

## Series 3 Air-Pilot Operated Valve

Cv= .73 - 1.37

Series 3: 1/8" NPTF, 3-way/2-position & 5-way/2-position  
1/4" NPTF, 3-way/2-position, 5-way/2-position, 5-way/3-position,  
and dual 3-way/2-position valves.

The pneumatically operated, 3-way/2-position, 5-way/2-position Series 3 valves have been designed with different methods of return: An Air-Pilot with mechanical spring, Air-Pilot return, or Air-Pilot with bias override return. This is possible due to the type of design consisting of a balanced spool, which means that it can be used for a very wide range of applications. (including reverse porting).

The 3-way/2-position valves are normally closed in the rest position when the pressure is supplied at P, and are normally open when the pressure is supplied at R, the use of A remaining unchanged. Moreover, the 5-way/2-position valves can be supplied via the ports R and S with two different pressures if a cylinder must be operated using a delivery pressure different from the return pressure.

On the valve series 3, two additional holes permit assembly onto the manifold CNVL without the use of a banjo bolt.

\*See manifold codes at the end of this section.

New versions of this valve have expanded the range to higher flow 1/4" ported valves as well as dual 3-way/2-position valves. 1/8" and 1/4" valves can be mounted on a common manifold by means of a transition plate.



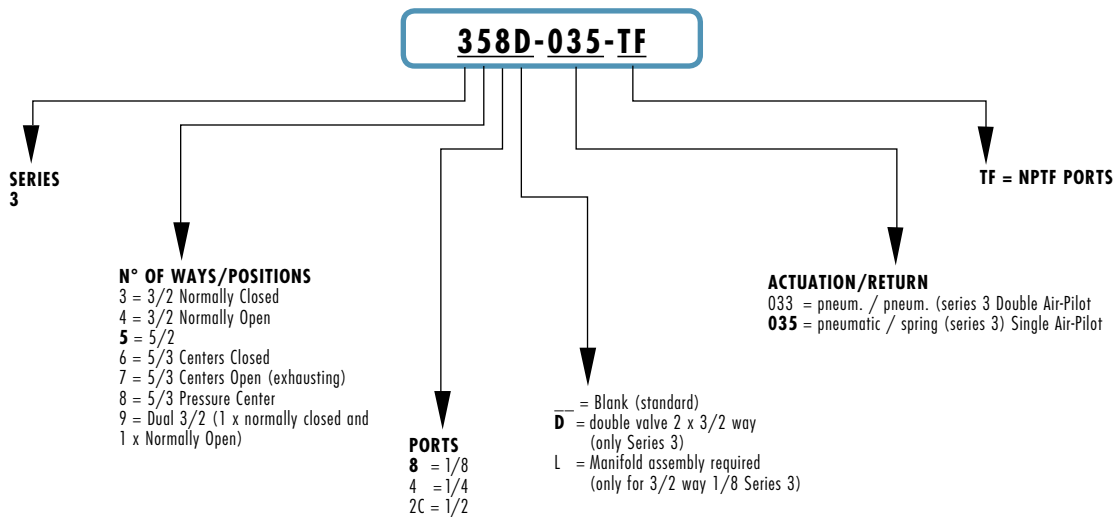
#### TECHNICAL SPECIFICATIONS

Valve group	3-way/2-position, 5-way/2-position, 5-way/3-position and dual 3-way/2-position
Construction	Air-Pilot, in-line ported
Mounting	through holes in valve body
Materials	Anodized body, stainless steel spool, Buna-N seals
Threaded port sizes	1/4", 1/8" NPTF
Installation	in any position
Operating temperature	0 - 80°C (with dry air at -20°C), 32°F — 176°F (with dry air at -4°F)
Fluid	Filtered air (25 micron or less recommended)
Lubricant	Not required; otherwise, oil compatible with Buna-N, (3° - 10° E); ISOVG32 grade, 32 centistrokes

## PNEUMATIC DATA

Operating pressure	P = -.9 -10 bar (0-145 psi): (Down to 28" Hg possible)
Control pressure	min. press. (see valve description)
Nominal pressure	6 bar (87 psi)
Nominal flow	*Qn Series 3: 1/8" = 700 NL/min (24.7 SCFM), Cv= .73 1/4" = 1300 NL/min (45.9 SCFM), Cv = 1.37
Nominal diameter	ø1/8 = 5 mm, 1/4" = 7.5 mm
Fluid	filtered air, without lubrication** (25 micron or less recommended)
	*Qn = determined with supply pressure of 6 bar and with Dp = 1 bar. **If lubricated air is used, it is recommended to use ISOVG32 oil and never interrupt the lubrication.

## CODING OF PNEUMATICALLY OPERATED VALVES

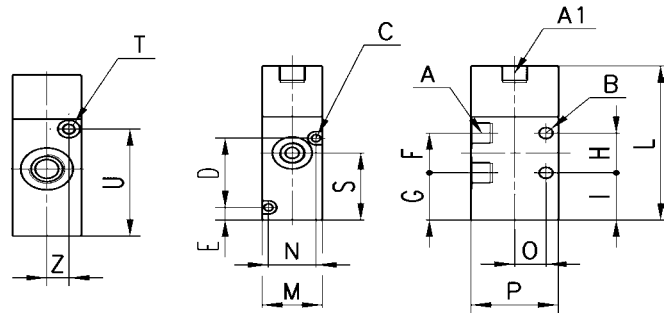
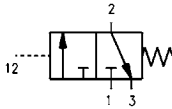


3-way/2-position valve, Single Air-Pilot, Spring Return

Cv = .73 - 1.37

Valve with Air Pilot and mechanical spring return.  
Minimum pilot pressure: 3 bar. (44 psi)

**Note:** Please specify model 338 for single application or 338L for manifold CNVL use.



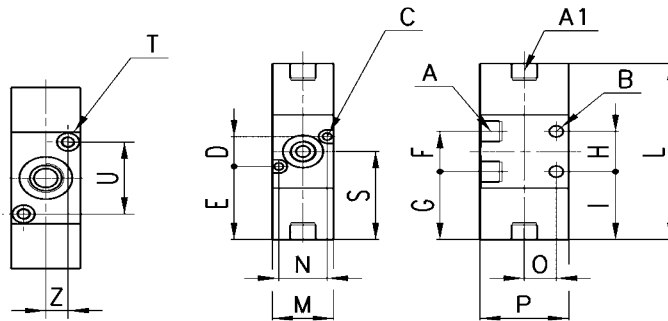
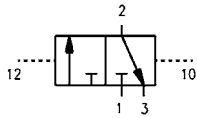
DIMENSIONS

Mod.	Mounting	Function	Flow rate NL/min	Cv	min. pil P.	Ports NPTF		Pilot																
						A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
<b>338-035TF</b>	without base	3-way/2-position NC	700	.73	3 bar	1/8	1/8	5	3.2	-	5.7	18	21.4	18	21.4	69.8	22	-	11.5	32	30.4	-	-	-
<b>338L-035TF</b>	on manifold	3-way/2-position NC	700	.73	3 bar	1/8	1/8	-	3.2	31.4	5.7	18	21.4	-	21.4	69.8	22	17.4	11.5	32	30.4	-	-	-
<b>334-035TF</b>	without base	3-way/2-position NC	1300	1.37	3 bar	1/4	-	4.1	-	-	-	22	21.4	22	21.4	73	25	-	16	40	32.4	M5	48.5	8

3-way/2-position valve, 1/8" port Double Air-Pilot

Cv = .73 - 1.37

Valve with double Air-Pilot  
Minimum pilot pressure: 2.5 bar. (29 psi)



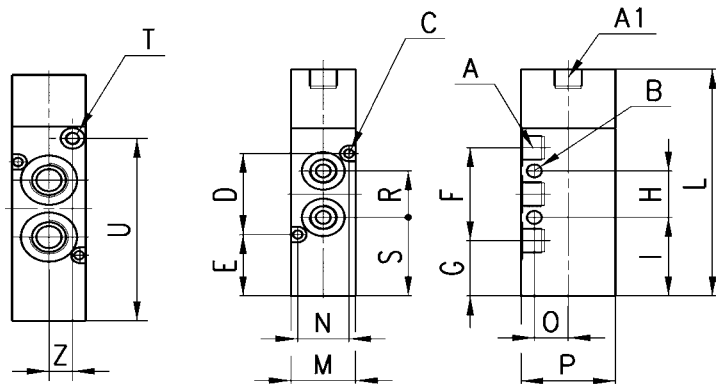
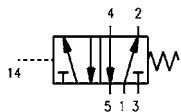
DIMENSIONS

Mod.	Mounting	Function	Flow rate NL/min	Cv	min. pil P.	Ports NPTF		Pilot																
						A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
<b>338-033TF</b>	without base	3-way/2-position NC	700	.73	2.5 bar	1/8	1/8	5	-	-	-	18	30.4	18	30.4	78.8	22	-	11.5	32	41.7	-	-	-
<b>338L-033TF</b>	on manifold	3-way/2-position NC	700	.73	2.5 bar	1/8	1/8	5	3.2	13.4	32.7	18	30.4	-	30.4	78.8	22	17.4	-	32	41.7	-	-	-
<b>334-033TF</b>	without base	3-way/2-position NC	1300	1.37	2.5 bar	1/4	-	4.1	-	-	-	22	29.7	22	29.7	81.3	25	-	16	40	40.7	M5	-	-

5-way/2-position valve, Single Air Pilot, Spring Return

Cv = .73 - 1.37

Valve with pneumatic operation  
mechanical spring return.  
Minimum pilot pressure: 2.5 bar. (36 psi)



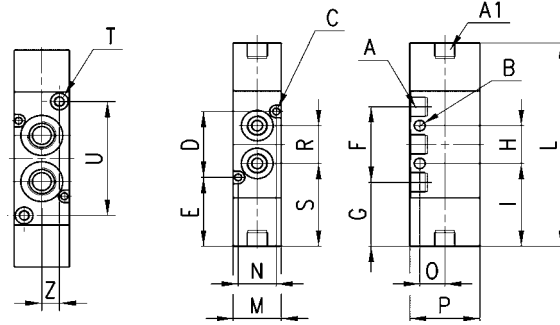
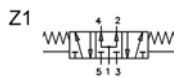
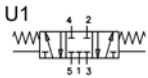
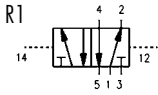
DIMENSIONS

Mod.	Mounting	Function	Flow rate NL/min	Cv	min. pil P.	Ports NPTF		Pilot																
						A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U	Z
<b>358-035TF</b>	without base/on manifold	5/2-way	700	.73	3 bar	1/8	1/8	5	3.2	31.4	23.8	36	21.4	18	30.4	87.8	22	17.4	11.5	32	30.4	-	-	-
<b>354-035TF</b>	without base/on manifold	5/2-way	1300	1.37	3 bar	1/4	-	4.1	3.2	36	25.4	44	21.4	22	30.4	95	25	21	16	40	32.4	M5	70.5	8

5-way/2-position and 5-way/3-position Double Air-Pilot Valve

Cv = .73 - 1.36

Valve with pneumatic actuation and differential return.  
Minimum pilot pressure: 2 bar. (29 psi)

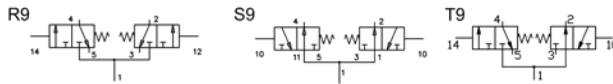


DIMENSIONS

Mod.	Mounting	Function	Flow rate NL/min	Cv	P. min pil.	Ports NPTF		Pilot																Symbol	
						A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U		Z
358-033TF	in line/ manifold	5/2	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	R1
354-033TF	in line/ manifold	5/2	1300	1.37	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	R1
368-033TF	in line/ manifold	5/3	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	U1
364-033TF	in line/ manifold	5/3	1200	1.26	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	U1
378-033TF	in line/ manifold	5/3	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	V1
374-033TF	in line/ manifold	5/3	1200	1.26	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	V1
388-033TF	in line/ manifold	5/3	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	Z1
384-033TF	in line/ manifold	5/3	1200	1.26	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	Z1

Dual 2 x 3-way/2-position Double Air-Pilot Valve

Cv = .73 - 1.26



DIMENSIONS

Mod.	Mounting	Function	Flow rate NL/min	Cv	P. min pil.	Ports NPTF		Pilot																Symbol	
						A	A1	B	C	D	E	F	G	H	I	L	M	N	O	P	S	T	U		Z
338D-035TF	in line/ manifold	2x3/2 NC	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	R9
334D-035TF	in line/ manifold	2x3/2 NC	1200	1.26	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	R9
348D-035TF	in line/ manifold	2x3/2 NA	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	S9
344D-035TF	in line/ manifold	2x3/2 NA	1050	1.1	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	S9
398D-035TF	in line/ manifold	2x3/2 NC NA	700	.73	2.5 bar	1/8	1/8	5	3.2	31.4	32.8	36	30.4	18	39.4	96.8	22	17.4	11.5	32	39.4	-	-	-	T9
394D-035TF	in line/ manifold	2x3/2 NC NA	1050	1.1	2.5 bar	1/4	-	4.1	3.2	36	33.7	44	29.7	22	40.7	103.3	25	21	16	40	40.7	M5	54.3	8	T9