20	22	22	24	24	26
h dia.	19	19	19	19	19	19	23	23
N	4	4	4	4	8	8	8	8
F dia.	34.8	34.8	34.8	34.8	34.8	47.6	47.6	47.6
G dia.	8	8	10	10	10	10	13	13

* Dimensions L₁ and L₂ shows the specific position with stem fully up.

Valve body installation

Install the valve taking care to below.

1. Do not install the valve to the pipe where water hammer may occur or scale, slag, etc. tend to lodge.
2. Locate the valve where it is certainly possible to service. The installed valve require enough clearance for servicing the actuator and valve such as removing and mounting of actuator, repair of packings. See Fig. 6 A to G for minimum clearance for removal of actuator. When the valve is installed inside the ceiling, provide the access opening within 50 cm around the valve. Drain pan is required to mount at the bottom end of the valve.
3. Bypass pipe is required. Locate the hand-valve in each of inlet, outlet and bypass pipe line. Install the strainer in inlet line.
4. Take care to prevent the stem from damage due to bending or scratching. The valve is shipped with protective tube put on valve stem. Do not remove the tube until installing the actuator.
5. Install the valve so the direction of flow is in the same direction as the arrow cast on the valve body.
6. Do not mount the actuator below the valve.
7. When using with electric actuator, install the valve so the motor shaft will be horizontal.

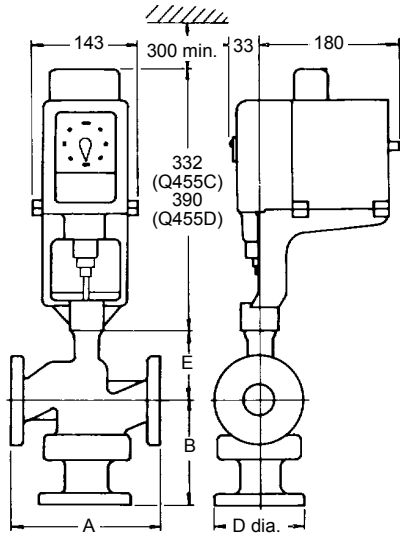
Actuator installation

1. Mounting the modutrol motor
Refer to the instructions of valve linkage Model Q455 and modutrol motor.
2. Mounting the high torque actuator Model MY9402, MY9403 remove the stem button screwed on the top of the stem. Mount the actuator using the yolk assembly Model QMY9400A (for 25 to 80 (A)) or Model QMY9400B (for 100 to 150 (A)).
Refer to the instruction of Model MY940X.

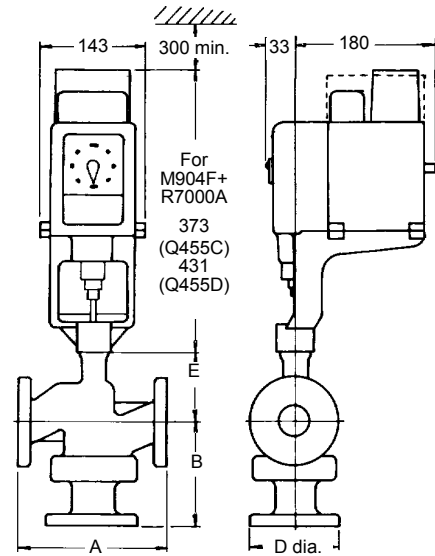
3. Mounting the pneumatic actuator

A. For Model MP912 or Model MP953 125 (A) a linkage is not required and the actuator can be directly installed on the valve. The stem button screwed on the top of the stem is locked in the exact position at the factory. If the position is shifted, reset it to the position specified in Fig. 1 'L₁'. Refer to the instruction of each actuator for details.

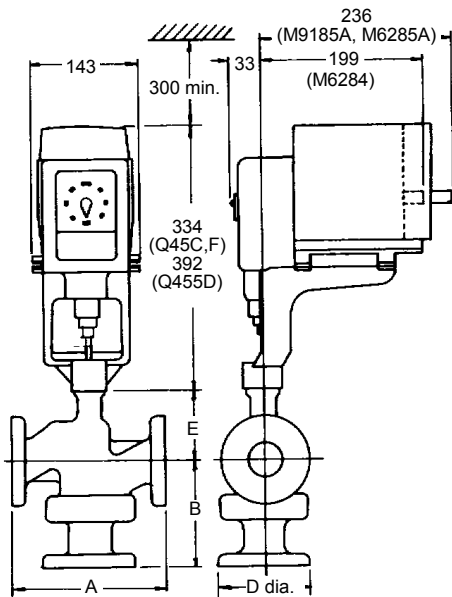
B. For Model MP953E 325 (A) remove the stem button from the valve and screw the stem button on the stem extension attached to the actuator. Screw the stem extension on the valve stem so that the stem button comes to the position specified in Fig. 5 L₂. To install the actuator, refer to the instruction of MP953 for details.



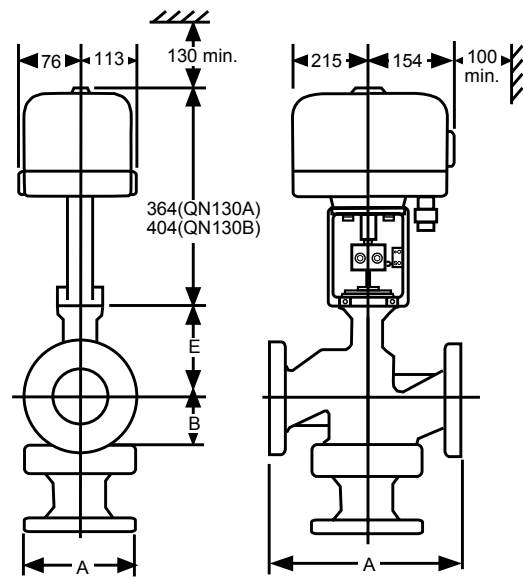
A. Model M604, M904/Q455C,



B. Model M904F+R7000A/Q455C,



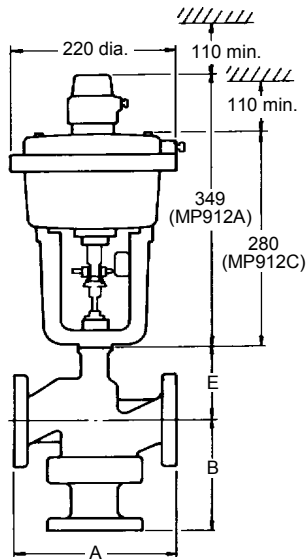
C. Model M6284, M9185A, M6285A/Q455C, D, F/V5065A



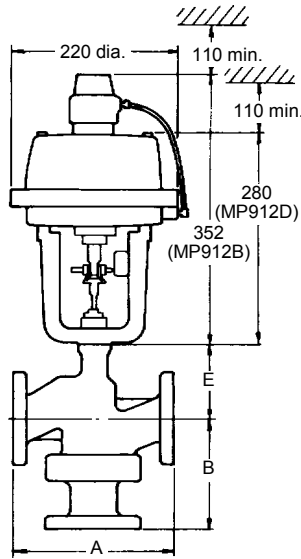
D. Model MY9402, MY9403/QMY9400A,B/V5065A

Valve size (A)	25	40	50	65	80	100	125	150
A	184	222	254	276	298	352	403	451
B	115	160	185	225	240	250	270	310
E	88	103	117	140	152	168	190	210
D	125	140	155	175	185	210	250	280

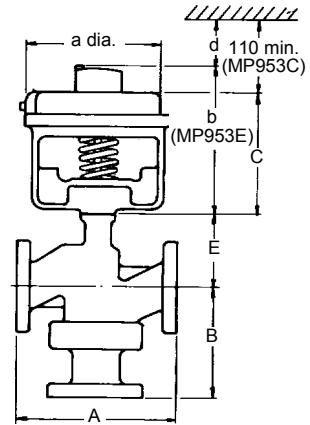
Fig. 6 Dimensions assembled with actuator (mm) (1/2)



E. Model MP912A, C/V5065A



F. Model MP912B, D/V5065A



G. Model MP953C, E/V5065A

Actuators	a	b	c	d	
MP	125 (A)	130	235	117	300 min.
953E	325 (A)	343	460	254	300 min.
MP	125 (A)	130	/	117	/
953C	/	/	/	/	/

Fig. 6 Dimensions assembled with actuator (mm) (2/2)

CAUTION



Take special care when touching the valve body. When used for high temperature service, valve surface becomes hot. Personal injury may result.

Check leakage around the valve visually every three month. Fasten the packing with the nut to prevent leakage. Replace the packing if required. Refer to the related instructions for the actuators.

Specifications are subject to change without notice.



Yamatake Corporation
Building Systems Company
International Business Headquarters

Totate International Building
 1-12-19, Shibuya
 Shibuya-Ku, Tokyo, 150-8316
 URL: <http://www.yamatake.com>