

15 mm Pilot Valve

The 15 mm pilot valve has been designed and developed by Amisco as a logical evolution of the traditional product range manufactured for the pneumatic market.

The 15 mm solenoid valve is designed for those applications, more and more common on the actual market, where besides high performances in terms of pressure and flow, minimum dimension, very low power consumption and high reliability even at high cycling rates are specified.

This system is designed for use with air.

The solenoid valve is composed by an encapsulated coil joined to a plastic valve body made by PPS. The assembly is not detachable.

Please contact Amisco for use with other media.

All given information are subjected to changes without notice.



All the 15mm pilot valves feature:

- **heat resistant bobbin moulded with 30% glass filled polyester (PBT)**
- **class H 200°C copper wire according to IEC 60317-13**
- **encapsulation with high quality specially designed glass filled polyamide (PA6.6)**
- **stainless steel guiding tube**
- **plunger and core made by a magnetic stainless steel specially designed for solenoid applications.**

The pilot assembly is designed for more than 50 million cycles.

The valve is normally equipped with NBR seals and monostable manual override, and it can be delivered with a specially designed seal and screws for its assembling on the main valve units.

The coil is designed and manufactured according to EN 60204.1 and VDE 0580 and it's suitable for industrial ambient conditions. For use in different ambients with high humidity, take contact with Amisco.

All the components used are UL-listed.

The coil is also in conformity with 94/9/EC ATEX for electrical apparatus of group II, category 3:

GAS: Ex nA IIC Tx Gc

DUST: Ex tc IIIC Tx Dc

For further information about Atex versions, see the "ATEX Products" catalogue.

Different electrical connections are available.

The configuration of the valve unit can be with the pneumatic ports on the same side of the electrical connections or on the opposite side.

All the pneumatic connections are located in the valve body and the Amisco 15mm pilot valve is suitable for the use of subbases or the assembling in batteries, for common pressure and exhaust location.

More technical specifications are reported in the following pages.

TECHNICAL DATA

Pilot Valve technical data

Valve function	3/2 NC - 3/2 NO - 2/2 NC - 2/2 NO - 3/2 UNI
Media	air accordingly ISO 8573-1 class 3-4-3
Lubrication	not necessary
Orifice size	0,8 to 1,5 mm
Pressure	0 ÷ 16 bar
Response time	5 - 15 ms
Max cycling time	2000 cpm
Life time expectancy	50 million cycles
Manual override	monostable - bistable - no override
Assembly	in any position
Fixing	n°2 screws M3 x 18

Coil technical data

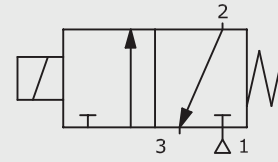
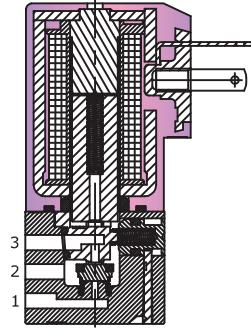
Duty Cycle	ED 100%
Temperature	ambient -10°C to + 50°C (-30°C FKM low temperature) fluid -10°C to + 50°C
Power	1 to 2,5 W (DC) 3 VA (AC)
Voltage	12 - 24 V DC 24 - 115 - 230 VAC (other voltages on request)
Voltage variation	± 10%
Insulation Class	F
Degrees of protection	IP 40 (according to EN 60529) with connector assembled with suitable seal IP 67 Flying Leads and M12 version
Electrical connection	Amp 2,8 x 0,5 - DIN C - Flying Leads - M12
Coil construction	according to EN 60204.1 and VDE 0580

Materials

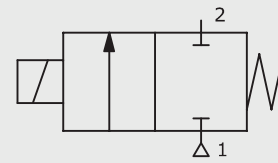
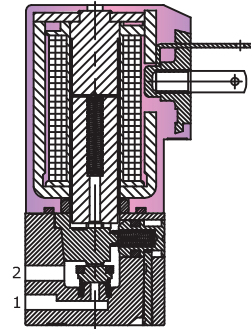
Valve body	PPS
Seals	NBR - FKM - FKM Low temperature
Cores	stainless steel
Springs	stainless steel
Coil	PA 6.6 glass reinforced
Copper wire	class H 200°C IEC 60317 13

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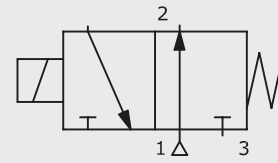
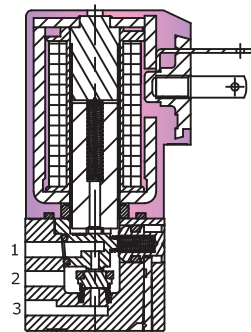
3/2 NC



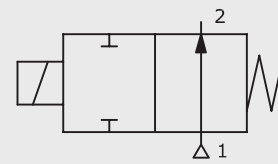
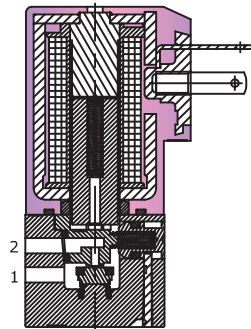
2/2 NC



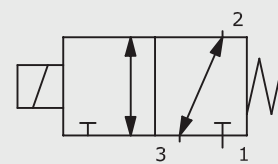
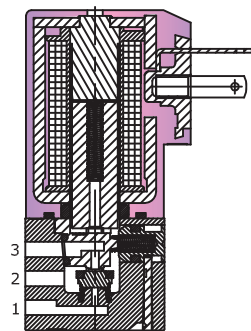
3/2 NO



2/2 NO



3/2 UNI

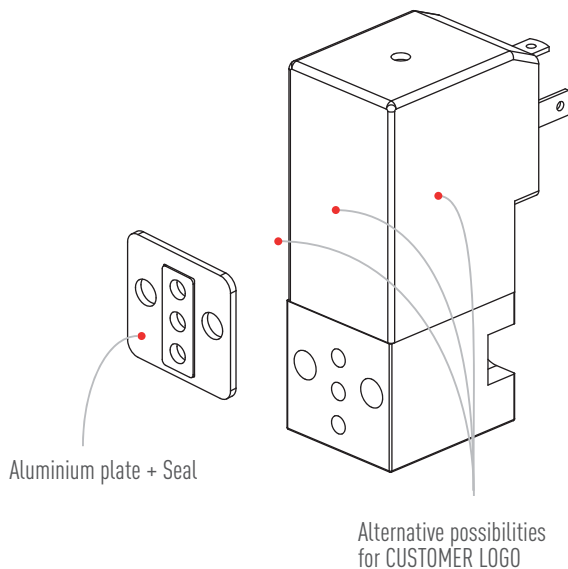


TECHNICAL SPECIFICATIONS

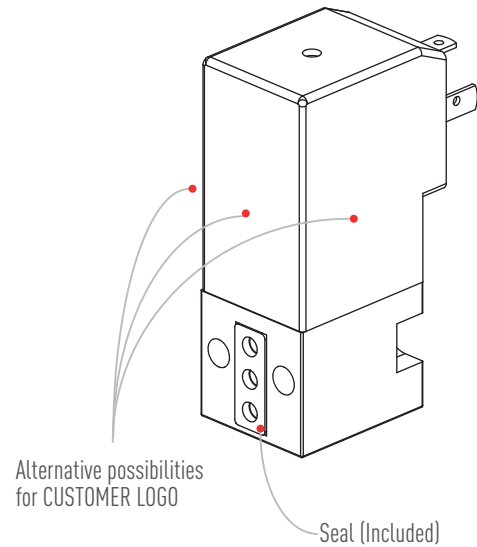
Valve Types	Function	Orifice mm (Port 1)	Orifice mm (Port 3)	KV factor	Flow rate NL/min (Port 1→2) 6 bar Δp 1 bar	Pressure		Power	
						bar		W	VA
						MIN	MAX	DC	AC
A	3/2 NC	0,8	1,0	0,28	18	0	8	1	3
B	3/2 NC	1,1	1,5	0,42	28	0	10	2,5	3
C	3/2 NC	1,5	1,5	0,55	36	0	6	2,5	3
D	2/2 NC	0,8	-	0,28	18	0	8	1	3
E	2/2 NC	1,1	-	0,42	28	0	10	2,5	3
F	2/2 NC	1,5	-	0,55	36	0	6	2,5	3
G	3/2 NO	1,0	1,1	0,36	23	0	7	2,5	3
H	3/2 NO	1,5	1,5	0,55	36	0	3,5	2,5	3
I	2/2 NO	1,0	-	0,40	26	0	10	1	3
J	2/2 NO	1,5	-	0,55	36	0	10	2,5	3
K	3/2 NC	0,8	1,0	0,28	18	0	16	2,5	3
N	3/2 NC	1,1	1,5	0,42	28	2	7,5	1	-
Q	3/2 UNI	0,8	1,0	0,28 / 0,36	18 / 23	2	10	2,5	3

Other specification upon customer request.

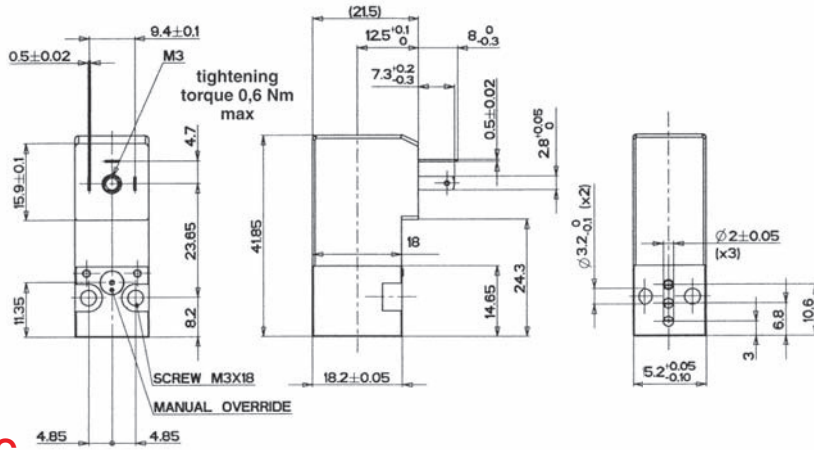
Valves with external seal



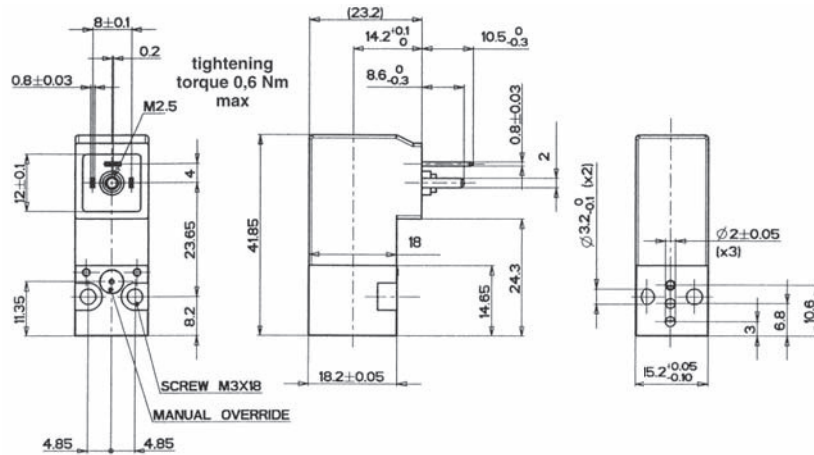
Valves with recessed seal



AMP 2.8x0.5



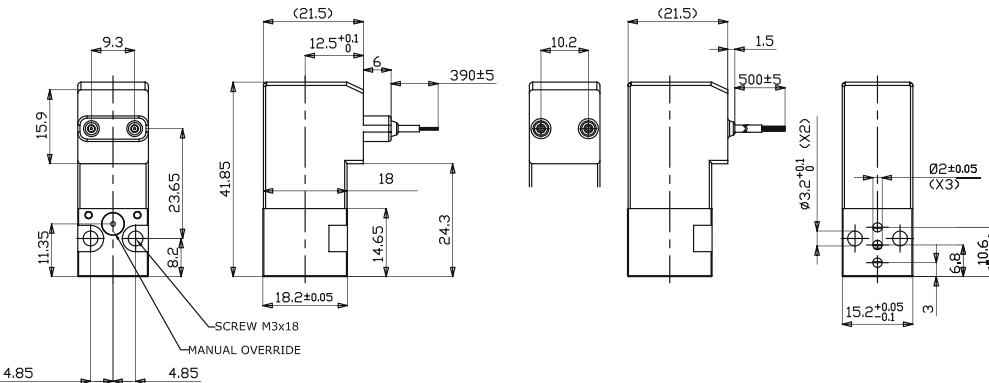
DIN C



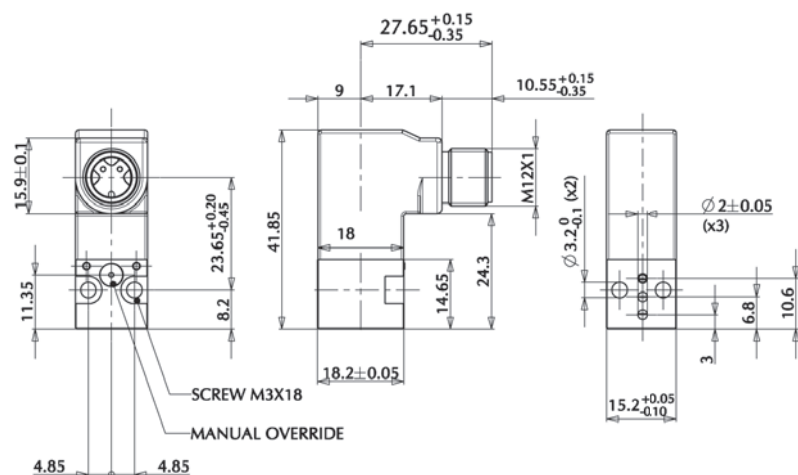
Flying Leads

STANDARD FLYING LEADS

HIGH TEMPERATURE (HT) FLYING LEADS



M12



15 mm PILOT VALVE CODING SPECIFICATION

CODE: **1 5 Z Z A A K B Y W C X X**

PRODUCT FAMILY
15=15mm pilot valve

ELECTRICAL CONNECTION
S1 = Industrial 9.4mm 3 pins
D1 = DIN C 8.0mm 3 pins
C1 = Std Flying Leads (105°C)
C2 = HT Flying Leads (140°C)
M1 = M12

NOMINAL VOLTAGES
C1 = 12VDC
C2 = 24VDC
PO = 24VAC 50/60 Hz
Other voltages available on demand

P2 = 110VAC 50/60 Hz
R5 = 220VAC 50/60 Hz
P9 = 230VAC 50/60 Hz

WINDING CONFIGURATION
(see pag4 Technical Specifications)
A = 2.5 W
B = 1.0 W
C = 3 VA
Other winding configurations available on demand

ASSEMBLING COIL-VALVE
1 = pneumatic and electrical ports on the opposite side (external seal)
2 = pneumatic and electrical ports on the same side (external seal)
4 = pneumatic and electrical ports on the opposite side (recessed seal)
5 = pneumatic and electrical ports on the same side (recessed seal)

VALVE TYPES
(see pag4 Technical Specifications)
A= 3/2 NC Ø 0.8/1.0mm
B= 3/2 NC Ø 1.1/1.5mm
C= 3/2 NC Ø 1.5/1.5mm
E= 2/2 NC Ø 1.1mm
G= 3/2 NO Ø 1.0/1.1mm
Q= 3/2 UNI

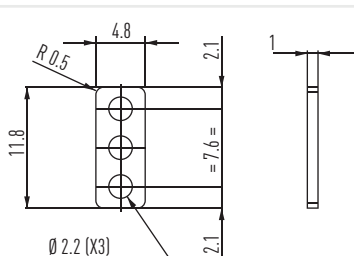
SEAL MATERIALS
N=NBR
V=FKM
F=FKM Low Temperature (-30°C)

MANUAL OVERRIDE
M=monostable (no lock) Brass
B=bistable (turn and lock) Brass
O=no override

MARKING
AM=Amisco logo and technical specifications
XX=according to customers demands
ZN=no marking

RECESSED SEAL VERSION

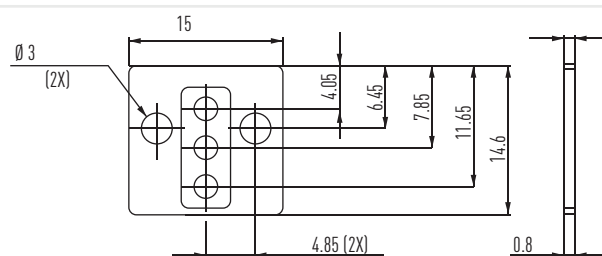
Included in valve with recessed seal
P/N 534044 (NBR)
P/N 534075 (FKM Low temperature)



ASSEMBLING EQUIPMENT - to be ordered separately

EXTERNAL SEAL VERSION

Aluminium plate + Seal
P/N 534047 (aluminium plate + NBR seal)
P/N 534076 (aluminium plate + FKM Low temperature seal)



Screw M3x18TC
(2 pcs for each pilot)
P/N 540177

Torque Max = 0.6Nm

