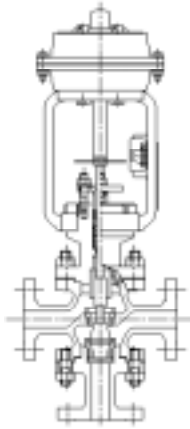
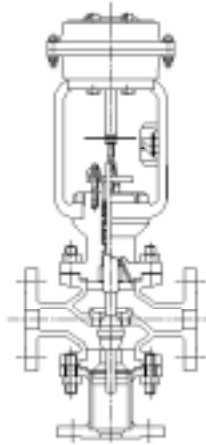


<b>General Specifications</b>	<b>Three-Way Control Valve</b>	<b>V-5300</b>
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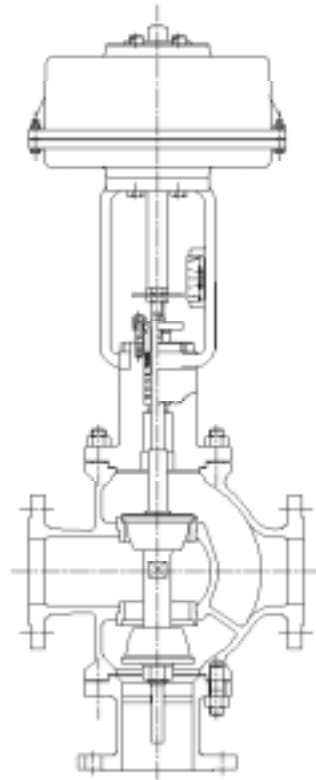
- V-5310 Diverting Three-Way Control Valve(15 ~ 20A)  
 Mixing Three-Way Control Valve(15 ~ 20A)
- V-5320 Diverting Three-Way Control Valve(25 ~ 40A)  
 Mixing Three-Way Control Valve(25 ~ 200A)
- V-5330 Diverting Three-Way Control Valve(50 ~ 200A)



V-5310 , 5320  
 Mixing Type



V-5310 , 5320  
 Diverting Type



V-5330  
 Diverting Type

#### Feature

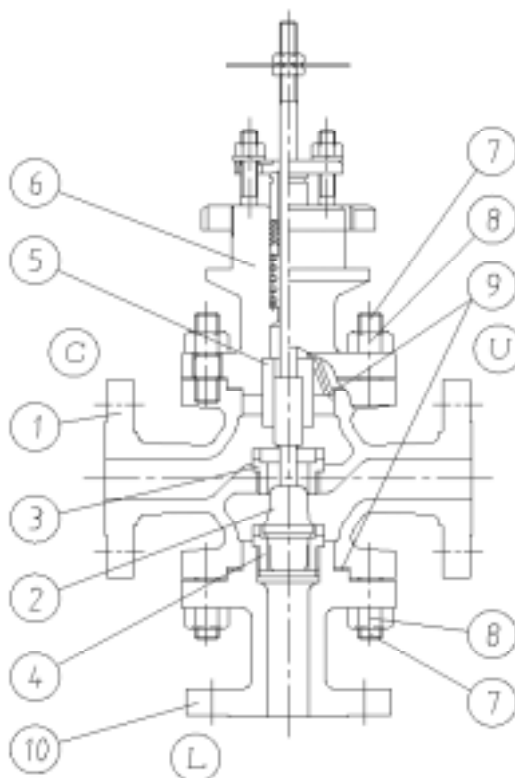
- 'Mixing Type Three-Way Valve' mixes the fluid from two directions with one direction.
- 'Diverting Type Three-Way Valve' Diverts the fluid from one direction for two directions.
- It uses it for the bypass control of the heat exchanger and It uses it for the mixture of the dissimilar fluid etc.

#### 1・General specifications

**Table・1 General specifications**

Model number	V-5310 , 5320 , 5330
Model name	Three-way type
End connection standard	JIS10 , ANSI/ASME150 ~ 1500# / RF , FF
Nominal size(A)	15 ~ 200
Rated Cv	linear : 5 ~ 660 / on-off : 6.3 ~ 680
Body / Bonnet materials	FC200 , SCPH2 , SCS13A , SCS14A
Valve plug / Seat ring materials	SUS304 , SUS316
Flow characteristics	linear , on-off
Working pressure range	JIS10 ~ 40K , ANSI/ASME150 ~ 1500#
Working Temperature	0 ~ 180
Allowable seat leakage volume	0.25%Cv
Gland packing	V-PTFE , Hi-pressure V-PTFE , V-PTFE+O"ring , Graphite
Gasket	PTFE , Graphite

2. Valve body structure



**Fig. 1 Valve body structure**

**Table 2 Standard parts materials**

No.	Parts name	Standard materials
1	Valve body	FC200 , SCPH2 , SCS13A , SCS14A
2	Valve plug	SUS304 , SUS316
3	Seat ring	SUS304 , SUS316
4	Lower seat ring	SUS304 , SUS316
5	Guide bush	SUS316 , SUS630
6	Bonnet	FC200 , SCPH2 , SCS13A , SCS14A
7	Stud bolt	SUS304
8	Hexagonal nut	SUS304
9	Gasket	PTFE , Graphite
10	Adapter	SUS304 , SUS316 , SS400

3. Rated Cv value

**Table 3 Rated Cv value , Stroke , Port size**

Port size	Linear		on-off	
	Cv Value	Stroke	Cv Value	Stroke
15	5	13	6.3	8
20	9		11	
25	12		13	
32	21	25	-	13
40	30		35	
50	48		54	
65	76	40	85	25
80	115		130	
100	180		205	
125	270	60	270	40
150	390		410	
200	660		680	

## 5. Standard specifications of Actuator

### **[T-5000-series multi-spring diaphragm actuator]**

Model name	: Multi springs type diaphragm actuator T-5000 series
Model number	: T-57 , T-58 , T-59 , T-50
Action	: Direct action(DA) , Reverse action(RA)
Diaphragm case materials	: Aluminum casting product (alumite processing)
Diaphragm materials	: CR rubber with base fabric
Yoke materials	: FC200
Actuator air pressure	: See Table 7,8,9,10
Drive part tightening pressure	: See Table 7,8,9,10
Ambient temperature	: -30 ~ 60
Coating color	: Yellow (Munsell 2.5Y 8/13)
Air piping connection	: Rc1/4

## 5. Options

### **[Valve body]**

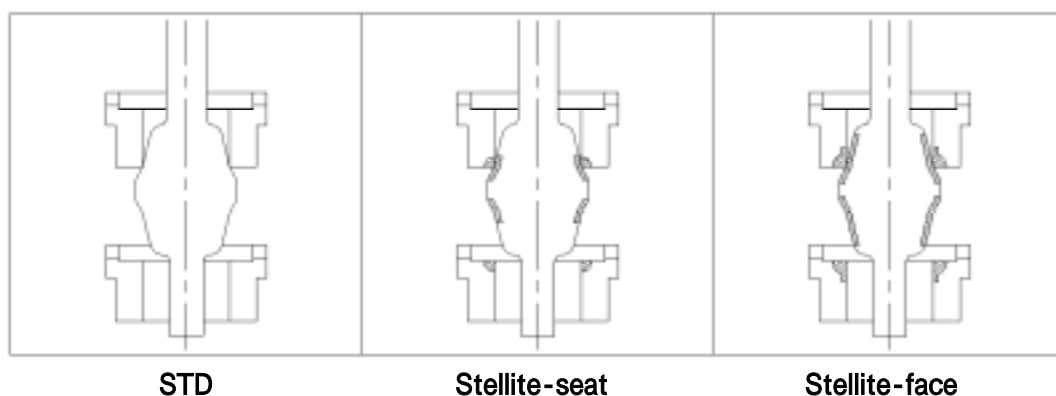
Body / Bonnet materials	: SCS16 , SCS19
Valve plug additional specification	: See Figure 2
Valve plug shape	: V-port(Eq% , linear)
Gland structure	: See Figure 4.The bellows structure can be produced.
Guide bush structure / materials	: Anti-Bite type , chrysanthemum type
Seat ring	: All round welding(Seat ring) , Seat ring gasket

### **[Yoke]**

Yoke materials	: SCPH2,SCS13A
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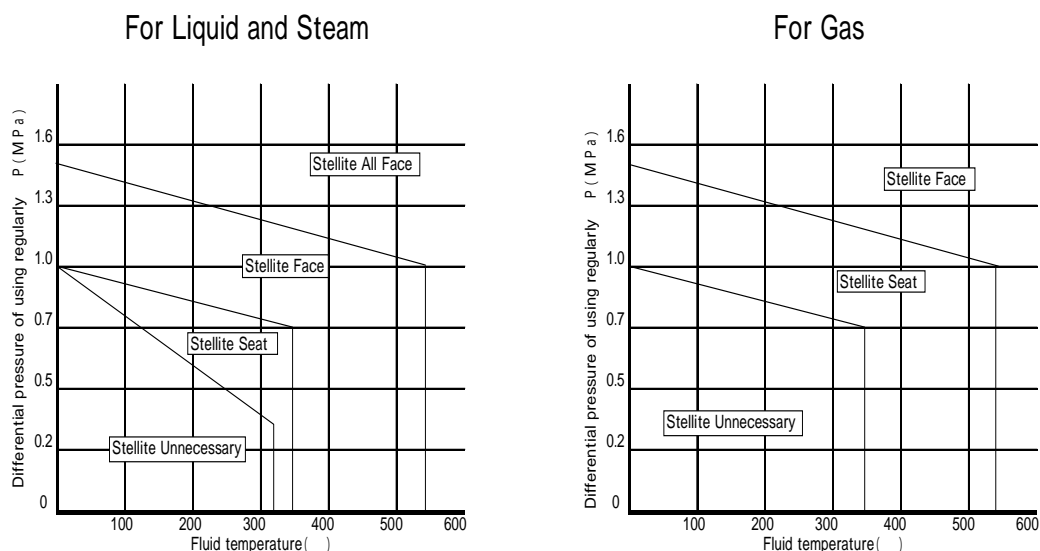
### **[Actuator]**

Manual hand wheel	: Top Handle
Coating color	: Each color
Mechanical stopper	: Maximum / Minimum Stopper
Urgent exhaust function	: In specified time It might be impossible, but please tell sales-man.



**Fig.2 Valve-plug , Seat-ring Addition specifications**

**6. Stellite hardening processing**

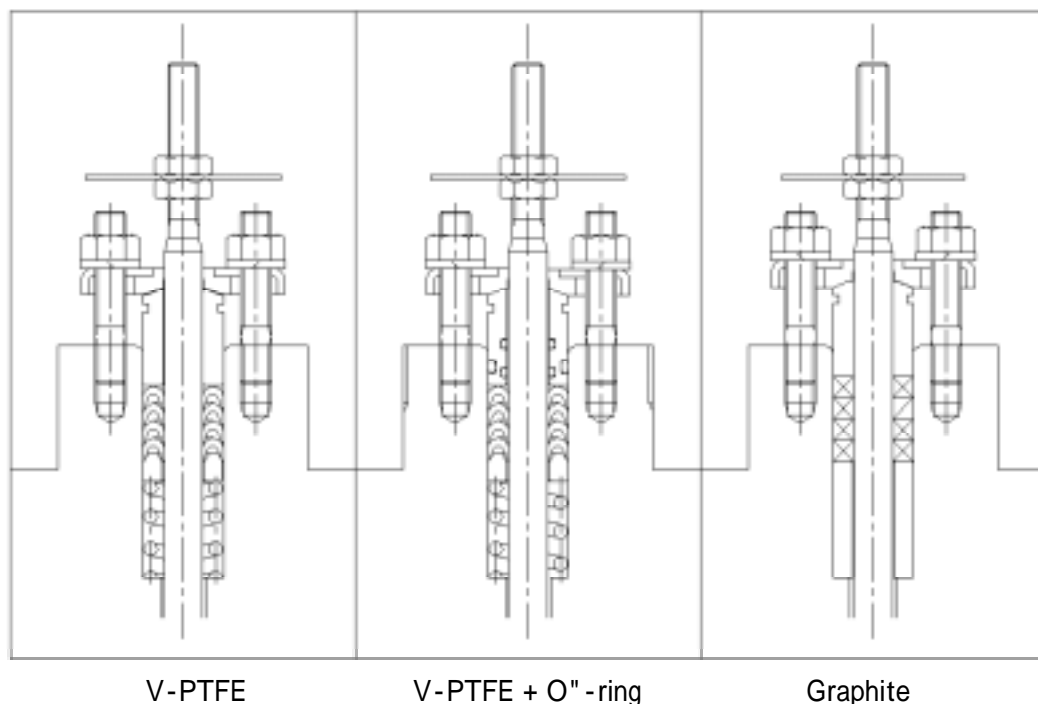


**Fig. 3 Relations with differential pressure and the temperature**

**7. Accessories**

Positioner	: EP(TP351),PP(TP601)
Air set (filter-tipped decompression valve)	: XR104,XR108,AW3000
Solenoid-controlled valve	: AG33,MOOU,M15G
Limit switch	: 1LS,ZE- **
Adjacent switch	: E2F

**8. Gland structure**

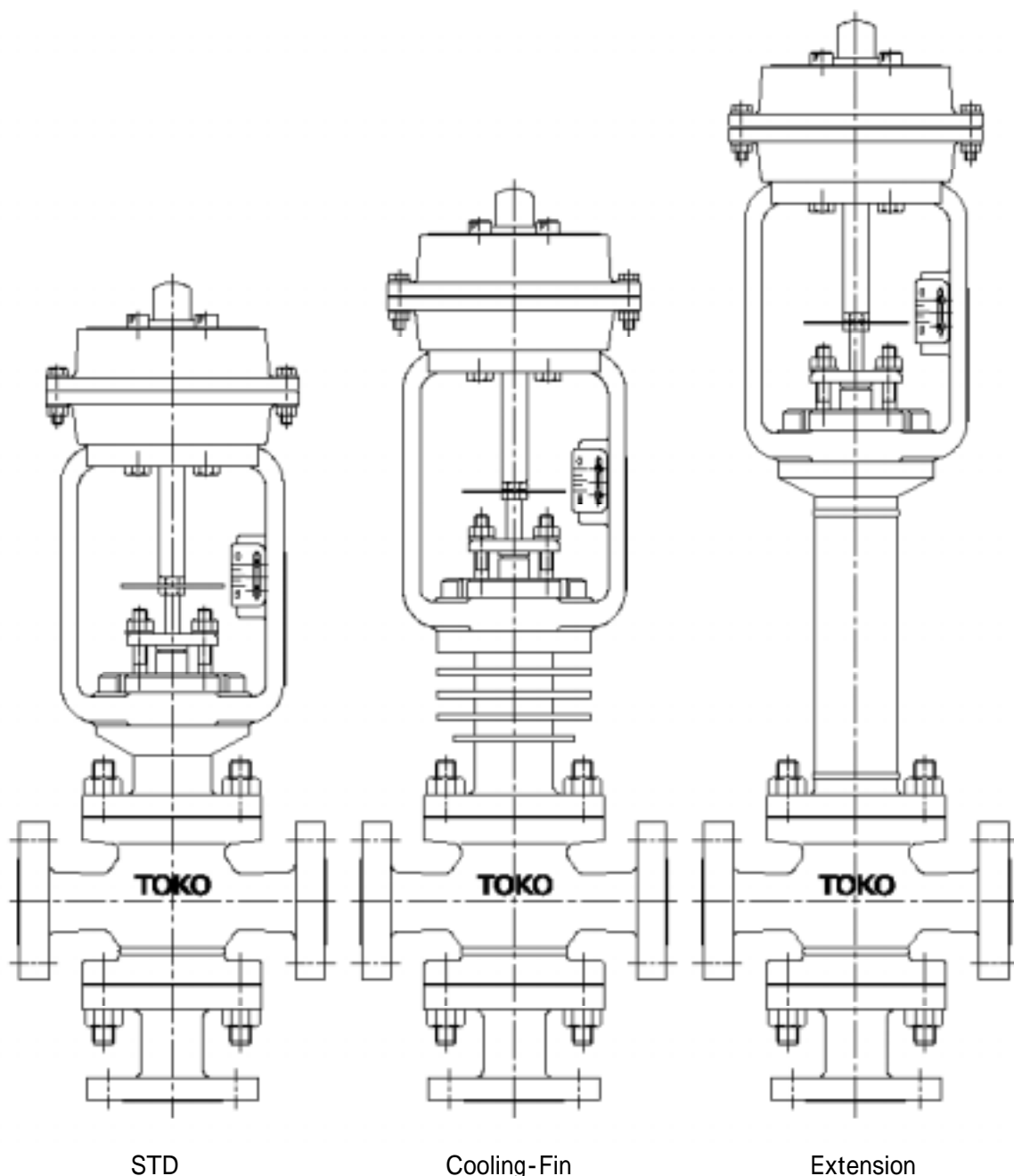


**Fig. 4 Gland structure**

**Table 4 Gland packing materials and working pressure , temperature**

	V - PTFE	V - PTFE + O" - ring	Graphite
Materials	PTFE	PTFE+CR , FPM , NBR	Graphite
Temp.	-15 ~ 180	CR:-40 ~ 110 FPM:-15 ~ 230 , NBR:-50 ~ 120	-200 ~ 400
Press.	JIS10K,20K ANSI150,300#	JIS30K,40K ANSI600,900,1500#	ANSI1500#

9. Various bonnets



**Fig. 5 Various bonnets**

**Table 5 Operating temperature limits of various bonnet shape**

·STD	: 0 ~ 180
·Cooling-Fin	: 180 以上
·Extension	: -50 ~ 0

When the design temperature is - less than 50 , the long extension bonnet is needed. Please consult the salesman. It leads to the damage of the gland gasket and the leakage of the fluid when it makes a mistake in the selection of the bonnet.

I will explain the gland gasket by a gland structure.

Please select the cooling fin bonnet at the high temperature. And please select the extension bonnet at the low temperature.

The bonnet selected according to the fluid temperature becomes a design put on the vertical direction.

Please consult the salesman when using it excluding the vertical direction.

10. Various sizes

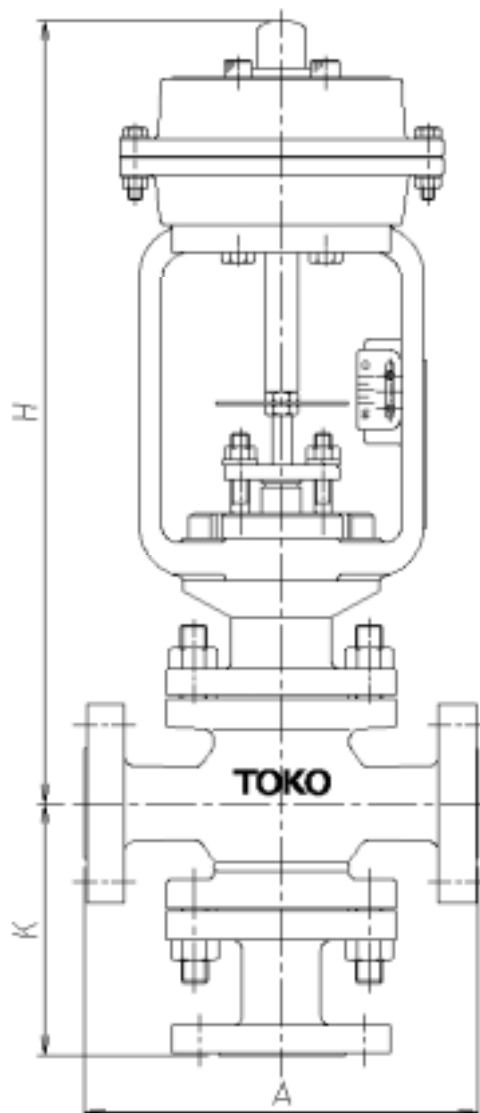


Fig. 6 Sizes

Table 6 Sizes

JIS10K

	V-5310,5320			V-5330		
	Diverting·Mixing Three-way Valve			Diverting Three-way Valve		
	H	K	A	H	K	A
15A	380	180	120	-	-	-
20A	380	180	120	-	-	-
25A	389	200	140	-	-	-
40A	472	235	175	-	-	-
50A	492	265	180	-	-	-
65A	593	290	195	519	290	230
80A	600	320	200	676	320	240
100A	630	370	230	696	370	280
125A	841	420	280	887	420	310
150A	885	475	310	945	475	350
200A	925	570	390	978	570	450

(mm)

11. Dead line pressure(Mixing)

**Table·7 Dead line pressure**

Mixing Three-way type Valve(Air to C U)																	
action	Model No.	Stroke (mm)	Spting Range (kPaG)	SUP. (kPaG)	Port size (mm)												
					10	15	20	25	32	40	50	65	80	100	125	150	200
Air to C U	5772	13	50-110	160	3.92	1.74	0.98	0.58									
	5773	13	100-190	350	7.84	3.48	1.96	1.16									
	5776	13	150-300	420	9.4	4.18	2.35	1.39									
	5872	13	50-110	160		4.35	2.45	1.45									
	5873	13	100-190	350		8.71	4.9	2.9									
	5876	13	150-300	420		10.45	5.88	3.48									
	5972	13	50-90	160			6.12	3.62									
	5882	25	50-110	160					0.96	0.61	0.39	0.23					
	5883	25	90-190	350					1.72	1.1	0.71	0.42					
	5886	25	140-300	420					2.3	1.47	0.94	0.56					
	5982	25	50-110	160					2.39	1.53	0.98	0.58					
	5983	25	100-190	350					4.78	3.06	1.96	1.16					
	5986	25	150-300	420					5.74	3.67	2.35	1.39					
	5942	40	50-100	160									0.42	0.24			
	5943	40	90-170	350									0.76	0.44			
	5946	40	140-270	420									1.19	0.69			
	5042	40	50-100	160									0.76	0.44			
	5043	40	100-190	360									1.53	0.88			
	5062	60	50-100	160											0.28	0.2	0.11
	5063	60	100-190	350											0.56	0.39	0.22
5066	60	150-290	420											0.73	0.51	0.29	

Mixing Three-way type Valve(Air to L U)																	
action	Model No.	Stroke (mm)	Spting Range (kPaG)	SUP. (kPaG)	Port size (mm)												
					10	15	20	25	32	40	50	65	80	100	125	150	200
Air to L U	5772	13	50-110	160	3.92	1.74	0.98	0.58									
	5773	13	100-190	350	7.84	3.48	1.96	1.16									
	5776	13	150-300	420	9.4	4.18	2.35	1.39									
	5872	13	50-110	160		4.35	2.45	1.45									
	5873	13	100-190	350		8.71	4.9	2.9									
	5876	13	150-300	420		10.45	5.88	3.48									
	5972	13	50-90	160			6.12	3.62									
	5882	25	50-110	160					0.96	0.61	0.39	0.23					
	5883	25	90-190	350					1.72	1.1	0.71	0.42					
	5886	25	140-300	420					2.3	1.47	0.94	0.56					
	5982	25	50-110	160					2.39	1.53	0.98	0.58					
	5983	25	100-190	350					4.78	3.06	1.96	1.16					
	5986	25	150-300	420					5.74	3.67	2.35	1.39					
	5942	40	50-100	160									0.42	0.24			
	5943	40	90-170	350									0.76	0.44			
	5946	40	140-270	420									1.19	0.69			
	5042	40	50-100	160									0.76	0.44			
	5043	40	100-190	350									1.53	0.88			
	5062	60	50-100	160											0.28	0.2	0.11
	5063	60	100-190	350											0.56	0.39	0.22
5066	60	150-290	420											0.73	0.51	0.29	

12. Dead line pressure(Diverting)

**Table·8 Dead line pressure**

Diverting Three-way Valve(Air to C U)																	
action	Model No.	Stroke (mm)	Spting Range (kPaG)	SUP. (kPaG)	Port size (mm)												
					10	15	20	25	32	40	50	65	80	100	125	150	200
Air to C U	5772	13	50-110	160	3.92	1.74	0.98	0.58									
	5773	13	100-190	350	7.84	3.48	1.96	1.16									
	5776	13	150-300	420	9.4	4.18	2.35	1.39									
	5872	13	50-110	160		4.35	2.45	1.45									
	5873	13	100-190	350		8.71	4.9	2.9									
	5876	13	150-300	420		10.45	5.88	3.48									
	5972	13	50-90	160			6.12	3.62									
	5882	25	50-110	160					0.96	0.61	0.39	0.23					
	5883	25	90-190	350					1.72	1.1	0.71	0.42					
	5886	25	140-300	420					2.3	1.47	0.94	0.56					
	5982	25	50-110	160					2.39	1.53	0.98	0.58					
	5983	25	100-190	350					4.78	3.06	1.96	1.16					
	5986	25	150-300	420					5.74	3.67	2.35	1.39					
	5942	40	50-100	160									0.42	0.24			
	5943	40	90-170	350									0.76	0.44			
	5946	40	140-270	420									1.19	0.69			
	5042	40	50-100	160									0.76	0.44			
	5043	40	100-190	350									1.53	0.88			
	5062	60	50-100	160											0.28	0.2	0.11
	5063	60	100-190	350											0.56	0.39	0.22
5066	60	150-290	420											0.73	0.51	0.29	

Diverting Three-way Valve(Air to L U)																	
action	Model No.	Stroke (mm)	Spting Range (kPaG)	SUP. (kPaG)	Port size (mm)												
					10	15	20	25	32	40	50	65	80	100	125	150	200
Air to L U	5772	13	50-110	160	3.92	1.74	0.98	0.58									
	5773	13	100-190	350	7.84	3.48	1.96	1.16									
	5776	13	150-300	420	9.4	4.18	2.35	1.39									
	5872	13	50-110	160		4.35	2.45	1.45									
	5873	13	100-190	350		8.71	4.9	2.9									
	5876	13	150-300	420		10.45	5.88	3.48									
	5972	13	50-90	160			6.12	3.62									
	5882	25	50-110	160					0.96	0.61	0.39	0.23					
	5883	25	90-190	350					1.72	1.1	0.71	0.42					
	5886	25	140-300	420					2.3	1.47	0.94	0.56					
	5982	25	50-110	160					2.39	1.53	0.98	0.58					
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	5942	40	50-100	160									0.42	0.24			
	5943	40	90-170	350									0.76	0.44			
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	5042	40	50-100	160									0.76	0.44			
	5043	40	100-190	350									1.53	0.88			
	5062	60	50-100	160											0.28	0.2	0.11
	5063	60	100-190	350											0.56	0.39	0.22
5066	60	150-290	420											0.73	0.51	0.29	



# N o t e s

The supplied instrumentation air must use dry cleanly and enough air for instrumentation.  
We might change a part of the specification and externals without the refusal for the demand and the quality improvement.

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