

Series VBO - VBU (Nickel Plated) Pilot-Operated Check/Blocking Valves

Unidirectional (Pilot-Operated Check Valve)
and Bidirectional (Blocking Valve) 1/8", 1/4", 3/8", 1/2" NPTF
Nominal diameters 5.5 - 8 - 11 mm

These valves have been designed to mount directly into the cylinder ports. The inner design of the blocking valves Series VBO and VBU allows a very high flow rate and reliable operation.



TECHNICAL SPECIFICATIONS

Construction	poppet type
Valve group	pilot-operated check and blocking valves (pilot connection 5/32" OD)
Materials	OT58 Nickel-Plated Brass Body, Buna-N seals, Teflon seal ring, internals brass
Mounting	by male thread
Ports	1/8" - 1/4" - 3/8" - 1/2" NPTF
Position	in any position
Operating temperature	from 0 to 80°C (with dry air -20°C) (32°F - 175°F (dry air necessary down to - 4° F))
Lubrication	not required, if necessary use oil compatible with Buna-N (3° - 10° E) (ISOVG32 grade)

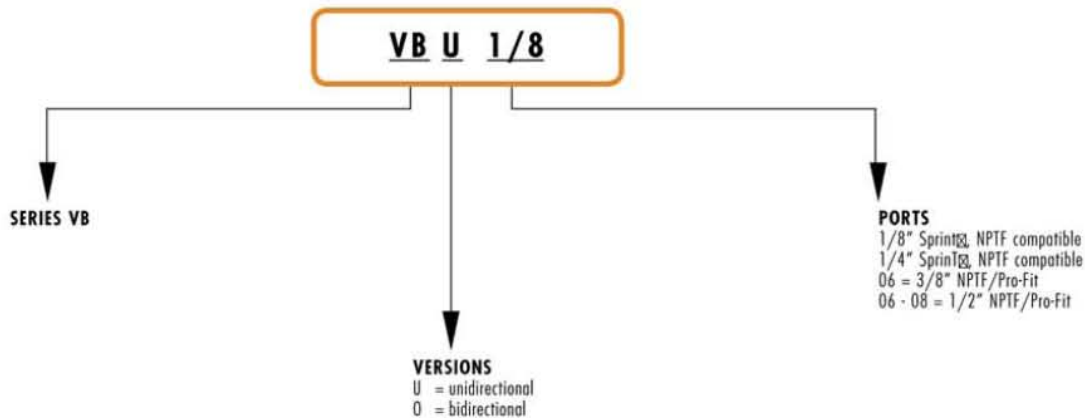
PNEUMATIC DATA

Operating pressure	VBU: 0.3 - 10 bar (4.35 - 145 psi), VBO: 0 - 10 bar (0 - 145 psi)
Nominal pressure	6 bar (87 psi)
Nominal flow	see graph
Nominal diam.	1/8" ø5.5 mm (.217") - 1/4" ø8 mm (.315") - 3/8" ø11 mm (.433")
Fluid	filtered air, without lubricant* (25 micron or less)

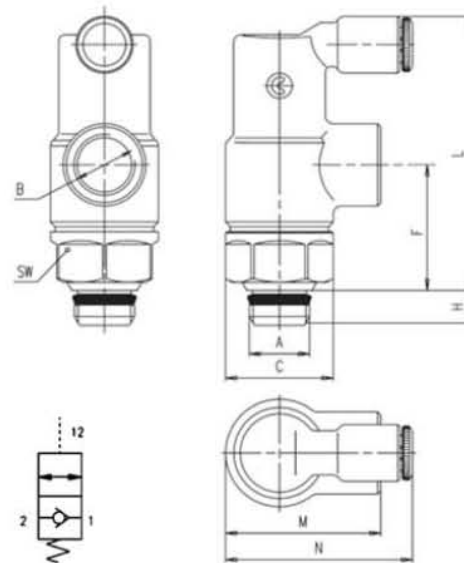
*in the event that lubricated air is used, it is recommended to use oil ISOVG32. Once applied, the lubrication should never be interrupted.



CODING OF UNIDIRECTIONAL AND BIDIRECTIONAL VALVES



Unidirectional blocking valve Mod. VBU and bidirectional blocking valve Mod. VBO

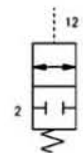


DIMENSIONS (in inches)

Mod.	A NPTF	B NPTF	C	F	H	L	M	N	SW
VBU 1/8	1/8"	1/8"	.665	.787	.216	1.692	.964	1.181	.590
VBU 1/4	1/4"	1/4"	.807	.984	.275	1.968	1.267	1.318	.748
VBU 06	3/8"	3/8"	1.055	1.299	.314	2.637	1.574	1.555	.944
VBU 06-08	1/2"	3/8"	1.055	1.299	.334	2.667	1.574	1.555	.944

DIMENSIONS (in inches)

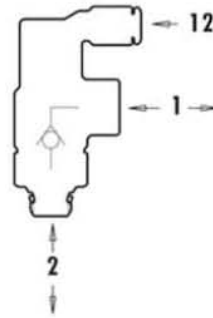
Mod.	A NPTF	B NPTF	C	F	H	L	M	N	SW
VBO 1/8	1/8"	1/8"	.665	.787	.216	1.692	.964	1.181	.590
VBO 1/4	1/4"	1/4"	.807	.984	.275	1.968	1.267	1.318	.748
VBO 06	3/8"	3/8"	1.055	1.299	.314	2.637	1.574	1.555	.944
VBO 06-08	1/2"	3/8"	1.055	1.299	.334	2.667	1.574	1.555	.944



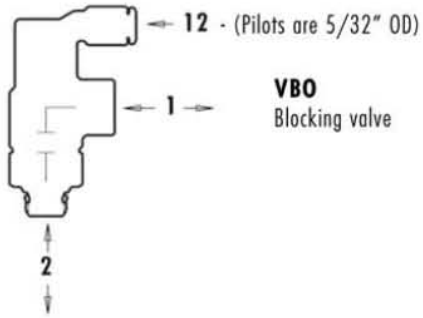
UNIDIRECTIONAL AND BIDIRECTIONAL BLOCKING VALVES

VBU
Pilot-operated check valve

Unidirectional



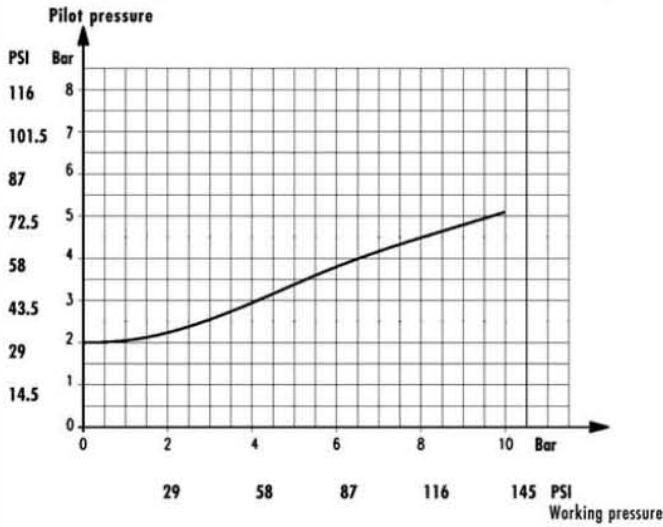
Bidirectional



VBO
Blocking valve

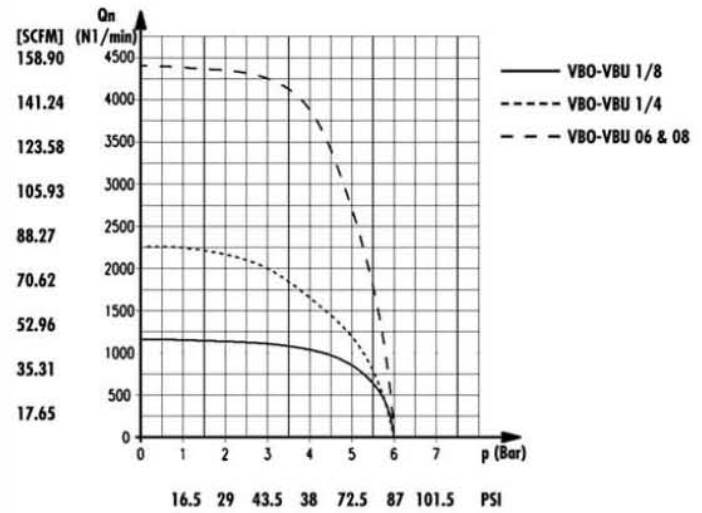
PILOT PRESSURE (BOTH VBU AND VBO)

The diagram below shows the relation between working pressure and pilot pressure required in order to operate the valve.
VBU - The opening pressure of the unidirectional valve is 0.3 bar (4.35 psi).



FLOW RATE (BOTH VBU AND VBO)

Flow Q (NL/min.) (SCFM)
N.B.: Q is determined with an inlet pressure of 6 bar (87 psi).



3

AIR PILOT VALVES

APPLICATION SCHEMES (Examples Only)

