

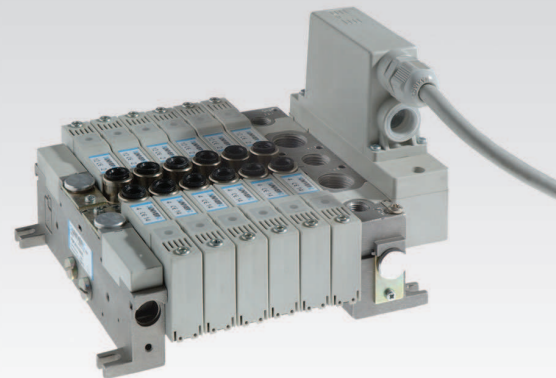
PS

COMBOBOX valves

- Valves with compact design: valve body with integrated sub-base
- High flexibility:
 - > possibility of choosing fitting dimension (4-6-8) according to users' needs
 - > manifolds from 2 up to 20 valve positions
 - > electric and pneumatic control - versions 3/2+3/2 - 5/2 - 5/3
 - > different pressures (vacuum included)
- Electrical connection: external - multipolar - serial connections

Available ATEX version upon request

CE II 2Gc IIC T5 II 2Dc T100°C



TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C (PSR: -15 ÷ +50 °C)
Fluid temperature	max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Commutation system	spool
Ways/Positions	3/2+3/2, 5/2, 5/3
Pressure	electric control = max 9 bar pneumatic control = max 10 bar
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring
Connections	tube Ø 4, 6, 8
Nominal Ø	6 mm
Nominal flow rate (NI/min) according to the type of fittings:	
straight - tube Ø8 mm	830
90° elbow - tube Ø8 mm	700
straight - tube Ø6 mm	510
90° elbow - tube Ø6 mm	370
straight - tube Ø4 mm	200
90° elbow - tube Ø4 mm	140

CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber
Actuators	self-extinguishing technopolymer
Spool	aluminum

ELECTRIC CHARACTERISTICS

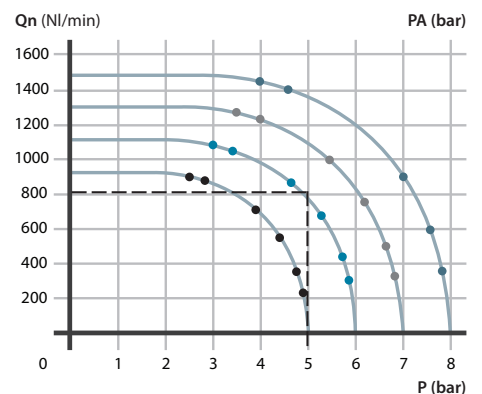
Electropilot/Coil	B series/U04
Voltage	24 V DC (12 V DC upon request)
Power consumption	1,35 W
Protection degree	IP65
Manual override	recessed button - 1 position (PSC) impulse screw - 1-2 positions (PSP)

CODIFICATION KEY

P	S	C	2	6	0	2	4	
1	2	3	4	5	6			

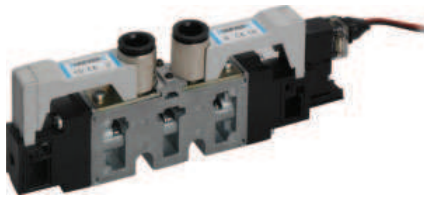
1 Series PSC = Separate wires PSP = Plug-in PSR = Pneumatic	2 Ways 2 = 5/2 6 = 3/2+3/2 NC-NC 3 = 5/3 c.c. 7 = 3/2+3/2 NC-NO 4 = 5/3 o.c. 8 = 3/2+3/2 NO-NO 5 = 5/3 p.c.	3 Control 14 2 = Pneumatic amplified 6 = Electrical amplified	4 Return 12 0 = Pneumatic spring 3 = Pneumatic not amplified 1 = Mechanical spring 6 = Electrical amplified 2 = Pneumatic amplified 7 = Electrical not amplified
5 Voltage and coil PSC and PSP series, coils assembled with standard supplied led 24 = 24 V (standard) 12 = 12 V (upon request)	6 ATEX version X = Atex (upon request) See ATEX Catalogue for types and versions		

Flow rate characteristics



P = Working pressure
PA = Supply pressure
Qn = Flow rate

Single electric impulse



	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Weight Kg	Part no.
		14	12		En.	De-en.		
5/2		electrical amplified	pneumomechanical spring	1,8÷9	17	38	0,143	PSC26024
5/2		electrical amplified	mechanical spring	2,2÷9	15	50	0,143	PSC26124

Double electric impulse



	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Weight Kg	Part no.
		14	12		En.	De-en.		
5/2		electrical amplified	electrical amplified	0,7÷9	11	11	0,150	PSC26624
5/3 c.c.		electrical amplified	electrical amplified	2,2÷9	15	50	0,155	PSC36624
5/3 o.c.		electrical amplified	electrical amplified	2,2÷9	15	50	0,155	PSC46624
5/3 p.c.		electrical amplified	electrical amplified	2,2÷9	15	50	0,155	PSC56624
3/2 NC + 3/2 NC		electrical amplified	electrical amplified	2÷9	15	33	0,140	PSC66624
3/2 NC + 3/2 NO		electrical amplified	electrical amplified	2÷9	15	33	0,140	PSC76624
3/2 NO + 3/2 NO		electrical amplified	electrical amplified	2÷9	15	33	0,140	PSC86624

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Solenoid valves are supplied without coil and connector

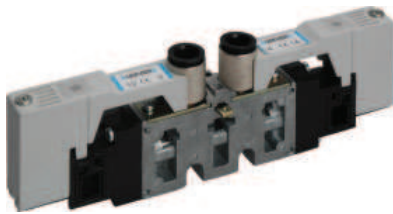
Manual override on PSC series is with button with tool, 1 position

Single electric impulse



	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Weight Kg	Part no.
		14	12		En.	De-en.		
5/2		electrical amplified	pneumomechanical spring	1,8÷9	17	38	0,148	PSP26024
5/2		electrical amplified	mechanical spring	2,2÷9	15	50	0,148	PSP26124

Double electric impulse



	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Weight Kg	Part no.
		14	12		En.	De-en.		
5/2		electrical amplified	electrical amplified	0,7÷9	11	11	0,160	PSP26624
5/3 c.c.		electrical amplified	electrical amplified	2,2÷9	15	50	0,165	PSP36624
5/3 o.c.		electrical amplified	electrical amplified	2,2÷9	15	50	0,165	PSP46624
5/3 p.c.		electrical amplified	electrical amplified	2,2÷9	15	50	0,165	PSP56624
3/2 NC + 3/2 NC		electrical amplified	electrical amplified	2÷9	15	33	0,140	PSP66624
3/2 NC + 3/2 NO		electrical amplified	electrical amplified	2÷9	15	33	0,140	PSP76624
3/2 NO + 3/2 NO		electrical amplified	electrical amplified	2÷9	15	33	0,140	PSP86624

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Solenoid valves are supplied without coil and connector

Manual override on PSC series is with button with tool, 1 position

On PSP series a maximum of 20 coils can be used, restriction due to the connection modules

Subject to change

Single pneumatic impulse



	Symbol	Control	Return	Pressure	Resp. Time (ms)		Weight	Part no.
					bar	En.		
5/2		14	12	1,7÷10	14	33	0,136	PSR220
5/2		14	12	2,2÷10	12	45	0,136	PSR221

Double pneumatic impulse

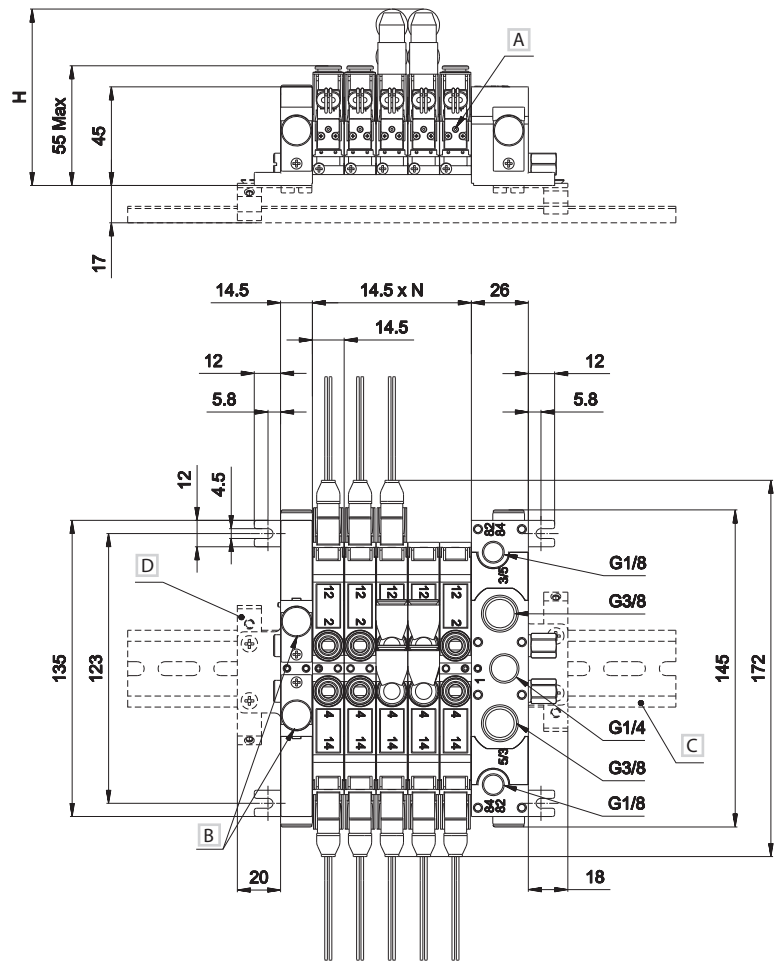


	Symbol	Control	Return	Pressure	Resp. Time (ms)		Weight	Part no.
					bar	En.		
5/2		14	12	0,7÷10	5	5	0,136	PSR222
5/2		14	12	1,1÷10	9	8	0,132	PSR223
5/3 c.c.		14	12	2,2÷10	12	45	0,140	PSR322
5/3 o.c.		14	12	2,2÷10	12	45	0,140	PSR422
5/3 p.c.		14	12	2,2÷10	12	45	0,140	PSR522
3/2 NC + 3/2 NC		14	12	2÷10	12	29	0,140	PSR622
3/2 NC + 3/2 NO		14	12	2÷10	12	29	0,140	PSR722
3/2 NO + 3/2 NO		14	12	2÷10	12	29	0,140	PSR822

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

3

PSC Series with 26 mm inlet plate and 14.5 mm end plate with DIN (EN50022) rail

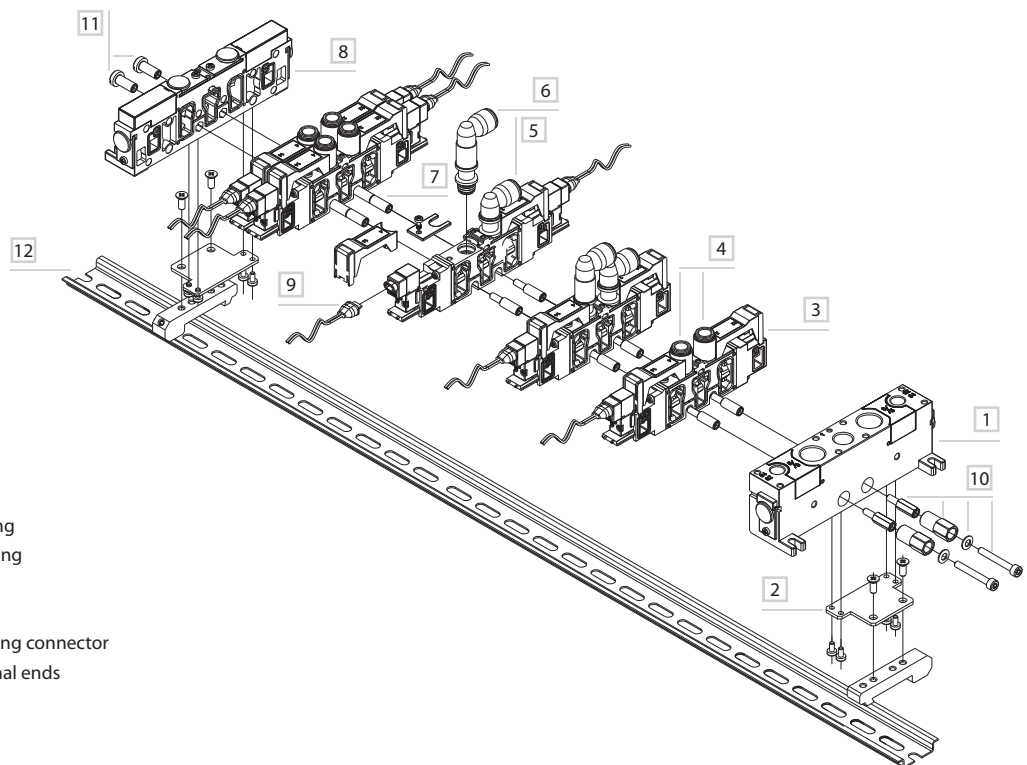


Tube Ø	H
4	72,6
6	76,6
8	80,5

- A Manual override
- B Possibility of supplementary exhausts 3-5
- C Rail DIN (EN 50022)
- D DIN rail connector as optional

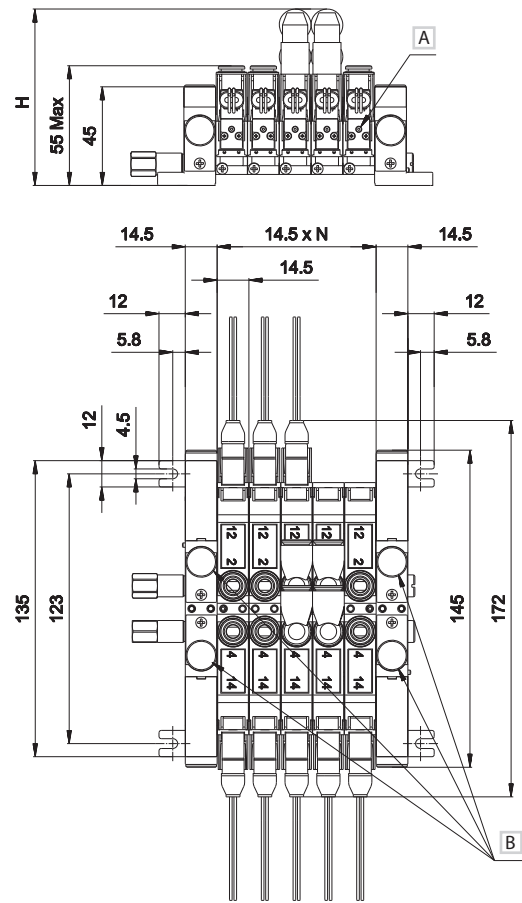
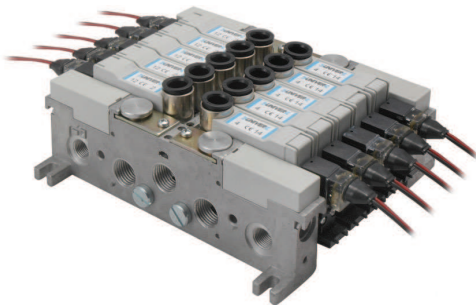
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- 82 = Pilot exhaust side 2
- 84 = Pilot exhaust side 4

N = Number of valve positions



- 1 Inlet plate
- 2 DIN rail adapter plate
- 3 Valve
- 4 Straight fitting
- 5 Swivel low elbow fitting
- 6 Swivel high elbow fitting
- 7 Modular tie-rods
- 8 Blank plate
- 9 Micro double-pole flying connector
- 10 Tie-rods with hexagonal ends
- 11 Counter tie-rods
- 12 DIN rail

PSC series with 14,5 mm inlet and end plate



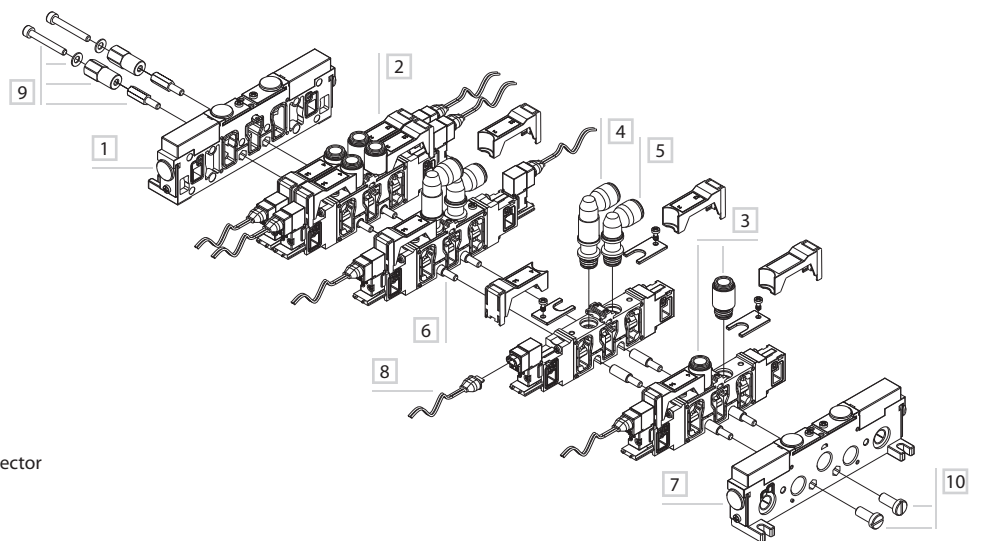
Tube Ø	H
4	72,6
6	76,6
8	80,5

- A Manual override
- B Possibility of supplementary exhausts 3 - 5

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- 82 = Pilot exhaust side 2
- 84 = Pilot exhaust side 4

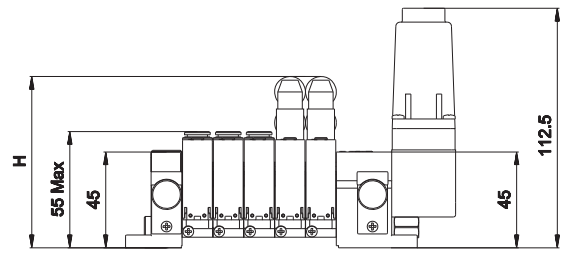
N = Number of valve positions

3



- 1 Inlet plate
- 2 Valve
- 3 Straight fitting
- 4 Swivel low elbow fitting
- 5 Swivel high elbow fitting
- 6 Modular tie-rods
- 7 Blank plate
- 8 Micro double-pole flying connector
- 9 Tie-rods with hexagonal ends
- 10 Counter tie-rods

PSP series with 26mm inlet plate and 14,5 mm end plate with multipolar connector

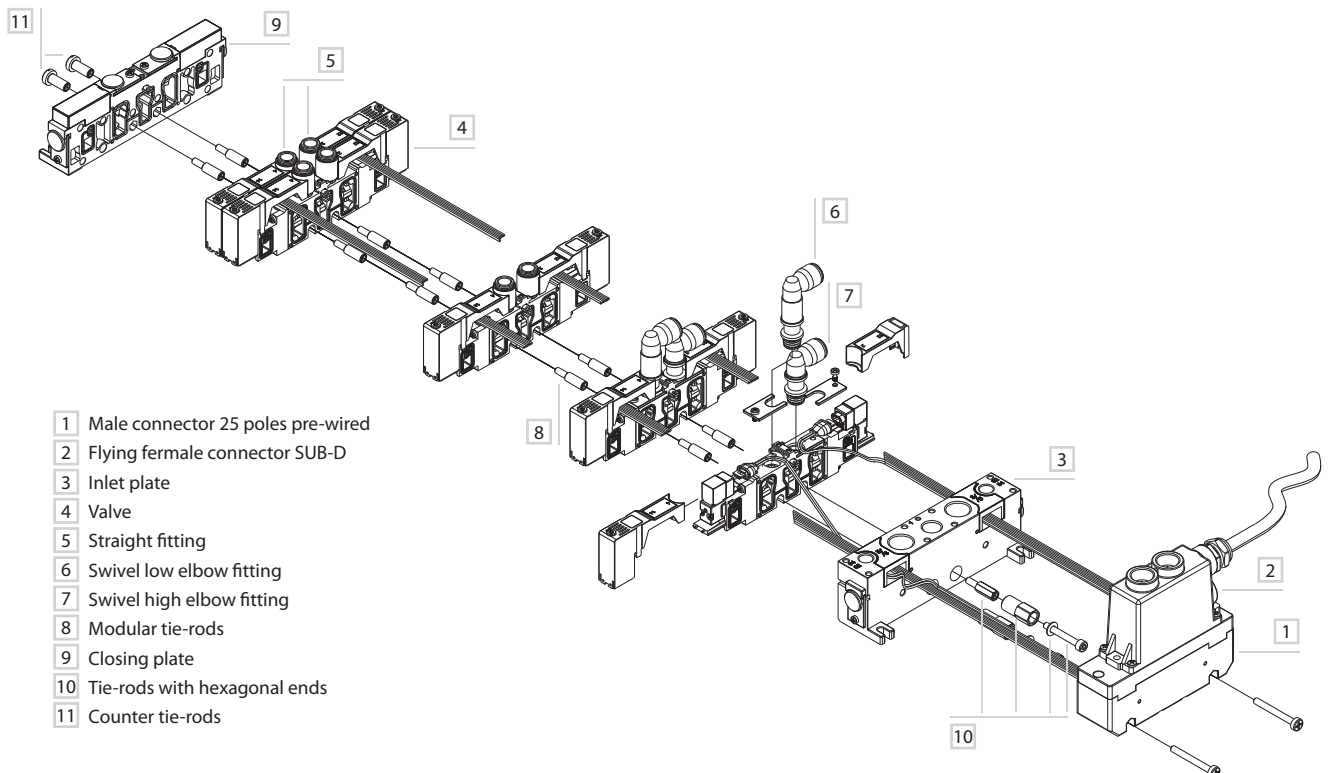
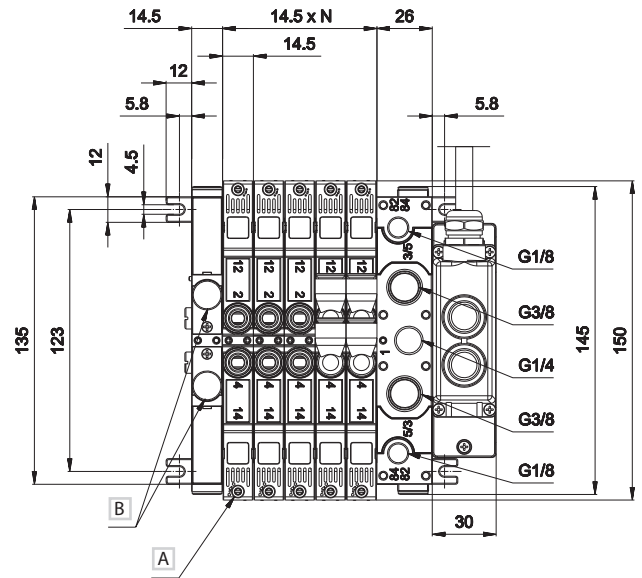


Tube Ø	H
4	72,6
6	76,6
8	80,5

- A Manual override
- B Possibility of supplementary exhausts 3 - 5

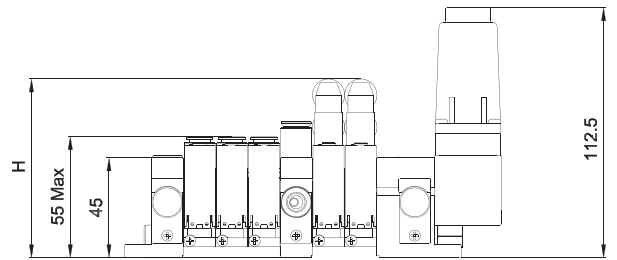
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- 82 = Pilot exhaust side 2
- 84 = Pilot exhaust side 4

N = Number of valve positions



- 1 Male connector 25 poles pre-wired
- 2 Flying female connector SUB-D
- 3 Inlet plate
- 4 Valve
- 5 Straight fitting
- 6 Swivel low elbow fitting
- 7 Swivel high elbow fitting
- 8 Modular tie-rods
- 9 Closing plate
- 10 Tie-rods with hexagonal ends
- 11 Counter tie-rods

PSP series with 26mm inlet plate and 14.5mm end plate with multipolar connector and intermediate plate

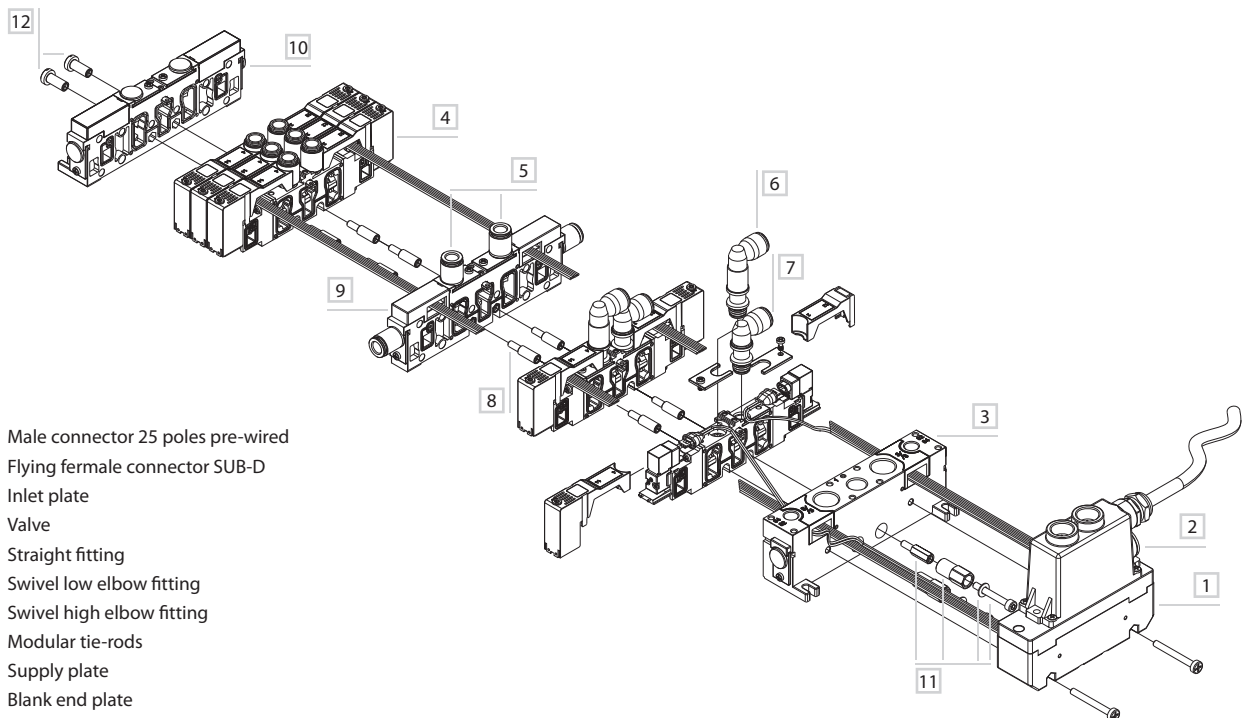
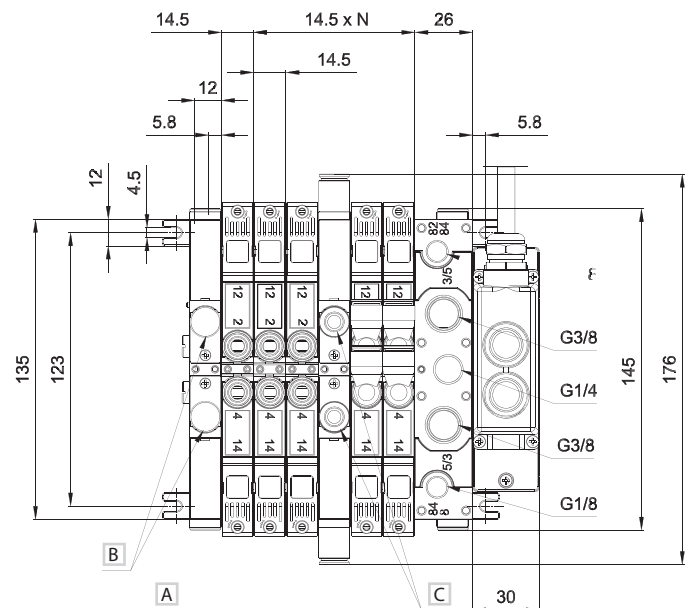


Tube Ø	H
4	72,6
6	76,6
8	80,5

- A Manual override
- B Possibility of supplementary exhausts 3 - 5
- C For type of fittings see page 3_59

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- 82 = Pilot exhaust side 2
- 84 = Pilot exhaust side 4

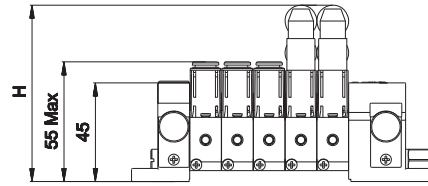
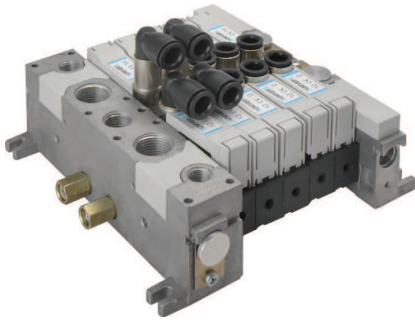
N = Number of valve positions



- 1 Male connector 25 poles pre-wired
- 2 Flying female connector SUB-D
- 3 Inlet plate
- 4 Valve
- 5 Straight fitting
- 6 Swivel low elbow fitting
- 7 Swivel high elbow fitting
- 8 Modular tie-rods
- 9 Supply plate
- 10 Blank end plate
- 11 Tie-rods with hexagonal ends
- 12 Counter tie-rods

3

PSR series with 26 mm inlet and 14,5 mm end plate

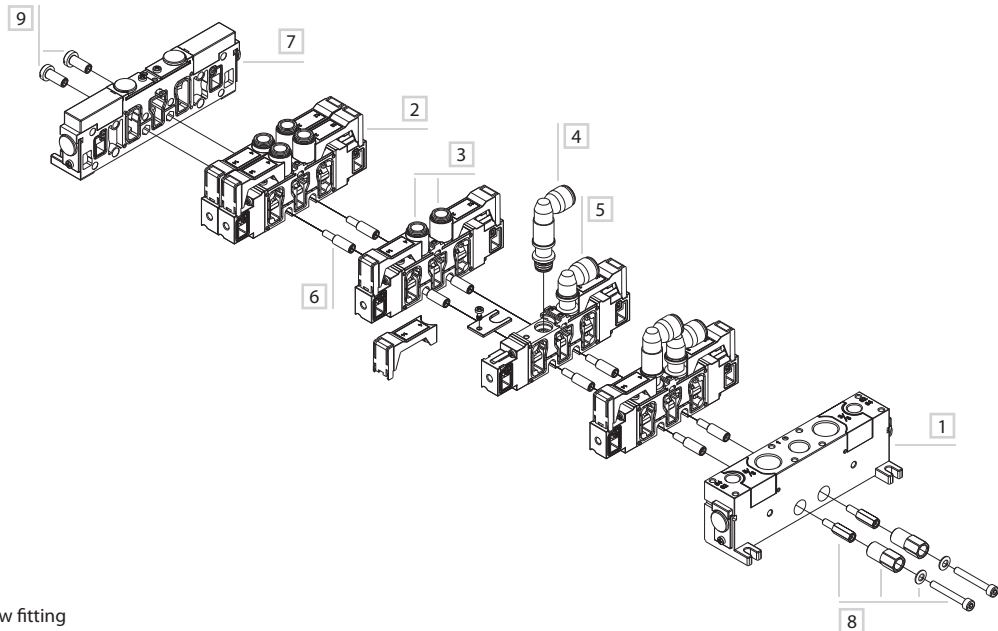
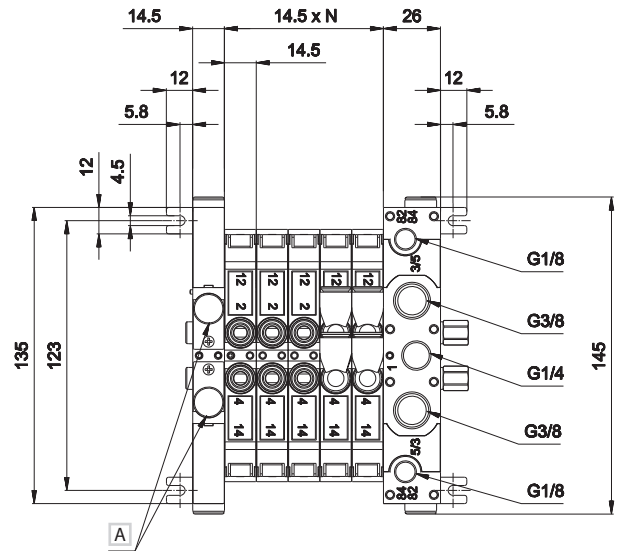


Tube Ø	H
4	72,6
6	76,6
8	80,5

A Possibility of supplementary exhausts 3 - 5

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- 82 = Pilot exhaust side 2
- 84 = Pilot exhaust side 4

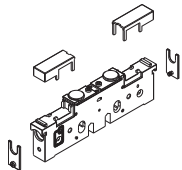
N = Number of valve positions



- 1 Inlet plate
- 2 Valve
- 3 Straight fitting
- 4 Swivel low elbow fitting
- 5 Swivel high elbow fitting
- 6 Modular tie-rods
- 7 Blank plate
- 8 Tie-rods with hexagonal ends
- 9 Counter tie-rods

PS14100	PS14200	PS15000	PS15100	PS15200	PS15300*
inlet plate 26 mm internal pilot supply weight: 0,295 Kg	inlet plate 26 mm external pilot supply weight: 0,290 Kg	blank closing plate weight: 0,168 Kg	intel plate 14,5 mm internal pilot supply weight: 0,167 Kg	intel plate 14,5 mm external pilot supply weight: 0,162 Kg	intermediate plate 14,5 mm, closed air supply, open exhausts weight: 0,167 Kg
PS15310*	PS15320*	PS15330*	PS15340	PS15350	PS15360
intermediate plate 14,5 mm, open air supply, closed exhausts weight: 0,170 Kg	intermediate plate 14,5 mm, closed air supply and exhaust weight: 0,171 Kg	intermediate plate 14,5 mm open air supply and exhaust weight: 0,165 Kg	intermediate supply plate with closed exhausts and internal pilot supply weight: 0,164 Kg	intermediate supply plate with closed exhausts and external pilot supply weight: 0,164 Kg	intermediate supply plate with open exhausts and internal pilot supply weight: 0,164 Kg

PS15370



intermediate supply plate with open exhausts and external pilot supply weight: 0,164 Kg

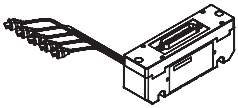
* = For intermediate plate with closed pilot supply ports add suffix 1 to part number.
The intermediate plate occupies one valve place, please keep this in mind for a correct order of the modular tie-rods.

Air supply of the electropilots by means of the end plates for both internal and external air supply. In case there are two different working pressures at the end plates, it is possible to supply all pilots with one of the two pressures (in general with the higher one) or to supply the pilots of each valve group with the working pressure of the same. This can be realized by choosing the correct separation plate. The same is valid if the pressures are more than two: in this case it is necessary to use intermediate supply plates suitably coupled with the separation plates.

PSK100145	PSK200145	PSK200290	PSK200725	PSK300145	PSK401
tie-rods with hexagonal ends (package 50 pcs.) weight: 0,015 Kg	modular tie-rods L1 = 14,5 mm each place (package 100 pcs.) weight: 0,003 Kg	modular tie-rods L2 = 29 mm for 2 places (package 100 pcs.) weight: 0,006 Kg	modular tie-rods L5 = 72,5 mm for 5 places (package 100 pcs.) weight: 0,015 Kg	counter tie-rods (package 50 pcs.) weight: 0,003 Kg	DIN rail adapter plate with screws (package 2 pcs. suitable for all models) weight: 0,066 Kg

GZR-100	GZR-101	GZR-102	GZR-V10004/6/8	GZR-V20004/6/8	GZR-V20L004/6/8
plug (package 2 pcs. suitable for all models) weight: 0,002 Kg	G1/8 Fitting seat reducing plug - gas thread for silencer assembly weight: 0,011 Kg	G1/4 Fitting seat reducing plug - gas thread for silencer assembly weight: 0,0315 Kg	straight fitting (package 50 pcs.) GZR-V10004 tube: 4 mm GZR-V10006 tube: 6 mm GZR-V10008 tube: 8 mm weight: 0,010 Kg	swivel low elbow fitting (package 50 pcs.) GZR-V20004 tube: 4 mm weight: 0,013 Kg GZR-V20006 tube: 6 mm weight: 0,014 Kg GZR-V20008 tube: 8 mm weight: 0,015 Kg	swivel high elbow fitting (package 50 pcs.) GZR-V20L004 tube: 4 mm weight: 0,017 Kg GZR-V20L006 tube: 6 mm weight: 0,021 Kg GZR-V20L008 tube: 8 mm weight: 0,027 Kg

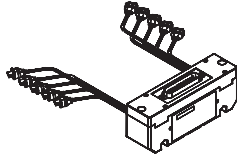
TIM06M/10M/20M



male connector 25 poles pre-wired for monostable valves (M)

TIM06M weight: 0,096 Kg (max 6M)
TIM10M weight: 0,103 Kg (max 10M)
TIM20M weight: 0,127 Kg (max 20M)

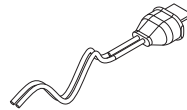
TIM06B/10B



male connector 25 poles pre-wired for bistable valves (B)

TIM06B weight: 0,11 Kg (max 6B)
TIM10B weight: 0,118 Kg (max 10B)

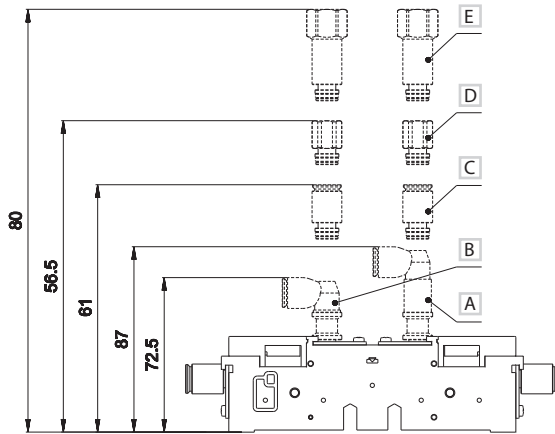
D-530C-100/200



micro double-pole flying connector: stripped and tinned wires with protection guard (package 100 pcs.)

D-530C-100 weight: 0,0047 Kg (wire length 100 cm)
D-530C-200 weight: 0,0093 Kg (wire length 200 cm)

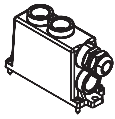
Overall dimensions of fittings on intermediate plates for exhausts 3-5



- A Swivel high elbow fitting for tube Ø8
- B Swivel low elbow fitting for tube Ø8
- C Straight fitting for tube Ø8
- D Fitting for silencer G1/8
- E Fitting for silencer G1/4

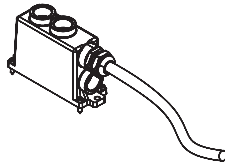
Flying connectors/connections table

TSCF000



■ female connector
25 poles D-sub
without cable

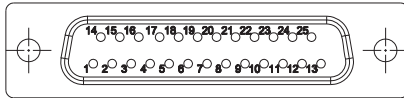
TSCF24S0300 TSCF24S0500 TSCF24S1000



■ flying female connector sub D
according to CEI 20-22 O.R. II
(upon request)
prewired for 24 coils
M3 x 12 fixing screws

Colour identification according to standard DIN 47100

Female connector D-SUB 25 poles
for 12+12 coils



PIN N°	Operator side	Valve N°	TSCF16D		TSCF24S	
			Colour	Coil	Colour	Coil
1	14	1	white	coil 1	white	coil 1
2	12	1	brown	coil 2	brown	coil 2
3	14	2	green	coil 3	green	coil 3
4	12	2	grey	coil 4	yellow	coil 4
5	14	3	pink	coil 5	grey	coil 5
6	12	3	blue	coil 6	pink	coil 6
7	14	4	violet	coil 7	blue	coil 7
8	12	4	grey-pink	coil 8	red	bobina8
9	14	5	red-blue	coil 9	black	bobina9
10	12	5	white-green	coil 10	violet	coil 10
11	14	6	brown-green	coil 11	grey-pink	coil 11
12	12	6	white-yellow	coil 12	red-blue	coil 12
13	14	7	yellow-brown	coil 13	white-green	coil 13
14	12	7	white-grey	coil 14	brown-green	coil 14
15	14	8	grey-brown	coil 15	white-yellow	coil 15
16	12	8	white-pink	coil 16	yellow-brown	coil 16
17	14	9	white-brown	not used	white-grey	coil 17
18	12	9	white-blue	not used	grey-brown	coil 18
19	14	10	black	com 0V	white-pink	coil 19
20	12	10	black	com 0V	pink-brown	coil 20
21	14	11	red	24V INP	white-blue	coil 21
22	12	11	red	24V INP	brown-blue	coil 22
23	14	12	yellow	com 0V	white-red	coil 23
24	-	-	yellow	com 0V	brown-red	com 0V
			yellow	com 0V	brown-black	com 0V
			yellow	com 0V	shield	shield
25	12	12	shield	shield	white-black	coil 24

3

AC

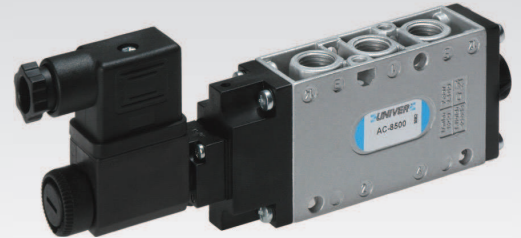
MIXED threaded valves G1/8 - G 1/4 - G1/2

- Mixed commutation system (spool - poppet)
- High flow rate
- Quick response time
- High cycles
- Control: manual, mechanical, pneumatic, electric
- Modular sub-bases

Available ATEX version upon request

CE Ex II 2Gc IICT5 II 2Dc T100°C

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



TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ +45 °C		
Fluid temperature	max +50 °C		
Fluid	50 µm filtered air, with or without lubrication		
Commutation system	poppet mixed system		
Ways/Positions	5/2		
Pressure	10 bar max		
Control	pneumatic, electric, mechanical		
Return	pneumomechanical spring, pneumatic, electric		
Connections	G1/8	G1/4	G1/2
Nominal Ø (mm)	6	8	15
Nominal flow rate (NI/min)	1080	1600	4600

CONSTRUCTIVE CHARACTERISTICS

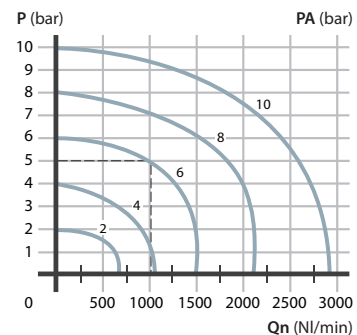
Valve body	die-cast aluminium
Seals	nitrile rubber, polyurethane
Actuators	technopolymer
Spool	aluminium

ELECTRIC CHARACTERISTICS

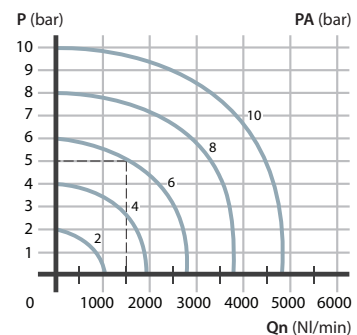
	G1/8	G1/4	G1/2
Electropilot	U1		U2
Coil	DA		DB
Power consumption	3,5 W (DC) - 5 VA (AC)		11 W (DC) - 10 VA (AC)
Connector	AM 5110		AM 5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC		
Manual override	impulse screw - 2 positions		

Flow rate characteristics

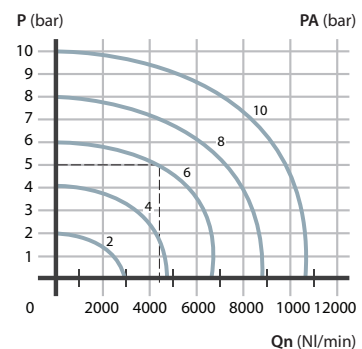
>> G1/8



>> G1/4



>> G1/2



P = Working pressure

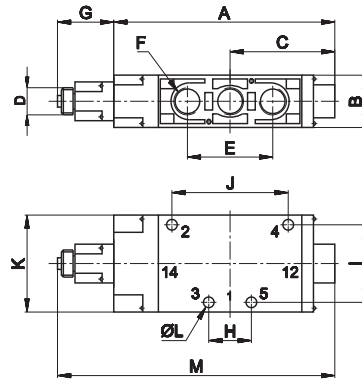
PA = Supply pressure

Qn = Flow rate

Indirect mechanical control for use with pneumatic, mechanical and manual actuators



1 = Supply port
2 - 4 = Use
3 - 5 = Exhaust
14 = Control
12 = Return



	G1/8	G1/4	G1/2
A	99	114	163
B	25	27	40
C	47	54	83
D	M14x1	M14x1	M14x1
E	36	44	80
F	G1/8	G1/4	G1/2
G	27	27	27
H	18	22	40
I	26	40	50
J	36	60	108
K	40	50	63
L	4,5	5,5	6,5
M	126	141	190

5/2

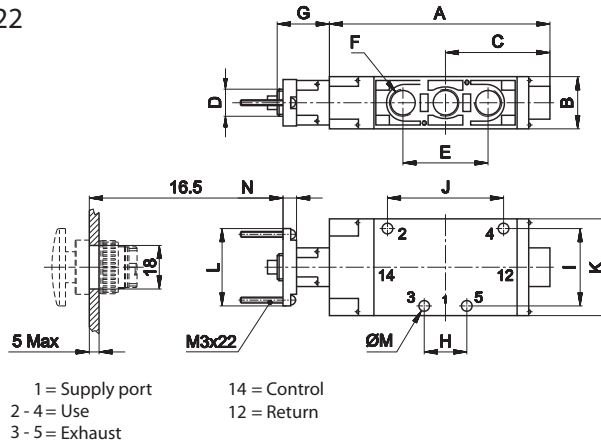
Symbol	Connection	Control	Return	Pressure	Weight	Part no.
	G1/8	14	12	bar	Kg	
	G1/4	ball pushrod	pneumomechanical spring	1,8÷10	0,27	AC-7010
	G1/2			2,3÷10	0,28	AC-8010
				2÷10	0,33	AC-9010

3

MANUAL ACTUATORS			PNEUMATIC AND MECHANICAL ACTUATORS		
	Recessed button	<ul style="list-style-type: none"> BLACK AI-3511 RED AI-3512 GREEN AI-3513 		Pneumatic actuator	AI-3550
	Head button	<ul style="list-style-type: none"> RED AI-3514 BLACK AI-3516 RED AI-3514D BLACK AI-3516D 		Amplified pneumatic actuator	AI-3551
	Button	<ul style="list-style-type: none"> GREEN AI-3515 RED AI-3517 BLACK AI-3519 		Roller operator 1 position	AI-3560
	Rotating selector	<ul style="list-style-type: none"> BLACK AI-3520 BLACK AI-3521 		Ball-push operator 1 position	AI-3562
	Rotating lever selector	<ul style="list-style-type: none"> BLACK AI-3522 BLACK AI-3523 		Operator with omni-directional antenna 1 position	AI-3563
	Lever operator	<ul style="list-style-type: none"> BLACK AI-3524 		Roller lever operator 1 position	AI-3570
	Omni-directional operator	<ul style="list-style-type: none"> BLACK AI-3525 		Articulated roller lever operator 1 position Complete actuation with stroke 2,5 mm, max stroke 4,7 mm	AI-3571
	Push-pull operator	<ul style="list-style-type: none"> BLACK AI-3526 		Key operator 1 position	AI-3572

For actuator dimensions refer to section "Accessories>Actuators and buttons"

Indirect control
for panel mounting actuators Ø 22



	G1/8	G1/4	G1/2
A	99	114	163
B	25	27	40
C	47	54	83
D	M14x1	M14x1	M14x1
E	36	44	80
F	G1/8	G1/4	G1/2
G	27	27	27
H	18	22	40
I	26	40	50
J	36	60	108
K	40	50	63
L	40	40	40
M	4,5	5,5	6,5
N	7	7	7

Symbol	Connection	Control	Return	Pressure	Weight	Part no.	
		14	12	bar	Kg		
5/2		G1/8		1,8÷10	0,28	AC-7013	
		G1/4	ball pushrod	pneumomechanical spring	2,3÷10	0,29	AC-8013
		G1/2			2÷10	0,84	AC-9013
5/2		G1/8		1÷10	0,29	AC-7013P	
		G1/4	ball pushrod	pneumatic amplified	1÷10	0,28	AC-8013P
		G1/2			1÷10	0,83	AC-9013P

MANUAL ACTUATORS

	Recessed button	<ul style="list-style-type: none"> ■ BLACK ■ RED ■ GREEN 	AI-3511 AI-3512 AI-3513	
	Head button	<ul style="list-style-type: none"> ■ RED ■ BLACK 	AI-3514 AI-3516	
		<ul style="list-style-type: none"> ■ RED ■ BLACK 	AI-3514D AI-3516D	
	Button	<ul style="list-style-type: none"> ■ GREEN ■ RED ■ BLACK 	AI-3515 AI-3517 AI-3519	
	Rotating selector	<ul style="list-style-type: none"> ■ BLACK 	AI-3520 AI-3521	
	Rotating lever selector	<ul style="list-style-type: none"> ■ BLACK 	AI-3522 AI-3523	
	Lever operator	<ul style="list-style-type: none"> ■ BLACK 	AI-3524	
	Omni-directional operator	<ul style="list-style-type: none"> ■ BLACK 	AI-3525	
	Push-pull operator	<ul style="list-style-type: none"> ■ BLACK 	AI-3526	

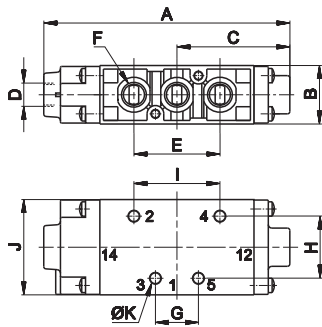
For actuator dimensions refer to section "Accessories>Actuators and buttons"

Single/double **pneumatic impulse**



Symbol	Connection	Control		Return	Pressure bar	Times (ms)		Weight Kg	Part no.
		14	12			En.	De-en.		
SINGLE PNEUMATIC IMPULSE									
5/2		G1/8	pneumatic amplified	pneumomechanical spring	1,8÷10	8	10	0,22	AC-7100
		G1/4			2,3÷10	10	10	0,23	AC-8100
		G1/2			2÷10	10	10	0,76	AC-9100
DOUBLE PNEUMATIC IMPULSE									
5/2		G1/8	pneumatic amplified	pneumatic amplified	1÷10	5	10	0,23	AC-7120
		G1/4			0,8÷10	6	6	0,21	AC-8120
		G1/2			0,8÷10	8	8	0,77	AC-9120

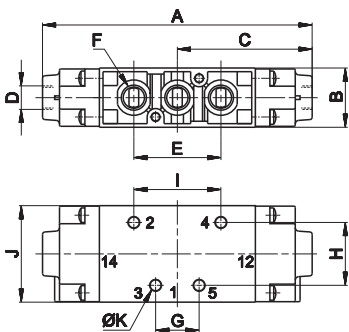
Single pneumatic impulse



- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

	A	B	C	D	E	F	G	H	I	J	K
G1/8	103	25	47	G1/8	36	G1/8	18	26	36	40	4,5
G1/4	117	27	54	G1/8	44	G1/4	22	40	60	50	5,5
G1/2	165	40	82,5	G1/8	80	G1/2	40	50	108	63	6,5

Double pneumatic impulse



- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

	A	B	C	D	E	F	G	H	I	J	K
G1/8	112	25	56	G1/8	36	G1/8	18	26	36	40	4,5
G1/4	126,5	25	63	G1/8	44	G1/4	22	40	60	50	5,5
G1/2	165	40	82,5	G1/8	80	G1/2	40	50	108	63	6,5

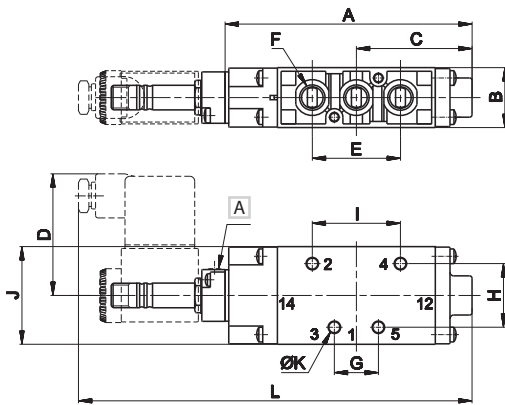
3

Single/double electric impulse



Symbol	Connection	Control		Return	Pressure bar	Times (ms)		Weight Kg	Part no.
		14	12			En.	De-en.		
SINGLE ELECTRIC IMPULSE									
5/2		G1/8			1,8÷10	18	20	0,27	AC-7500
		G1/4	electric amplified	pneumomechanical	2,3÷10	22	22	0,28	AC-8500
		G1/2		spring	2÷10	23	30	1,1	AC-9500
DOUBLE ELECTRIC IMPULSE									
5/2		G1/8			1÷10	14	14	0,33	AC-7520
		G1/4	electric amplified	electric amplified	0,8÷10	14	14	0,31	AC-8520
		G1/2			0,8÷10	16	16	1,1	AC-9520

Single electric impulse

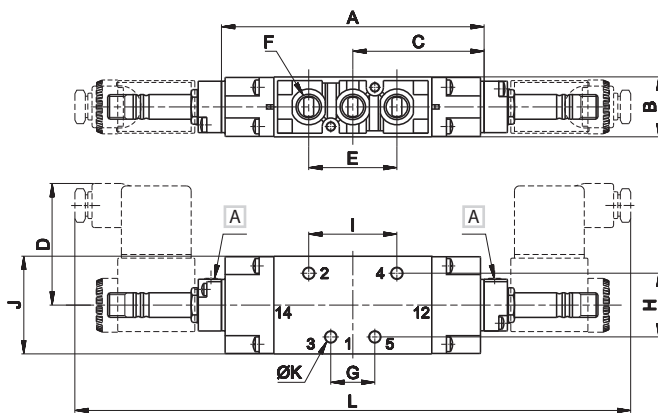


A Manual override

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

	A	B	C	D	E	F	G	H	I	J	K	L
G1/8	101	25	47	50	36	G1/8	18	26	36	40	4,5	164
G1/4	116	27	54	50	44	G1/4	22	40	60	50	5,5	180
G1/2	165	40	83	48	80	G1/2	40	50	108	63	6,5	241

Double electric impulse



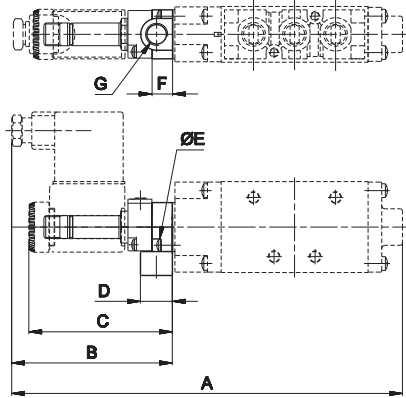
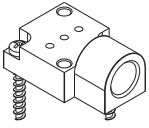
A Manual override

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

	A	B	C	D	E	F	G	H	I	J	K	L
G1/8	107	25	53,5	50	36	G1/8	18	26	36	40	4,5	227
G1/4	124	27	62	50	44	G1/4	22	40	60	50	5,5	252
G1/2	164	40	80,5	48	80	G1/2	40	50	108	63	6,5	317

For technical data of coils, refer to section "Accessories>Coils"
 For external servoassisted pilot, use AM - 5148 plates (refer to next pages)
 Electrovalves are supplied without coil, connector and locking ring

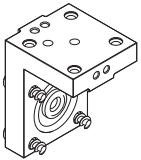
AM-5148



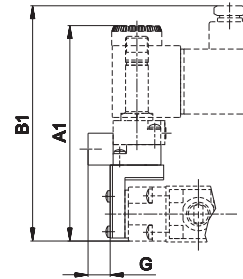
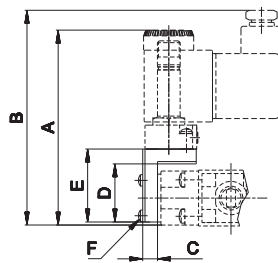
	G1/8	G1/4
A	171,5	186
B	70,5	70,5
C	63	63
D	14	14
E	2,9x10	2,9x10
F	9	9
G	G1/8	G1/8

Plate for external servoassisted pilot
weight: 0,03 Kg

AM-5151



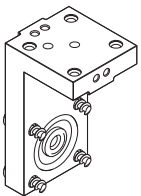
AM-5151 + AM-5148



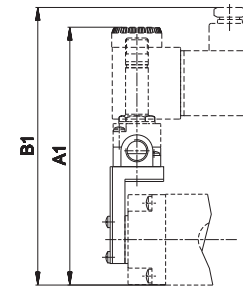
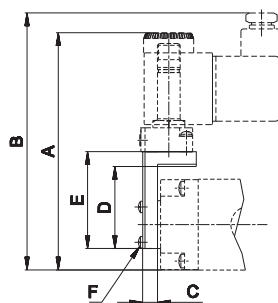
	G1/8	G1/4
A	87,7	88,7
A1	96,7	97,7
B	95,5	96,5
B1	104,5	105,5
C	6,5	6,5
D	25,5	25,5
E	32	32
F	2,9x10	2,9x10
G	9,7	9,7

"H" option solenoid square
weight: 0,035 Kg

AM-5152



AM-5152 + AM-5148



	G1/8	G1/4
A	106	111
A1	115	120
B	113,5	118,5
B1	122,5	127,5
C	6,5	6,5
D	36	36
E	42,5	42,5
F	2,9x10	2,9x10

"P" option solenoid square
weight: 0,05 Kg

CH

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

Main features:

- Closed centers
- High flow rate
- Quick response time
- Suitable for heavy duties and where the number of mechanical operation is high

Available ATEX version upon request

CE Ex II 2Gc IIC T5 II 2Dc T100°C



TECHNICAL CHARACTERISTICS

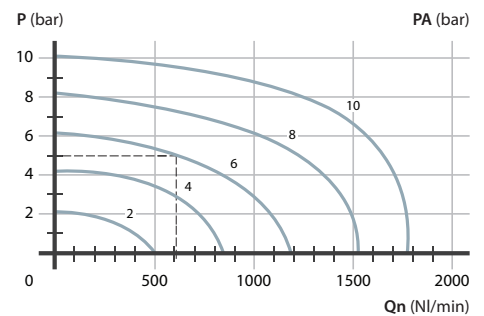
Ambient temperature	-10 ÷ +45 °C
Fluid temperature	Max + 50 °C
Fluid	50 µm filtered air, with or without lubrication
Commutation system	poppet system
Ways/Positions	2/2 NC, 3/2 NC, 2/2 NO, 3/2 NO
Pressure	Max 10 bar
Control	manual, mechanical
Return	mechanical spring
Connections	G1/8
Nominal Ø	5 mm
Nominal flow rate (NI/min)	NC = 600 NO = 550

CONSTRUCTIVE CHARACTERISTICS

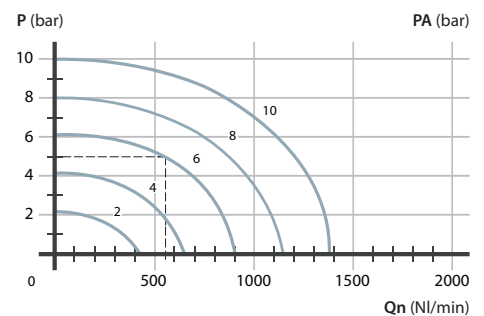
Valve body	zamak
Seals	nitrile rubber
Actuators	zinc-plated steel/technopolymer
Spool	nickel-plated brass

Flow rate characteristics

>> 3/2 NC

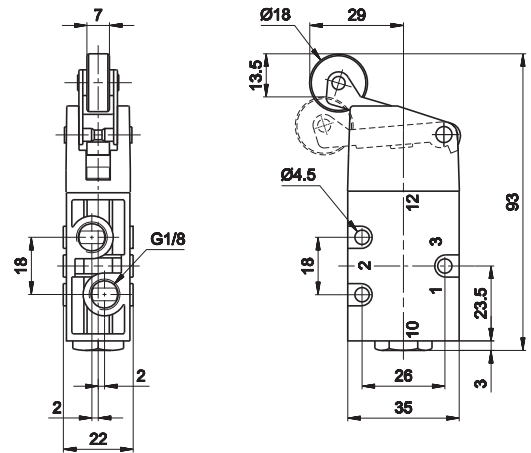


>> 3/2 NO



P = Working pressure
 PA = Supply pressure
 Qn = Flow rate

Roller lever - spring

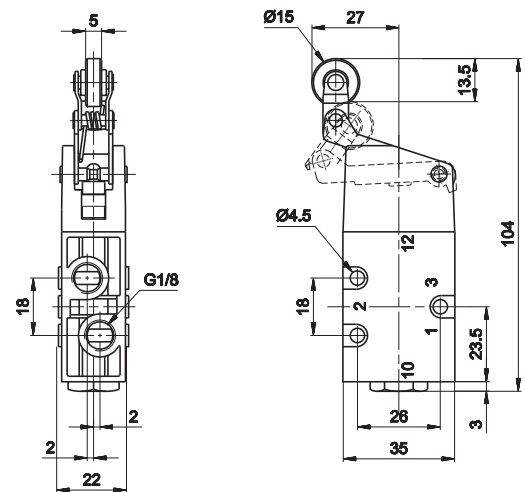


- 1 = Supply port
- 2 = Use
- 3 = Exhaust
- 12 = Control
- 10 = Return

	Symbol	Flow rate (NI/min)	Force N	Weight Kg	Part no.
3/2 NC		600	21	0,2	CH-250
2/2 NC		600	21	0,2	CH-252
3/2 NO		550	15	0,2	CH-254
2/2 NO		550	15	0,2	CH-256

Uni-directional roller lever - spring

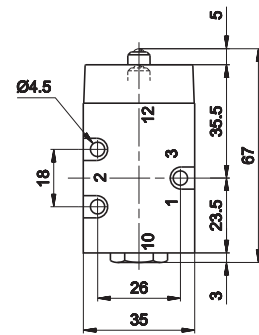
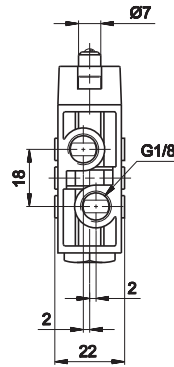
3



- 1 = Supply port
- 2 = Use
- 3 = Exhaust
- 12 = Control
- 10 = Return

	Symbol	Flow rate (NI/min)	Force N	Weight Kg	Part no.
3/2 NC		600	16	0,21	CH-260
2/2 NC		600	16	0,21	CH-262
3/2 NO		550	12	0,21	CH-264
2/2 NO		550	12	0,21	CH-266

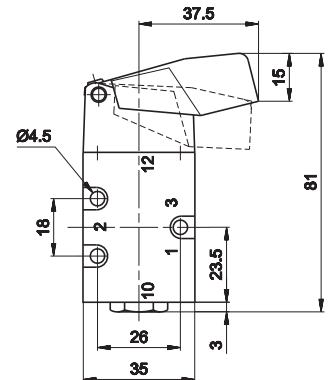
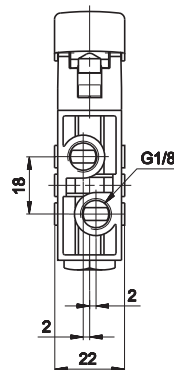
Ball-push - spring



- 1 = Supply port
- 2 = Use
- 3 = Exhaust
- 12 = Control
- 10 = Return

	Symbol	Flow rate (NI/min)	Force N	Weight Kg	Part no.
3/2 NC		600	51	0,18	CH-270
2/2 NC		600	51	0,18	CH-272
3/2 NO		550	39	0,18	CH-274
2/2 NO		550	39	0,18	CH-276

Button lever - spring



- 1 = Supply port
- 2 = Use
- 3 = Exhaust
- 12 = Control
- 10 = Return

	Symbol	Flow rate (NI/min)	Force N	Weight Kg	Part no.
3/2 NC		600	18	0,18	CH-280
2/2 NC		600	18	0,18	CH-282
3/2 NO		550	14	0,18	CH-284
2/2 NO		550	14	0,18	CH-286

Red button lever

AF

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

- Wide range: G1/8 - G1/4 - G3/8 - G1/2 - G3/4 - G1 - G1 1/2
- Original Univer poppet system appreciated for decades
- Suitable for applications where high flow rate and high cycles rates are required
- G1 - 2/2 version for blowing

Available ATEX version upon request

CE Ex II 2Gc IIC T5 II 2Dc T100°C

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



TECHNICAL CHARACTERISTICS

Ambient temperature								+50 °C max
Fluid temperature								-5 ÷ +60 °C
Fluid	50 µm filtered air, with or without lubrication							
Commutation system	poppet							
Ways/Positions	2/2 NC (upon request), 3/2 NC, 3/2 NO, 3/2 NC-NO							
Pressure	max 10 bar							
Control	pneumatic, indirect electropneumatic							
Return	pneumomechanical spring							
Connections	G 1/8	G 1/4	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2	
Nominal Ø (mm)	5,5	8	10	15	19	25	39	
Nominal flow rate (NI/min)	580	1100	1500	5400	6500	13500	35000	

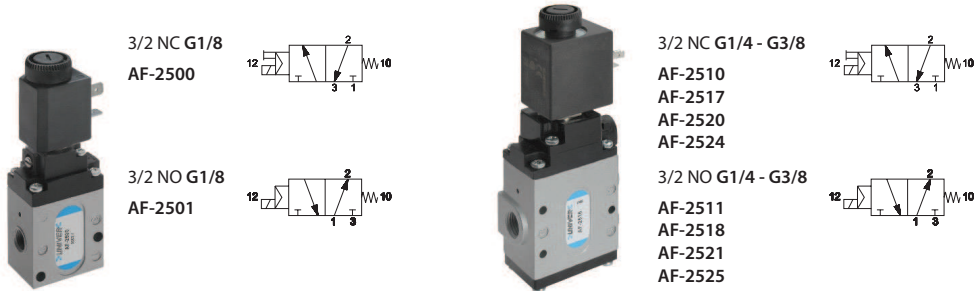
CONSTRUCTIVE CHARACTERISTICS

Valve body	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Seals	polyurethane conical poppets and Vulkollan diaphragm
Actuators	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Spool	G1/8 ÷ G3/8 = aluminium G1/2 ÷ G1 1/2 = steel + plastic

ELECTRIC CHARACTERISTICS

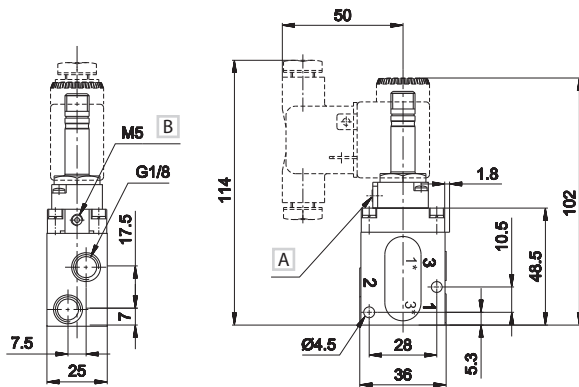
	G1/8 G3/8	G1/4 ÷ G1 1/2
Electropilot	U1	U2
Coil	DA	DB
Power consumption	3,5 W (DC) - 5 VA (AC)	11 W (DC) - 10 VA (AC)
Connector	AM-5110	AM-5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC	
Manual override	impulse screw - 2 positions	

G1/8 - G1/4 - G3/8 Electrovalves



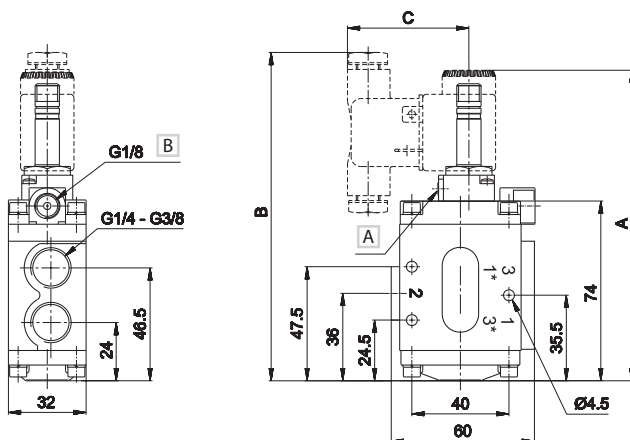
	Connect.	Control	Return	Flow rate	Ø	Resp. Time (ms)		Pressure bar		Weight	Coil	Part no.
						En.	De-en.	min.	max.			
3/2 NC	G1/8	electric amplified	pneumomechanical spring	580	5,5	15	20	1,5	10	0,25	U1	AF-2500
	G1/4	electric amplified	pneumomechanical spring	1100	8	20	23	1,6	10	0,58	U1	AF-2510
	G1/4	electric amplified	pneumomechanical spring	1100	8	20	23	1,6	10	0,70	U2	AF-2517
	G3/8	electric amplified	pneumomechanical spring	1500	10	20	23	1,6	10	0,56	U1	AF-2520
	G3/8	electric amplified	pneumomechanical spring	1500	10	20	23	1,6	10	0,70	U2	AF-2524
3/2 NO	G1/8	electric amplified	pneumomechanical spring	580	5,5	15	20	1,5	10	0,25	U1	AF-2501
	G1/4	electric amplified	pneumomechanical spring	1100	8	15	20	1,6	10	0,58	U1	AF-2511
	G1/4	electric amplified	pneumomechanical spring	1100	8	15	20	1,6	10	0,70	U2	AF-2518
	G3/8	electric amplified	pneumomechanical spring	1500	10	15	20	1,6	10	0,56	U1	AF-2521
	G3/8	electric amplified	pneumomechanical spring	1500	10	15	20	1,6	10	0,70	U2	AF-2525

G1/8



- NC
 1 = Supply port
 2 = Use
 3 = Exhaust
- NO
 1* = Supply port
 2 = Use
 3* = Exhaust
- A Manual override
 B External servoassistance of the pilot

G1/4 - G3/8



- NC
 1 = Supply port
 2 = Use
 3 = Exhaust
- NO
 1* = Supply port
 2 = Use
 3* = Exhaust
- A Manual override
 B External servoassistance of the pilot

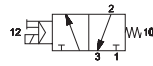
	A	B	C
U1	129	136	50
U2	140,5	150	51,5

Upon request:
 - external servoassistance of the pilot
 - G1/4 - G3/8 U2 without manual override
 - 2/2 version insert plug on the drain
 Electrovalves are supplied without coil, connector and locking ring

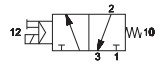
G1/2 - G3/4 - G1 - G1 1/2 Electrovalves



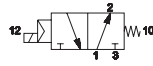
3/2 NC G1/2 - G3/4 - G1
 AF-2530
 AF-2540
 AF-2545



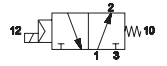
3/2 NC G1 1/2
 AF-2565



3/2 NO G1/2 - G3/4 - G1
 AF-2531
 AF-2541
 AF-2546

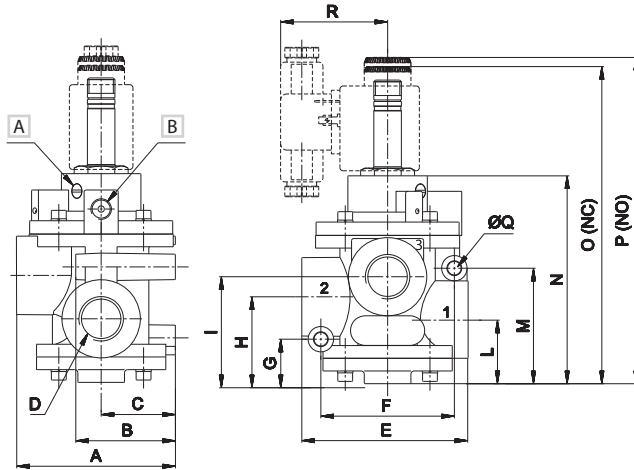


3/2 NO G1 1/2
 AF-2561



	Connect.	Control	Return	Flow rate	Ø	Resp. Time (ms)		Pressure bar		Weight	Coil	Part no.
						En.	De-en.	min.	max.			
3/2 NC	G1/2	electric amplified	pneumomechanical spring	5400	15	17	27	2	10	1,19	U2	AF-2530
	G3/4	electric amplified	pneumomechanical spring	6500	19	17	27	2	10	1,13	U2	AF-2540
	G1	electric amplified	pneumomechanical spring	13500	25	20	32	2,2	10	1,62	U2	AF-2545
	G1 1/2	electric amplified	pneumomechanical spring	35000	39	47	22	2,5	10	2,27	U2	AF-2565
3/2 NO	G1/2	electric amplified	pneumomechanical spring	5400	15	30	22	3	10	1,19	U2	AF-2531
	G3/4	electric amplified	pneumomechanical spring	6500	19	30	22	3	10	1,13	U2	AF-2541
	G1	electric amplified	pneumomechanical spring	13500	25	28	23	3	10	1,62	U2	AF-2546
	G1 1/2	electric amplified	pneumomechanical spring	35000	39	55	20	3	10	2,27	U2	AF-2561

G1/2 - G3/4 - G1

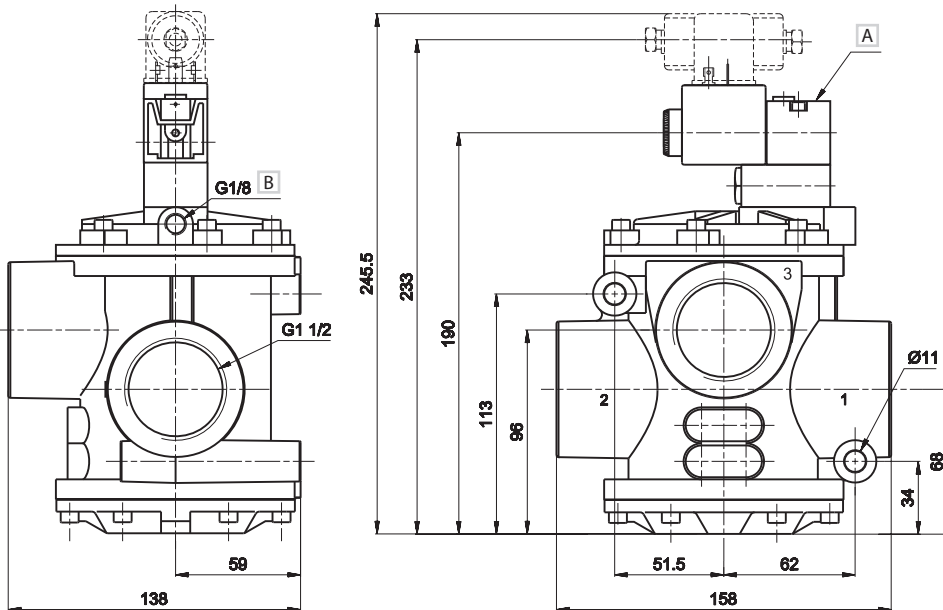


1 = Supply port
 2 = Use
 3 = Exhaust

A Manual override
 B External servoassistance of the pilot

	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	175	8,4	50

G1 1/2

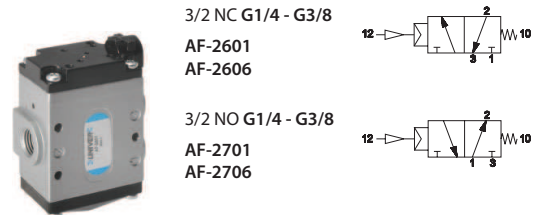
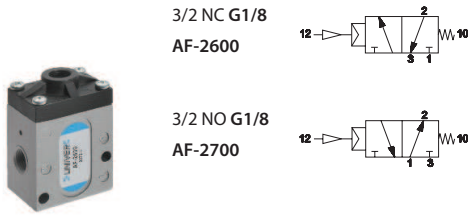


1 = Supply port
 2 = Use
 3 = Exhaust

A Manual override
 B External servoassistance of the pilot

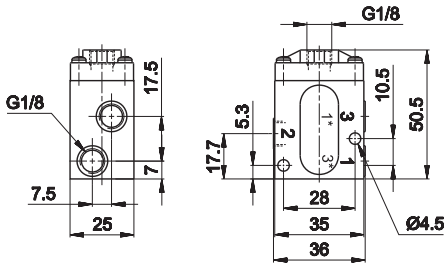
Upon request:
 - external servoassistance of the pilot
 Electrovalves are supplied without coil, connector and locking ring

G1/8 - G1/4 - G3/8 Servo valves



	Connect.	Control	Return	Flow rate (NI/min)	Ø mm	Resp. Time (ms)		Pressure bar		Weight Kg	Part no.
						En.	De-en.	supply	control		
3/2 NC	G1/8	pneumatic amplified	pneumomechanical spring	580	5,5	5	8	6	3,5	0,21	AF-2600
	G1/4	pneumatic amplified	pneumomechanical spring	1100	8	5	7	6	4	0,54	AF-2601
	G3/8	pneumatic amplified	pneumomechanical spring	1500	10	5	7	6	4	0,52	AF-2606
3/2 NO	G1/8	pneumatic amplified	pneumomechanical spring	580	5,5	5	8	6	3,5	0,21	AF-2700
	G1/4	pneumatic amplified	pneumomechanical spring	1100	8	5	7	6	4	0,54	AF-2701
	G3/8	pneumatic amplified	pneumomechanical spring	1500	10	5	7	6	4	0,52	AF-2706

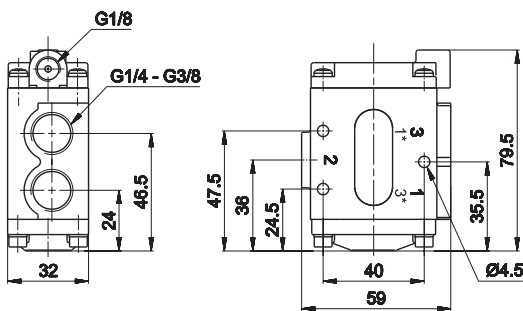
G1/8



NC
1 = Supply port
2 = Use
3 = Exhaust

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

G1/4 - G3/8



NC
1 = Supply port
2 = Use
3 = Exhaust

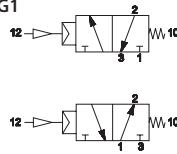
NO
1* = Supply port
2 = Use
3* = Exhaust

Upon request:
2/2 version insert plug on the drain

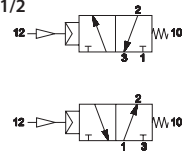
G1/2 - G3/4 - G1 - G1 1/2 Servo valves



3/2 NC-NO G1/2 - G3/4 - G1
 AF-2603
 AF-2610
 AF-2615



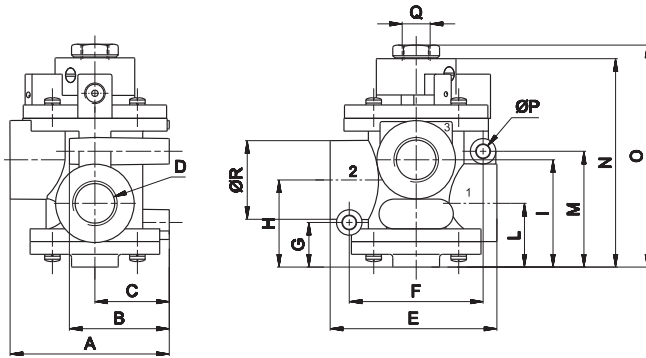
3/2 NC-NO G1 1/2
 AF-2620



3/2 NC-NO

Connect.	Control	Return	Flow rate (NI/min)	Ø mm	Resp. Time (ms)		Pressure bar		Weight Kg	Part no.
					En.	De-en.	supply	control		
G1/2	pneumatic amplified	pneumomechanical spring	5400	15	7	10	6	4	1,27	AF-2603
G3/4	pneumatic amplified	pneumomechanical spring	6500	19	7	10	6	4	1,10	AF-2610
G1	pneumatic amplified	pneumomechanical spring	13500	25	10	12	6	4	1,59	AF-2615
G1 1/2	pneumatic amplified	pneumomechanical spring	35000	39	36	15	6	4	2,19	AF-2620

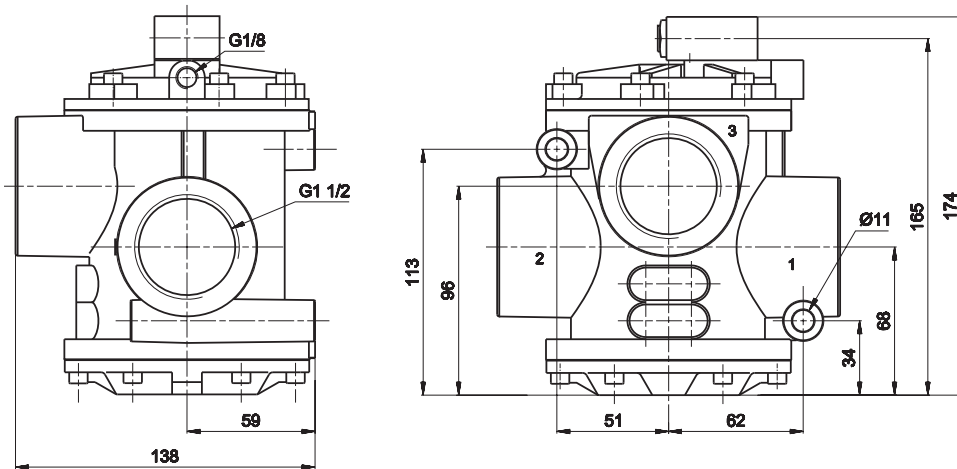
G1/2 - G3/4 - G1



1 = Supply port
 2 = Use
 3 = Exhaust

	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G1	88,5	55	40	G1	101	76	25,5	51	64	38	62,5	115	120,5	8,4	G1/4	45

G1 1/2



1 = Supply port
 2 = Use
 3 = Exhaust

G1 - 2/2 Electrovalve for blowing



2/2 NC G1
AF-2550



2/2 NC G1
AF-2551

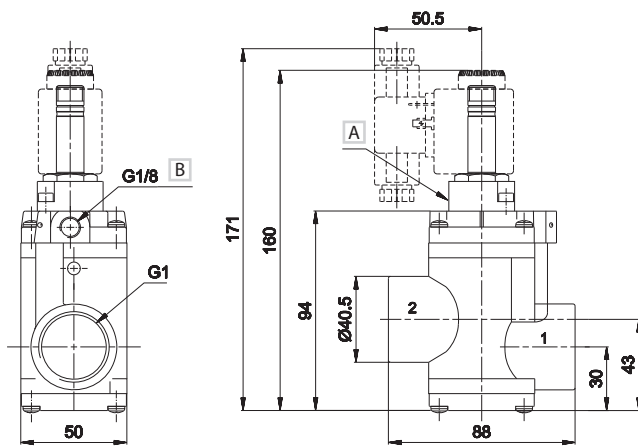


2/2 NC G1
AF-2552



2/2 NC

Connect.	Control	Return	Flow rate	Ø	Resp. Time (ms)			Pressure bar		Weight	Part no.	
					En.	De-en.	min.	max.	supply			control
G1	electric amplified	pneumomechanical spring	16000	25	23	55	2	10	-	-	1,06	AF-2550
G1	electric amplified	pneumomechanical spring	16000	25	23	55	2	10	-	-	1,06	AF-2551
G1	electric amplified	pneumomechanical spring	16000	25	23	35	-	-	6	4	1,06	AF-2552



1 = Supply port
2 = Use

A Manual override AF-2551
B External servoassistance of the pilot AF-2552

G1 - 2/2 Servovalve for blowing

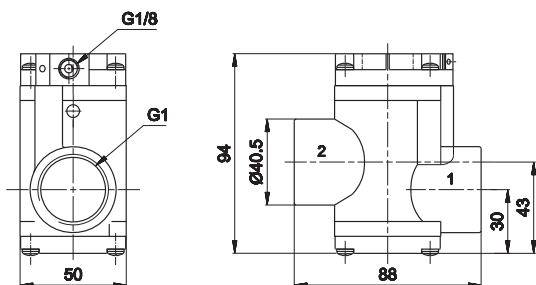


2/2 NC G1
AF-2617



2/2 NC

Connect.	Control	Return	Flow rate	Ø	Resp. Time (ms)			Pressure bar		Weight	Part no.
					En.	De-en.	min.	max.	supply		
G1	pneumatic amplified	pneumomechanical spring	16000	25	12	25	6	4	1	1	AF-2617



1 = Supply port
2 = Use

Electrovalves are supplied without coil, connector and locking ring

AG

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

- A complete range: G1/8 - G1/4 - G3/8 - G1/2 - G3/4 - G1 - G1 1/2
- Original Univer poppet system appreciated for decades
- Servoassisted version
- A complete range of solenoid valves and pneumatic valves for vacuum with connection from G1/8 ÷ G1 1/2 to satisfy all requirements
- The internal system ensures high reliability and long life

Available ATEX version upon request

CE Ex II 2Gc II CT5 II 2Dc T100°C

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



TECHNICAL CHARACTERISTICS

Ambient temperature								+50 °C
Fluid temperature								-5 ÷ +60 °C
Fluid	50 µm filtered air, with or without lubrication - vacuum							
Commutation system	poppet							
Ways/Positions	2/2 NC (upon request), 3/2 NC, 3/2 NO, 3/2 NC-NO							
Control	indirect vacuum							
Return	automatic by vacuum							
Connections	G 1/8	G 1/4	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2	
Nominal Ø (mm)	5,5	8	10	15	19	25	39	

CONSTRUCTIVE CHARACTERISTICS

Valve body	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Seals	valve for vacuum with external air operation polyurethane conical poppets and Vulkollan diaphragm valve for direct vacuum with external vacuum operation silicon poppets
Actuators	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Spool	G1/8 ÷ G3/8 = aluminium G1/2 ÷ G1 1/2 = steel + plastic

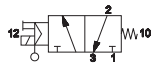
ELECTRIC CHARACTERISTICS

	G1/8	G1/4 ÷ G1 1/2
Electropilot	U1	U2
Coil	DA	DB
Power consumption	3,5 W (DC) - 5 VA (AC)	11 W (DC) - 10 VA (AC)
Connector	AM 5110	AM 5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC	
Manual override	impulse screw - 2 positions	

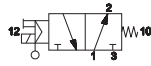
3/2 Solenoid valve for vacuum with external pilot air supply



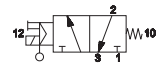
3/2 NC G1/8
AG-3001



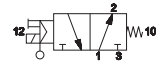
3/2 NO G1/8
AG-3002



3/2 NC G1/4 - G3/8
AG-3009
AG-3011

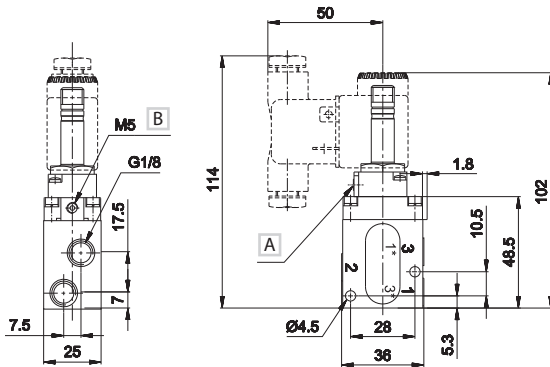


3/2 NO G1/4 - G3/8
AG-3010
AG-3012



	Connect.	Control	Return	Ø	Resp. Time (ms)		Minimum control pressure bar	Pump max m³/h	Max vacuum		Weight Kg	Coil	Part no.
					mm	En.			De-en.	mm Hg			
3/2 NC	G1/8	12 electric amplified	10 mechanical spring	5,5	14	25	1,5	1,5	759,5	0,5	0,25	U1	AG-3001
	G1/4			8	16	27	2,5	4	759,5	0,5	0,58	U2	AG-3009
	G3/8			10	16	27	2,5	10	759,5	0,5	0,56	U2	AG-3011
3/2 NO	G1/8	12 electric amplified	10 mechanical spring	5,5	14	25	1,5	1,5	759,5	0,5	0,25	U1	AG-3002
	G1/4			8	16	27	2,5	4	759,5	0,5	0,58	U2	AG-3010
	G3/8			10	16	27	2,5	10	759,5	0,5	0,56	U2	AG-3012

G1/8



NC

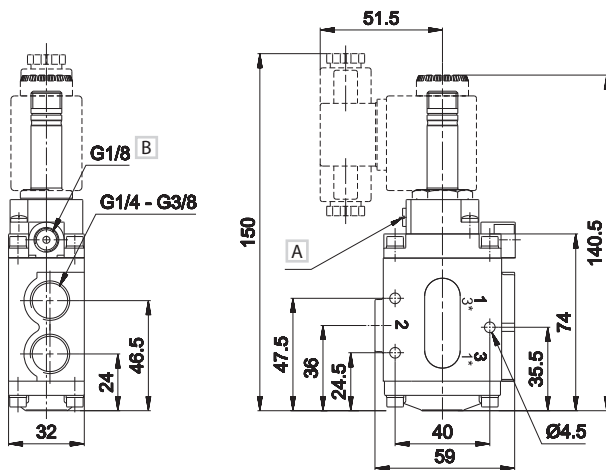
- 1 = Supply port (vacuum)
- 2 = Use
- 3 = Exhaust

NO

- 1* = Supply port (vacuum)
- 2 = Use
- 3* = Exhaust

- A Manual override
- B Supply port for external servoassistance of the pilot

G1/4 - G3/8



NC

- 1 = Suplly port (vacuum)
- 2 = Use
- 3 = Exhaust

NO

- 1* = Supply port (vacuum)
- 2 = Use
- 3* = Exhaust

- A Manual override
- B Supply port for external servoassistance of the pilot

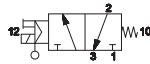
Electrovalves are supplied without coil, connector and locking ring

3/2 Solenoid valve for vacuum with external pilot air supply



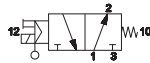
3/2 NC G1/2 - G3/4 - G1

AG-3020
AG-3040
AG-3050



3/2 NO G1/2 - G3/4 - G1

AG-3021
AG-3041
AG-3051



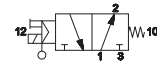
3/2 NC G1 1/2

AG-3062



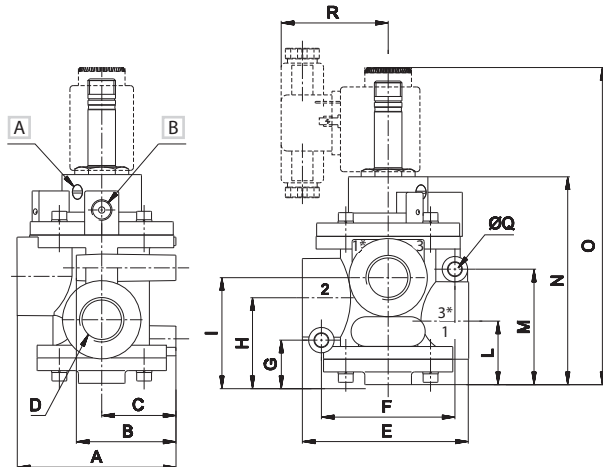
3/2 NO G1 1/2

AG-3063



Connect.	Control	Return	Ø	Resp. Time (ms)		Minimum control		Pump		Max vacuum		Weight	Coil	Part.no
	12	10	mm	En.	De-en.	pressure bar	max m ³ /h	mm Hg	Torr	Kg				
3/2 NC	G1/2		15	16	40	3	20	759,5	0,5	1,19	U2	AG-3020		
	G3/4	electric	19	16	40	3	35	759,5	0,5	1,13	U2	AG-3040		
	G1	amplified	25	18	42	3	90	759,5	0,5	1,62	U2	AG-3050		
	G1 1/2		39	60	38	4	180	759,5	0,5	2,25	U2	AG-3062		
3/2 NO	G1/2		15	16	40	3	20	759,5	0,5	1,19	U2	AG-3021		
	G3/4	electric	19	16	40	3	35	759,5	0,5	1,13	U2	AG-3041		
	G1	amplified	25	18	42	3	90	759,5	0,5	1,62	U2	AG-3051		
	G1 1/2		39	60	38	4	180	759,5	0,5	2,25	U2	AG-3063		

G1/2 - G3/4 - G1



NC

- 1 = Supply port
- 2 = Use
- 3 = Exhaust

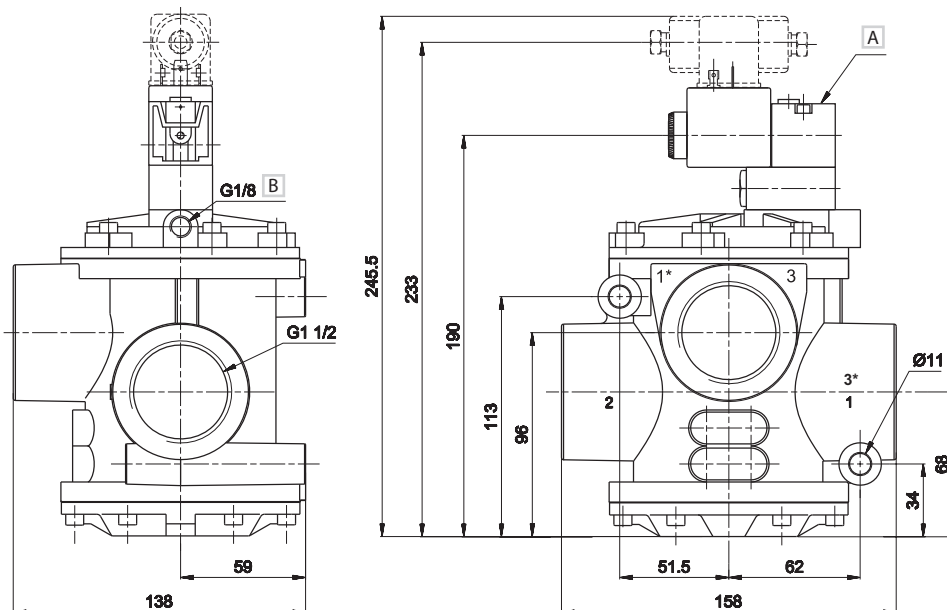
NO

- 1* = Supply port
- 2 = Use
- 3* = Exhaust

- A Manual override
- B Supply port for external servoassistance of the pilot

	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	8,4	50

G1 1/2



NC

- 1 = Supply port
- 2 = Use
- 3 = Exhaust

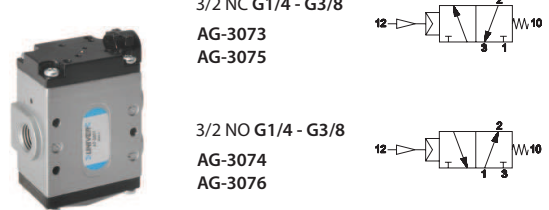
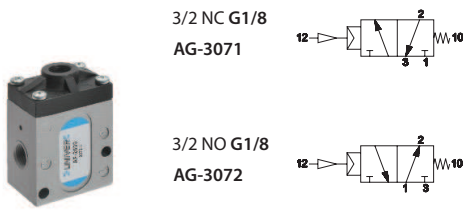
NO

- 1* = Supply port
- 2 = Use
- 3* = Exhaust

- A Manual override
- B Supply port for external servoassistance of the pilot

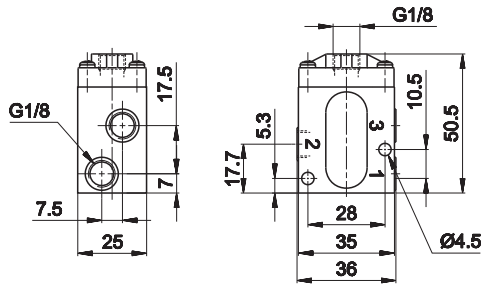
Electrovalves are supplied without coil, connector and locking ring

3/2 Pneumatic valve for vacuum with external air operation



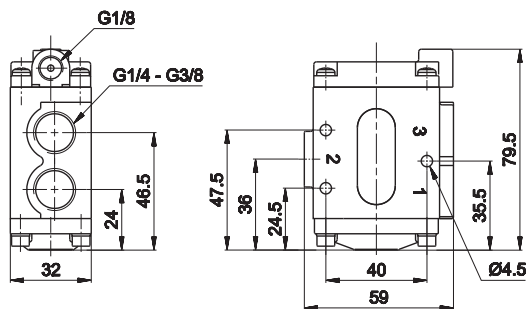
	Connect.	Control	Return	Ø	Resp. Time (ms)		Minimum control pressure bar	Pump max m ³ /h	Max vacuum		Weight Kg	Part no.
					En.	De-en.			mm Hg	Torr		
3/2 NC	G1/8	pneumatic amplified	mechanical spring	5,5	3	6	1,5	1,5	759,5	0,5	0,21	AG-3071
	G1/4			8	4	8	2,5	4	759,5	0,5	0,54	AG-3073
	G3/8			10	4	8	2,5	10	759,5	0,5	0,52	AG-3075
3/2 NO	G1/8	pneumatic amplified	mechanical spring	5,5	3	6	1,5	1,5	759,5	0,5	0,21	AG-3072
	G1/4			8	4	8	2,5	4	759,5	0,5	0,54	AG-3074
	G3/8			10	4	8	2,5	10	759,5	0,5	0,52	AG-3076

G1/8



- 1 = Supply port (vacuum)
- 2 = Use
- 3 = Exhaust

G1/4 - G3/8



- 1 = Supply port (vacuum)
- 2 = Use
- 3 = Exhaust

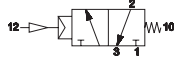
3

3/2 Pneumatic valve for vacuum with external air operation



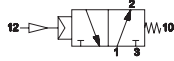
3/2 NC G1/2 - G3/4 - G1

AG-3081
AG-3091
AG-3100



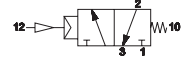
3/2 NO G1/2 - G3/4 - G1

AG-3082
AG-3092
AG-3101



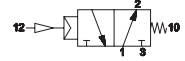
3/2 NC G1 1/2

AG-3110



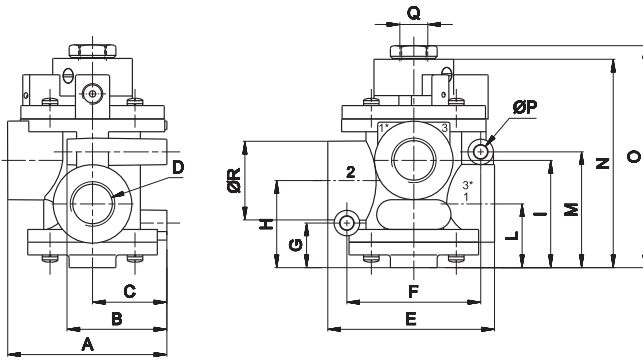
3/2 NO G1 1/2

AG-3111



	Connect.	Control	Return	Ø	Times (ms)		Minimum control pressure bar	Pump max m ³ /h	Max vacuum		Weight Kg	Part no.
					mm	En.			De-en.	mm Hg		
3/2 NC	G1/2	pneumatic amplified	mechanical spring	15	6	15	3	20	759,5	0,5	1,16	AG-3081
	G3/4			19	6	15	3	35	759,5	0,5	1,10	AG-3091
	G1			25	7	16	3	90	759,5	0,5	1,59	AG-3100
	G1 1/2			39	65	25	4	180	759,5	0,5	2,19	AG-3110
3/2 NO	G1/2	pneumatic amplified	mechanical spring	15	6	15	3	20	759,5	0,5	1,16	AG-3082
	G3/4			19	6	15	3	35	759,5	0,5	1,10	AG-3092
	G1			25	7	16	3	90	759,5	0,5	1,59	AG-3101
	G1 1/2			39	65	25	4	180	759,5	0,5	2,19	AG-3111

G1/2 - G3/4 - G1



NC

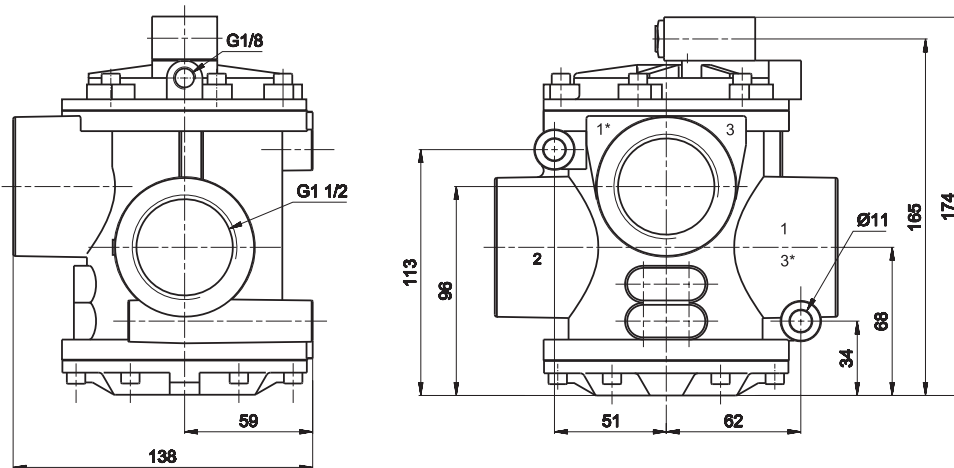
- 1 = Supply port (vacuum)
- 2 = Use
- 3 = Exhaust

NO

- 1* = Supply port (vacuum)
- 2 = Use
- 3* = Exhaust

	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G1	88,5	55	40	G1	101	76	25,5	51	64	38	62,5	115	120,5	8,4	G1/4	45

G1 1/2



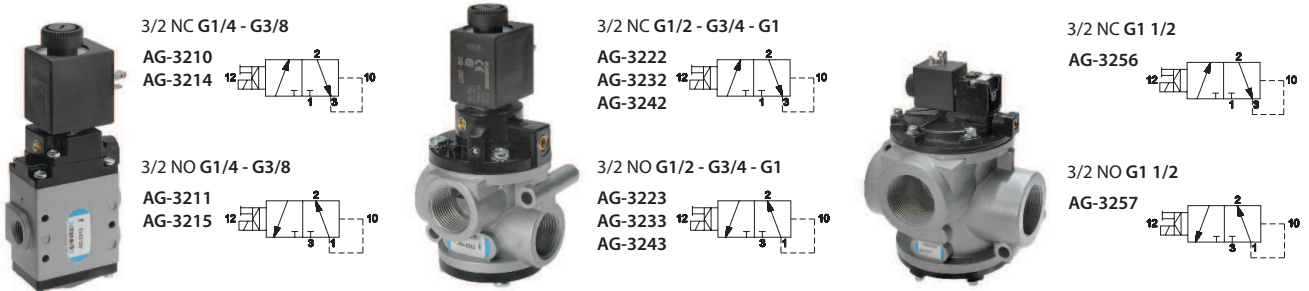
NC

- 1 = Supply port (vacuum)
- 2 = Use
- 3 = Exhaust

NO

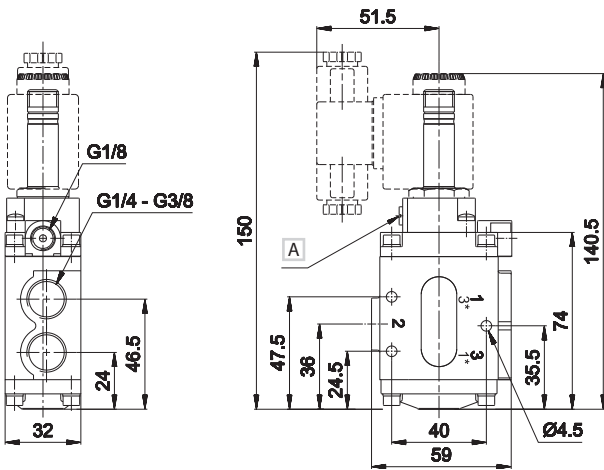
- 1* = Supply port (vacuum)
- 2 = Use
- 3* = Exhaust

3/2 Solenoid valve for direct vacuum with pilot vacuum supply

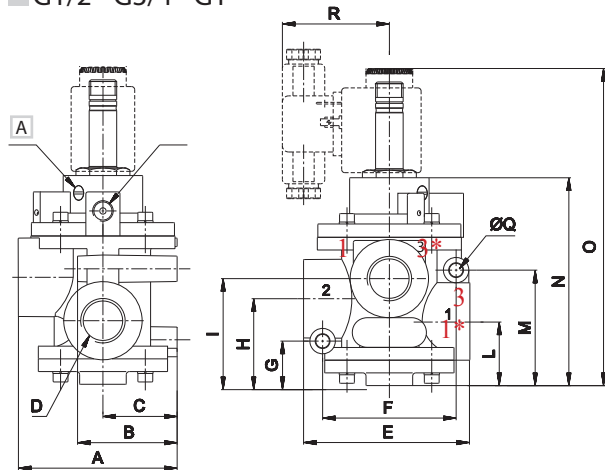


Connect.	Control	Return	Ø		Resp. Time (ms)		Pump max m ³ /h	Min. vacuum		Max vacuum		Weight Kg	Coil	Part no.
			mm	mm	En.	De-en.		mm Hg	Torr	mm Hg	Torr			
3/2 NC	electric amplified	vacuum	G1/4	8	25	16	4	150	610	759,5	0,5	0,52	U2	AG-3210
			G3/8	10	25	16	10	150	610	759,5	0,5	0,56	U2	AG-3214
			G1/2	15	30	15	20	150	610	759,5	0,5	1,19	U2	AG-3222
			G3/4	19	30	15	35	150	610	759,5	0,5	1,13	U2	AG-3232
			G1	25	38	18	90	150	610	759,5	0,5	1,62	U2	AG-3242
G1 1/2	39	75	50	100	150	610	759,5	0,5	2	U2	AG-3256			
3/2 NO	electric amplified	vacuum	G1/4	8	20	14	4	150	610	759,5	0,5	0,58	U2	AG-3211
			G3/8	10	20	14	10	150	610	759,5	0,5	0,56	U2	AG-3215
			G1/2	15	20	18	20	150	610	759,5	0,5	1,19	U2	AG-3223
			G3/4	19	20	18	35	150	610	759,5	0,5	1,13	U2	AG-3233
			G1	25	25	20	90	150	610	759,5	0,5	1,62	U2	AG-3243
G1 1/2	39	70	60	100	150	610	759,5	0,5	2	U2	AG-3257			

G1/4 - G3/8

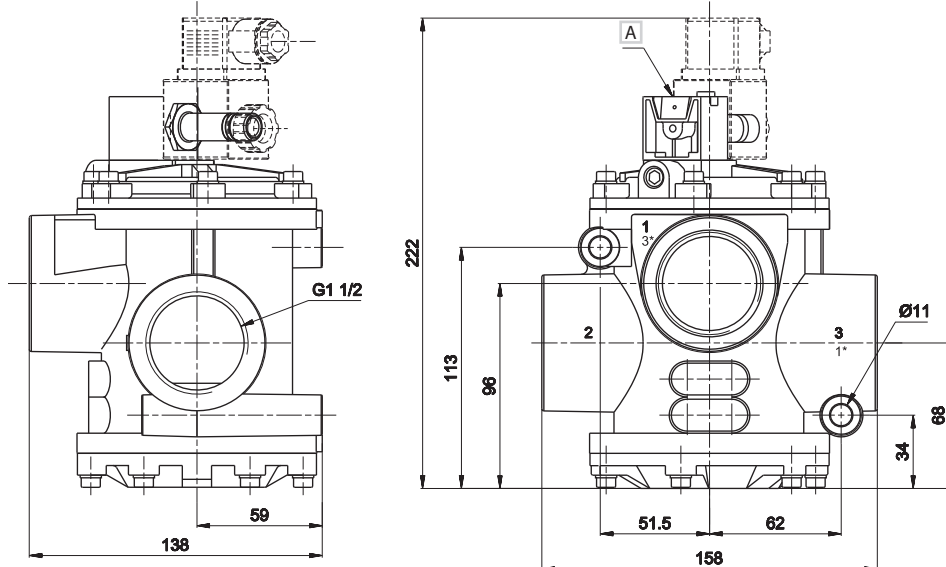


G1/2 - G3/4 - G1



	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	8,4	50

G1 1/2



- NC**
1 = Supply port (vacuum)
2 = Use
3 = Exhaust
- NO**
1* = Supply port (vacuum)
2 = Use
3* = Exhaust

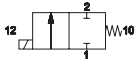
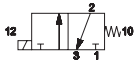
A Manual override

For 2/2 version put a cup on the exhaust (3)
Electrovalves are supplied without coil, connector and locking ring

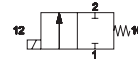
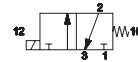
2/2 - 3/2 Solenoid valve for vacuum with direct operation



3/2 NC G1/4
 AG-3310
 AG-3311
 AG-3312
 AG-3313
 2/2 NC G1/4
 AG-3300
 AG-3301
 AG-3302
 AG-3303



3/2 NC G1/2
 AG-3330
 AG-3331
 AG-3332
 2/2 NC G1/2
 AG-3320
 AG-3321
 AG-3322



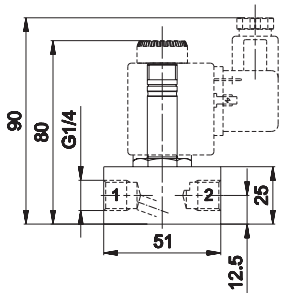
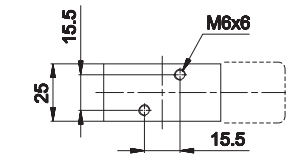
Material:
 valve body G1/4 = brass
 G1/2 = aluminium
 tube/sleeve stainless steel
 nucleus and spring stainless steel
 seals (a) G1/4 = NBR
 G1/2 = vulkollan
 (a) = vulkollan + NBR for valves 3/2 version

Connect.	Control	Return	Ø mm	Resp. Time (ms)		Pump max m ³ /h	Max vacuum		Weight Kg	Part no.	
				En.	De-en.		mm Hg	Torr			
3/2 NC	electric	mechanical spring	G1/4	3-3*	10	10	1,8	759,5	0,5	0,22	AG-3310
			G1/4	4-3*	12	8	2,5	759,5	0,5	0,22	AG-3311
			G1/4	5-3*	13	8	4	759,5	0,5	0,22	AG-3312
			G1/4	6-3*	15	8	5	759,5	0,5	0,22	AG-3313
			G1/2	8-3*	17	8	6	759,5	0,5	0,25	AG-3330
			G1/2	10-3*	20	10	7,5	759,5	0,5	0,25	AG-3331
2/2 NC	electric	mechanical spring	G1/4	3	10	-	1,8	759,5	0,5	0,22	AG-3300
			G1/4	4	12	-	2,5	759,5	0,5	0,22	AG-3301
			G1/4	5	13	-	4	759,5	0,5	0,22	AG-3302
			G1/4	6	15	-	5	759,5	0,5	0,22	AG-3303
			G1/2	8	17	-	6	759,5	0,5	0,25	AG-3320
			G1/2	10	20	-	7,5	759,5	0,5	0,25	AG-3321
G1/2	11	28	-	10	759,5	0,5	0,25	AG-3322			

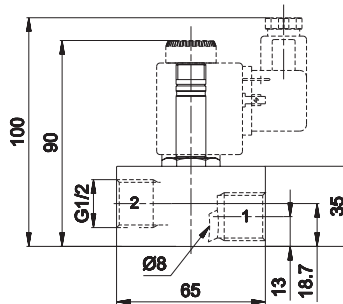
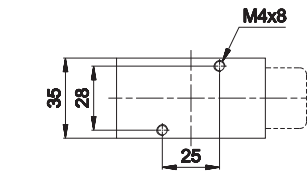
* = solenoid valves with 3 mm fixed exhaust

G1/4

G1/2



1 = Supply port (vacuum)
 2 = Use
 3 = Exhaust



1 = Supply port (vacuum)
 2 = Use
 3 = Exhaust



Coil U2 - 17 VA

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

Electrovalves are supplied without coil, connector and locking ring

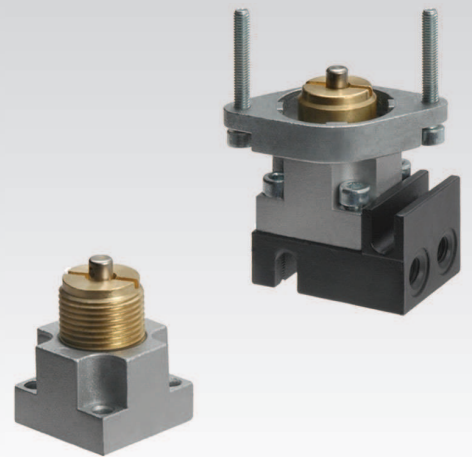
AI

Miniature limit switches

Univer limit switches, mounted on sub-bases with threaded connections or with quick couplings, may be combined with different types of manual operators for panel mounting complying with the various need of the plant.

Available ATEX version upon request

CE II 2Gc IIC T5 II 2Dc T100°C



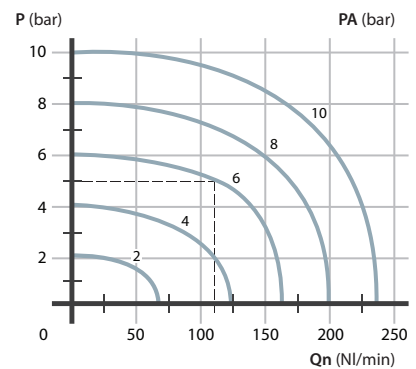
TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ +90 °C
Fluid temperature	max +50 °C
Fluid	50 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 10 bar
Control	manual, mechanical
Return	mechanical spring
Connections	interface for sub-base
Nominal Ø	2,3 mm (1,5 sensible type)
Nominal flow rate (NI/min)	110 NI/min (55 sensible type)

CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber
Sub-base	zamak
Spool	nickel-plated brass

Flow rate characteristics



P = Working pressure
PA = Supply pressure
Qn = Flow rate

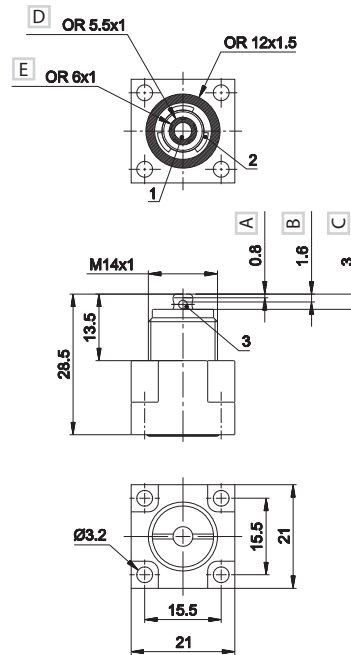
Mechanical push button - spring



- A Pre-stroke
- B Max opening
- C Total stroke
- D 3/2 NC - 3/2 NO - 2/2 NC
- E 2/2 NO

	Symbol	Ø mm	Flow rate NI/min	Force N	Weight Kg	Part no.
3/2 NC		2,3	110	15	0,040	AI-3500
		1,5	55	4	0,040	AI-3500S (a)
3/2 NO		2,3	110	15	0,040	AI-3501
		1,3	45	4	0,040	AI-3501S(a)
2/2 NC		2,3	110	15	0,040	AI-3502
2/2 NO (b)		2,3	110	15	0,040	AI-3503

(a) = sensible (b) = 2/2 NO version available upon request

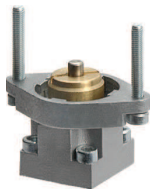


3

PNEUMATIC AND MECHANICAL ACTUATORS			MANUAL PUSH		
	Pneumatic operator	AI-3550		Recessed button	<ul style="list-style-type: none"> ■ BLACK AI-3511 ■ RED AI-3512 ■ GREEN AI-3513
	Amplified pneumatic operator	AI-3551		Head button	<ul style="list-style-type: none"> ■ RED AI-3514 ■ BLACK AI-3516 ■ RED AI-3514D ■ BLACK AI-3516D
	Roller operator 1 position	AI-3560		Button	<ul style="list-style-type: none"> ■ GREEN AI-3515 ■ RED AI-3517 ■ BLACK AI-3519
	Ball-push operator 1 position	AI-3562		Accident prevention rotating selector	<ul style="list-style-type: none"> ■ BLACK AI-3520 ■ BLACK AI-3521
	Operator with omni-directional antenna 1 position	AI-3563		Rotating lever selector	<ul style="list-style-type: none"> ■ BLACK AI-3522 ■ BLACK AI-3523
	Roller lever operator 1 position	AI-3570		Lever operator	■ BLACK AI-3524
	Articulated roller operator 1 position Complete actuation with stroke 2,5 mm, max stroke 4,7 mm	AI-3571		Omni-directional operator	■ BLACK AI-3525
	Key operator 1 position	AI-3572		Push-pull operator	■ BLACK AI-3526

For actuators dimensions see section "Accessories>Actuators"

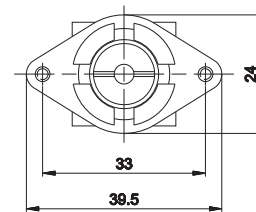
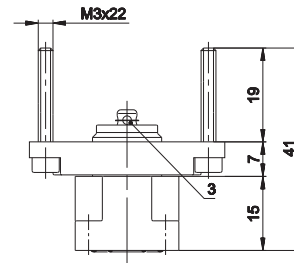
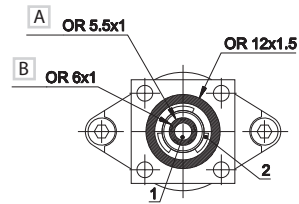
Mechanical push button for panel mounting - spring



A 3/2 NC - 3/2 NO - 2/2 NC
B 2/2 NO

	Symbol	Ø mm	Flow rate NI/min	Force N	Weight Kg	Part no.
3/2 NC		2,3	110	15	0,055	AI-3500Q
		1,5	55	4	0,055	AI-3500SQ (a)
3/2 NO		2,3	110	15	0,055	AI-3501Q
		1,3	45	4	0,055	AI-3501SQ (a)
2/2 NC		2,3	110	15	0,055	AI-3502Q
2/2 NO (b)		2,3	110	15	0,055	AI-3503Q

(a) = sensible (b) = upon request only 2/2 NO version



1 = Supply port
2 = Use
3 = Exhaust

MANUAL PUSH

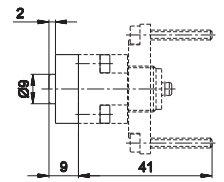
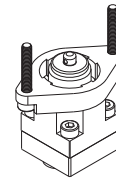
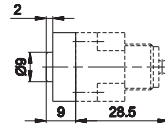
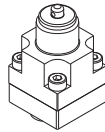
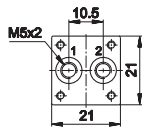
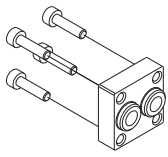
	Recessed button	<ul style="list-style-type: none"> ■ BLACK AI-3511Q ■ RED AI-3512Q ■ GREEN AI-3513Q
	Head button	<ul style="list-style-type: none"> ■ RED AI-3514Q ■ BLACK AI-3516Q ■ RED AI-3514QD ■ BLACK AI-3516QD
	Button	<ul style="list-style-type: none"> ■ GREEN AI-3515Q ■ RED AI-3517Q ■ BLACK AI-3519Q
	Accident prevention rotating selector	<ul style="list-style-type: none"> ■ BLACK AI-3520Q ■ BLACK AI-3521Q
	Rotating lever selector	<ul style="list-style-type: none"> ■ BLACK AI-3522Q ■ BLACK AI-3523Q
	Lever operator	<ul style="list-style-type: none"> ■ BLACK AI-3524Q
	Omni-directional operator	<ul style="list-style-type: none"> ■ BLACK AI-3525Q
	Push-pull operator	<ul style="list-style-type: none"> ■ BLACK AI-3526Q

For actuators dimensions see section "Accessories>Actuators"

AI-3610

AI-3610 + AI-3500

AI-3610 + AI-3500Q

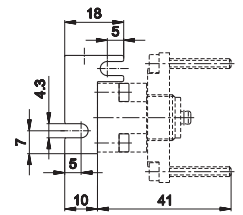
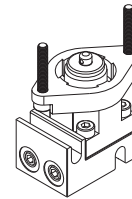
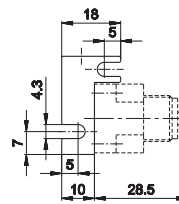
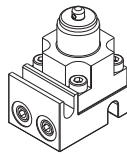
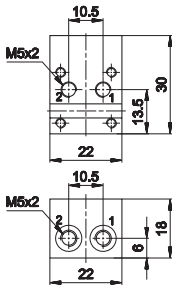
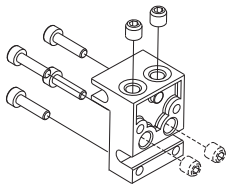


Sub-base with M5 threaded connections
weight: 0,020 Kg

AI-3612

AI-3612 + AI-3500

AI-3612 + AI-3500Q



Sub-base with side or dorsal consumptions and threaded connections M5
weight: 0,020 Kg

Part numbers include M3x12 fixing screws (4 pcs) and M5x5 dowel pins to close the unused ways.
The M5x5 dowel pins must be mounted with loctite (243 type). Be sure that loctite does not obstruct the ports or sinks inside the valve.
The dowel pins must be screwed till reaching the base surface. Avoid screwing them completely.

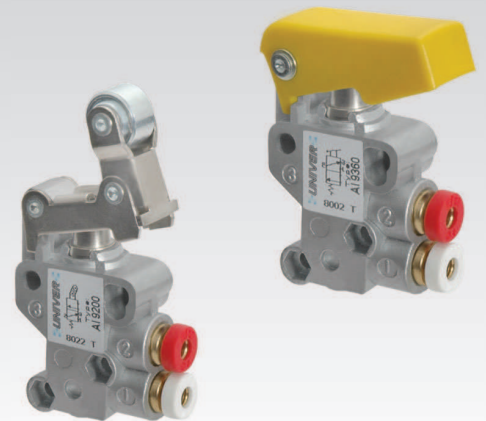
AI JET

JET series Pneumatic Switches

- Light with compact design
- Low operating force and high response time
- M5 threaded connections or push-in fitting tube Ø4
- Wide range of actuators and manual overrides for mounting panel (Original Univer)

Available ATEX version upon request

CE Ex II 2Gc IIC T5 II 2Dc T100°C



TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ +90 °C
Fluid temperature	max +50 °C
Fluid	50 µm filtered air, with or without lubrication
Commutation system	poppet
Ways/Positions	2/2 NC, 3/2 NC, 3/2 NO
Pressure	max 10 bar
Control	manual, mechanical
Return	mechanical spring
Connections	M5, tube Ø4
Nominal Ø	2,5 mm
Nominal flow rate (NI/min)	70 NI/min

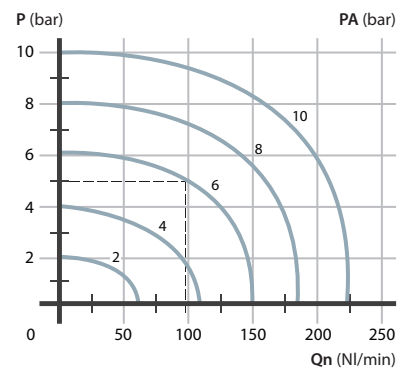
CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber
Spool	nickel-plated brass

OTHER VERSIONS AVAILABLE



Flow rate characteristics

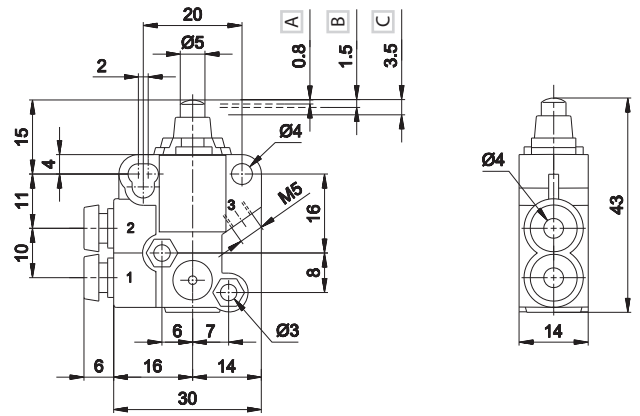


P = Working pressure
PA = Supply pressure
Qn = Flow rate

Ball-push - spring tube Ø4



	Symbol	Connection	Force (a)	Weight	Part no.
			N	Kg	
3/2 NC		tube Ø4	14	0,060	AI-9000
3/2 NO		tube Ø4	14	0,060	AI-9010
2/2 NC		tube Ø4	14	0,060	AI-9020

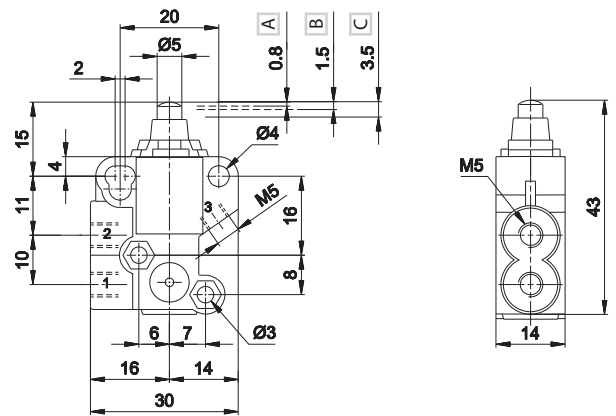


- A Pre-stroke
- B Maximum opening
- C Total stroke
- 1 = Supply port
- 2 = Use
- 3 = Exhaust

Ball-push - spring M5



	Symbol	Connection	Force (a)	Weight	Part no.
			N	Kg	
3/2 NC		M5	14	0,060	AI-9000M
3/2 NO		M5	14	0,060	AI-9010M
2/2 NC		M5	14	0,060	AI-9020M

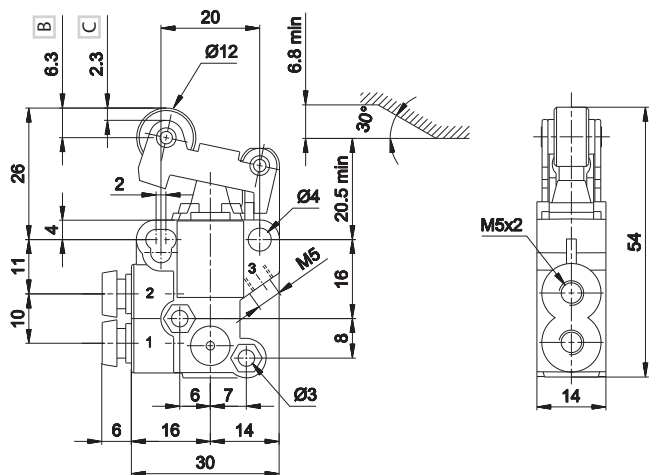


- A Pre-stroke
- B Maximum opening
- C Total stroke
- 1 = Supply port
- 2 = Use
- 3 = Exhaust

Roller lever - spring tube Ø4



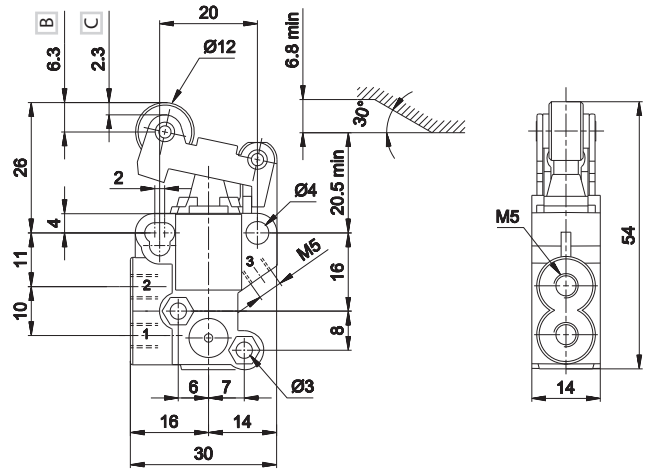
	Symbol	Connection	Force (a)	Weight	Part no.
			N	Kg	
3/2 NC		tube Ø4	7	0,085	AI-9100
3/2 NO		tube Ø4	7	0,085	AI-9110
2/2 NC		tube Ø4	7	0,085	AI-9120



- B Maximum opening
- C Total stroke
- 1 = Supply port
- 2 = Use
- 3 = Exhaust

(a) = at 6 bar (b) = upon request 2/2 NO version

Roller lever - spring M5

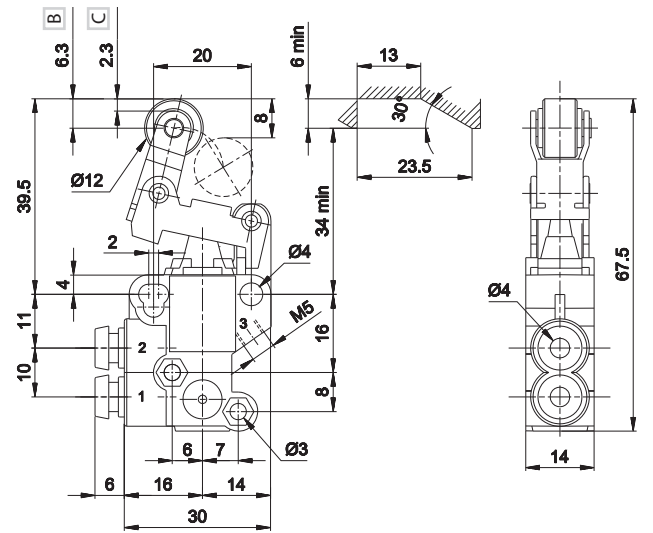


	Symbol	Connection	Force (a) N	Weight Kg	Part no.
3/2 NC		M5	7	0,085	AI-9100M
3/2 NO		M5	7	0,085	AI-9110M
2/2 NC		M5	7	0,085	AI-9120M

B Maximum opening
C Total stroke

1 = Supply port
2 = Use
3 = Exhaust

Uni-directional roller lever - spring tube Ø4

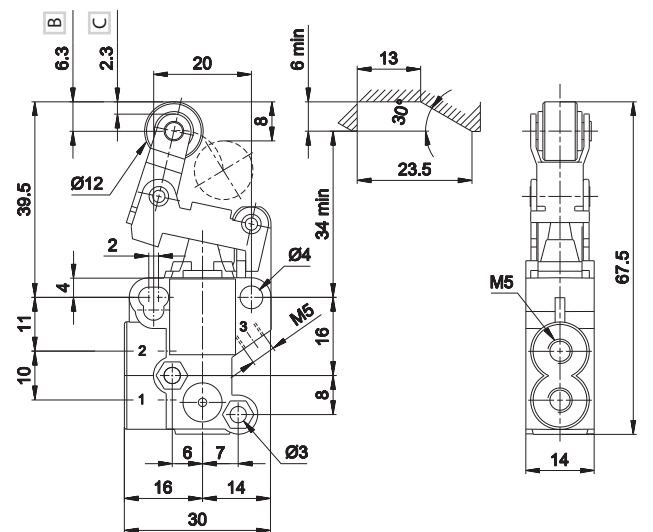


	Symbol	Connection	Force (a) N	Weight Kg	Part no.
3/2 NC		tube Ø4	4	0,085	AI-9200
3/2 NO		tube Ø4	4	0,085	AI-9210
2/2 NC		tube Ø4	4	0,085	AI-9220

B Maximum opening
C Total stroke

1 = Supply port
2 = Use
3 = Exhaust

Uni-directional roller lever - spring M5



	Symbol	Connection	Force (a) N	Weight Kg	Part no.
3/2 NC		M5	4	0,085	AI-9200M
3/2 NO		M5	4	0,085	AI-9210M
2/2 NC		M5	4	0,085	AI-9220M

B Maximum opening
C Total stroke

1 = Supply port
2 = Use
3 = Exhaust

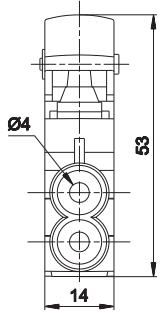
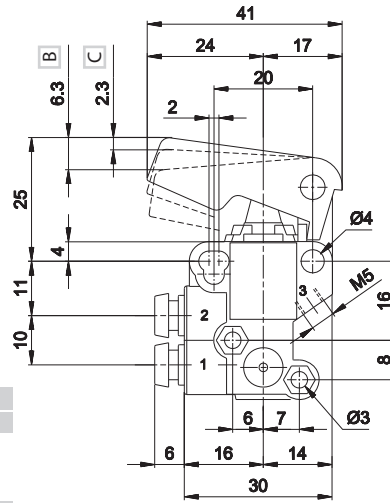
(a) = at 6 bar (b) = upon request 2/2 NO version

Button - spring tube Ø4



	Symbol	Connection	Force (a) N	Weight Kg	Part no.
3/2 NC		tube Ø4	7	0,065	AI-9350
3/2 NO		tube Ø4	7	0,065	AI-9360
2/2 NC		tube Ø4	7	0,065	AI-9370

Button yellow colour



B Maximum opening
C Total stroke

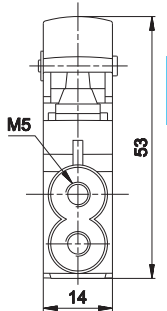
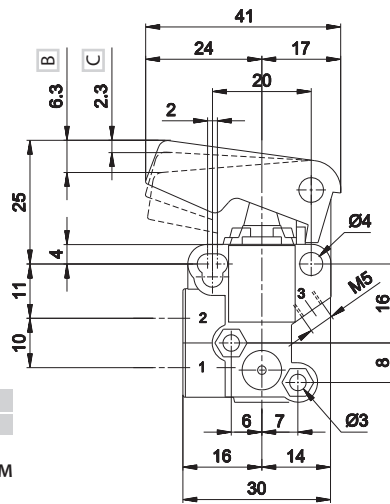
1 = Supply port
2 = Use
3 = Exhaust

Button - spring M5



	Symbol	Connection	Force (a) N	Weight Kg	Part no.
3/2 NC		M5	7	0,065	AI-9350M
3/2 NO		M5	7	0,065	AI-9360M
2/2 NC		M5	7	0,065	AI-9370M

Button yellow colour



B Maximum opening
C Total stroke

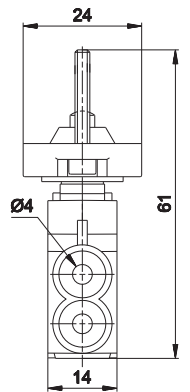
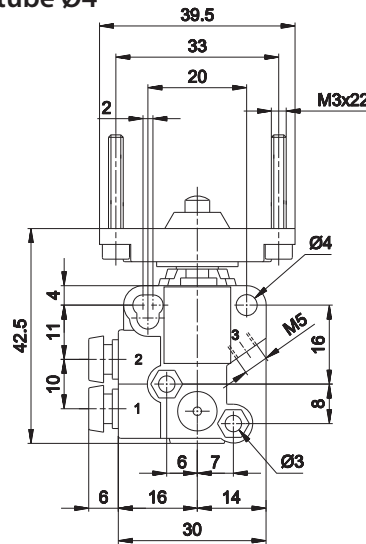
1 = Supply port
2 = Use
3 = Exhaust

(a) = at 6 bar (b) = upon request 2/2 NO version

Mechanical push button for panel mounting - spring tube Ø4



	Symbol	Connection	Force (a)	Weight	Part no.
			N	Kg	
3/2 NC		tube Ø4	14	0,075	AI-9400
3/2 NO		tube Ø4	14	0,075	AI-9410
2/2 NC		tube Ø4	14	0,075	AI-9420

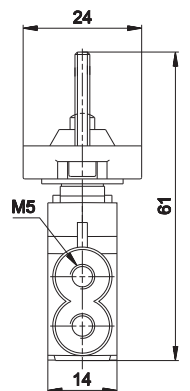
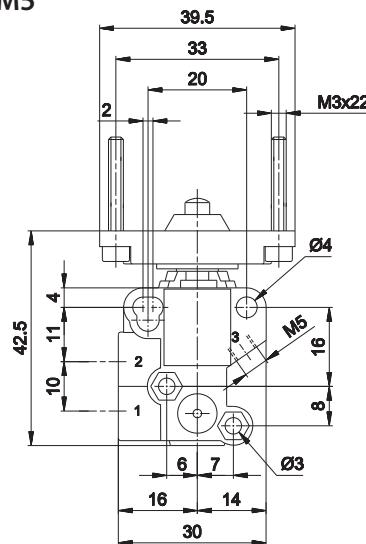


1 = Supply port
2 = Use
3 = Exhaust

Mechanical push button for panel mounting - spring M5



	Symbol	Connection	Force (a)	Weight	Part no.
			N	Kg	
3/2 NC		M5	14	0,075	AI-9400M
3/2 NO		M5	14	0,075	AI-9410M
2/2 NC		M5	14	0,075	AI-9420M



1 = Supply port
2 = Use
3 = Exhaust

MANUAL ACTUATORS

	Recessed button	<ul style="list-style-type: none"> ■ BLACK AI-3511Q ■ RED AI-3512Q ■ GREEN AI-3513Q 			<ul style="list-style-type: none"> ■ BLACK AI-3522Q ■ BLACK AI-3523Q
	Head button	<ul style="list-style-type: none"> ■ RED AI-3514Q ■ BLACK AI-3516Q ■ RED AI-3514QD ■ BLACK AI-3516QD 			<ul style="list-style-type: none"> ■ BLACK AI-3524Q
	Button	<ul style="list-style-type: none"> ■ GREEN AI-3515Q ■ RED AI-3517Q ■ BLACK AI-3519Q 			<ul style="list-style-type: none"> ■ BLACK AI-3525Q
	Rotating selector	<ul style="list-style-type: none"> ■ BLACK AI-3520Q ■ BLACK AI-3521Q 			<ul style="list-style-type: none"> ■ BLACK AI-3526Q

(a) = at 6 bar (b) = upon request 2/2 NO version
For actuator dimensions refer to section "Accessories>Actuators"

AI JET2

3/2 - 5/2 - 5/3 Valves with panel operation

- Light with compact design
- Low operating force and high response time
- M5 threaded connections or push-in fitting tube Ø4
- Wide range of actuators and manual overrides for mounting panel (Original Univer)

Available ATEX version upon request

CE II 2Gc IIC T5 II 2Dc T100°C



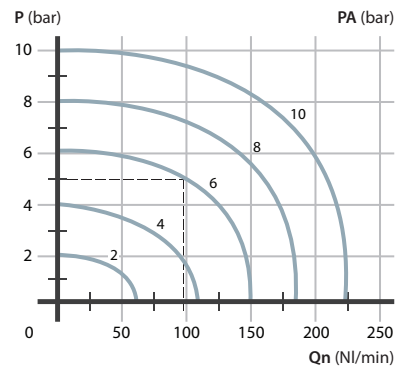
TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ +90 °C
Fluid temperature	max +50 °C
Fluid	50 µm filtered air, with or without lubrication
Commutation system	poppet
Ways/Positions	2/2 NC, 3/2 NC, 3/2 NO
Pressure	max 10 bar
Control	manual, mechanical
Return	mechanical spring
Connections	M5, tube Ø4
Nominal Ø	2,5 mm
Nominal flow rate (NI/min)	70 NI/min

CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber
Spool	nickel-plated brass

Flow rate characteristics

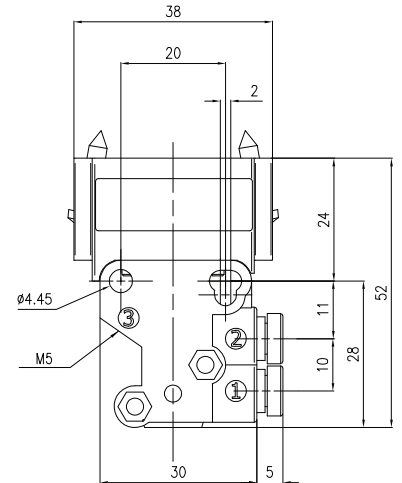
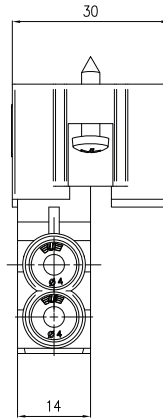


P = Working pressure
 PA = Supply pressure
 Qn = Flow rate

2/2 - 3/2 Mechanical push button for panel mounting - tube Ø4



	Symbol	Connection	Weight Kg	Part no.
3/2 NC		W1-10 tube Ø4	0,075	AI-9500B
3/2 NO		W1-10 tube Ø4	0,075	AI-9510B
2/2 NC		W1-10 tube Ø4	0,075	AI-9520B

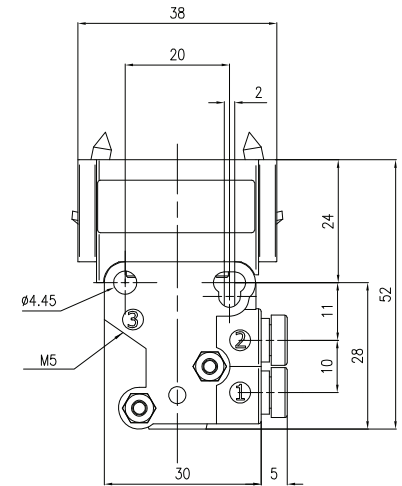
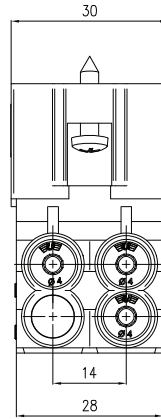


5/2 - 5/3 Mechanical push button for panel mounting - tube Ø4



	Symbol	Connection	Weight Kg	Part no.
5/2		W1-10 tube Ø4	0,15	AI-9550B
5/3 o.c.		W1-10 tube Ø4	0,15	AI-9560B
5/3 p.c.		W1-10 tube Ø4	0,15	AI-9570B

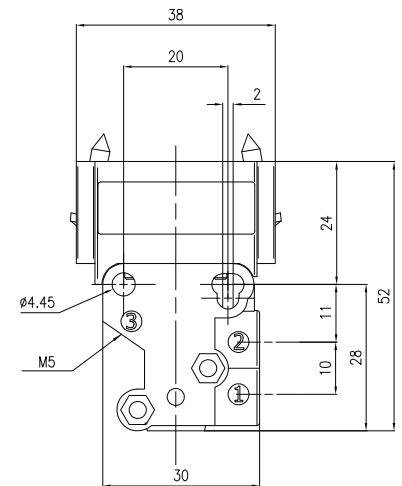
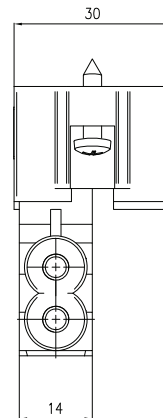
o.c. = open centres p.c. = pressurized centres



2/2 - 3/2 Mechanical push button for panel mounting - M5



	Symbol	Connection	Weight Kg	Part no.
3/2 NC		W1-10 M5	0,075	AI-9500BM
3/2 NO		W1-10 M5	0,075	AI-9510BM
2/2 NC		W1-10 M5	0,075	AI-9520BM

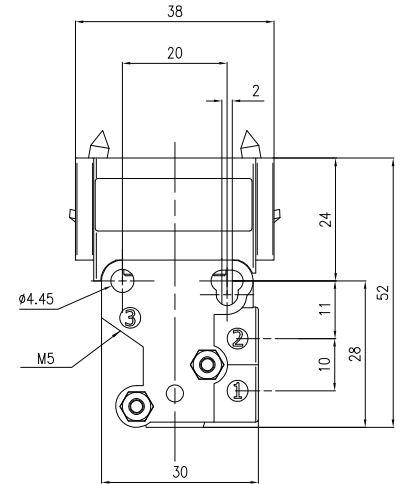
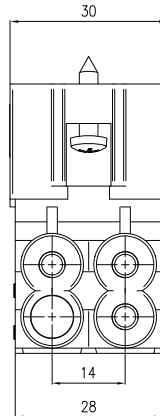


5/2 - 5/3 Mechanical push button for panel mounting - M5



	Symbol	Connection	Weight Kg	Part no.
5/2		M5	0,15	AI-9550BM
5/3 o.c.		M5	0,15	AI-9560BM
5/3 p.c.		M5	0,15	AI-9570BM

o.c. = open centres p.c. = pressurized centres



MANUAL ACTUATORS

	Recessed button	<ul style="list-style-type: none"> ■ BLACK AI-35B10N ■ RED AI-35B10R ■ GREEN AI-35B10V
	Protruding button	<ul style="list-style-type: none"> ■ BLACK AI-35B11N ■ RED AI-35B11R ■ GREEN AI-35B11V
	Two-position head button	<ul style="list-style-type: none"> ■ BLACK AI-35B13N ■ RED AI-35B13R
	Short lever selector	<ul style="list-style-type: none"> ■ BLACK AI-35B20 2 steady positions
		<ul style="list-style-type: none"> ■ BLACK AI-35B21 3 unsteady positions
		<ul style="list-style-type: none"> ■ BLACK AI-35B22 3 steady positions
	Long lever selector	<ul style="list-style-type: none"> ■ BLACK AI-35B25 2 steady positions
		<ul style="list-style-type: none"> ■ BLACK AI-35B26 3 unsteady positions
		<ul style="list-style-type: none"> ■ BLACK AI-35B27 3 steady positions
	Key selector	<ul style="list-style-type: none"> ■ BLACK AI-35B30 2 steady positions
		<ul style="list-style-type: none"> ■ BLACK AI-35B31 3 unsteady positions
		<ul style="list-style-type: none"> ■ BLACK AI-35B32 3 steady positions

For actuator dimensions refer to section "Accessories>Actuators"

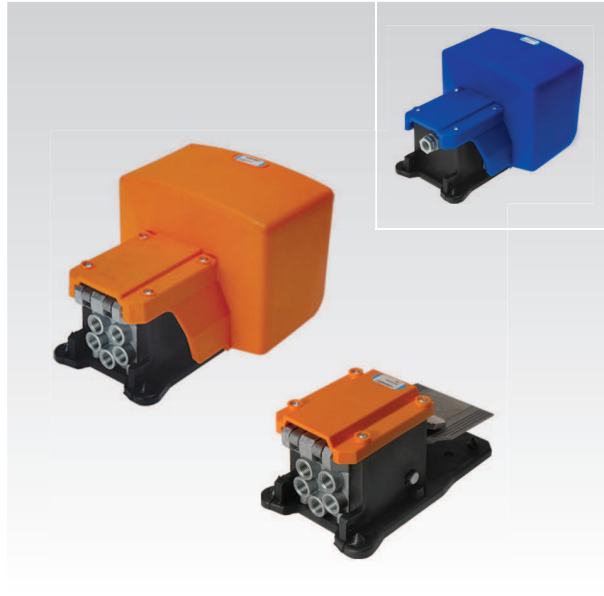
AM

Pneumatic and electric foot valves

- Double poppet system appreciated for its reliability and high flow rate
- Aluminium valve body and pedal lever to the max strenght
- Available with and without protection (in the latter case the protection is to be realized by the machine builder according to the current rules)
- Available with safety devices to prevent unintentional operations
- Available with pneumatic servo-assistance in case of minimum stress
- Electric foot valves with single or double microswitch complete the foot valve range

Available ATEX version upon request

CE Ex II 2Gc IIC T5 II 2Dc T100°C



TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ +70 °C	
Fluid temperature	-10 ÷ +50 °C	
Fluid	filtered air 50 µm, with or without lubrication	
Commutation system	poppet	
Ways/Positions	2/2 NC, 3/2 NC, 2/2 NO, 3/2 NO, 5/2	
Pressure	max 10 bar	
Control	pedal	
Return	mechanical spring, pedal	
Connections	G1/8	G1/4
Nominal Ø (mm)	2,3	8
Nominal flow rate (NI/min)	98	800

CONSTRUCTIVE CHARACTERISTICS

PNEUMATIC FOOT VALVE:

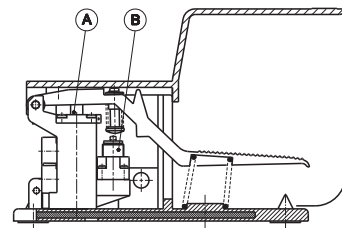
Valve body	zamak
Foot valve lever	aluminium
Pedal body and protections	plastic material with reinforcing steel plate
Seals	oil/wear-resistant compound
Spool	aluminium

ELECTRIC FOOT VALVE:

Valve body, foot valve lever, protections	dielectric plastic material
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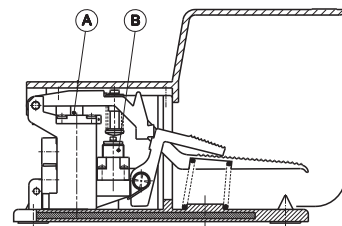
Functioning

Pedal with spring return



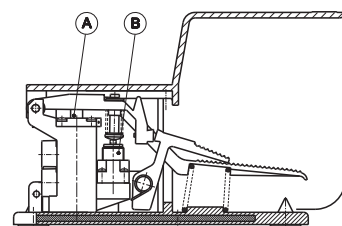
Direct operation A or pneumatic servo-assistance B.

Pedal with two positions (bistable)



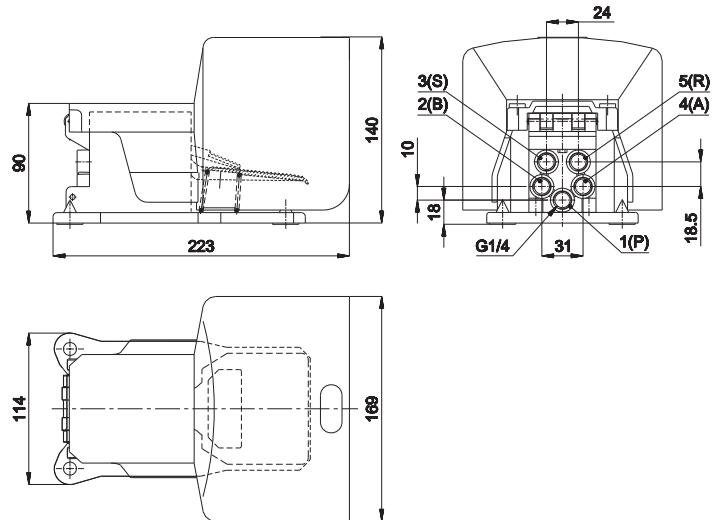
The pedal must be deeply pressed. The unlocking pedal brings the pedal back to the starting position.

Pedal with safety device



Operation is possible only by pushing both pedals at the same time. Pedals return to the starting position by releasing them. In this case unintentional operation is avoided.

G1/4 pneumatic foot valve with protection



1 (P) = Supply port

2 - 4 (B - A) = Use

3 - 5 (S - R) = Exhaust

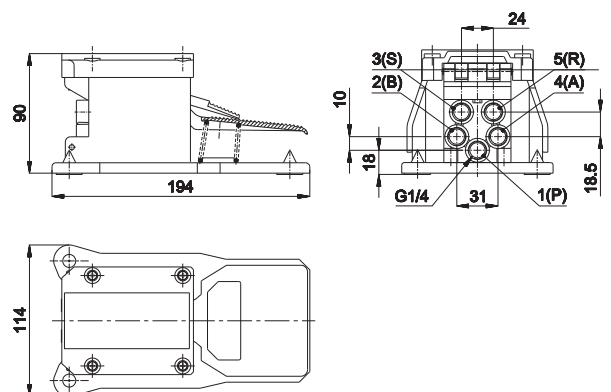
Threaded connections for different functions

2/2 NC		2/2 NO		3/2 NC			3/2 NO			5/2				
A	P	B	P	A	P	R	B	P	S	A	B	P	R	S
4	1	2	1	4	1	5	2	1	3	4	2	1	5	3

Symbol	Return	Force N	Weight Kg	Part no.	
SPRING RETURN PEDAL					
3/2 NC		mechanical spring	20	1,25	AM-5000
5/2		mechanical spring	20	1,45	AM-5001
3/2 NO		mechanical spring	20	1,25	AM-5002
BISTABLE PEDAL					
3/2 NC		pedal	20	1,37	AM-5003
5/2		pedal	20	1,52	AM-5004
3/2 NO		pedal	20	1,37	AM-5005
PEDAL WITH SAFETY CONTROL					
5/2		mechanical spring	20	1,45	AM-5011
3/2 NO		mechanical spring	20	1,25	AM-5012
3/2 NC		mechanical spring	20	1,25	AM-5015
SERVOASSISTED PEDAL - SPRING RETURN					
5/2		mechanical spring	20	1,45	AM-5021
SERVOASSISTED BISTABLE PEDAL					
5/2		mechanical spring	20	1,45	AM-5031
SERVOASSISTED PEDAL WITH SAFETY CONTROL					
5/2		mechanical spring	20	1,45	AM-5041

Pneumatic foot valve with orange as standard protection.

G1/4 pneumatic foot valves without protection



1 (P) = Supply port

2 - 4 (B - A) = Use

3 - 5 (S - R) = Exhaust

Threaded connections for different functions

2/2 NC		2/2 NO		3/2 NC			3/2 NO			5/2				
A	P	B	P	A	P	R	B	P	S	A	B	P	R	S
4	1	2	1	4	1	5	2	1	3	4	2	1	5	3

Symbol	Return	Force N	Weight Kg	Part no.	
PEDAL					
3/2 NC		mechanical spring	20	1,25	AM-5000A
5/2		mechanical spring	20	1,45	AM-5001A
BISTABLE PEDAL					
3/2 NC		pedal	20	1,37	AM-5003A
5/2		pedal	20	1,52	AM-5004A

Other versions upon request.

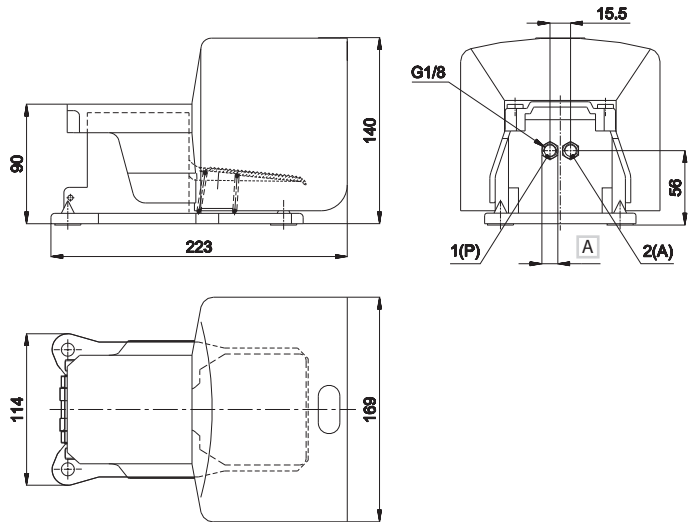
If this version is used the protection is to be realized by the user according to the current rules.

G1/8 pneumatic foot valves with protection



Symbol	Return	Force N	Weight Kg	Part no.
	mechanical spring	20	0,96	AM-5043
	mechanical spring	20	0,96	AM-5043B
	mechanical spring	20	0,96	AM-5043C
	mechanical spring	20	0,96	AM-5043D

Pneumatic foot valve with orange protection.
Upon request version without protection.



A Wrench 12

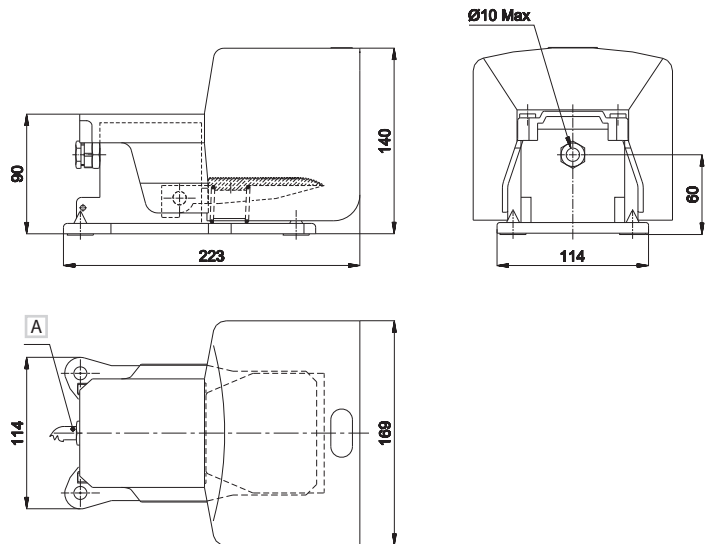
1 (P) = Supply port
2 (A) = Use

Electric foot valves



Symbol	Description	Force N	Weight Kg	Part no.
	pedal without electric microswitch	20	0,86	AM-5050
	pedal with electric microswitch	20	0,92	AM-5051
	pedal with double electric microswitch	20	0,95	AM-5052

Electric foot valve with blue protection.



A Electric cable

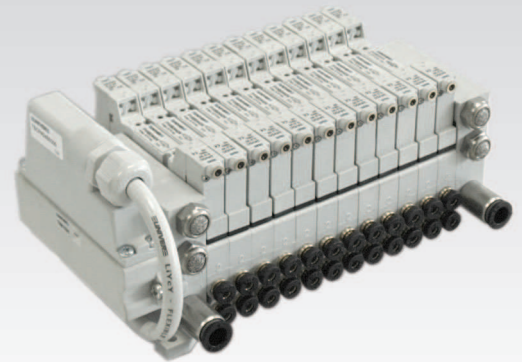
P10

10 mm COMPACT valves - threaded body and for sub-base mounting 90° ELECTROPILOT CONNECTION

- Standard consumption: 1 W; upon request low power consumption: 0,3W
- Quick response times
- High flow rate: the development of the traditional UNIVER spool technology permits high flow rate values
- Compact design: the valve body (10mm) allows reduced overall dimensions
- Complete solution
- Threaded body (P10F) and body for sub-base (P10B) in the following versions: 5/2 - 5/3 - 3/2+3/2
- External and multipolar electrical connections
- TC serial transmission system
- Maximum application flexibility
- Modular sub-base (single and double) for a high versatility in the composition of the valve manifolds
- Simplified installation
- Easy installation of tubes and fittings thanks to connections being all on the same side

Available ATEX version upon request

CE 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	spool
Ways/Positions	3/2+3/2, 5/2, 5/3
Pressure	7 bar (electric control) 10 bar (pneumatic control)
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring, pneumatic, electric
Connections	M5 (P10F) - M5, M7, tube Ø 4 (P10B)
Nominal flow rate (NI/min)	310 (5/2) 230 (5/3) 250 (3/2+3/2)

CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber (NBR)
Sub-base and actuators	selfextinguishing technopolymer
Spool	aluminum

ELECTRIC CHARACTERISTICS

Electropilot	B10 (0,3 W) B11 (1 W)
Voltage	24 V DC (± 10%)
Power consumption	B10 = 0,3 W, speed-up 1 W (25 ms) B11 = 1 W
Protection degree	IP65
Manual override	recessed button - 1 position

CODIFICATION KEY

P	1	0	F	2	4	4	2	4		
	1	2	3	4	5	6	7			

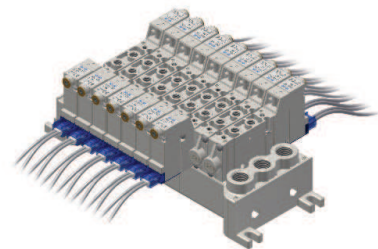
1 Series P10F = threaded body P10B = body for sub-base	2 Type 2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c. 6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	3 Control 14 3 = pneumatic amplified 4 = electric amplified 90° (0,3W) 6 = electric amplified 90° (1W)	4 Return 12 0 = pneumomechanical spring 1 = mechanical spring 3 = pneumatic amplified 4 = electric amplified 90° (0,3W) 6 = electric amplified 90° (1W)
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5 Voltage 24 = 24 V DC	6 Variant D = external pilot supply on valve body (P10 = M3)	7 ATEX option X = Atex (upon request)
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See ATEX Catalogue for types and versions

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Version with in-line connections
(upon request)

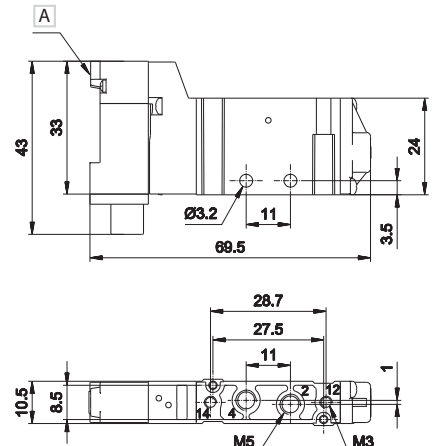


Single electric impulse



Weight (Kg): 0,054

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		electric amplified	pneumo mechanical spring	1,5÷9	12	20	P10F24024 P10F26024
5/2		electric amplified	mechanical spring	1,9÷9	10	21	P10F24124 P10F26124



A Manual override

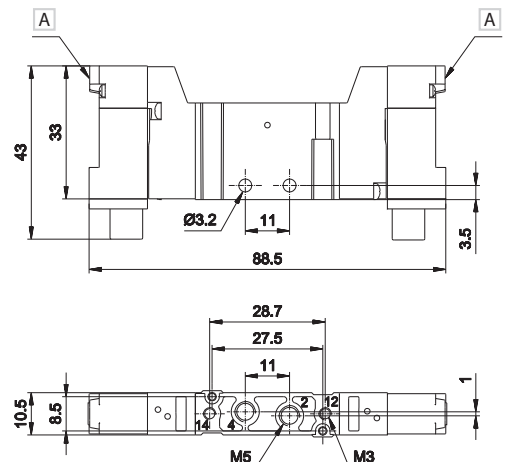
2 - 4 = Use
14 = Control
12 = Return

Double electric impulse



Weight (Kg): 0,069

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		electric amplified	electric amplified	0,7÷9	10	10	P10F24424 P10F26624
5/3 c.c.		electric amplified	electric amplified	1,5÷9	11	22	P10F34424 P10F36624
5/3 o.c.		electric amplified	electric amplified	1,5÷9	11	22	P10F44424 P10F46624
5/3 p.c.		electric amplified	electric amplified	1,5÷9	11	22	P10F54424 P10F56624
3/2 NC + 3/2 NC		electric amplified	electric amplified	1,3÷9	9	14	P10F64424 P10F66624
3/2 NC + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	P10F74424 P10F76624
3/2 NO + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	P10F84424 P10F86624



A Manual override

2 - 4 = Use
14 = Control
12 = Return

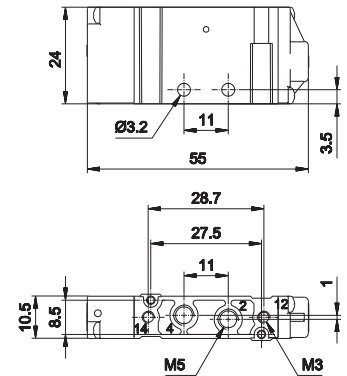
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single pneumatic impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,5÷10	8	14	P10F230
5/2		pneumatic amplified	mechanical spring	1,9÷10	7	16	P10F231



2 - 4 = Use
14 = Control
12 = Return

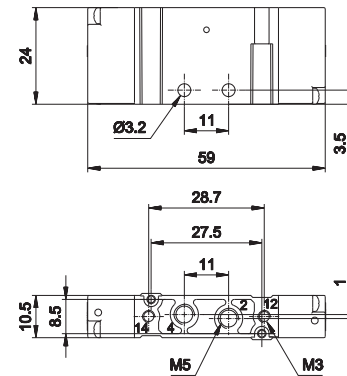
Double pneumatic impulse



Weight (Kg): 0,044

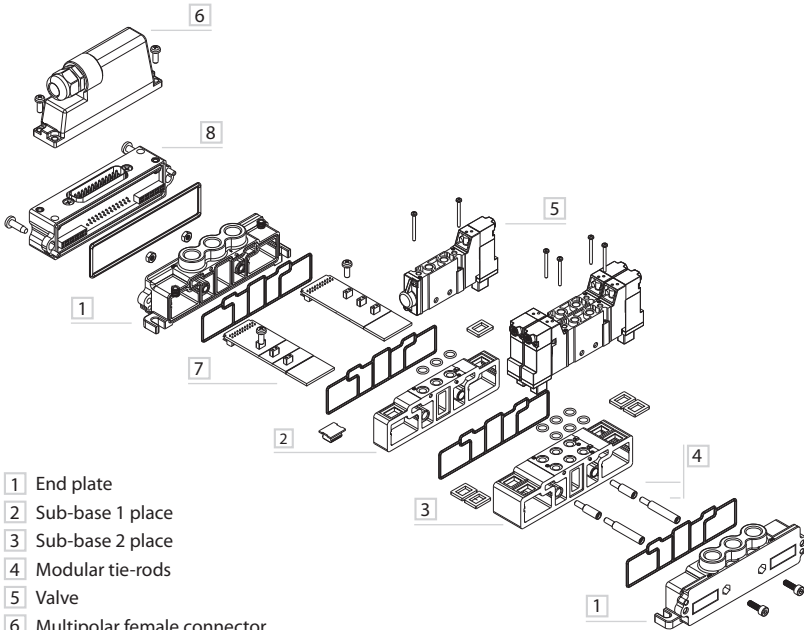
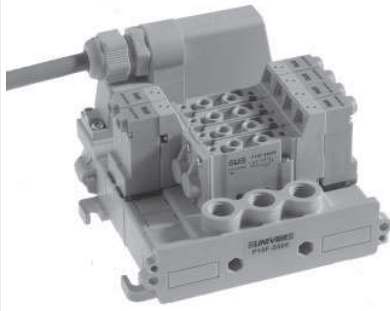
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,6÷10	6	6	P10F233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	P10F333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	P10F433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	P10F533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	P10F633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	P10F733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	P10F833

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

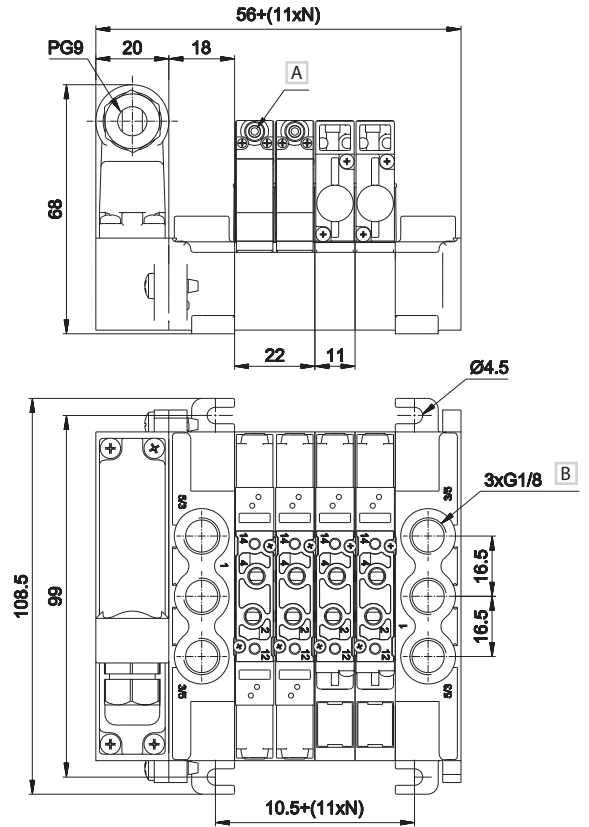


2 - 4 = Use
14 = Control
12 = Return

Integrated electric connection



- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 place
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Bus connection card
- 8 Multipole connection module



- 1 = Supply port
 - 2 - 4 = Use
 - 3 - 5 = Exhaust
 - 14 = Control
 - 12 = Return
- N = Number of valve places
- A Manual override
 - B Tightening torque
G1/8 = max 3 Nm

TIM1024 P10SF100 P10SF110 P10SF200 P10SF210 P10SF500

connection module 25 poles male type D-sub weight: 0,047 Kg	sub-base 1 place weight: 0,018 Kg	sub-base 1 place 1-3-5 closed weight: 0,02 Kg	sub-base 2 places weight: 0,04 Kg	sub-base 2 places 1-3-5 closed weight: 0,04 Kg	supply plate G1/8 left for TIM module weight: 0,04 Kg

P10SF505 P10SF550 P10SF560 P10SF570 P10SS14M P10SS12**M**

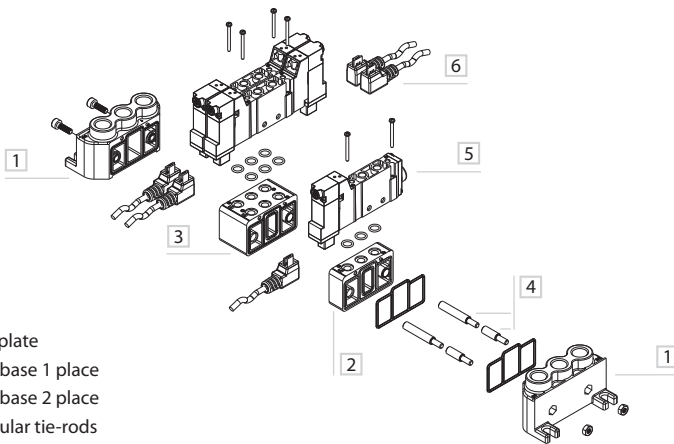
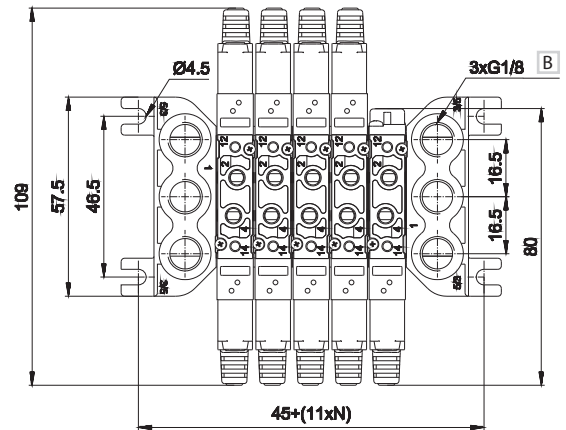
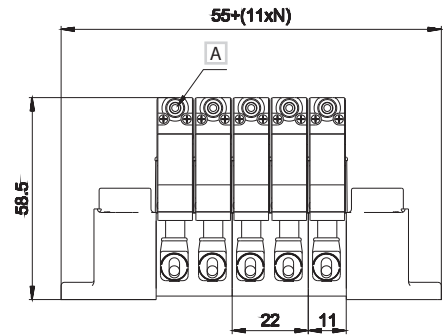
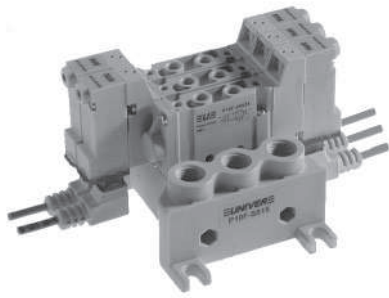
supply plate G1/8 right weight: 0,04 Kg	supply pressure separator plate weight: 0,002 Kg	covering plate for unused valve place weight: 0,003 Kg	intermediate supply plate for threaded version weight: 0,004 Kg	bus connection card, side 14 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg	bus connection card, side 12 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg

P10STR01 P10STR02 P10STR05

modular tie-rods 1 valve place (package 100 pcs.) weight: 0,001 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,007 Kg

- AZ4-SN003A**
100 nuts M3 for tie-rods
- AZ4-VN0310**
100 screws for tie-rods

Electric connection with external connector



- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 place
- 4 Modular tie-rods
- 5 Valve
- 6 Single connection

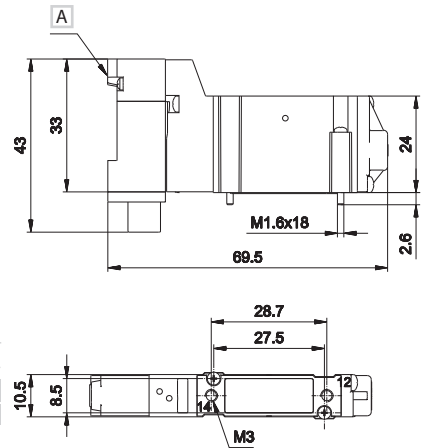
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

- A Manual override
- B Tightening torque
G1/8 = max 3 Nm

N = Number of valve places

P10SF300	P10SF310	P10SF400	P10SF410	P10SF515	P10SF550
sub-base 1 place weight: 0,011 Kg	sub-base 1 place 1-3-5 closed weight: 0,013 Kg	sub-base 2 places weight: 0,024 Kg	sub-base 2 places 1-3-5 closed weight: 0,026	supply place G1/8 right/left weight: 0,032 Kg	supply pressure separator plate weight: 0,003 Kg
P10SF560	P10SF570	P10STR01	P10STR02	P10STR05	
covering plate for unused valve place weight: 0,003 Kg	intermediate supply plate for threaded version weight: 0,004 Kg	modular tie-rods 1 valve place (package 100 pcs.) weight: 0,001 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,007 Kg	AZ4-SN003A 100 nuts for tie-rods AZ4-VN0310 100 screws for tie-rods

Single electric impulse



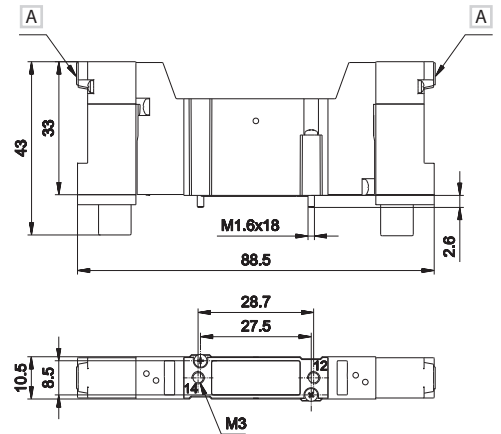
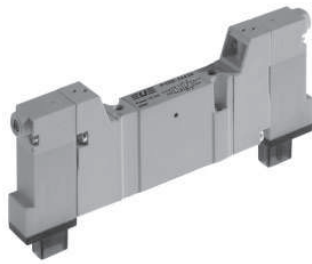
Weight (Kg): 0,054

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	bar	12	20	P10B24024 P10B26024
5/2		14	12	bar	10	21	P10B24124 P10B26124

A Manual override

14 = Control
12 = Return

Double electric impulse



Weight (Kg): 0,069

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	bar	10	10	P10B24424 P10B26624
5/3 c.c.		14	12	bar	11	22	P10B34424 P10B36624
5/3 o.c.		14	12	bar	11	22	P10B44424 P10B46624
5/3 p.c.		14	12	bar	11	22	P10B54424 P10B56624
3/2 NC + 3/2 NC		14	12	bar	9	14	P10B64424 P10B66624
3/2 NC + 3/2 NO		14	12	bar	9	14	P10B74424 P10B76624
3/2 NO + 3/2 NO		14	12	bar	9	14	P10B84424 P10B86624

A Manual override

14 = Control
12 = Return

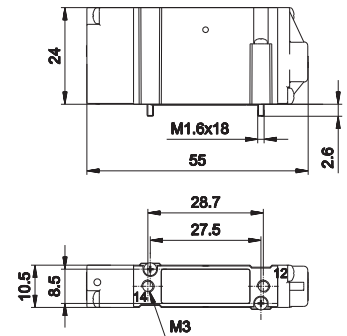
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single pneumatic impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,5÷9	8	14	P10B230
5/2		pneumatic amplified	mechanical spring	1,9÷9	7	16	P10B231



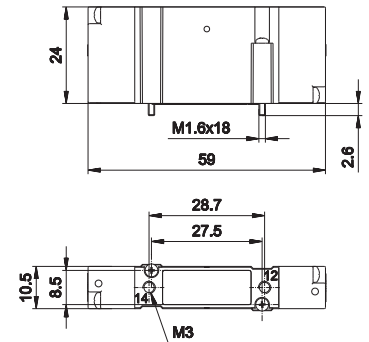
14 = Control
12 = Return

Double pneumatic impulse



Weight (Kg): 0,044

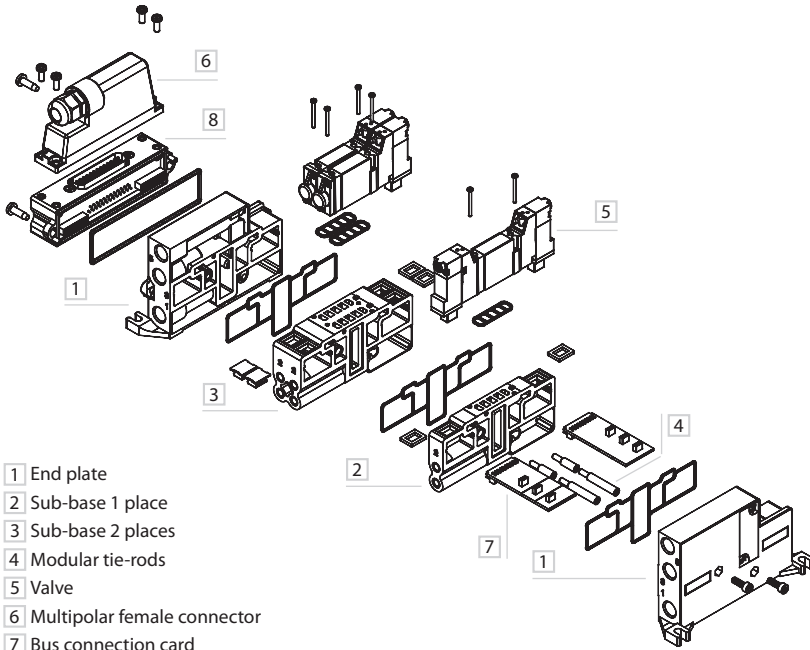
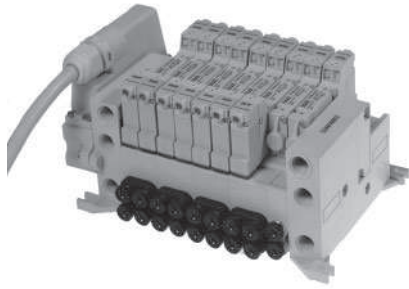
	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,6÷9	6	6	P10B233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷9	8	14	P10B633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	8	14	P10B733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	8	14	P10B833



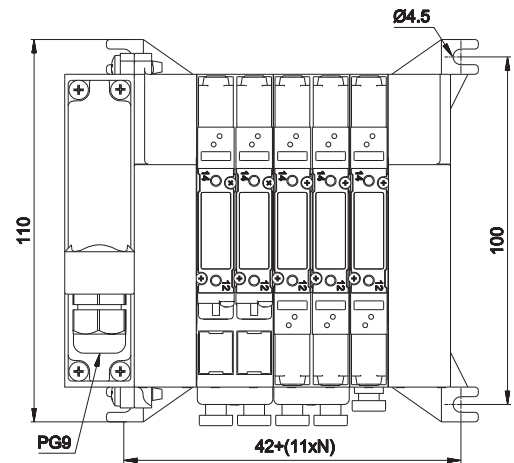
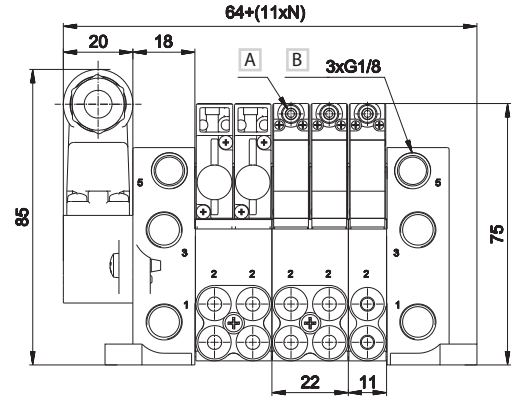
14 = Control
12 = Return

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Integrated electric connection

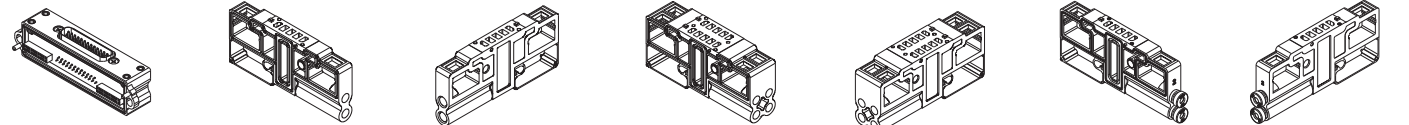


- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Bus connection card
- 8 Multipole connection module



- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve places
- A Manual override
- B Tightening torque
- G1/8 - M5 = max 3 Nm
- M7 = 2 Nm

TIM1024 P10SB100/107 P10SB110/117 P10SB200/207 P10SB210/217 P10SB304 P10SB314



connection module 25 poles male type D-sub weight: 0,047 Kg

sub-base 1 place side outlets M5, M7 weight: 0,031 Kg

sub-base 1 place side outlets M5, M7 1-3-5 closed weight: 0,033 Kg

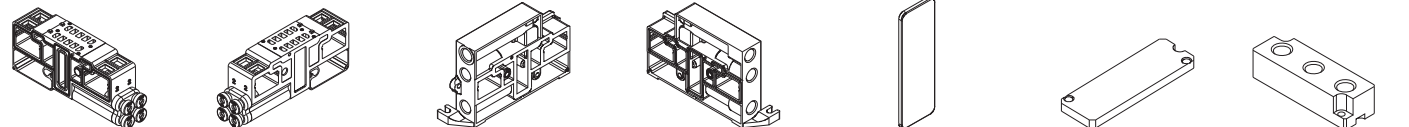
sub-base 2 places side outlets M5, M7 weight: 0,062 Kg

sub-base 2 places side outlets M5, M7 1-3-5 closed weight: 0,067 Kg

sub-base 1 place side outlets with quick couplings pipe 4 weight: 0,034 Kg

sub-base 1 place side outlets with quick couplings pipe 4 1-3-5 closed weight: 0,034 Kg

P10SB404 P10SB414 P10SB500 P10SB505 P10SB550 P10SB560 P10SB570



sub-base 2 places side outlets with quick couplings pipe 4 weight: 0,073 Kg

sub-base 1 place side outlets with quick couplings pipe 4 1-3-5 closed weight: 0,068 Kg

supply plate G1/8 left for TIM module weight: 0,074 Kg

supply plate G1/8 right weight: 0,074 Kg

supply pressure separator plate weight: 0,004 Kg

covering plate for unused valve place weight: 0,002 Kg

intermediate supply plate for sub-base weight: 0,007 Kg

P10SS14**M P10SS12**M P10STR01 P10STR02 P10STR05



bus connection card, side 14 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg

bus connection card, side 12 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg

modular tie-rods 1 valve place (package 100 pcs.) weight: 0,001 Kg

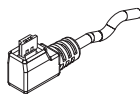
modular tie-rods 2 valve places (package 100 pcs.) weight: 0,003 Kg

modular tie-rods 5 valve places (package 100 pcs.) weight: 0,007 Kg

AZ4-SN003A
100 nuts for tie-rods

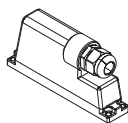
AZ4-VN0310
100 screws for tie-rods

D-535U40300
D-535U40500



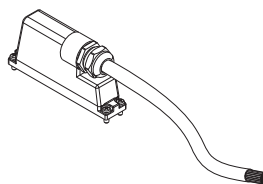
■ single connector with cable 3-5 m

TSCFN24S000



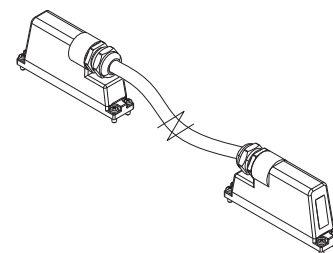
■ female connector 25 poles type D-sub no cable M3 x 8 fixing screws

TSCFN24S0300
TSCFN24S0500
TSCFN24S1000



■ female connector 25 poles type sub-D cable 3-5-10 m M3 x 8 fixing screws

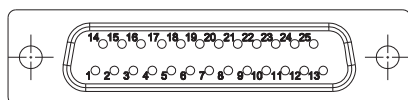
TSCFN16D0300
TSCFN16D0500
TSCFN16D1000



■ flying male/female connector sub D (upon request) prewired for 24 coils with cable Ø 8 mm (3-5-10 m length) suitable for mobile laying M3 x 8 fixing screws

▾ Colour identification according to standard DIN 47100

Female D-SUB 25 poles for connection 12+12 coils



PIN No.	Colour	Coil	Control side	ValveN°
1	white	1	14	1
2	brown	2	12	1
3	green	3	14	2
4	yellow	4	12	2
5	grey	5	14	3
6	pink	6	12	3
7	blue	7	14	4
8	red	8	12	4
9	nero	9	14	5
10	black	10	12	5
11	grey-pink	11	14	6
12	red-blue	12	12	6
13	white-green	13	14	7
14	brown-green	14	12	7
15	white-yellow	15	14	8
16	yellow-brown	16	12	8
17	white-grey	17	14	9
18	grey-brown	18	12	9
19	white-pink	19	14	10
20	pink-brown	20	12	10
21	white-blue	21	14	11
22	brown-blue	22	12	11
23	white-red	23	14	12
24	brown-red brown-black shield	common low	-	-
25	white-black	24	12	12

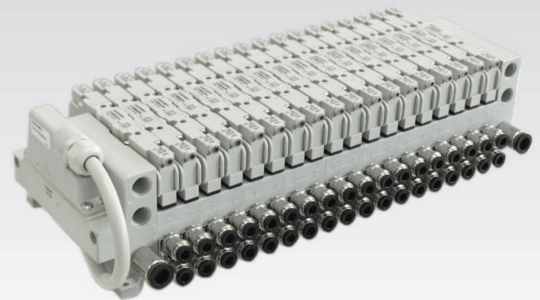
P15

15 mm COMPACT valves - threaded body and for sub-base mounting 90° ELECTROPILOT CONNECTION

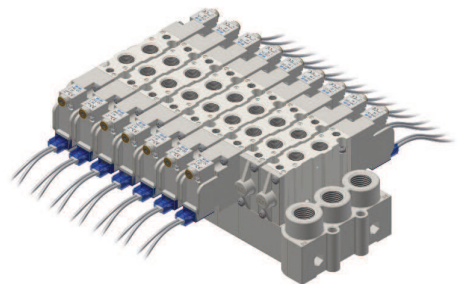
- Standard consumption: 1W; upon request low power consumption: 0,3W
- Quick response times
- High flow rate: the development of the traditional UNIVER spool technology permits high flow rate values
- Compact design: the valve body (15 mm) allows reduced overall dimensions
- Complete solution
- Threaded body (P15F) and body for sub-base (P15B) in the following versions: 5/2 - 5/3 - 3/2+3/2
- External and multipolar electrical connections
- TC serial transmission system
- Maximum application flexibility
- Modular sub-base (singles and doubles) for a high versatility in the composition of valve manifolds
- Simplified installation
- Easy installation of tubes and fittings thanks to connections being all on the same side

Available ATEX version upon request

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



Version with in-line connections
(upon request)



TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Commutation system	spool
Ways/Positions	3/2+3/2, 5/2, 5/3
Pressure	electric control = Max 9 bar * pneumatic control = Max 10 bar
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring
Connections	G1/8 (P15F) - G1/8 tubo Ø 4-6-8 (P15B)
Nominal flow rate (NI/min)	800 (5/2) 720 (5/3) 720 (3/2+3/2)

CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber (NBR)
Sub-base and actuators	selfextinguishing technopolymer
Spool	aluminum

ELECTRIC CHARACTERISTICS

Electropilot	B10 (0,3 W) B11 (1 W)
Voltage	24 V DC (± 10%)
Power consumption	B10 = 0,3 W, speed-up 1 W (25 ms) B11 = 1 W
Protection degree	IP65
Manual override	recessed button - 1 position

CODIFICATION KEY

P	1	5	F	2	4	4	2	4		
	1			2	3	4	5	6	7	

1 Series	2 Type	3 Control 14	4 Return 12
P15F = threaded body P15B = Body for sub-base P15D = Threaded body 15 mm connector	2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c.	6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	0 = pneumomechanical spring 1 = mechanical spring 3 = pneumatic amplified 4 = electric amplified 90° (0,3W) 6 = electric amplified 90° (1W)

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

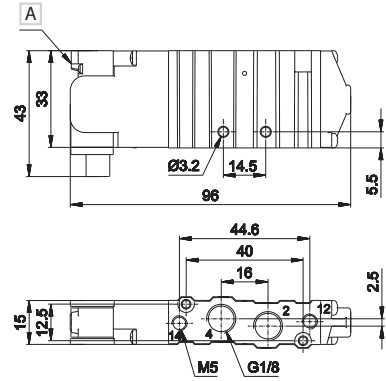
5 Voltage	6 Variant	7 ATEX option
24 = 24 V DC	D = external pilot supply on valve body (P15 = M5)	X = Atex (upon request) See ATEX Catalogue for types and versions

Single electric impulse



Weight (Kg): 0,138

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 pneumo mechanical spring	1,9÷9	15	24	P15F24024 P15F26024
5/2		14 electric amplified	12 mechanical spring	2÷9	12	21	P15F24124 P15F26124



A Manual override

2 - 4 = Use
14 = Control
12 = Return

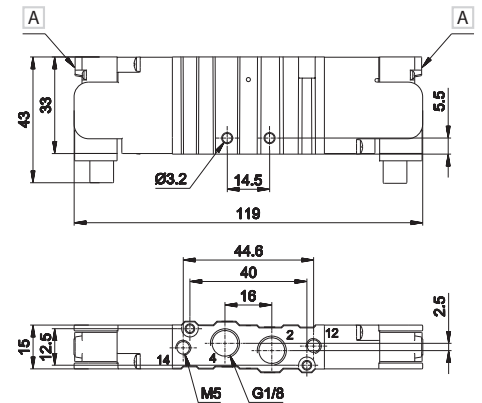
Double electric impulse



Weight (Kg): 0,158

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	0,7÷9	11	11	P15F24424 P15F26624
5/3 c.c.		14 electric amplified	12 electric amplified	1,6÷9	11	35	P15F34424 P15F36624
5/3 o.c.		14 electric amplified	12 electric amplified	1,6÷9	11	35	P15F44424 P15F66624
5/3 p.c.		14 electric amplified	12 electric amplified	1,6÷9	11	35	P15F54424 P15F56624
3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,5÷9	14	16	P15F64424 P15F66624
3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,5÷9	14	16	P15F74424 P15F76624
3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,5÷9	14	16	P15F84424 P15F86624

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

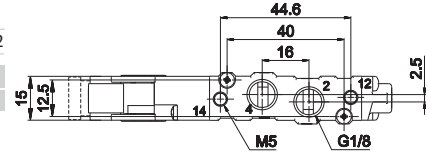
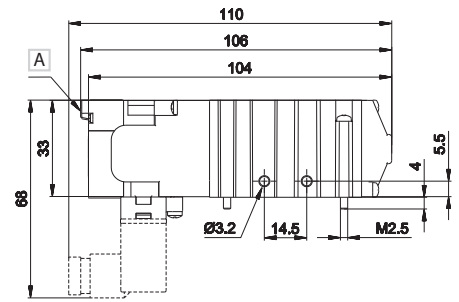
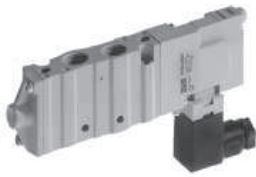


A Manual override

2 - 4 = Use
14 = Control
12 = Return

3

Single electric impulse



Weight (Kg): 0,142

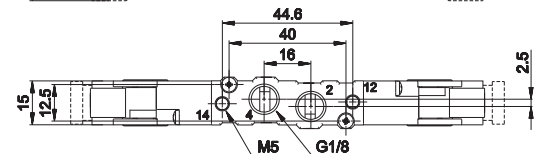
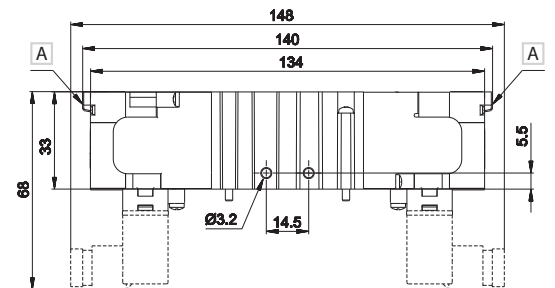
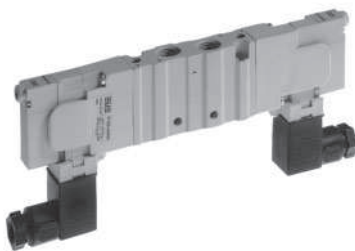
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 pneumo mechanical spring	1,9÷9	15	24	P15D24024 P15D26024

A Manual override

2 - 4 = Use
14 = Control
12 = Return

5/2		14 electric amplified	mechanical spring	2÷9	12	21	P15D24124 P15D26124
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Double electric impulse



Weight (Kg): 0,166

> AM-5109 connector not included

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	0,7÷9	16	16	P15D24424 P15D26624

A Manual override

2 - 4 = Use
14 = Control
12 = Return

5/3 c.c.		14 electric amplified	12 electric amplified	1,6÷9	11	35	P15D34424 P15D36624
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5/3 o.c.		14 electric amplified	12 electric amplified	1,6÷9	11	35	P15D44424 P15D46624
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5/3 p.c.		14 electric amplified	12 electric amplified	1,6÷9	11	35	P15D54424 P15D56624
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3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,5÷9	14	16	P15D64424 P15D66624
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3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,5÷9	14	16	P15D74424 P15D76624
-----------------	--	--------------------------	--------------------------	-------	----	----	------------------------

3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,5÷9	14	16	P15D84424 P15D86624
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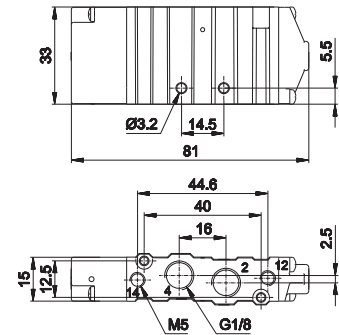
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single pneumatic impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,9÷10	11	15	P15F230
5/2		pneumatic amplified	mechanical spring	2÷10	10	14	P15F231



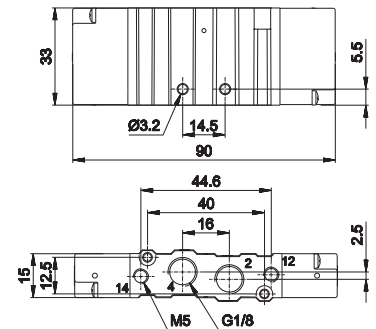
2 - 4 = Use
14 = Control
12 = Return

Double pneumatic impulse



Weight (Kg): 0,044

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,7÷10	10	10	P15F233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	P15F333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	P15F433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	P15F533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	P15F633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	P15F733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	P15F833

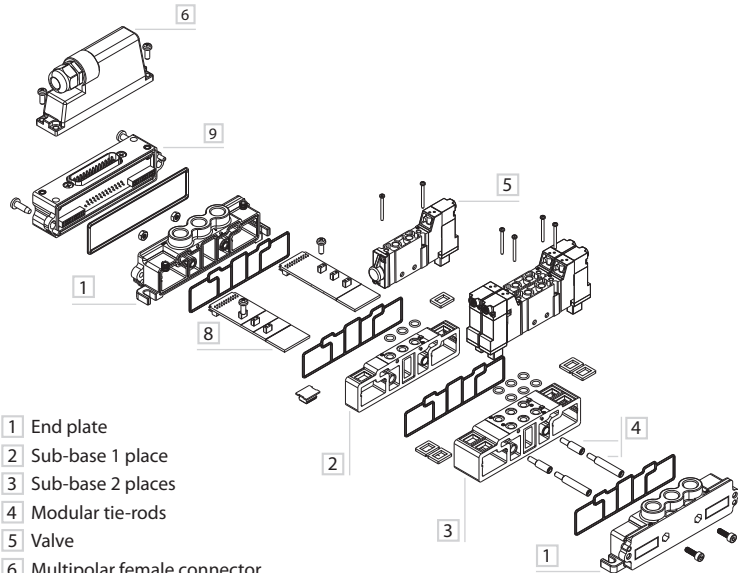
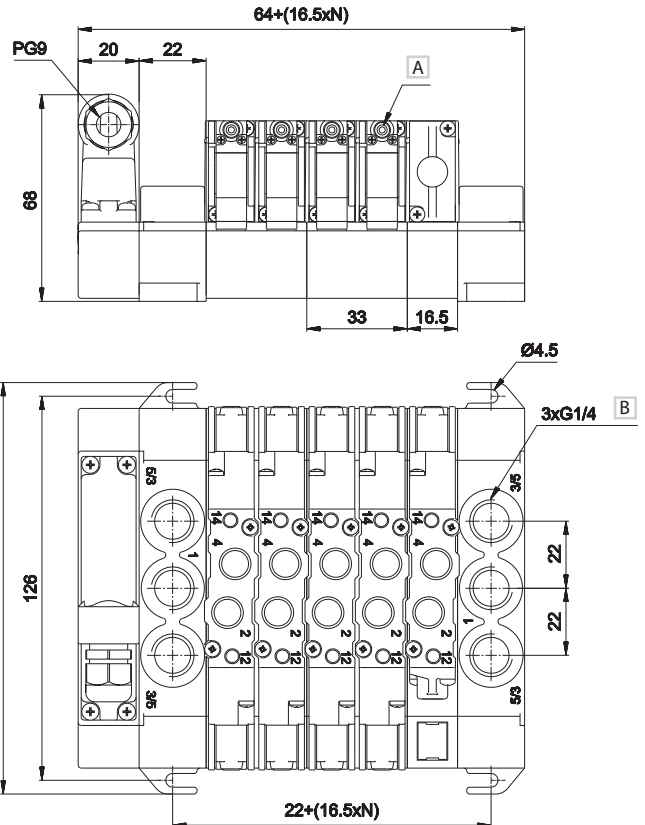
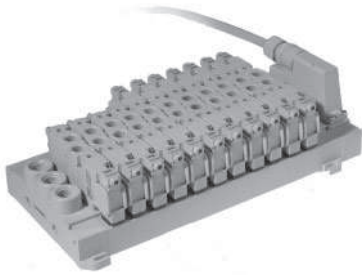


2 - 4 = Use
14 = Control
12 = Return

o.c. = open centres c.c. = closed centres p.c. = pressurized centres

3

Integrated electric connection

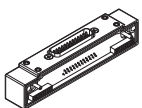


- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Single connector
- 8 Bus connection card
- 9 Multipole connection module

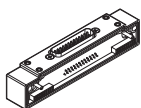
- 1 = Supply port
 - 2 - 4 = Use
 - 3 - 5 = Exhaust
 - 14 = Control
 - 12 = Return
- A Manual override
 - B Tightening torque G1/4 = max 10 Nm

N = Number of valve places

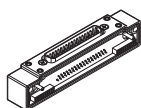
TIM1524	TIM151806	TIM1536	P15SF100	P15SF110	P15SF200	P15SF210
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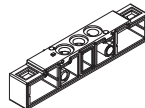
connection module
25 poles male
12+12 coils
type D-sub
weight: 0,047 Kg



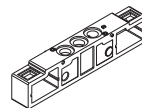
connection module
25 poles male
18 coils, side 14
6 coils, side 12
type D-sub
weight: 0,055 Kg



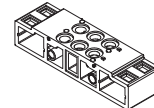
connection module
37 poles male
16+16 coils
type D-sub
weight: 0,057 Kg



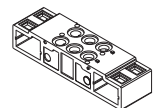
sub-base 1 place
weight: 0,037 Kg



sub-base 1 place
1-3-5 closed
weight: 0,038 Kg

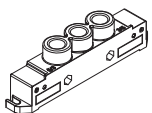


sub-base 2 places
weight: 0,073 Kg

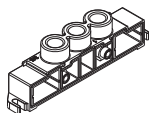


sub-base 2 places
1-3-5 closed
weight: 0,074 Kg

P15SF500	P15SF505	P15SF550	P15SF560	P15SF570	P15SS**01MC	P15SS**..M
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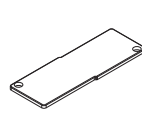
supply plate G1/4 left
for TIM module
weight: 0,064 Kg



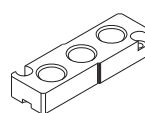
supply plate G1/4 right
weight: 0,065 Kg



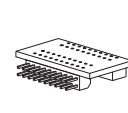
supply pressure
separator plate
weight: 0,003 Kg



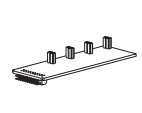
covering plate for
unused valve place
weight: 0,007 Kg



intermediate supply plate
for threaded version
weight: 0,011 Kg

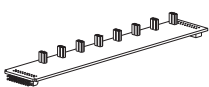


U-bus connection
card, male
** = side 14 or 12
weight: 0,004 Kg

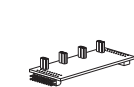


bus connection
card, male
** = side 14 or 12
.. = 04, 06, 08 places
weight: 0,009 Kg 04 places
0,010 Kg 06 places
0,013 Kg 08 places

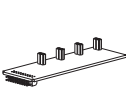
P15SS**08MF	P15SS**04MFP	P15SS**04MP	P15STR01	P15STR02	P15STR05
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bus connection card
male/female
** = side 14 or 12
weight: 0,014 Kg



bus connection card
male/female
extension
** = side 14 or 12
weight: 0,008 Kg



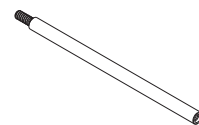
bus card
extension
** = side 14 or 12
weight: 0,006 Kg



modular tie-rods
1 valve place
(package 100 pcs.)
weight: 0,003 Kg



modular tie-rods
2 valve places
(package 100 pcs.)
weight: 0,007 Kg



modular tie-rods
5 valve places
(package 100 pcs.)
weight: 0,018 Kg

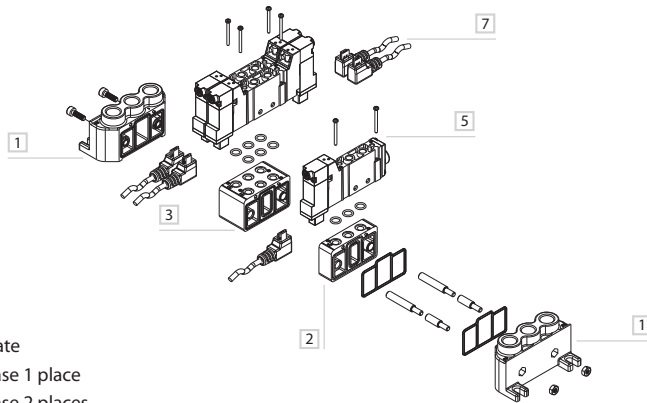
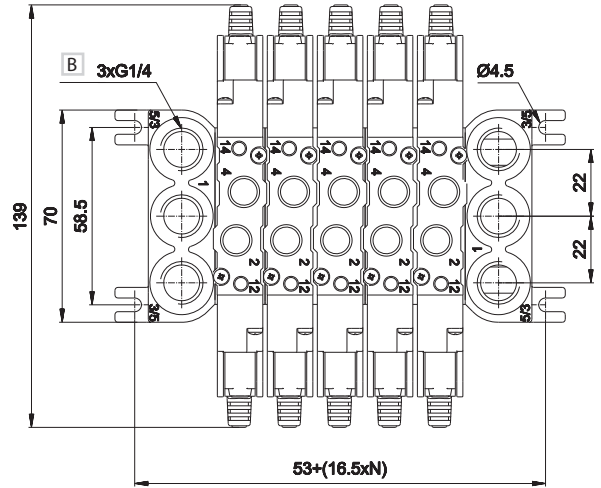
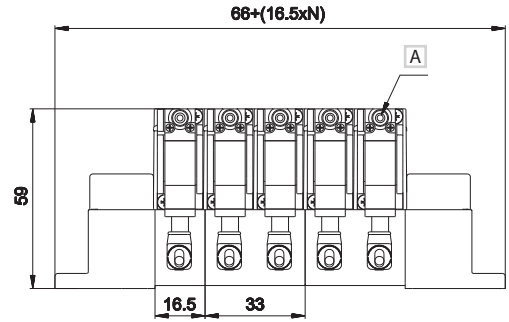
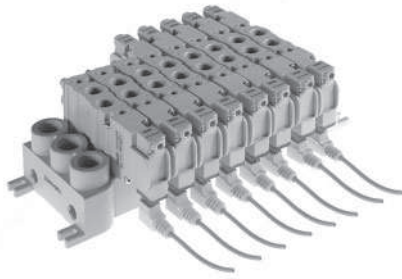
AZ4-SN004A

100 nuts M4 for tie-rods

AZ4-VN0414

100 screws 4x14 for tie-rods

Electric connection with external connector



- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Single connector
- 8 Bus connection card
- 9 Multipole connection module

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve places
- A Manual override
- B Tightening torque
- G1/4 = max 10 Nm

3

P15SF300	P15SF310	P15SF400	P15SF410	P15SF515	P15SF550	P15SF560
sub-base 1 place weight: 0,023 Kg	sub-base 1 place 1-3-5 closed weight: 0,024 Kg	sub-base 2 places weight: 0,046 Kg	sub-base 2 places 1-3-5 closed weight: 0,048 Kg	supply plate right/left G1/4 weight: 0,050 Kg	supply pressure separator plate weight: 0,001 Kg	covering plate for unused valve place weight: 0,007 Kg

P15SF570	P15STR01	P15STR02	P15STR05
intermediate supply plate for threaded version weight: 0,009 Kg	modular tie-rods 1 valve place (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,007 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,018 Kg

AZ4-SN004A
100 nuts M4 for tie-rods

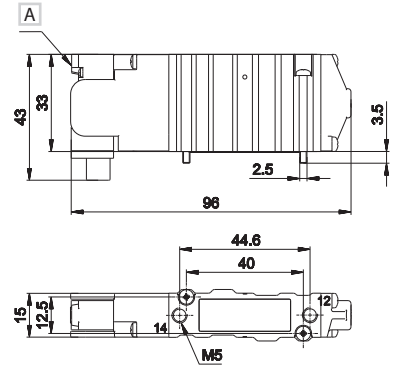
AZ4-VN0414
100 screws 4x14 for tie-rods

Single electric impulse



Weight (Kg): 0,138

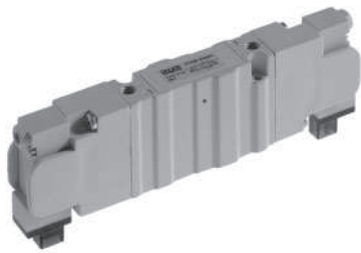
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,9÷9	15	24	P15B24024 P15B26024
5/2		14		2÷9	12	21	P15B24124 P15B26124



A Manual override

14 = Control
12 = Return

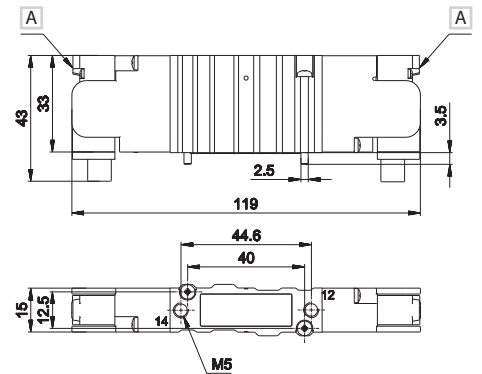
Double electric impulse



Weight (Kg): 0,158

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	0,7÷9	11	11	P15B24424 P15B26624
5/3 c.c.		14	12	1,6÷9	11	35	P15B34424 P15B36624
5/3 o.c.		14	12	1,6÷9	11	35	P15B44424 P15B46624
5/3 p.c.		14	12	1,6÷9	11	35	P15B54424 P15B56624
3/2 NC + 3/2 NC		14	12	1,5÷9	14	16	P15B64424 P15B66624
3/2 NC + 3/2 NO		14	12	1,5÷9	14	16	P15B74424 P15B76624
3/2 NO + 3/2 NO		14	12	1,5÷9	14	16	P15B84424 P15B86624

o.c. = open centres c.c. = closed centres p.c. = pressurized centres



A Manual override

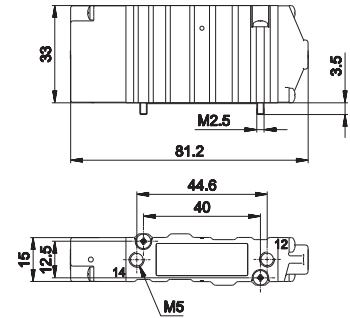
14 = Control
12 = Return

Single pneumatic impulse



Weight (Kg): 0,127

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumo mechanical spring	1,9÷9	11	15	P15B230
5/2		pneumatic amplified	mechanical spring	2÷9	10	14	P15B231



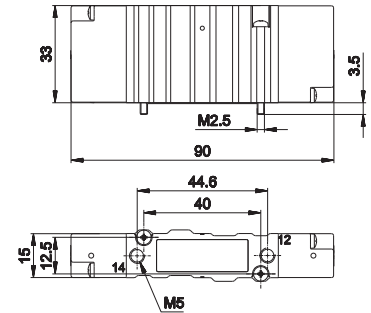
14 = Control
12 = Return

Double pneumatic impulse



Weight (Kg): 0,132

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumatic amplified	0,7÷9	10	10	P15B233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,6÷9	9	21	P15B333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,6÷9	9	21	P15B433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,6÷9	9	21	P15B533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷9	10	14	P15B633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	10	14	P15B733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	10	14	P15B833

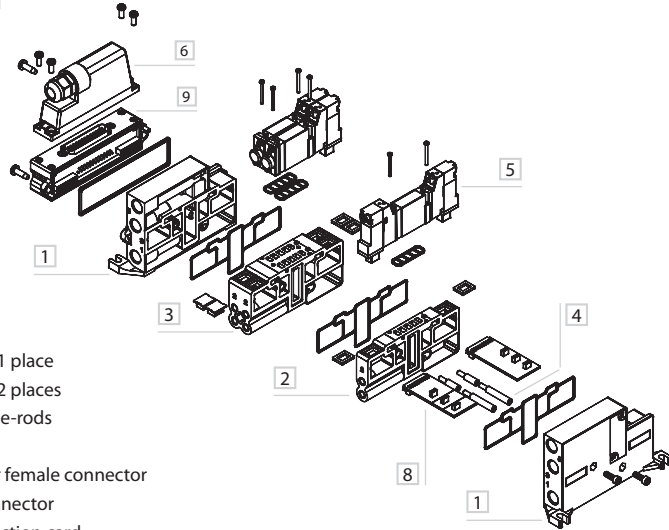
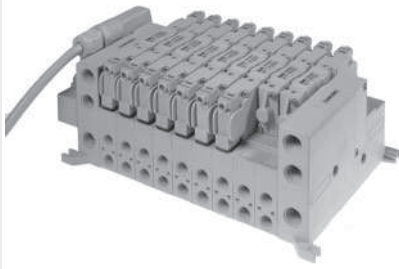


14 = Control
12 = Return

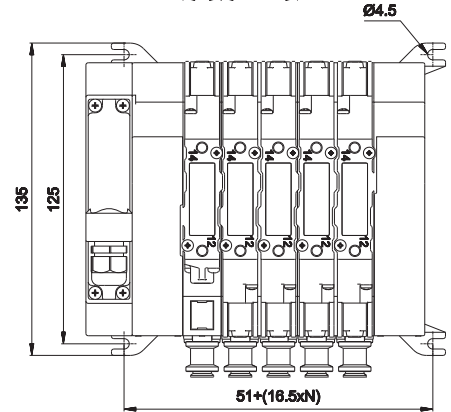
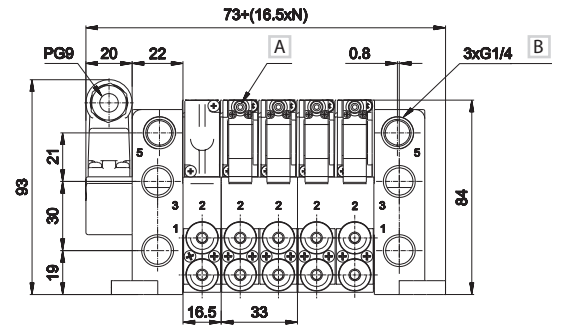
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

3

Integrated electric connection



- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Single connector
- 8 Bus connection card
- 9 Multipole connection module



- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

- A Manual override
- B Tightening torque
- G1/4 = max 10 Nm
- G1/8 = max 3 Nm

N = Number of valve places

TIM1524	TIM151806	TIM1536	P15SB100	P15SB110	P15SB200	P15SB210
connection module 25 poles male 12+12 coils type D-sub weight: 0,047 Kg	connection module 25 poles male 18 coils side 14 6 coils side 12 type D-sub weight: 0,055 Kg	connection module 37 poles male 16+16 coils type D-sub weight: 0,057 Kg	sub-base 1 place side outlets G1/8 integrated version weight: 0,060 Kg	sub-base 1 place side outlets G1/8 integrated version 1-3-5 closed weight: 0,060 Kg	sub-base 2 places side outlets G1/8 weight: 0,133 Kg	sub-base 2 places side outlets G1/8 integrated version 1-3-5 closed weight: 0,133 Kg
P15SB300	P15SB310	P15SB400	P15SB410	P15SB500	P15SB505	P15SB550
sub-base 1 place side outlets for quick couplings integrated version weight: 0,060 Kg	sub-base 1 place side outlets for quick couplings 1-3-5 closed weight: 0,060 Kg	sub-base 2 places side outlets for quick couplings integrated version weight: 0,133 Kg	sub-base 2 places side outlets for quick couplings 1-3-5 closed weight: 0,133 Kg	supply plate G1/8 for TIM module weight: 0,127 Kg	supply plate G1/4 right weight: 0,124 Kg	supply pressure separator plate weight: 0,003 Kg
P15SB560	P15SB570	P15SS**01MC	P15SS**..M	P15SS**08MF	P15SS**04MFP	P15SS**04MP
covering plate for unused valve place weight: 0,007 Kg	intermediate supply plate for sub-base weight: 0,016 Kg	U-bus connection card, male ** = lato14 o 12 weight: 0,004 Kg	bus connection card male ** = side14 or 12 .. = 04, 06, 08 places weight: 0,009 Kg 04 places 0,010 Kg 06 places 0,013 Kg 08 places	bus connection card male/female extension ** = side14 or 12 weight: 0,014 Kg	bus connection card male/female extension ** = side14 or 12 weight: 0,008 Kg	bus card extension ** = side14 or 12 weight: 0,006 Kg

P15STR01	P15STR02	P15STR05	GZR-V100..
modular tie-rods 1 valve place (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,007 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,018 Kg	fitting .. = 04, 06, 08 places weight: 0,013 Kg

AZ4-SN004A

100 nuts M4 for tie-rods

AZ4-VN0414

100 screws 4x14 for tie-rods

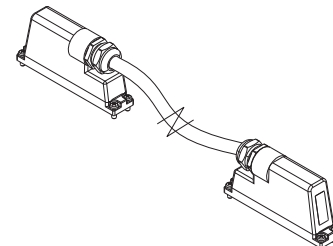
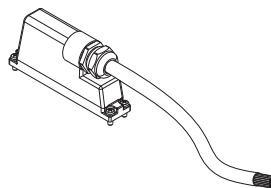
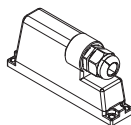
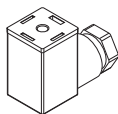
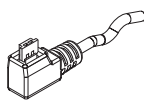
D-535U40300
D-535U40500

AM-5109

TSCFN24S000
TSCFN36S000

TSCFN24S0300
TSCFN24S0500
TSCFN24S1000
TSCFN32S0300
TSCFN32S0500
TSCFN32S1000

TSCFN16D0300
TSCFN16D0500
TSCFN16D1000



■ single connector with cable 3-5 m

■ 15 mm connector

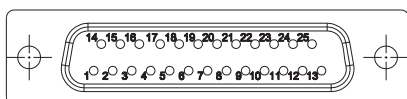
■ female connector 25/37 poles type D-sub no cable M3 x 8 fixing screws

■ female connector 25/37 poles type D-sub with cable 3-5-10 m M3 x 8 fixing screws

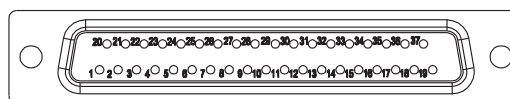
■ flying male/female connector sub D (upon request) prewired for 24 coils with cable Ø 8 mm (3-5-10 m length) suitable for mobile laying M3 x 8 fixing screws

Colour identification according to standard DIN 47100

Female D-SUB 25 poles for connection 12+12 coils



Female D-SUB 37 poles for connection 16+16 coils



PIN No.	Colour	Coil	Control side		Valve No.
			TIM1524	TIM151806	
1	white	1	14	14	1
2	brown	2	12	12	1
3	green	3	14	14	2
4	yellow	4	12	12	2
5	grey	5	14	14	3
6	pink	6	12	12	3
7	blue	7	14	14	4
8	red	8	12	12	4
9	black	9	14	14	5
10	violet	10	12	12	5
11	grey-pink	11	14	14	6
12	red-blue	12	12	12	6
13	white-green	13	14	14	7
14	brown-green	14	12	14	7
15	white-yellow	15	14	14	8
16	yellow-brown	16	12	14	8
17	white-grey	17	14	14	9
18	grey-brown	18	12	14	9
19	white-pink	19	14	14	10
20	pink-brown	20	12	14	10
21	white-blue	21	14	14	11
22	brown-blue	22	12	14	11
23	white-red	23	14	14	12
24	brown-red brown-black shield	common law	-	-	-
25	white-black	24	12	14	12

PIN No.	Colour	Coil	Control side		Valve No.
			TIM1536		
1	white	1	14		1
2	brown	2	12		1
3	green	3	14		2
4	yellow	4	12		2
5	grey	5	14		3
6	pink	6	12		3
7	blue	7	14		4
8	red	8	12		4
9	black	9	14		5
10	violet	10	12		5
11	grey-pink	11	14		6
12	red-blue	12	12		6
13	white-green	13	14		7
14	brown-green	14	12		7
15	white-yellow	15	14		8
16	yellow-brown	16	12		8
17	white-grey	17	14		9
18	grey-brown	18	12		9
19	white-pink	19	14		10
20	pink-brown	20	12		10
21	white-blue	21	14		11
22	brown-blue	22	12		11
23	white-red	23	14		12
24	brown-red	24	12		12
25	white-black	25	14		12
26	brown-black	26	12		13
27	grey-green	27	14		14
28	yellow-grey	28	12		14
29	pink-green	29	14		15
30	yellow-pink	30	12		15
31	green-blue	31	14		16
32	yellow-blue	32	12		16
33	-	not used	-		-
34	-	not used	-		-
35	-	not used	-		-
36	yellow-black	common	-		-
37	yellow-red shield	common law	-		-

3

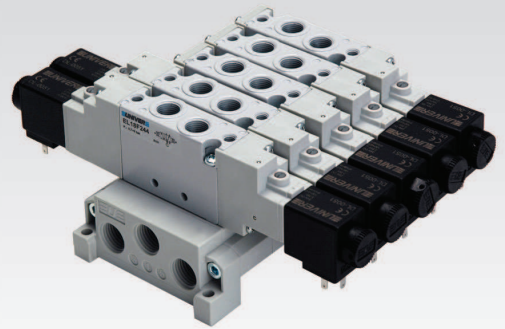
EL18F

ESSENTIAL valves 18 mm - G1/8

High flow rate: 800 NI/min
 Reduced dimensions: 18 mm
 Complete solution: 5/2 - 5/3 - 3/2+3/2
 Strong: metallic body

Available ATEX version upon request

CE 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	spool
Ways/Positions	5/2 - 5/3 - 3/2+3/2
Max Pressure	8 bar (electric control), 10 bar (pneumatic control)
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring, pneumatic amplified, electric amplified
Connections	G1/8
Nominal flow rate (NI/min)	800 (5/2) 720 (5/3) 720 (3/2+3/2)

CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber (NBR)
Actuators	aluminium
Sub-base	technopolymer
	aluminium
Spool	aluminium

ELECTRIC CHARACTERISTICS

Electropilot	U06
Coil	DL series 17 mm
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC
Power consumption	2,5 W 5 VA
Protection degree	IP65
Manual override	impulse 1-2 positions

CODIFICATION KEY

E	L	1	8	F	2	5	0		
		1	2	3	4	5	6		

1 Series EL18F = ESSENTIAL Valves 18 mm - G1/8	2 Type 2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c. 6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	3 Control 14 3 = Pneumatic amplified 5 = Electrical amplified DC/AC
4 Return 12 0 = Pneumomechanical spring 1 = Mechanical spring 3 = Pneumatic amplified 5 = Electrical amplified DC/AC	5 Option D = External servo-assistance of the pilot	6 ATEX Option X = Atex (upon request) See ATEX Catalogue for types and versions

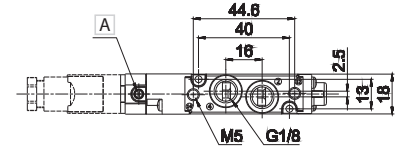
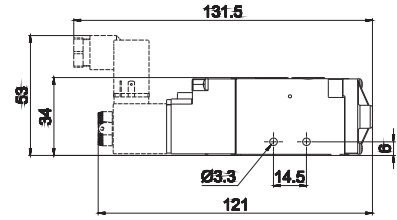
c.c. = closed centres o.c. = open centres p.c. = pressurized centres

Subject to change

Single electric impulse



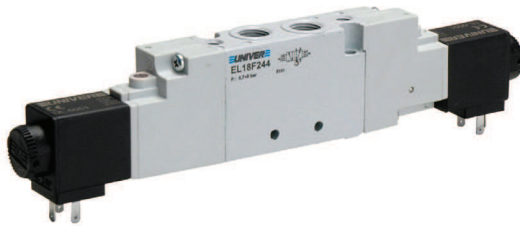
A Manual override
 2 - 4 = Use
 14 = Control
 12 = Return



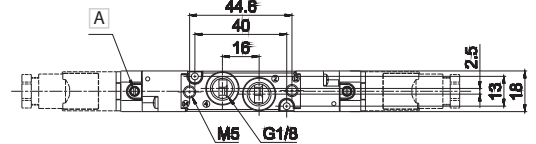
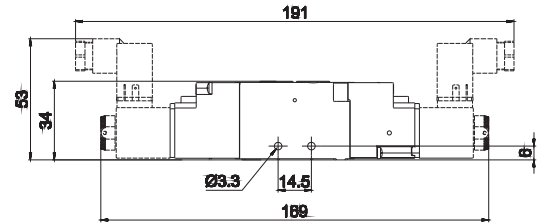
Weight (Kg): 0,168

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,9÷8	15	24	EL18F250
5/2		14	12	2÷8	12	21	EL18F251

Double electric impulse



A Manual override
 2 - 4 = Use
 14 = Control
 12 = Return



Weight (Kg): 0,192

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1÷8	11	11	EL18F255
5/3 c.c.		14	12	1,9÷8	11	35	EL18F355
5/3 o.c.		14	12	1,9÷8	11	35	EL18F455
5/3 p.c.		14	12	1,9÷8	11	35	EL18F555
3/2 NC + 3/2 NC		14	12	1,5÷8	14	16	EL18F655
3/2 NC + 3/2 NO		14	12	1,5÷8	14	16	EL18F755
3/2 NO + 3/2 NO		14	12	1,5÷8	14	16	EL18F855

c.c. = closed centres o.c. = open centres p.c. = pressurized centres

Solenoid valves are supplied without coil/connector/locking nut

Coil

- DL-0050 12 V DC 2,5 W
- DL-0051 24 V DC 2,5 W
- DL-0106 24 V AC 50/60 Hz 5 VA
- DL-0108 110 V AC 50/60 Hz 5 VA
- DL-0124 230 V AC 50/60 Hz 5 VA

Connector

AM-5109

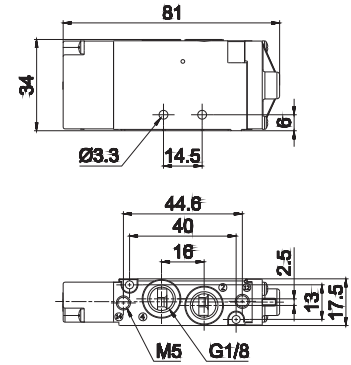
For technical characteristics see chapter 5 accessories

3

Single pneumatic impulse



2 - 4 = Use
14 = Control
12 = Return



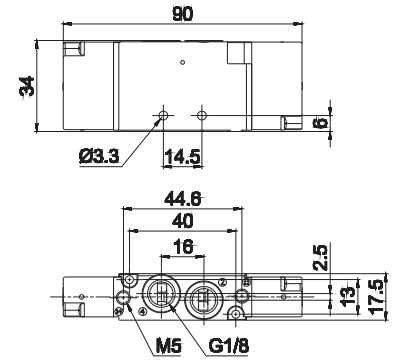
Weight (Kg): 0,149

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumo mechanical spring	1,9÷10	11	15	EL18F230
5/2		pneumatic amplified	mechanical spring	2÷10	10	14	EL18F231

Double pneumatic impulse



2 - 4 = Use
14 = Control
12 = Return

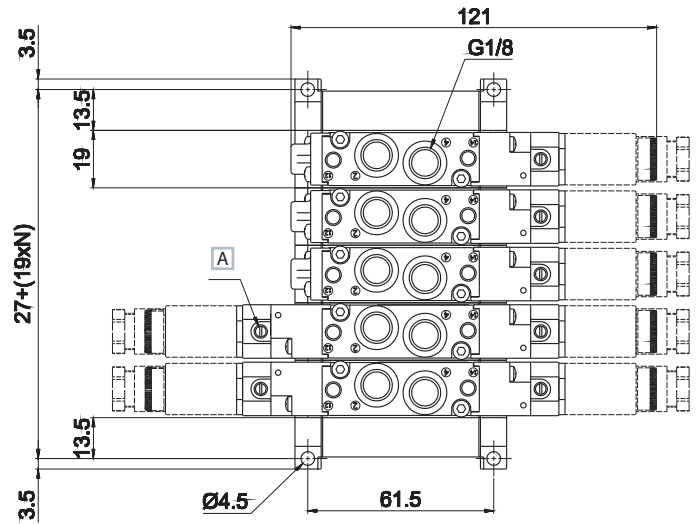
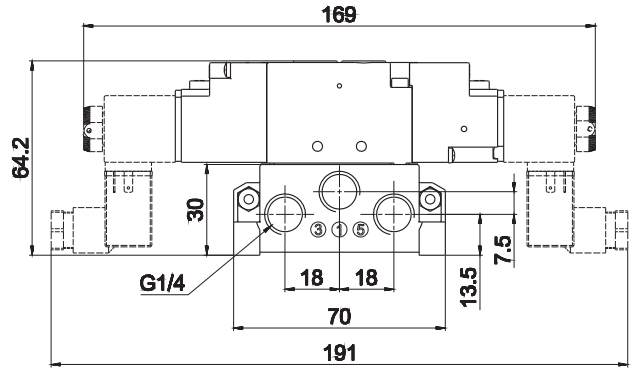
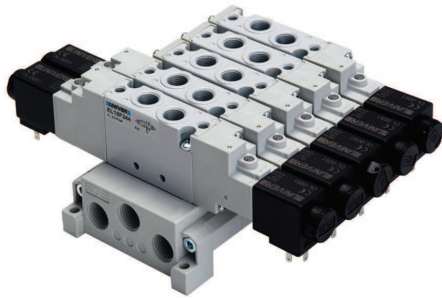


Weight (Kg): 0,154

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumatic amplified	0,7÷10	10	10	EL18F233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,9÷10	9	21	EL18F333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,9÷10	9	21	EL18F433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,9÷10	9	21	EL18F533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,5÷10	10	14	EL18F633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,5÷10	10	14	EL18F733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,5÷10	10	14	EL18F833

c.c. = closed centres o.c. = open centres p.c. = pressurized centres

Modular sub-base in technopolymer

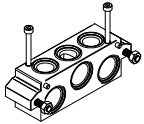


A Manual override

- 1 = Supply
 - 2 - 4 = Use
 - 3 - 5 = Exhaust
 - 14 = Control
 - 12 = Return
- N = Number of valve places

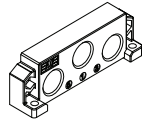
3

EL18SF300



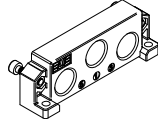
Sub-base 1 place (screw and seals are included)

EL18SF515



Left supply plate G1/4

EL18SF516



Right supply plate G1/4 (screws and seals are included)

EL18SF518



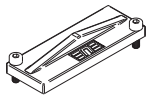
Fixing spring for DIN rail (screws are included)

EL18SF550



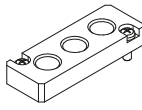
Pressure separator

EL18SF560



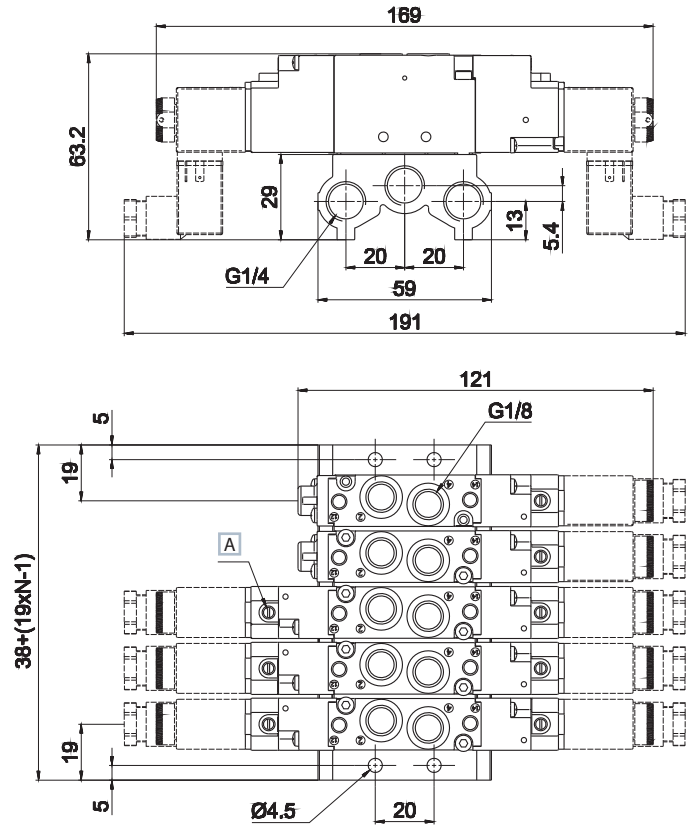
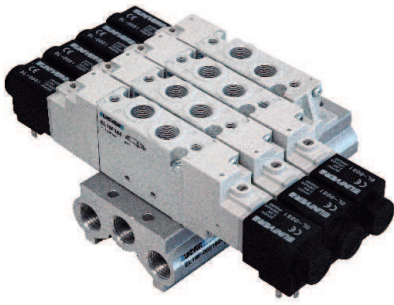
Closing plate for unused valve place (screws are included)

EL18SF570



Intermediate supply plate (screws are included)

Aluminum sub-base



A Manual override

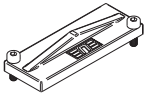
- 1 = Supply
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

N = Number of valve places

Part No.	No. Positions
EL18SF900-02	2
EL18SF900-03	3
EL18SF900-04	4
EL18SF900-05	5
EL18SF900-06	6
EL18SF900-07	7
EL18SF900-08	8
EL18SF900-09	9
EL18SF900-10	10

The sub-base includes gaskets and screws for mounting valves

EL18SF560



Closing plate for unused valve place (screws are included)

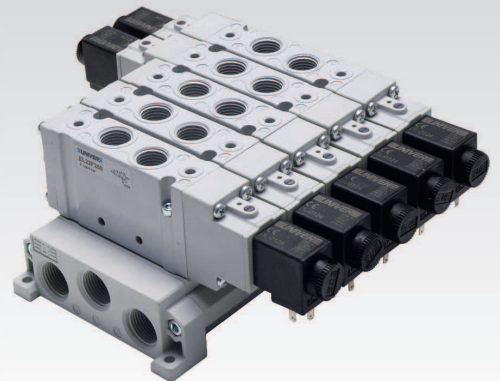
EL22F

ESSENTIAL valves 22 mm - G1/4

High flow rate: 1700 NI/min
 Reduced dimensions: 22 mm
 Complete solution: 5/2 - 5/3 - 3/2+3/2
 Strong: Metallic body

Available ATEX version upon request

CE 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	spool
Ways/Positions	5/2 - 5/3 - 3/2+3/2
Max Pressure	8 bar (electric control) 10 bar (pneumatic control)
Control	electro, pneumatic
Return	mechanical spring, pneumomechanical spring
Connections	G1/4
Nominal flow rate (NI/min)	1700 (5/2) 1450 (5/3) 1450 (3/2+3/2)

CONSTRUCTIVE CHARACTERISTICS

Valve body	aluminium
Seals	nitrile rubber (NBR)
Actuators	aluminium
Sub-base	technopolymer, aluminium
Spool	aluminium

ELECTRIC CHARACTERISTICS

Electropilot	U6
Coil	DL series 15 mm
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC
Power consumption	2,5 W 5 VA
Protection degree	IP65
Manual override	impulse 1-2 positions

CODIFICATION KEY

E	L	2	2	F	2	5	0		
		1	2	3	4	5	6		

1 Series EL22F = ESSENTIAL Valves 22 mm - G1/4	2 Type 2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c. 6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	3 Control 14 3 = Pneumatic amplified 5 = Electrical amplified DC/AC
4 Return 12 0 = Pneumomechanical spring 1 = Mechanical spring 3 = Pneumatic amplified 5 = Electrical amplified DC/AC	5 Option D = External servo-assistance of the pilot	6 ATEX Option X = Atex (upon request) See ATEX Catalogue for types and versions

c.c. = closed centres o.c. = open centres p.c. = pressurized centres

Subject to change

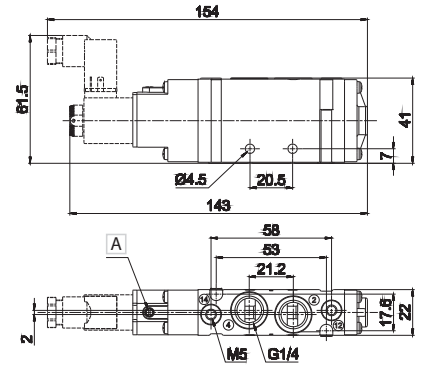
Single electric impulse



A Manual override

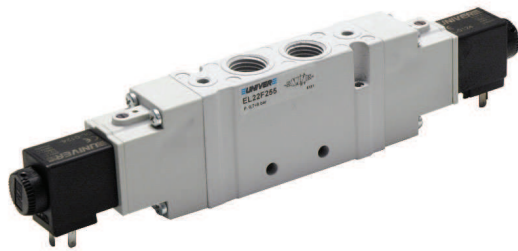
2 - 4 = Use
14 = Control
12 = Return

Weight (Kg): 0,208



	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,5÷9	15	24	EL22F250
5/2		14	12	1,9÷9	12	21	EL22F251

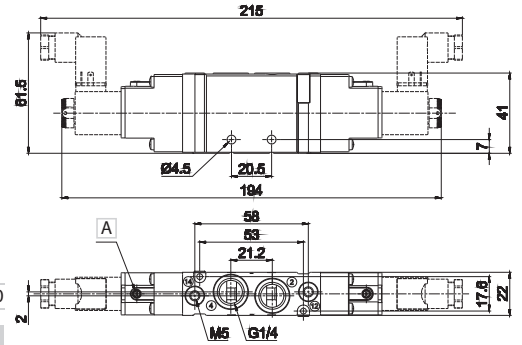
Double electric impulse



A Manual override

2 - 4 = Use
14 = Control
12 = Return

Weight (Kg): 0,210



	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,5÷9	16	16	EL22F255
5/3 c.c.		14	12	1,9÷9	11	35	EL22F355
5/3 o.c.		14	12	1,9÷9	11	35	EL22F455
5/3 p.c.		14	12	1,9÷9	11	35	EL22F555
3/2 NC + 3/2 NC		14	12	1,5÷9	14	16	EL22F655
3/2 NC + 3/2 NO		14	12	1,9÷9	14	16	EL22F755
3/2 NO + 3/2 NO		14	12	1,9÷9	14	16	EL22F855

c.c. = closed centres o.c. = open centres p.c. = pressurized centres

Solenoid valves are supplied without coil/connector/locking nut

Coil

- DL-0050 12 V DC 2,5 W
- DL-0051 24 V DC 2,5 W
- DL-0106 24 V AC 50/60 Hz 5 VA
- DL-0108 110 V AC 50/60 Hz 5 VA
- DL-0124 230 V AC 50/60 Hz 5 VA

Connector

AM-5109

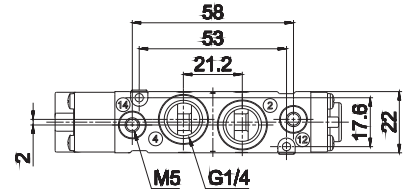
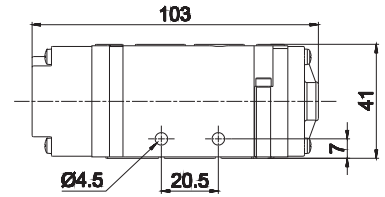
For technical characteristics see chapter 5 accessories

3

Single pneumatic impulse



2 - 4 = Use
14 = Control
12 = Return



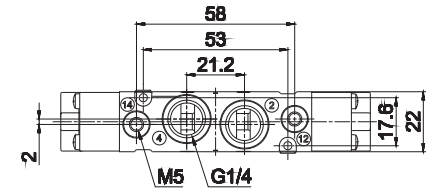
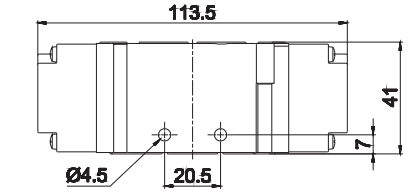
Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,9÷10	11	15	EL22F230
5/2		pneumatic amplified	mechanical spring	2÷10	10	14	EL22F231

Double pneumatic impulse



2 - 4 = Use
14 = Control
12 = Return

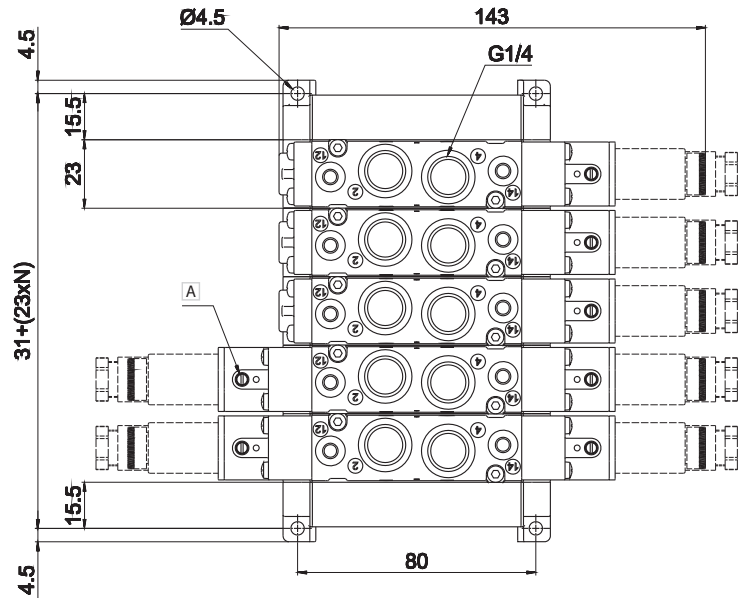
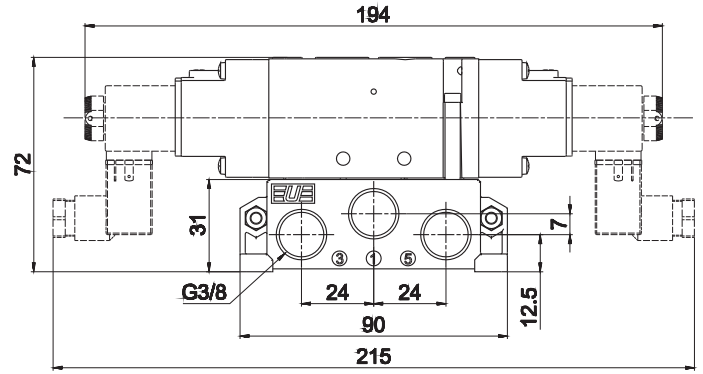
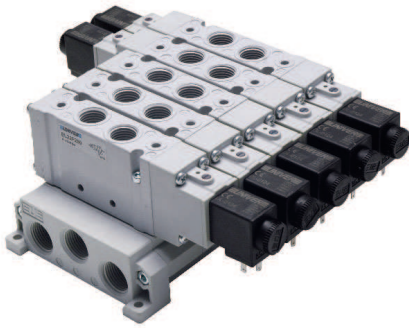


Weight (Kg): 0,044

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,7÷10	10	10	EL22F233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	EL22F333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	EL22F433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	EL22F533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	EL22F633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	EL22F733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	EL22F833

c.c. = closed centres o.c. = open centres p.c. = pressurized centres

Modular sub-base in technopolymer



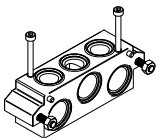
A Manual override

- 1 = Supply
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

N = Number of valve places

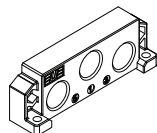
3

EL22SF300



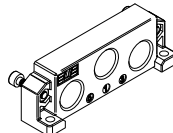
Sub-base 1 place (screws and seals are included)

EL22SF515



Left supply plate G3/8

EL22SF516



Right supply plate G3/8 (screws and seals are included)

EL18SF518



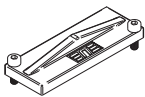
Fixing spring for DIN rail (screws are included)

EL22SF550



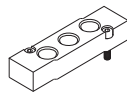
Pressure separator

EL22SF560



Closing plate for unused valve place (screws are included)

EL22SF570



Intermediate supply plate (screws are included)

COILS

U04 - U05 - U06 - U1 - U2 - U3 Coils and Connectors

Available ATEX version upon request

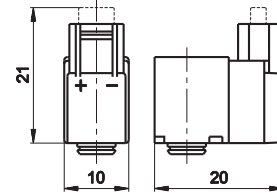
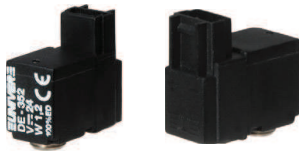
CE Ex II 3 GD c nA II T5 - 10°C ≤ Ta ≤ 45°C



COUPLING TABLE - COILS /ELECTROPILOTS - ELECTROPILOTS/SOLENOID VALVES			Electropilots								
			A (U05)	B (U04)	AA(U1)	AA(U3)		AB (U2)			
Coils	U04	10 mm		■							
	U05	15 mm	■								
	U1	22 mm			■						
	U2	30 mm							■	■	
	U3	30 mm					■	■			
Solenoid valves	BE	ISO 1 - ISO 2 ISO 3 - ISO 4	■					■			R
	AE	ISO 1 ISO 2			■	■					
	BD	ISO 01 26 mm ISO 02 18 mm	■								
	AC-N	NAMUR interface			■	■					
	CL CM	G1/8 G1/4			■	■					
	COMPACT 2/4		■								
	G6 GL6	G1/8 sub-base	■	■							
	G7	G1/8	R		■	■					
	AC	G1/8 - G1/4			■	■					
		G1/2			R	R			■		
	AF	G1/8			■	■					
		G1/4 - G3/8			■	■			■		
		G1/2 ÷ G1			R	R			■		
	AG	G1 1/2									■
G1/8				■	■						
G1/4 ÷ G1				R	R			■			
	G1 1/2									■	

■ = Standard R = Upon request

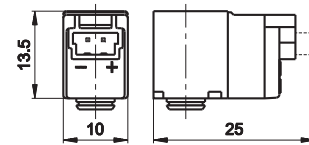
U04 coil with integrated 90° upward connector



Duty cycle ED (a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.	Connector
	%	Hold					
100	1,2	1,2	±10	24 V DC	0,013	DE-352	D-500 D-530-... D-535-...
100	0,5	0,5	±10	24 V DC	0,013	DE-355	
100	1,35	1,35	±10	24 V DC	0,013	DE-452	

Upon request 12 VDC

U04 coil with in-line connector

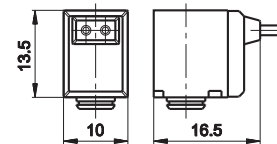


Duty cycle ED (a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.	Connector
	%	Hold					
100	1,2	1,2	±10	24 V DC	0,013	DE-552	D-500 D-530-... D-535-...
100	0,5	0,5	±10	24 V DC	0,013	DE-555	
100	1,35	1,35	±10	24 V DC	0,013	DE-652	

Upon request 12 VDC

3

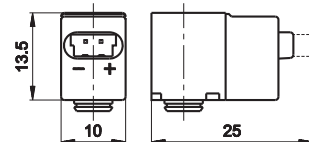
U04 coil with loose cables (length 300 mm)



Duty cycle ED (a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.(b)
	%	Hold				
100	1,2	1,2	±10	24 VDC	0,013	DE-052L030

Upon request 12 VDC

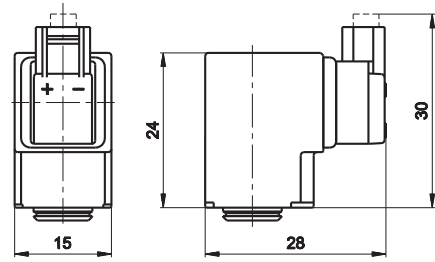
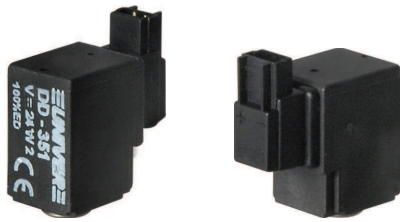
U04 coil with in-line connector with protecting cover for complete tightness



Duty cycle ED (a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.	Connector
	%	Hold					
100	1,35	1,35	±10	12 V DC	0,013	DE-642I	D-500 D-530-... D-535-...
100	1,35	1,35	±10	24 V DC	0,013	DE-652I	
100	0,5	0,5	±10	24 V DC	0,013	DE-655I	

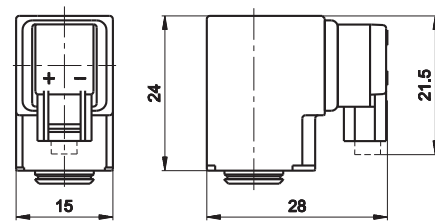
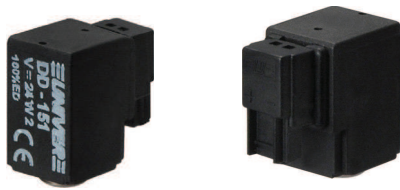
(a) = under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated
 (b) = different wire lengths are available upon request

U05 coil with integrated 90° upward connector



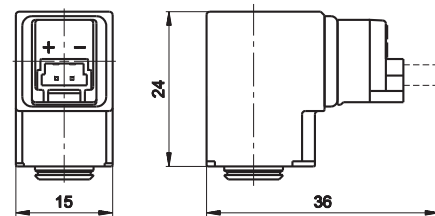
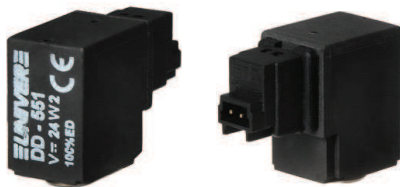
Duty cycle ED(a) %	Power consumption W		Tension tolerance %	Rated voltage	Weight Kg	Part no.	Connector
	Hold	Inrush					
100	2	2	±10	24 V DC	0,019	DD-351	D-500 D-530-... D-535-...

U05 coil with integrated 90° downward connector



Duty cycle ED(a) %	Power consumption W		Tension tolerance %	Rated voltage	Weight Kg	Part no.	Connector
	Hold	Inrush					
100	2	2	±10	24 V DC	0,019	DD-151	D-500 D-530-... D-535-...

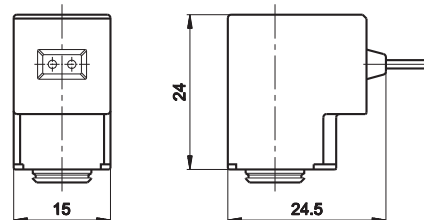
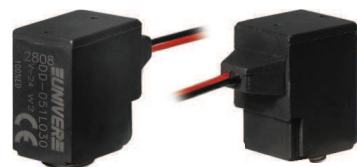
U05 coil with in-line connector



Duty cycle ED(a) %	Power consumption W		Tension tolerance %	Rated voltage	Weight Kg	Part no.	Connector
	Hold	Inrush					
100	2	2	±10	24 V DC	0,019	DD-551	D-500 D-530-... D-535-...

Upon request: version with LED and V DC version

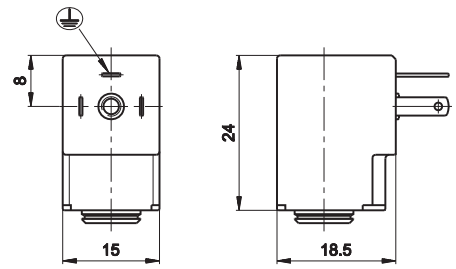
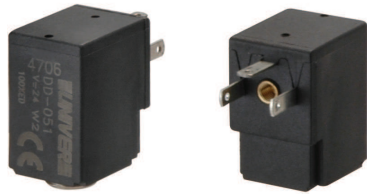
U05 coil with loose cables (length 300 mm)



Duty cycle ED(a) %	Power consumption W		Tension tolerance %	Rated voltage	Weight Kg	Part no. (b)
	Hold	Inrush				
100	1,5	1,5	±10	12 V DC	0,019	DD-051L030
100	2	2	±10	24 V DC	0,019	DD-052L030

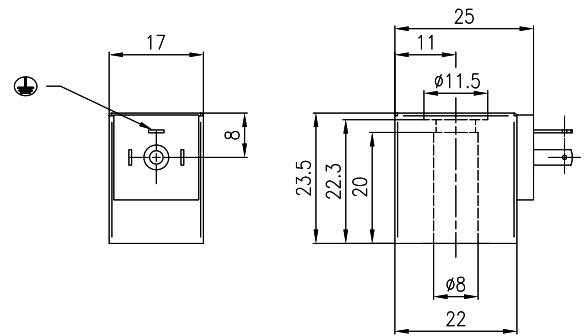
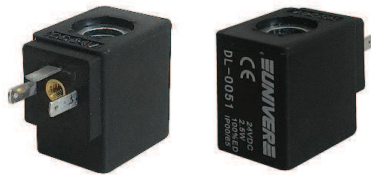
(a) = under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated
 (b) = different wire lengths are available upon request

U05 15 mm coil - Faston



Duty cycle ED(a)	Power consumption W				Tolerance		Rated voltage		Frequency	Weight	Part no.	Connector
	%	DC W		AC VA		tension %		DC	AC	HZ		
	Hold	Inrush	Hold	Inrush	DC	AC						
100	-	-	3,5	-	-	±10	-	24	50/60	0,019	DD-011	AM-5109
100	-	-	3,5	-	-	±10	-	230	50/60	0,019	DD-013	
100	-	-	2,3	3,2	±10	±10	-	24	50/60	0,019	DD-040	
100	2	2	-	-	±10	-	12	-	-	0,019	DD-041	
100	2,5	2,5	-	-	±10	±10	12	-	-	0,019	DD-042	
100	-	-	2,3	3,2	±10	-	-	48	50/60	0,019	DD-050	
100	2	2	-	-	±10	±10	24	-	-	0,019	DD-051	
100	2,5	2,5	-	-	±10	-	24	-	-	0,019	DD-052	
100	-	-	-	-	±10	±10	-	110	50/60	0,019	DD-060	
100	-	-	2,3	3,2	±10	-	-	230	50/60	0,019	DD-070	

U06 15 mm coil



Duty cycle ED(a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.
	%	Hold				
100	2,5	2,5	±10	12 V DC	0,08	DL-0050
100	2,5	2,5	±10	24 V DC	0,08	DL-0051
100	3,3 VA (Max)	5 VA (Max)	±10	24 V AC 50/60 Hz 5 VA	0,08	DL-0106
100	3,3 VA (Max)	5 VA (Max)	±10	110 V AC 50/60 Hz 5 VA	0,08	DL-0108
100	3,3 VA (Max)	5 VA (Max)	±10	230 V AC 50/60 Hz 5 VA	0,08	DL-0124

Connectors for U04, U05 and U06 coils

	Length (mm)	Coil	Part no.
MINIATURE CONNECTOR WITHOUT WIRES			
	-	U04/U05	D-500
MINIATURE CONNECTOR WITH LOOSE CABLES			
	300	U04/U05	D-530-30
	500	U04/U05	D-530-50
	2000	U04/U05	D-530-200
MINIATURE CONNECTOR WITH CABLE			
	300	U04/U05	D-535-30
	500	U04/U05	D-535-50
	2000	U04/U05	D-535-200

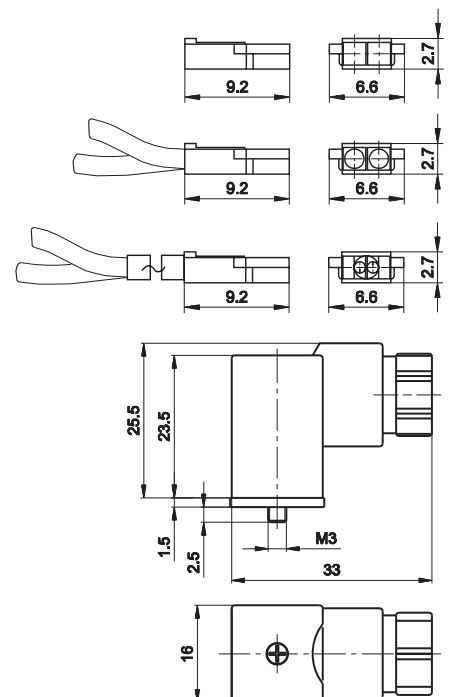
CAUTION! Do not invert the polarity when connecting the coil with LED.

15 mm connector



U05/U06 AM-5109

Protection according to IP65. PG9 cable connection. 180° rotation on the coil.



Upon request version with LED:

(a) = 110V - 230V solenoid valves must be built-in (EN-60204-1)

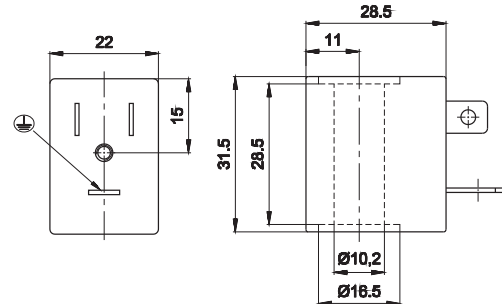
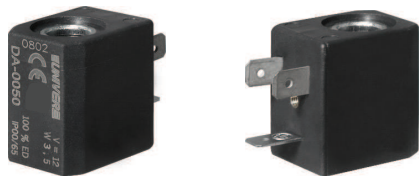
Under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated

For version CSA/UL see related section



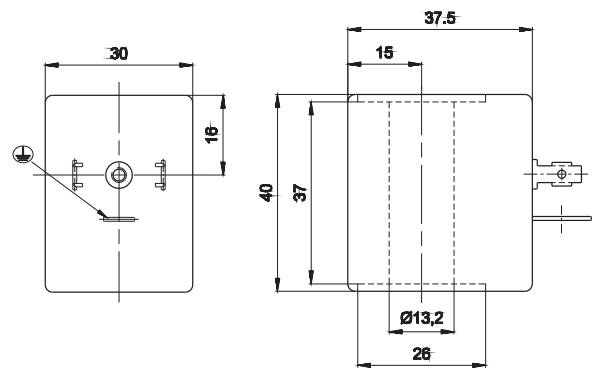
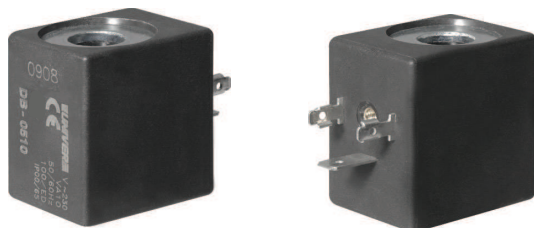
Possibility of replacement without intervention in the pneumatic circuit
 Other voltages available upon request
 360° rotation on the pilot. Coil winding: H class
 Ambient temperature: -10 ÷ +45 °C. Fluid temperature: -10 ÷ +95 °C.
 The solenoid valves functioning with 100V-230V must be incorporated (EN60204-1)
 Under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated.
 Protection class IP65, if used with connector.

U1 22 mm coil to be used with U1 electropilot



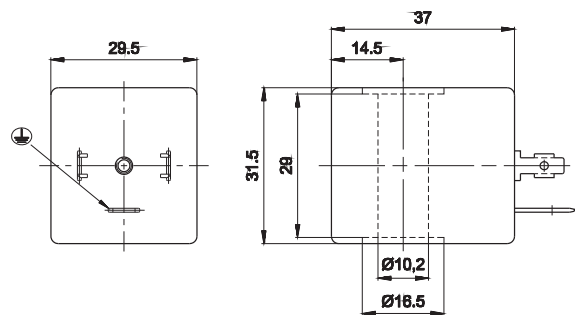
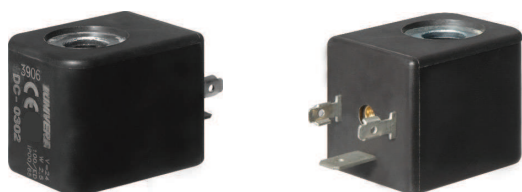
Duty cycle ED ^(a)	Power consumption W		Tolerance tension	Rated voltage	Weight	Part no.
	%	Hold				
100	3,5	3,5	±10	12 V DC	0,06	DA-0050
100	3,5	3,5	±10	24 V DC	0,06	DA-0051
100	5,4 VA (Max)	7,8 VA (Max)	±10	24 V AC/50-60 HZ	0,06	DA-0106
100	5,4 VA (Max)	7,8 VA (Max)	±10	110 V AC/50-60 HZ	0,06	DA-0108
100	5,4 VA (Max)	7,8 VA (Max)	±10	230 V AC/50-60 HZ	0,06	DA-0124

U2 30 mm coil to be used with U2 electropilot



Duty cycle ED ^(a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.
	%	Hold				
100	11	11	±10	12 V DC	0,10	DB-0501
100	11	11	±10	24 V DC	0,10	DB-0502
100	10 VA (Max)	16 VA (Max)	±10	24 V AC/50-60 HZ	0,10	DB-0507
100	10 VA (Max)	16 VA (Max)	±10	110 V AC/50-60 HZ	0,10	DB-0509
100	10 VA (Max)	16 VA (Max)	±10	230 V AC/50-60 HZ	0,10	DB-0510

U3 30 mm coil to be used with U1 electropilot



Duty cycle ED ^(a)	Power consumption W		Tension tolerance	Rated voltage	Weight	Part no.
	%	Hold				
100	2,5	2,5	±10	12 V DC	0,08	DC-0301
100	2,5	2,5	±10	24 V DC	0,08	DC-0302
100	3,3 VA (Max)	5 VA (Max)	±10	24 V AC/50-60 HZ	0,08	DC-0307
100	3,3 VA (Max)	5 VA (Max)	±10	110 V AC/50-60 HZ	0,08	DC-0309
100	3,3 VA (Max)	5 VA (Max)	±10	230 V AC/50-60 HZ	0,08	DC-0310

(a) = 110V - 230V solenoid valves must be built-in (EN-60204-1)
 Under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated

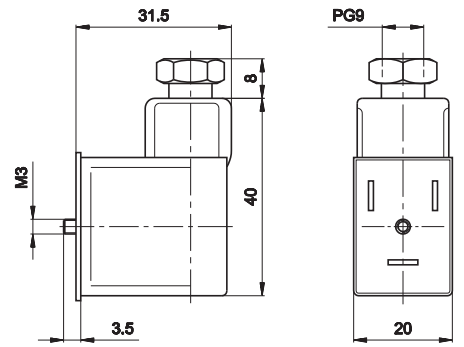
Connector for U1 coil

Coil	Part no.
CONNECTOR	



U1 AM-5110

Protection according to IP 65. PG9 cable connection. 180° rotation on the coil
LED available upon request.



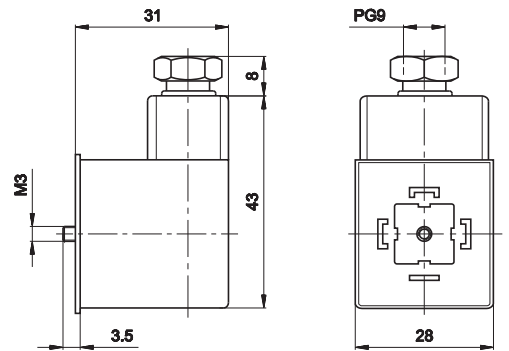
Connector for U2, U3 coil

Coil	Part no.
DIN 43650 CONNECTOR	



U2/U3 AM-5111

Protection according to IP 65. PG9 cable connection. 360° rotation on the coil.
LED available upon request.

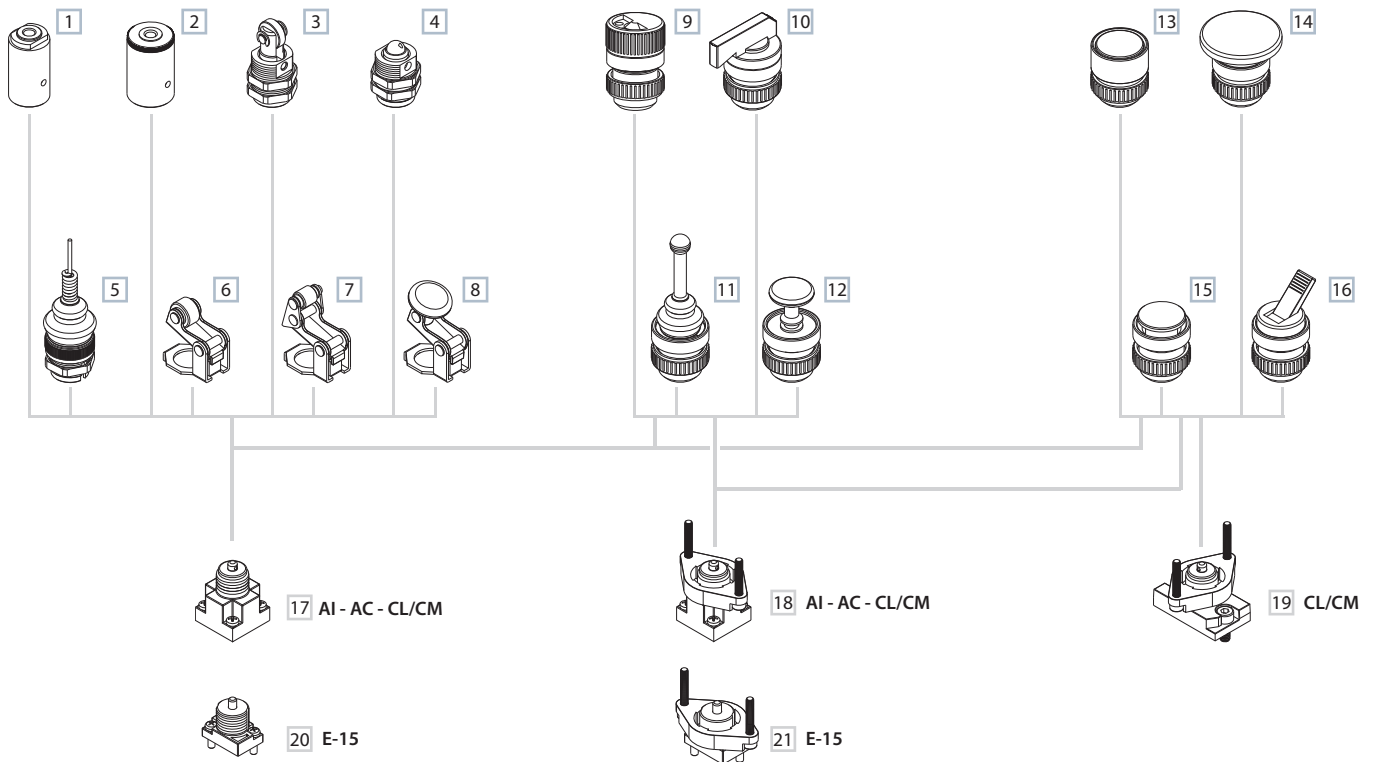


OPERATORS

Manual, pneumatic and mechanical operators for screw and panel mounting



Modular system actuators/buttons



3
VALVES

PNEUMATIC / MECHANICAL ACTUATORS

- 1 Pneumatic actuator
- 2 Amplified pneumatic actuator
- 3 Roller operator 1 position
- 4 Ball-push operator 1 position
- 5 Omni-directional antenna 1 position
- 6 Roller lever operator 1 position
- 7 Articulated roller lever operator 1 position
- 8 Key operator 1 position

MANUAL ACTUATORS

- 9 Rotating selector
- 10 Rotating lever selector
- 11 Omni-directional operator
- 12 Push-pull operator
- 13 Recessed button
- 14 Head button
- 15 Button
- 16 Lever

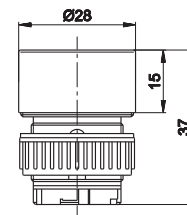
OVERRIDE

- 17 Threaded indirect operation
- 18 Indirect panel operation
- 19 Direct panel operation
- 20 Ball-push direct operation
- 21 Ball-push direct panel operation

Recessed button



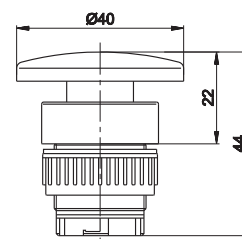
Symbol	Colour	Force ^(a) N	Weight Kg	Part no.
1 POSITION				
	black ■	16	0,031	AI-3511
	red ■	16	0,031	AI-3512
	green ■	16	0,031	AI-3513
FOR PANEL MOUNTING 1 POSITION (b)				
	black ■	16	0,031	AI-3511Q
	red ■	16	0,031	AI-3512Q
	green ■	16	0,031	AI-3513Q



Head button



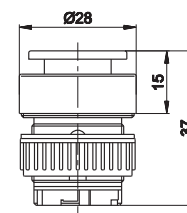
Symbol	Colour	Force ^(a) N	Weight Kg	Part no.
1 POSITION				
	red ■	16	0,022	AI-3514
	black ■	16	0,022	AI-3516
FOR PANEL MOUNTING 1 POSITION (b)				
	red ■	16	0,022	AI-3514Q
	black ■	16	0,022	AI-3516Q
2 POSITIONS				
	red ■	16	0,022	AI-3514D
	black ■	16	0,022	AI-3516D
FOR PANEL MOUNTING 2 POSITIONS (b)				
	red ■	16	0,022	AI-3514QD
	black ■	16	0,022	AI-3516QD



Button



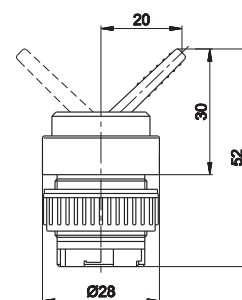
Symbol	Colour	Force ^(a) N	Weight Kg	Part no.
1 POSITION				
	green ■	12,5	0,025	AI-3515
	red ■	12,5	0,025	AI-3517
	black ■	12,5	0,025	AI-3519
FOR PANEL MOUNTING 1 POSITION (b)				
	green ■	12,5	0,025	AI-3515Q
	red ■	12,5	0,025	AI-3517Q
	black ■	12,5	0,025	AI-3519Q



Lever operator



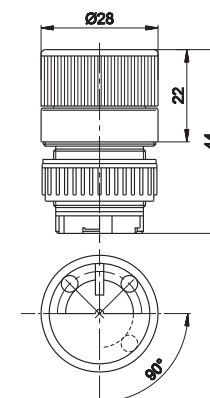
Symbol	Colour	Force ^(a) N	Weight Kg	Part no.
2 POSITIONS				
	black ■	6	0,022	AI-3524
FOR PANEL MOUNTINGS 2 POSITIONS (b)				
	black ■	6	0,022	AI-3524Q



Rotating selector for accident prevention



Symbol	Colour	Force ^(a) N	Weight Kg	Part no.
WITH LIGHT 1 POSITION				
	black ■	12,5	0,025	AI-3521
FOR PANEL MOUNTING WITH LIGHT 1 POSITION (b)				
	black ■	12,5	0,025	AI-3521Q
WITH LIGHT 2 POSITIONS				
	black ■	12,5	0,025	AI-3520
FOR PANEL MOUNTING WITH LIGHT 2 POSITIONS (b)				
	black ■	12,5	0,025	AI-3520Q

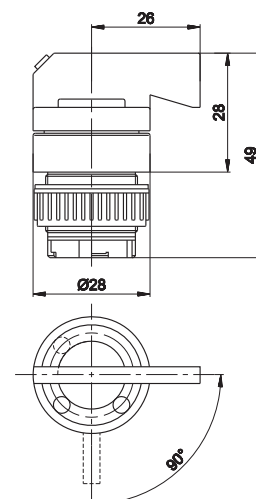


(a) = force at 6 bar with actuators assembled on AI-35.. standard limit switch
 (b) = to be used with valves preset with flange for panel mounting

Rotating lever selector



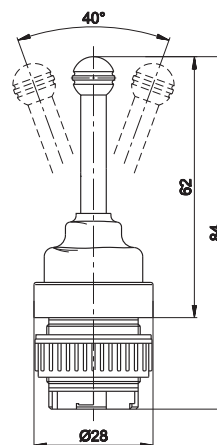
Symbol	Colour	Force (a) N	Weight Kg	Part no.
WITH LIGHT 1 POSITION				
	black ■	12,5	0,025	AI-3523
FOR PANEL MOUNTING WITH LIGHT 1 POSITION (b)				
	black ■	12,5	0,025	AI-3523Q
WITH LIGHT 2 POSITIONS				
	black ■	12,5	0,025	AI-3522
FOR PANEL MOUNTING WITH LIGHT 2 POSITIONS (b)				
	black ■	12,5	0,025	AI-3522Q



Omni-directional operator



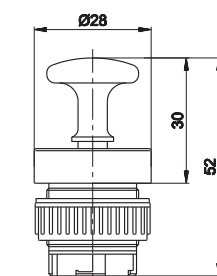
Symbol	Colour	Force (a) N	Weight Kg	Part no.
WITH CENTRE RETURN 1 POSITION				
	black ■	7	0,029	AI-3525
FOR PANEL MOUNTING WITH CENTRE RETURN 1 POSITION (b)				
	black ■	7	0,029	AI-3525Q



Push-pull operator



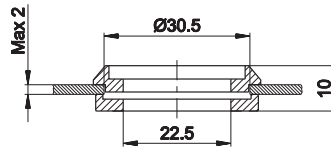
Symbol	Colour	Force (a) N	Weight Kg	Part no.
2 POSITIONS				
	black ■	16	0,029	AI-3526
FOR PANEL MOUNTING 2 POSITIONS (b)				
	black ■	16	0,029	AI-3526Q



(a) = force at 6 bar with actuators assembled on AI-35..standard limit switch
 (b) = to be used with valves preset with flange for panel mounting

Reducer

AI-3529

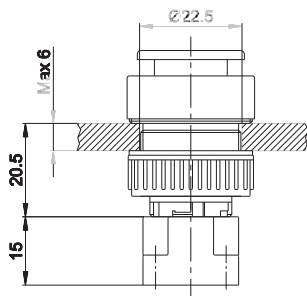


reducer for Ø 30,5 to Ø 22,5, to be used with AI-35..Q limit switches
(for details refer to next page)

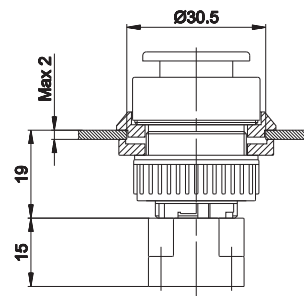
Assembly examples

Manual actuators for screw mounting (ring nut)

Panel mounting for Ø 22,5 bore sizes

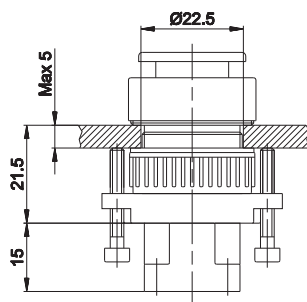


Panel mounting for Ø 30,5 bore sizes
with reducer AI_3529



Manual actuators for panel mounting (ring nut+screws)

Panel mounting for Ø 22,5 bore sizes

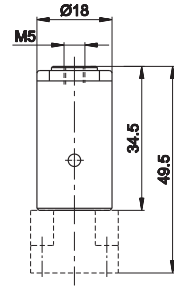


3

Pneumatic operator



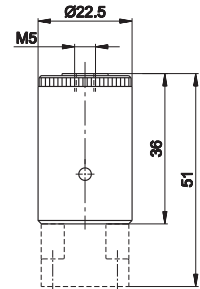
Symbol	Control pressure bar	Operating pressure bar	Weight Kg	Part no.
	1,9÷2,7	1÷9	0,020	AI-3550



Amplified pneumatic operator



Symbol	Control pressure bar	Operating pressure bar	Weight Kg	Part no.
	0,6÷0,9	1÷9	0,030	AI-3551



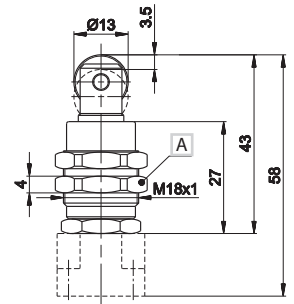
Roller operator



Symbol	Force (a) N	Weight Kg	Part no.
	-	0,031	AI-3560

WITH DUST PROTECTION

A Wrench 20



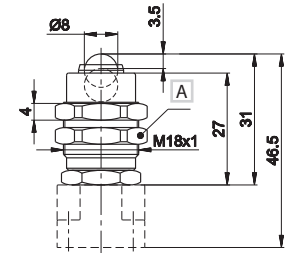
Ball-push operator



Symbol	Force (a) N	Weight Kg	Part no.
	26	0,023	AI-3562

WITH DUST PROTECTION

A Wrench 20



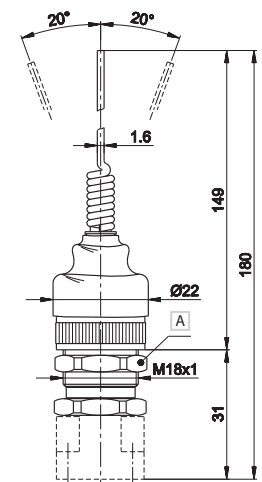
Omni-directional antenna



Symbol	Force (a) N	Weight Kg	Part no.
	3,3	0,034	AI-3563

1 POSITION WITH CENTRE RETURN

A Wrench 20



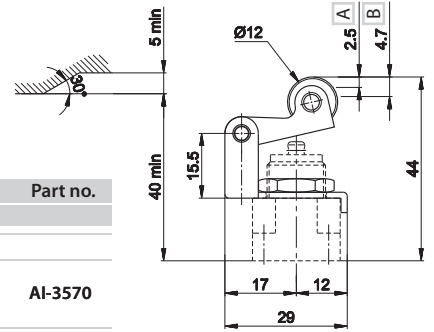
(a) = force at 6 bar with actuators assembled on AI-35..standard limit switch

Roller lever operator



Symbol	Force (a) N	Weight Kg	Part no.
1 POSITION			
	10	0,021	AI-3570

A Max opening
B Total stroke

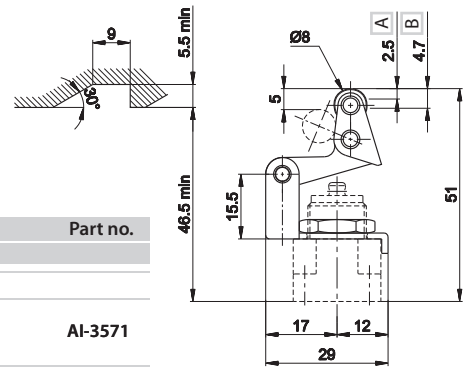


Articulated roller operator



Symbol	Force (a) N	Weight Kg	Part no.
1 POSITION			
	10	0,021	AI-3571

A Max opening
B Total stroke

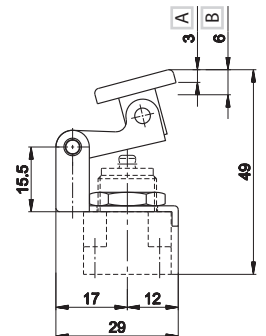


Key operator



Symbol	Force (a) N	Weight Kg	Part no.
1 POSITION			
	10	0,021	AI-3572

A Max opening
B Total stroke



(a) = force at 6 bar with actuators assembled on AI-35..

YR240

Brass ball valve 2/2 with rotary actuator

- Full-bore ball valve
- Anti-blowout stem
- Top-flange according to DIN-ISO 5211



TECHNICAL CHARACTERISTICS

Temperature	-20 ÷ 120 °C
Fluid	air, water, etc
Working pressure	Max PN 40
Thread ends	GAS UNI 338 - ISO R/228 - DIN 259 - BSPP
Rotary angle	90°
Flow direction	both directions

CONSTRUCTIVE CHARACTERISTICS

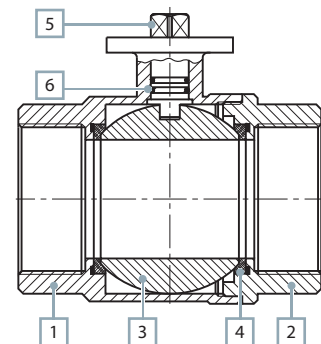
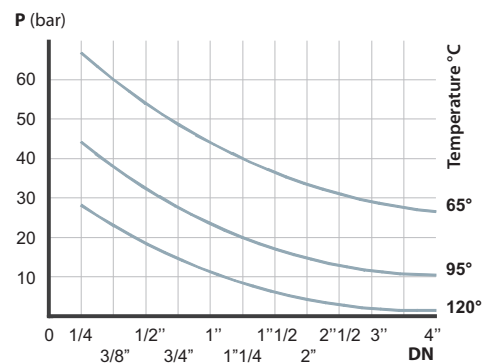
Body	hot pressed brass (1)
End cap	hot pressed brass (2)
Ball	chromium-plated brass (3)
Seat ring	P.T.F.E. (4)
Piston rod	brass (5)
Piston rod ring	viton (6)

CODIFICATION KEY

Y	R	2	4	0	0	1	0	D	A
1			2				3		

1 Series	2 Size	3 Version
YR240 = Brass ball valve 2/2 with rotary actuator	008 = 8 mm 010 = 10 mm 015 = 15 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm 040 = 40 mm 050 = 50 mm 065 = 65 mm 080 = 80 mm 100 = 100 mm	DA = double acting SR = single acting

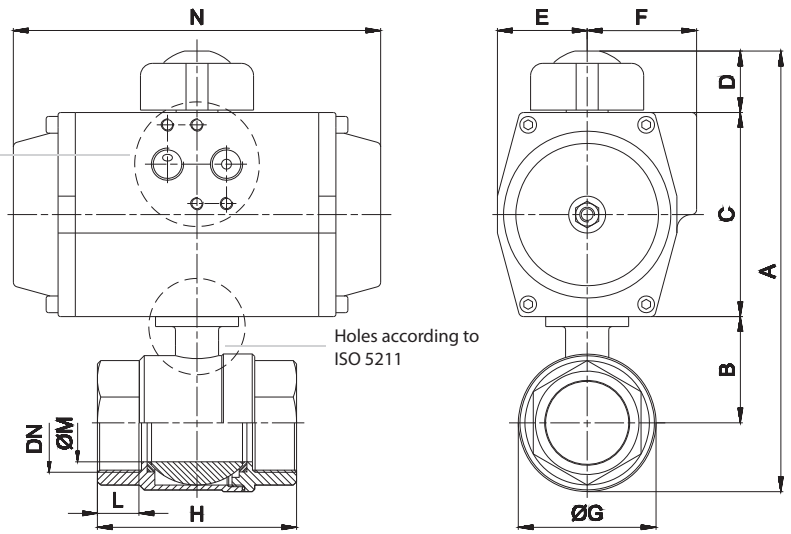
Pressure - temperature diagram



Double acting/single acting



NAMUR connection



Holes according to ISO 5211

Double acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G 1/4	114	29	45	24	22,5	22,5	32	65	17	15	142	YR240008SR
10	G 3/8	114	29	45	24	22,5	22,5	32	65	17	15	142	YR240010SR
15	G 1/2	136	29	67	24	30	41	32	65	17	15	142	YR240015SR
20	G 3/4	143	32	67	24	30	41	40	75	19	20	142	YR240020SR
25	G 1	150,5	36	67	24	30	41	47	86	21	25	155	YR240025SR
32	G 1 1/4	160,5	41	67	24	30	41	57	95	22	32	155	YR240032SR
40	G 1 1/2	198,5	57	83	24	36,5	44,5	69	101	22	38	213	YR240040SR
50	G 2	212	64	83	24	36,5	44,5	82	120	25	47	213	YR240050SR
65	G 2 1/2	265,5	85	100	24	42,5	49,5	113	165	30	65	276	YR240065SR
80	G 3	296	94.5	110	24	49	53	135	188	33	80	366	YR240080SR
100	G 4	348	116	125	24	55	58	166	225	39	100	366	YR240100SR

Single acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G 1/4	136	29	67	24	30	41	32	65	17	15	142	YR240008SR
10	G 3/8	136	29	67	24	30	41	32	65	17	15	142	YR240010SR
15	G 1/2	136	29	67	24	30	41	32	65	17	15	142	YR240015SR
20	G 3/4	143	32	67	24	30	41	40	75	19	20	142	YR240020SR
25	G 1	166,5	36	83	24	30	41	47	86	21	25	155	YR240025SR
32	G 1 1/4	176,5	41	83	24	36,5	44,5	57	95	22	32	155	YR240032SR
40	G 1 1/2	215,5	57	100	24	42,5	49,5	69	101	22	38	213	YR240040SR
50	G 2	229	64	100	24	42,5	49,5	82	120	25	47	213	YR240050SR
65	G 2 1/2	290,5	85	125	24	55	58	113	165	30	65	276	YR240065SR
80	G 3	351	94.5	155	34	70	70	135	188	33	80	366	YR240080SR
100	G 4	388	116	155	34	70	70	166	225	39	100	366	YR240100SR

Actuator sizing: air supply actuator 5,5 bar (80 psi) min. with ΔP valve 16 bar (232 psi) max

YR250

Ball valve 2/2 AISI 316 with manual lever or rotary actuator

- Full-bore ball valve
- Anti-blowout stem
- Antistatic device
- Top-flange according to DIN-ISO 5211
- Stem sealing with Chevron rings



TECHNICAL CHARACTERISTICS

Temperature	-20 ÷ 200 °C
Fluid	air, water, chemical agents, etc
Working pressure	Max PN 63
Thread ends	GAS UNI 338 - ISO R/228 - DIN 259 - BSPP
Rotary angle	90°
Flow direction	both directions

CONSTRUCTIVE CHARACTERISTICS

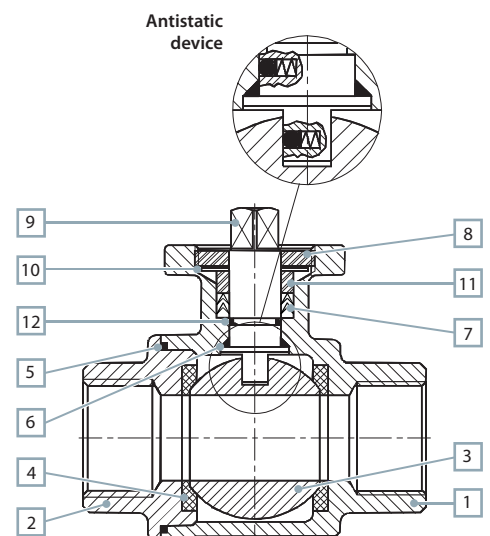
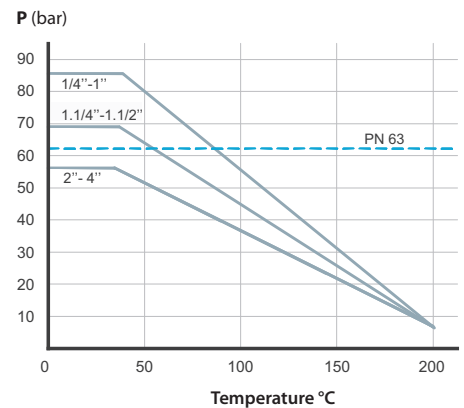
Body	CF8M (1)
End cap	CF8M (2)
Ball	stainless steel (AISI 316) (3)
Gasket	15% R - P.T.F.E.* (4)
Seat ring	P.T.F.E. (5)
Thrust washer	P.T.F.E. (6)
Gland packing	P.T.F.E. (7)
Gland nut	stainless steel (AISI 304) (8)
Piston rod	stainless steel (AISI 304) (9)
Washer	stainless steel (AISI 304) (10)
Gland ring	stainless steel (AISI 304) (11)
O-ring	viton (12)

CODIFICATION KEY

Y	R	2	5	0	0	1	0	D	A
1			2				3		

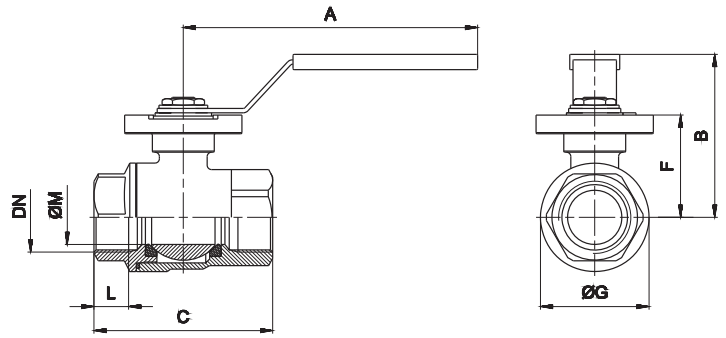
1 Series	2 Size	3 Version
YR250 = Ball valve 2/2 AISI 316 with manual lever or rotary actuator	008 = 8 mm 010 = 10 mm 015 = 15 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm 040 = 40 mm 050 = 50 mm 065 = 65 mm 080 = 80 mm	LM = manual lever DA = double acting SR = single acting

Pressure - temperature diagram



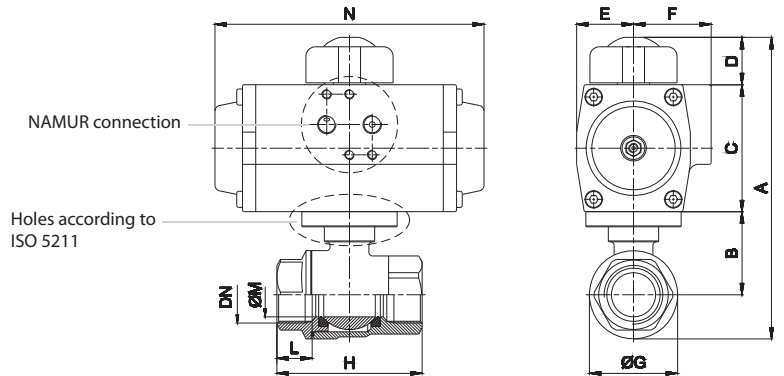
* R-P.T.F.E.: Reinforced P.T.F.E. (15% glass fibre)

With lever



Ø	DN	A	B	C	L	ØM	F	ØG	Square	ISO 5211	Part no.
8	G 1/4	120	59	47	9,7	11	36	42	9	F03	YR250008LM
10	G 3/8	120	59	47	10,1	12,5	36	42	9	F03	YR250010LM
15	G 1/2	120	63	57	13,2	15	38	36	9	F03 - F04	YR250015LM
20	G 3/4	120	70	64	14,5	20	42	44	9	F03 - F04	YR250020LM
25	G 1	140	74	77	16,8	25	45	51	11	F04 - F05	YR250025LM
32	G 1 1/4	150	88	90	19,1	32	56	64	11	F04 - F05	YR250032LM
40	G 1 1/2	200	94	105	19,1	40	62	77	14	F05 - F07	YR250040LM
50	G 2	200	102	122	23,4	50	70	92	14	F05 - F07	YR250050LM
65	G 2 1/2	255	140	154	26,7	65	95	112	17	F07 - F10	YR250065LM
80	G 3	255	153	173	29,8	76	120	140	17	F07 - F10	YR250080LM

Double acting/single acting



Double acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G 1/4	126	36	45	24	22,5	28,5	42	47	9,7	11	115	YR250008DA
10	G 3/8	126	36	45	24	22,5	28,5	42	47	10,1	12,5	115	YR250010DA
15	G 1/2	147	38	67	24	30	41	36	57	13,2	15	142	YR250015DA
20	G 3/4	155	42	67	24	30	41	44	64	14,5	20	142	YR250020DA
25	G 1	161,5	45	67	24	30	41	51	77	16,8	25	142	YR250025DA
32	G 1 1/4	195	56	83	24	36,5	44,5	64	90	19,1	32	155	YR250032DA
40	G 1 1/2	207,5	62	83	24	36,5	44,5	77	105	19,1	40	155	YR250040DA
50	G 2	240	70	100	24	42,5	49,5	92	122	23,4	50	213	YR250050DA
65	G 2 1/2	285	95	110	24	49	53	112	154	26,7	65	236	YR250065DA
80	G 3	324	120	110	24	49	53	140	173	29,8	80	236	YR250080DA

Single acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G 1/4	148	36	67	24	30	41	42	47	9,7	11	142	YR250008SR
10	G 3/8	148	36	67	24	30	41	42	47	10,1	12,5	142	YR250010SR
15	G 1/2	147	38	67	24	30	41	36	57	13,2	15	142	YR250015SR
20	G 3/4	171	42	83	24	36,5	44,5	44	64	14,5	20	155	YR250020SR
25	G 1	177,5	45	83	24	36,5	44,5	51	77	16,8	25	155	YR250025SR
32	G 1 1/4	212	56	100	24	42,5	49,5	64	90	19,1	32	213	YR250032SR
40	G 1 1/2	224,5	62	100	24	42,5	49,5	77	105	19,1	40	213	YR250040SR
50	G 2	250	70	110	24	49	53	92	122	23,4	50	236	YR250050SR
65	G 2 1/2	300	95	125	24	55	58	112	154	26,7	65	276	YR250065SR
80	G 3	369	120	155	24	70	70	140	173	29,8	80	366	YR250080SR

Actuator sizing: air supply actuator 5.5 bar (80 psi) min.with ΔP valve 16 bar (232 psi) max

YR260

Ball valve 2/2 AISI 316 (3 pieces) with manual lever or rotary actuator

- Full-bore ball valve
- Anti-blowout stem
- Antistatic device
- Top-flange according to DIN-ISO 5211
- Stem sealing with Chevron rings



TECHNICAL CHARACTERISTICS

Temperature	-25 ÷ 200 °C
Fluid	air, water, chemical agents, etc
Working pressure	Max PN 63
Thread ends	GAS UNI 338 - ISO R/228 - DIN 259 - BSPP
Rotary angle	90°
Flow direction	both directions

CONSTRUCTIVE CHARACTERISTICS

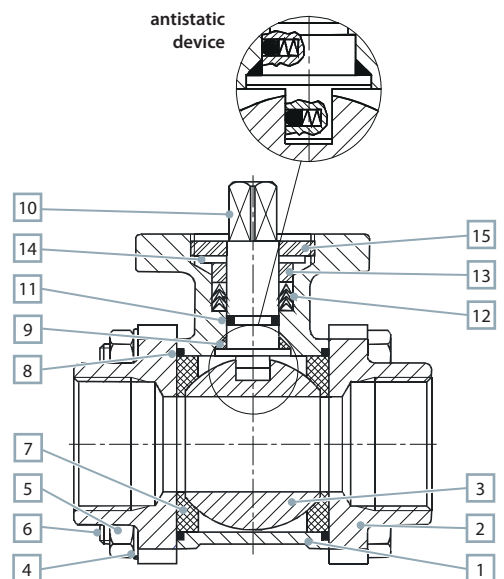
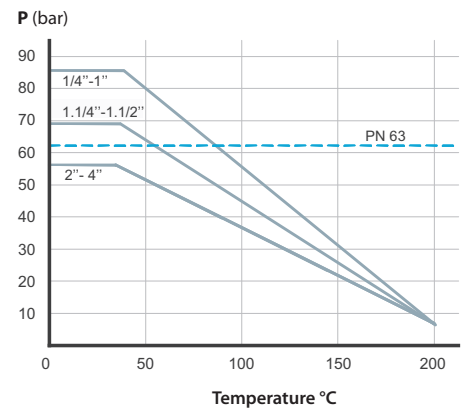
Body	CF8M (1)
End cap	CF8M (2)
Ball	stainless steel (AISI 316) (3)
Washer	stainless steel (AISI 304) (4)
Nut	stainless steel (AISI 304) (5)
Screw	stainless steel (AISI 304) (6)
Gasket	15% R - P.T.F.E* (7)
Seat ring	P.T.F.E. (8)
Thrust washer	P.T.F.E. (9)
Piston rod	stainless steel (AISI 304) (10)
O-ring	viton (11)
Packing	P.T.F.E. (12)
Gland ring	stainless steel (AISI 304) (13)
Washer	stainless steel (AISI 304) (14)
Gland nut	stainless steel (AISI 304) (15)

CODIFICATION KEY

Y	R	2	6	0	0	1	0	D	A
1			2				3		

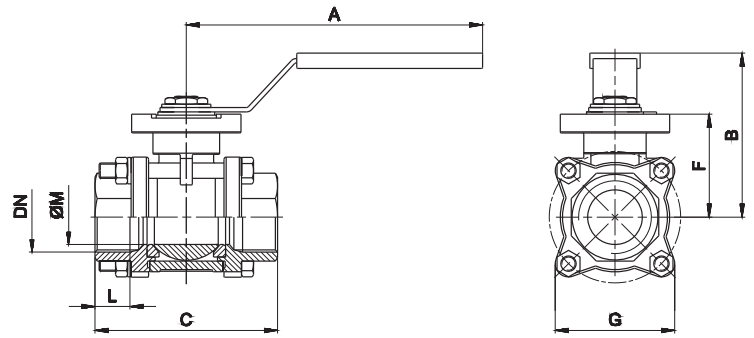
1 Series	2 Size	3 Version
YR260 = Ball valve 2/2 AISI 316 (3 pieces) with manual lever or rotary actuator	008 = 8 mm 010 = 10 mm 015 = 15 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm 040 = 40 mm 050 = 50 mm 065 = 65 mm 080 = 80 mm	LM = manual lever DA = double acting SR = single acting

Pressure - temperature diagram



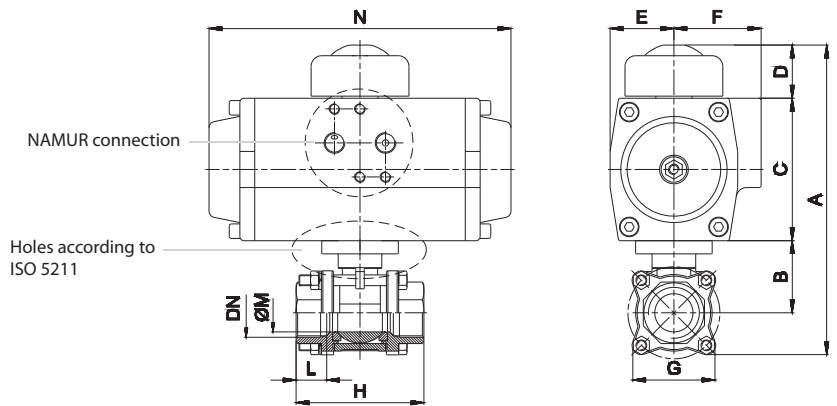
* R-P.T.F.E.: Reinforced P.T.F.E. (15% glass fibre)

With lever



Ø	DN	A	B	C	L	ØM	F	G	Square	ISO 5211	Part no.
8	G 1/4	120	59	47	9,7	11	36	42	9	F03	YR260008LM
10	G 3/8	120	59	47	10,1	12,5	36	42	9	F03	YR260010LM
15	G 1/2	120	63	54	13,2	15	38	50	9	F03	YR260015LM
20	G 3/4	140	70	73	14,5	20	42	54	11	F04 - F05	YR260020LM
25	G 1	140	74	79	16,8	25	45	58	11	F04 - F05	YR260025LM
32	G 1 1/4	204	88	90	19,1	32	56	72	14	F05 - F07	YR260032LM
40	G 1 1/2	204	94	102	19,1	40	62	80	14	F05 - F07	YR260040LM
50	G 2	204	102	118	23,4	50	70	92	14	F05 - F07	YR260050LM
65	G 2 1/2	255	140	149	26,7	65	102	120	17	F07 - F10	YR260065LM
80	G 3	255	153	180	29,8	80	112	194	17	F07 - F10	YR260080LM

Double acting/single acting



Double acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G 1/4	126	36	45	24	22,5	28,5	42	47	9,7	11	115	YR260008DA
10	G 3/8	126	36	45	24	22,5	28,5	42	47	10,1	12,5	115	YR260010DA
15	G 1/2	154	38	67	24	30	41	50	54	13,2	15	142	YR260015DA
20	G 3/4	160	42	67	24	30	41	54	73	14,5	20	142	YR260020DA
25	G 1	165	45	67	24	30	41	58	79	16,8	25	142	YR260025DA
32	G 1 1/4	199	56	83	24	36,5	44,5	72	90	19,1	32	155	YR260032DA
40	G 1 1/2	209	62	83	24	36,5	44,5	80	102	19,1	40	155	YR260040DA
50	G 2	240	70	100	24	42,5	49,5	92	118	23,4	50	213	YR260050DA
65	G 2 1/2	296	102	110	24	49	53	120	149	26,7	65	236	YR260065DA
80	G 3	343	112	110	24	49	53	194	180	29,8	80	236	YR260080DA

Single acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G 1/4	148	36	67	24	30	41	42	47	9,7	11	142	YR260008SR
10	G 3/8	148	36	67	24	30	41	42	47	10,1	12,5	142	YR260010SR
15	G 1/2	154	38	67	24	30	41	50	54	13,2	15	142	YR260015SR
20	G 3/4	176	42	83	24	36,5	44,5	54	73	14,5	20	155	YR260020SR
25	G 1	181	45	83	24	36,5	44,5	58	79	16,8	25	155	YR260025SR
32	G 1 1/4	216	56	100	24	42,5	44,5	72	90	19,1	32	213	YR260032SR
40	G 1 1/2	226	62	100	24	42,5	49,5	80	102	19,1	40	213	YR260040SR
50	G 2	250	70	110	24	49	53	92	118	23,4	50	236	YR260050SR
65	G 2 1/2	311	102	125	24	55	58	120	149	26,7	65	276	YR260065SR
80	G 3	388	112	155	24	70	70	194	180	29,8	80	366	YR260080SR

Actuator sizing: air supply actuator 5.5 bar (80 psi) min. with ΔP valve 16 bar (232 psi) max

YR270

L-shaped ball valve 3/2 AISI 316 with manual lever or rotary actuator

- Full-bore ball valve
- Anti-blowout stem
- Antistatic device
- Top-flange according to DIN-ISO 5211
- Stem sealing with Chevron rings



TECHNICAL FEATURES

Temperature	-15 ÷ 230 °C
Fluid	air, water, chemical agents, etc.
Working pressure	Max PN 64
Thread ends	GAS UNI 338 - ISO R/228 - DIN 259 - BSPP
Rotary angle	90°
Flow direction	both directions

CONSTRUCTIVE FEATURES

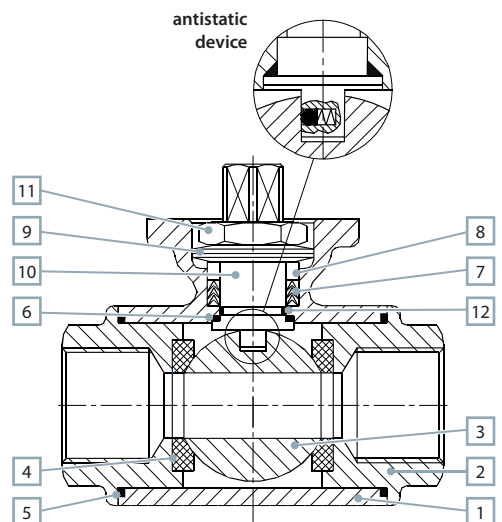
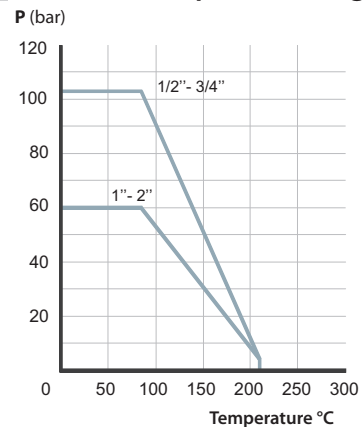
Body	stainless steel (AISI 316) (1)
End cap	stainless steel (AISI 316) (2)
Ball	stainless steel (AISI 316) (3)
Seat ring	P.T.F.E. (4)
Body seal	P.T.F.E. (5)
Thrust washer	P.T.F.E. (6)
Stem packing	P.T.F.E. (7)
Gland ring	P.T.F.E. (8)
Bevel washer	stainless steel (AISI 410) (9)
Piston rod	stainless steel (AISI 316) (10)
Lock nut	stainless steel (AISI 304) (11)
O-ring	viton (12)

CODIFICATION KEY

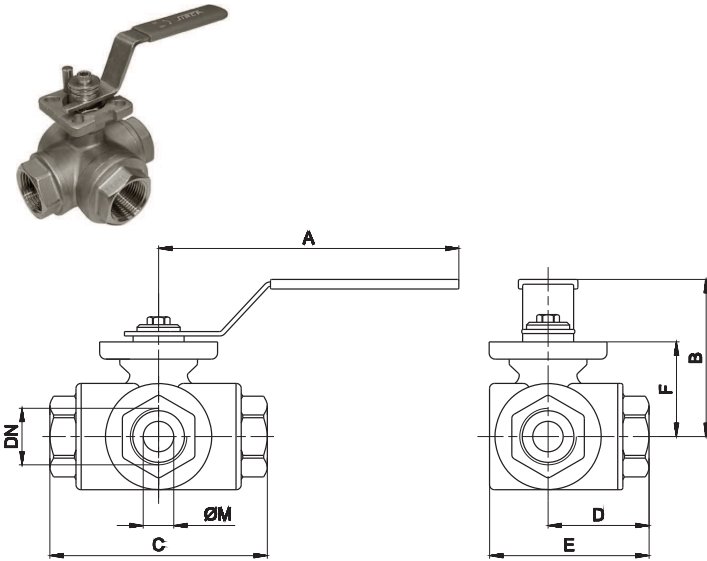
Y	R	2	7	0	0	1	0	D	A
1			2				3		

1 Series	2 Size	3 Version
YR270 = L-shaped ball valve 3/2 AISI 316 with manual lever or rotary actuator	008 = 8 mm 010 = 10 mm 015 = 15 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm 040 = 40 mm 050 = 50 mm	LM = manual lever DA = double acting SR = single acting

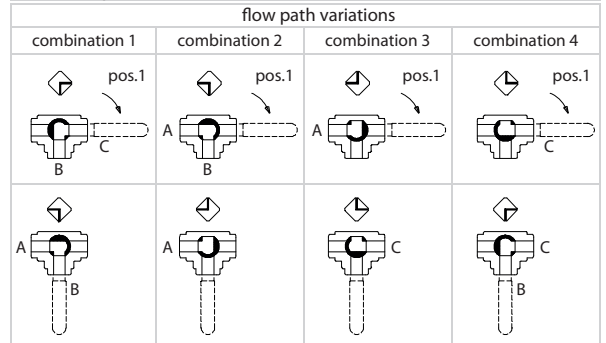
Pressure - temperature diagram



With lever



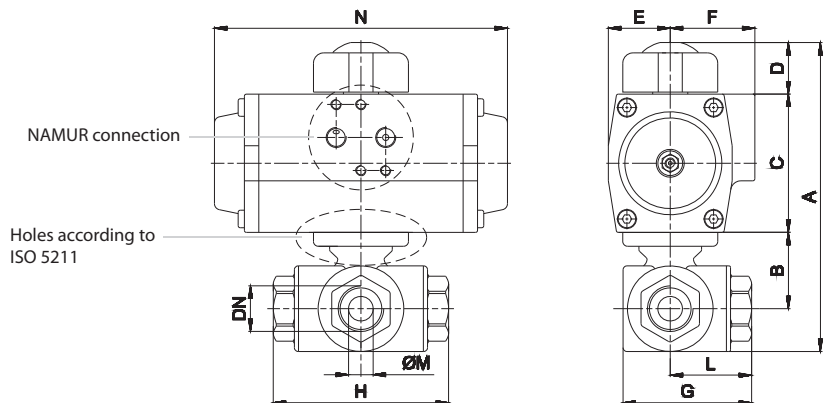
Operating draft



The ball holes position is showed on the stem milling
 A, B, C = outlets Lever rotation: 90°
 To change outlets combination please operate as follow:
 - remove the lever
 - turn the stem into the desired starting position (pos.1)
 - reset the lever

Ø	DN	A	B	C	D	E	F	ØM	Square	ISO 5211	Part no.
8	G 1/4	115	80,5	75,7	38,5	61	40,5	9,5	9	F04	YR270008LM
10	G 3/8	115	80,5	75,7	38,5	61	40,5	11	9	F04	YR270010LM
15	G 1/2	115	80,5	75,7	38,5	61	40,5	12,7	9	F04	YR270015LM
20	G 3/4	115	86	86,5	44,5	73	45	16	9	F04	YR270020LM
25	G 1	135	94,5	102,5	52	83	56,5	20	9	F05	YR270025LM
32	G 1 1/4	180	103	118,5	58,5	96	60,5	25	11	F04 - F05	YR270032LM
40	G 1 1/2	205	124,5	126	64,5	106,5	78,5	32	11	F05 - F07	YR270040LM
50	G 2	205	131	149	75	126	87	38,1	14	F05 - F07	YR270050LM

Double acting/single acting



Double acting

Ø	DN	A	B	C	D	E	F	G	H	L	ØM	N	Part no.
8	G 1/4	157	40,5	67	24	30	41	61	75,7	38,5	9,5	142	YR270008DA
10	G 3/8	157	40,5	67	24	30	41	61	75,7	38,5	11	142	YR270010DA
15	G 1/2	157	40,5	67	24	30	41	61	75,7	38,5	12,7	142	YR270015DA
20	G 3/4	177	45	83	24	36,5	44,5	73	86,5	44,5	16	155	YR270020DA
25	G 1	196	56,5	83	24	36,5	44,5	83	103	52	20	155	YR270025DA
32	G 1 1/4	208	60,5	83	24	36,5	44,5	96	119	58,5	25	155	YR270032DA
40	G 1 1/2	244	78,5	100	24	42,5	49,5	106,5	126	64,5	32	213	YR270040DA
50	G 2	291	87	125	24	55	58	126	149	75	38,1	276	YR270050DA

Single acting

Ø	DN	A	B	C	D	E	F	G	H	L	ØM	N	Part no.
8	G 1/4	173	40,5	83	24	36,5	44,5	61	75,7	38,5	9,5	155	YR270008SR
10	G 3/8	173	40,5	83	24	36,5	44,5	61	75,7	38,5	11	155	YR270010SR
15	G 1/2	173	40,5	83	24	36,5	44,5	61	75,7	38,5	12,7	155	YR270015SR
20	G 3/4	194	45	100	24	42,5	49,5	73	86,5	44,5	16	213	YR270020SR
25	G 1	206	56,5	100	24	42,5	49,5	83	103	52	20	213	YR270025SR
32	G 1 1/4	225	60,5	100	24	42,5	49,5	96	119	58,5	25	213	YR270032SR
40	G 1 1/2	254	78,5	110	24	49	53	106,5	126	64,5	32	236	YR270040SR
50	G 2	318	87	142	34	64	69	126	149	75	38,1	310	YR270050SR

Actuator sizing: air supply actuator 5.5 bar (80 psi) min. with ΔP valve 16 bar (232 psi) max

YR280

Brass L-shaped ball valve 3/2 with manual lever or rotary actuator

- Full-bore ball valve
- Anti-blowout stem
- Antistatic device
- Top-flange according to DIN-ISO 5211



TECHNICAL FEATURES

Temperature	-20 ÷ 160 °C		
Fluid	air, water, chemical agents, etc		
Working pressure	DN 1/4" ÷ DN3/4" PN30	DN 1" PN16	DN 1 1/4" ÷ DN 2" PN10
Thread ends	UNI ISO 7/1-Rp - DIN 2999 (GAS)		
Rotary angle	90°		
Flow direction	both directions		

CONSTRUCTIVE FEATURES

Body	nickel-plated OT 58 (1)
End cap	nickel-plated OT 58 (2)
Ball	nickel-plated OT 58 (3)
Seat ring	P.T.F.E. (4)
Thrust washer	P.T.F.E. (5)
Gasket stem	P.T.F.E. (6)
Gland nut	nickel-plated OT 58 (7)
Piston rod	nickel-plated OT 58 (8)
O-ring	viton (9 - 10)

CODIFICATION KEY

Y	R	2	8	0	0	1	0	D	A
1			2				3		

1 Series

YR280 = Brass L-shaped ball valve 3/2 with manual lever or rotary actuator

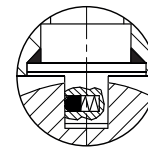
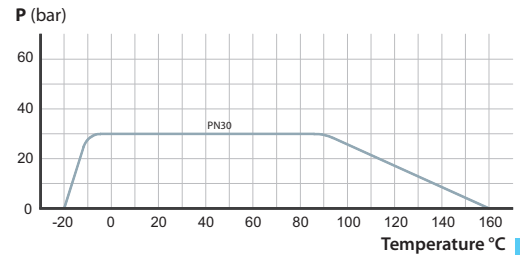
2 Size

- 008** = 8 mm
- 010** = 10 mm
- 015** = 15 mm
- 020** = 20 mm
- 025** = 25 mm
- 032** = 32 mm
- 040** = 40 mm
- 050** = 50 mm

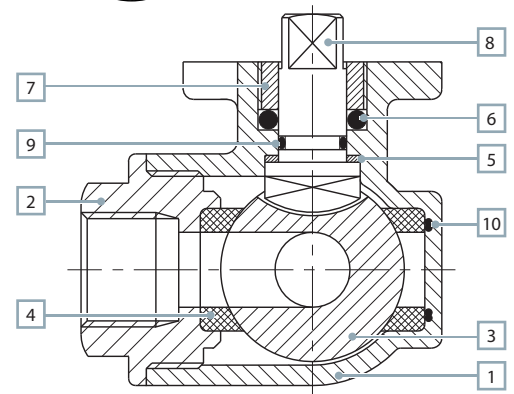
3 Version

- LM** = manual lever
- DA** = double acting
- SR** = single acting

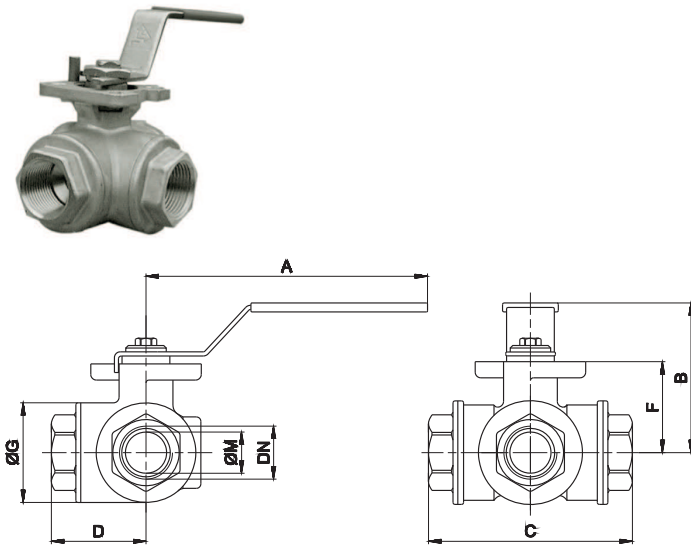
Pressure - temperature diagram



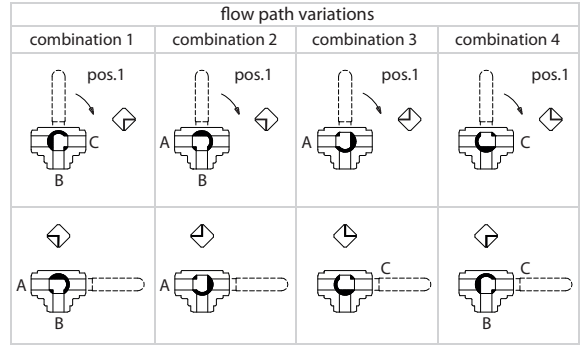
antistatic device



With manual lever



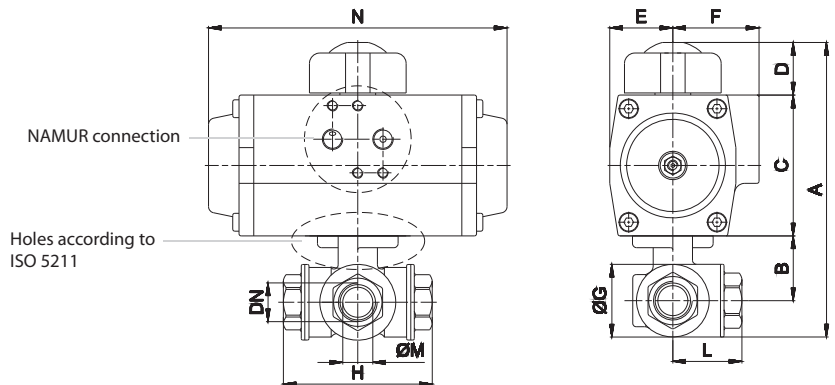
Operating draft



The ball holes position is showed on the stem milling
 A, B, C = outlets Lever rotation: 90°
 To change outlets combination please operate as follow:
 - remove the lever
 - turn the stem into the desired starting position (pos.1)
 - reset the lever

Ø	DN	A	B	C	D	F	ØG	ØM	Square	ISO 5211	Part no.
8	G1/4	120	59	65	53	32,5	34	10	9	F03	YR280008LM
10	G3/8	120	59	65	53	32,5	34	10	9	F03	YR280010LM
15	G1/2	120	62	78	60,5	32,5	40	14	9	F03	YR280015LM
20	G3/4	170	78	87	68	41,5	48	19	11	F05	YR280020LM
25	G1	170	83	105	82,5	47	60	24	11	F05	YR280025LM
32	G1 1/4	170	88	118	99	60	72	30	11	F05	YR280032LM
40	G1 1/2	220	111	134	114	74	86	38	14	F07	YR280040LM
50	G2	220	120,5	161	138	85	112	48	14	F07	YR280050LM

Double acting/spring return



Double acting

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G1/4	118,5	32,5	45	24	22,5	22,5	34	65	53	10	115	YR280008DA
10	G3/8	118,5	32,5	45	24	22,5	22,5	34	65	53	10	115	YR280010DA
15	G1/2	143,5	32,5	67	24	30	41	40	78	60,5	14	142	YR280015DA
20	G3/4	172,5	41,5	83	24	36,5	44,5	48	87	68	19	155	YR280020DA
25	G1	184	47	83	24	36,5	44,5	60	105	82,5	24	155	YR280025DA
32	G1 1/4	203	60	83	24	36,5	44,5	72	118	99	30	155	YR280032DA
40	G1 1/2	241	74	100	24	42,5	49,5	86	134	114	38	213	YR280040DA
50	G2	265	85	100	24	42,5	49,5	112	161	138	48	213	YR280050DA

Spring return

Ø	DN	A	B	C	D	E	F	ØG	H	L	ØM	N	Part no.
8	G1/4	140,5	32,5	67	24	30	41	34	65	53	10	142	YR280008SR
10	G3/8	140,5	32,5	67	24	30	41	34	65	53	10	142	YR280010SR
15	G1/2	143,5	32,5	67	24	30	41	40	78	60,5	14	142	YR280015SR
20	G3/4	172,5	41,5	83	24	36,5	44,5	48	87	68	19	155	YR280020SR
25	G1	184	47	83	24	36,5	44,5	60	105	82,5	24	155	YR280025SR
32	G1 1/4	220	60	100	24	42,5	49,5	72	118	99	30	213	YR280032SR
40	G1 1/2	241	74	100	24	42,5	49,5	86	134	114	38	213	YR280040SR
50	G2	275	85	100	24	49	53	112	161	138	48	236	YR280050SR

Actuator sizing: air supply actuator 5.5 bar (80 psi) min. with ΔP valve 16 bar (232 psi) max

CSA-UL

Electropilots with "CSA-UL" Certification

Electropilots and valves are supplied with coil certified for United States and Canada. Products with this mark are certified by the Canadian CSA organization in compliance with the standards required by the US (US on the right of the logo) and Canadian market (C on the left of the logo).

Certification N° 244884.

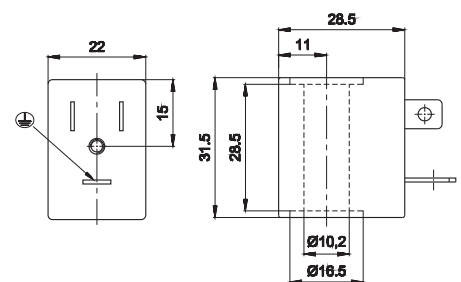
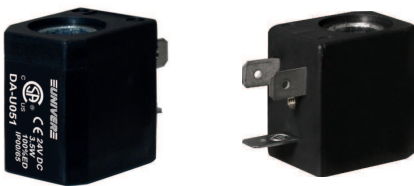
In compliance with:
 CSA C22.2 No. 139-13
 UL 429:2013



TECHNICAL CHARACTERISTICS

Ambient temperature	-10°C + 45°C
Duty cycle (%)	100
Tension tolerance	±10

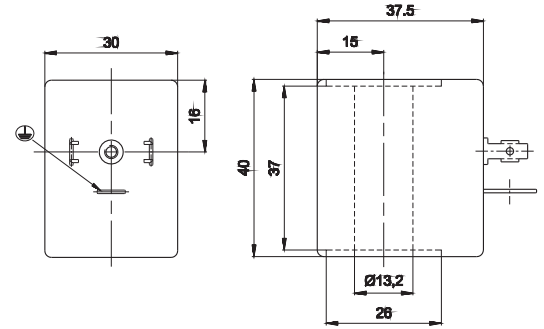
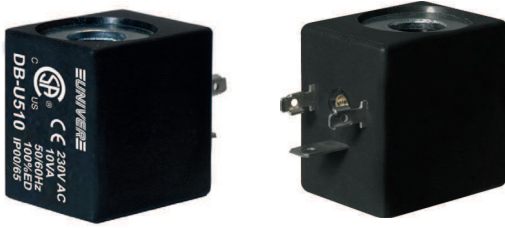
■ U1 22 mm coil to be used with U1 electropilot



Duty cycle ED(a)	Ambient temperature	Power consumption W		Tension tolerance %	Rated voltage	Weight Kg	Part no.
		hold	inrush				
100	-10°C+45°C	3,5	3,5	±10	12 V DC	0,06	DA-U050
100	-10°C+45°C	3,5	3,5	±10	24 V DC	0,06	DA-U051
100	-10°C+45°C	6	6	±10	12 V DC*	0,06	DA-U101
100	-10°C+45°C	6	6	±10	24 V DC	0,06	DA-U102
100	-10°C+45°C	6	6	±10	48 V DC*	0,06	DA-U103
100	-10°C+45°C	6	6	±10	110 V DC*	0,06	DA-U104
100	-10°C+45°C	5 VA (Max)	7,8 VA (Max)	±10	24 V AC/50-60 HZ	0,06	DA-U106
100	-10°C+45°C	5 VA (Max)	7,8 VA (Max)	±10	110 V AC/50-60 HZ	0,06	DA-U108
100	-10°C+45°C	5 VA (Max)	7,8 VA (Max)	±10	230 V AC/50-60 HZ	0,06	DA-U124

(*) = upon request

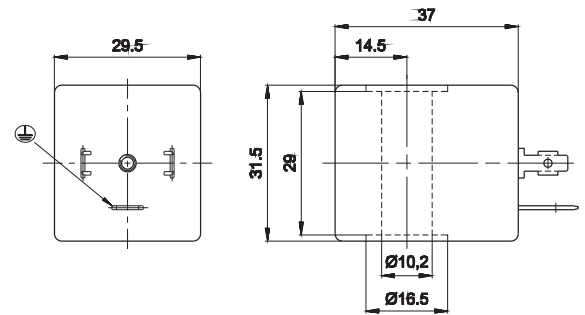
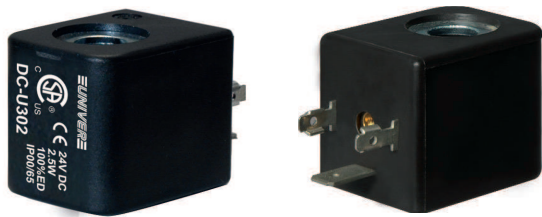
U2 30 mm coil to be used with U2 electropilot



Duty cycle ED(a)	Ambient temperature	Power consumption W		Tension tolerance	Rated voltage	Weight Kg	Part no.
		hold	irush				
100	-10°C+45°C	11	11	±10	12 V DC	0,10	DB-U501
100	-10°C+45°C	11	11	±10	24 V DC	0,10	DB-U502
100	-10°C+45°C	11	11	±10	48 V DC*	0,10	DB-U503
100	-10°C+45°C	11	11	±10	110 V DC*	0,10	DB-U504
100	-10°C+45°C	10 VA (Max)	16 VA (Max)	±10	24 V AC/50-60 HZ	0,10	DB-U507
100	-10°C+45°C	10 VA (Max)	16 VA (Max)	±10	110 V AC/50-60 HZ	0,10	DB-U509
100	-10°C+45°C	10 VA (Max)	16 VA (Max)	±10	230 V AC/50-60 HZ	0,10	DB-U510

(*) = upon request

U3 30 mm coil to be used with U1 electropilot



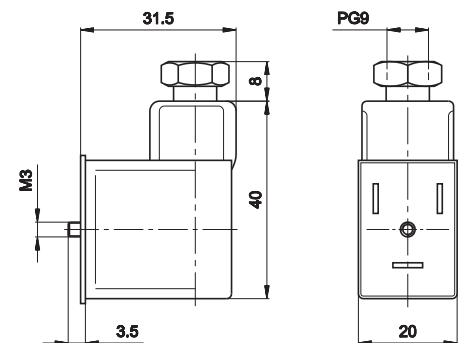
Duty cycle ED(a)	Ambient temperature	Power consumption W		Tension tolerance	Rated voltage	Weight Kg	Part no.
		hold	inrush				
100	-10°C+45°C	2,5	2,5	±10	12 V DC	0,08	DC-U301
100	-10°C+45°C	2,5	2,5	±10	24 V DC	0,08	DC-U302
100	-10°C+45°C	2,5	2,5	±10	110 V DC*	0,08	DC-U304
100	-10°C+45°C	3,3 VA (Max)	5 VA (Max)	±10	24 V AC/50-60 HZ	0,08	DC-U307
100	-10°C+45°C	3,3 VA (Max)	5 VA (Max)	±10	110 V AC/50-60 HZ	0,08	DC-U309
100	-10°C+45°C	3,3 VA (Max)	5 VA (Max)	±10	230 V AC/50-60 HZ	0,08	DC-U310

(a) = under continuous service maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated

(*) = upon request

Connector for U1 coil

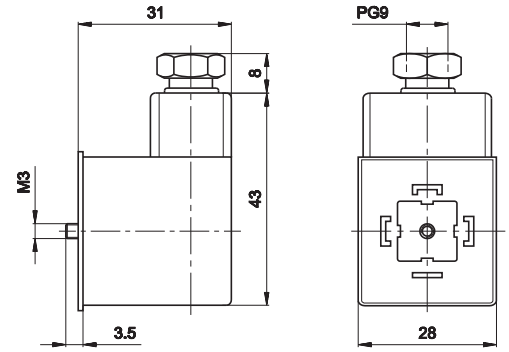
Coil	Part no.
CONNECTOR	
	U1 AM-5110



Protection according to IP 65. PG9 cable connection. 180° rotation on the coil LED and moulded cable are available upon request

Connector for U2, U3 coil

	Coil	Part no.
DIN 43650 CONNECTOR		
	U2/U3	AM-5111



Protection according to IP 65. PG9 cable connection. 360° rotation on the coil LED and moulded cable are available upon request

Coils matching with electropilots/valves

<p>■ AA U1 Miniature electropilots</p> 	<p>■ AB U2 Miniature electropilots</p> 	<p>■ BE ISO 5599/1 valves size 1-2-3-4</p> 
<p>■ AE ISO 5599/1 light series valves size 1-2</p> 	<p>■ AC-N NAMUR valves</p> 	<p>■ CL/CM UNIVERSAL valves G1/8 - G1/4</p> 
<p>■ G7 26 mm - valves and solenoid valves</p> 	<p>■ AC MIXED valves G1/8 - G1/4 - G1/2</p> 	<p>■ AF Poppet valves for compressed air G1/8 ÷ G1 1/2</p> 
<p>■ AG Popper valves for vacuum G1/8 ÷ G1 1/2</p> 	<p>■ HZE1S Shut-off valves</p> 	

For technical details on electropilots/valves refer to our technical catalogue