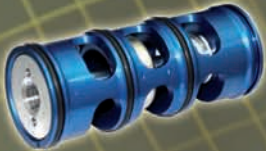


ROSS Valves for Glass Machines



Cartridge



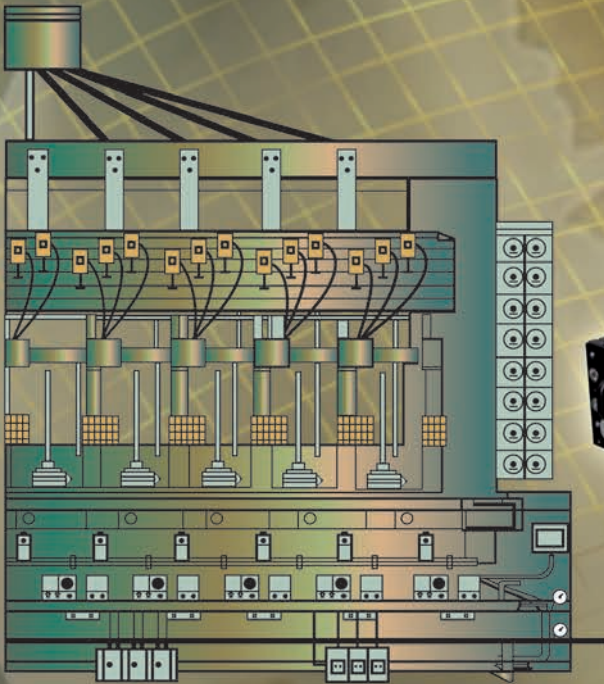
BlowHead On/Off



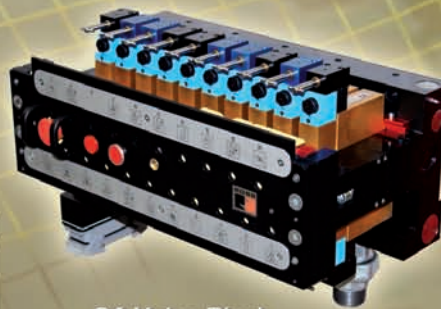
Pusher



Blow Mold Vacuum



Proportional Valve



21-Valve-Block



Blow Pistol



Counterblow
Vacuum- or
Hi-Lo Pressure



Plunger Up or Down
Cooling



Final Blow, Settle Blow
Finish Cooling, Blow Off



Mold Open / Close

21 Valve Block —

The Compact Solution for Minimized Downtimes on IS Glass Machines

- Quick-and-easy exchange feature
- Very precise air return poppet
- Highly reliable, accurate switching
- Rugged manual actuators involved
- All valves with indicator lights
- High flow characteristics
- This extremely compact multifunctional package can provide pilot air for the main control valves as well as directly controlling the actuators for cylinder applications.

STANDARD SPECIFICATIONS

Temperature Range:

Ambient: 4° to 80°C.

Media: 4° to 105°C.

Flow Media: Filtered air.

Pressure Range: 1 to 6 bar.

Enclosure Rating: IP 65.

Power Consumption: 3.5 W nominal.

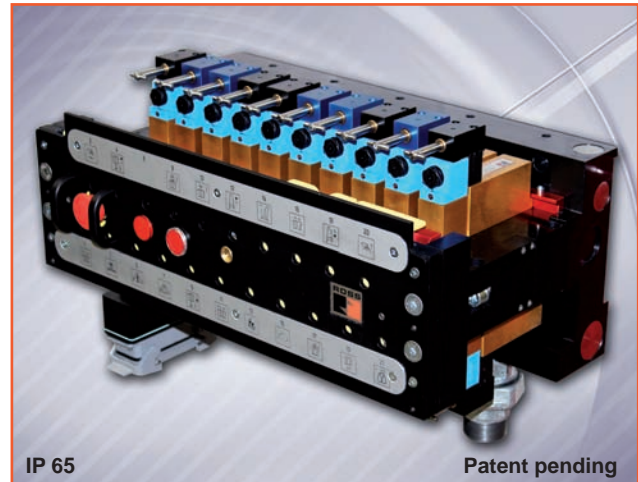
Standard Voltage: 24 VDC.

Coil: 100 % ED.

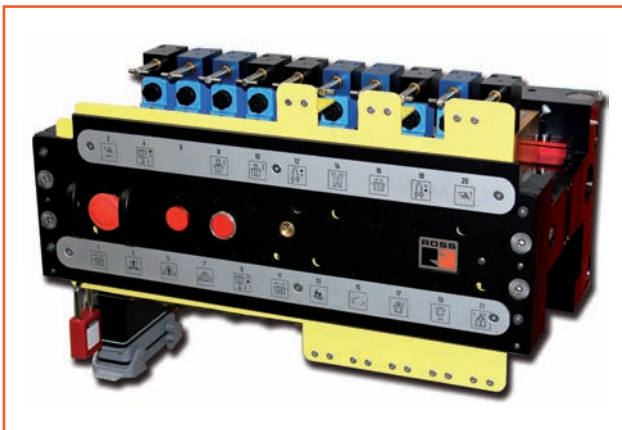
Actuation Time: 20 ms.

Flow of Valve: 4500 NI/min.

Nominal Diameter: 14 mm.



Save Time and Money with The innovative 21-Valve-Block



The ROSS 21-Valve-Block is available in various designs. The picture above shows a model conforming to the requirements of LOTO (safe energy isolation). Contact your ROSS-Specialist to find out how the 21-Valve-Block can be integrated into your system.

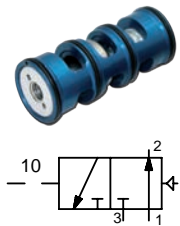
Valves used in the block are easy-to-service cartridge valves in normally open and normally closed version.

See ROSS Glass Info Sheets Form RE-E-A10209A and Form RE-E-A10210A for detailed information on these products.

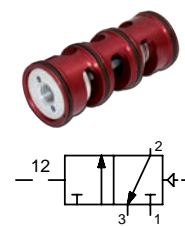
Model-No. D371H97

Model-No. D369H97

Normally open



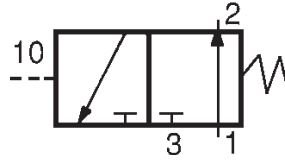
Normally closed



We reserve the right to introduce technical modifications without notice.

CARTRIDGE Size 14mm for 21-Valve Block on I/S Glass Machines

3/2-Way, Normally Open, Spring Return — Blue Housing



Model Number:
D366H97

- Optimized flow with nominal Size 14 mm
- Pistons with O-Ring and TEFLON guides for
 - reduced friction
 - reduced housing wear
 - constant response time
- Optimized guidance of moving parts by spacing of pistons
- Optimized poppet alignment to housing seat as design feature
- Robust stainless steel poppet with curled O-Ring
- 2-piston design integrates pressure booster function (see graph below)
- Integrated return spring does not interfere with inlet or exhaust flow

DESIGN

Poppet valve: Viton-seals on metal seat.

Body: Aluminum alloy, anodized

Piston: Aluminum alloy

Poppet: Stainless steel

ACTUATION

Maintained pressure signal to pilot, spring returned. Pilot pressure required, see graph below (min. 1 bar recommended)

OPERATION

Signal exhausted: 1 open to 2, 3 exhausted.

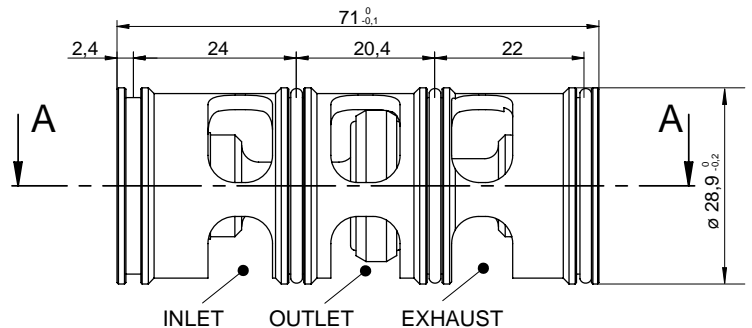
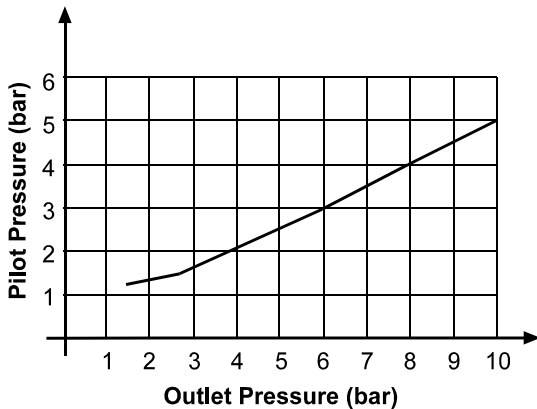
Signal present: 1 closed, 2 exhausted via 3.

Operating pressure range: 0 - 10 bar.

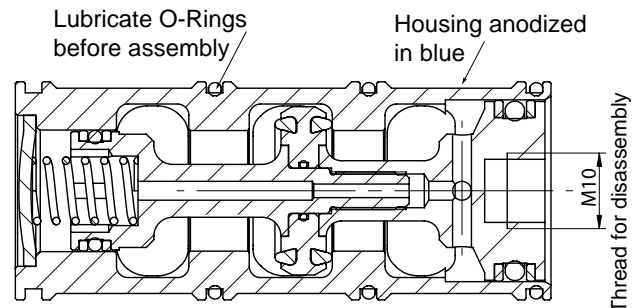
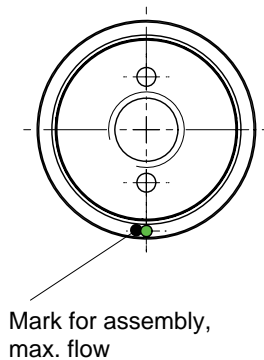
CHARACTERISTICS

Ambient/Media temperature: 4°C to 105°C

Flow medium: compressed air, filtered



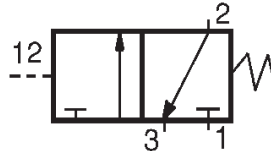
Section A-A



Subject to technical change.

CARTRIDGE Size 14mm for 21-Valve Block on I/S Glass Machines

3/2-Way, Normally Closed, Spring Return — **Red Housing**



Model Number:
D365H97

- Optimized flow with nominal Size 14 mm
- Pistons with O-Ring and TEFLON guides for
 - reduced friction
 - reduced housing wear
 - constant response time
- Optimized guidance of moving parts by spacing of pistons
- Optimized poppet alignment to housing seat as design feature
- Robust stainless steel poppets with curled O-Ring
- 2-piston design integrates pressure booster function (see graph)
- Integrated return spring does not interfere with inlet or exhaust flow

DESIGN

Poppet valve: Viton-seals on metal seat.

Body: Aluminum alloy, anodized

Piston: Aluminum alloy

Poppet: Stainless steel

ACTUATION

Maintained pressure signal to pilot, spring returned. Pilot pressure required, see graph below (min. 1 bar recommended)

OPERATION

Signal exhausted: 1 closed, 2 exhausted via 3.

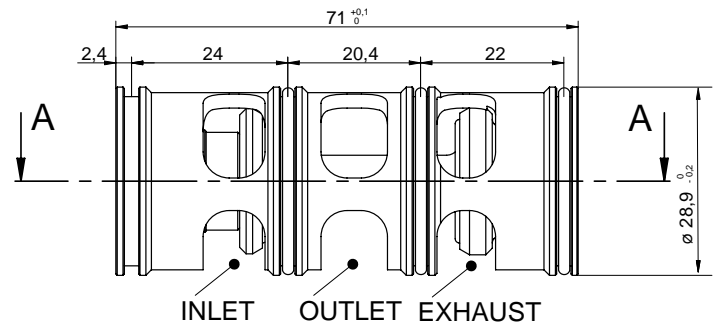
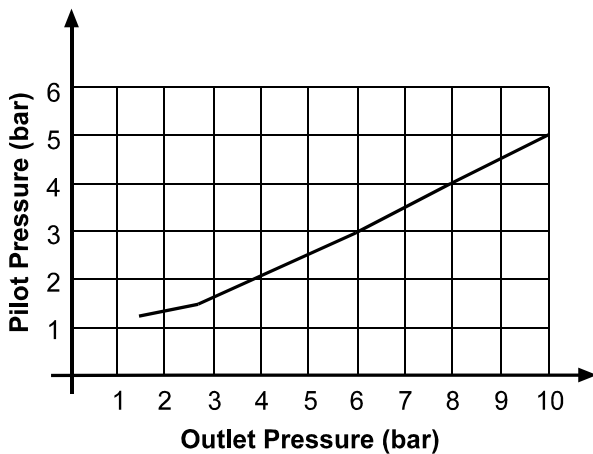
Signal present: 1 open to 2, 3 exhausted.

Operating pressure range: 0 - 10 bar.

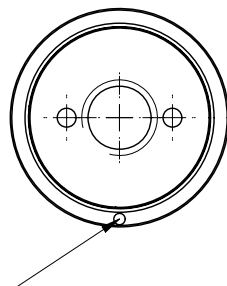
CHARACTERISTICS

Ambient/Media temperature: 4°C to 105°C

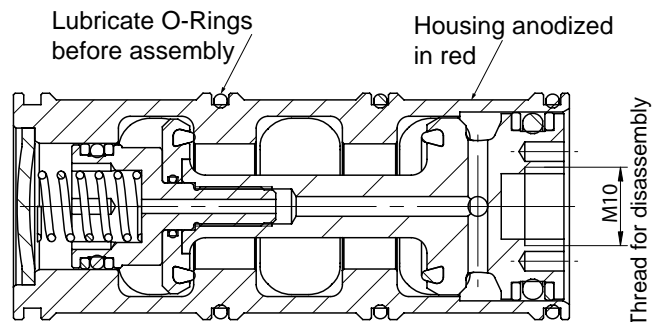
Flow medium: compressed air, filtered



Section A-A



Mark for assembly, max. flow



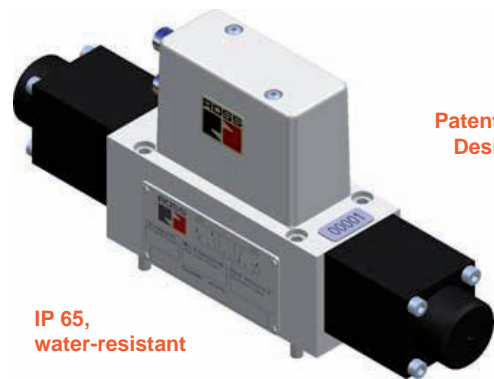
Subject to technical change.



PROPORTIONAL VALVE

Plunger Control, Counterblow, Final Blow

- Proportional pressurizing and exhausting
- Poppet construction
- "Plug-and-play" concept
- Excellent hysteresis
- Long service life
- Various interfaces available
- Digital control
- Self-adjusting zero-point
- Customer-specific electrical supply



Patented Design

IP 65,
water-resistant

Model Number: 01-SOP-03-00-0-0
(For other models, contact ROSS)

DESIGN FEATURES

Poppet valve with force-balanced valve elements, one valve element being used for pressurizing the downstream system.

Housing: Aluminum alloy

Actuator: Proportional solenoid.

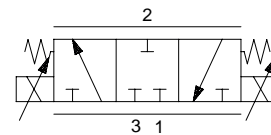
TECHNICAL SPECIFICATIONS

Flow medium: Compressed air or other neutral gases

Ambient temperature: 0° to 70° C

Inlet pressure: 5.5 bar max.*

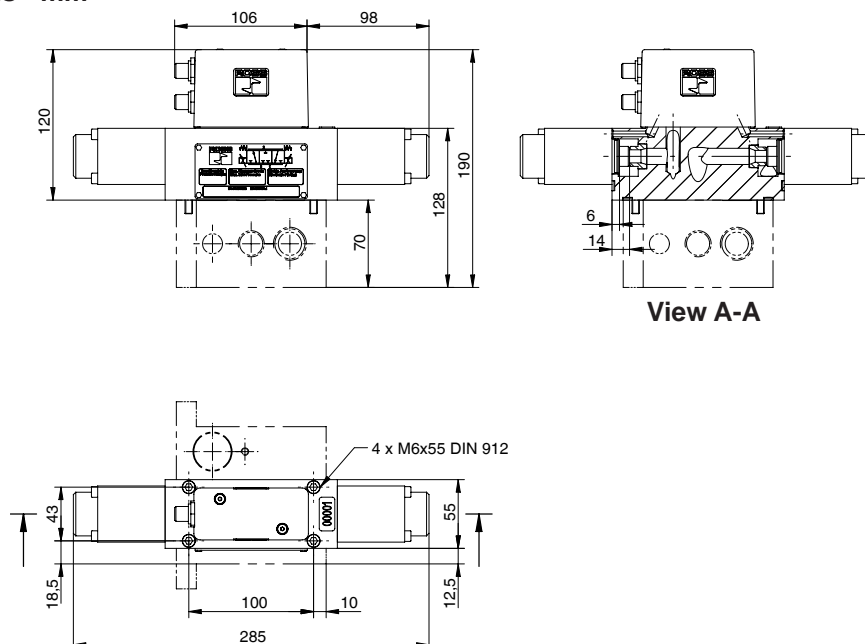
Operating pressure: 0 to 3.5 bar max.*



* For other pressures, contact ROSS.

We reserve the right to introduce technical modifications without notice.

Dimensions - mm



BLOW MOLD VACUUM VALVE

3/2 Directional Control Valve - Normally Closed - Pressure Operated

- High-speed poppet construction
- Constant repeatability
- Specialised low-wear body-coating
- Hard piston coating
- Non-lube
- Built-in steel filter
- EMHART interface
- Integrated handle
- Special versions available



DESIGN

Poppet Valve: Viton-seals on metal seat.

Body: Aluminum alloy, anodized.

Piston: Hard coated, original OEM steel filter.

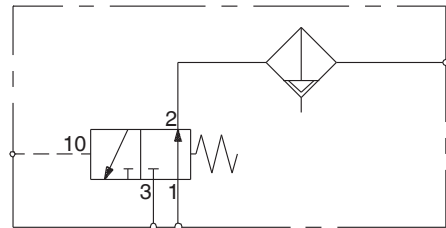
STANDARD SPECIFICATIONS

Flow Medium: Vacuum service.

Ambient Temperature: -17° to 150° C (0° to 300° F).

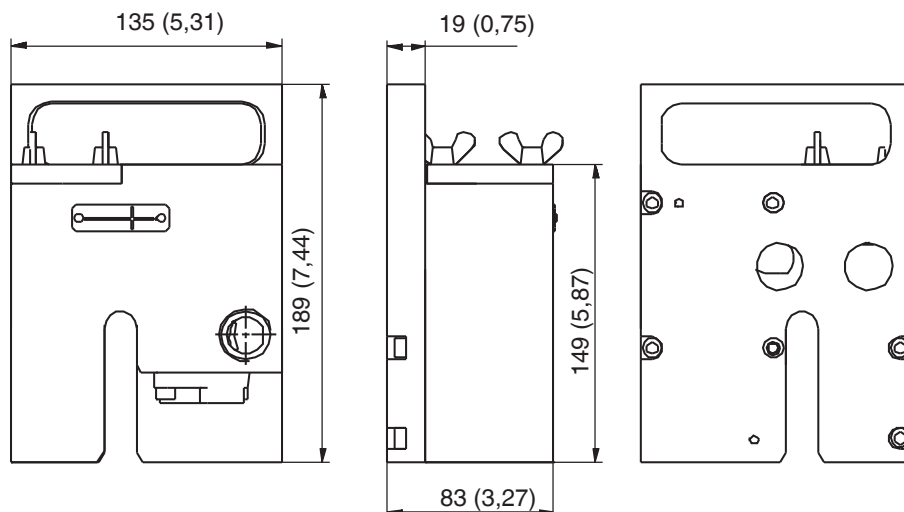
Media Temperature: -17° to 150° C (0° to 300° F).

Model Number: D2154A6907



We reserve the right to introduce technical modifications.

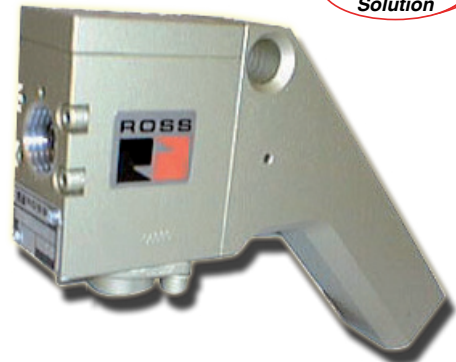
Dimensions - mm (inches)



BLOW PISTOL

2/2 Directional Control Valve - Normally Closed - Manually Operated

- Poppet construction
- High flow, low pressure
- Integrated handle
- Safety approvals



DESIGN

Poppet Valve: Resilient seal on metal seat.

Housing Material: Aluminum alloy.

Push Button: Aluminum.

STANDARD SPECIFICATIONS

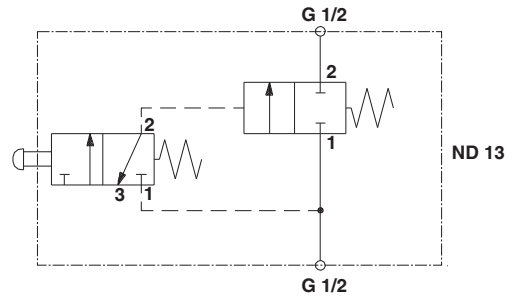
Flow Medium: Compressed air, filtered.

Ambient Temperature: 4° to 80° C (40° to 175° F).

Media Temperature: 4° to 80° C (40° to 175° F).

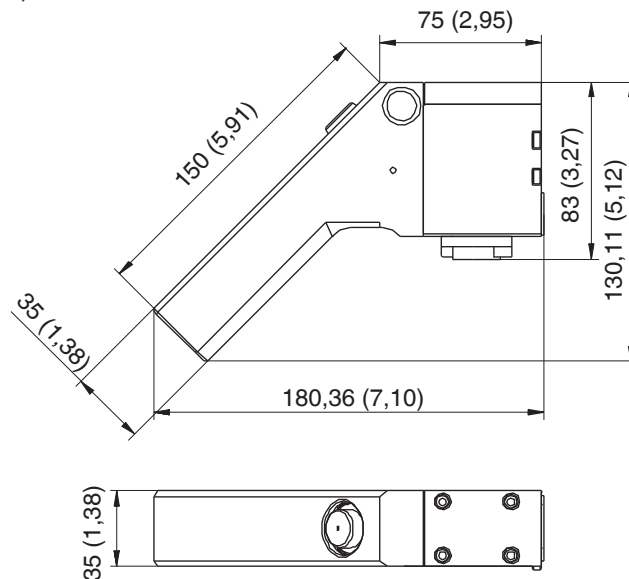
Inlet Pressure: 0,3 to 10 bar (5 to 150 psig)

Model Number: D1221B4900



We reserve the right to introduce technical modifications.

Dimensions - mm (inches)



COUNTERBLOW VACUUM or Hi-Lo PRESSURE

3/2 Directional Control Valve - High-Speed Poppet Design

- High-speed poppet construction
- Constant repeatability
- Non friction seat seals
- Non-lube
- Specialised low-wear body-coating
- Pressure booster option
- Solenoid, remote pilot options
- Locking, non locking manual overrides
- Base options



STANDARD SPECIFICATIONS

Solenoids: Standard voltages 200-240 volts 50/60 Hz;
100-120 volts 50/60 Hz; 110 volts d.c. 24 volts d.c.

Power Consumption: 10,8 VA inrush, 8,5 VA holding
on 50 or 60 Hz; 6 watts on d.c.

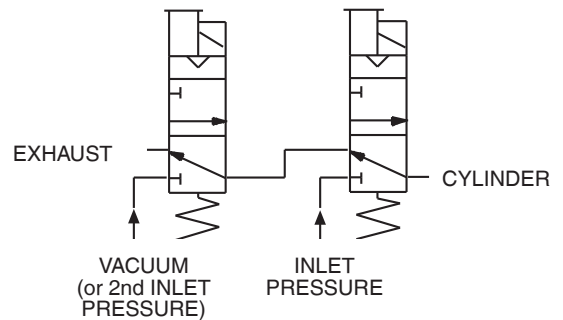
Flow Medium: Filtered air.

Ambient Temperature: -17° to 80° C (0° to 175° F).

Media Temperature: -17° to 150° C (0° to 300° F).

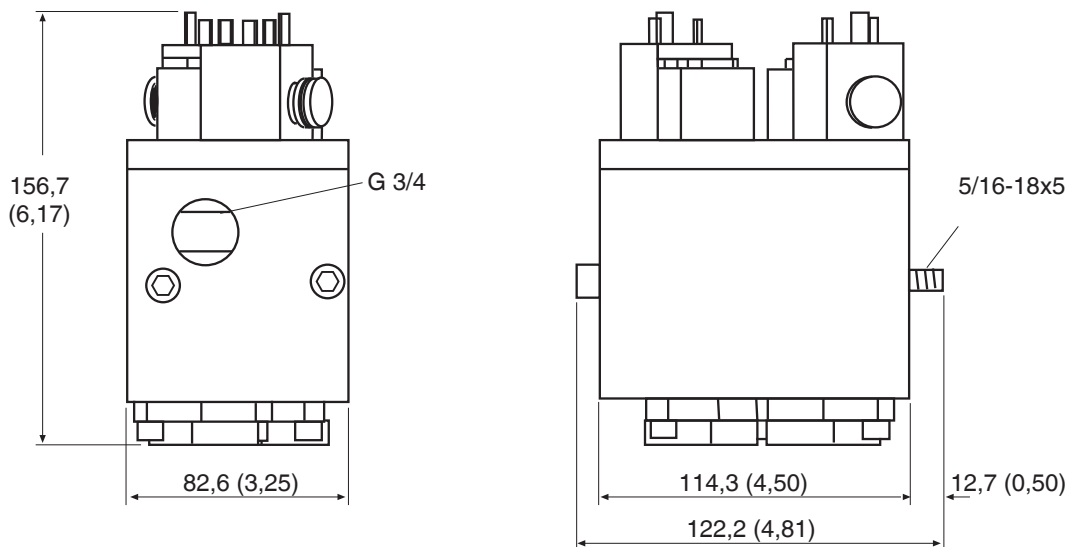
Inlet Pressure: 2 to 10 bar (30 to 150 psig).

Model Number: 2175C5912



Dimensions - mm (inches)

We reserve the right to introduce technical modifications.



COUNTERBLOW VACUUM or Hi-Lo PRESSURE

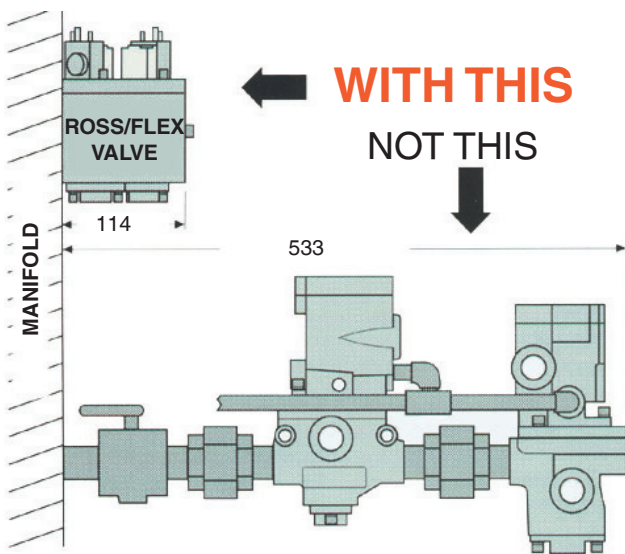
3/2 Directional Control Valve - High-Speed Poppet Design

REDUCE:

- Piping
- Number of Fittings
- Maintenance
- Downtime
- Labor Cost
- Volume to be Evacuated
- Compressed Air Usage

INCREASE:

- Reaction Speed
- Repeatability
- Flexibility: Ports located to suit user's piping
- Output
- PROFITS



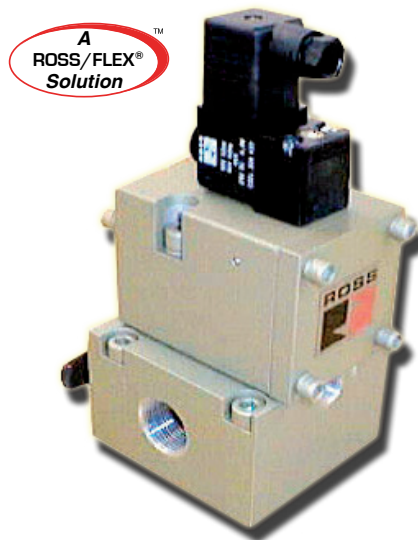
INSTALLATION COMPARISON (FOR THREE-GOB SYSTEM)

	ROSS	Present Std.
Space Needed	6,5 dm ³	86 dm ³
Time to Change-Out	< 1 min.	> 1 hour
Response Speed	RAPID	SLOW
Petcocks	0	3
Unions	0	12
Tees	0	6
Elbows	0	8
Hard-wired junction boxes	0	6
Length of tubing	0	about 5 m
Threads to be made	12	75

FINAL BLOW, SETTLE BLOW, FINISH COOLING, BLOW OFF

3/2 Directional Control Valve - Pressure Booster Options

- High-speed poppet construction
- Constant repeatability
- Non friction seat seals
- Non-lube
- Specialised low-wear body-coating
- Quick exhaust, pressure booster options
- Locking, non-locking manual overrides
- Special base options



STANDARD SPECIFICATIONS

Solenoids: Standard voltages 200-240 volts 50/60 Hz;
100-120 volts 50/60 Hz; 110 volts d.c. 24 volts d.c.

Power Consumption: 30 VA inrush, 16 VA holding on 50
or 60 Hz; 11 watts on d.c.

Flow Medium: Filtered air.

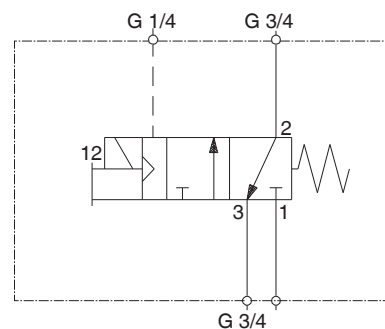
Ambient Temperature: -17° to 80° C (0° to 175° F).

Media Temperature: -17° to 150° C (0° to 300° F).

Inlet Pressure: 2 to 10 bar (30 to 150 psig).

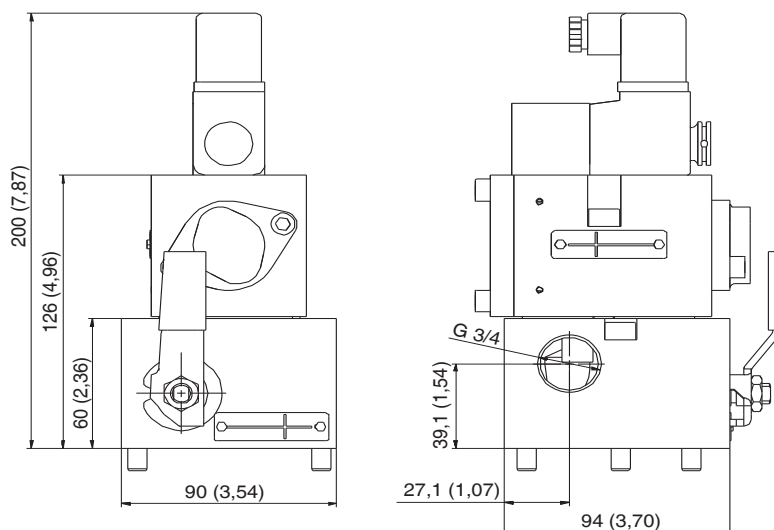
Consult ROSS for lower inlet pressure.

Model Numbers
D2173A5950 (Valve)
D749G91 (Base)



We reserve the right to introduce technical modifications.

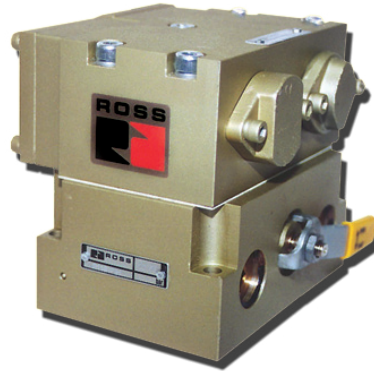
Dimensions - mm (inches)



MOLD OPEN / CLOSE VALVE

3/2 Directional Control Valve - Pressure Operated with Pressure Booster

- High-speed poppet construction
- Constant repeatability
- Non-friction seat seals
- Non-lube
- Specialised low-wear body-coating
- Blowhead compatible
- Separate kick-off available
- Built-in flow controls and inlet shut-off
- Built-in pressure boosters
- Special base and two signal options



Model Number: D3900B0700

Kick-off Valve



Model No.: D1223A1900

DESIGN

Poppet Valve: Viton-seals on metal seats.

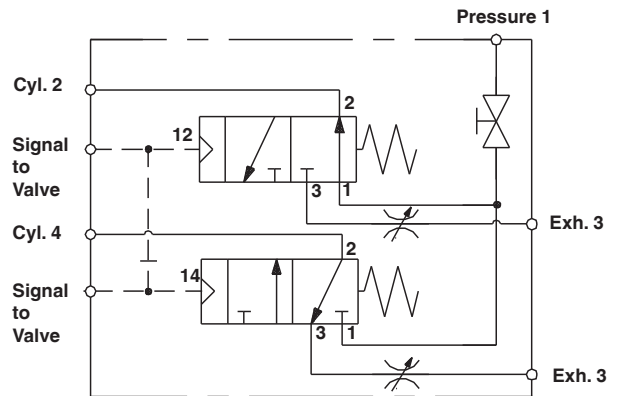
Body: Aluminum alloy, anodized.

STANDARD SPECIFICATIONS

Flow Medium: Compressed air, filtered.

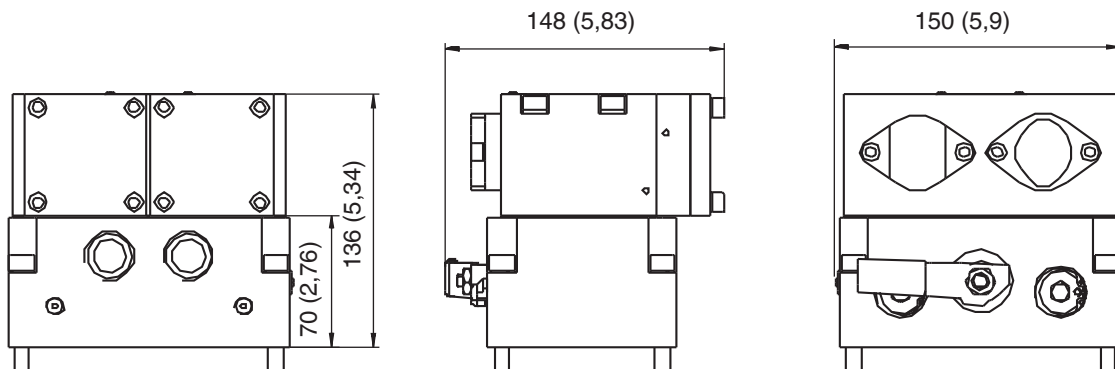
Ambient Temperature: -17° to 150° C (0° to 300° F).

Media Temperature: -17° to 150° C (0° to 300° F).



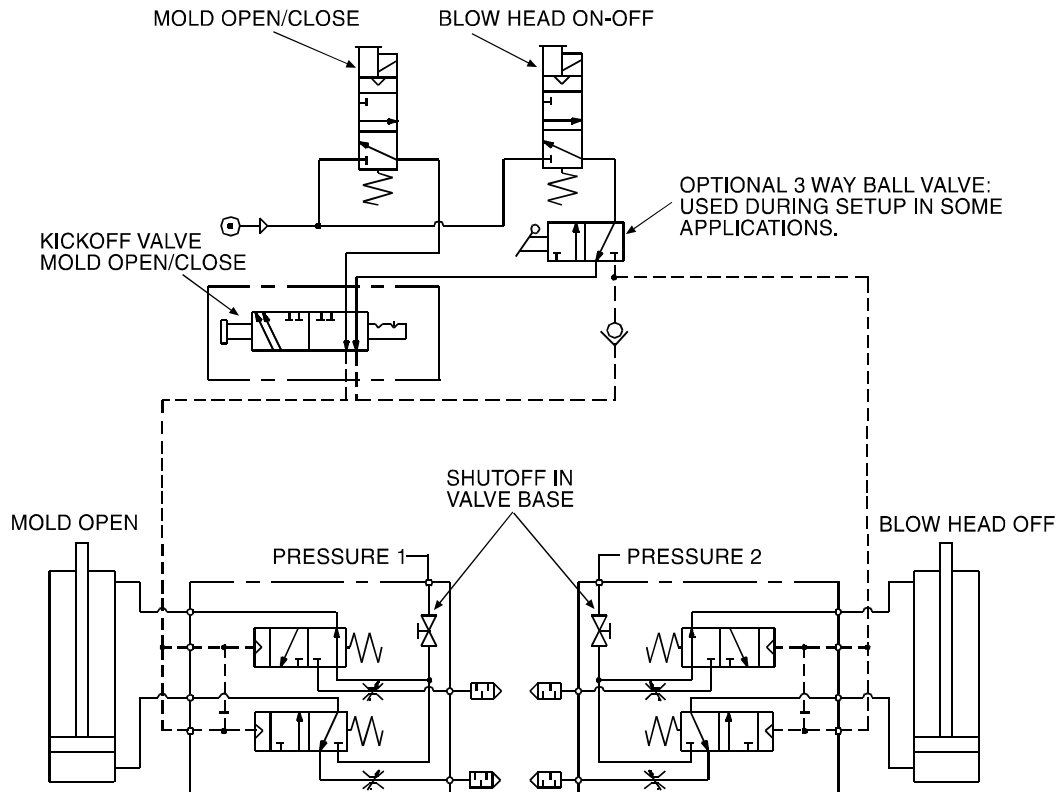
We reserve the right to introduce technical modifications.

Dimensions - mm (inches)



MOLD OPEN / CLOSE VALVE

3/2 Directional Control Valve - Pressure Operated with Pressure Booster



PLUNGER UP or DOWN, COOLING

3/2 Directional Control Valve - Manifold Design

- High-speed poppet construction
- Constant repeatability
- Non friction seat seals
- Non-lube
- Specialised low-wear body-coating
- Quick exhaust, pressure booster options
- Solenoid, remote pilot options
- Locking, non-locking manual overrides
- Base options



STANDARD SPECIFICATIONS

Solenoids: Standard voltages 200-240 volts 50/60 Hz;
100-120 volts 50/60 Hz; 110 volts d.c. 24 volts d.c.

Power Consumption: 10,9 VA inrush, 8,5 VA holding on
50 or 60 Hz; 6 watts on d.c.

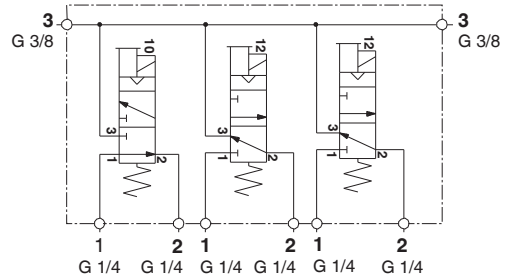
Flow Medium: Filtered air.

Ambient Temperature: -17° to 80° C (0° to 175° F).

Media Temperature: -17° to 150° C (0° to 300° F).

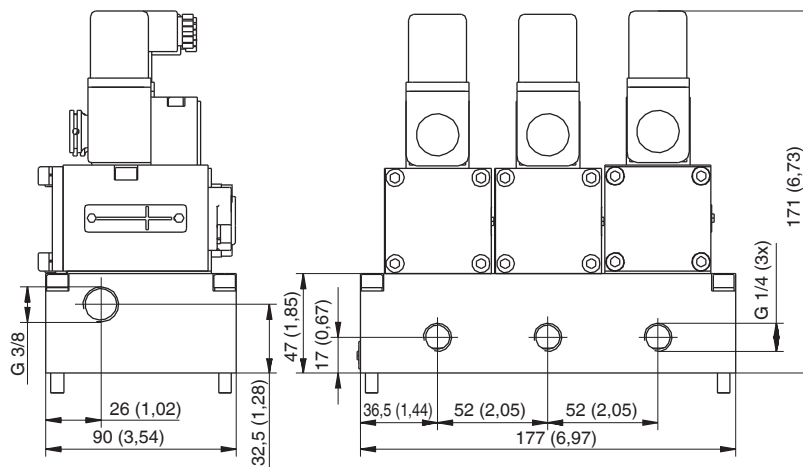
Inlet Pressure: 2 to 10 bar (30 to 150 psig).

Model Number: D3900A0844



We reserve the right to introduce technical modifications.

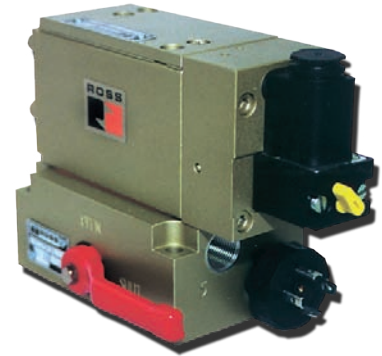
Dimensions - mm (inches)



PUSHER VALVE

5/2 Cartridge Poppet Valve - Solenoid Pilot Operated - Internal Pilot Supply

- High-speed poppet construction
- Constant repeatability
- Non-friction seat seals
- Non-lube
- Solenoid, remote pilot options
- Dual pressure options
- Locking, non-locking manual overrides
- Special versions available



DESIGN

Poppet Valve: Viton-seals on metal seat.

Body: Aluminum alloy.

Size: ND 9, for existing ANSI-sub-base (Cv = 1), e.g. W500B91. ISO interface also available.

STANDARD SPECIFICATIONS

Solenoids: Rated for continuous duty; AC or DC power.

Power Consumption: 10,9 VA max. inrush, 8,5 VA max. holding on 50 or 60 Hz; 6,5 watts nominal on DC.

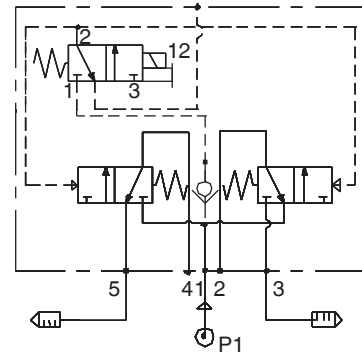
Flow Medium: Compressed air, filtered.

Ambient Temperature: -17° to 80° C (0° to 175° F).

Media Temperature: -17° to 150° C (0° to 300° F).

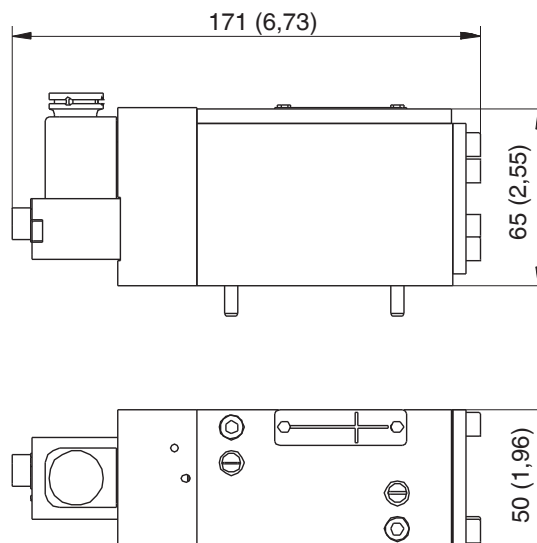
Inlet Pressure: 1,0 to 6 bar (15 to 90 psig).

Model Number: D2176D2903
(can be used for replacement of W7476A2910)



We reserve the right to introduce technical modifications.

Dimensions - mm (inches)



GLOBAL Reach with a LOCAL Touch.sm



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