





SINCE 1971

Product range _Pneumatic Automation

Cylinders High Tech Valves Air treatment Accessories





■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 quarantees 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.







Foundation of UNIVER company

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







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

■ Research and development

1991 10 mm nanovalve

1998

G6 - G7 - G8 series valves

1992 Slide units in extruded aluminium profile 1993 Cybrain programmable actuators (patented)

1997 Telescopic cylinders (patented)

Locking units (patented)

1999 Compact cylinders with adjustable cushioning standard (patented)



10 mm nanovalve



Slide units



Telescopic cylinders

2000

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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 2nd generation

COMPACT 10/15 mm valves 2007



Pneumatic/electric clamping units





# _PRODUCT **NEWS**

## KL

ISO 15552 cylinder Ø 32÷125 mm



- 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

## RM/RS

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 Ø 80 100
- Pneumatic cushioning standard
- Magnetic version standard
- Standard version according to ISO 21287
- STRONG version (interaxes, centering diameters and rods according to ISO 15552)



**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
- ☑ Flush-mounted sensors on two sides
- Connections on two sides





## **B10** 10 mm nanovalves



- Low input standard: 0,3 W
- High flow-rate: 30 NI/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/P15

Compact solenoid valves threaded body and sub-base mounting



- № 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
- ☑ Modular sub-bases for single and multipolar electric connections

## TC

Serial communication system



- 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
5.0	

version for locking unit 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
7	
version for locking ur	nit, 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
<u> </u>	
version for locking un	it, 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

KL

version for locking unit, magnetic version as standard

# 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

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

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



available with: hollow rod, long piston



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
<u> </u>	
magnetic version and	d cushioning as standard



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

Bore mm	32÷10
Stroke mm	0÷80
Туре	double-acting, single-actin
	through rod, tander
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magnetic version and cushioning as standard available with: hollow piston rod, antirotation piston rod, version for locking unit, long piston



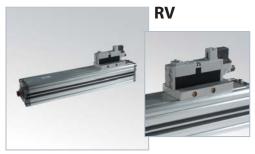
STRONG compact cylinders - octagonal tube centering diameters, interaxes and piston rods according to ISO 15552

Bore mm	32÷63
Stroke mm	0÷800
Туре	double-acting, single-acting
	through rod, tandem

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
<u> </u>	
Ø 32-40-50 BD 18 mm 24 V DC s	series
Ø 63 BD 26 mm 24 V DC series	



Rotating cylinders

Bore mm						3	2÷125
Rotation a	ngles			90°-180°-270°-360°			
Type m	ale and	female	pinion	with or	withou	ıt adju	stment
7							
theoretical	torque	at 6 bar					
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
7	
available with: hollow	piston rod, antirotation



Oval cylinders

Bore mm	18÷80
Stroke mm	0÷320
Type	double-acting, through rod
7	
magnetic version and cushioning	g as standard
available with: hollow piston rod	





Mounting accessories

M12 electric connection

Available on all cylinders series	
Mounting accessories for cylinder and piston rod	
<u> </u>	
original UNIVER	



Magnetic sensors

Туре	reed - electronic
Cable	3/5 mt. M8 - M12 connections
Mounting	from the top in T-shaped recessed grooves
7	
cylinder series	:
M - KD - KL - RF	P - RM - RO - RN - RO - RS - OV - S1 Ø 16 - RT - NFZ



-Magnetic sensors

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



Rodless cylinders

Bore mm	16÷50
Stroke mm	max 6000
Туре	standard carriage, medium, long
<u> </u>	

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
<u> </u>	
flexible slide system	
high translaton speed 0,2	2-1,5 m/s
upon request locking uni	t



Rodless cylinders with integrated guides 90° slide on ball bearings

Bore mm	25÷50
Stroke mm	max 6000
Туре	standard carriage, medium long
<u> </u>	
rigid slide system	heavy, high precision series
translation speed	0,2-2 m/s



Telescopic cylinders

Bore mm	25÷63
Stroke mm	2 stages=1200 max, 3 stages=1800 max
Туре	2 stages, 3 stage
The state of the s	

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
Type	magnetic version standard
THE RESERVE OF THE PERSON NAMED IN COLUMN 1	

axial locking system integrated in the cylinder high repeatability and intervention speed rod holding force ≥ 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
7	

digital axial detector integrated in the cylinder repeatibility ± 0,02 mm M12 Encoder connector



upon request locking unit

## Pneumatic actuators with integrated measuring detector and safety locking system

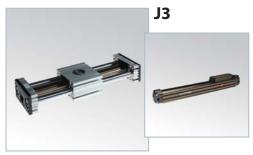
Bore mm	32÷63
Stroke mm	(Ø 32) 350 - (Ø 40) 450 - (Ø 50) 600 - (Ø 63) 750
Туре	magnetic version standard
7	
combination repeatibility	of NFZ and NQZ versions ± 0,3 mm



#### 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,
	mounting, semiexternal or protected cylinder
7	
possibility to in	tegrate 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		
7			
possibility to integrate 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 stage:





Guided compact cylinders

12÷63
10÷200
JLS=slide bearings
JLV=ball bushing

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



 $^{\bullet}$  Locking unit for Ø 16-125 mm cylinders and for Ø 6÷32 mm piston rods

Cylinder bore mm	16÷125
Piston rod bore mm	6÷32
Cylinders	(ISO 6432) M series
	(ISO 15552) K, KD, KL, RS series

Ø Cylinder (mm)	16	20	25	32	40	50	63	80	100	125	160	200
Ø Piston rod (mm)	6	8	10	12	16	20	20	25	25	32	40	40
Static locking force (N)	200	314	490	800	1260	2000	3100	5000	7850	12300	20600	30900





ISO 15552 Ø 160-120 mm cylinders with integrated locking unit

Cylinder bore mm 160	-200
Stroke mm	6÷32



■10 mm nanovalve

Functions	3/2 NC - 3/2 NO
Flow rate NI/min	9÷15
Voltage V DC (1,2 W)	12-24
V AC	24
NI.	

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



ISO 15218 10 mm nanovalve high flow-rate, low input

Functions	3/2 NC
Flow rate NI/min	30
Voltage V DC (0,3 W)	24 (LED standard)

versions: 12 V DC (upon request) flow rate 50 NI/min bistable low imput 0,1 W



■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

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



Miniature electropilots U1

Functions	2/2 - 3/2 NC/NC
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

# VALVES_



Miniature electropilots U2

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

replaceable coil, single/manifold sub-base versions: on sub-base and in line, M5, G1/8, CNOMO



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
V	

replaceable coil, modular sub-bases G1/8, G1/4 control: electric, pneumatic, manual, mechanical



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
<u> </u>	
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

replaceable coil,

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



# P10F

## 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
NT.	

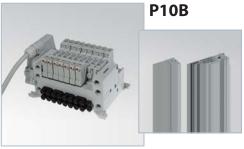
indirect electropneumatic control single and double modular sub-base 24 coils configuration



**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
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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
<u> </u>	
indirect electropneumatic control	

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
V	

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
<u> </u>	
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
<u> </u>	
indirect electropneumatic control	
(pneumatic control version)	
single and and double modular sub-base	



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

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

Serial communication system

sub D 25

Controlle	1 devices
	nifold - Digital Input M12/M8 - Output M12
	ent capacity
Max. 64 In	puts + 64 Outputs
Integrated	d configuration
COMPACT	P10 - P15 (suitable for BD VDMA series 18-26 mm)
Distribute	d configuration
Remote ex	spansion modules for valve manifolds with plug-in

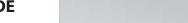
### **BDA/BDE**



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		4	
V AC (2,3 VA) BDA 12-24-48-11		-110-230	
ST.			

modular sub-bases, single and multipolar electric connection





ISO 15407-1 VDMA 24563 solenoid valves - M12 connector

Functions	5/2 -	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	24	24		
<u> </u>				
modular sub-bases single ele	ctric connection M	112		

**BDB** 



BD/TC/TX

Fieldbus Protocols DeviceNet

AS-I CANopen InterBus-S ProfiBus-DP

Serial communication system

Controlled devices	
Valves manifold - M12/M8 Digital Input - M12 Outp	out
Management capacity	
Max. 64 Inputs + 64 Outputs	
Integrated configuration	
BD VDMA 18-26 mm series	
Remotable configuration	
Remote expansion modules for valve manifolds wi plug-in sub D 25	th





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	1:
NT.	

24 V DC coil with connector and LED for integrated electric

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

# VALVES_



ISO 5599/1 valves

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
N		

versions: mixed and spool system electric, pneumatic, indirect control single and modular sub-bases BF series



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
<u> </u>		
versions: mixed and spool syst electric control, indirect	em	



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
<u> </u>		
electric, pneumatic, indirect of single and modular sub-base		





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

Functions	2/2 - 3/2
Flow rates NI/min	600
Control	mechanical, manual
7	
high flow-rate and switching speed	





#### 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

 $24\,\mathrm{V}$  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
NT.	

 $24\,\mathrm{V}$  DC coil with connector and LED for integrated electric version

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
<u> </u>	

replaceable coil
electric, pneumatic, indirect control
multiple sub-bases in aluminium extruded profile



E-15

• 15 mm manual and mechanical control valves threaded connections M5

Functions	5/2
Flow-rate NI/min	150
Control	mechanical, manua
7	
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
7	
electric, pneumatic contro	ol
poppet system	



#### 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
<u>L</u>	
electric, pneumatic cont	rol
poppet system	



#### **JET pneumatic limit switches and miniature series**

Functions	2/2 - 3/2 NC/NC
Flow-rate NI/min	
Jet	98
Miniature	110
<u> </u>	

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

Functions	2/2 - 3/2 - 5/2
Flow-rate NI/min	
M5-G1/8	98
G1/4	800
7	
versions: spring return two positions with safe	tv

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



Filter G1/4÷G3/4

Size	Connections	Flow-rate (NI/min)
0	G1/4	1300
1	G1/4	2460
1	G3/8	3040
1	G1/2	3570
2	G3/8	4770
2	G1/2	5550
2	G3/4	5750



Regulator G1/4÷G3/4

Size	Connections	Flow-rate (NI/min)
0	G1/4	1100
1	G1/4	1480
1	G3/8	1900
1	G1/2	2320
2	G3/8	2430
2	G1/2	3220
2	G3/4	3430



Lubricator G1/4÷G3/4

Size	Connections	Flow-rate (NI/min)
Size	Connections	Flow-rate (M/IIIII)
0	G1/4	1450
1	G1/4	3230
1	G3/8	4440
1	G1/2	5610
2	G3/8	6190
2	G1/2	7240
2	G3/4	7540



Filter regulator G1/4÷G3/4

Connections	Flow-rate (NI/min)
G1/4	1000
G1/4	1360
G3/8	1620
G1/2	1890
G3/8	3010
G1/2	3950
G3/4	4180
	G1/4 G1/4 G3/8 G1/2 G3/8 G1/2

# AIR TREATMENT_



Filter regulator+lubrificator G1/4÷G3/4

Size	Connections	Flow-rate (NI/min)
0	G1/4	920
1	G1/4	1010
1	G3/8	1330
1	G1/2	1680
2	G3/8	1910
2	G1/2	2330
2	G3/4	2420



Filter+ regulator+regulator G1/4÷G3/4

Size	Connections	Flow-rate (NI/min)
0	G1/4	931
1	G1/4	960
1	G3/8	1230
1	G1/2	1450
2	G3/8	1870
2	G1/2	2070
2	G3/4	2120



Gradual starter G1/2÷G3/4

Size	Connections	Flow-rate (N
1	G1/2	3670
2	G3/4	4260
Pneumatic, electric	control	



Diverter blocks G1/4÷G3/4

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





Lockable valves G1/4÷G3/4

Size	Connections	Flow-rate (NI/min)
0	G1/4	3850
1	G1/4	5190
1	G3/8	6250
1	G1/2	7100
2	G3/8	6150
2	G1/2	7150
2	G3/4	7300





Pressure microregulator G1/4

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





Precision regulator

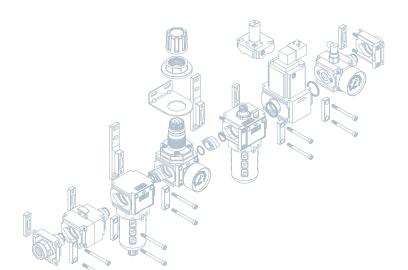
Connection	G1/4
Adjustment range bar	0,1÷3 - 0,1÷4 - 0,1÷8
Flow-rate NI/min	420
<u>u</u>	
versions: standard, oversize exhaust	





Precision regulator

Connection	G1/4
Adjustment range bar	0÷0,1 - 0÷1 - 0÷2 - 0,1÷10
Flow-rate NI/min	800
7	
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

unidirectional and bidirectional version





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

version with manual adjustment or electric switch

#### **AM-50**



Flow regulators M5-G1

Ømm	Connections	Flow rate in adju	stment (NI/min)
		unidirectional	bidirectional
1	M5	100	100
1	G1/8	140	140
2,25	G1/8	120	120
3,5	G1/8	280	-
5	G1/4	350	350
6	G1/4	700	-
6	G3/8	350	350
9	G1/2 - G3/4	2200	2200
12	G1	2200	2200

**AM-53** 



Economizer G1/8-G1

Connections	Flow-rate (NI/min)
G1/8 - G1/4	700/900
G1/4 - G3/8	1200/2000
G1/2 - G3/4	3500/5000
G1	5200/7500

# ACCESSORIES_



Signal processing valves

Flow-rate (NI/min)
300
110
300
110

AM-51



Unidirectional check valves

Connections	Flow-rate (NI/min)
G1/2 - G3/4	4500
G1	7500



Pneumoelectric transducers

Function	NO-NO
Voltage	16 A-250 V 50H:
	5 A-250 V 50H;
	3 A-30 V DO



Calibrated pressure switches

NO-NC
16 A-250 V 50Hz
5 A-250 V 50Hz
3 A-30 V DC
1÷8





Push-in fittings in technopolymer

Tube mm	Ø 4-6-8-10-12
Threaded connection	M5, G1/8, G1/4, G3/8, G1/2
N.F.	

versions: cylindrical thread with O-ring and conical Teflon pre-treatment body and release ring in technopolymer



Push-in fittings in metal

cody and release ring 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
<u> </u>	
cylindrical thread with O-ri	ng

HC

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

availabe with self-holding system and various types of clamping arms



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

Ø Cylinder mm	40
Version	pneumatic standard
	with manual lever
Maunting	DIN
7	
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
<u> </u>	
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
7	
available with diff	erent rods and strokes

**LAGE** 

Nr. AK60016061 01

# AUTOMOTIVE_



Pneumatic under body clamps

Ø Cylinder mm	50
Version	pneumatic standard
	manual without cylinder
Mounting	DIN
Mounting	L

availale with vanishing hook,
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
7	
various rotating table	s available



Electric clamping units

Size	140-225-350-95
Mounting	DIN, NAAM
<u> </u>	
available with remoted manual control	
various types of clamping arms available	
electronic control module original UNIVER	



Electric power pivots

Size	500-1000
Mounting	DIN
7	
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
<b>u</b>	
various mounting option	ns available
opening angle adjustme	nt

#### UNIBLOCK



Manual clamping devices

Version	manual
vertical, horizontal series, pull action, straight line action,	
heavy duty	

Pneumatic clamping devices

Ø Cylinder mm	16-25
Version	pneumatic standard
7	
available with front mounting	pattern or with 4-sided mounting

**UNIBLOCK** 

#### **UNIFLEX**



**UNIFLEX clamping units** 

Ø Cylinder mm	40-50-63-80
Version	manual, pneumatic,
	pneumatic with manual control
7	
available with front	mounting or with 4-sided mounting
various types of clar	mping arms available
DIN standard	

## **Automotive**



#### References

KUKA

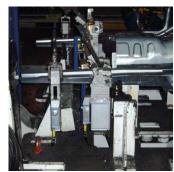
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Pneumatic and electric applications



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