

22 mm & 30 mm

Pneumatic Pilot Valve Systems

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Pneumatic Pilot Valve Systems

In order to meet the growing demand of the pneumatic industrial automation, AMISCO offers a complete range of pneumatic solenoid pilot valves with 22 mm and 30 mm width as a logical evolution of the traditional range of coils and solenoid operators, heart of any solenoid valve.

These pilot valve systems are designed for those applications where high performance, high reliability and long life are necessary. All solenoid valves of this system are designed for use with compressed air and consist of an encapsulated coil assembled on a valve with brass tube and plastic body.

Please contact Amisco for use with other media.



The 22mm and 30mm pilot valves feature:

Coil:

Refer to 22mm (EVI 7/9) and 30mm (EVI 30/9) coil catalogues

Valve:

- brass or stainless steel tube for special application
- plunger and core made by a magnetic stainless steel specially designed for solenoid applications
- polyester valve body for 22mm, PPS valve body for Cnomo
- plastic material used are UL-Listed

The pilot valves are designed for more than 50 million cycles.

The valves are normally equipped with NBR seals and bistable manual override.

Maximum suggested roughness for the pneumatic interface is Ra=0.8.

The coils are designed and manufactured according to EN 60204.1 and VDE 0580 and it's suitable for industrial ambient conditions. For use in different ambient with high humidity, please refer to kit for humid application (details in the following pages).

VALVE CODING SPECIFICATIONS

PART NUMBER:

X X X T Y K V 5 5 4 4 * *

TYPE

22E = 22mm EE Pilot Valve
 22I = 22mm IE Pilot Valve
 30C = 30mm Pilot Valve CNOMO

TUBE DIAMETER

9 = Ø 9mm

TUBE MATERIAL

1 = Stainless Steel
 0 = Brass

VALVE FUNCTION

2 = 2 Way valve
 3 = 3 Way valve

VALVE CONDITION

C = Normally Closed
 O = Normally Open

ORIFICE DIAMETER

| | | |
|-------|----|---|
| 22 mm | EE | 12 = Ø 1.2 mm 15 = Ø 1.5 mm |
| | IE | 12 = Ø 1.2 mm 16 = Ø 1.6 mm 18 = Ø 1.8 mm |
| 30 mm | | 12 = Ø 1.2 mm 15 = Ø 1.5 mm |

SEAL MATERIALS

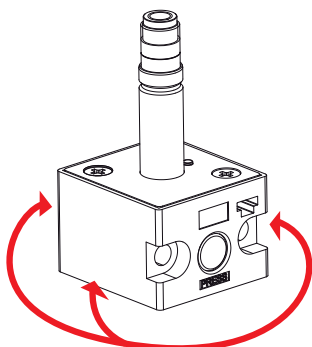
N = NBR
 V = FKM
 (other material on request)

MANUAL OVERRIDE

| | |
|-------|---|
| 22 mm | 0 = No override M = Monostable (no lock) Brass P = Bistable (turn and lock) Plastic |
| | 0 = No override M = Monostable (no lock) Brass B = Bistable (turn and lock) Brass |

MARKING

ZN = Standard - No logo
 AM = Standard + Amisco Logo
 ... = Customized marking



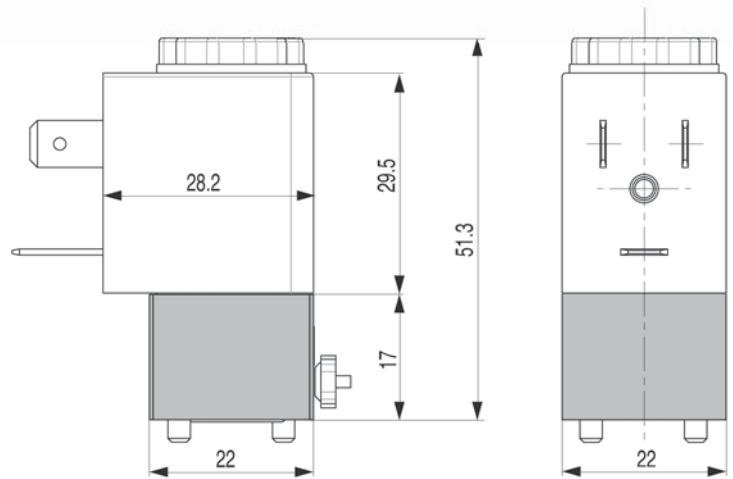
alternative possibilities for **CUSTOMER LOGO**



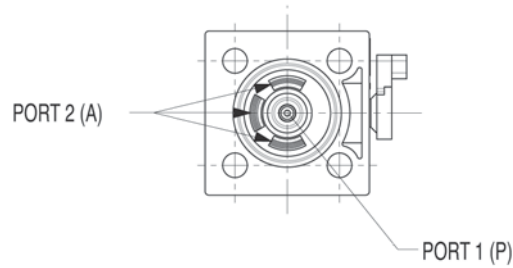
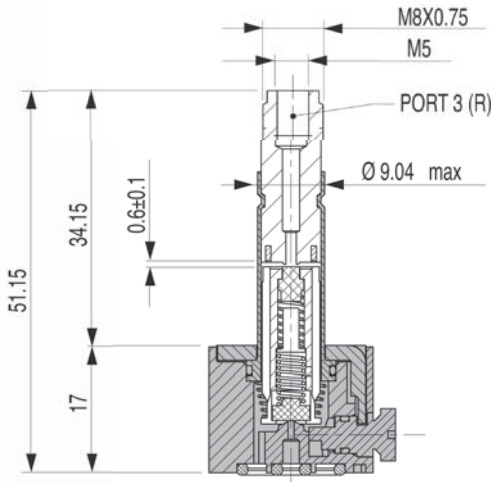
22 mm and 30 mm PNEUMATIC PILOT VALVE
STANDARD AMISCO LOGO POSITION
 (only valve, coil is separate)

22 mm EE PILOT VALVE

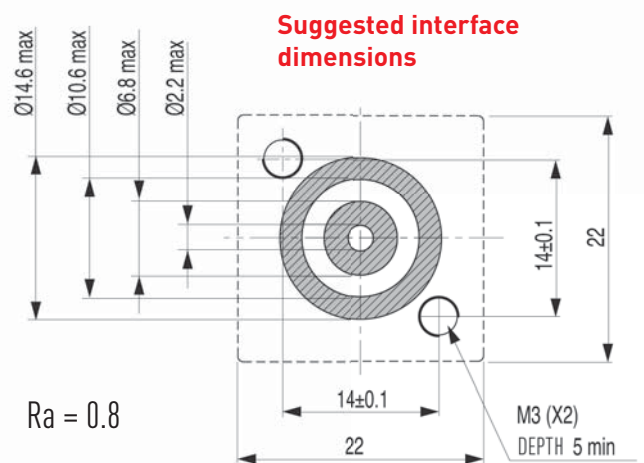
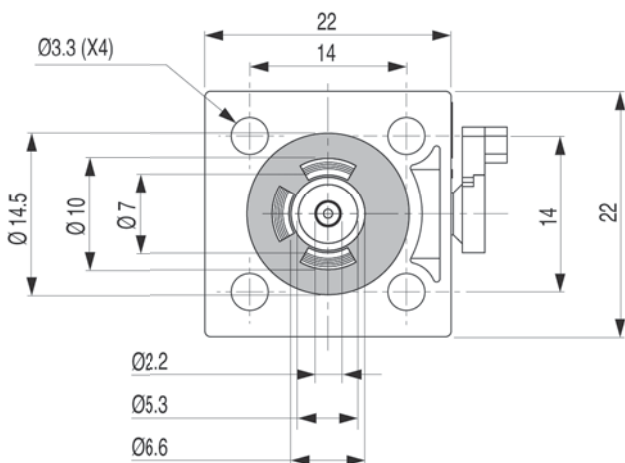
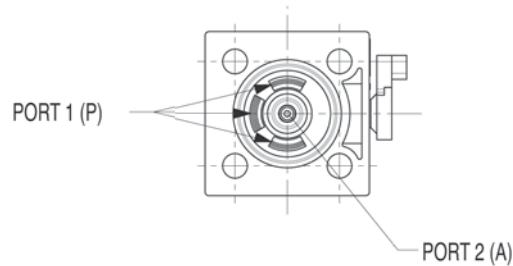
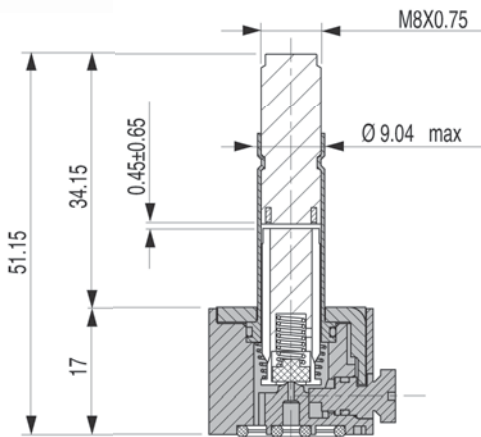
Solenoid Valve Assembly



3/2 NC



2/2 NC



22 mm EE PILOT VALVE

TECHNICAL SPECIFICATIONS

| Function | Orifice mm (Port 1) | Flow rate NL/min (Port 1→2) 6 bar Δp 1 bar | Kv factor | Pressure bar | | Coil Power | |
|----------|---------------------|---|-----------|--------------|-----|------------|-----|
| | | | | MIN | MAX | W | VA |
| | | | | | | DC | AC |
| 3/2 NC | 1,2 | 50 | 0,76 | 0 | 10 | 3 | 5 |
| 3/2 NC | 1,5 | 65 | 0,99 | 0 | 10 | 6,5 | 8,5 |
| 2/2 NC | 1,2 | 50 | 0,76 | 0 | 10 | 3 | 5 |
| 2/2 NC | 1,5 | 65 | 0,99 | 0 | 10 | 6,5 | 8,5 |

PILOT VALVE TECHNICAL DATA

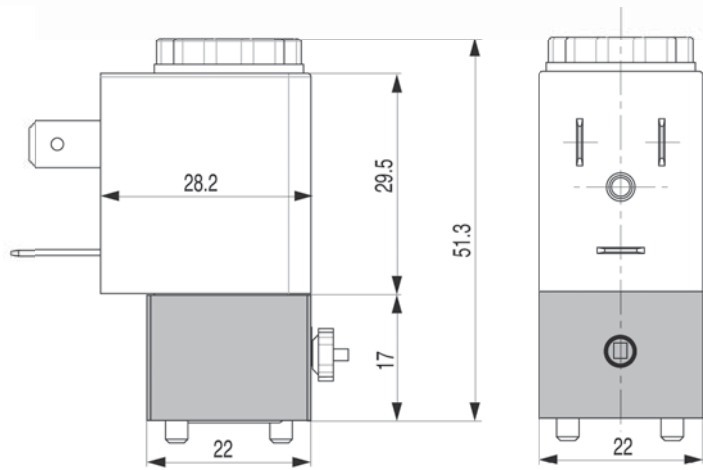
| | | |
|----------------------|---|--|
| Valve function | 3/2 NC - 2/2 NC | |
| Media | air | |
| Lubrication | not necessary | |
| Temperature | -20°C ÷ + 50°C (for use with different temperature please contact Amisco) | |
| Orifice size | 1,2 - 1,5 mm | |
| Pressure | 0 ÷ 10 bar | |
| Response time | 8 ÷ 15 ms | |
| Life time expectancy | 50 million cycles | |
| Manual override | monostable - bistable - no override | |
| Assembly | in any position | |
| Fixing | n° 2 screws M3 x 20 | |
| Material | valve body | glass reinforced Polyester |
| | seals | NBR - FKM (other materials on request) |
| | cores | stainless steel |
| | core tube | brass - stainless steel |
| | springs | stainless steel |

COIL TECHNICAL DATA

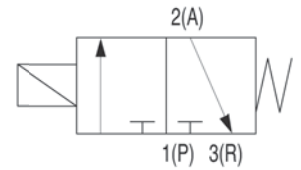
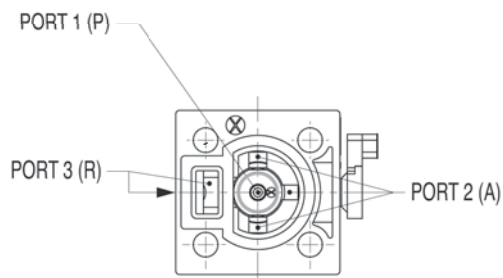
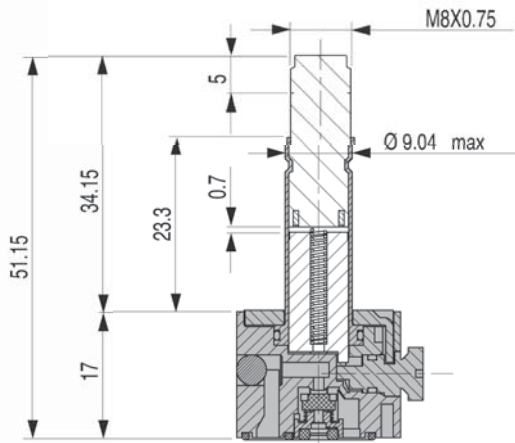
The valves have to be used with the related 22mm (EVI 7/9) Amisco coil.
Please refer to the specific catalogue for these products.

22 mm IE PILOT VALVE

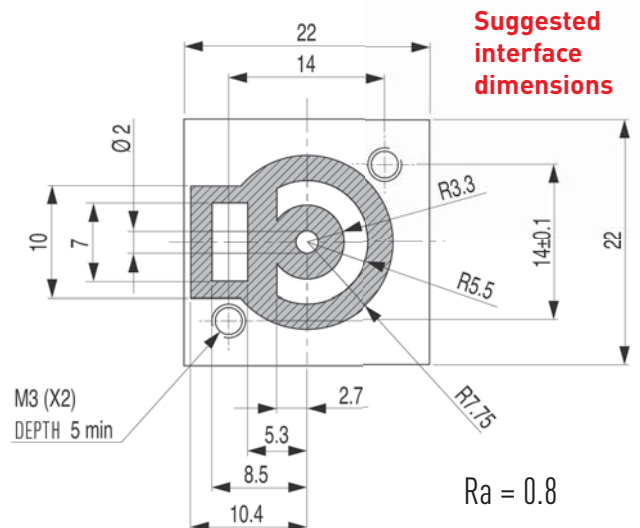
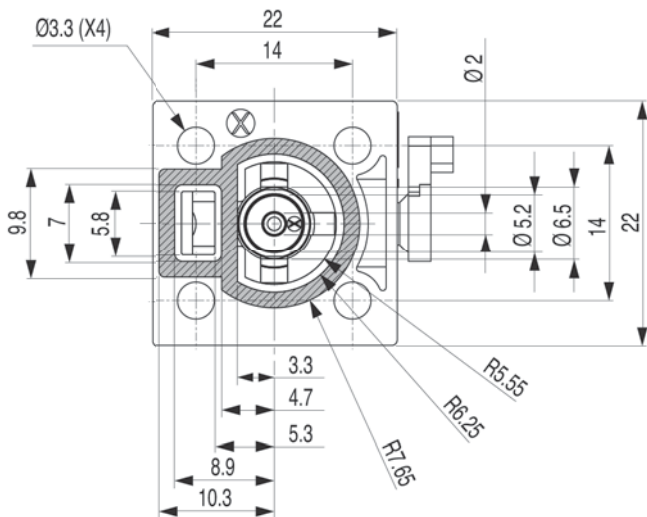
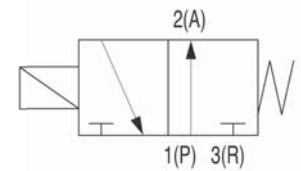
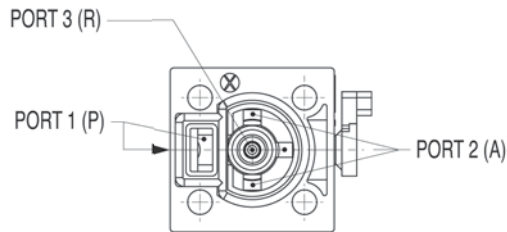
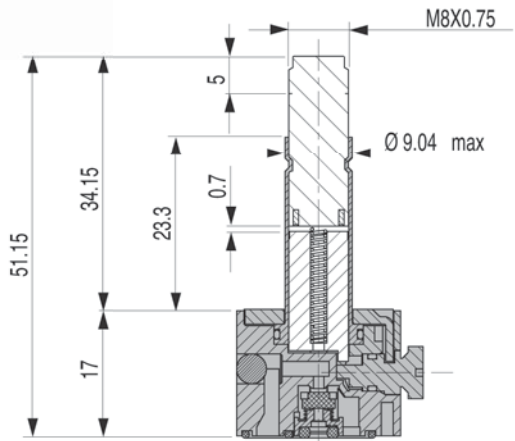
Solenoid Valve Assembly



3/2 NC



3/2 NO



22 mm IE PILOT VALVE

TECHNICAL SPECIFICATIONS

| Function | Orifice mm (Port 1) | Flow rate NL/min (Port 1→2) 6 bar Δp 1 bar | Kv factor | Pressure bar | | Coil Power | |
|----------|---------------------|--|-----------|--------------|-----|------------|-----|
| | | | | MIN | MAX | W | VA |
| | | | | | | DC | AC |
| 3/2 NC | 1,2 | 50 | 0,76 | 0 | 10 | 4 | 6 |
| 3/2 NC | 1,6 | 65 | 0,98 | 2 | 10 | 6,5 | 8,5 |
| 3/2 NC | 1,8 | 70 | 1,05 | 2 | 8 | 6,5 | 8,5 |
| 3/2 NO | 1,6 | 60 | 0,90 | 0 | 7 | 6,5 | 8,5 |
| 3/2 NO | 1,8 | 65 | 0,98 | 0 | 6 | 6,5 | 8,5 |

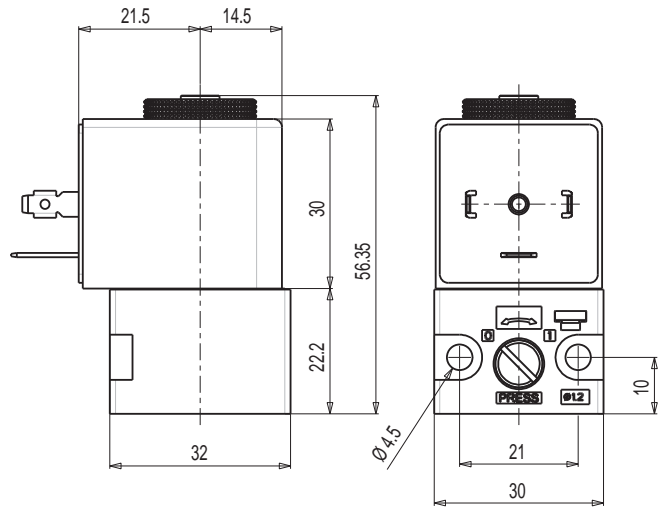
PILOT VALVE TECHNICAL DATA

| | | |
|----------------------|---|--|
| Valve function | 3/2 NC - 3/2 NO | |
| Media | air | |
| Lubrication | not necessary | |
| Temperature | -20°C ÷ + 50°C (for use with different temperature please contact Amisco) | |
| Orifice size | 1,6 - 1,8 mm | |
| Pressure | 0 ÷ 10 bar | |
| Response time | 8 ÷ 15 ms | |
| Life time expectancy | 50 million cycles | |
| Manual override | bistable - no override | |
| Assembly | in any position | |
| Fixing | n° 2 screws M3 x 20 | |
| Material | valve body | glass reinforced Polyester |
| | seals | NBR - FKM (other materials on request) |
| | cores | stainless steel |
| | core tube | brass - stainless steel |
| | springs | stainless steel |

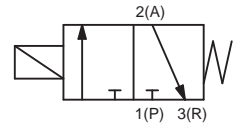
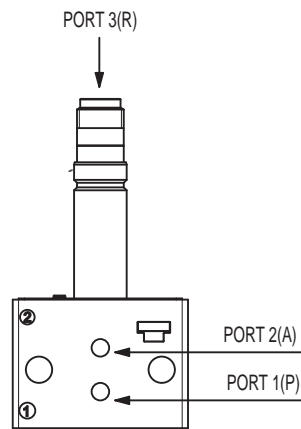
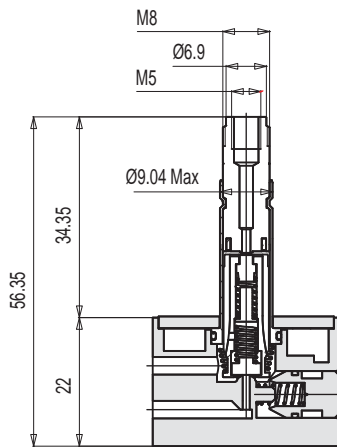
COIL TECHNICAL DATA

The valves have to be used with the related 22mm (EVI 7/9) Amisco coil.
Please refer to the specific catalogue for these products.

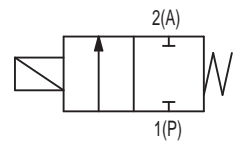
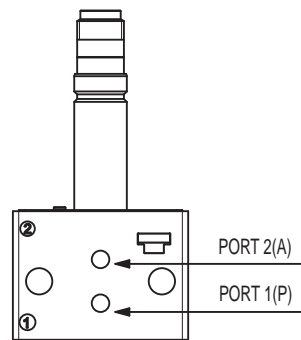
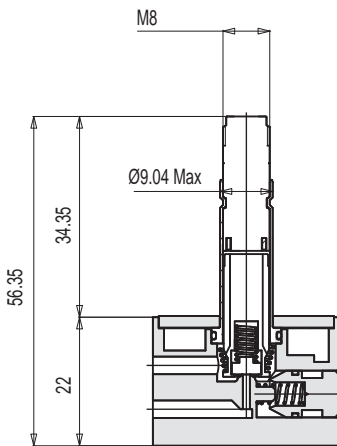
30 mm PILOT VALVE - CNOMO



3/2 NC

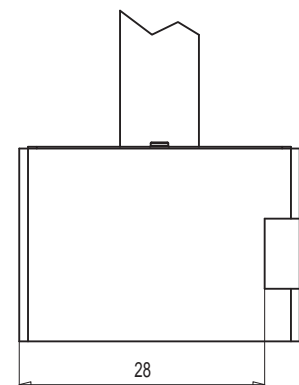
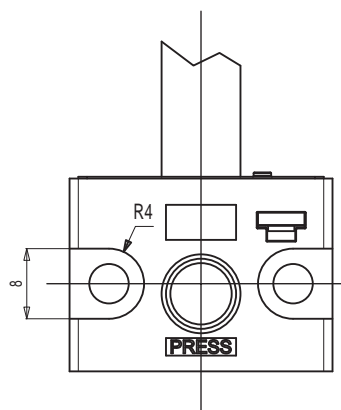
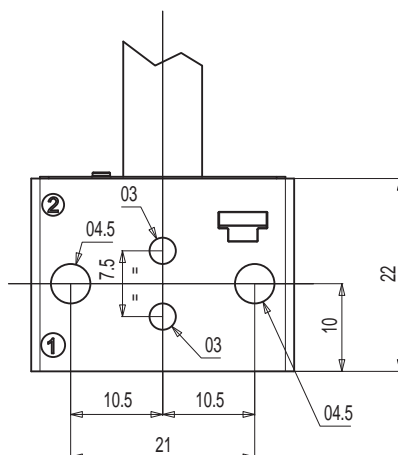


2/2 NC



Suggested interface dimensions

Ra = 0.8



SCREW SUGGESTED M4x30 (x2) min

30 mm PILOT VALVE - CNOMO

TECHNICAL SPECIFICATIONS

| Function | Orifice mm (Port 1) | Flow rate NL/min (Port 1→2) 6 bar Δp 1 bar | Kv factor | Pressure bar | | Coil Power | |
|----------|---------------------|--|-----------|--------------|-----|------------|----|
| | | | | MIN | MAX | W | VA |
| | | | | | | DC | AC |
| 3/2 NC | 1,2 | 50 | 0,76 | 0 | 10 | 2 | 3 |
| 2/2 NC | 1,2 | 50 | 0,76 | 0 | 10 | 2 | 3 |
| 3/2 NC | 1,5 | 70 | 1,08 | 0 | 10 | 4,5 | 5 |
| 2/2 NC | 1,5 | 70 | 1,08 | 0 | 10 | 4,5 | 5 |

PILOT VALVE TECHNICAL DATA

| | | |
|----------------------|--|-------------------------|
| Valve function | 3/2 NC - 2/2 NC | |
| Media | air | |
| Lubrication | not necessary | |
| Temperature | -20°C ÷ + 50°C (for use with different temperature contact Amisco) | |
| Orifice size | 1,2 - 1,5 mm | |
| Pressure | 0 ÷ 10 bar | |
| Response time | 8 ÷ 15 ms | |
| Life time expectancy | 50 million cycles | |
| Manual override | monostable - bistable - no override | |
| ASSEMBLY | in any position | |
| Fixing | n° 2 screws M4 x 30 (not supplied by Amisco) | |
| Material | valve body | PPS |
| | seals | FKM - NBR |
| | cores | stainless steel |
| | core tube | brass - stainless steel |
| | springs | stainless steel |

COIL TECHNICAL DATA

The valves have to be used with the related 30mm (EVI 30/9) Amisco coil.
Please refer to the specific catalogue for these products.

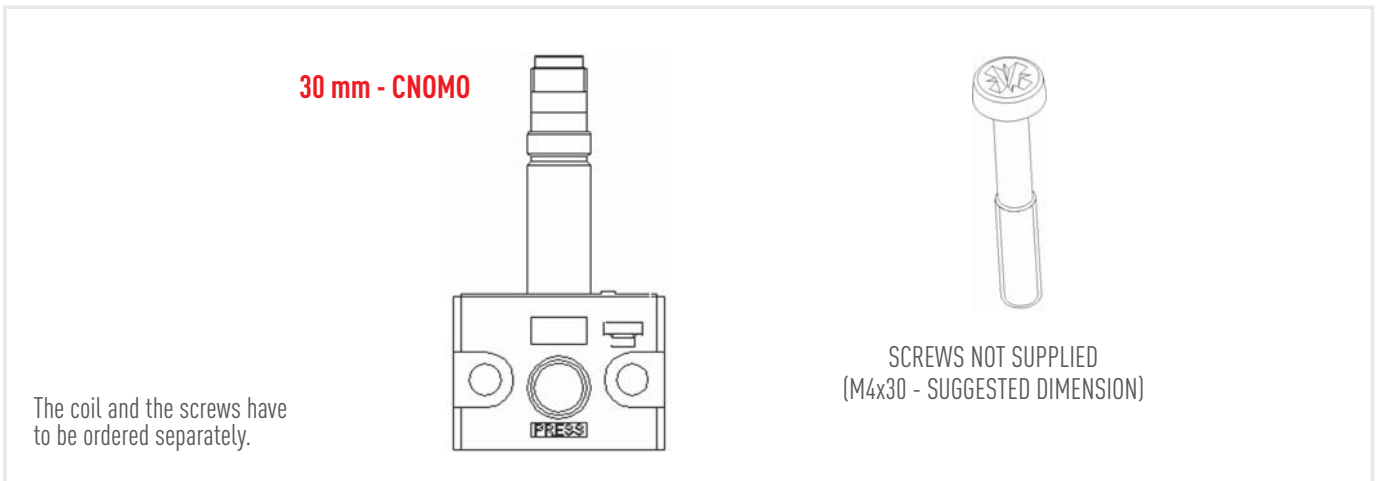
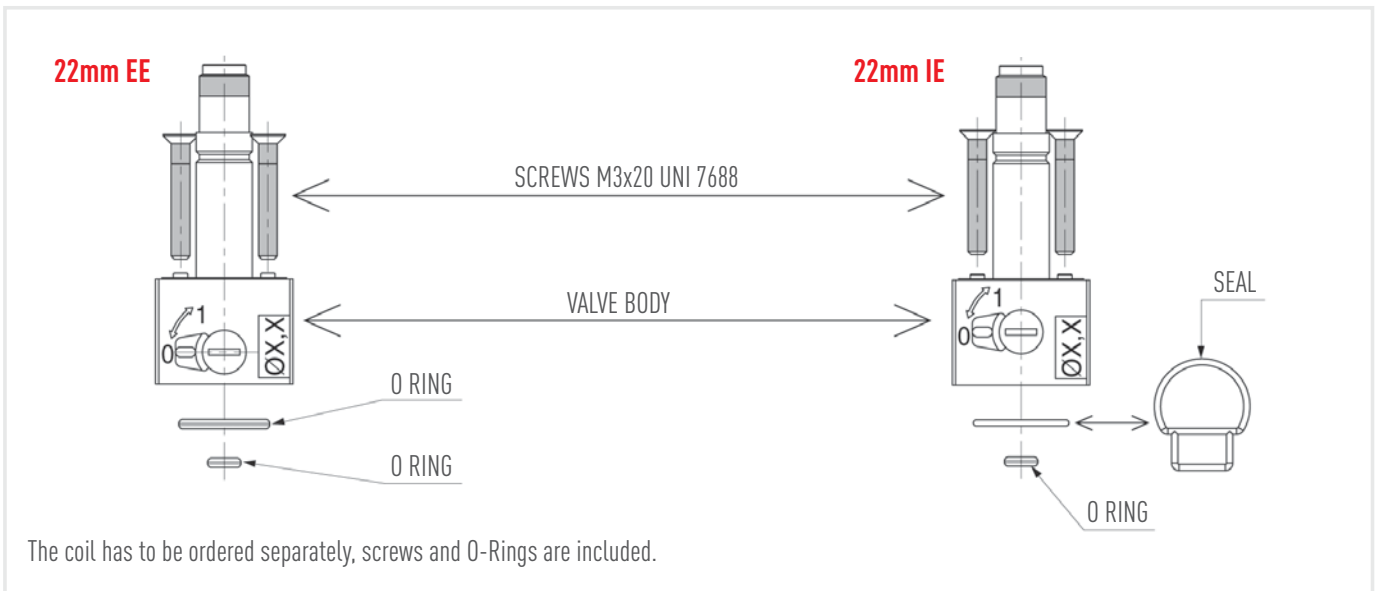
22 mm - 30 mm PILOT VALVE

STANDARD CODING SPECIFICATION

(The coil has to be ordered separately)

| Valve Type | Function | Inlet orifice \varnothing | Seals | Manual Override | Valve Part Number | |
|-------------|-------------|-----------------------------|---------------|-----------------|-------------------|---------------|
| 22mm EE | 3/2 NC | 1,2 | NBR | Monostable | 22E903C12NMAM | |
| | | | | Bistable | 22E903C12NPAM | |
| | | | No Override | 22E903C12NOAM | | |
| | | FKM | Monostable | 22E903C12VMAM | | |
| | | | Bistable | 22E903C12VPAM | | |
| | | No Override | 22E903C12VOAM | | | |
| | 1,5 | NBR | Monostable | 22E903C15NMAM | | |
| | | | Bistable | 22E903C15NPAM | | |
| | | No Override | 22E903C15NOAM | | | |
| | | FKM | Monostable | 22E903C15VMAM | | |
| | | | Bistable | 22E903C15VPAM | | |
| | | No Override | 22E903C15VOAM | | | |
| | 2/2 NC | 1,2 | NBR | Monostable | 22E902C12NMAM | |
| | | | | Bistable | 22E902C12NPAM | |
| | | | No Override | 22E902C12NOAM | | |
| | | | FKM | Monostable | 22E902C12VMAM | |
| | | | | Bistable | 22E902C12VPAM | |
| | | | No Override | 22E902C12VOAM | | |
| | | 1,5 | NBR | Monostable | 22E902C15NMAM | |
| | | | | Bistable | 22E902C15NPAM | |
| | | | No Override | 22E902C15NOAM | | |
| | | | FKM | Monostable | 22E902C15VMAM | |
| | | | | Bistable | 22E902C15VPAM | |
| | | | No Override | 22E902C15VOAM | | |
| 22mm IE | 3/2 NC | 1,2 | NBR | Bistable | 22I903C12NPAM | |
| | | | | No Override | 22I903C12NOAM | |
| | | | FKM | Bistable | 22I903C12VPAM | |
| | | No Override | | 22I903C12VOAM | | |
| | | 1,6 | NBR | Bistable | 22I903C16NPAM | |
| | | | | No Override | 22I903C16NOAM | |
| | FKM | | Bistable | 22I903C16VPAM | | |
| | | | No Override | 22I903C16VOAM | | |
| | 1,8 | | NBR | Bistable | 22I903C18NPAM | |
| | | | | No Override | 22I903C18NOAM | |
| | | FKM | Bistable | 22I903C18VPAM | | |
| | | | No Override | 22I903C18VOAM | | |
| | | 3/2 NO | 1,6 | NBR | Bistable | 22I903016NPAM |
| | | | | | No Override | 22I903016NOAM |
| | FKM | | | Bistable | 22I903016VPAM | |
| | | | No Override | 22I903016VOAM | | |
| | 1,8 | | NBR | Bistable | 22I903018NPAM | |
| | | | | No Override | 22I903018NOAM | |
| | | FKM | Bistable | 22I903018VPAM | | |
| | No Override | | 22I903018VOAM | | | |
| | 30mm CNOMO | 3/2 NC | 1,2 | NBR | Monostable | 30C903C12NMAM |
| | | | | | Bistable | 30C903C12NBAM |
| | | | | No Override | 30C903C12NOAM | |
| | | | FKM | Monostable | 30C903C12VMAM | |
| Bistable | | | | 30C903C12VBAM | | |
| No Override | | | 30C903C12VOAM | | | |
| 2/2 NC | | 1,2 | NBR | Monostable | 30C902C12NMAM | |
| | | | | Bistable | 30C902C12NBAM | |
| | | | No Override | 30C902C12NOAM | | |
| | | FKM | Monostable | 30C902C12VMAM | | |
| | | | Bistable | 30C902C12VBAM | | |
| | | No Override | 30C902C12VOAM | | | |
| 3/2 NC | | 1,5 | NBR | Monostable | 30C903C15NMAM | |
| | | | | Bistable | 30C903C15NBAM | |
| | | | No Override | 30C903C15NOAM | | |
| | | FKM | Monostable | 30C903C15VMAM | | |
| | | | Bistable | 30C903C15VBAM | | |
| | | No Override | 30C903C15VOAM | | | |
| 2/2 NC | | 1,5 | NBR | Monostable | 30C902C15NMAM | |
| | | | | Bistable | 30C902C15NBAM | |
| | | | No Override | 30C902C15NOAM | | |
| | | FKM | Monostable | 30C902C15VMAM | | |
| | | | Bistable | 30C902C15VBAM | | |
| | | No Override | 30C902C15VOAM | | | |

ASSEMBLING EQUIPMENT



FASTENING NUTS (Note: tightening torque min-max 0,4 ÷ 0,6 Nm)

| | | |
|---|--------------------------|--|
| Plastic knurled nut | P/N 540238 | |
| Plastic knurled nut for protected exhaust | P/N 540270 | |
| Aluminium knurled nut Weavy washer Ø 8 DIN 137 type A | P/N 540201 P/N 535019 | |

KIT FOR SEALED VERSION



We sell, separately from the coil, a kit to complete the sealing of the 22mm coil, to be equipped on our 22mm pilot valve.

The kit is composed by two O-Rings, a special nut designed for this application, and the assembly instruction.

Complete valve using coil with terminal has been tested positively for IP65.

Complete valve using coil with flying leads has been tested positively for IP67.



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