

Series 4 Air-Pilot operated valves

Cv= .73 - 2.00

Series 4: 1/8", 1/4" NPTF, 3-way/2-position;
5-way/2-position; 5-way/3-position
1/2" NPTF 5-way/2-position

The pneumatically operated, 3-way/2-position, 5-way/2-position Series 4 valves have been designed with different methods of return: an Air-Pilot with mechanical spring, Air-Pilot return, or Air-Pilot with bias 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 Series 4 valves, two additional holes permit assembly onto the manifold CNVL without the use of a banjo bolt.

* See pages at end of sections for manifold options.

Key - Series 4 valves incorporate a double lip (Z) seal against the spool. This seal design has improved wear and sealing properties against the spool and spacer glands for when the fluid media is less than optimal.



Key - Series 4 valves incorporate a more robust packed bore design than the Series 3 valves. This supports the improved (Z) seal design and better wear life of the seals.

TECHNICAL SPECIFICATIONS

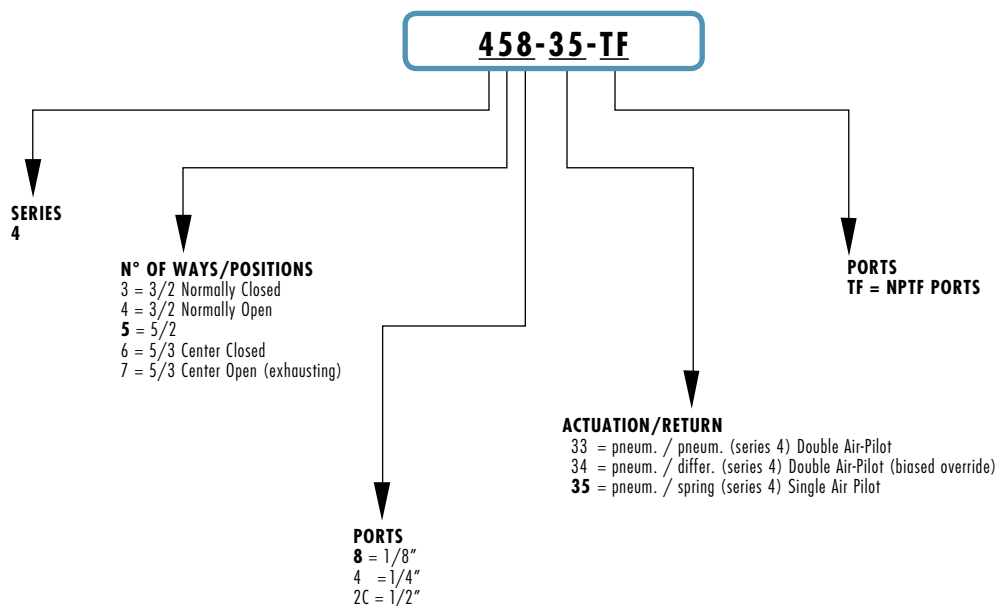
Valve group	3-way/2-position, 5-way/2-position, 5-way/3-position
Construction	Air-Pilot, in-line ported
Mounting	through holes in valve body
Materials	Anodized body, stainless steel spool, Buna-N seals
Threaded port sizes	1/8", 1/4", 1/2" NPTF
Installation	in any position
Operating temperature	0 - 80°C (with dry air at -20°C), 32°F — 176°F (with dry air at -4°F)
Fluid	Filtered air (32 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 = -0.9 -10 bar, 0-145 psi (down to 28" Hg vacuum rated)
Control pressure	min. press. (see valve description)
Nominal pressure	6 bar - 87 psi
Nominal flow	*Qn Series 4: 1/8" = 700 NL/min. (24.72 SCFM), Cv = .73 1/4" = 1250 NL/min (43.7 SCFM), Cv= 1.3 1/2" = 1900 NL/min (67.1 SCFM), Cv= 2.00
Fluid	filtered air, without lubrication** (25 micron recommended)

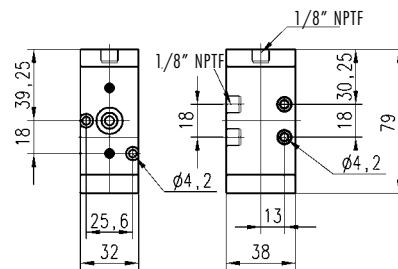
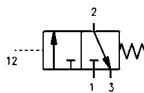
*Qn = determined with supply pressure of 6 bar and with $\Delta p = 1$ bar. **If lubricated air is used, it is recommended to use ISOVG32 oil and never interrupt the lubrication.

CODING OF PNEUMATICALLY OPERATED VALVES



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

Cv = .73

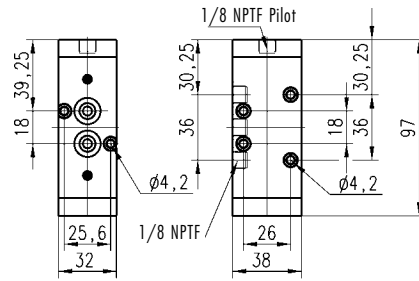
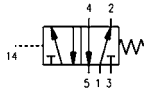


Mod.	Mounting	Function	Flow rate NL/min	P. min pil. bar (psi)
438-35TF	in line/manifold	3/2 NC	700	2.5 bar (36 psi)

5-way/2-position valve, 1/8" port, Air Pilot, Spring Return

Cv = .73

Valve with pneumatic actuation and spring.
Minimum pilot pressure: 2.5 bar. (36 psi)

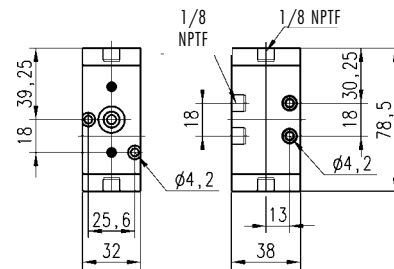
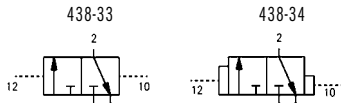


Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
438-35TF	in line/manifold	5/2	700	2.5 bar (36 psi)

3-way/2-position valve, 1/8" port, Double Air Pilot (Mod. -34TF Bias Return)

Cv = .73

Valve with pneumatic actuation/return (-33 model),
and differential return (-34 model).
Minimum pilot pressure: 2 bar. (29 psi)

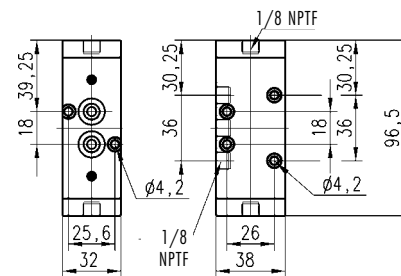
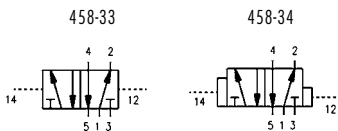


Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
438-33TF	in line/manifold	3/2 NC	700	2 bar (29 psi)
438-34TF	in line/manifold	3/2 NC	700	2 bar (29 psi)

5-way/2-position valve, 1/8" port, Double Air Pilot (Mod. -34TF Bias Return)

Cv = .73

Valve with pneumatic actuation/return (-33 model),
and differential return (-34 model).
Minimum pilot pressure: 2 bar. (29 psi)



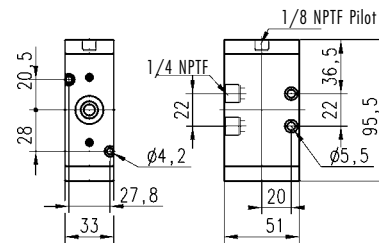
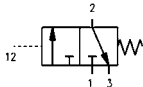
Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
458-33TF	in line/manifold	5/2 NC	700	2 bar (29 psi)
458-34TF	in line/manifold	5/2 NC	700	2 bar (29 psi)

3-way/2-position valve, 1/4" port, Air Pilot, Spring Return

Cv = 1.31

Valve with pneumatic actuation and spring return.

Minimum pilot pressure: 2.5 bar. (36 psi)



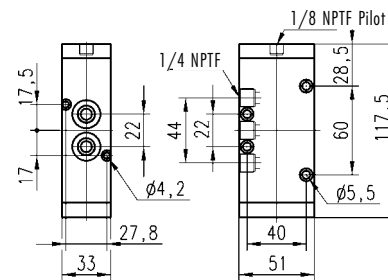
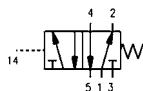
Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
434-35TF	in line/manifold	3/2	1250	2.5 bar (36 psi)

5-way/2-position valve, 1/4" port, Air Pilot, Spring Return

Cv = 1.32

Valve with pneumatic actuation and mechanical spring return.

Minimum pilot pressure: 2.5 bar. (36 psi)



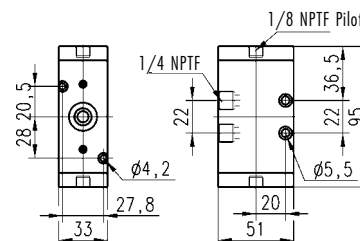
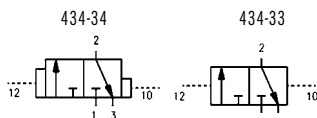
Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
454-35TF	in line/manifold	5/2	1250	2.5 bar (36 psi)

3-way/2-position valve, 1/4" port, Double Air Pilot (Mod -34TF Bias Return)

Cv = 1.31

Valve with pneumatic actuation/return (-33 mod.) and differential return (-34 mod.)

Minimum pilot pressure: 2 bar. (29 psi)

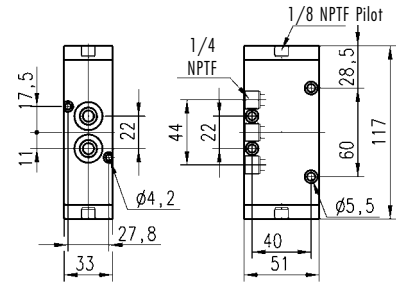
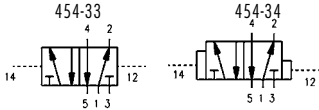


Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
434-33TF	in line/manifold	3/2 NC	1250	2 bar (29 psi)
434-34TF	in line/manifold	3/2 NC	1250	2 bar (29 psi)

5-way/2-position valve, 1/4" port, Double Air Pilot (Mod. -34TF bias return)

Cv = 1.31

Valve with pneumatic actuation/return (-33 mod.) and differential return (-34 mod.)
Minimum pilot pressure: 2 bar. (29 psi)

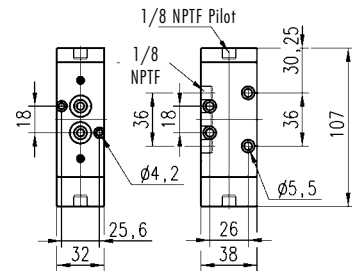
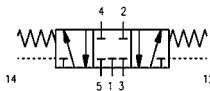


Mod.	Mounting	Function	Flow rate NL/min	P. min pil. bar (psi)
454-33TF	in line/manifold	5/2	1250	2 bar (29 psi)
454-34TF	in line/manifold	5/2	1250	2 bar (29 psi)

5-way/3-position closed-center valve, 1/8" port, Air Pilot with Spring to Center Position

Cv = .73

Valve with pneumatic actuation and central return by mechanical spring.
Minimum pilot pressure: 2.5 bar. (36 psi)

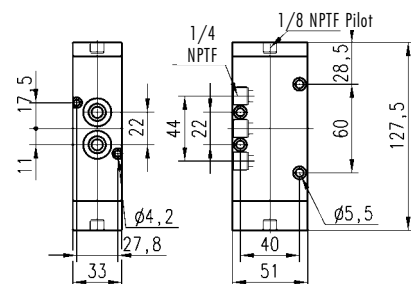
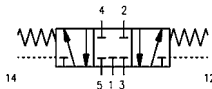


Mod.	Mounting	Function	Flow rate NL/min	P. min pil. bar (psi)
468-33TF	in line/manifold	5/3 CC	700	2.5 bar (36 psi)

5-way/3-position closed-center valve, 1/4" port, Air Pilot with Spring to Center Position

Cv = 1.31

Valve with pneumatic actuation and central return by mechanical spring.
Minimum pilot pressure: 2.5 bar. (36 psi)

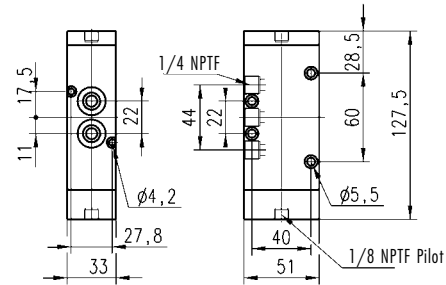
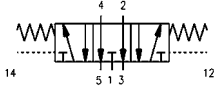


Mod.	Mounting	Function	Flow rate NL/min	P. min pil. bar (psi)
464-33TF	in line/manifold	5/3 CC	1250	2.5 bar (36 psi)

5-way/3-position open-center valve, 1/4" port, Air Pilot with Spring to Center Position (exhausting)

Cv = 1.31

Valve with pneumatic actuation
and central return by mechanical spring.
Minimum pilot pressure: 2.5 bar. (36 psi)

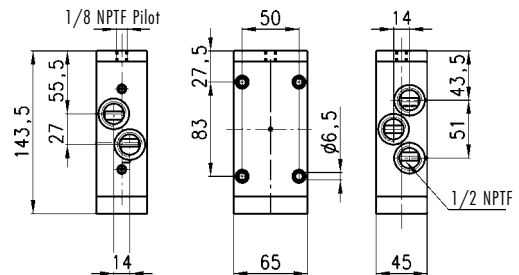
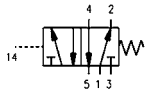


Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
474-33TF	in line/manifold	5/3 OC	1250	2.5 bar (36 psi)

5-way/2-position valve, 1/2" port

Cv = 2.00

Valve with pneumatic Air-Pilot with spring return,
actuation and mechanical spring return.
Minimum pilot pressure: 2.5 bar (36 psi)



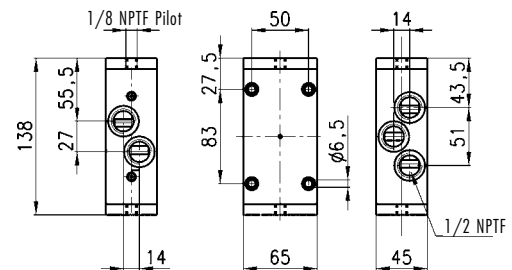
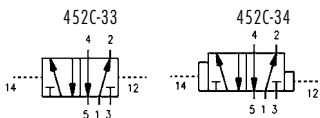
Contact factory for availability.

Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
452C-35TF	in line	5/2	1900	2.5 bar (36 psi)

5-way/2-position valve, 1/2" port, Double Air-Pilot (Mod. -34TF bias return)

Cv = 2.00

Valve with pneumatic actuation/return (-33
mod.) and differential return (-34 mod.)
Minimum pilot pressure: 2 bar (29 psi)



Contact factory for availability.

Mod.	Mounting	Function	Flow rate NL/min	P. min pil.
452C-33TF	in line/manifold	5/2	1900	2 bar (29 psi)
452C-34TF	in line/manifold	5/2	1900	2 bar (29 psi)