

### SINCE 1971 LEADER IN INDUSTRIAL AUTOMATION



Pneumatic Automation\_

Cylinders High-Tech Valves Air treatment Accessories

### Automotive\_

Pneumatic power clamps Electric power clamps Pneumatic components for Automotive





UNIVER Headquarter

In the '70s Univer started its activity in the field of industrial automation with the production of pneumatic valves. In the following '80s and '90s the range of technologically advanced and original pneumatic components has allowed a continuous growth and development of the company.

In the year 2000 the Automotive division was created and since then it has developed solutions for the automotive industry. Univer is now a partner of the most important automobile industries and their connected companies worldwide. The electronic division, as a support of the Pneumatic Automation and Automotive divisions, is specialized in the study, design and manufacturing of the electric and electronic devices integrated in the Univer products.

The engineering of the products and of the processes, the production, the tests and customer service are attended to thanks to a severe quality standard. Since 1991 Univer is UNI EN ISO 90001 certified.

The organization of the sales network is coordinated by the Headquarters of Univer S.p.A. in Milan.

In Italy the commercial company Univer Service S.r.l. with its logistics centre guarantees a quick and efficient service to all 10 direct branch offices and to all the distributors in the country. The Univer group has 9 direct companies and a distribution network which covers the most important industrialized areas worldwide.





**1971** Foundation of UNIVER company

1973 Poppet valves for compressed air and vacuum



First valve series



- **1980** Valves according to ISO 5599 (Industry Award)
- 1982 UNIVERSAL series valves
- **1986** Cylinders and mounting elements according to ISO 6431 (first cylinders on the market with extruded aluminium profile)
- **1988** Cylinders with antirotation piston and octagonal tube Electrically actuated microvalves Rodless cylinders (patented)
- **1989** Rotating cylinders (patented) Short-stroke cylinders



AE valves



ISO 6431 K cylinders



Rodless cylinder series S1



Research and development

Lab tests



ITALIA - Headquarter: UNIVER S.p.A. UNIVER SERVICE S.r.I.

AUSTRALIA - UNIVER Pty Ltd BRASIL - UNIVER do Brasil S/A FINLAND - UNIVER OY FRANCE- UNIVER FRANCE S.a.s. **GERMANY** - UNIVER G.m.b.H.

SPAIN- UNIVER S.L. System Supplier Pneumatic SWEDEN - UNIVER SWEDEN AB SWITZERLAND- UNIVER AG **UNITED KINGDOM** - UNIVER Manufacturing Company Ltd.

# 1990

- 1991 10 mm nanovalve
- G6 G7 G8 series valves
- 1992 Slide units in extruded aluminium profile
- 1993 Cybrain programmable actuators (patented)
- 1997 Telescopic cylinders (patented)
- 1998 Locking units (patented)
- 1999 Compact cylinders with adjustable cushioning standard (patented)

# 2000

- 2000 Combobox valves
- 2001 Pneumatic power clamps and retractable locating pin units (patented)
- 2002 Oval cylinders
- 2003 Electric cylinders (patented) Electric power pivots (patented)

Electric power clamps and retractable locating pin units

- 2004 Valves according to ISO 15407/VDMA 24563 Serial communication control blocks Pneumatic grippers (patented)
- 2005 Pneumatic power pivots (patented)
- 2006 10 mm nanovalve 2<sup>nd</sup> generation
- COMPACT 10/15 mm valves 2007



### 10 mm nanovalve

Slide units





Pneumatic/electric clamping units



# \_PRODUCT **NEWS**

**KL** ISO 15552 cylinder Ø **32÷125** mm



ISO 21287 compact cylinders Ø 80÷100 mm

☑ Further development of the compact cylinder series Ø 16 - 20 - 25 - 32 - 40 - 50 - 63

N E W Ø80-100

- Pneumatic cushioning standard
- Magnetic version standard
- Standard version according to ISO 21287
- STRONG version (interaxes, centering diameters and rods according to ISO 15552)



### **JL** Guided compact cylinders



- Versions: slide bearing (JLS), ball bushing (JLV)
- Three mounting options: through holes from the top, threaded holes from the bottom and from the back
- Mechanical end-stroke cushioning
- S Flush-mounted sensors on two sides
- Connections on two sides

- New design of the tube for easy cleaning
- Grooves for recessed sensors and pneumatic connections on one side for easy installation
- Traditional Univer technology which guarantees resistance and reliability
- Dimensions according to International standards for a complete interchangeability



### B10 10 mm nanovalves



Compact solenoid valves threaded body and sub-base mounting

# TC

Serial communication system

Low input standard: 0,3 W

TUE BIO-401124D

- I High flow-rate: 30 Nl/min
- Quick response time: 3 ms
- ISO 15218 interface
- 3/2 NC version
- Upon request:
- Bistable version
- 0,1 W version
- 50 NI/min flow-rate version

P10: 10 mm body width - P15: 15 mm body width
Low input: 0,3 W
High flow-rate: 300 NI/min (P10), 800 NI/min (P15)
Body with threaded connections and for sub-base mounting

Nodular sub-bases for single and multipolar electric connections

Integrated solution One serial system for all manifolds: P10 - P15 - BD18 - BD26 series

☑ I/O modules (M8/M12) Modular system up to max 64 inputs + 64 outputs

Remotable configuration for additional multipole connection system manifolds

Fieldbus protocols DeviceNet, AS-I, CANopen, InterBus, ProfiBus-DP



ISO 6432 microcylinders

| Bore mm               | 8÷25                               |
|-----------------------|------------------------------------|
| Stroke mm             | 0÷500                              |
| Туре                  | double-acting, single-acting       |
|                       | through rod, with cushioning       |
| 2                     |                                    |
| version for locking u | nit Ø 16÷25, magnetic from Ø 10÷25 |



ISO 15552 cylinders (ex ISO 6431)

| Bore mm   | 32÷200                       |
|-----------|------------------------------|
| Stroke mm | 0÷1000                       |
| Туре      | double-acting, single-acting |
|           | through rod, tandem          |
| La<br>الا |                              |

version for locking unit, magnetic version upon request



ISO 15552 cylinders (ex ISO 6431) tube with grooves for recessed sensors

| Bore mm                | 32÷125                            |
|------------------------|-----------------------------------|
| Stroke mm              | 0÷1000                            |
| Туре                   | double-acting, single-acting      |
|                        | through rod, tandem               |
| N                      |                                   |
| version for locking ur | nit, magnetic version as standard |



ISO 15552 cylinders - NEW DESIGN grooves for recessed sensors and pneumatic connection on one side

| Bore mm                | 32÷125                           |
|------------------------|----------------------------------|
| Stroke mm              | 0÷1000                           |
| Туре                   | double-acting, single-acting     |
|                        | through rod, tandem              |
| N I                    |                                  |
| version for locking ur | it, magnetic version as standard |

# CYLINDERS\_

**RP/RM** 



=UNITOP (RP) ISO 21287 (RM) compact cylinders

| Bore mm               | <b>RP</b> =16÷63 <b>RM</b> =16÷100   |
|-----------------------|--------------------------------------|
| Stroke mm             | 0÷500                                |
| Туре                  | double-acting, single-acting         |
|                       | through rod, tandem                  |
| 2                     |                                      |
| magnetic version ar   | nd cushioning as standard            |
| available with: hollo | w rod, antirotation rod, long piston |

**RO/RN** 

UNITOP (RO) ISO 21287 (RN) compact cylinders with octagonal tube

| Bore mm   | 16÷63                        |
|-----------|------------------------------|
| Stroke mm | 0÷500                        |
| Туре      | double-acting, single-acting |
|           | through rod, tandem          |
|           | through tou, tanden          |

magnetic version and cushioning as standard available with: hollow rod, long piston



 STRONG compact cylinders - centering diameters, interaxes and piston rods according to ISO 15552

| 32÷100                       |
|------------------------------|
| 0÷800                        |
| double-acting, single-acting |
| through rod, tandem          |
|                              |

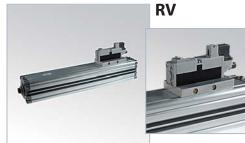
magnetic version and cushioning as standard available with: hollow piston rod, antirotation piston rod, version for locking unit, long piston



STRONG compact cylinders - octagonal tube centering diameters, interaxes and piston rods according to ISO 15552

| Bore mm   | 32÷63                        |
|-----------|------------------------------|
| Stroke mm | 0÷800                        |
| Туре      | double-acting, single-acting |
|           | through rod, tandem          |
| <u>لا</u> |                              |

magnetic version and cushioning as standard available with: hollow rod, version for locking unit, long piston





STRONG cylinders with integrated valve

| Bore mm                   | 32÷63                      |
|---------------------------|----------------------------|
| Stroke mm                 | min 125                    |
| Туре                      | double-acting, through rod |
|                           |                            |
| Ø 32-40-50 BD 18 mm 24 V  | DC series                  |
| Ø 63 BD 26 mm 24 V DC ser | ies                        |
| M12 electric connection   |                            |

| ·······       | -,                                      |
|---------------|---|
| Bore mm       |   |
| Rotation an   | gles                                    |
| Type ma       | le and fer                              |
| L<br>L        |   |
| theoretical t | orque at                                |
|               |   |
| Ø Cylinder    | 32                                      |
|               | Rotation an<br>Type ma<br>theoretical t |

|         |            | -      | k.   |  |
|---------|------------|--------|------|--|
| E       |            | INTING | - Ma |  |
| -Cirr   | • •        |        |      |  |
| Potatin | g cylinder |        |      |  |

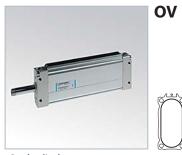
R

| Bore mm         |        |          |        |                    | 32÷125 |          |        |  |
|-----------------|--------|----------|--------|--------------------|--------|----------|--------|--|
| Rotation angles |        |          |        | 90°-180°-270°-360° |        |          |        |  |
| <b>Type</b> ma  | le and | female   | pinion | with or            | withou | ut adjus | stment |  |
| LI .            |        |          |        |                    |        |          |        |  |
| theoretical t   | orque  | at 6 bar |        |                    |        |          |        |  |
| Ø Cylinder      | 22     | 40       | 50     | ()                 | 00     | 100      | 105    |  |
| Ø Cylinder      | 32     | 40       | 50     | 63                 | 80     | 100      | 125    |  |
| Mt (Nm)         | 7,2    | 13,5     | 23,4   | 43,8               | 94,2   | 159      | 306    |  |



Short stroke cylinders

| Bore mm                                   | 12÷100                       |
|---|------------------------------|
| Stroke mm                                 | 0÷100                        |
| Туре                                      | double-acting, single-acting |
|   | through rod, tandem          |
| La |                              |
| available with: hollow p                  | piston rod, antirotation     |



Oval cylinders

| Bore mm                           | 18÷80                      |
|-----------------------------------|----------------------------|
| Stroke mm                         | 0÷320                      |
| Туре                              | double-acting, through rod |
| <u>الا</u>                        |                            |
| magnetic version an               | d cushioning as standard   |
| available with: hollow piston rod |                            |





Mounting accessories

| Available on all cylinders series                |  |  |
|--|--|--|
| Mounting accessories for cylinder and piston rod |  |  |
|  |  |  |
| original UNIVER                                  |  |  |



Magnetic sensors

| Туре             | reed - electronic                                    |
|------------------|--|
| Cable            | 3/5 mt. M8 - M12 connections                         |
| Mounting         | from the top in T-shaped recessed grooves            |
| <b>L</b>         |  |
| cylinder series  | :  |
| M - KD - KL - RF | P - RM - RO - RN - RQ - RS - OV - S1 Ø 16 - RT - NFZ |



Magnetic sensors

| Туре             | reed - electronic            |
|------------------|------------------------------|
| Cable            | 3/5 mt. M8 - M12 connections |
| Mounting         | bracket                      |
| <u> </u>         |                              |
| cylinder series: |                              |
| M - KD - W - S1  |                              |
|                  |                              |

DH



Rodless cylinders

| Bore mm   |  | 16÷50                           |
|-----------|--|---------------------------------|
| Stroke mm |  | max 6000                        |
| Туре      |  | standard carriage, medium, long |
| N         |  |                                 |
|           |  |                                 |

various supply options of the cylinder end-caps high translation speed 1-3 m/s



Rodless cylinders with integrated guides sliding guide in tecnopolymer

| Bore mm                                   | 25÷50                          |
|---|--------------------------------|
| Stroke mm                                 | max 6000                       |
| Туре                                      | standard carriage, medium long |
| La |                                |
| flexible slide system                     |                                |

high translaton speed 0,2-1,5 m/s upon request locking unit



Rodless cylinders with integrated guides 90° slide on ball bearings

| Bore mm   | 25÷50                          |
|-----------|--------------------------------|
| Stroke mm | max 6000                       |
| Туре      | standard carriage, medium long |
|           |                                |

rigid slide system heavy, high precision series translation speed 0,2-2 m/s upon request locking unit



Telescopic cylinders

| Bore mm   | 25÷63                                 |
|---|---------------------------------------|
| Stroke mm   | 2 stages= max 1200, 3 stages=max 1800 |
| Туре  | 2 stages, 3 stages                    |
| 2   |                                       |
| standard supplied: non-rotating piston rod, elastic bumpers, flange, magnetic piston 1st stage, ISO interaxes |                                       |

# HIGH-TECH\_



Pneumatic actuators with integrated safety locking system

| Bore mm       | 32÷63   |
|---------------|---|
| Stroke mm     | (Ø 32) 350 - (Ø 40) 450 - (Ø 50) 600 - (Ø 63) 750 |
| Туре          | magnetic version standard                         |
| N             |   |
| axial locking | system integrated in the cylinder                 |

high repeatability and intervention speed rod holding force  $\ge$  3 times the thrust force of the cylinder at 6 bar



Pneumatic actuator with integrated measuring detector

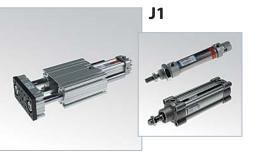
| Bore mm                        | 32÷63   |
|--------------------------------|---|
| Stroke mm                      | (Ø 32) 350 - (Ø 40) 450 - (Ø 50) 600 - (Ø 63) 750 |
| Туре                           | magnetic version standard                         |
| L.                             |   |
| digital axial or repeatibility | letector integrated in the cylinder<br>± 0,02 mm  |
| M12 Encoder connector          |   |



Pneumatic actuators with integrated measuring detector and safety locking system

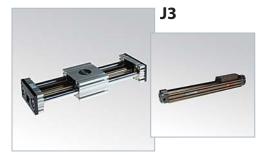
| Bore mm   | 32÷63   |
|-----------|---|
| Stroke mm | (Ø 32) 350 - (Ø 40) 450 - (Ø 50) 600 - (Ø 63) 750 |
| Туре      | magnetic version standard                         |
| M         |   |

combination of NFZ and NQZ versions repeatibility  $\pm$  0,3 mm



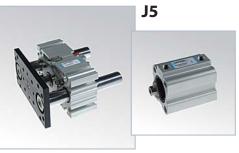
Slide units for ISO 6432 M series microcylinders and ISO 15552 K/KD/KL cylinders series

| Bore mm       | 16÷100  |
|---------------|---|
| Stroke mm     | M series=max 500 K series=max 1000                |
| Туре          | protruding piston rods with short, medium,        |
|               | long carriage, protected cylinder                 |
| cen           | tral mounting, semiexternal or protected cylinder |
| La            |   |
| possibility t | o integrate locking unit                          |



Slide unit for S1 series rodless cylinders

| Bore mm          | 25÷50                                       |
|------------------|---|
| Stroke mm        | standard max 800                            |
| Туре             | protected carriage standard or long version |
| N                |   |
| possibility to i | ntegrate locking unit                       |



Slide unit for W series short-stroke cylinders

| Bore mm   | 20÷80                                     |
|-----------|---|
| Stroke mm | 5÷75                                      |
| Туре      | protruding piston rod, protected cylinder |
|           | version with two plates                   |



Slide unit for STRONG compact cylinders

| Bore mm   | 32÷63                   |
|-----------|-------------------------|
| Stroke mm | 15÷800                  |
| Туре      | protected cylinder      |
|           | version with two plates |



Slide unit for RT2 series telescopic cylinders

| Bore mm   | 32÷63                       |
|-----------|-----------------------------|
| Stroke mm | 120÷1200                    |
| Туре      | protected cylinder 2 stages |







Guided compact cylinders

| Bore mm   | 12÷63              |
|-----------|--------------------|
| Stroke mm | 10÷200             |
| Туре      | JLS=slide bearings |
|           | JLV=ball bushing   |

Ы

reduced overall dimensions, antirotation, mounting on 3 sides, connections on 2 sides, flush-mounted sensors, mechanical end-stroke bumpers



Locking unit for rodless cylinders Ø 25÷50 mm

| Bore mm          | 25÷50  |
|------------------|--------|
| Rodless cylinder | S5-VL1 |
|                  |        |



Locking unit for Ø 16÷125 mm cylinders and for Ø 6÷32 mm piston rods

| Cylinder bore mm   |          |           | 16        | 5÷125  | Cy | linder b | ore mm |
|--------------------|----------|-----------|-----------|--------|----|----------|--------|
| Piston rod bore mm |          |           |           | 6÷32   | St | roke mn  | ו      |
| Cylinders          |          | (ISO (    | 6432) M   | series |    |          |        |
|                    | (ISO 155 | 52) K, K[ | D, KL, RS | series |    |          |        |
| Ø Cylinder (mm)    | 16       | 20        | 25        | 32     | 40 | 50       | 63     |
|                    |          |           |           |        |    |          |        |
| Ø Piston rod (mm)  | 6        | 8         | 10        | 12     | 16 | 20       | 20     |



ISO 15552 Ø 160-200 mm cylinders with integrated locking unit

80

25

5000

| Cylinder bore mm | 160-200 |
|------------------|---------|
| Stroke mm        | 6÷32    |

100

25

125

32

7850 12300 20600 30900

200

40

160



10 mm nanovalve

| 3/2 NC - 3/2 NO |
|-----------------|
| 9÷15            |
| 12-24           |
| 24              |
|                 |

В

replaceable coil (version available with LED) versions: in line connector, 90° connector, loose cables

# VALVES\_



Miniature electropilots U2

10

| Functions                                 | 2/2 - 3/2 NC/NO   |
|---|-------------------|
| Flow rate NI/min                          | 92÷210            |
| Voltage V DC (11 W)                       | 12-24-48-110      |
| V AC (10 VA)                              | 12-24-48-110-230  |
| La |                   |
| replaceable coil, single/manifold         | sub-base          |
| versions: on sub-base and in line         | , M5, G1/8, CNOMO |



ISO 15218 10 mm nanovalve

high flow-rate, low input

versions: 12 V DC (upon request)

Functions

Ы

bistable

Flow rate NI/min

Voltage V DC (0,3 W)

flow rate 50 NI/min

low imput 0,1 W

**B10** 

NEW

3/2 NC

24 (LED standard)

30

= MIXED G1/8 - G1/4 - G1/2 threaded valves

| Functions                | 5/2                           |
|--------------------------|-------------------------------|
| Flow rate NI/min         | G1/8=1080 G1/4=1600 G1/2=4600 |
| Voltage V DC (3,5 W)     | 12-24-48-110                  |
| V AC (5 VA)              | 12-24-48-110-230              |
| Ы                        |                               |
| replaceable coil, modu   | lar sub-bases G1/8, G1/4      |
| control: electric, pneur | natic, manual, mechanical     |



15 mm microvalve

| Functions                | 2/2 - 3/2 NC/NO  |
|--------------------------|------------------|
| Flow rate NI/min         | 26÷38            |
| Voltage V DC (1,5÷2,5 W) | 12-24-48-110     |
| V AC (2,3 VA)            | 12-24-48-110-230 |
| NI                       |                  |

AC-N

replaceable coil (version available with LED) versions: in line connector, 90° connector, loose cables Faston single, manifold sub-base, multipolar connection



Miniature electropilots U1

| Functions                                  | 2/2 - 3/2 NC/NO  |
|--|------------------|
| Flow rate NI/min                           | 29÷80            |
| Voltage V DC (3,5 W)                       | 12-24-48-110     |
| V AC (5 VA)                                | 12-24-48-110-230 |
|  |                  |
| replaceable coil, single/manifold sub-base |                  |

versions: on sub-base and in line M5, G1/8, CNOMO



NAMUR threaded valves

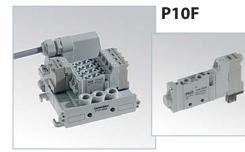
| Functions                    | 3/2, 5/2         |
|------------------------------|------------------|
| Flow rate NI/min             | 1200             |
| Voltage V DC (3,5 W)         | 12-24-48-110     |
| V AC (5 VA)                  | 12-24-48-110-230 |
| <b>N</b>                     |                  |
| replaceable coil,            |                  |
| control: electric, pneumatic |                  |



UNIVERSAL G1/8 - G1/4 threaded valves

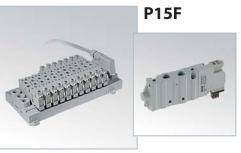
| Functions            | 3/2 - 5/2 - 5/3    |
|----------------------|--------------------|
| Flow rate NI/min     | G1/8=890 G1/4=1480 |
| Voltage V DC (3,5 W) | 12-24-48-110       |
| V AC (5 VA)          | 12-24-48-110-230   |
| 2                    |                    |
| replaceable coil,    |                    |

control: electric, pneumatic, manual, mechanical modular sub-bases



### COMPACT 10 mm threaded connections M5 multipolar electric connection

| Functions                          | 5/2 - 5/3 - 3/2+3/2 |
|------------------------------------|---------------------|
| Flow rate NI/min                   | 310                 |
| Voltage V DC (0,3 W)               | 24                  |
|                                    |                     |
| indirect electropneumatic control  |                     |
| single and double modular sub-base |                     |
| 24 coils configuration             |                     |



COMPACT 15 mm threaded connections G1/8 multipolar electric connection

| Functions                          | 5/2 - 5/3 - 3/2+3/2 |
|------------------------------------|---------------------|
| Flow rate NI/min                   | 800                 |
| Voltage V DC (0,3 W)               | 24                  |
|                                    |                     |
| indirect electropneumatic control  |                     |
| single and double modular sub-base |                     |
| 24/32 coils configuration          |                     |



### COMPACT 10 mm for sub-base multipolar electric connection

| Functions                          | 5/2 - 5/3 - 3/2+3/2 |
|------------------------------------|---------------------|
| Flow rate NI/min                   | 310                 |
| Voltage V DC (0,3 W)               | 24                  |
|                                    |                     |
| indirect electropneumatic control  |                     |
| single and double modular sub-base |                     |

M5, M7 connections, tube Ø 4 mm 24 coils configuration



### COMPACT 15 mm for sub-base multipolar electric connection

| Functions            | 5/2 - 5/3 - 3/2+3/2 |
|----------------------|---------------------|
| Flow rate NI/min     | 800                 |
| Voltage V DC (0,3 W) | 24                  |
| N                    |                     |

indirect electropneumatic control single and double modular sub-base G1/8 connections, tube Ø 4-6-8 mm 24/32 coils configuration





COMPACT 10 mm threaded connections M5 external electric connector

| Functions                          | 5/2 - 5/3 - 3/2+3/2 |
|------------------------------------|---------------------|
| Flow rate NI/min                   | 310                 |
| Voltage V DC (0,3 W)               | 24                  |
|                                    |                     |
| indirect electropneumatic control  |                     |
| (pneumatic control version)        |                     |
| single and double modular sub-base |                     |
|                                    |                     |





COMPACT 15 mm threaded connections G1/8 external electric connector

| Functions                              | 5/2 - 5/3 - 3/2+3/2 |
|--|---------------------|
| Flow rate NI/min                       | 800                 |
| Voltage V DC (0,3 W)                   | 24                  |
|  |                     |
| indirect electropneumatic control      |                     |
| (pneumatic control version)            |                     |
| single and and double modular sub-base |                     |



COMPACT 15 mm threaded connections G1/8 electric connector 15 mm

P15D

| Functions                              | 5/2 - 5/3 - 3/2+3/2 |
|--|---------------------|
| Flow rate NI/min                       | 800                 |
| Voltage V DC (0,3 W)                   | 24                  |
|  |                     |
| indirect electropneumatic control      |                     |
| (pneumatic control version)            |                     |
| version with miniature connector 15 mm |                     |
| suitable for P15SF sub-base            |                     |



Fieldbus Protocols DeviceNet AS-I CANopen InterBus-S ProfiBus-DP

11

Serial communication system

| Controlled devices  |
|---|
| Valves manifold - Digital Input M12/M8 - Output M12       |
| Management capacity                                       |
| Max 64 Inputs + 64 Outputs                                |
| Integrated configuration                                  |
| COMPACT P10 - P15 (suitable for BD VDMA series 18-26 mm)  |
| Distributed configuration                                 |
| Remote expansion modules for valve manifolds with plug-in |
| sub D 25  |

# **BDA/BDE**

ISO 15407-1/2 VDMA 24563 valves and solenoid valves - 18/26 mm

| Functions                | 5/2 - 5/3 - 3/2+3/2 |       |
|--------------------------|---------------------|-------|
| Flow-rate NI/min         | 18 mm               | 26 mm |
| ISO/VDMA standard        | 620                 | 1250  |
| oversize                 | 800                 | 1700  |
| Voltage V DC (1,5 W) BDA | 12-24-48-110        |       |
| BDE                      | 24                  |       |
| V AC (2,3 VA) BDA        | 12-24-48-110-230    |       |
| N                        |                     |       |

modular sub-bases, single and multipolar electric connection

# VALVES\_



ISO 5599/1 valves

12

| Functions   |              | 5/2 - 5/3   |
|---|--------------|-------------|
| Flow rates NI/min                                     | size 1=1480  | size 2=2300 |
|   | size 3= 4200 | size 4=6600 |
| Voltage V DC (2,5 W)                                  |              | 12-24       |
| V AC (3,5 VA)   |              | 24-110-230  |
| <b>N</b>  |              |             |
| versions: mixed and spool electric, pneumatic, indire |              |             |

single and modular sub-bases BF series



-ISO 15407-1 VDMA 24563

Functions

oversize

Ы

Voltage V DC

Flow-rate NI/min

ISO/VDMA standard

solenoid valves - M12 connector

modular sub-bases, single electric connection M12

ISO 5599/1 valves M12 connector

| Functions                  |             | 5/2 - 5/3     |
|----------------------------|-------------|---------------|
| Flow rates NI/min          | size 1=1480 | size 2=2300   |
|                            |             | size 3=4200   |
| Voltage V DC (1,5 W)       |             | 24            |
|                            |             | M12 connector |
|                            |             |               |
| versions: mixed and spool  | system      |               |
| electric control, indirect |             |               |



- Serial communication system

| Controlled devices  |
|---|
| Valve manifolds - M12/M8 Digital Input - M12 Output                   |
| Management capacity   |
| Max 64 Inputs + 64 Outputs  |
| Integrated configuration  |
| BD VDMA 18-26 mm series   |
| Remotable configuration   |
| Remote expansion modules for valve manifolds with<br>plug-in sub D 25 |

### **BD/TC/TX**

### PSP/PSC/PSR



### ComboBox valves (valve body with integrated sub-base)

| Functions                         | 5/2 - 5/3 - 3/2+3/2        |
|-----------------------------------|----------------------------|
| Flow-rate NI/min                  | 830                        |
| Voltage V DC (1,35W)              | 24                         |
| upon request                      | 12                         |
| 24 V DC coil with connector and L | ED for integrated electric |

connection PSP=integrated electric connection PSC=single connection PSR=pneumatic

# **BE12**

5/2 - 5/3 - 3/2+3/2

18 mm

620

800

24

26 mm

1250

1700

24

**BDB** 



Light series valves for sub-base ISO 5599

| Functions                       |             | 5/2            |
|---------------------------------|-------------|----------------|
| Flow rates NI/min               | size 1=1480 | size 2=2300    |
| Voltage V DC (2,5 W)            |             | 12-24-48-110   |
| V AC (3,5 VA)                   | 12-         | -24-48-110-230 |
| N                               |             |                |
| electric, pneumatic, indirect c | ontrol      |                |

single and modular sub-bases BF series



= 2/2 - 3/2 - G1/8 poppet valves

| Functions                          | 2/2 - 3/2          |
|------------------------------------|--------------------|
| Flow rates NI/min                  | 600                |
| Control                            | mechanical, manual |
| <u>لا</u>                          |                    |
| high flow-rate and switching speed |                    |

-UINIIV/ER\*



20 mm valves and solenoid valves threaded connections G1/8

| Functions                       | 5/2 - 5/3 - 3/2+3/2         |
|---------------------------------|-----------------------------|
| Flow-rate NI/min                | 770                         |
| Voltage V DC (1,5 W)            | 12-24-48-110                |
| V AC (2,3 VA)                   | 12-24-48-110-230            |
| Ч                               |                             |
| 24 V DC coil with connector and | LED for integrated electric |

version

electric, pneumatic, indirect control

modular sub-bases, single and multipolar electric connection





20 mm valves and solenoid valves for sub-base

| Functions                         | 5/2 - 5/3 - 3/2+3/2         |
|-----------------------------------|-----------------------------|
| Flow-rate NI/min                  | 770                         |
| Voltage V DC (1,5W)               | 12-24-48-110                |
| V AC (2,3 VA)                     | 12-24-48-110-230            |
|                                   |                             |
| 24 V DC coil with connector and l | LED for integrated electric |

electric, pneumatic, indirect control modular sub-bases, single and multipolar electric connection



26 mm valves and solenoid valves threaded connections G1/8

| Functions           | 5/2 - 5/3        |
|---------------------|------------------|
| Flow-rate NI/min    | 860              |
| Voltage V DC (3,5W) | 12-24-48-110     |
| V AC (5 VA)         | 12-24-48-110-230 |
|                     |                  |
| 1 11 11             |                  |

replaceable coil electric, pneumatic, indirect control

multiple sub-bases in aluminium extruded profile



15 mm manual and mechanical control valves threaded connections M5

| Functions        | 5/2                |
|------------------|--------------------|
| Flow-rate NI/min | 150                |
| Control          | mechanical, manual |
| L<br>الا         |                    |

pneumatic and mechanical actuators panel actuators





Poppet valves for compressed air G1/8 - G1 1/2

| Functions                                  | 2/2 - 3/2 NC/NO                |
|--|--------------------------------|
| Flow-rate NI/min                           | G1/8=580 G1/4=1100 G3/8=1500   |
| G1/2=5400 G                                | 3/4=6500 G1=13500 G1 1/2=35000 |
| Voltage V DC (3,5-11 W)                    | 12-24-48-110                   |
| V AC (5-10 VA)                             | 12-24-48-110-230               |
| L<br>L                                     |                                |
| electric, pneumatic contr<br>poppet system | ol                             |



Poppet valves for vacuum G1/8 - G1 1/2

| Functions               | 2/2 - 3/2 NC/NO                |
|-------------------------|--------------------------------|
| Flow-rate NI/min        | G1/8=580 G1/4=1100 G3/8=1500   |
| G1/2=5400               | G3/4=6500 G=13500 G1 1/2=35000 |
| Voltage V DC (11 W)     | 12-24-48-110                   |
| V AC (10 VA)            | 12-24-48-110-230               |
|                         |                                |
| electric, pneumatic con | trol                           |
| poppet system           |                                |



JET pneumatic limit switches and miniature series

| Functions        | 2/2 - 3/2 NC/NO |
|------------------|-----------------|
| Flow-rate NI/min |                 |
| Jet              | 98              |
| Miniature        | 110             |
| 4                |                 |

Jet: M5, tube 4 Miniature: for M5 sub-base, tube 4 manual actuators 1 and 2 positions with threaded connections and for panel, pneumatic and mechanical actuators





Pneumatic and electric foot valves

| 2/2 - 3/2 - 5/2 |
|-----------------|
|                 |
| 98              |
| 800             |
|                 |

versions: spring return, two positions, with safety protected and unprotected pedal electric pedal with single and double microswitch









Size 0

Filter regulator + Lubricator

Filter + Regulator + Lubricator

| Size | Connections | Flow rate (NI/min) |
|------|-------------|--------------------|
| 0    | G1/4        | 900                |
| 1    | G3/8        | 1200               |
| 2    | G1/2        | 2000               |
|      |             |                    |

| min) | Size | Connections | Flow rate (NI/min) |
|------|------|-------------|--------------------|
|      | 0    | G1/4        | 900                |
|      | 1    | G3/8        | 1200               |
|      | 2    | G1/2        | 2000               |

# AIR TREATMENT\_



Filter



| Size | Connections | Flow rate (NI/min) |
|------|-------------|--------------------|
| 0    | G1/4        | 1100               |
| 1    | G3/8        | 3500               |
| 2    | G1/2        | 6500               |





Regulator

| Size | Connections | Flow rate (NI/min) |
|------|-------------|--------------------|
| 0    | G1/4        | 1000               |
| 1    | G3/8        | 2100               |
| 2    | G1/2        | 4300               |
|      |             |                    |



Lubricator

| Connections | Flow rate (NI/min) |
|-------------|--------------------|
| G1/4        | 1400               |
| G3/8        | 4400               |
| G1/2        | 7000               |
|             | G1/4<br>G3/8       |



| Size | Connections | Flow rate (NI/min) |
|------|-------------|--------------------|
| 0    | G1/4        | 1000               |
| 1    | G3/8        | 2300               |
| 2    | G1/2        | 4500               |

14

U

HZE-S



Gradual starter

| Size | Connections |
|------|-------------|
| 0    | G1/4        |
| 1    | G1/2        |
| 2    | G3/4        |
|      |             |



Diverter block

| Size | Connections |
|------|-------------|
| 0    | G1/4        |
| 1    | G3/8        |
| 2    | G1/2        |
|      |             |



Lockable valve

| Size | Connections |
|------|-------------|
| 0    | G1/4        |
| 1    | G3/8        |
| 2    | G1/2        |
|      |             |



Shut-off valve

| Size | Connections |
|------|-------------|
| 0    | G1/4        |
| 1    | G1/2        |
| 2    | G3/4        |

Pneumatic/electric operation





HZRM

Pressure microregulator G1/4

| Connections | Flow-rate (NI/min) |
|-------------|--------------------|
| G1/4        | 340                |



Precision regulator

| Connection                           | G1/4                  |
|--------------------------------------|-----------------------|
| Adjustment range bar                 | 0,1÷3 - 0,1÷4 - 0,1÷8 |
| Flow-rate NI/min                     | 420                   |
|                                      |                       |
| versions: standard, oversize exhaust |                       |

HZRP10



HZRP20



Precision regulator

| Connection                        | G1/4                       |
|-----------------------------------|----------------------------|
| Adjustment range bar              | 0÷0,1 - 0÷1 - 0÷2 - 0,1÷10 |
| Flow-rate NI/min                  | 800                        |
|                                   |                            |
| versions: standard, non relieving |                            |

### AM-55



### Blocking valve G1/8÷G1/2

| Connections | Flow rate (NI/min) |
|-------------|--------------------|
| G1/8 - G1/4 | 620                |
| G1/4 - G3/8 | 2100               |
| G1/2        | 3500               |

# AM-52

Gradual starter G1/8÷G1

| Connections | Flow-rate (NI/min) |
|-------------|--------------------|
| G1/8 - G1/4 | 620                |
| G1/4 - G3/8 | 2100               |
| G1/2 - G3/4 | 3500               |
| G1          | 6800               |
|             |                    |

AM-54

unidirectional and bidirectional version

version with manual adjustment or electric switch

AM-50

Flow rate in adjustment (NI/min) unidirectional bidirectional

100

140

120

-

350

-

350

2200

2200

100

140

120

280

350

700

350

2200

2200





Economizer G1/8÷G1

| Flow-rate (NI/min) |
|--------------------|
| 700/900            |
| 1200/2000          |
| 3500/5000          |
| 5200/7500          |
|                    |

| version with manaal aajastment of | ciccuic swite |
|-----------------------------------|---------------|
|                                   |               |
|                                   |               |

# ACCESSORIES\_

AM-51



16

Signal processing valves G1/8 - tube Ø4

| Connections            | Flow-rate (NI/min) |
|------------------------|--------------------|
| two pressure valve AND |                    |
| G1/8                   | 300                |
| tube Ø 4               | 110                |
| selector valve OR      |                    |
| G1/8                   | 300                |
| tube Ø 4               | 110                |
|                        |                    |



Unidirectional check valves G1/2÷G1

| Flow-rate (NI/min) |
|--------------------|
| 4500               |
| 7500               |
|                    |

AM-5200



Pneumoelectric transducers

Flow regulators M5÷G1

M5

G1/8

G1/8

G1/8

G1/4

G1/4

G3/8

G1/2 - G3/4

G1

Ø mm Connections

1

2,25

3,5

5

б

6 9

12

| Function | NO-NC           |
|----------|-----------------|
| Voltage  | 16 A-250 V 50Hz |
|          | 5 A-250 V 50Hz  |
|          | 3 A-30 V DC     |





Calibrated pressure switches

| Function             | NO-NC           |
|----------------------|-----------------|
| Voltage              | 16 A-250 V 50Hz |
|                      | 5 A-250 V 50Hz  |
|                      | 3 A-30 V DC     |
| Adjustment range bar | 1÷8             |



Push-in fittings in technopolymer

| Ø 4-6-8-10-12                 |
|-------------------------------|
| M5, G1/8, G1/4, G3/8, G1/2    |
|                               |
| ith O-ring and conical Teflon |
|                               |
| nopolymer                     |
|                               |



Push-in fittings in metal

| Tube mm   | Ø 3-4-5-6-8-10-12-14           |
|---|--------------------------------|
| Threaded connection   | M3, M5, G1/8, G1/4, G3/8, G1/2 |
| La<br>La<br>La<br>La<br>La<br>La<br>La<br>La<br>La<br>La<br>La<br>La<br>La<br>L |                                |
| cylindrical thread with O-  | ring                           |
| cody and release ring in n  | netal                          |



Automatic fittings and accessories with pneumatic function

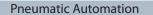
| Elbow and intermediate flow regulator |
|---------------------------------------|
| Slider valves                         |
| Quick exhaust valves                  |
| Miniature ball valves                 |
| 2/2 - 3/2 manual miniature valves     |
| Check valves                          |
| Silencers                             |
|                                       |

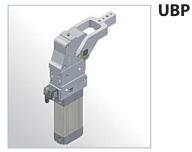


Standard fittings in metal

Threaded connections M5, G1/8, G1/4, G3/8, G1/2, G3/4, G1







• UNIVERSAL pneumatic power clamps with adjustable opening angle from 0° to 135°

| Ø Cylinder mm                | 40-50-63-80        |
|------------------------------|--------------------|
| Version                      | pneumatic standard |
|                              | with manual lever  |
| Mounting                     | DIN, NAAMS         |
| <br>                         |                    |
| availabe with self-holding s | ystem and various  |

types of clamping arms



UNIVERSAL gripper units with adjustable opening angle from 0° to 95°

| Version  | امتر مام مرجع مرتف محرين مرجو |
|----------|-------------------------------|
| version  | pneumatic standard            |
|          | with manual lever             |
| Maunting | DIN                           |

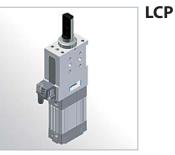
available with jaws double or single movement



Power clamps conforming to the CNOMO standard with adjustable opening angle

| Ø Cylinder mm | 32-40-50-63 |
|---------------|-------------|
| Mounting      | CNOMO       |
|               |             |

available with or without brake



Pneumatic retractable locating pin units

| Ø Cylinder mm       | 50-63                                  |
|---------------------|--|
| Version             | pneumatic standard - with manual lever |
|                     | double rod                             |
|                     | available also in compact version      |
| Mounting            | DIN, CNOMO                             |
| Ы                   |  |
| available with diff | erent rods and strokes                 |

# AUTOMOTIVE\_

LSPG



Pneumatic under body clamps

| 50                      |
|-------------------------|
| pneumatic standard      |
| manual without cylinder |
| DIN                     |
|                         |

availale with vanishing hook,

18

with vanishing hook and pin orthogonal series

various locating pin diameters and hook's working heights



Pneumatic rotating units

| Ø Cylinder mm          | 80-100-125-160-200              |
|------------------------|---------------------------------|
| Version                | with brake passive-intervention |
| Mounting               | DIN                             |
|                        |                                 |
| various rotating table | s available                     |



Electric clamping units

| Size                                  | 140-225-350-950 |
|---------------------------------------|-----------------|
| Mounting                              | DIN, NAAMS      |
|                                       |                 |
| available with remoted manual control |                 |
|                                       |                 |

various types of clamping arms available electronic control module original UNIVER





Electric power pivots

| Size   | 500-1000 |
|--|----------|
| Mounting   | DIN      |
|  |          |
| available with remoted electronic control module |          |
| various rotating tables available                |          |



Grippers

| Ø Cylinder mm            | 25-32                      |
|--------------------------|----------------------------|
| Version                  | pneumatic standard         |
|                          | double and single movement |
| Mounting                 | DIN                        |
| <u>-</u>                 |                            |
| various mounting options | available                  |
| opening angle adjustment | t                          |

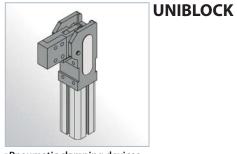
### LGP25-32



Manual clamping devices

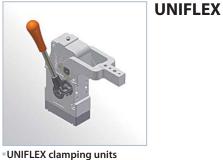
| Version  | manual |
|--|--------|
|  |        |
| vertical, horizontal series, pull action, straight line ac | tion,  |
| heavy duty   |        |

UNIBLOCK



Pneumatic clamping devices

| Ø Cylinder mm                 | 16-25                            |
|-------------------------------|----------------------------------|
| Version                       | pneumatic standard               |
| 2                             |                                  |
| available with front mounting | pattern or with 4-sided mounting |



. .

| Ø Cylinder mm  | 40-50-63-80                   |
|----------------|-------------------------------|
| Version        | manual, pneumatic,            |
|                | pneumatic with manual control |
| La<br>La<br>La |                               |

available with front mounting or with 4-sided mounting various types of clamping arms available DIN standard



#### References

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Pneumatic and electric applications

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