B11

ISO 15218 - 10 mm Nanovalves - 1 W standard

- Flow-rate: 10 Nl/min
- Quick response time: 3 ms
- ISO 15218 interface
- 3/2 NC version
- Led standard

TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Ways/Positions	**3/2 NC, 3/2 NO**
Pressure	Max 7 bar
Control	electric
Return	mechanical spring
Operating frequency	5 Hz
Assembly	no. 2 screws M1,6
Connections	ISO 15218 interface
Nominal Ø (mm)	0,7 (3/2 NC) (3/2 NO)
Nominal flow rate (Nl/min)	10

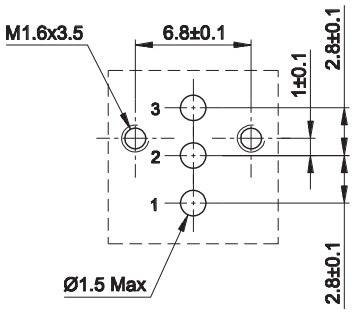
CONSTRUCTIVE CHARACTERISTICS

Valve body	self-extinguishing technopolymer
Seals	VITON/NBR
Components	stainless steel - brass

ELECTRIC CHARACTERISTICS

Voltage	24 VDC (12V DC upon request)
Voltage tolerance	±10%
Power consumption	1 W
Electrical connection	connector D535 U40 (IP65), welded pin (IP00), Molex
LED	yellow (standard)
Manual override	monostable button

Substructure (ISO 15218)



1 = Supply port
2 = Use
3 = Exhaust

CODIFICATION KEY

B	1	1	-	4	0	1	L	2	4	D
1				2	3	4	5	6		

1 Series
B11 = ISO 15218 - 10 mm Nanovalves

2 Model
4 = Monostable

3 Type
0 = 3/2 NC
1 = 3/2 NO

4 Function
1 = With manual override (L variant)
2 = Without manual override (L variant)
3 = With manual override (P variant)
4 = Without manual override (P variant)
5 = With manual override (M variant)
6 = Without manual override (M variant)

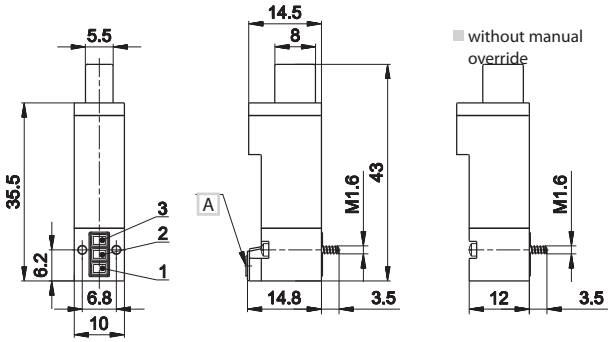
5 Variant
L = 90° connector (protected pins)
M = In-line connector protected pins (upon request)
P = In-line connector (for assembly on electronic board)

6 Voltage
24D = 24 V DC
12D = 12 V DC (upon request)

Fixing screws standard supplied. Max tightening torque 0,15 Nm
Other versions upon request: in-line cables and 90° cables

Subject to change

90° Connector - protected pins

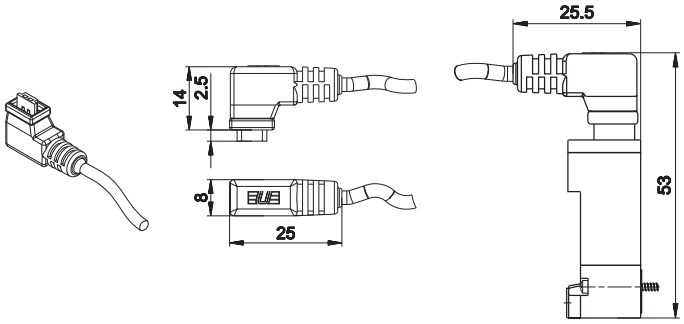


Symbol	Pressure	Ø	Resp. Time (ms)		Weight	Part no.
	bar	mm	En.	De-en.	Kg	
3/2 NC	0÷7	0,7	3	3,5	0,0108	B11-401L24D(a)
3/2 NC	0÷7	0,7	3	3,5	0,0107	B11-402L24D(b)

A Manual override

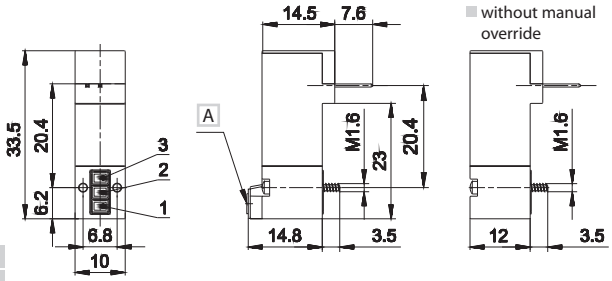
1 = Supply port
2 = Use
3 = Exhaust

D-535U40300/500



single connector with 0,3-0,5 m wire
weight Kg: 0,05 **D-535U40300 wire L = 300 mm**
0,07 **D-535U40500 wire L = 500 mm**

In-line PIN (for assembly on electronic board)



Symbol	Pressure	Ø	Resp. Time (ms)		Weight	Part no.
	bar	mm	En.	De-en.	Kg	
3/2 NC	0÷7	0,7	3	3,5	0,0104	B11-403P24D(a)
3/2 NC	0÷7	0,7	3	3,5	0,0103	B11-404P24D(b)

A Manual override

1 = Supply port
2 = Use
3 = Exhaust

(a) = with manual override (b) = without manual override

B10

ISO 15218 - 10 mm Nanovalves - low power consumption

- Low input standard: 0,3 W
- Flow-rate: 10 Nl/min
- Quick response time: 3 ms
- ISO 15218 interface
- 3/2 NC version
- Led standard

Upon request:
- Bistable version

TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Ways/Positions	**3/2 NC**
Pressure	Max 7 bar
Control	electric
Return	mechanical spring
Operating frequency	5 Hz
Assembly	no. 2 screws M1,6
Connections	ISO 15218 interface
Nominal Ø (mm)	0,7 mm
Nominal flow rate (Nl/min)	10

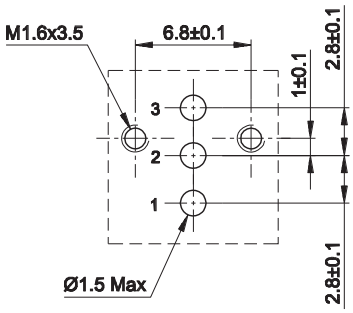
CONSTRUCTIVE CHARACTERISTICS

Valve body	self-extinguishing technopolymer
Seals	VITON/NBR
Components	stainless steel - brass

ELECTRIC CHARACTERISTICS

Voltage	24 VDC (12V DC upon request)
Voltage tolerance	±10%
Power consumption	1,3 W (speed-up 1 W)
Electrical connection	connector D535 U40 (IP65), welded pin (IP00), Molex
LED	yellow (standard)
Manual override	monostable button

Substructure (ISO 15218)



1 = Supply port
2 = Use
3 = Exhaust

CODIFICATION KEY

B	1	0	-	4	0	1	L	2	4	D
1				2	3	4	5	6		

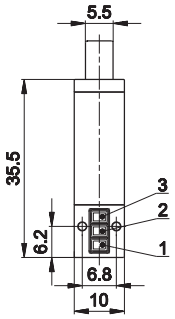
1 Series	2 Model	3 Type	4 Function
B10 = ISO 15218 10 mm Nanovalves low power consumption	**4** = Monostable	**0** = 3/2 NC	**1** = With manual override (L variant) **2** = Without manual override (L variant) **3** = With manual override (P variant) **4** = Without manual override (P variant) **5** = With manual override (M variant) **6** = Without manual override (M variant)

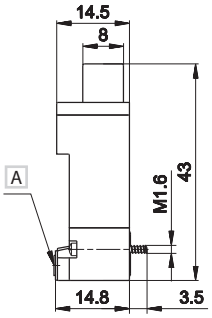
5 Variant	6 Voltage
L = 90° connector (protected pins) **M** = In-line connector protected pins (upon request) **P** = In-line connector (for assembly on electronic board)	**24D** = 24 V DC **12D** = 12 V DC (upon request)

Fixing screws standard supplied. Max tightening torque 0,15 Nm
Other versions upon request: in-line cables and 90° cables

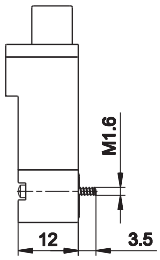
Subject to change

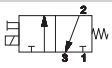
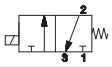
90° Connector - protected pins





without manual override

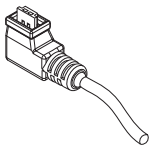


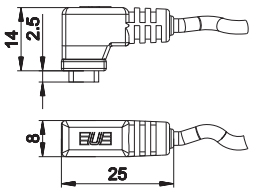
	Symbol	Pressure	Ø	Resp. Time (ms)		Weight	Part no.
		bar	mm	En.	De-en.	Kg	
3/2 NC		0÷7	0,7	3	3,5	0,0108	B10-401L24D(a)
3/2 NC		0÷7	0,7	3	3,5	0,0107	B10-402L24D(b)

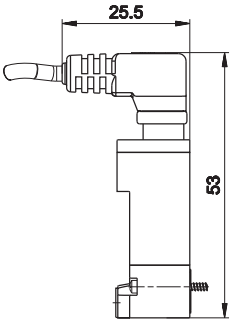
A Manual override

1 = Supply port
2 = Use
3 = Exhaust

D-535U40300/500

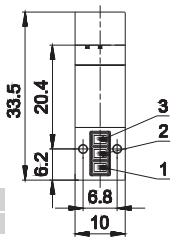


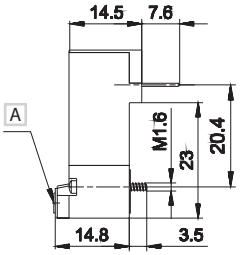




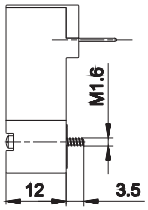
single connector with 0,3-0,5 m wire
weight Kg: 0,05 **D-535U40300 wire L = 300 mm**
0,07 **D-535U40500 wire L = 500 mm**

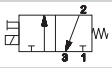
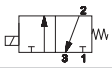
In-line PIN (for assembly on electronic board)





without manual override



	Symbol	Pressure	Ø	Resp. Time (ms)		Weight	Part no.
		bar	mm	En.	De-en.	Kg	
3/2 NC		0÷7	0,7	3	3,5	0,0104	B10-403P24D(a)
3/2 NC		0÷7	0,7	3	3,5	0,0103	B10-404P24D(b)

A Manual override

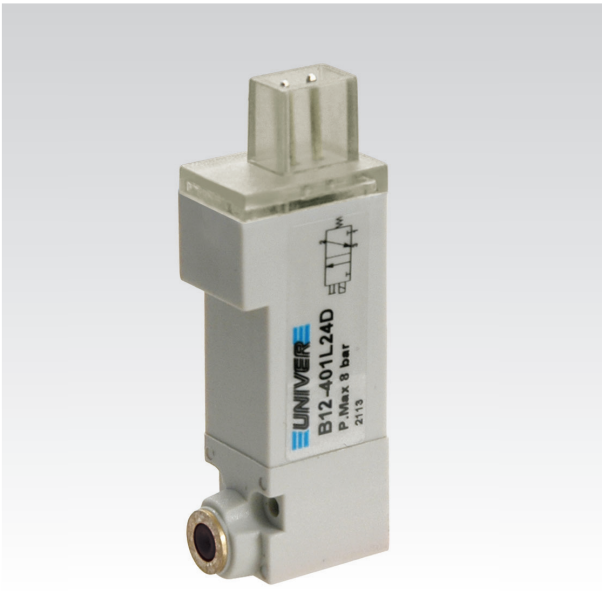
1 = Supply port
2 = Use
3 = Exhaust

B12

ISO 15218 - 10 mm Nanovalves - high flow rate

- High flow-rate: 30 Nl/min
- Quick response time: 3 ms
- ISO 15218 interface
- 3/2 NC version
- Led standard

Upon request:
- 40 Nl/min flow rate version



TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Ways/Positions	**3/2 NC**
Pressure	Max 7 bar
Control	electric
Return	mechanical spring
Operating frequency	5 Hz
Assembly	no. 2 screws M1,6
Connections	ISO 15218 interface
Nominal Ø (mm)	1,3 mm
Nominal flow rate (Nl/min)	28

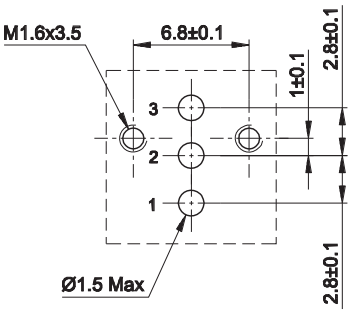
CONSTRUCTIVE CHARACTERISTICS

Valve body	self-extinguishing technopolymer
Seals	VITON/NBR
Components	stainless steel - brass

ELECTRIC CHARACTERISTICS

Voltage	24 VDC (12V DC upon request)
Voltage tolerance	±10%
Power consumption	0,6 W (speed-up 5,5 W)
Electrical connection	connector D535 U40 (IP65), welded pin (IP00), Molex
LED	yellow (standard)
Manual override	monostable button

Substructure (ISO 15218)



1 = Supply port
2 = Use
3 = Exhaust

CODIFICATION KEY

B	1	2	-	4	0	1	L	2	4	D
1				2	3	4	5	6		

1 Series
B12 = ISO 15218 - 10 mm Nanovalves - high flow rate

2 Model
4 = Monostable

3 Type
0 = 3/2 NC

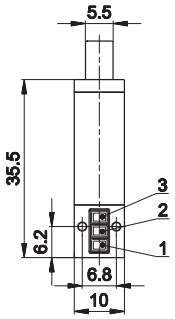
4 Function
1 = With manual override (L variant)
2 = Without manual override (L variant)
3 = With manual override (P variant)
4 = Without manual override (P variant)
5 = With manual override (M variant)
6 = Without manual override (M variant)

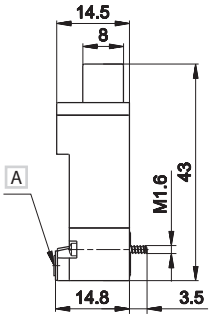
5 Variant
L = 90° connector (protected pins)
M = In-line connector protected pins (upon request)
P = In-line connector (for assembly on electronic board)

6 Voltage
24D = 24 V DC
12D = 12 V DC (upon request)

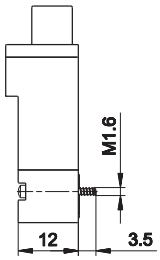
Fixing screws standard supplied. Max tightening torque 0,15 Nm
Other versions upon request: in-line cables and 90° cables, nominal flow rate 40 Nl/min

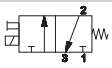
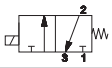
90° Connector - protected pins



Without manual override

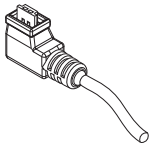


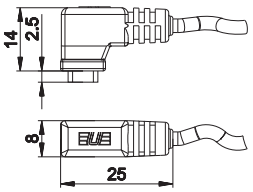
	Symbol	Pressure	Ø	Resp. Time (ms)		Weight	Part no.
		bar	mm	En.	De-en.	Kg	
3/2 NC		0÷7	1,3	3	3,5	0,0108	B12-401L24D(a)
3/2 NC		0÷7	1,3	3	3,5	0,0107	B12-402L24D(b)

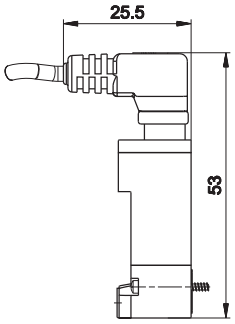
A Manual override

1 = Supply port
2 = Use
3 = Exhaust

D-535U40300/500

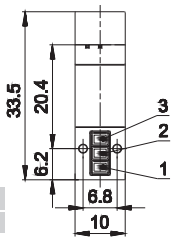


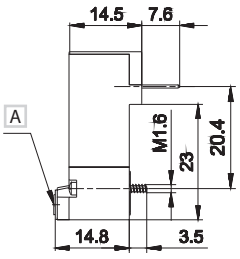




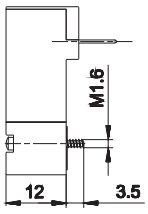
single connector with 0,3-0,5 m wire
weight Kg: 0,05 **D-535U40300 wire L = 300 mm**
0,07 **D-535U40500 wire L = 500 mm**

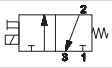
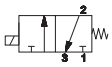
In-line PIN (for assembly on electronic board)



without manual override



	Symbol	Pressure	Ø	Resp. Time (ms)		Weight	Part no.
		bar	mm	En.	De-en.	Kg	
3/2 NC		0÷7	1,3	3	3,5	0,0104	B12-403P24D(a)
3/2 NC		0÷7	1,3	3	3,5	0,0103	B12-404P24D(b)

A Manual override

1 = Supply port
2 = Use
3 = Exhaust

(a) = with manual override (b) = without manual override

B

10 mm nanovalves

- Flow rate 12 Nl/min
- Interface with conveyed discharge or discharge in the air
- Versions 3/2 normally open (NO) and normally closed (NC)
- Interchangeable coil (U04) - rotation by 180°
- Molex-type electrical connector or loose wires

ATEX version available upon request

CE Ex II 3 GD c nA II T5-10°C ≤ Ta ≤ 45°C

TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Commutation system	poppet valve
Ways/Positions	**3/2 NC, 3/2 NO**
Pressure	Max 8 bar
Control	electric
Return	mechanical spring
Connections	on sub-base
Nominal Ø	0,5÷0,6 mm
Nominal flow rate	9÷12 Nl/min
Max frequency	2300 ÷ 3000 cycles/min

CONSTRUCTIVE CHARACTERISTICS

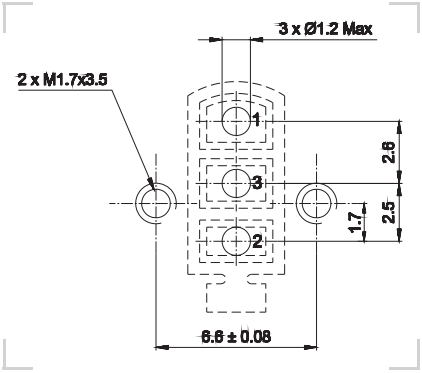
Valve body	technopolymer (aluminium external cover)
Seals	nitrile rubber
Components	stainless steel - treated brass

ELECTRIC CHARACTERISTICS

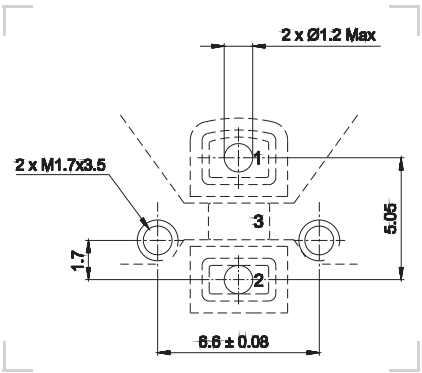
Coil	U04 DE series
Power consumption	1,2 W (1,35 W with LED) - 0,5 W (speed-up 1,2 W)
Electrical connection	Molex bipolar connector or loose cables
Voltage	12 V DC - 24 V DC
Manual override	recessed button - 1 position

Substructure

Conveyed discharge

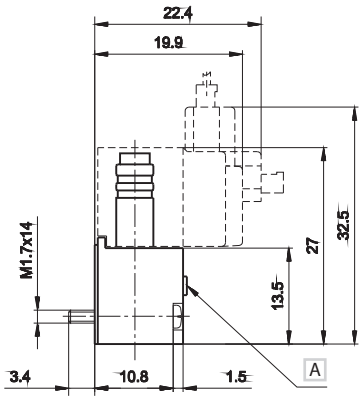


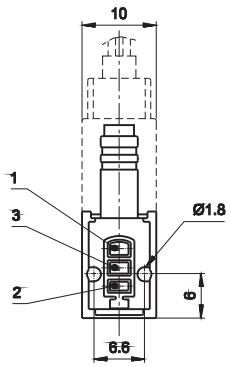
Discharge in the air



NC	NO
1 = Supply port	**1** = Exhaust
2 = Use	**2** = Use
3 = Exhaust	**3** = Supply port

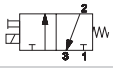
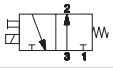
Valves with conveyed discharge



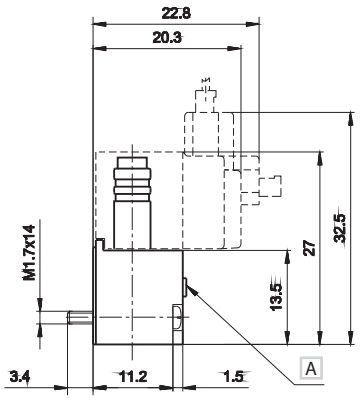


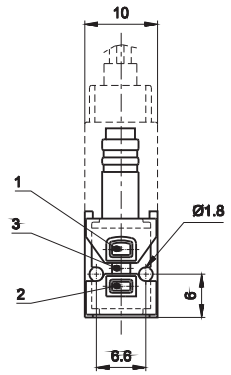
1 = Supply port
2 = Use
3 = Exhaust

A Manual override

	Symbol	Nominal Ø	Flow rate Nl/min.	Pressure bar	Response Time (ms) En.	Response Time (ms) De-en.	Weight Kg	Part no.
3/2 NC		0,5	1→2 = 9 2→3 = 12	1,5÷8 (a)	9	10	0,007	**B-101N**
3/2 NO		0,5	3→2 = 9 2→1 = 10	0÷8	18	8	0,007	**B-121N**

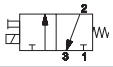
Valves with discharge in the air





1 = Supply port
2 = Use
3 = Exhaust

A Manual override

	Symbol	Nominal Ø	Flow rate Nl/min.	Pressure bar	Response Time (ms) En.	Response Time (ms) De-en.	Weight Kg	Part no.
3/2 NC		0,6	1→2 = 12 2→3 = 15	1,5÷8 (a)	9,5	9	0,007	**B-102N**

>> Coils

DE-352
24VDC - 1,2 W

DE-355
24VDC - 0,5 W

DE-452
24VDC - 1,35 W

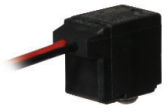
U04 with integrated upward 90° connector
Weight: 0,006

DE-552
24VDC - 1,2 W

DE-555
24VDC - 0,5 W

DE-652
24VDC - 1,35 W

U04 with in-line connector
Weight: 0,006



DE-052L030
24VDC - 1,2 W

U04 with loose wires (300 mm lenght)
Weight: 0,008

DE-642I
12VDC - 1,35 W

DE-652I
24VDC - 1,35 W

DE-655I
24VDC - 0,5 W

U04 with in-line connector with protecting cover for complete tightness
Weight: 0,006

(a) = upon request: 0 bar operation
For technical features of coils and connectors, see section **"Accessories>Coils"**
Nanovalves are supplied without coil and connector

A

ISO 15218 - 15 mm Microvalves

- Flow rate max 38 Nl/min
- ISO 15218 interface
- 2/2-3/2 versions - normally open (NO) and normally closed (NC)
- Interchangeable coil - 90° orientation
- Single and multiple sub-bases - single and multipolar electric connection

ATEX version available upon request

CE Ex II 3 GD c nA II T5-10°C ≤ Ta ≤ 45°C

TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C	
Fluid temperature	Max +50 °C	
Fluid	10 µm filtered air, with or without lubrication	
Commutation system	poppet	
Ways/Positions	**2/2 NC, 3/2 NC, 2/2 NO, 3/2 NO**	
Pressure	Max 9 bar	
Control	electric	
Return	mechanical spring	
Connections	ISO 15218 interface	
Nominal Ø	1,2	1,5
Nominal flow rate	26	38
Max frequency	2700 cycles/min	

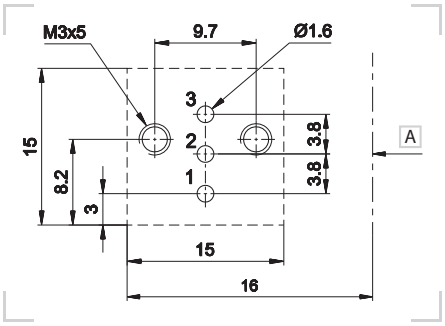
CONSTRUCTIVE CHARACTERISTICS

Valve body	technopolymer (aluminium external cover)
Seals	nitrile rubber
Components	stainless steel, brass

ELECTRIC CHARACTERISTICS

Coil	U05 DD series
Power consumption	2 W DC / 2,3 VA AC (Ø 1,2) - 2,5 W DC / 3,5 VA AC (Ø 1,5)
Electrical connection	15 mm connector - Molex bipolar connector or loose cables
Voltage	24 V DC -12 V DC - 24 V AC - 110 V AC - 230 V AC
Manual override	recessed button - 1 position
	(other manual overrides upon request)
Protection degree with connector	IP65

ISO 15218 Substructure



A Pitch

3/2 NC

1 = Supply port
2 = Use
3 = Exhaust

3/2 NO

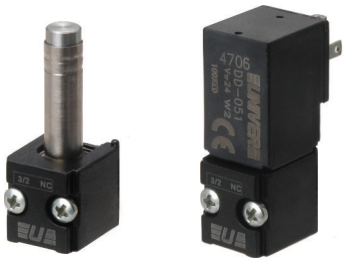
1 = Exhaust
2 = Use
3 = Supply port

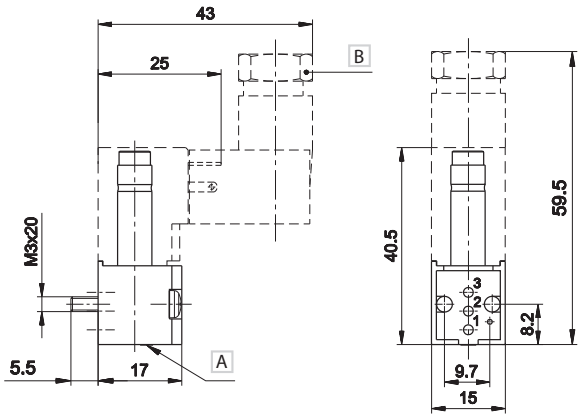
2/2 NO

1 = Exhaust
3 = Supply port

Drilling jig to assemble the valve on a smooth surface with a sealing plate in between. Part no. A-299-11.

15 mm Microvalves





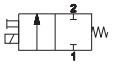
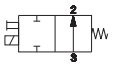
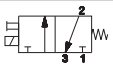
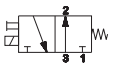
A Manual override
B Possible rotation by 180°

3/2 NC
1 = Supply port
2 = Use
3 = Exhaust

3/2 NO
1 = Exhaust
2 = Use
3 = Supply port

2/2 NO
1 = Exhaust
3 = Supply port

Microvalves Ø 1,2 for direct current coils 2 W

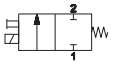
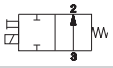
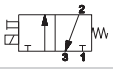
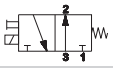
	Symbol	Pressure bar	Ø mm	Flow rate Nl/min.	Current	Response Time (ms) En.	Response Time (ms) De-en.	Weight (b) Kg	Part no.
2/2 NC		0÷9	1,2	26	DC	11	11	0,018 (0,037)	**A-141N**
2/2 NO		0÷9	1,2	26	DC	11	11	0,018 (0,037)	**A-161N**
3/2 NC		0÷9	1,2	26	DC	11	11	0,018 (0,037)	**A-101N**
3/2 NO		0÷9	1,2	26	DC	11	11	0,018 (0,037)	**A-121N**

Suggested coils

DD-051 24 V DC - 2 W	Coil with Faston
DD-051L030 24 V DC - 2 W	Coil with flying cables

Upon request 12 V DC

Microvalves Ø 1,5 for direct current coils 2,5 W

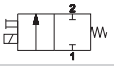
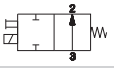
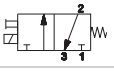
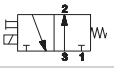
	Symbol	Pressure bar	Ø mm	Flow rate Nl/min.	Current	Response Time (ms) En.	Response Time (ms) De-en.	Weight (b) Kg	Part no.
2/2 NC		0÷8	1,5	38	DC	11	11	0,018 (0,037)	**A-142N**
2/2 NO		0÷8	1,5	38	DC	11	11	0,018 (0,037)	**A-162N**
3/2 NC		0÷8	1,5	38	DC	11	11	0,018 (0,037)	**A-102N**
3/2 NO		0÷8	1,5	38	DC	11	11	0,018 (0,037)	**A-122N**

Suggested coils

DD-052 24 V DC - 2,5 W	Coil with Faston
DD-052L030 24 V DC - 2,5 W	Coil with flying cables

Upon request 12 V DC

Microvalves Ø 1,2 for direct or alternate current

	Symbol	Pressure bar	Ø mm	Flow rate Nl/min.	Current	Response Time (ms) En.	Response Time (ms) De-en.	Weight (b) Kg	Part no.
2/2 NC		0÷9	1,2	26	DC/AC	11	11	0,018 (0,037)	**A-151N**
2/2 NO		0÷9	1,2	26	DC/AC	11	11	0,018 (0,037)	**A-171N**
3/2 NC		0÷9	1,2	26	DC/AC	11	11	0,018 (0,037)	**A-111N**
3/2 NO		0÷9	1,2	26	DC/AC	11	11	0,018 (0,037)	**A-131N**

Suggested coils

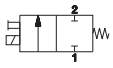
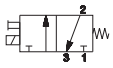
DD-040 24 V AC - 50/60 Hz -2,3 VA **DD-041** 12 V DC - 2 W **DD-050** 48 V AC - 50/60 Hz - 2,3 VA **DD-051** 24 V DC - 2 W **DD-070** 230 V AC - 50/60 Hz - 2,3 VA	Coil with Faston
DD-051L030 24 V DC - 2 W	Coil with flying cables

Upon request 12 V DC

(b) = the weight in brackets refers to coil with faston

For technical data of coils see **"Accessories>Coils"**
Microvalves are supplied without coil and connector

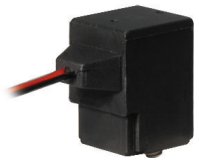
Microvalves Ø 1,5 for direct or alternate current

	Symbol	Pressure	Ø	Flow rate	Current	Response Time (ms)		Weight (b)	Part no.
		bar	mm	Nl/min.		En.	De-en.	Kg	
2/2 NC		0÷8	1,5	38	DC/AC	11	11	0,018 (0,037)	**A-152N**
3/2 NC		0÷8	1,5	38	DC/AC	11	11	0,018 (0,037)	**A-112N**

Suggested coils	
DD-011 24 V AC - 50/60 Hz - 3,5 VA **DD-013** 230 V AC - 50/60 Hz - 3,5 VA **DD-040** 24 V AC - 50/60 Hz - 2,3 VA **DD-042** 12 V DC - 2,5 W **DD-052** 24 V DC - 2,5 W **DD-060** 48 VAC - 50/60 Hz - 3,5 VA	Coil with Faston
DD-052L030 24 V DC - 2,5 W	Coil with flying cables

Upon request 12 V DC

>> Coils



U5 flying cables
weight: 0,019 Kg

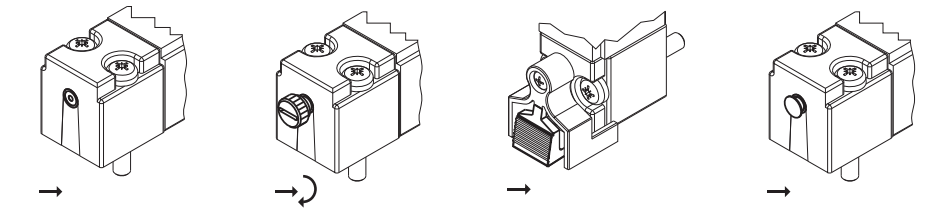
DD-051L030
DD-052L030

U05 15 mm
weight: 0,019 Kg

DD-011 **DD-050**
DD-013 **DD-051**
DD-040 **DD-052**
DD-041 **DD-060**
DD-042 **DD-070**

Standard manual override

Operation	Notes	Symbol
1 = with button with tool, 1 position (standard)	metallic	→
2 = with button, 1-2 positions (upon request)	technopolymer red colour	⊖
3 = with front button, 1 position (upon request)	technopolymer red colour	→
4 = with button, 1 position (upon request)	metallic	→



1 **2** **3** **4**

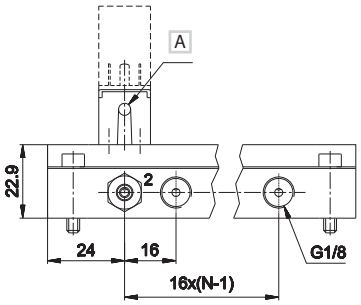
(b) = the weight in brackets refers to coil with faston

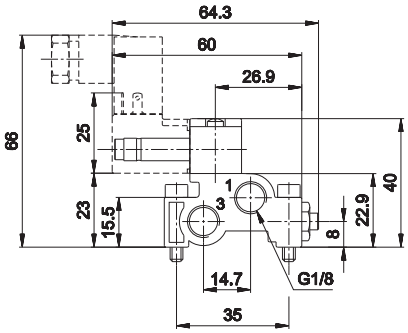
For technical data of coils see **"Accessories>Coils"**
Microvalves are supplied without coil and connector

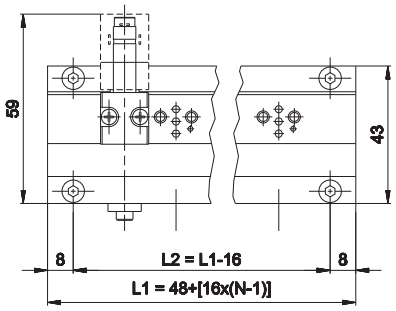
Sub-base for external electric connection

Sub-base in extruded anodized aluminium with conveyed supplies and exhausts for assembling NC or NO valves.
If NC and NO valves are assembled on just one base, it is necessary to insert the inverter part A-350 for NO valves.

A - 326A - _ _ [(b)] G1/8 threaded connections (standard)
A - 326B - _ _ [(b)] M5 threaded connections (upon request)
A - 326D - _ _ [(b)] push-in connections tube 4 (upon request)







A Manual override

N = Number of valve positions
(b) = Number of positions

3/2 NC
1 = Supply port
2 = Use
3 = Exhaust

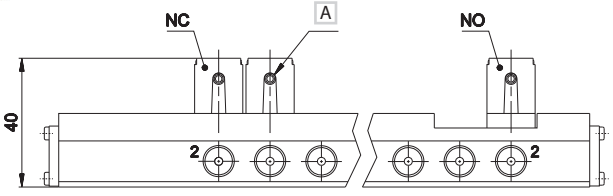
3/2 NO
1 = Exhaust
2 = Use
3 = Supply port

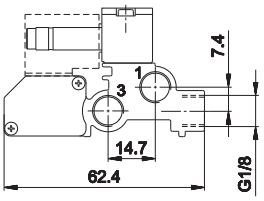
2/2 NO
1 = Exhaust
3 = Supply port

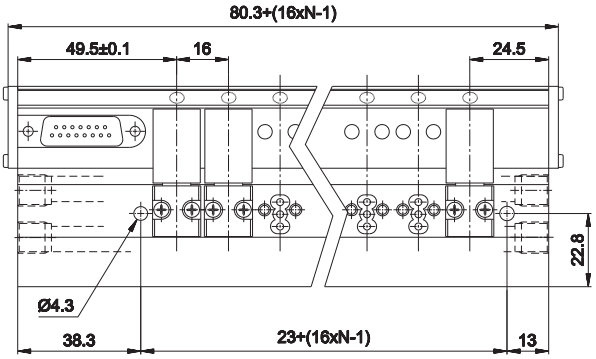
3

Sub-base for integrated electric connection

Sub-base in extruded anodized aluminium up to Max 13 stations with sub-D connector 15 pin (upon request up to 23 with connector 25 pin) and G1/8 threaded standard connections, with conveyed supplies and exhausts for assembling NC or NO valves, with integrated coil connection and optical indication of the valve working status.
If both NO and NC valves are assembled on just one sub-base, NC valves are always mounted on the connector side and afterwards the NO valves. The invert plate (part no. A-350) must be installed for NO valves.







A Manual override

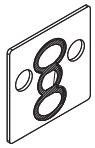
N = Number of valve positions

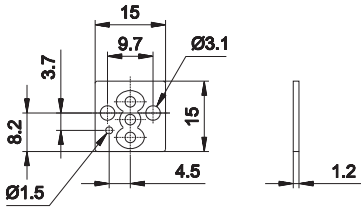
3/2 NC
1 = Supply port
2 = Use
3 = Exhaust

3/2 NO
1 = Exhaust
2 = Use
3 = Supply port

2/2 NO
1 = Exhaust
3 = Supply port

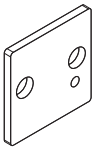
A-299-11

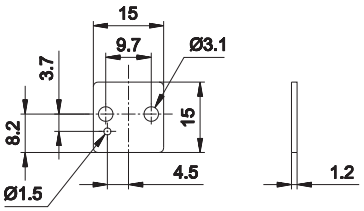




Sealing plate
It blocks the seal in place when the valve is mounted on a smooth surface without a seal housing
material: aluminium
weight: 0,003 Kg

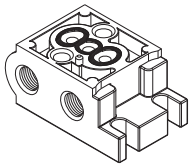
A-301

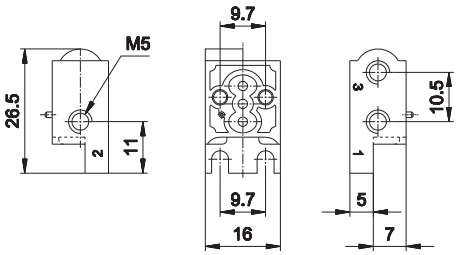




Blank plate
Unused valve stations must be closed with the blank plate
material: aluminium
weight: 0,002 Kg

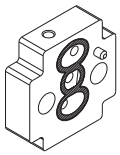
A-305

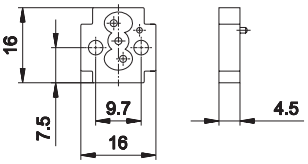




Single base
material: zamak
connection: M5
weight: 0,012 Kg

A-350



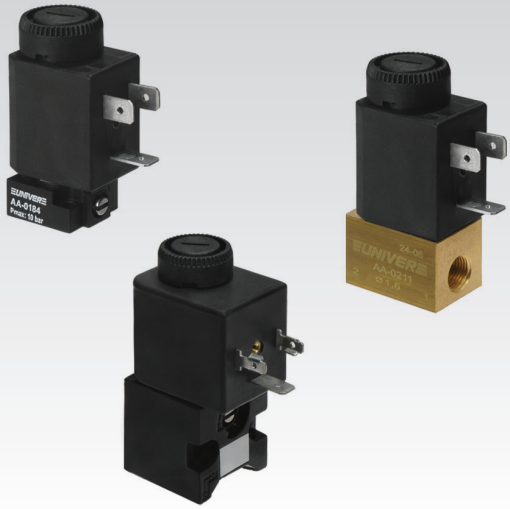


Inverter plate
NO and NC valves can be mounted on a single block inserting this device between the NO valve and the sub-base.
If all installed valves are NO versions, just invert air supply without using the inverter plate.
material: plastic
weight: 0,002 Kg

AA

Miniature electropilots U1

Direct intervention electropilots with poppet valve system and cushioned bottom seals
- Assembly on sub-base, threaded connections on the body, CNOMO interface
- Orientable coil (360°) separated from mechanical part
- Versions: 2/2 3/2 NC - NO
- Original Univer SPEED modular sub-bases



ATEX version available upon request

CE Ex II 2Gc IIC T5 II 2Dc T100°C

TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ +50 °C			
Fluid temperature	Max +95 °C			
Fluid	50 µm filtered air, with or without lubrication; neutral gases (upon request other fluids can be used)			
Commutation system	direct intervention poppet valve system with cushioned seals			
Ways/Positions	**2/2 NC, 3/2 NC, 3/2 NO**[(a)]			
Pressure	**2/2, 3/2 NC** = 0 ÷ 10			
	3/2 NO = 3 ÷ 10			
Control	electric			
Return	mechanical spring			
Connections	on sub-base or with threaded connections on the body			
	sub-base	**G 1/8**	**M5**	**CNOMO**
Nominal Ø (mm)	1,2 ÷ 1,5	1 ÷ 1,5	1 ÷ 1,5	1,2 ÷ 1,5
Nominal flow rate (Nl/min)	30 ÷ 60	28 ÷ 60	30 ÷ 60	33 ÷ 45

CONSTRUCTIVE CHARACTERISTICS

Materials	see features below

ELECTRIC CHARACTERISTICS

Series	U1	U3
Coil	DA	DC
Power consumption	3,5 W (DC) - 5 VA (AC)	2,5 W (DC) - 3,3 VA (AC)
Connector	AM 5110	AM 5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC	
Protection degree	IP65	

For other electric features see section **"Accessories>Coils"**

C SA US

For electropilots in compliance with CSA/UL certification see the related section "Omologated electropilots"

(a) = Mechanical part designed to keep the air supply always from the body
(Useful in case of assembly of more NC-NO pilots in series to have a unique supply port)

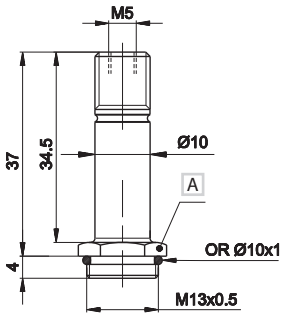
U1 Sleeves - with moving core

Material:	
sleeve	treated brass
cores and spring	stainless steel
seals	nitrile rubber

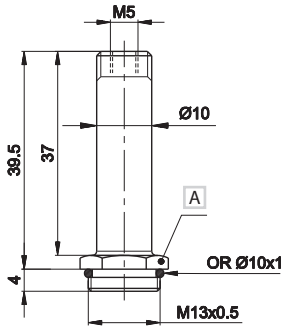
	Exhaust Ø	Pressure	Weight	Part no.
	mm	bar	Kg	
3/2 NO	1,2	3÷10	0,024	**AA-0150**
3/2 NC	1,5	0÷10	0,022	**AA-0157**
2/2 NC	-	0÷10	0,022	**AA-0170**

Upon request viton seals and stainless steel sleeves (only NC versions)

NC

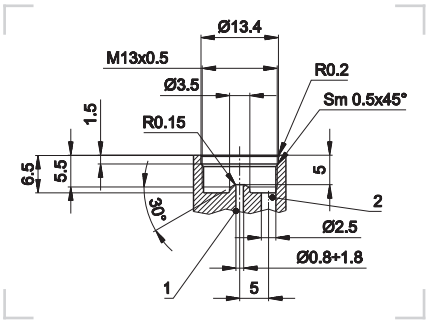


NO



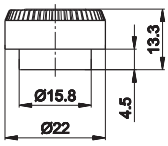
A Wrench 14

Detail of machining

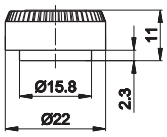


1 = Supply port
2 = Use

Locking rings for coils on sleeves



1



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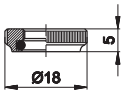


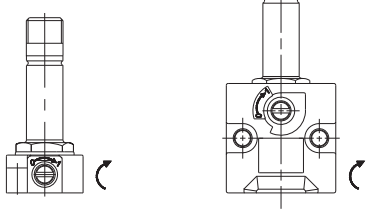
3

Version	Suitable for sleeves	Material	Coil	Part no.
1 = radial exhausts	3/2 NO	technopolymer	U1	**AM-5213A**
2 = radial exhausts	3/2 NC	technopolymer	U1	**AM-5211A**
3 = open exhausts	2/2 NC	brass	U1	**AM-5211B**

In order to convey exhausts, use version 3

Standard manual overrides

Functionig	Suitable for sleeves	Symbol/Part no.
1 = with 2 position screw	all NC U1 electropilots that can use manual override	⊖
2 = with impulse 1-2 position screw	only CNOMO NC U1 electropilots	⊖
3 = with button with tool	only CNOMO NC U1 electropilots	→
4 = with button, 1 position	U1 3/2 NO electropilots	**AM-5201** (a)



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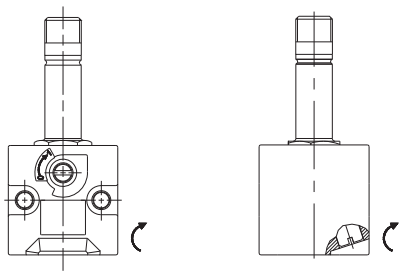

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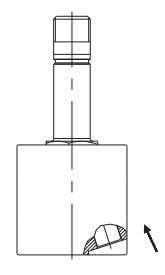

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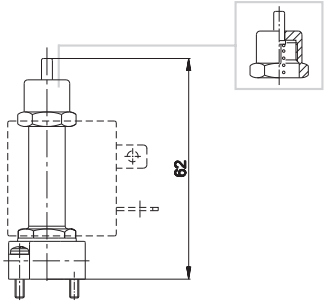
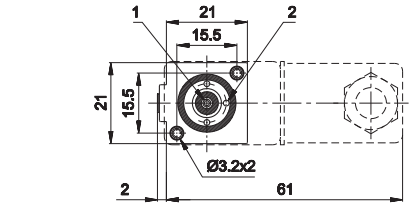


4

(a) = montato sull'estremità del cannotto 3/2 NO

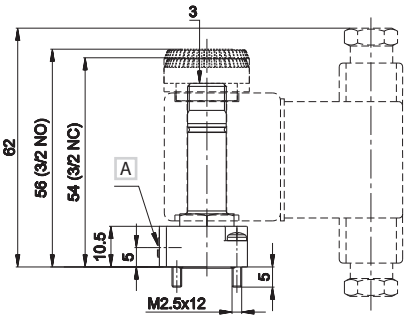
⊖ = with 2 position screw
→ = with button with tool

U1 **2/2 - 3/2** Electropilot for assembling on sub-base



Material:	
valve body	technopolymer
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d) mm	Flow rate (Nl/min) 1→2	2→3	Resp. Time (ms) En.	De-en.	Manual override	Weight Kg	Part no.
3/2 NC		1,5	60	80	12	12	⊖	0,027	**AA-0184**
2/2 NC		1,3	50	-	16	-	⊖	0,027	**AA-0186**
3/2 NO (b)		1,2	30	70	11	10	(c)	0,030	**AA-0188**

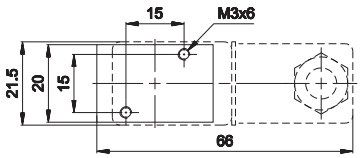


A Manual override

1 = Supply port
2 = Use
3 = Exhaust

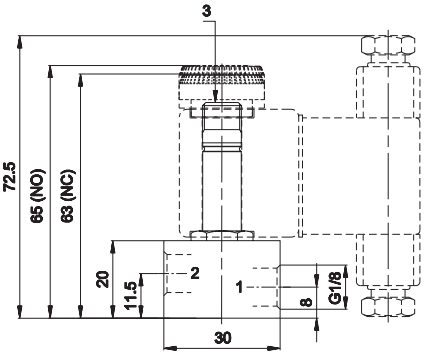
Use SPEED subbase to build Manifolds, see following pages.
Available upon request: brass valve body (without manual override), zamak valve body, stainless steel sleeve, other inner diameters.

U1 **2/2 - 3/2** G1/8 Electropilot



Material:	
valve body	brass
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

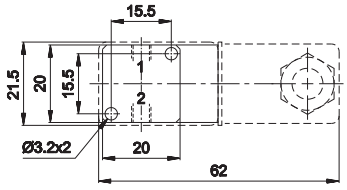
	Symbol	Ø (d) mm	Flow rate (Nl/min) 1→2	2→3	Resp. Time (ms) En.	De-en.	Manual override	Weight Kg	Part no.
3/2 NC		1,5	60	85	12	12	-	0,105	**AA-0211**
2/2 NC		1,3	60	-	16	-	-	0,105	**AA-0219**
3/2 NO (b)		1,2	28	75	11	9	(c)	0,105	**AA-0213**



1 = Supply port
2 = Use
3 = Exhaust

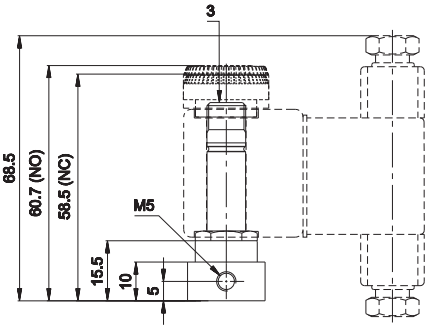
Electropilot to be used alone.
Brass body suitable for intercepting non-aggressive luiquids. No manual override.
Available upon request: stainless steel sleeve - other inner diameters.

U1 **2/2 - 3/2** M5 Electropilot



Material:	
valve body	brass
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d) mm	Flow rate (Nl/min) 1→2	2→3	Resp. Time (ms) En.	De-en.	Manual override	Weight Kg	Part no.
3/2 NC		1,5	60	80	12	12	-	0,065	**AA-0231**
2/2 NC		1,3	50	-	16	-	-	0,065	**AA-0239**
3/2 NO (b)		1,2	30	70	11	10	(c)	0,065	**AA-0233**



1 = Supply port
2 = Use
3 = Exhaust

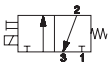
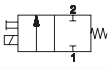
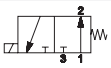
Electropilot to be used alone.
Brass body suitable for intercepting non-aggressive luiquids. No manual override.
Available upon request: stainless steel sleeve - other inner diameters.

(b) = close the exhaust of the 3/2 NO electropilot to get the 2/2 NO one
(c) = manual override on AM-5201 ring nut
⊖ = with 2 position screw
(d) = the Ø shown on the 3/2 valves refers to the exhhaust

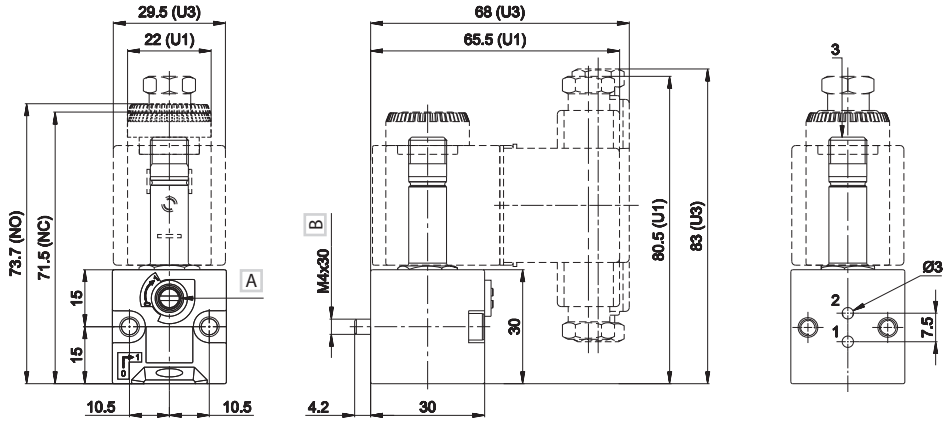
Electropilots are supplied without coil and connector

U1 CNOMO **2/2 - 3/2** Electropilot for mounting on sub-bases SPEED U2

Material:	
valve body	technopolymer
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d) mm	Flow rate (Nl/min) 1→2	2→3	Resp. Time (ms) En.	De-en.	Manual override	Weight Kg	Part no.
3/2 NC		1,5	45	77	12	12	⊖	0,052	**AA-0400**
		1,5	45	77	12	12	→	0,052	**AA-0400U**
2/2 NC		1,3	42	-	18	-	⊖	0,052	**AA-0402**
3/2 NO (b)		1,2	33	77	11	10	(c)	0,060	**AA-0404**

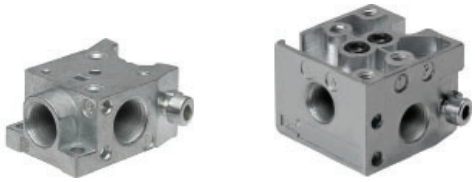
Available upon request: zamak valve body, stainless steel sleeve, other inner diameters.



A Manual override
B ISO 4762

1 = Supply port
2 = Use
3 = Exhaust

Modular sub-base "SPEED" series U1/U2 **G1/8**



Electropilot	Connections	Material	Weight Kg	Part no.
U1 sub-base	G 1/8	zamak	0,037	**AA-0450**
CNOMO sub-base	G 1/8	zamak	0,075	**AB-0900**

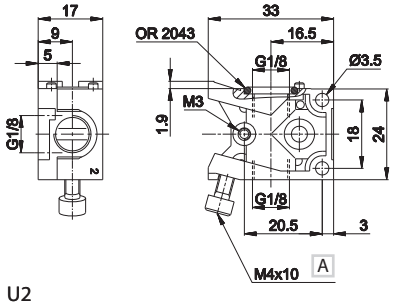
Advantages
The original UNIVER "Speed" series was designed to solve some operational problems

- Possibility of defining the number of sub-bases at the moment of use
- Possibility of freely increasing or reducing the number of elements
- Quick assembly with special screw (built-in) standard supplied
- Reduction of stock holding
- Easy technical intervention

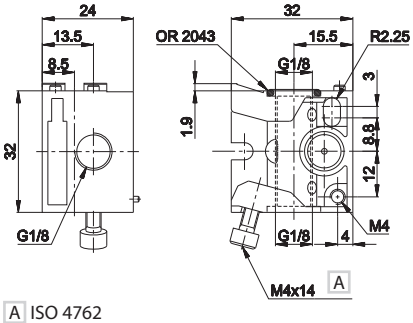
Air supply is rotated by 90° in comparison with side consumption
Standard (built-in) screw and O-Ring

When assembling the manifold, put the bases on a flat surface and tighten the screw until the manifold is perfectly aligned.

U1



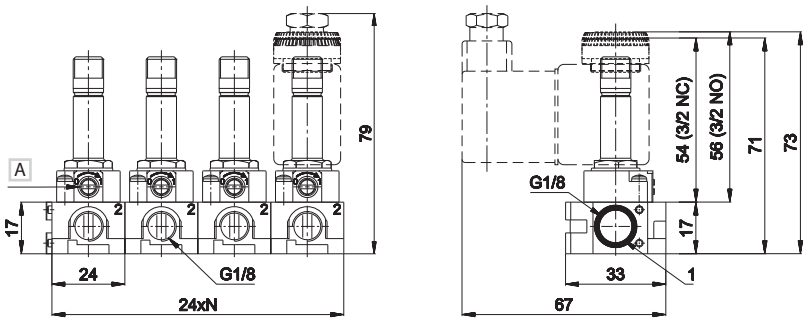
U2



A ISO 4762

(b) = close the exhaust of the 3/2 NO electropilot to get the 2/2 NO one
(c) = manual override on ring nut AM-5201
⊖ = with 2 position screw
→ = with button with tool
(d) = the Ø shown on the 3/2 valves refers to the exhhaust
Electropilots are supplied without coil and connector

U1 **G1/8** sub-base

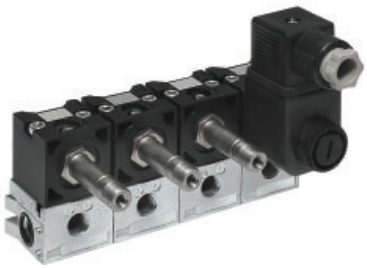


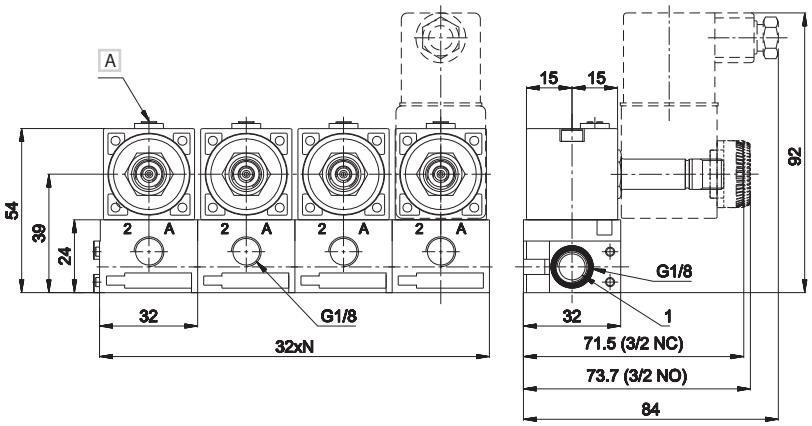
A Manual override

1 = Supply port
2 = Use

N = Number of valve positions

U1 **G1/8 CNOMO** sub-base





A Manual override

1 = Supply port
2 - A = Use

N = Number of valve positions

AB

Miniature electropilots U2

Direct intervention electropilots with poppet valve system and bottom cushioned seals
- Assembly on sub-base
- Threaded connections on the body
- CNOMO interface
- Orientable coil (360°) separated from mechanical part
- Versions: 2/2 3/2 - NC NO
- Original Univer SPEED modular sub-base

ATEX version available upon request

CE Ex II 3 GD c nA II T5-10°C ≤ Ta ≤ 45°C

TECHNICAL CHARACTERISTICS

Ambient temperature				-10 ÷ +50 °C
Fluid temperature				Max +95 °C
Fluid				10 µm filtered air, with or without lubrication; neutral gases (versions for different fluids available upon request)
Commutation system				direct intervention poppet with cushioned seals
Ways/Positions				**2/2 NC, 3/2 NC, 3/2 NO**[(a)]
Pressure				**2/2, 3/2 NC** = 0 ÷ 10 bar **3/2 NO** = 3 ÷ 10 bar
Control				electric
Return				mechanical spring
Connections				on sub-base / threaded on the body
	sub-base	**G 1/8**	**G 1/4**	**CNOMO**
Nominal Ø (mm)	2,1 ÷ 2,4	2,1 ÷ 2,4	1,6 ÷ 6	2,1 ÷ 2,4
Nominal flow rate (Nl/min)	92 ÷ 150	100 ÷ 155	95 ÷ 650	92 ÷ 110

CONSTRUCTIVE CHARACTERISTICS

Materials	see features below

ELECTRIC CHARACTERISTICS

Series	U2
Coil	DB
Power consumption	11W (DC) - 10 VA (AC)
Connector	AM 5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC
Protection degree	IP65

For other electric features see section **"Accessories>Coils"**

C SA US

For electropilots in compliance with CSA/UL certification see the related section "Omologated electropilots"

(a) = Mechanical part designed to keep the air supply always from the body
(Useful in case of assembly of more NC-NO pilots in series to have a unique supply port)

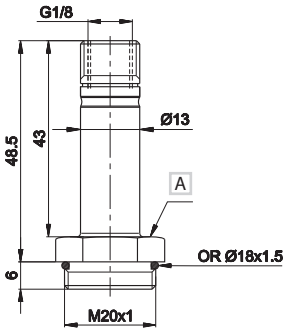
U2 Sleeves - with moving core

Material:	
sleeve	treated brass
cores and springs	stainless steel
seals	nitrile rubber

	Exhaust Ø	Pressure	Weight	Part no.
	mm	bar	Kg	
3/2 NO	2,4	3÷10	0,06	**AB-0600**
3/2 NC	2,4	0÷10	0,05	**AB-0613**
2/2 NC	-	0÷10	0,06	**AB-0640**
2/2 NC (a)	-	0÷10	0,06	**AB-0643**

Upon request viton seals and stainless steel sleeves (only NC options)

NC



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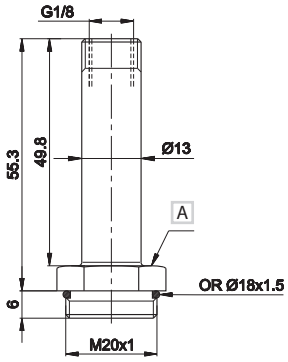
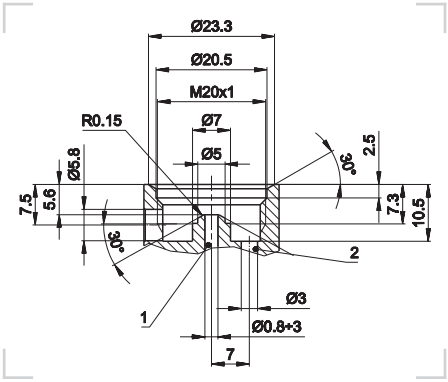


A Wrench 22

Detail of machining

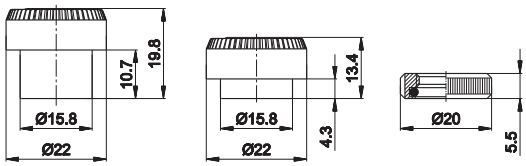


1 = Supply port
2 = Use

Locking rings for coils on sleeves

Version	Suitable for sleeves	Material	Coil	Part no.
1 = radial exhausts	3/2 NC	technopolymer	U2	**AM-5212A**
2 = radial exhausts	3/2 NO	technopolymer	U2	**AM-5214A**
3 = open exhausts	2/2 NC	brass	U2	**AM-5212B**

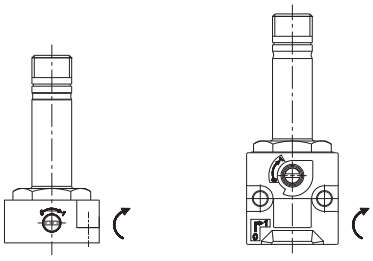
In order to convey exhausts, use version 3



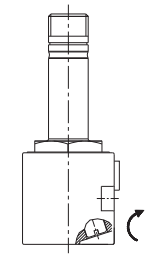
1 2 3

Standard manual overrides with electropilots

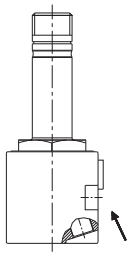
Functionig	Suitable for sleeves	Symbol/Part no.
1 = with 2 position screw	all NC U2 electropilots that can use manual override	⊖
2 = with impulse 1-2 position screw	only CNOMO NC U2 electropilots	⊖
3 = with button with tool	only CNOMO NC U2 electropilots	→
4 = with button, 1 position	U2 NO 3/2 electropilots	**AM-5203** (b)



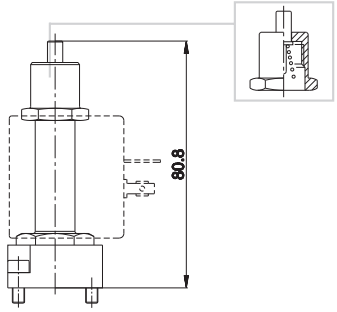
1



2



3



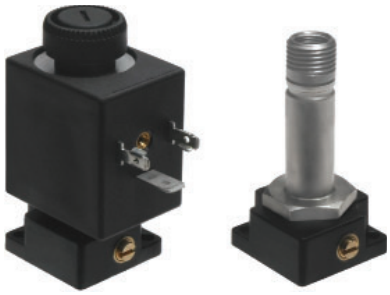
4

(a) = Suitable for sub-bases with diameter from 3 ÷ 6

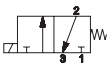
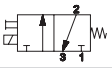
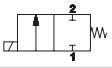
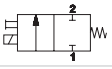
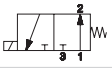
(b) = Mounted on the 3/2 NO sleeve

⊖ = with 2 position screw
→ = with button with tool

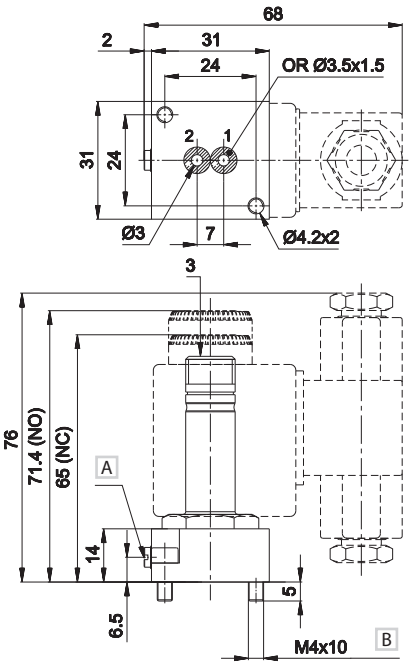
U2 **2/2 - 3/2** Electropilot for assembling on sub-base



Material:	
valve body	zamak
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d) mm	Flow rate (Nl/min) 1→2	2→3	Resp. Time (ms) En.	De-en.	Manual override	Weight Kg	Part no.
3/2 NC		2,4	150	160	13	10	-	0,12	**AB-0681**
3/2 NC		2,4	150	160	13	10	⊖	0,12	**AB-0687**
2/2 NC		2,1	130	-	13	-	-	0,12	**AB-0722**
2/2 NC		2,1	130	-	13	-	⊖	0,12	**AB-0728**
3/2 NO (c)		2,4	92	148	14	10	(e)	0,13	**AB-0685**

Sub-base: SPEED U2. Available upon request: stainless steel sleeve - other inner diameters.

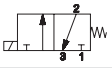
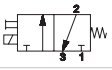
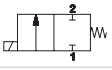
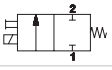
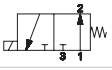


A Manual override
B ISO 4762

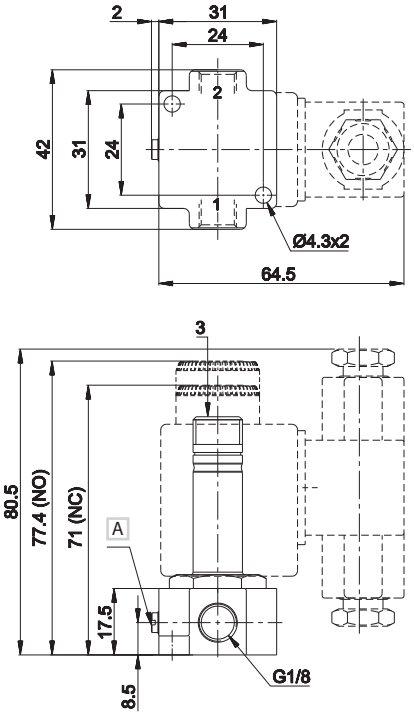
1 = Supply port
2 = Use
3 = Exhaust

U2 **2/2 - 3/2** G1/8 Electropilot

Material:	
valve body	zamak
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d) mm	Flow rate (Nl/min) 1→2	2→3	Resp. Time (ms) En.	De-en.	Manual override	Weight Kg	Part no.
3/2 NC		2,4	155	210	13	10	-	0,14	**AB-0751**
3/2 NC		2,4	155	210	13	10	⊖	0,14	**AB-0757**
2/2 NC		2,1	155	-	12	-	-	0,14	**AB-0765**
2/2 NC		2,1	155	-	12	-	⊖	0,14	**AB-0771**
3/2 NO (c)		2,4	100	150	14	14	(e)	0,15	**AB-0755**

Available upon request: stainless steel sleeve - other inner diameters.



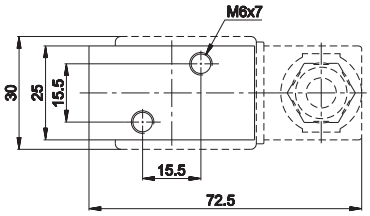
A Manual override

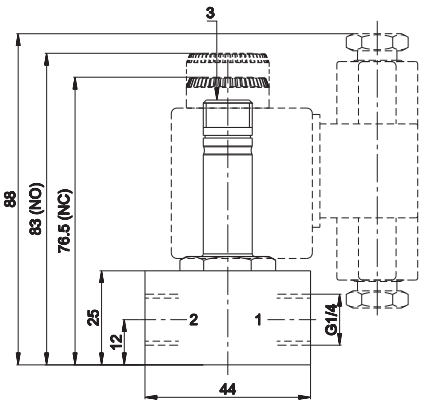
1 = Supply port
2 = Use
3 = Exhaust

(c) = close the exhaust of the 3/2 NO electropilot to get the 2/2 NO one (d) = the Ø shown on the 3/2 valves refers to the exhhaust ⊖ = with 2 position screw
(e) = manual override on ring nut AM-5203

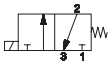
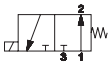
Electropiltots are supplied without coil and connector

U2 **3/2** G1/4 Electropilot





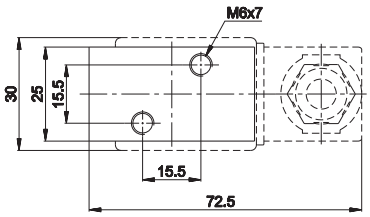
Material:	
valve body	brass
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

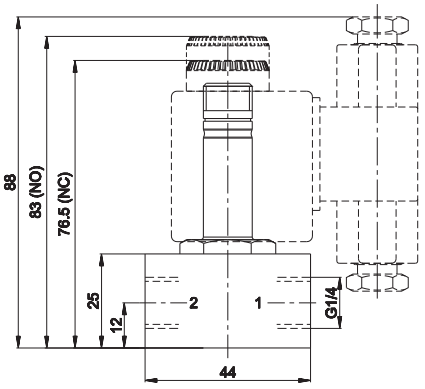
	Symbol	Ø (d)	Flow rate (Nl/min)		Resp. Time (ms)		Manual	Weight	Part no.
		mm	1→2	2→3	En.	De-en.	override	Kg	
3/2 NC		2,1	200	210	13	11	-	0,22	**AB-0822**
3/2 NO (c)		2,1	95	160	12	10	(e)	0,23	**AB-0819**

Suitable for intercepting non-aggressive liquids. Upon request: stainless steel body and sleeve.

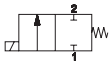
1 = Supply port
2 = Use
3 = Exhaust

U2 **2/2** G1/4 Electropilot





Material:	
valve body	brass
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d)	Flow rate	Pressure	Resp. Time (ms)		Weight	Part no.
		mm	(Nl/min)	bar	En.	De-en.	Kg	
2/2 NC		1,6	108	0÷30	6	-	0,23	**AB-0824**
		2	165	0÷20	9	-	0,23	**AB-0825**
		2,4	210	0÷15	11	-	0,23	**AB-0826**
		3	280	0÷10	12	-	0,23	**AB-0827**
		3,5	350	0÷9	-	10	0,23	**AB-0828**
		4	450	0÷8	-	13	0,23	**AB-0829**
		4,5	500	0÷7	-	13	0,23	**AB-0830**
		5	550	0÷6,5	-	16	0,23	**AB-0831**
		5,5	600	0÷6	-	21	0,23	**AB-0832**
		6	650	0÷5	-	29	0,23	**AB-0833**

Suitable for intercepting non-aggressive liquids.

1 = Supply port
2 = Use

Coil U2 - 17 VA

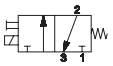
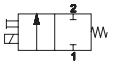
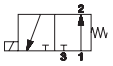
Voltage
24V AC - 50/60 Hz **DB-0607**
110V AC - 50/60 Hz **DB-0608**
220V AC - 50/60 Hz **DB-0610**

(c) = close the exhaust of the 3/2 NO electropilot to get the 2/2 NO one. (d) = the Ø shown on the 3/2 valves refers to the exhhaust. ⊖ = with 2 position screw.
(e) = manual override on AM-5203 ring nut

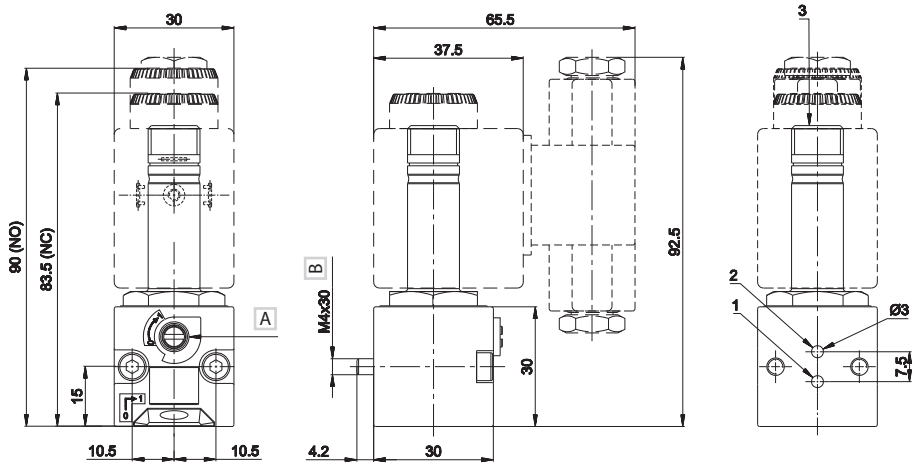
Electropiltots are supplied without coil and connector

U2 CNOMO **2/2 - 3/2** Electropilot for mounting on sub-bases SPEED U2

Material:	
valve body	technopolymer
sleeve	treated brass
core and spring	stainless steel
seals	nitrile rubber

	Symbol	Ø (d)	Flow rate (Nl/min)		Resp. Time (ms)		Manual	Weight	Part no.
		mm	1→2	2→3	En.	De-en.	override	Kg	
3/2 NC		2,4	110	170	13	12	⊖	0,08	**AB-0885**
2/2 NC		2,1	115	-	12	-	⊖	0,08	**AB-0886**
3/2 NO (c)		2,4	92	148	13	10	(e)	0,09	**AB-0888**

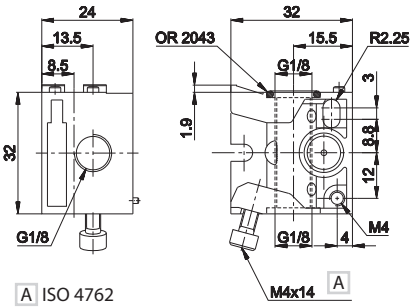
Available upon request: zamak valve body, stainless steel sleeve, other inner diameters.



A Override manual
B ISO 4762

1 = Supply port
2 = Use
3 = Exhausts

Modular sub-base SPEED series U2 G1/8



A ISO 4762

Electropilot	Connections	Material	Weight	Part no.
			kg	
U2 for base	G 1/8	zamak	0,075	**AB-0900**

Advantages
The original UNIVER "Speed" series was realized to solve some operational problems

- Possibility of defining the number of sube-bases at the moment of use
- Possibility of freely increasing or reducing the number of elements
- Quick assembly with special screw (built-in) standard supplied
- Reduction of stock holding
- Easy technical intervention

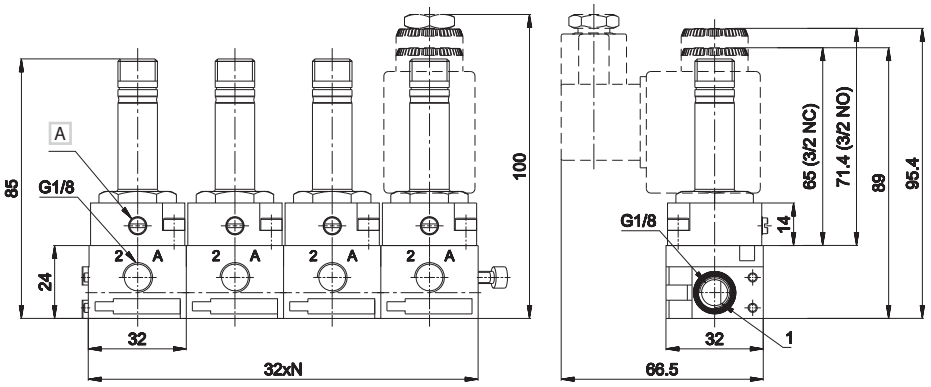
Air supply is rotated by 90° in comparison with side consumption
Standard (built-in) screw and O-Ring

When assembling the manifold, put the bases on a flat surface and tighten the screw until the manifold is perfectly aligned.

(c) = close the exhaust of the 3/2 NO electropilot to get the 2/2 NO one (d) = the Ø shown on the 3/2 valves refers to the exhhaust ⊖ = with 2 position screw
(e) = manual override on ring nut AM-5203

Electropiltots are supplied without coil and connector

U2 **G1/8** Sub-base

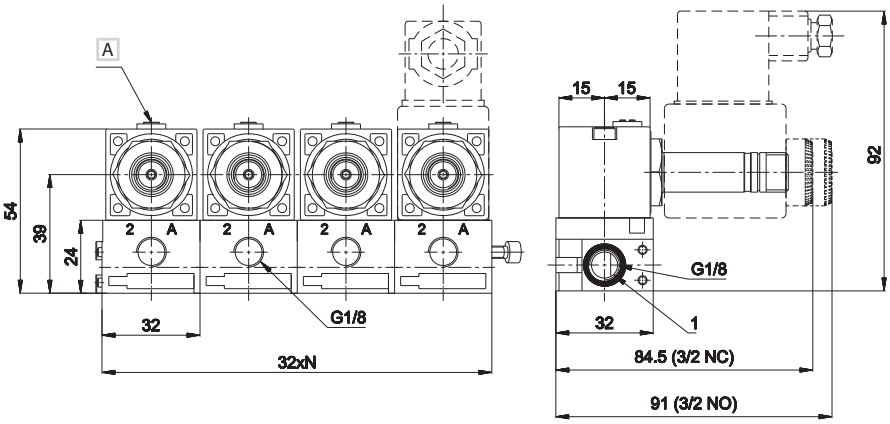


A Manual override

1 = Supply port
2 - A = Use

N = Number of valve position

U2 **G1/8 CNOMO** Sub-base



A Manual override

1 = Supply port
2 - A = Use

N = Number of valve position