FRESH AIR!
For Your Container Glass Production

Plug-and-Play Solutions
ROSS / FLEX® Process
Customer-specific Designs
manufactIS Service
SPOTLIGHT
AUF „SAFETY“

ROSS ist weltweit als versierter Problemlöser und Package-Provider bekannt.
Selbstverständlich umfasst unser Portfolio auch sicherheitsbezogene Applikationen, die wir ganz Ihren Bedürfnissen anpassen (siehe Beispiel). Sprechen Sie uns gerne an.

IHRE VORTEILE IM ÜBERBLICK

- 21-Ventil-Block. Kompakte Lösungen für die Minimierung von Stillstandzeiten.
- Hohe Schaltgeschwindigkeit und -konstanz während der gesamten Lebensdauer der Ventile.
- Counterblow-Vakuum-Ventile.
- Hoch-/Niederdruck-Ventile.
- Pegelstauung, Mündungskühlung.
- Fertigblasen, Festblasen, Mündungskühlung.
- Ventil zum Form-Öffnen / Schließen.
- Pusher-Ventile.
- „Blow mold“-Vakuum-Ventile.
- Slimline™-Ventile für Fertigblasen mit Schnellentlüftung oder Druckübersetzer (optional).
- Alle Produkte sind für Hochtemperaturreinsätze konzipiert.
- Blaspistole in Sitzventilkonstruktion.
- Modernste Proportionalventiltechnik.
- Alle Systeme und Produkte führen zu deutlichen Einsparungen (Verrohrung, Verschraubungen, Wartung, Stillstandzeiten, Arbeits- / Energiekosten).
- Gern arbeiten wir eine Lösung für Ihre ganz spezielle Anwendungsproblematik aus.

YOUR BENEFITS AT A GLANCE

- manufactis – The ROSS subsidiary offers an all-round service package for the container glass industry (more Info: www.manufactis.net).
- 21-Valve-Block. Compact solutions for downtime minimisation.
- High speed actuation and consistency over the whole life cycle of the valves.
- Counterblow vacuum valves.
- High-/low-pressure valves.
- Plunger control, finish cooling.
- Final blow, settle blow, finish cooling.
- Mold Open / Close valves.
- Pusher valves.
- „Blow mold“ vacuum valves.
- Slimline™ valves for final blow, including quick exhaust or pressure booster (optional).
- All products are designed for high-temperature applications.
- Blow pistol in poppet valve design.
- State-of-the-art proportional valve technology.
- All systems and products contribute to substantial savings (piping, fittings, maintenance, machine downtime, labor and energy cost).
- We will be glad to work out a solution to your specific application problem.
While ROSS proportional valves have proved to be true endurance runners with high system availability in many different fields of application, performance variations may occur, due to heavy-duty service under extremely tough operating conditions. For instance, wear and tear can be caused by contamination, residues of detergents and lubricants, or by tiny glass particles.

The new, compact ROSS testing unit in black box design with its individually configured test field, enables users to verify locally whether a proportional valve is still working up to its full performance volume (by interposing the black box, the valves can even be tested live on the machine). It is particularly important that precision and actuation speed of the valves maintain highest performance levels.

The test package was developed by ROSS EUROPA® (RE) on request of a customer from the container glass industry. The independent piloting electronics device may be used for the full range of ROSS proportional valve models. The portable electronics device stands out for its outspoken mobility. The desired testing mode can be selected and controlled easily, guided by clear menu steps. A Technical Description, including step-by-step instructions, as well as the separately available data sheet RESK 4591.0 will provide the user with all the know-how needed for expert handling of the test-package. Should there be need for further information, our specialists will be happy to provide the answers.

Focus is on the stabilization of the production process with the aim to minimize machine down-times. The unit is used for submitting valves on-site to a functional test, outside the productive process. Thereby a machine standstill will be avoided. The test may cover dynamics of the valve, for instance. Other test parameters include the rise and fall times. In order to ensure maximum repeatability for achieving highly reliable results, RE designed and implemented a sophisticated testing environment involving a full-fledged test bench with two-liter reservoir volume.
Any user will be able to verify very easily whether preset desired values are met, thus making sure that the respective valve works properly.

The test is simple and easy, following an uncomplicated, plug-and-play procedure. Customers benefit from a comprehensive, independent, mobile solution.

Cable kits are available for all valve types. Also, adapter plates have been manufactured for all valve interfaces, so that every single proportional valve type provided by ROSS can be tested individually.

**Test Installation without mounted Valve**

**Test Installation with mounted Valve**

**Components of the Mobile Test Bench developed by ROSS EUROPA®**
Pressure sensor between gauge and pressure reservoir is not pictured.
For detailed information about the components required for the test, see Data Sheet RESK 4591.0

The Test Unit in Practical Use

Faulty operation of the proportional valve in a work segment of the machine (station) is indicated on the monitor. Following an „exclusion step“ test procedure, the proportional valve is usually exchanged first under most-possible fault presumption aspects, in order to make sure that production can resume without any further delay (valve exchange is the easiest option in a fault analysis: „4 screws, 1 connector to handle...“).

Should the respective station still not operate properly, the further course of the „exclusion“ test procedure would most likely involve an exchange of the plunger cylinder(-s). Other possible causes for a fault might be defective tubes/hoses or mechanical parts.

The test procedure includes two steps:

1. Before exchanging plunger cylinders, test proportional valves for proper function on the test bench.

2. If the valve proves to be faultless, it will be stocked for the next maintenance/repair situation. Customarily, the exchanged valve will remain in the machine in order to avoid further downtime, that is, waste of productive time.
ROSS® Proportional Valve Technology: The Art of Permanent Improvement

ROSS proudly offers a complete line of proportional valves, Nominal Diameter ranging from 2.5 to 50. Various interface options as well as customized piloting concepts provide maximum flexibility. Feel free to download comprehensive Catalog E485A from our website www.rosseuropa.com. In addition, a large number of Data Sheets are available. Do not hesitate to contact us for details.

Take advantage of these KEY FEATURES:

- Proportional pressurizing and exhausting
- Digital piloting
- New electronics, featuring super fast processor
- Housing in seamless design
- Poppet valve design
- Temperature range up to 85°C
- Pressure- or volume regulation
- Highest precision and repeatability
- Small hysteresis
- Long service life
- Various interface options
- Automatic zero-point calibration
- Customized piloting and electrical connection
- Minimum maintenance
- High Enclosure Rating, IP 65
- Convenient base-mounting

This strong offering is rounded off by self-controlling software package Servo-Prop which makes sure that in case of a system fault the set values will be restored after the 8th valve cycle at the latest. ROSS EUROPA® will be happy to provide detailed information.

Your Benefits: optimized productivity, enhanced quality, less waste.
Test Unit for ROSS®-Proportional Valves

SPECIFICATIONS

Maximum Pressure: 5 bar.
Test pressure (pressure supply at G 1 inlet),
must be set to nominal valve pressure.
For valves with nominal pressure exceeding 5 bar,
test pressure must be set to 5 bar.
Temperature: 0 to 85°C
Port Size: G 1

Model Number: RESK 4591.0

Dimensions - mm

Sensor with Connector for Electronic Test Box
0 to 5 bar, 0 to 5 volts
Manual Exhaust
Cable - 3 m
<table>
<thead>
<tr>
<th>Adapter Plate Illustration</th>
<th>Proportional Valve Model Numbers</th>
<th>Adapter Plate Model Number</th>
</tr>
</thead>
</table>
| ![Adapter Plate Illustration](image1) | 01-SOP-03-00-0-0  
 01-SOP-03-00-0-1  
 01-SOP-03-00-0-3  
 ND 9,5 - ND 10,5, GPS-version | RESK 4152.17 |
| ![Adapter Plate Illustration](image2) | 120P190002  
 120P190003  
 120P190006  
 120P190010  
 120P190011  
 120P190012  
 120P190014  
 120P190016  
 ND 12, Bosch-version | RESK 4152.19 |
| ![Adapter Plate Illustration](image3) | 095P090000  
 095P090001  
 115P200000  
 115P200001  
 115P200002  
 115P200003  
 115P200006  
 115P200010  
 115P200012  
 115P200013  
 ND 7,0, Bosch-version | RESK 4152.20 |
| ![Adapter Plate Illustration](image4) | 120P210000  
 Valve 120P21, Sklostroj-version | RESK 4152.21 |
| ![Adapter Plate Illustration](image5) | 120P140002  
 120P140003  
 120P140012  
 120P140022  
 120P140023  
 120P140024  
 ND 12, 120P14, Heye-version | RESK 4152.22 |
<table>
<thead>
<tr>
<th>Illustration</th>
<th>Proportional Valve Numbers</th>
<th>Model Number Adapter Plates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01-SOP-01-00-0-2</td>
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<td>01-SOP-01-00-0-3</td>
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<td>01-SOP-01-00-0-4</td>
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<tr>
<td></td>
<td>ND 14, ROSS Proportional Valve</td>
<td>RESK 4152.23</td>
</tr>
</tbody>
</table>

|              | 200P160002                |                             |
|              | ND 20, ROSS Proportional Valve | RESK 4152.24              |

|              | 095P140002                |                             |
|              | 095P140012                |                             |
|              | 095P140022                |                             |
|              | ND 9,5, ROSS Proportional Valve | RESK 4152.25              |
Required Accessories

Electronic test box for all proportional valve models. Connecting/porting options at both sides, power cable included.

Model Number: RESK 4591.40

Shut-off Valve, G 1
Model-No.: YD1523C6002
Ambient/Media Temperature: 4° to 80° C.
Flow Medium: compressed air, filtered.

Pressure Regulator, G 1
Model-No.: C5213K6017
Ambient/Media Temperature: 0° to 60° C.
Flow Medium: compressed air, filtered.
Regulated Pressure: 0.5 to 12 bar.

Pressure Gauge, G 1/4
Model-No.: W5400A2011
Housing: ø 54 mm.
Pressure Range: 0 to 14 bar.
### Adapter Cable

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Connector</th>
<th>for Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESK 4591.60</td>
<td>Harting, square-type (with gold contacts)</td>
<td>120P140002, 120P140002.V2, 120P140022, 120P140022.V2, 120P140023, 120P140024, 120P140025.V2</td>
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<tr>
<td>RESK 4591.61</td>
<td>Wieland, square-type</td>
<td>01-SOP-01-00-0-2, 01-SOP-01-00-0-3, 01-SOP-01-00-1-2, 01-SOP-01-00-2-2, 095P140002, 095P140012, 095P140012.V2, 095P140022, 01-SOP-01-00-0-1, 140P170000, 200P160002, 095P140000, 095P140001, 120P140004, 200P160000, 200P160001, 200P160003, 200P160004</td>
</tr>
<tr>
<td>RESK 4591.63</td>
<td>Harting, square-type (Sklostroj-wiring)</td>
<td>120P210000</td>
</tr>
<tr>
<td>RESK 4591.64</td>
<td>(2x) M12, 5-pin</td>
<td>01-SOP-03-00-0-0, 01-SOP-03-00-0-0.V2, 01-SOP-03-00-0-3, 01-SOP-03-00-0-2, 01-SOP-01-00-0-4, 01-SOP-01-00-1-4, 01-SOP-01-00-1-9, 01-SOP-01-00-2-6, 01-SOP-01-00-0-6, 01-SOP-01-00-1-6, 120P190016</td>
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<tr>
<td>RESK 4591.65</td>
<td>M12, 5-pin</td>
<td>01-SOP-01-00-1-7, 01-SOP-01-00-0-5, 01-SOP-01-00-1-5, 01-SOP-01-00-1-0, 120P190014, 120P190012, 115P200012, 120P190002, 115P200013</td>
</tr>
<tr>
<td>RESK 4591.68</td>
<td>M12, 8-pin</td>
<td>01-SOP-01-00-1-8, 115P200000, 115P200001, 120P190010, 120P190011, 115P200010</td>
</tr>
</tbody>
</table>
Spare Parts

Pressure Gauge
Model-No.: RESK 4591.8

Port Size: G 1/2, radial, bottom-ported
Pressure Range: 0 to 10 bar

Pressure Transmitter, incl. 3 m Cable with Connector
Model-No.: RESK 4591.43

Safety Precautions

⚠ Before exchanging a valve, air supply must be shut off.

⚠ All equipment to be used by trained staff only.

ORDERING INFORMATION:

For testing a ROSS® Proportional Valve, the following components are required:

• Test Unit RESK 4591.0
• Adapter Plate (see Pages 2 and 3 for appropriate design)
• Electronic Test Box RESK 4591.40 (see Page 4 for details)
• Adapter Cable (see Page 4)
• Pressure Regulator (see Page 4)
• Shut-off Valve, (see Page 4)
Well-proven Design, Broad Application Range

The versatile, robust ROSS® proportional valve has proved its value over many years in the hollow-glass-making industry, controlling plunger, blowing and forming functions in a safe, reliable and cost-efficient way. Now an increasing number of other industries discover the many convincing benefits of this product which ensures steady pressure conditions over long periods of time. For instance, it proved to be a great solution for designing dancer controls in the steel industry and for the proportional control of air brakes on a sophisticated technical level (e.g. soft brake and soft system restart). The ROSS proportional valve features an integrated electronics module and sensors designed to control both system pressurizing and exhausting. They can be set in such a way that precise controlling within a certain range of electronic data (0 – 10 V or 4 – 20 mA) is guaranteed. The electronic heart of the valve ensures that in case of changed operating conditions the set values will be restored after the 8th valve cycle at the latest, thanks to „ADC“ software (see following page). This makes life easier for the machine staff because there is no need to permanently monitor proper functioning of machine and system.

Designed for proportional pressurizing and exhausting, the valve provides actuation positions ranging from 0 to 100%. The parameters can be modified permanently, maximum repeatability is ensured. The set pressure is kept up precisely, even if disturbances occur in the system, caused by faulty seals, component wear, pressure drop, variations in the pressure supply, or other influences.

Regardless of the specific application and the industrial work environment — one of the major benefits of the proportional valve resides in the fact that it operates reliably as an integrated pilot-main-valve-package with exemplary system uptime. Last, but not least, the „Two-in-One“-design provides great opportunities for reducing procurement cost and mounting times.

The ROSS proportional valve also scores against the backdrop of energy consumption aspects: Specifically designed internals result in a very small hysteresis providing optimum efficiency. The valve stops air supply as soon as the best-possible work pressure is reached. Permanent supply of compressed air is not required, which makes the ROSS proportional valve a very economical control item in your system.

Force-balanced valve elements, the unbeatable ROSS poppet design, stainless-steel internals as well as excellent sealing properties guarantee a consistently reliable actuation performance in dirty, caustic environments, as can be found in the paper manufacturing and textile industries, for instance.
Features:

I. A Smart Package:

ROSS® proportional valves are the ideal choice for applications under rough operating conditions, as can be found in the field of hollow-glass-making, for instance. You can even say, these valves like it hot. In order to secure steady top-level performance even in a demanding environment governed by fast-changing parameters, ROSS® developed the ADC software (Automated Disturbance Control).

II. Function:

The ADC electronic tool ensures fast and reliable value readjustment involving the following parameters:

- Leakage in the pneumatic system
- Compressed air variations in the circuit
- Voltage variations
- Temperature variations

A specific algorithm verifies the valve’s regulating curve on a permanent basis. If deviations from the set values are caused by one of the above mentioned anomalies, the valve immediately starts its resetting process. After as few as 6 to 8 valve cycles the desired values will be restored.

III. Benefits:

- Enhanced productivity
- Improved quality
- Less wear
To sum it up:

ROSS proudly offers a complete line of proportional valves with nominal diameters ranging from 2.5 to 50. Maximum flexibility is achieved due to highest-possible adaptation to customers’ requirements (e.g. interface options, customized piloting).

Benefits at a Glance:

- Proportional pressurizing and exhausting
- Digital piloting
- New electronics with super fast processor
- Housing in seamless design
- Poppet valve construction
- Temperature range up to 85°C
- Pressure or volume control
- Maximum precision and repeatability
- Small hysteresis
- Long service-life
- Interface options
- Automatic zero-point readjustment
- Customized piloting and electrical connection
- Minimum maintenance
- High Enclosure Rating, IP 65
- Sub-base concept

The proportional valve is an established winner in the ROSS® line of premium air controls. This multi-talented, smart power package stands out for a range of productivity-enhancing virtues, such as continuity, intelligence, sensitivity and, last but not least, extraordinary balancing capabilities. It is a small wonder that this product enjoys growing popularity on the pneumatics scene worldwide.
DESIGN FEATURES

Solenoid plate with individual access to each cartridge unit. The plugs are secured by two holding bars.

MATERIALS

Plate: Aluminum
Plugs: Brass

OPERATION

3-position manual override or electrical actuation.

PORTS

Exhaust: G 1
Pilot air: G 1/4

INSTALLATION

Installation to the IS Machine should be done by specifically trained staff only.

IMPORTANT SAFETY INSTRUCTIONS

It is essential that all air pressure is exhausted from the block before beginning cartridge exchange.

Make sure that the holding bars are installed properly.

SPECIFICATIONS

Solenoid: Rated for continuous duty.
Electrical Characteristics: 24 VDC, 6.8 W
Pilot system: ND 2, Exhaust 2.3
Compressed air: must be filtered
Ambient temperature: 4° - 80°C
Media temperature: 4° - 105°C
Pilot pressure: max. 5.5 bar
Weight: 18 kg
Scope of delivery: Coil plate, minus conductor, tool (1x)*

ACCESSORIES

*Cartridge & plug Assembly / disassembly tool M10/M5: Part No. D672F86
Cartridge NC, red: Part No. D365H97
Cartridge NO, blue: Part No. D366H97

A High Speed Control Block can be ordered directly from our subsidiary manufactIS. Further information and contact via www.manufactis.net

Ordering Code:
RESK 5416.1
DIMENSIONS — mm

SPARE PARTS INFO

Pilot insert, ND 2, complete, solenoid included: (see illustration at right): Part No. D386G97

Coil 24 VDC, 6.8 W with spades: Part No. 372L33

Knurled screw: Part No. 123A38

Disc: Part No. 117J37
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 NL/min.
Nominal Diameter: 14 mm.

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

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

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.
CARTRIDGE Size 14mm for 21-Valve Block on I/S Glass Machines
3/2-Way, Normally Open, Spring Return — Blue Housing

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

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

Section A-A

Lubricate O-Rings before assembly
Housing anodized in blue
Thread for disassembly

Mark for assembly, max. flow

Subject to technical change.

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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

Subject to technical change.

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Ross Asia K.K. • Ross Asia K.K. China Liaison Office • Ross Controls India Pvt. Ltd.

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Form RE-E-A10209
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

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.

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

Dimensions - mm

We reserve the right to introduce technical modifications without notice.
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

Dimensions - mm (inches)

We reserve the right to introduce technical modifications.
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

Dimensions - mm (inches)

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Form RE-E-A10132H
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: 2175D5912

Dimensions - mm (inches)

EXHAUST

VACUUM
(or 2nd INLET PRESSURE)

CYLINDER

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)

<table>
<thead>
<tr>
<th></th>
<th>ROSS</th>
<th>Present Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Needed</td>
<td>6.5 dm³</td>
<td>86 dm³</td>
</tr>
<tr>
<td>Time to Change-Out</td>
<td>&lt; 1 min.</td>
<td>&gt; 1 hour</td>
</tr>
<tr>
<td>Response Speed</td>
<td>RAPID</td>
<td>SLOW</td>
</tr>
<tr>
<td>Petcocks</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Unions</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Tees</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Elbows</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Hard-wired junction boxes</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Length of tubing</td>
<td>0</td>
<td>about 5 m</td>
</tr>
<tr>
<td>Threads to be made</td>
<td>12</td>
<td>75</td>
</tr>
</tbody>
</table>

WITH THIS

NOT THIS

ROSS CONTROLS® • ROSS EUROPA GmbH • ROSS UK Ltd. • ROSS SOUTH AMERICA Ltda
ROSS ASIA K.K. • ROSS ASIA K.K. CHINA LIASON OFFICE • ROSS CONTROLS INDIA Pvt. Ltd.
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.

Dimensions - mm (inches)

Model Numbers
D2173A5950 (Valve)
D749G91 (Base)
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

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).

Dimensions - mm (inches)

Model Number: D3900B0700

Kick-off Valve

Model No.: D1223A1900

Pressure 1

We reserve the right to introduce technical modifications.
MOLD OPEN / CLOSE VALVE
3/2 Directional Control Valve - Pressure Operated with Pressure Booster

MOLD OPEN/CLOSE

BLOW HEAD ON-OFF

OPTIONAL 3 WAY BALL VALVE: USED DURING SETUP IN SOME APPLICATIONS.

KICKOFF VALVE
MOLD OPEN/CLOSE

SHUTOFF IN VALVE BASE

MOLD OPEN

PRESSURE 1

PRESSURE 2

BLOW HEAD OFF
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

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)

Dimensions - mm (inches)

We reserve the right to introduce technical modifications.
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ROSS® hat sich als Hersteller und Anbieter von Premium-Pneumatiklösungen auf allen Kontinenten fest etabliert. Unsere Fähigkeit, massgeschneiderte Produkte sowie anschließfertige Systeme zu entwickeln, wird als Industriestandard weitgehend geschätzt.


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