SMC - Experts in the Automotive Industry
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Series CLKZ1R, CNOMO Std
Power Clamp Cylinder

Features
- Constant clamp pressure is applied even if the thickness of the work piece varies.
- Aluminium body provides light weight construction.
- One way lock mechanism ensures work is held.

Series CKZT
Slim Line Power Clamp

Features
- Rounded Cover design reduces weld spatter accumulation.
- Elliptical piston design achieves narrow body shape.
- Easy proximity cassette installation and removal.
- Adjustment bolt for changing arm opening angle.
- Protective seal design is less effected by poor air quality.

Series CK1
Clamp Cylinder, Bore Sizes: ø40, ø50, ø63

Features
- Two types of clevis width (16.5 & 19.5mm).
- Piping entry orientation can be selected as required.
- Gaiters are unnecessary—heavy duty copper scraper is provided as a countermeasure against weld spatter.
- Built-in speed controllers.
- Non-lube type.
Series CKA
Large Bore Clamp Cylinder

Bore Sizes: ø80, ø100

Features

- Clevis width (28mm).
- Piping entry orientation can be selected as required.
- Gaiters are unnecessary—heavy duty copper scraper is provided as a countermeasure against weld spatter.
- Built-in speed controllers.
- Non-lube type.

Series D-P □
Tie Rod Mount Weld Immune Auto Switch

Two colour LED
40ms Response

Series D-P □
Tie Rod Mount Weld Immune Auto Switch

High Magnet Field Resistance
1.2 ms Response suit CKP only
Series CLK1
Clamp Cylinder with Lock

Bore Sizes: ø32, ø40, ø50, ø63

Features
- Extra piping or valving is not required.
- Lock is controlled from the Directional Control Valve.
- Compact lock mechanism.
- Lock engages when residual pressure is exhausted regardless of work piece thickness or end stop position.
- Multi-porting options like the CK1 Series.

Symbols
- Clamp side locking type
- Unclamp side locking type

New lock Circuit Design
Conventional Lock Circuit

Holding a clamped state
Prevents work piece slippage and dropping due to work piece weight.

Holding an unclamped state
Prevents dislocation of home position due to weight of clamp arm.
Series CKGV
Clamp Cylinder, Bore Sizes: ø50, ø63

Features
- Mounting from 2 sides.
- Three piping directions.
- 2 piston seals allow for low friction travel until 6 degrees before the clamp closes when the 2nd seal starts to develop its force.
- Mechanical locking system based on the quadrilateral joint law—can only be released by air in the retraction port or a vertical force applied to rod end.
- Adjustable stroke on retraction and still maintaining rubber cushion.
- Optional manual override lever available, left or right side.

Series CKQC/CLKQ
Locating Pin Clamp Cylinder, Bore Sizes: ø50

Features
- Clamping position height adjustable from 0.5 to 2mm by addition of shims.
- Optional lock to hold pin clamp in place in case of air loss.
- 2 types of guide pin—round or diamond.
- Variety of body mounting positions.
- Magnetic field resistant switches are available.

Series CKQR
Pin Shift Cylinder

Features
- Non rotating mechanism is standard.
- The cylinder can be mounted on any of the 3 side surfaces or the bottom surface to provide flexibility in mounting.
- Option in two pin diameters, ø25mm and ø40mm.
Heavy Duty Series MK2
Rotary Clamp

Features
- Compact rod extends and rotates design.
- Strong clamping force.
- Left or right rotation.
- Auto switch is attachable.
- Clamp are available as an accessory.

Series MRQ
Linear Rotary

Releasing a workpiece
Change Direction

Series CQ2
Compact Cylinder: Standard Type, Single Rod

Bore Sizes: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100, ø125, ø140, ø160, ø180, ø200

Features
- Unique range of products and sizes.
- Compact, light weight, space-saving design.
- Single or double acting.
- Non-rotating piston rod option (ø12 to 63 only).
- Bore sizes: ø12 - 200mm.
Series CQM
Compact Cylinder: Guide Rod Type, Double Acting, Single Rod
Bore Sizes: φ12, φ16, φ20, φ25, φ30, φ40, φ50, φ63, φ80, φ100

Features
- 3 to 4 times stronger anti-lateral load (compared to CQ2).
- Loads can be directly mounted.
- Compatible mounting dimensions with CQS/CQ2.
- Autoswitch is mountable/removable even when the plate is retracted.

Series CM2
Air Cylinder: Standard Type, Double Acting, Single Rod
Bore Sizes: φ20, φ25, φ30, φ40

Features
- Longer life.
- Compact and lightweight.
- Excellent dust resistance.
- Reduced piston rod deflection.

Series CA2, Bore Sizes: φ40, φ50, φ63, φ80, φ100
Air Cylinder: Standard Type, Double Acting, Single Rod

Features
- Tie rod construction.
- Air cushion design.
- Easy cushion valve adjustment.
- Piston rod deflection minimised.

Additional Options Upon Request
Series CBA2
Endlock Series
Bore Sizes: ø40, ø50, ø63, ø80, ø100

Features
- End lock cylinder either at rod or head end.
- Dimensions are the same as CA2 Series.
- Lock can be either by air release or manually.

Series CNA
Cylinder with Lock
Bore Sizes: ø40, ø50, ø63, ø80, ø100

Features
- Fine Lock Cylinder suits applications for:
  - Intermediate stops.
  - Emergency stops.

Series CS1
Compact Cylinder: Guide Rod Type, Double Acting, Single Rod
Bore Sizes: ø125, ø140, ø160, ø180, ø200, ø250, ø300

Features
- 3 to 4 times stronger anti-lateral load (compared to CQ2).
- Loads can be directly mounted.
- Compatible mounting dimensions with CQS/CQ2.
- Autoswitch is mountable/removable even when the plate is retracted.

Additional Options Upon Request
- Low Friction
  Series CS1□Q
- Air-hydro version
  Series CS1□H
Series CLS
Cylinder with Lock, Double Acting, Single Rod

Bore Sizes: ø125, ø140, ø160, ø180, ø200, ø250

Features
- Manual unlocking function.
- Design minimises the influence of unlocking air quality.
- Compact lock unit weight and saves space.
- Fail safe construction, spring to lock.

Series C85
ISO Cylinder: Standard/Non rotating Type

Double Acting, Single/Double Rod
Bore Sizes: ø8, ø10, ø12, ø16, ø20, ø25

Features
- Conforms to CETOP RP52P and ISO 6432 standards.
- Double acting models.
- High speed actuation.
- Auto switch sensing option.
- Special rod seal gives high resistance to dust ingress.
- Easy & accurate mounting.
- Exceptional service life.
- Non-rotating and double rod options.
- Air cushioning option.

Series C76
Cylinder: Standard/Non rotating Type, Double Acting, Single/Double Rod

Bore Sizes: ø32, ø40

Features
- Easy-accurate mounting.
- Conforms to CETOP RP52P and ISO 6432 standards.
- High Speed Actuation.
- Replaceable Rod Seal.
- Strong, Corrosion-proof Barrel.
Series C95
ISO/VDMA Cylinder: Standard Type
Double Acting, Single/Double Rod
Bore Sizes: ø32, ø40, ø50, ø63, ø80, ø100, ø125, ø160, ø200, ø250

Features
- Dimensions conform to VDMA, ISO & CETOP Standards.
- Piston force to 7500N.
- Adjustable stroke end cushioning.
- High repeatability regardless of load.
- Ultra low friction & long life.
- Double & Non-rotating rod types available.
- Guide units available.

Series CP95
Profile Design Air Cylinder
Bore Sizes: ø32, ø40, ø50, ø63, ø80, ø100

Features
- Conforms to VDMA 24 562 (parts 1 and 2), ISO 6431 and CETOP standards.
- Combines lightweight profile barrel design with enclosed tie rods for clean lines.
- Unique seal system ensures efficient performance and long life.
- Fully adjustable cushioning at end of stroke.
- Magnetic proximity sensing.
- Superior cushioning performance and Kinetic energy absorption.
Series C55
ISO Standard [ISO 21287] Compact Cylinder

Bore Sizes: ø20, ø25, ø32, ø40, ø50, ø63

Features

- Standard ISO compact cylinders with standard outside dimensions according to ISO21287.
- Full range of brackets available.
- Tapped body with through holes for easy mounting.
- Male rod thread is available as an option.

Series MY1
Rodless Cylinder

Bore Sizes: ø16, ø20, ø25, ø32, ø40, ø50, ø63

Features

- 5 Guide Types Available:
  - MY1B: Basic Style
  - MY1M: Slide bearing
  - MY1C: Cam follower
  - MY1H: High precision with integrated linear guide.
  - MY1HT: High rigidity with twin linear guides suitable.

Series LX/LJ1
Electric Actuator

Features

- LX: Short Strokes up to 200mm.
- LJ1: Strokes up to 1500mm.
- Variety of controls - Servo/Stepper/Optional Brake.
- Choice of guide types depending on accuracy required.
Series E-MY2

E - Rodless

Features

- No PLC required - operates off the same signal as a solenoid Valve.
- One-button stroke learning function
  • 5 intermediate stops possible.
- Acceleration & maximum velocity can be adjusted.
- 2 guide types available: E-MY2C / E-MY2H.
- Some standard strokes ex-stock Australia.

Section 2

Guided Actuators/Grippers

Series MGP

Compact Guide Cylinder

Bore Sizes: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Features

- Compact design incorporates cylinder body as part of guide body.
- High resistance to side loads.
- For even higher loads, see MGPS Series.
- Piping from two directions possible.
- Optional air cushion & longer stroke available, up to 400mm.
- Coil scraper for harsh environments.
- Frost, weld spatter or machining chips from Rod & guide rods.
Series MG□□-RN/HN
End Lock Guide Cylinder

Bore Sizes: ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

- Optional Rod or rear end lock available.
- Locking or Non-locking type.
- Body dimension only increases by 25mm to standard.

Series MGPS
Heavy Duty Compact Guide Cylinder

Bore Sizes: ø50, ø80

- Compared with the MGPM ø50 standard slide, the MGPS ø50 reinforced slide bearing provides.
  - 10% more lateral load resistance.
  - 25% more eccentric lateral load capacity.
  - 140% more impact load resistance.

Series MGG
Guide Cylinder with Shock Absorber

Bore Sizes: ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Series MGF
Guide Table

Bore Sizes: ø40, ø63, ø100

Changing of transfer direction
**Series MGT**

**Turntable Cylinder**

Bore Sizes: \(\varnothing 63, \varnothing 80, \varnothing 100\)

---

**Application Example**

Assembly lines, inspection lines etc. with turning operations

---

**Series RSH/RS1H**

**Heavy Duty Stopper Cylinder**

Bore Sizes RSH: \(\varnothing 20, \varnothing 32\)

Bore Sizes RS1H: \(\varnothing 50, \varnothing 63, \varnothing 80\)

---

**Option**

With lock mechanism

Lever basis position  Lever lock  Lock cancel
Series MGZ
Non-Rotating Double Power Cylinder

Bore Sizes: ø20, ø25, ø32, ø40, ø50, ø63, ø80

- Integrated piping from the head cover.
- Unique construction doubles pressurized area for extension.
- Ideal for lifting and pressing operations.
- Up to 40% cross section space saving compared to conventional twin guide rod cylinders.
- Clean line on external surfaces.

Air pressure supplied from A operates on both surfaces ① and ②. (Extension)
Air pressure supplied from B operates on surface ③. (Retraction)

Application examples

Series MHT2
Toggle Style Gripper

Bore Sizes: ø32, ø40, ø50, ø63

Features

- The toggle mechanism holds work even when pressure drops.
- Ideal for holding heavy work.
- Auto switches available.
Series MHL2
Wide Opening Gripper
Bore Sizes: ø10, ø16, ø20, ø25, ø32, ø40

Features

- One unit can handle work pieces with various diameters.
- A large amount of gripping force is provided through use of double piston mechanism.
- Compact design, multiple mounting points.
- Fingers synchronized by rack and pinion mechanism.
- Built-in dust proofing mechanism.

Series MHS
3 Parallel Style gripper
Bore Sizes: ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100, ø125

Features

- Holding force from 14N up to 1270N.
- Variety of options avail:
  - MHSJ: Dust Cover
  - MHSH: Centre Pusher
  - MHSL: Long Stroke Jaws
  - MHSHJ: Combination Cover & Pusher.
- 2 & 4 fingers are also available.

Gripping of different diameter workpieces
Air blowing
Pushing out a workpiece with external cylinder
Section 3
Manual Valves

Series VSH
5 Port Hand Valve

Features
- Hand lever valve - metal spool.
- Sub-base or manifold mount.
- 5/2 & 5/3 positions.

Series VH
4 Port Hand Valve

Features
- Robust handle.
- 5/2 & 5/3 positions.
- Panel mount option.
- Common exhaust port.

Series VHA
Release

Features
- Residual pressure release valve.
- Assist maintenance where there is trapped line pressure as a result of using a centre closed valve.
- 0 to 1MPa pressure range.

Series CB-97XH
Push-in indicator

Features
- 10mm Push-in pneumatic indicator.
- Detection for charged lines;
  - Exhaust port of VHA200
Series VHK
2 or 3 Port Finger Valve

Bore Sizes: ø32, ø40, ø50, ø63

Features
- Compact.
- Light duty applications.

Series VM
Mechanical Valves 3/2 and 5/2

Features
- Variety of Valve controls available:
  - Roller.
  - Plunger.
  - Flush mount button.
  - Mushroom button.
  - Twist selector.
  - Key lock.
  - Adjustable lever or roller.
  - Foot Pedal.

Series VM
Large Push Button

Features
- Oversized Buttons for Operators wearing gloves.
  Available in Red, Green & Black.
  VM 130 - 01 - 30*-X105
    65mm mushroom button with guard
  VM 130 - 01 - 30*-X107
    65mm mushroom button
  VM 130 - 01 - 30*-X112
    40mm mushroom button with medium guard
Series VR51
Two hand control valve

Features
- An output is available through synchronised, two-handed operation (within 0.5s).
- Equipment having a safety circuit.

Section 4
Flow Controls and Other

Series AS
Elbow Type (Metal Body)

Features
- Speed controller with one-touch fitting.
- Metal body.

Series AS-M
Speed Controller for Low Speed Operation

Features
- Standard type metal body.
- Brass components are nickel plated.
**Series AS□□□1F-T**

Tamper Proof Speed Controller. Elbow type/Universal type

**Features**
- Tamper proof, internal slot for adjustment.
- Able to adjust flow by a special tool.
- Prevention of an unnecessary manual operation.
- Variety of body styles: Metal and plastic elbow, plastic in line.

---

**Series ASS**

Safety Speed Control Valve 8SSC Valve

**Features**
- In-line soft start mechanical Valve.
- Speed control valve fixed throttle with rapid air supply adjustment.
- Meter-in and meter-out available.
- Prevent raid cylinder movement when no back pressure is present.

---

**Series ASP**

Speed Controller with Pilot Check Valve

**Features**
- Pilot check valve and speed controller are combined.
- Realizes momentary intermediate stoppage of a cylinder and able to adjust speed control of it.
- Tubing mount direction is 360° free.
- Electroless nickel plated is provided as standard.
Series ASR/ASQ
Air Saving Valve

Features

- Save on air consumption for cylinder return stroke under no load.
- Fixed or adjustable pressure with std flow control features.
- Two direction flow control valve with quick exhaust with adjustable pilot pressure.

Series AS□□□□FE
Speed Controller with Residual Pressure Release Valve with One-touch Fitting

Features

- Residual pressure can be easily released with one push of button.
- Eye-catching red color release button.

Series VR13**
Double Check Valve

Features

- Residual pressure outlet - 1/4" port, aluminium cast body.
- VR1350 is a direct outlet.
- VR1355 has a flow control attached for controlled exhaust.
Series KEA/KEB/KEC
Residual Pressure Exhaust Valve

Residual pressure inside the cylinder is released to the atmosphere by pressing the button.

JIS symbol

Without push button guard
With one-touch fitting

With push button guard
With one-touch fitting

With push button guard
Rc screw

<table>
<thead>
<tr>
<th>Model</th>
<th>Applicable tubing O.D. mm</th>
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<tbody>
<tr>
<td>KEA06</td>
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<tr>
<td>KEA08</td>
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<table>
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<tr>
<th>Model</th>
<th>Connection thread</th>
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<tr>
<td>KEC-02</td>
<td>Rc1/4</td>
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<tr>
<td>KEC-03</td>
<td>Rc3/8</td>
</tr>
</tbody>
</table>

Series 25**
Metal Silencers

Features

- Metal casing for harsh environments.
- 19dB(A) noise reduction.
- Available from 1/4" up to 1".

[Image of metal silencer]
Series AN□00
Silencer Standard Type

Features
- Over 30 dB (A) noise reduction.
- Low back pressure.
- Compact and easy mounting.

Series AMC
Exhaust Cleaner

Features
- Ensures clean plant air and reduces noise pollution;
  Over 35 dB (A) noise reduction.
  Over 99.9% oil mist removal.
- Oil emissions can be captured and disposed of responsibly.

Series KR
Flame Resistant Fittings

Features
- Push-in spatter resistant fittings.
  - 6mm to 12mm
**Series KQG**
**Stainless Steel 316, One Touch-Fittings**

**Features**
- **Material**
  - Metal parts: Stainless steel 316.
  - Seal parts: Special FKM.
- Can be used with steam.
- Operating fluid temperature: 
  -5 to 150°C
- Grease-free.

**Series TRS**
**FR Soft Nylon Tubing**

**Features**
- **Flame Resistance**
  (Equivalent to UL-94 Standard V-0).
- Applicable for general air pressure and water in a spark atmosphere such as spot welding.
- Variety of colours: Black, Yellow, Blue, Red and Green.
Series TRBU
Flame Resistant Tubing

Features
- For general air and water piping in environments with sparks from spot welding, etc.
- Double layer construction using flame resistant resin (equivalent to UL-94 Standard V-0) in the external layer.
- Applicable for general air pressure and water in a spark atmosphere such as spot welding.
- Variety of colours: Black, Yellow, Blue, Red and Green.

Sectional view of FR double layer polyurethane tube

Series TK
Tube Cutter

Features
- Tube Cutter: TK-1.
- Perpendicular cutting.
- Reduced operating force.
- Enclosure/safety lock contained.
- Tube Cutter: TK-2
  Possible to cut a tube up to 18mm.
- Tube Cutter: TK-3 [Useful type]
  Safety lock contained.
**Series TKS**

**Double Layer Tubing Stripper**

**Features**

- Allows easy stripping of the outer layer from double layer tubing.
- Available sizes: 06, 08, 10, 12mm.

**Series VMG/KN**

**Blow Gun/Nozzle**

**Features**

- Effective sectional area 30mm².
- Pressure loss is less than 1%.

**Effect of Energy Saving Improvement**

*Before* 0.04 MPa  
*After* 0.003 MPa

**Nozzle type**

- Male thread nozzle
- Low noise nozzle
- High efficiency nozzle
- Pivoting nozzle with self-align
- Needle sensing head
**Series KK**
- With sleeve lock (Except for KK2)
- Effective area 3.8 to 82 mm$^2$
- Sleeve cover standardised

**Series KKH**
- Without sleeve lock
- Effective area is equivalent to that of Series KK.

The pulling strength for the plugs and sockets has been improved. Twice as strong as the conventional models.

**Series KKA**
- Body material: Stainless steel 304
- Seal material: Special FKM
- Non-greased specification
- Operating temperature range:
  -5 to 150°C

Connection port size 1, 1¼, 1½ is newly added.
(Series KKA7/8/9)

**Series KK13**
- Manufactured by RECTUS AG
- Connection port size 1, 1¼, 1½ is newly added.
Section 5
Airline Equipment

Series FQ1
Filter for cleaning Solvent, Quick change filter

Features
- Element replacement in only 60 seconds.
- No tools required, easy element replacement.

Series FN1
Low Maintenance Filter

Features
- A unique element design with back-flush feature generates.
- Eco-friendly regenerative filter.
- Cleaning solvent/Coolant.
- Back flush capacity.
Series AMG  
Water Separator

Features
- Removal of 99.99% of all water droplets present in the air line.
- Should be installed at the peak pressure in the line and as far from the compressor as possible for maximum efficiency.

Series IDG  
Membrane Air Dryer

Features
- Power supply not required.
- No vibration or exhaust heat.
- Dew point indicator confirms air drying at a glance.
- Also available with fittings for purge air discharge.
- Integrated pre-filter.
- Environmentally friendly (non-freon).
- Compatible with low dew points.

Series ID  
Heatless Air Dryer

Features
- Heatless ID series is best when dry air with a low dew point is needed.
- Supply dry air with a low dew point below -30°C.
- Compact and lightweight without heater and electric control board.

Series PDE  
Refrigerated Dryers

Refrigerated Dryer.
- 1/2" to 2 1/2" 360 l/min to 18000 l/min.
- 80NB to 100NB ANSI 21000 l/min to 60480 l/min.
Series ARJ
Miniature regulator

Features
- Compact and light weight.
- Allows smaller mounting pitch.

Series ARM
Compact Manifold regulator

Features
- Allows high degree of freedom in selection according to the installation conditions.
- Four types of supply blocks (for common supply).
- Types and sizes of the One-touch fittings can be changed.
- Mixed manifold.
- Pressure gauge with limit indicator.

Series AR10 to 60
Regulator/Modular style

Features
- Can be combined with a modular style air filter and lubricator.
- A rich variety of models enables precise and stable pressure settings to meet user needs.

Series ARG
Regulator c/w Gauge

Features
- Space saving.
- Only one hole to cut - reduced labour.
- Gauge limit indicator easy to adjust.
**Series ARX**
Regulator for 2000kPa

**Features**
- Primary pressure 2MPa.
- Regulating range 0.05 to 0.085MPa.
- 1/8" or 1/4" connection.

**Series ARX 5**
Pilot Operated Regulator

**Features**
- Internal pilot operated relieving style regulator.
- Flow rates up to 16000 l/min.

**Series IR**
Precision Regulator

**Features**
- Bracket and pressure gauge can be mounted from 2 directions.
- Expanded regulating pressure range.
- Compact and light weight.
- Modular body introduced.
- Superior relief flow characteristics.
Series AW60
Filter Regulator

Features

- Body size 60 (port size: 3/4 and 1) has been added to filter Regulator AW Series.
- Check valve construction is featured (AW60K).
- External or built-in gauge available.

Series AV
Soft Start-up Valve

Features

- Large effective area (mm²).
- Modular with F.R.L. Combinations.
- Manual supply/exhaust function.
- Low power consumption.

Series ITV
Electro-Pneumatic Regulator

Features

- Device-Net compatible option (~X80).
- Digital signal feedback of output pressure.
- In case of signal failure, output pressure can be set as "stay-put" or 0 MPa.
- Body ported or modular assembly possible for some styles.
- Manifold mounting available for some styles.
Series VHS
Pressure Relief 3 Port Valve with Locking Holes

Features

- Conforming to OSHA Standard.
- Manually operated valve can be used to prevent accidents caused by residual pressure in pneumatic lines.
- Can prevent accidents due to inadvertent air supply.
- Combination with a modular style F.R.L. is possible.

Series VEX3900-20-X2
Lockable shut-off Valve

Features

- Lockable shut-off valve with large flow.
- 2” connection port.

Series XT17-6-12R
Compact Filter Assembly

Features

- Compact filter assembly.
- Bayonet coupling for isolated pressure take-off.
- Pressure switch option.
- Built-in lockable shut-off valve.
Series AD402/600
Auto Drain Valve

Features

- Drainage is automatically discharged in a reliable manner, without requiring human operators.
- Highly resistant to dust and corrosion, operates reliably, and a bowl guard is provided as standard equipment.
- Mechanical float.
- 1.0 MPa max. operating pressure.

Series ADH4000
Heavy Duty Auto Drain

Features

- Mechanical float.
- Flush button to facilitate daily testing.
- Easy maintenance.
- No need for electric power and no waste for air.

Series LMU
Mist Spray Unit

<table>
<thead>
<tr>
<th>Model</th>
<th>Oil tank Pressure MPa</th>
<th>Oil tank Capacity</th>
<th>Port</th>
<th>Applicable Maxim Valve</th>
<th>Magnet Holder</th>
<th>Branch Pipe</th>
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</thead>
<tbody>
<tr>
<td>LMU100</td>
<td>0.05 to 0.2</td>
<td>Full: 3000</td>
<td>Sup: 1/4</td>
<td>LMV 110,120</td>
<td>LMH10</td>
<td>LMD1</td>
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<tr>
<td>LMU200</td>
<td>0.05 to 0.2</td>
<td>Effective: 2500</td>
<td>Out / Air: T0604, Oil: T0425</td>
<td>LMV 210,220</td>
<td>LMH20</td>
<td>LMD2</td>
</tr>
</tbody>
</table>
Series LMV
Mixing Valve

Series ALD
D.P. Lube Unit

Section 6
Instrumentation

Series XT14-145-W
Water Check valve

Features
- Non return Check valve.
- For use with water/oil/air.
- Male thread facilitates mounting.
- 3/8" BSP Porting.

Series IN-24-8-BC-R-N
Hand Operated 3 Port Selector Air/Water

Features
- Hand operated 3 port selector valve, air or water.
- Control of cooling water for weld guns.
- Water/air purge control.
- Flat mounting surface.
- Micro switch interface.
Series INV-079-5C-X1
Pilot Operated 3 Port Selector Air/Water

Features

- Pilot solenoid three port selector valve.
- Control of cooling water for weld guns.
- Drains residual water from piping.
- N.O. and N.C. function.
- Flat mounting surface.
- 24VDC or AC100V.
- Water / air purge control.

Series WI500-06
Water indicator

Features

- Green indicator shows flow of cooling water.
- Check mechanism prevents backflow.
- Indicator not in contact with liquid.
- 3/4" BSP female porting.

Series IFW510-03-X300
Water flow switch

Features

- Water flow switch 1-10 l/min.
- Max flow - 20 l/min -DC24V.
- N.O. and N.C. available.
- Variable settings to detect flow rates.
- Dual polarity facilitates wiring.
- 3/8", 1/2" or 3/4" BSP porting.
Series IL 211-02
Lock-Up Valve

Features
- Piloted 3 way lock-up valve.
- When signal pressure drops to set pressure outlet ports 1 & 2 are isolated.
- Signal pressure is adjustable.

Series PF2A
For Air Digital Flow Switch

Features
- Bright and easy to read LED display /digital setting.
- Two independent flow rate settings are possible.

Series PF2W
For Water Digital Flow Switch

Features
- Two types for different applications integrated and remote type displays.
- Water resistant construction conforming to IP65.
- Switching from real-time flow rate to accumulate flow is possible.
**Series IS1000**  
**Mechanical Style Pressure Switch**

**Features**
- Compact pressure switch 0.1 to 0.7 MPa.
- 0.1 to 0.4 MPa operating range.
- Long life, 5 million cycles.

**Series IS3000**  
**Pneumatic Pressure Switch**

**Features**
- Wide calibration range, 0.1 to 0.7 MPa.
- High frequency operation.
- Optional indicator light.

**Series ISG**  
**General Purpose Pressure Switch**

**Features**
- Variety of pressure ranges.
- Optional stainless components for wetted parts.
- 3/8” male port.
Series ZSE30/ISE30
High Precision, 2 Colour Display Digital Pressure Switch

Features
- 2 Colour display.
- Positive pressure or vacuum.
- Analog output 1-5V or 4-20mA.
- Panel mount available - IP40.

Series ZSE40/ISE40
High Precision, Digital Pressure Switch

Features
- Positive pressure or vacuum.
- Analog output 1-5V - NPN/PNP.
- Panel mount available - IP65.
- High response 2.5ms

Series ZSE50/ISE50
High Precision, Digital Pressure Switch for fluids

Features
- Pressure detection for a wide range of fluids.
- Positive pressure or vacuum.
- Analog output 1-5V.
- Panel mount available - IP65.
Series ISE70/75/75H
2 Colour Display Digital Pressure Switch

Features
- 2 Colour display.
- IP67.
- M12 connection - straight oe elbow.
- Air pressure range 0-1 MPa.
- General fluid pressure range, 0-10MPa and 0-15MPa.

Series ISA2
Air Catch Sensor

Bore Sizes: ø20, ø25, ø32, ø40, ø50, ø63

Features
- Detection distance: 0.01 to 0.5 mm.
- Repetition accuracy: 0.01 or less.
- 2 wiring methods: Individual wiring, Centralised wiring.
- 2 Port solenoid valve with Manual Lock.
Series EX250/EX500
Serial transmission system

Applicable protocol

Device Net
PROFIBUS-DP
CC-link
AS-i

Decentralized Serial wiring

Series EX500

Remote I/O (Rockwell Automation).
Device Net
PROFIBUS-DP
CC-link

Series EX245

Features

IP65 Protection.
Standard M12 Bus connector (5 pins, reverse key coding)
Up to 32 solenoid valves.
Up to 128 digital inputs.
Up to 64 digital outputs independent of solenoid valves.
Up to 8 modules (Limited by the total current consumption)
Integrated diagnostic and protection function.
Galvanically isolated power supplies (PROFIBUS DP, US1 for logic/sensors, US2 for valves/loads).
Free module configuration.
Series VQC (1000,2000,3000)
5-Port Solenoid valve

Features

- Conforming to IP67 for protection from dust and moisture.
- M8 or M12 input connections.
- Input and output options available.
- Service life - 200 million cycles for VQC1000/VQC2000 and 100 million cycles for VQC 4000 based on SMC life test conditions.

Series VQ4000/5000
Base Mounted Solenoid Valve

Features

- Larger size, fast response solenoid valves.
- Choice of metal or rubber seal.
- Plug-in or plug-lead (individually wired) electrical connections.
- IP65 splashproof option.
- Manifold or single subbase mounted.
Series SV
5 Port Solenoid Valve, Rubber seal

Serial communication
D-sub connector

Features
- CV 0.18 up to 3.3
- IP65 Protection, CE compliant.
- Input and output options available.
- Service life - 50 million cycles based on SMC life test conditions.

Series VS7-6 / VS7-8
Metal Seal ISO Valve

Features
- DIN Plug.
- Conforms to ISO 5599/1
- CV - 1.5, 3.2
- IP65 enclosure.
- 12 or 24VDC, 110VAC, 220VAC.
- Other voltages available upon request.
- Air pilot options available.
- VP7-*, Rubber spool also available.

Series VQ7-6 / VQ7-8
Metal or Rubber Seal ISO Valve

Features
- Lighter weight than previous VS7 Series.
- DIN Plug or M12 pre-wired connector.
- Conforms to ISO 5599/1, 1 & 2 Series.
- CV - 1.7, 3.2
- IP65 enclosure.
- 12 or 24VDC, 110VAC, 20VAC.
Series EVS7-6/-8/-10
Metal or Rubber Seal ISO Valve

Features
- M12 connection.
- Conforms to ISO 5599/1. 1,2 & 3 Series.
- CV - 1.2, 3 & 5.5
- IP65 enclosure.
- Reduced area of installation - coil size.
- 12/24 VDC - 1.8W

Series VSR8 / VSS8
Lateral Plug-in ISO Manifold, Metal or Rubber seal ISO Valve

Features
- ISO 15407-2 Interface.
- Accommodates enclosure IP65.
- Light weight.
- Large capacity.

Series VX
Direct Operated 2 Port Solenoid Valve

Features
- Reduction of power consumption.
- Direct operated 2 port solenoid valve.
- For water, oil, steam, air.
- Dust collectors, water hammer etc.
**Series ACTBV**  
**Actuated Ball Valve - 1/2" up to 3"**

**Features**
- Nickel plated ball valves with double acting actuator.
- Ball valves in other materials available on request subject to medium being used.

**Series VFN**  
**NAMUR Interface 3 and 5 Port Solenoid valve**

**Features**
- Compact design.
- Large Flow.
- Low Power consumption - 1.8W DC Solenoid.
- Voltages: DC12V, 24V  
  AC24V, 110V, 240V

**Series ZFA**  
**Air suction filter**

**Features**
- The collected dust does not remain in the case.
- Compact and lightweight.
- Adaptable for a manifold application.
- Large filter element surface.
- Easily replaced filter element.
- Mountable in any direction.
Series ZFB
Air suction filter with one-touch fittings

Features
- Unrestricted 360° piping tube mounting.
- Compact and lightweight.
- Easily replaced filter element.
- Piping tube can be connected or disconnected with one touch.

Series AMJ
Drain separator for vacuum

Features
- Removes water droplets from air by simply installing in vacuum equipment connection lines.
- Effective for removing water droplets from the air sucked into vacuum pumps and ejectors, etc.

Series IRV/ITV
Vacuum Regulator

Features
- Modular design in manual or electronic control.
- Electrical input style, manifold stackable.
Series ZU/ZH/ZM/ZL
Vacuum ejector

Features

- In line box/type compact ejectors.
- Push-in or threaded connection available.
- Built-in gauge, mechanical or digital.
- Solenoid activated and solenoid purge with some models.
- Suction flow rate from 7 l/min up to 200 l/min.
- Manifold stackable for ZM series.

Series ZP/ZPT/ZPX
Vacuum Pad

Features

- Cups in a variety of materials.
- Cup sizes from 2mm up to 240mm.
- Flat/Ribbed/Bellows/Rectangular.
- Optional Buffers, Check-Valves.
Series VBA
Booster regulator

Features
- Pressure increase 2:1 (VBA1111, 4:1).
- No electrics required.
- Handle operated or air operated.
- Optional tank and accessories can be fitted.
- Flow rates up to 1900 l/min.

Series MQR
Low torque metal seal type rotary joint

Features
- 1, 2, 4, 8, 12 and 16, circuits available.
- Ideal for turntables and robot arms.
- Suitable for operating pressures from -100kPa to 1MPa.
- Spiral porting allows for easy piping.
- Suitable for temperatures from -10°C to 80°C.
**Series VCC**

**Colour Change Valve (2/3 Port Air Operated)**

### Features

- Paint valves, 2 to 5 million cycles, subject to paint type.
- Air, water, butyl acetate 10 million cycles for cleaning / blowing.
- Reduction of paint deposit, dead space of valve element is reduced to 0.01cc or less.
- Valve can be replaced without touching the piping.
- Mountable on a robot man.
**Control Cabinets**

**Pneumatic/Electro-Pneumatic/Full Electrical**

**Features**

- Innovative design concepts in-house with controls.
- Panels or cabinets tailor made to suit customer needs. As a once off or as a repeat item.
- Full documentation supplied.
- Constructed to local Standards and regulations.
- Assemblies from the very SMALL to the very LARGE.
Series CHDKG
16MPa Compact Hydraulic Cylinder
Bore Sizes: ⌀20, ⌀25, ⌀32, ⌀40, ⌀50, ⌀63, ⌀80, ⌀100

Features
- Light and compact aluminium body.
- Auto switch can be mounted.
- Wide range of bores and strokes.
- Special options available on request, indent only.

Standard Strokes

<table>
<thead>
<tr>
<th>Bore size (mm)</th>
<th>Strokes (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>⌀20, ⌀25</td>
<td>5, 10, 15, 20, 25, 30, 35, 40, 45, 50mm</td>
</tr>
<tr>
<td>⌀32</td>
<td>5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75mm</td>
</tr>
<tr>
<td>⌀40, ⌀50, ⌀63, ⌀80, ��100</td>
<td>5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100mm</td>
</tr>
</tbody>
</table>

Series CHDSG
16MPa Hydraulic Cylinder (Conforms to ISO6020-2)
Bore Sizes: ��32, ��40, ��50, ��63, ��80, ��100

Features
- Stainless cylinder barrel & piston.
- Auto switch can be mounted.
- Wide range of bores and strokes.
- Variety of mounting options.
- Cushioning also available.

Standard Strokes

<table>
<thead>
<tr>
<th>Bore size (mm)</th>
<th>Strokes (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>��32, ��40, ��50, ��63, ��80</td>
<td>25 to 800mm</td>
</tr>
<tr>
<td>��100</td>
<td>25 to 1000mm</td>
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