

**Series 31, 32 Mixing / Diverting
Seated 3-Way Valves for
ANSI 150 – 600 (PN20- 100)
DIN/BS 4504 PN10-PN100**

Series 31, 32 Features

General

Three-way type control valves are used for controlling the fluids mutually to three directional pipings, i.e., mixing service (Model 31) and diverting service (Model 32).

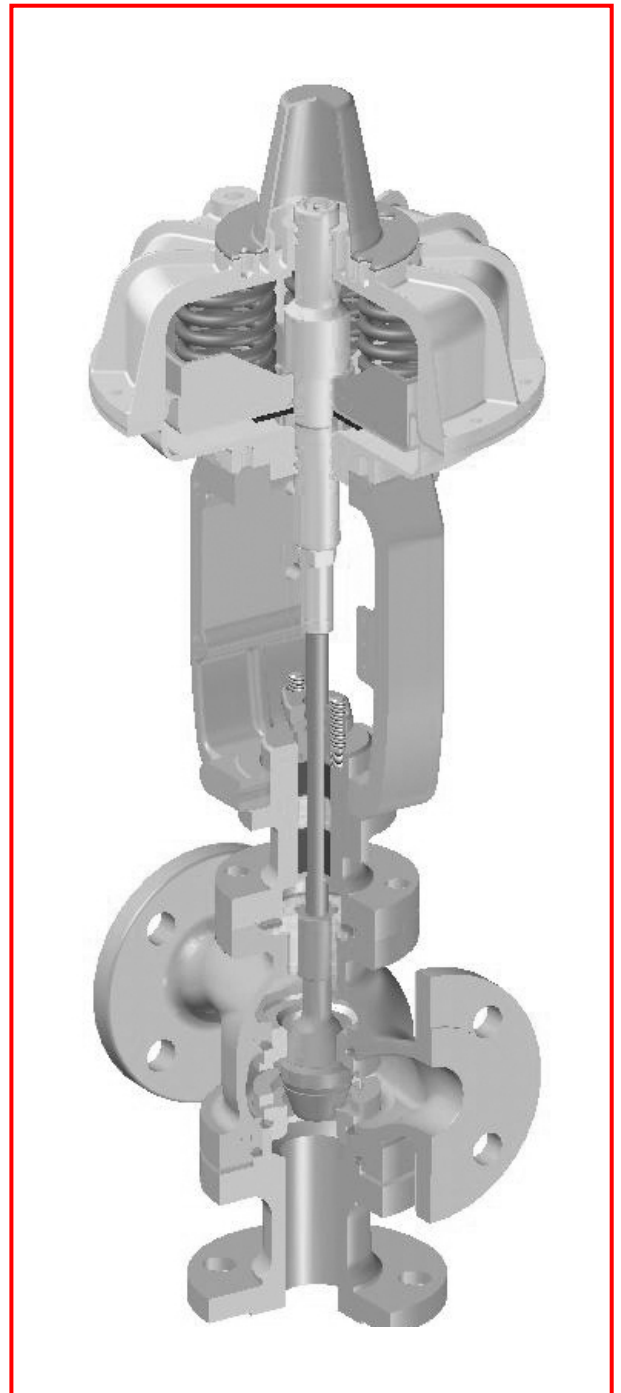
Model 31 valve body with valve size 65mm or less is applied to Model 32 diverting service. The actuators are designed compactly as multi-spring diaphragm operated type, and permit high thrust.

Performance :

- High Cv to body size ratio.
- Streamlined flow passages to optimize capacity.
- High Cv to valve weight ratio.
- Excellent flow control rangeability.

Design Flexibility :

- Modular construction design available with a range of different connections and styles.
- All trim components removable from the top for easy of maintenance.
- Wide range of supplementary noise control options.
- Inherently characterized trim offered in equal percentage, linear, quick opening and modified-parabolic (options).
- Multi trim sizes available.
- Full range of body and trim material options.
- Fully rationalized and interchangeable features.
- Full range of bonnet and packing designs to suit various temperatures and fluids.



**Figure 1. Class Series 31, 32 Valve Incorporating
Contoured trim and complete with
Series ' 5500' actuator**

Table 1. Specifications

Valve Type		Diaphragm operated three-way type control valve											
Valve Model No.		31						32					
Body Type		Model 31 mixing service, 32 diverting service, globe type three-way											
Valve Size	(mm)	20	25	40	50	65	80	100	125	150	200	250	
	(in.)	3/4	1	1.1/2	2	2.1/2	3	4	5	6	8	10	
Pressure Rating		JIS 10K, 20K, 30K, 40K : ANSI Class 150, 300, 600											
End Connections		Flanged end: RF, RJ, Male and female, Tangue and groove											
Body Materials		FC200, SCPH2, SCS13A, SCS14A											
Bonnet Type		Plain(-17℃ to +230℃), Fin(-20℃ to under -17℃, over +230℃) Bellows seal (See page 3)											
Gland Type		Bolted gland											
Packing		PTFE V-ring, Braided packing, Molded packing											
Gaskets		Flat gasket, Serrated gasket											
Guiding		Top guide											
Seat Type		Single seated (one seat per one flow director)											
Valve Plug Shapes		P-Port											
Plug Characteristics		Linear											
Trim Materials		SUS316											

Guide to Trim Options Available

Modular Design

Series 31, 32 has been designed around a modular manufacturing concept. Using this philosophy, a centre body module selected to most suit the specified flow conditions and operating data, is combined with end connection size/rating, selected to support that module. this design feature allows not only the selection of full size ends, to offer oversize end connections to suit a particular requirement.

Unbalance Trim

Single contoured unbalance Port(SP) are up to 6".
Ports are guided by heavy guide.

Balance Trim

Pressure balance ports are used to reduced the thrust on the port.

Single contoured balance Port (BP) are over 2" are standard and under 2" are available for specific applications.

Double contoured balance port (DP) are over 2" for high pressure drop.

Soft seats are used in application requirement ANSI class VI ' BUBBLE-TIGHT ' shutoff and FIRE SAFE design. it's design consist of an elastomer sandwiched between two metal piece, insert retainer and metal seat. the soft seat can be done by Installing the insert and soft seat between seat retainer and seat. therefore it can used for fire safe function.

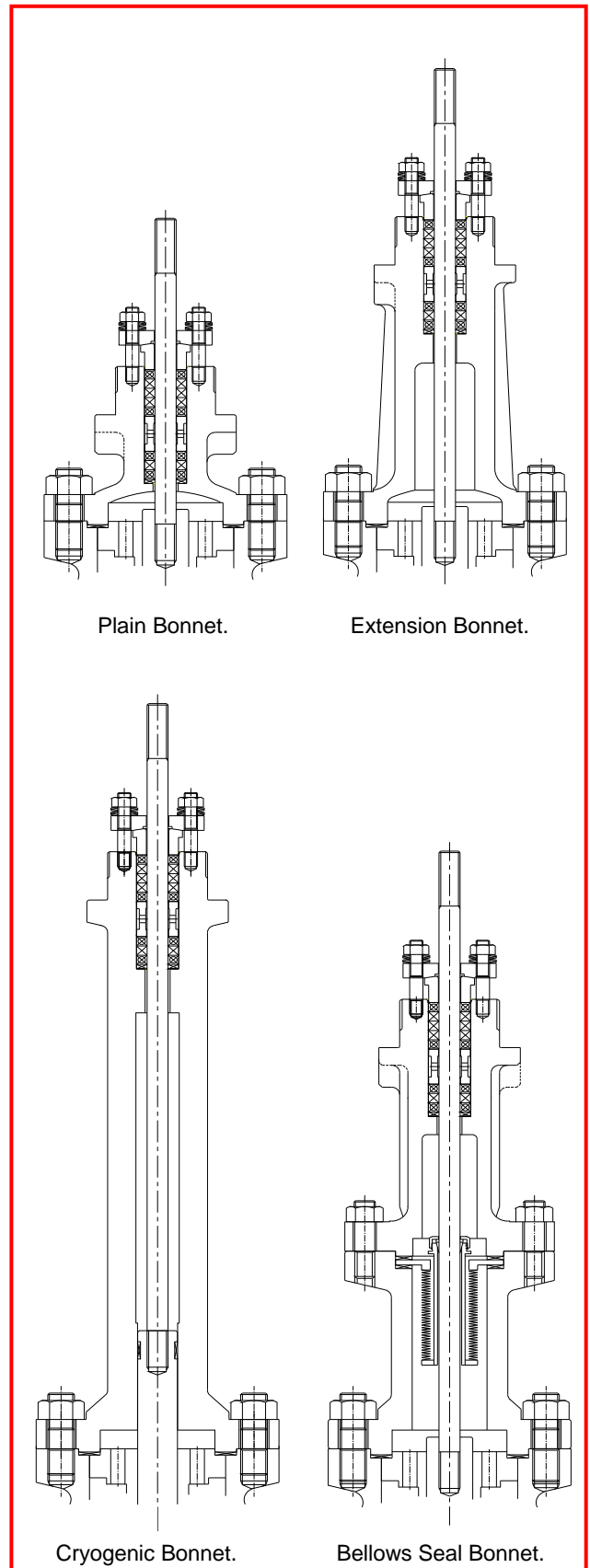


Figure 2. Bonnet design option

Series 31, 32 Outline Dimensions

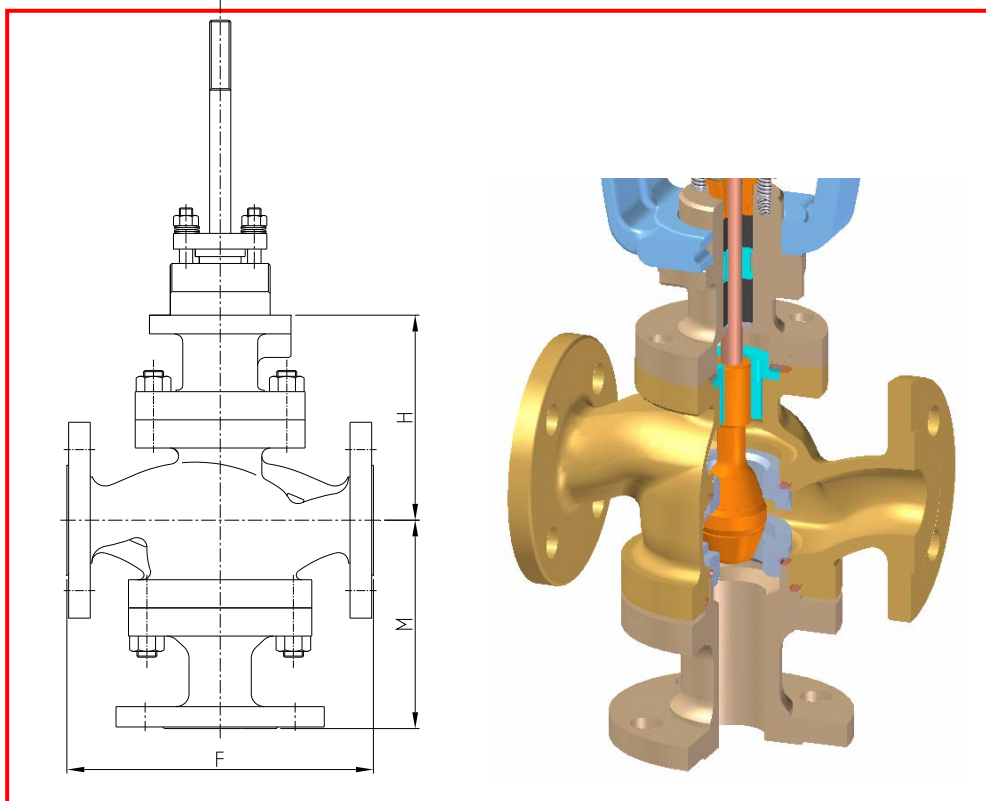


Figure 2. Series 31, 32 dimensions

Table 2. Series 31, 32 Dimensions

(Unit : mm)

SIZE		F			H (PLAIN)		H (EXTENSION)		M	
		150#	300#	600#	150#, 300#	600#	150#, 300#	600#	150#, 300#	600#
1/2"	15A	184	194	206	120	135	220	235	135	140
3/4"	20A	184	194	206	120	135	220	235	135	140
1"	25A	184	197	210	129	134	229	234	133	141
1 1/2"	40A	222	235	251	144	158	244	258	151	157
2"	50A	254	267	286	156	188	256	288	184	189
2 1/2"	65A	276	292	311	172	206	272	306	193	198
3"	80A	298	317	337	205	253	355	370	244	251
4"	100A	352	368	394	263	271	413	428	254	264
5"	125A	403	425	457	315	340	465	490	315	322
6"	150A	451	473	508	321	389	471	526	316	326
8"	200A	543	568	610	371	423	521	604	380	400
10"	250A	673	708	752	421	455	571	604	429	435
12"	300A	737	775	819	523	585	652	735	380	380