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CAMOZZI

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New products presentation

1 > Movement

2 > Control

3 > Treatment

5 > Vacuum

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News 2009

Cylinders - Aluminium profile

Series 62

Fit for purpose

In response to the market's increasing need for more complete, technically advanced solutions closely related to the application, Camozzi further expands the product portfolio presenting the new cylinders **Series 62**, especially designed to optimize the basic functions resulting in a quality product at a very competitive price.

General data

High use flexibility

The cylinder Series 62 has been designed on the basis of Series 61.
Both the profile and the piston have been improved and optimized as to their weight, thus allowing to reduce the cylinder cost.
This cylinder is a basic product representing a really attractive solution for the market as it can be used in a lot of industrial fields'applications at an excellent quality price level.

In compliance with standards

Camozzi always includes new cylinders within the standard range, making sure that these comply with the international standards.
Accordingly, Series 62 has been designed in compliance with the dimensions laid down in standards ISO 15552 as a replacement for previous DIN/ISO 6431/VDMA 24562.

Clean and light design

A permanent magnet is integrated in the piston which enables the detection of the piston's position, by means of proximity switches (Series CSH) mounted in the grooves along one side of the cylinder profile.
These grooves can be covered with a slot cover profile.
These cylinders are equipped with adjustable end-stroke cushioning.

The advantages

> Dimensions in compliance with standard ISO 15552
> Rolled stainless steel rod
> Clean and light design with adjustable end-stroke cushioning
> Excellent quality/price level

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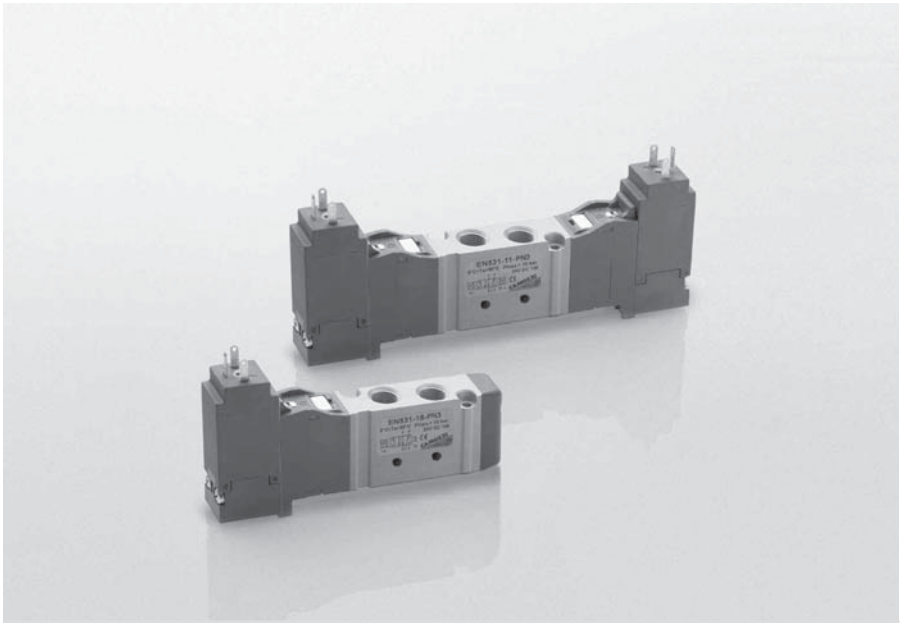
Valves and solenoid valves

Series EN



High reliability and space saving

This new valve has been designed to be installed in applications requiring a reduced space and where the valves need to be located as near as possible to the operating elements.
The valves **Series EN** can be mounted on any flat surface, and allow for an extremely compact machine design, thanks also to the reduced dimensions of the valve itself.

General data

Completely interchangeable

This new generation of solenoid valves is the evolution of the previous Series E, size 16 mm valve with ports threaded into the body.
As this valve is completely interchangeable with Series E, part of the code is maintained though the valve has a completely new shape and new components.

High flexibility

This new valve has an aluminium body, technopolymer endcovers, a new coil and a plug with connections in line with the pneumatic outlets, which further reduces the overall dimensions.
The valve is available as 5/2 mono and bistable in 3 types as 5/3 C.C., C.O., C.P. with voltage from 24 to 230V and protection class IP65.
It can also be used with vacuum components thanks to the option of an external servo-pilot supply.

Easy mounting

Series EN is equipped with a new pneumatic manifold which is particularly optimised in its overall dimensions.
The new connectors and the electrical pilot solution allows the electric cables to be placed in the same direction as the tube, reducing the overall dimensions and allowing assembly of the valve in a reduced space.
Every new change made has improved the production process, resulting in a new product available at a really competitive price.

The advantages

- > Mounting on any flat surface
- > Reduced dimensions
- > Aluminium body and technopolymer endcovers
- > Space saving

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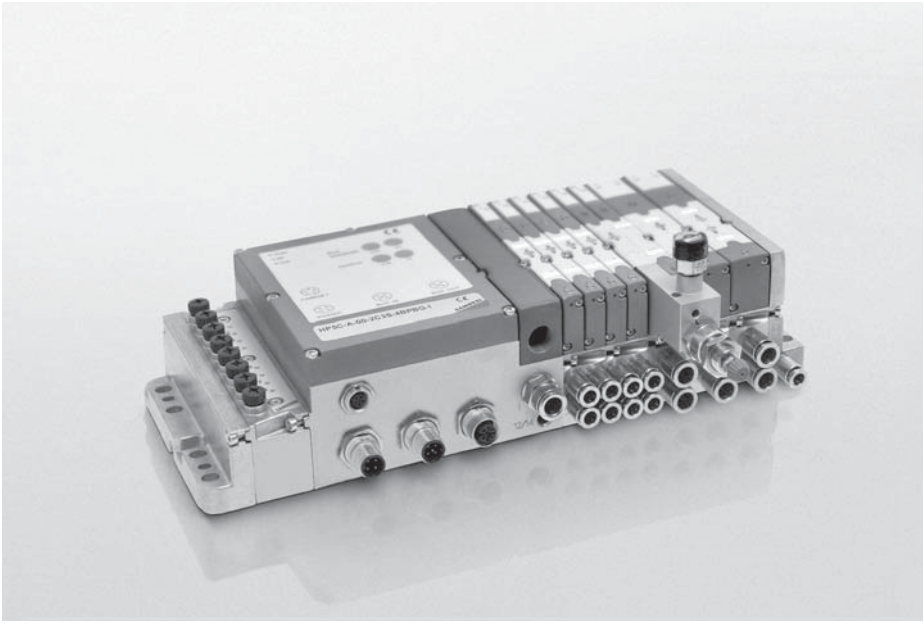
News 2009

Valve Islands

Series H



The world of **H** *technology*

With the **Series H** range now complete, with sizes 10,5 and 21 mm, the world of **H** technology and flexibility has definitively been upgraded. Thanks to high technology, a large range of options and total flexibility, the **Series H** valve islands always guarantee the best solution for each application, either as multipole or fieldbus versions. The light weight and the high flow rate combined to its compact design make the **Series H** one the most-advanced solutions in the pneumatics field.

General data

The Series H evolution

Apart from the individual fieldbus, mixing of pneumatics and electronics is now possible with the new CX2 module, allowing up to a max of 64 inputs and 64 outputs (coils and electrical signals) that can be connected to the fieldbus protocols; Profibus-Dp, CANOpen and DeviceNet.

The applications

The expandable version is particularly recommended for applications requiring a Master Island from which expansions depend, whilst the individual solution offers economical advantages when it is necessary to have single islands or in applications requiring components near to the Island itself.

A large range of components

Pressure regulator on the single solenoid valve (patented) maintaining the dimensions and keeping the valve island aesthetics unchanged. Output modules D-Sub-37 pin for 8, 16, 24 or 32 outlets; These electrical modules allow connection to the main Island, for instance with multipole valve islands, reducing therefore the costs. Output modules with M12 Duo connectors for 4 outlets, for connection of ports located in different areas. Electrical supply separated modules, allowing for part operation of the valve island.

The advantages

> Compact design
> Modularity
> Connection flexibility
> High Protection class (IP65)
> Easy assembly

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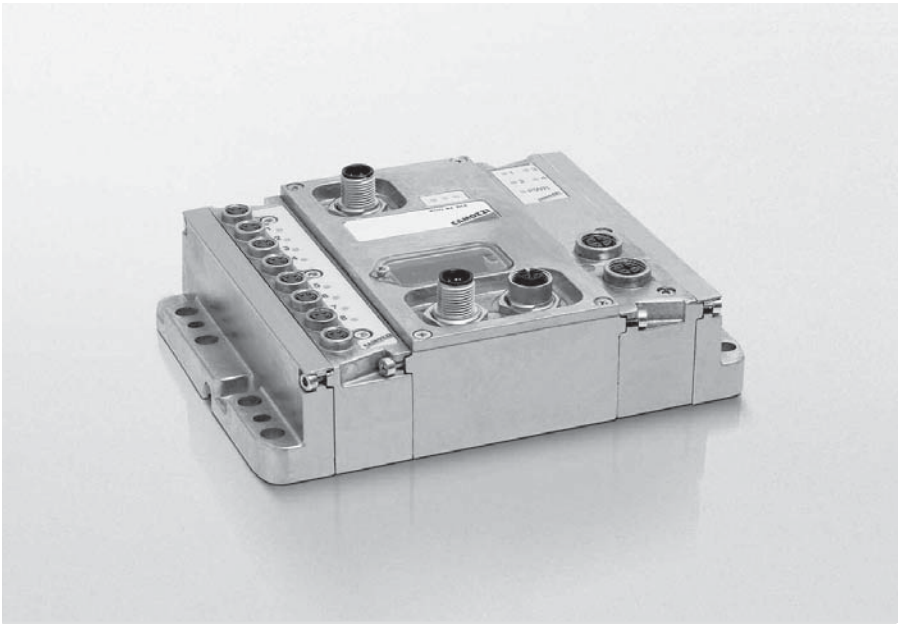
Individual Fieldbus node
Series CX2



The new Individual Fieldbus node Series **CX2**

Industrial applications for valve islands using a Fieldbus Protocol connection are increasing, utilising the advantages in implementation and ease of wiring. To respond to this increasing market demand, Camozzi has developed a new serial node enabling some solenoid valves series to interface with the most widespread Fieldbus Protocols: Profibus-Dp; CANOpen and DeviceNet.

General data

Maximum flexibility in use

The possibility to use the serial nodes directly integrated on different series of valves or as external components. Flexibility is increased by the modular structure. This device allows the connection of up to a max of 64 solenoids and 64 inputs on the base unit, so applications other than pneumatics are a possibility.

Wide range of modules

Electric output modules that can be coupled are: connection D-Sub- 37 pin for 8; 16; 24; 32 outlets or with two M12 connections for 4 outlets. Input modules have 8 M8 connections and allow the connection of sensors rated up to a max of 100mA.

High resistance

Thanks to its Aluminium support structure, this solution is IP65 rated with high mechanical strength. It is therefore suitable for mounting in arduous conditions. Easily modifiable, because all communication modules are connected by plug and socket, and addressing is done by rotary switch. It is also competitively priced.

The advantages

> Maximum flexibility in use
> For use in arduous conditions
> Easily modifiable

Parte elettrica

PROFIBUS | CANopen | DeviceNet

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News 2009

Micro pressure regulators

Series CLR

Pressure regulator made easier, for every application

The new range of **Series CLR** micro pressure regulators is Camozzi's answer to a more and more widespread request for products that guarantee precision, reliability and compactness.

General data

Maximum reliability

CLR flow regulator is conceived in order to guarantee maximum reliability for regulations of wide flows in applications that foresee a direct mounting, optimizing general dimensions and weight. Based on a piston functioning principle, the regulator has a brass body and a polymer adjustable as connection fitting.

Ease of use

The pressure is precisely regulated simply by turning the polymer knob with a locking nut available to set the desired output. The threaded top part and bottom of the body enable various mounting solutions. Without the adjustable fitting, the regulator can be mounted directly on seats made out from some machine parts.

The advantages

> Maximum light weight
> Compact dimensions
> Panel-mounted also available
> Ports G1/8 and G1/4

Pressure microregulators

Series T

Camozzi quality, the highest reliability

Manufactured from technopolymer material, the new **Series T** pressure microregulators have been created in order to offer a good regulation product at a very competitive price.

General data

Construction easiness

Series T pressure microregulators are available with G1/8 and G1/4 brass connections.
A self-relieving piston has been incorporated into the design to allow decreasing adjustments.
Non-relieving versions are also available.

High reliability

All models are equipped with a valve enabling fast draining (VS) which is useful when a regulator should be inserted between the valve and cylinder (or capacity) without any negative influence on the exhaust.

The advantages

> Maximum light weight
> Compact dimensions
> In-line or panel-mounted

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Vacuum
components

Compact and light weight for dynamic applications

Camozzi expands its comprehensive vacuum program introducing new series of light weight basic, in-line ejectors and filters. With the introduction of this program, Camozzi is able to cover an even wider range of applications, where light weight and small dimensions are essential such as feeder systems, handling of electronic components or in separation systems for plastic and sheet-metal machining to mention a few examples.

Basic ejectors
Series VEBL

General data

Basic ejectors in technopolymer without moving parts, based on the Venturi principle. Different sizes available, with internal nozzle from 0,5 to 2,5 mm and with suction rate from 8 to 207 l/min.

The advantages

> Small dimensions
> Light weight, suitable for dynamic applications
> Bracket, or screw mounted, easy to install

Inline ejectors
Series VEDL

Vacuum compact ejectors in technopolymer without moving parts, based on the Venturi principle, used for direct installation on suction pads. Available in two sizes with internal nozzle of 0,5 and 0,7 mm and with suction rate from 8 to 16 l/min.

The advantages

> Small dimensions
> Very light weight, only 5 gram, ideal for dynamic applications
> Easy to install
> Low air consumption

Inline vacuum filters
Series FVD

For use in vacuum systems with minor to medium levels of dirt. Direct mounting on the suction pad.

The advantages

> Light weight
> Easily replaceable filter element
> Transparent housing for easy indication of degree of contamination

Vacuum cup filters
Series FVT

Used as pre-filters and fine filters for air with varying amounts of contamination, for the protection of the vacuum generator.

The advantages

> For protection of ejectors and vacuum pumps
> Easily replaceable filter element
> Transparent housing for easy indication

Cylinders Series 62 - Aluminium profile

New

Double-acting, magnetic, cushioned
ø 32, 40, 50, 63, 80, 100, (ISO 15552)

- ISO 15552 (DIN/ISO 6431/VDMA 24562)
- Rolled stainless steel rod
- Clean and light design
- Adjustable pneumatic cushioning

The Series 62 cylinders have been designed to comply with the dimensions laid down in the ISO 15552 standards. A permanent magnet is integrated in the piston which enables the detection of the piston's position, by means of proximity switches (Series CSH) mounted in grooves along one side of the cylinder profile. These grooves can be covered with a slot cover profile Mod. S-CST-500.

These cylinders are equipped with adjustable end-stroke cushioning. They are also equipped with a mechanical cushioning in order to reduce the impact of the piston as it reaches the end of the stroke.

GENERAL DATA

Type of construction	with tie-rods (inside the profile)
Operation	double-acting
Materials	aluminium end-blocks, NBR seals, other parts see coding
Type of mounting	with tie-rods, front flange, rear flange, feet front and rear trunnion, swivel combination
Stroke min - max	10 ÷ 2500 mm
Operating temperature	0°C ÷ 80°C (with dry air -10°C)
Special designs	see coding example
Operating pressure	1 ÷ 10 bar
Speed	10 ÷ 1000 mm/sec (NO LOAD)
Fluid	clean air, lubrication if lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.
Proximity switch to use	CSH

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

STANDARD STROKES FOR CYLINDERS SERIES 62

Special strokes until 2500 mm available on request
✖ = Double acting

Ø	25	50	75	80	100	125	150	160	200	250	300	320	400	500
32	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
40	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
50	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
63	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
80	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
100		✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖

CODING EXAMPLE

62	M	2	P	050	A	0200	

62	SERIES
M	VERSION M= standard, magnetic
2	OPERATION 2 = double-acting 3 = double-acting (no cushion) 4 = double-acting (rear cushion) 5 = double-acting (front cushion) 6 = double-acting, through rod
P	MATERIALS P = rolled stainless steel rod AISI 420B - anodized profile aluminium tube - NBR seals - nuts and tie-rods zinc-plated steel
050	BORE: 032 = 32 mm 040 = 40 mm 050 = 50 mm 063 = 63 mm 080 = 80 mm 100 = 100 mm
A	CONSTRUCTION A = standard lock nut for rod RL = cylinder with rod lock
0200	STROKE: 10 ÷ 2500 mm
	= standard P = rod seal PU

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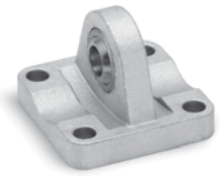
CYLINDERS ACCESSORIES SERIES 62

Piston rod socket joint Mod. GY

Piston rod lock nut Mod. U

Clevis pin Mod. S

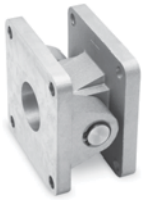


Rear trunnion ball-joint Mod. R

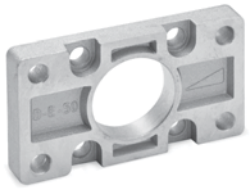
Coupling piece Mod. GKF (New)

Swivel ball joint Mod. GA

90° male trunnion Mod. ZC



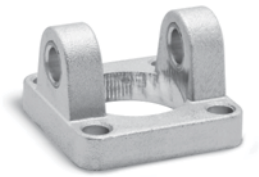
Swivel Combination Mod. C+L+S



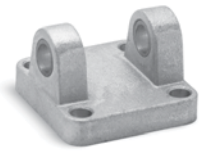
Front and rear flange Mod. D-E

Self aligning rod Mod. GK (New)

Foot mount Mod. B



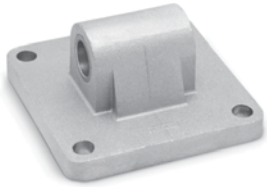
Front female trunnion Mod. H and CH



Rear female trunnion Mod. C and CH

Rod fork end Mod. G

All accessories are supplied separately, except for piston rod lock nut Mod. U



Rear trunnion male Mod. L

The company reserves the right to vary models and dimensions without notice.
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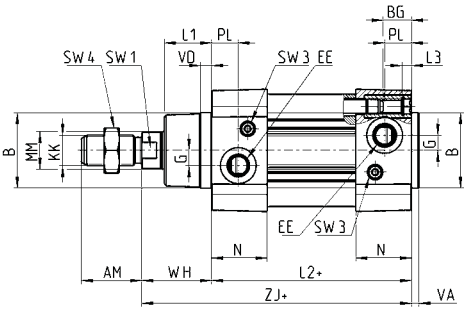
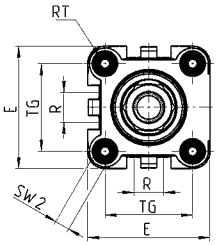
Cylinders Series 62

New

+ = add the stroke





DIMENSIONS

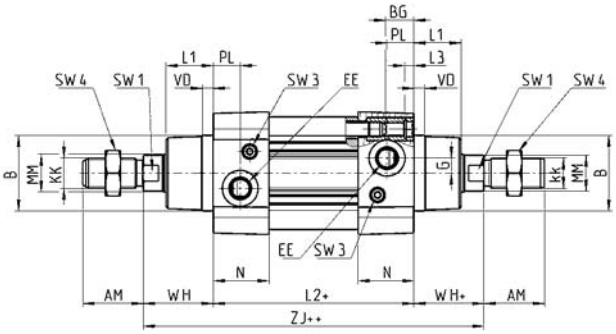
Ø	AM	B	BG	E	EE	G	KK	L1	L2+	L3	MM	N	PL	R	RT	SW1	SW2	SW3	SW4	TG	VA	VD	WH	ZJ+	front and rear cushion stroke
32	22	30	16	46	G1/8	5	M10x1,25	18	94	5	12	26	14	13	M6	10	6	2	17	32,5	4	5	26	120	17
40	24	35	16	55	G1/4	5	M12x1,25	21	105	5	16	29	15	13,5	M6	13	6	2	19	38	4	5	30	135	20
50	32	40	16	64,5	G1/4	8	M16x1,5	25	106	5	20	29,5	15	16	M8	17	8	3	24	46,5	4	6	37	143	15
63	32	45	16	75	G3/8	8	M16x1,5	26	121	5	20	36,5	21	28	M8	17	8	3	24	56,5	4	6	37	158	17
80	40	45	19	93	G3/8	8	M20x1,5	30	128	0	25	36	21	30	M10	22	10	5	30	72	4	7	46	174	20
100	40	55	19,5	110	G1/2	8	M20x1,5	35	138	0	25	38,5	23	40	M10	22	10	5	30	89	4	7	51	189	21

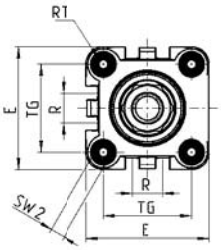
Cylinders Series 62

New

Through rod

+ = add the stroke
++ = add the stroke two times





DIMENSIONS

Ø	AM	B	BG	E	EE	G	KK	L1	L2+	L3	MM	N	PL	R	RT	SW1	SW2	SW3	SW4	TG	VD	WH	ZM+	front and rear cushion stroke
32	22	30	16	46	G1/8	5	M10x1,25	18	94	5	12	26	14	13	M6	10	6	2	17	32,5	5	26	146	17
40	24	35	16	55	G1/4	5	M12x1,25	21	105	5	16	29	15	13,5	M6	13	6	2	19	38	5	30	165	20
50	32	40	16	64,5	G1/4	8	M16x1,5	25	106	5	20	29,5	15	16	M8	17	8	3	24	46,5	6	37	180	15
63	32	45	16	75	G3/8	8	M16x1,5	26	121	5	20	36,5	21	28	M8	17	8	3	24	56,5	6	37	195	17
80	40	45	19	93	G3/8	8	M20x1,5	30	128	0	25	36	21	30	M10	22	10	5	30	72	7	46	220	20
100	40	55	19,5	110	G1/2	8	M20x1,5	35	138	0	25	38,5	23	40	M10	22	10	5	30	89	7	51	240	21

The company reserves the right to vary models and dimensions without notice.
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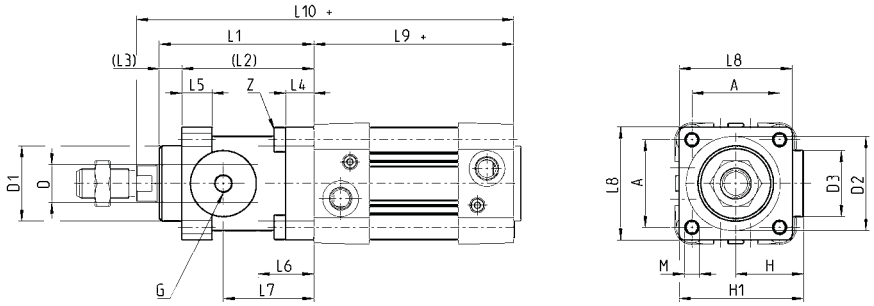
Cylinders Series 62 with rod lock

New

+ = add the stroke



DIMENSIONS

Ø	øD	øD1	øD2	øD3	A	G	H	H1	L1	L2	L3	L4	L5	L6	L7	L8	L9+	L10+	M	Z
32	12	30,5	35	25	32,5	M5	25,5	46,5	58	48	10	8	13	20,5	34	45	94	160	M6	M6x20
40	16	35	40	28	38	G1/8	30	53	65	55	10	8	13	22,5	38	50	105	178	M6	M6x20
50	20	40	50	35	46,5	G1/8	36	64	82	70	12	15	16	29,5	48	60	106	200	M8	M6x20
63	20	45	60	38	56,5	G1/8	40	75	82	70	12	15	16	29,5	49,5	70	121	215	M8	M8x30
80	25	45	80	48	72	G1/8	50	95	110	90	20	18	20	35	61	90	128	254	M10	M10x35
100	25	55	100	58	89	G1/8	58	110,5	115	100	15	18	20	39	69	105	138	269	M10	M10x35

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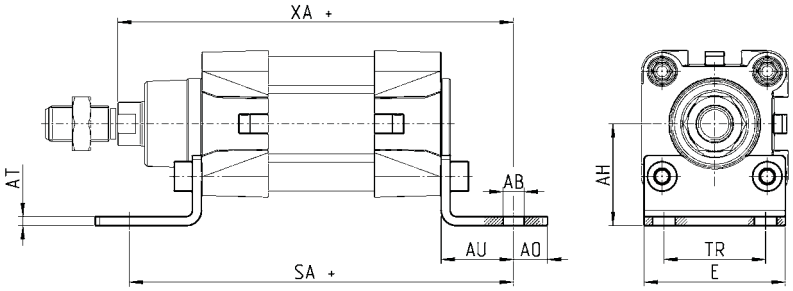
Foot mount Mod. B

Material: zinc-plated steel

Supplied with:
2x feet
4x screws

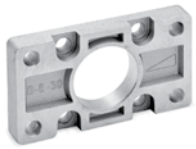
+ = add the stroke



Mod.	Ø	AT	SA+	XA+	TR	E	AB	AH	AO	AU
B-41-32	32	4	142	144	32	45	7	32	11	24
B-41-40	40	4	161	163	36	53,5	10	36	15	28
B-41-50	50	4	170	175	45	62,5	10	45	15	32
B-41-63	63	5	185	190	50	73	10	50	15	32
B-41-80	80	6	210	216	63	92	12	63	20	41
B-41-100	100	6	220	230	75	108,5	14,5	71	25	41

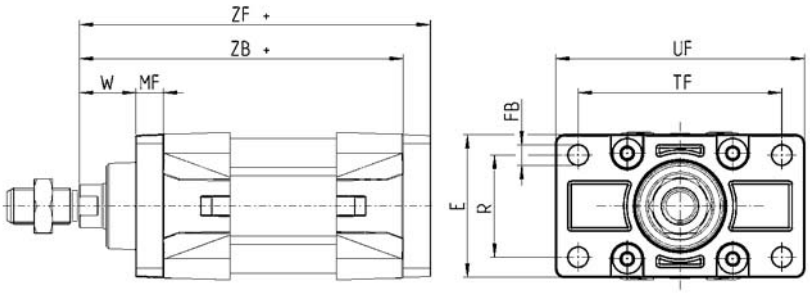
Front and rear flange Mod. D-E

Material: aluminium



Supplied with:
1x flange
4x screws

+ = add the stroke



Mod.	Ø	W	MF	ZB+	TF	R	UF	E	FB	ZF+	torque force
D-E-41-32	32	16	10	120	64	32	86	45	7	130	6 Nm
D-E-41-40	40	20	10	135	72	36	88	52	9	145	6 Nm
D-E-41-50	50	25	12	143	90	45	110	63	9	155	13 Nm
D-E-41-63	63	25	12	158	100	50	116	73	9	170	13 Nm
D-E-41-80	80	30	16	174	126	63	148	95	12	190	19 Nm
D-E-41-100	100	35	16	189	150	75	176	115	14	205	22 Nm

The company reserves the right to vary models and dimensions without notice.
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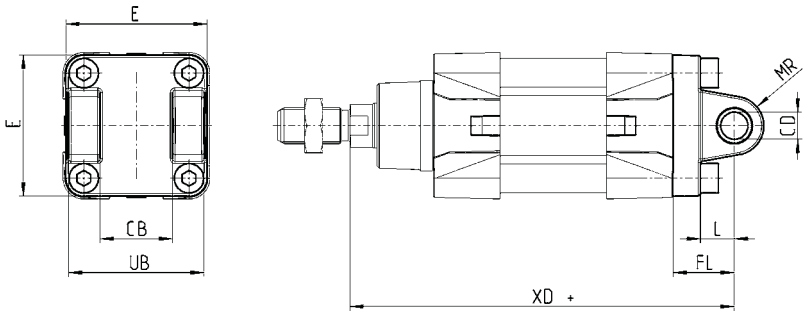
Rear trunnion female Mod. C and C-H

Material: aluminium

Supplied with:
N° female trunnion
N° screws

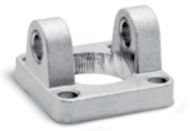
+ = add the stroke



Mod.	Ø	CD	L	FL	XD+	MR	E	CB	UB	torque force
C-41-32	32	10	12	22	142	10	45	26	45	6 Nm
C-41-40	40	12	15	25	160	13	52	28	52	6 Nm
C-41-50	50	12	15	27	170	13	63	32	60	13 Nm
C-H-41-63	63	16	20	32	190	15	73	40	70	13 Nm
C-H-41-80	80	16	24	36	210	15	95	50	90	19 Nm
C-H-41-100	100	20	29	41	230	18	115	60	110	26 Nm

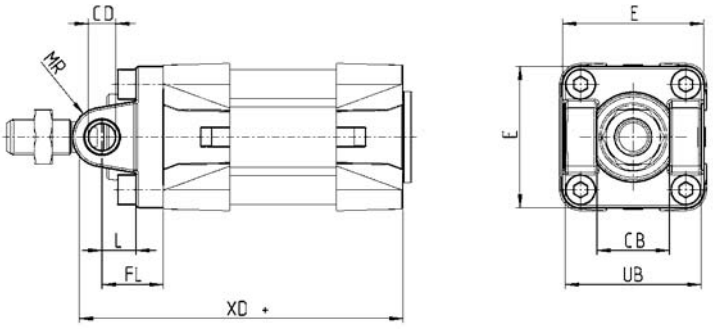
Front trunnion female Mod. H and C-H

Material: aluminium



Supplied with:
1x female trunnion
4x screws

+ = add the stroke



Mod.	Ø	CB	UB	E	XD	FL	L	CD	MR
H-41-32	32	26	45	45	120	22	12	10	10
H-41-40	40	28	52	52	135	25	15	12	13
H-41-50	50	32	60	63	143	27	15	12	13
H-60-63	63	40	70	73	158	32	20	16	15
C-H-41-80	80	50	90	95	174	36	24	16	15
C-H-41-100	100	60	110	115	189	41	29	20	18

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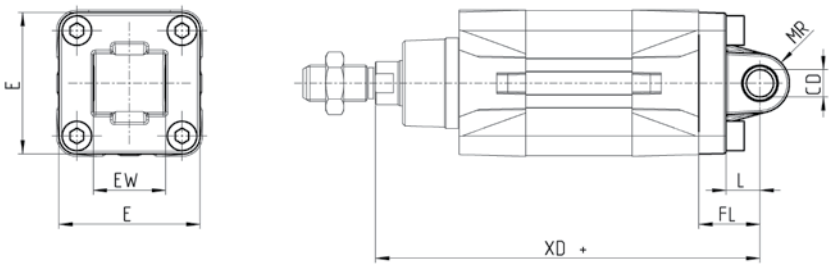
Rear trunnion, male Mod. L

Material: aluminium

Supplied with:
1x male trunnion
4x screws

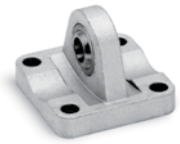
+ = add the stroke



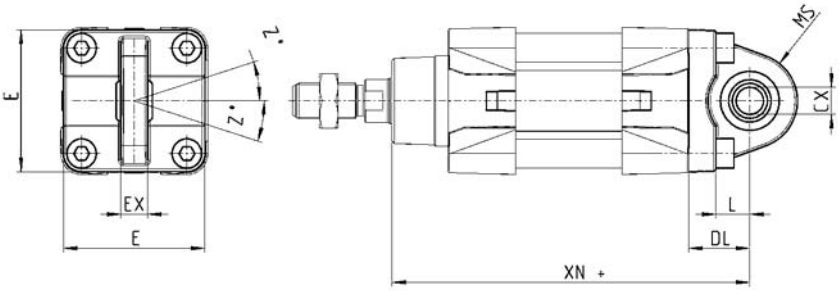
Mod.	Ø	CD	L	FL	XD+	MR	E	EW	torque force
L-41-32	32	10	12	22	142	9	45	26	6 Nm
L-41-40	40	12	15	25	160	13	52	28	6 Nm
L-41-50	50	12	15	27	170	13	63	32	13 Nm
L-41-63	63	16	20	32	190	15	73	40	13 Nm
L-41-80	80	16	24	36	210	15	95	50	19 Nm
L-41-100	100	20	29	41	230	18	115	60	22 Nm

Trunnion ball-joint Mod. R

Material: aluminium
not according to standard



Supplied with:
1x trunnion ball-joint
4x screws



Mod.	Ø	CX	L	DL	XN+	MS	E	EX	EP	Z	Torque force
R-41-32	32	10	12	22	142	16	45	14	10,5	4	6 Nm
R-41-40	40	12	15	25	160	20	52	16	12	4	6 Nm
R-41-50	50	12	15	27	170	20	63	16	12	4	13 Nm
R-41-63	63	16	20	32	190	24	73	21	15	4	13 Nm
R-41-80	80	16	24	36	210	24	95	21	15	4	19 Nm
R-41-100	100	20	29	41	230	30	115	25	18	4	22 Nm

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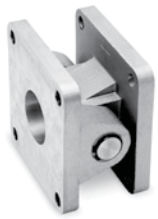
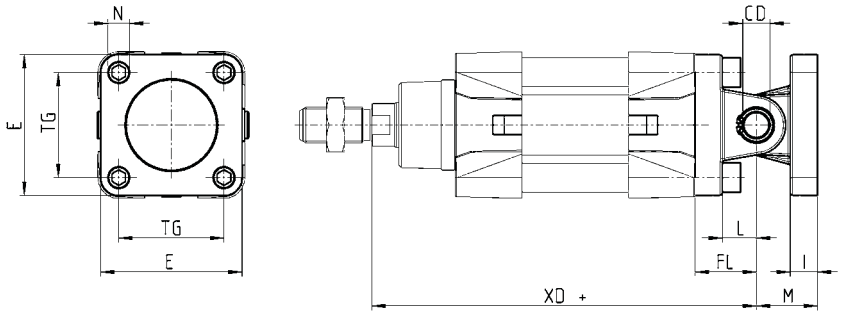
Accessory combination Mod. C+L+S

Material: aluminium



+ = add the stroke



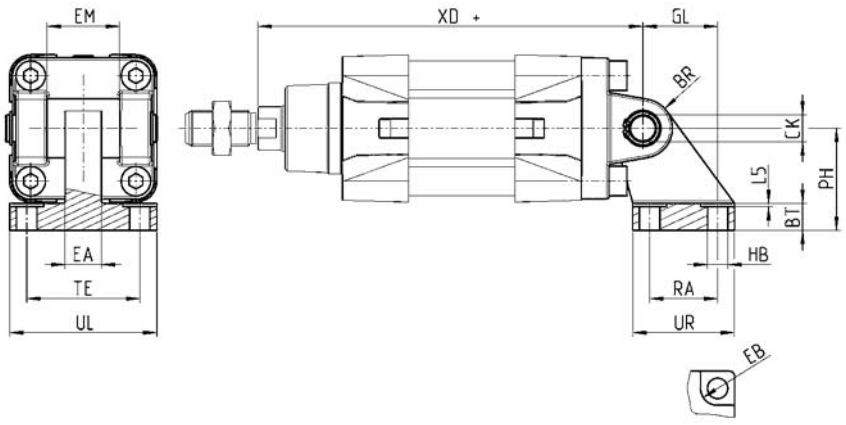
Mod.	Ø	⌀CD	L	FL	XD+	MR	E	CB	UB	torque force
C+L+S	32	10	12	22	142	10	45	26	45	6 Nm
C+L+S	40	12	15	25	160	10	52	28	52	6 Nm
C+L+S	50	12	15	27	170	13	63	32	60	13 Nm
C+L+S	63	16	20	32	190	15	73	40	70	13 Nm
C+L+S	80	16	24	36	210	15	95	50	90	19 Nm
C+L+S	100	20	29	41	230	18	115	60	110	26 Nm

90° male trunnion Mod. ZC

CETOP RP 107P
Material: aluminium

Supplied with:
1x male support

+ = add the stroke



Mod.	Ø	EB	CK	HB	XD+	TE	UL	EA	GL	L5	RA	EM	UR	PH	BT	BR
ZC-32	32	11	10	6,6	142	38	51	10	21	1,6	18	26	31	32	8	10
ZC-40	40	11	12	6,6	160	41	54	15	24	1,6	22	28	35	36	10	11
ZC-50	50	15	12	9	170	50	65	16	33	1,6	30	32	45	45	12	13
ZC-63	63	15	16	9	190	52	67	16	37	1,6	35	40	50	50	12	15
ZC-80	80	18	16	11	210	66	86	20	47	2,5	40	50	60	63	14	15
ZC-100	100	18	20	11	230	76	96	20	55	2,5	50	60	70	71	15	19

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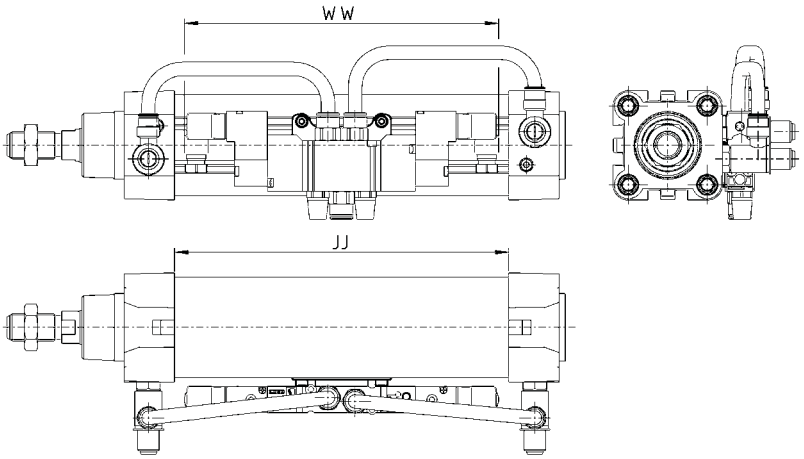
Accessory to mount valves on the cylinder

The mounting subbase Mod. PCV, enable the valve or solenoid valve to be mounted directly on the cylinder.

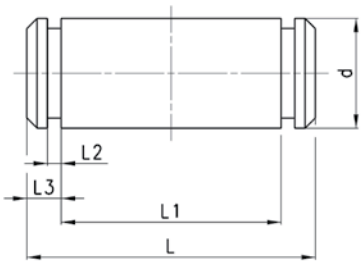
Make sure that the total lenght of the selected valve (WW)is smaller than the dimension JJ of the selected cylinder.
For more information see www.camozzi.com under “products area/downloads”



Mod.	
PCV-62-K3	to connect valves - solenoid valves Series 3
PCV-62-K4	to connect valves - solenoid valves Series 4 port G1/4
PCV-62-KE	to connect valves - solenoid valves Series E
PCV-62-K8	to connect valves - solenoid valves Series 4 port G1/8 and Series 3 port G1/4

Clevis pin Mod. S

Supplied with:
1x clevis pin (stainless steel 303)
2x Seeger (steel)



Mod.	Ø	d	L	L1	L2	L3
S-32	32	10	52	46	1,1	3
S-40	40	12	59	53	1,1	3
S-50	50	12	67	61	1,1	3
S-63	63	16	77	71	1,1	3
S-80	80	16	97	91	1,1	3
S-100	100	20	121	111	1,3	5

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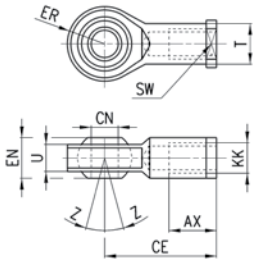
Swivel ball joint Mod. GA

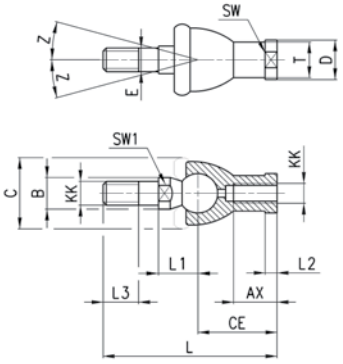
ISO 8139.
Material: zinc-plated steel.



Mod.	⌀CN	U	EN	ER	AX	CE	KK	T	Z	SW
GA-32	10	10,5	14	14	20	43	M10X1,25	15	6,5	17
GA-40	12	12	16	16	22	50	M12X1,25	17,5	6,5	19
GA-50-63	16	15	21	21	28	64	M16X1,5	22	7,5	22
GA-80-100	20	18	25	25	33	77	M20x1,5	27,5	7	30

Piston rod socket joint Mod.GY

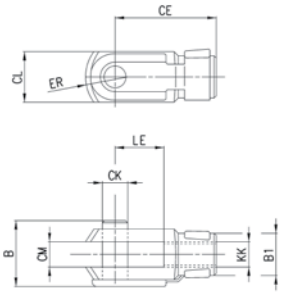
Material: zama and zinc-plated steel.



Mod.	Ø	KK	L	CE	L2	AX	SW	SW1	L1	L3	⌀T	⌀D	E	⌀B	⌀C	Z
GY-32	32	M10X1,25	74	35	6,5	18	17	11	19,5	15	15	19	10	14	28	15
GY-40	40	M12X1,25	84	40	6,5	20	19	17	21	17	17,5	22	12	19	32	15
GY-50-63	50-63	M16X1,5	112	50	8	27	22	23	27,5	23	22	27	16	22	40	11
GY-80-100	80-100	M20x1,5	133	63	10	38	30	25	31,5	25	27,5	34	20	29	45	7,5

Rod fork end Mod. G

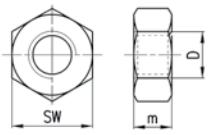
Material: zinc-plated steel
ISO 8140



Mod.	⌀CK	LE	CM	CL	ER	CE	KK	B	B1
G-25-32	10	20	10	20	12	40	M10 X 1,25	26	18
G-40	12	24	12	24	14	48	M12 X 1,25	32	20
G-50-63	16	32	16	32	19	64	M16 X 1,5	40	26
G-80-100	20	40	20	40	25	80	M20 X 1,5	48	34

Piston rod lock nut Mod. U

UNI EN ISO 4035.
Material: zinc-plated steel.



Mod.	D	m	SW
U-25-32	M10X1,25	6	17
U-40	M12X1,25	7	19
U-50-63	M16X1,5	8	24
U-80-100	M20x1,5	9	30

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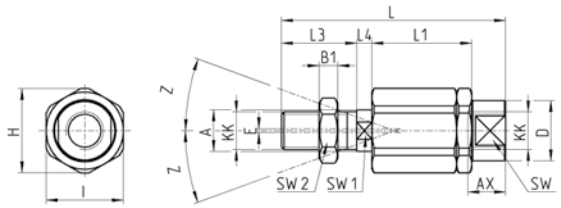
Self aligning rod Mod. GK

New

Material: zinc-plated steel.

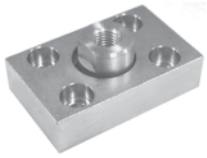


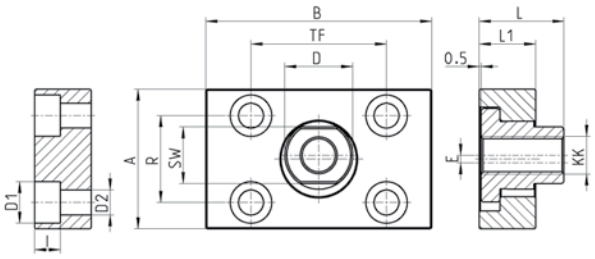
Mod.	Ø	KK	L	L1	L3	L4	⌀A	⌀D	H	I	SW	SW1	SW2	B1	AX	Z	E
GK-25-32	25-32	M10x1,25	71,5	35	20	7,5	14	22	32	30	19	12	17	5	22	4	2
GK-40	40	M12x1,25	75,5	35	24	7,5	14	22	32	30	19	12	19	6	22	4	2
GK-50-63	50-63	M16x1,5	104	53	32	10	22	32	45	41	27	20	24	8	30	3	2
GK-80-100	80-100	M20x1,5	119	53	40	10	22	32	45	41	27	20	30	10	37	3	2

Coupling piece Mod. GKF

New

Material: zinc-plated steel.





Mod.	Ø	KK	A	B	R	TF	L	L1	I	Ø D	Ø D1	Ø D2	SW	E
GKF-25-32	32	M10x1,25	37	60	23	36	22,5	15	6,8	18	11	6,6	15	2
GKF-40	40	M12x1,25	56	60	38	42	22,5	15	9	20	15	9	15	2,5
GKF-50-63	50-63	M16x1,5	80	80	58	58	26,5	15	10,5	25	18	11	22	2,5
GKF-80-100	80-100	M20x1,5	90	90	65	65	32,5	20	13	30,5	20	14	27	2,5

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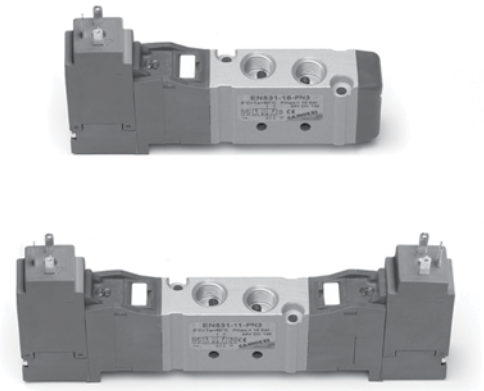
Valves and solenoid valves Series EN

New

2

CONTROL

5/2 way monostable/bistable 5/3 C.C. C.O. C.P.
With outlets on the body
For individual or manifold assembly
Size 16 mm



- Mounting on any flat surface
- Reduced dimensions
- Aluminium body and end-covers in technopolymer
- Space saving

Camozzi has developed a new series of valves to be used in applications requiring a reduced space of installation and in situations where the valves need to be located as near as possible to the operating elements. The single valves can be mounted on any flat surface, allowing compact machine design, which is also enhanced by the reduced dimensions of the valve itself.
Thanks to their robust aluminium bodies, the valves Series EN offer the highest reliability.

This new generation of solenoid valves is the evolution of the previous Series E, size 16 mm valve with ports threaded into the body. As this valve is completely interchangeable with Series E, part of the code is maintained though the valve has a completely new shape and new components.
Each new change has resulted in the optimization of the production process, resulting in a new highly cost effective product.

GENERAL DATA

Construction	spool-type
Valve group	way / pos. 5/2 and 5/3
Materials	body, spool, bases AL; end-covers tecnnopolymer, joints NBR PU
Ports	G 1/8
Temperature	0°C min. + 50° C max
Fluid	filtered air without lubricant. If lubricated air is used, it is recommended to use ISOVG32 oil and to never interrupt lubrication.
Voltage	see coding
Voltage tolerance	± 10%
Power consumption	2W, 1W
Class of insulation	class F
Protection class	IP65 with connector DIN 40050

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CODING EXAMPLE

EN	5	3	1	-	11	-	PN3

EN	SERIES
5	FUNCTION: 5 = 5/2 (5 ports/2 positions) 6 = 5/3 centre closed 7 = 5/3 centre open 8 = 5/3 pressure centre
3	SIZE: 3 = size 16
1	BODY TYPE: 1 = body with threaded plate
11	ACTUATION: 11 = electro-pneumatic, bistable 16 = electro-pneumatic, monostable 33 = pneumatic bistable 36 = pneumatic monostable E11 = electro-pneumatic, bistable with external servo-pilot supply E16 = electro-pneumatic, monostable with external servo-pilot supply
PN3	TYPE OF SOLENOID: PN3 = 24V - 1W PN4 = 48V - 2W PN6 = 110V - 2W PN7 = 230V - 2W P13 = 24V DC - 1W P53 = 24V DC - 2W P54 = 48V DC - 2W P56 = 110V DC - 2W W53 = 24V DC - 2W W54 = 48V DC - 2W In case of applications with alternate current, use a bridge rectifier connector (see pag. 2/2.07.12)

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2

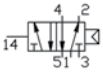
CONTROL

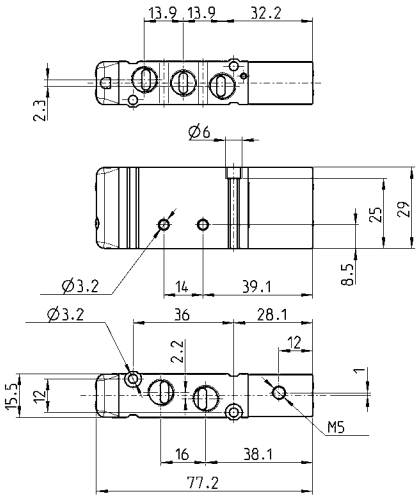
Pneumatically actuated valve, monostable - size 16

New

5/2 way

Note: the pilot pressure should never be lower than the operating pressure.



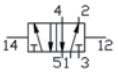


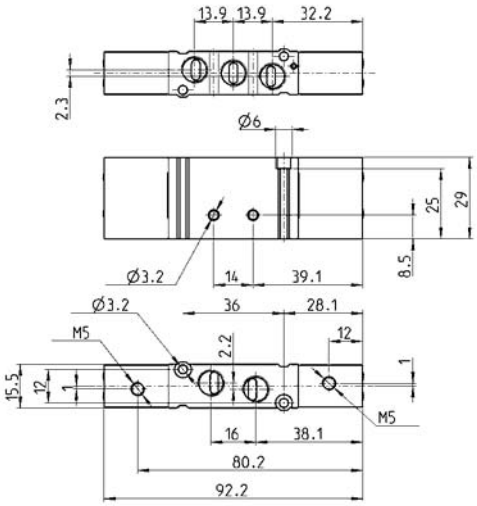
Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-36	G1/8	M5	2,5 ÷ 10	-0.9 ÷ 10	550

Pneumatically actuated valve, bistable - size 16

New

5/2 way





Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-33	G1/8	M5	2 ÷ 10	-0.9 ÷ 10	550

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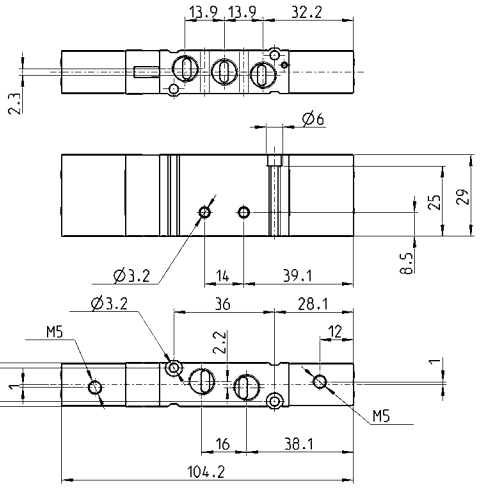
2

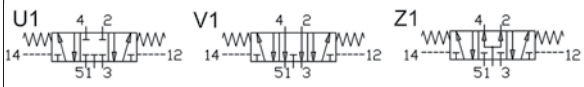
Pneumatically actuated valve - size 16

New

5/3 way

C.C. = Centres closed
C.O. = Centres open
C.P. = Pressure Centres



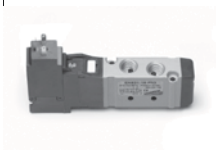


Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)	Symbol
EN631-33	G1/8	M5	3 ÷ 10	-0.9 ÷ 10	550	U1
EN731-33	G1/8	M5	3 ÷ 10	-0.9 ÷ 10	550	V1
EN831-33	G1/8	M5	3 ÷ 10	-0,9 ÷ 10	550	Z1

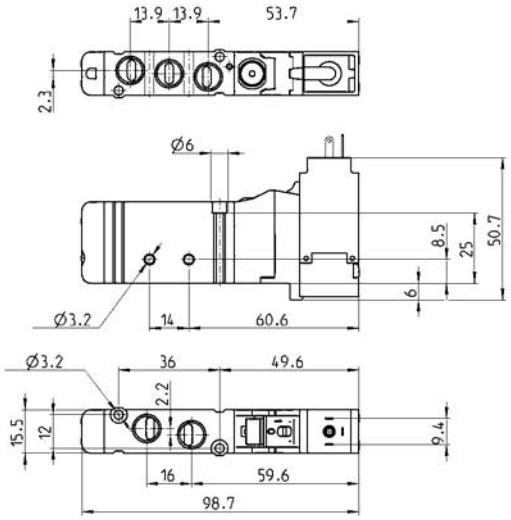
Electro-pneumatically actuated valve, monostable - size 16

New

5/2 way



Connectors see pages
2/2.07.11-12



Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-16-PN..	G1/8	-	-	2,5 ÷ 10	550

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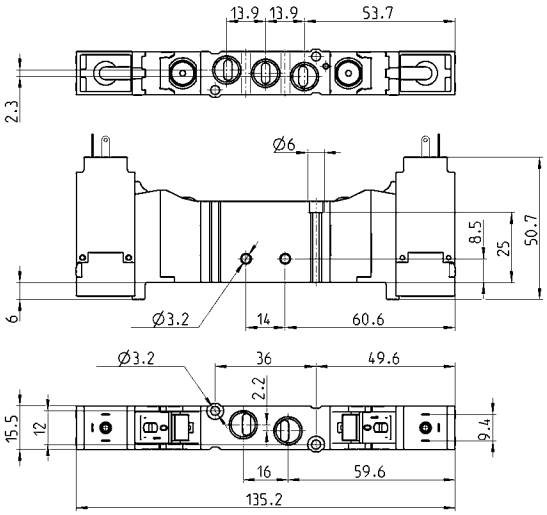
2

CONTROL

Electro-pneumatically actuated valve, bistable - size 16

New

5/2 way



Connectors see pages 2/2.07.11-12

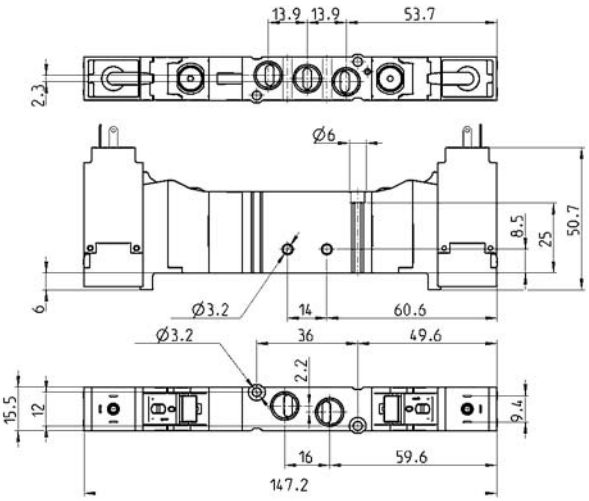
Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-11-PN..	G1/8	-	-	2 ÷ 10	550

Electro-pneumatically actuated valve - size 16

New

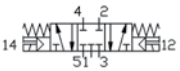
5/3 way

C.C. = Centres closed
C.O. = Centres open
C.P. = Pressure centres



Connectors see pages 2/2.07.11-12

B1



C1

D1

Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)	Symbol
EN631-11-PN..	G1/8	-	-	3 ÷ 10	550	B1
EN731-11-PN..	G1/8	-	-	3 ÷ 10	550	C1
EN831-11-PN..	G1/8	-	-	3 ÷ 10	550	D1

The company reserves the right to vary models and dimensions without notice.
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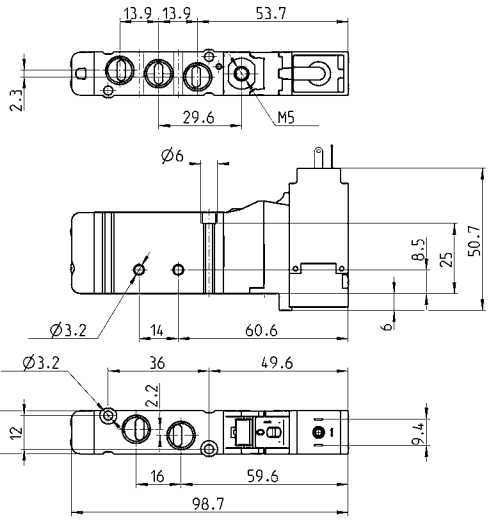
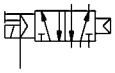
Electro-pneum. actuated valve, monostab. - ext. servo-pilot supply

New

5/2 way



Connectors see pages 2/2.07.11-12

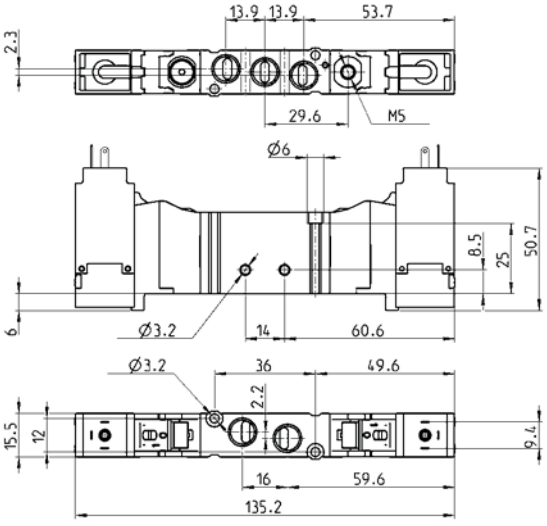


Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-E16-PN..	G1/8	M5	2,5 ÷ 10	- 0,9 ÷ 10	550

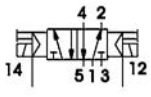
Electro-pneum. actuated valve, bistable - ext. servo-pilot supply

New

5/2 way



Connectors see pages 2/2.07.11-12



Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-E11-PN..	G1/8	M5	2 ÷ 10	-0,9 ÷ 10	550

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2

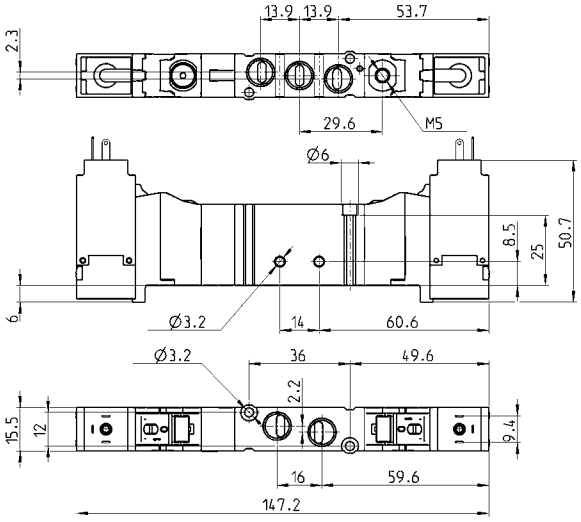
CONTROL

Electro-pneum. actuated valve - ext. servo-pilot supply

New

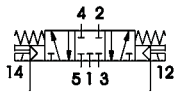
5/3 way

C.C. = Centres closed
C.O. = Centres open
C.P. = Pressure centres

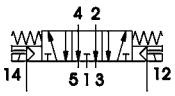


Connectors see pages
2/2.07.11-12

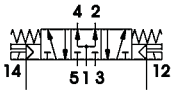
G7



H7



I7

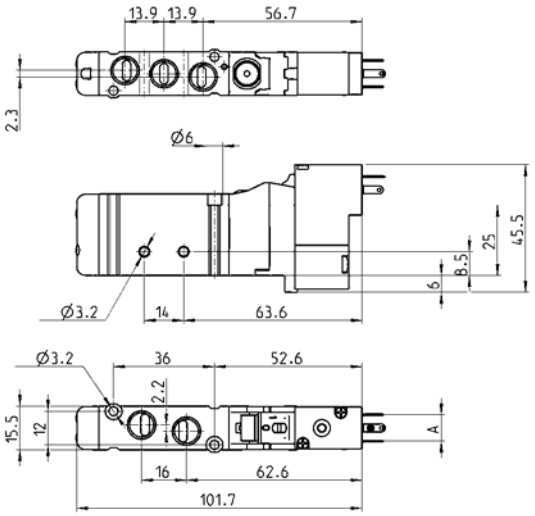


Mod.	Ports	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)	Symbol
EN631-E11-PN..	G1/8	M5	3 ÷ 10	-0,9 ÷ 10	550	G7
EN731-E11-PN..	G1/8	M5	3 ÷ 10	-0,9 ÷ 10	550	H7
EN831-E11-PN..	G1/8	M5	3 ÷ 10	-0,9 ÷ 10	550	I7

Electro-pneumatically actuated valve, monostable solenoid P, W

New

5/2 way



Connectors see pages
2/2.07.11-12

Mod.	Ports	A	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-16-P13	G1/8	9,4	-	-	2,5 ÷ 10	550
EN531-16-P54	G1/8	9,4	-	-	2,5 ÷ 7	550
EN531-16-P56	G1/8	9,4	-	-	2,5 ÷ 7	550
EN531-16-W53	G1/8	8	-	-	2,5 ÷ 10	550
EN531-16-W54	G1/8	8	-	-	2,5 ÷ 7	550

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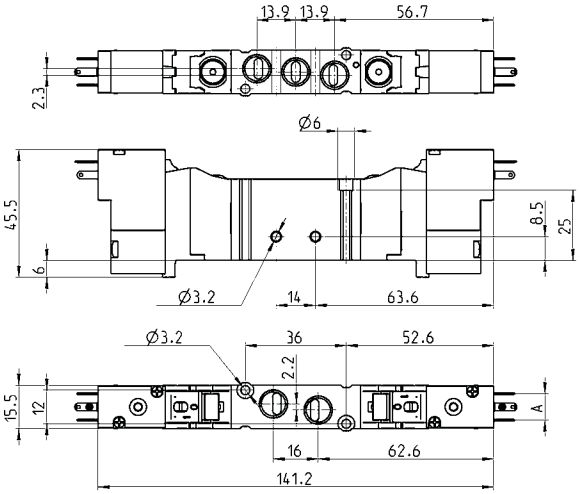
Electro-pneumatically actuated valve, bistable solenoid P, W

New

5/2 way



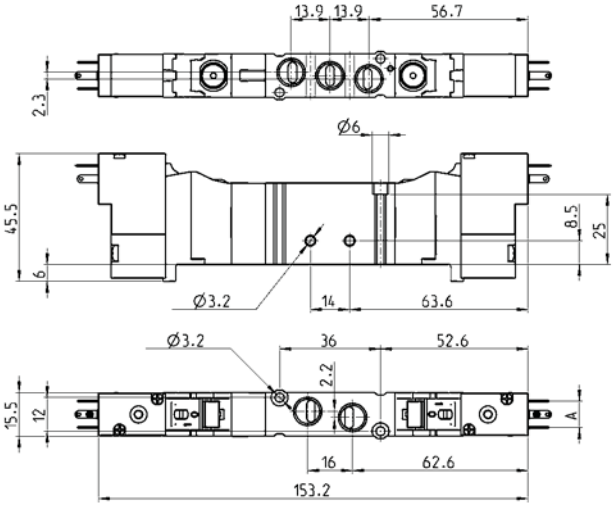
Connectors see pages
2/2.07.11-12

Mod.	Ports	A	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-11-P13	G1/8	9,4	-	-	2 ÷ 10	550
EN531-11-P54	G1/8	9,4	-	-	2 ÷ 7	550
EN531-11-P56	G1/8	9,4	-	-	2 ÷ 7	550
EN531-11-W53	G1/8	8	-	-	2 ÷ 10	550
EN531-11-W54	G1/8	8	-	-	2 ÷ 7	550

Electro-pneumatically actuated valve, bistable solenoid P, W

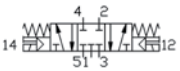
New

5/3 way



Connectors see pages
2/2.07.11-12

B1



C1

D1

Mod.	Ports	A	Pilot	Pilot Supply Pressure (bar)	Operating pressure (bar)	Flow (Nl/min)	Symbol
EN631-11-P..	G1/8	9,4	-	-	2 ÷ 10	550	B1
EN731-11-P..	G1/8	9,4	-	-	2 ÷ 7	550	C1
EN831-11-P..	G1/8	9,4	-	-	2 ÷ 7	550	D1
EN631-11-W..	G1/8	8	-	-	2 ÷ 10	550	B1
EN731-11-W..	G1/8	8	-	-	2 ÷ 7	550	C1
EN831-11-W..	G1/8	8	-	-	2 ÷ 7	550	D1

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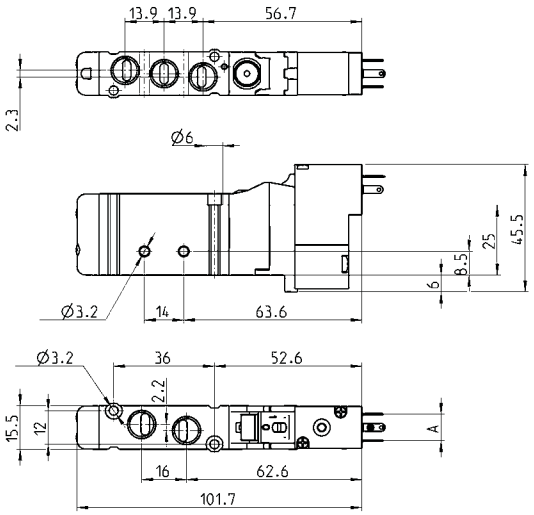
2

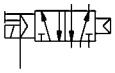
CONTROL

Electro-pneum. act. valve, monost. - ext. servo-pilot supply sol. P, W

New



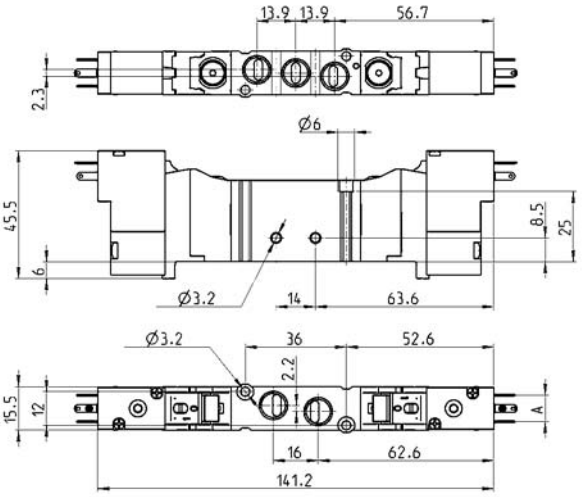
Connectors see pages
2/2.07.11-12



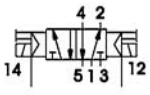
Mod.	Ports	A	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-E16-P..	G1/8	9,4	M5	3 ÷ 10	-0,9 ÷ 10	550
EN531-E16-W..	G1/8	8	M5	3 ÷ 10	-0,9 ÷ 10	550

Electro-pneum. act. valve, bistab. - ext. servo-pilot supply sol. P, W

New



Connectors see pages
2/2.07.11-12



Mod.	Ports	A	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)
EN531-E11-P..	G1/8	9,4	M5	3 ÷ 10	-0,9 ÷ 10	550
EN531-E11-W..	G1/8	8	M5	3 ÷ 10	-0,9 ÷ 10	550

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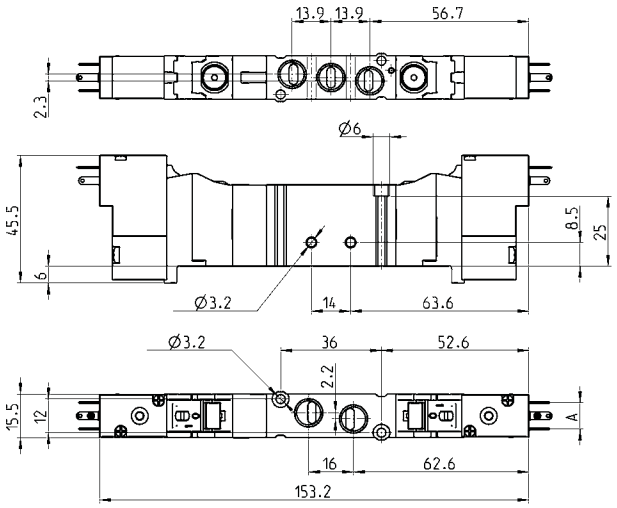
2

Electro-pneum. act. valve - ext. servo-pilot supply solenoid P, W

New

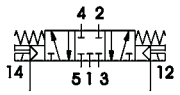
5/3 way

C.C. = Centres closed
C.O. = Centres open
C.P. = Pressure centres

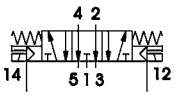


Connectors see pages
2/2.07.11-12

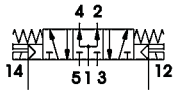
G7



H7



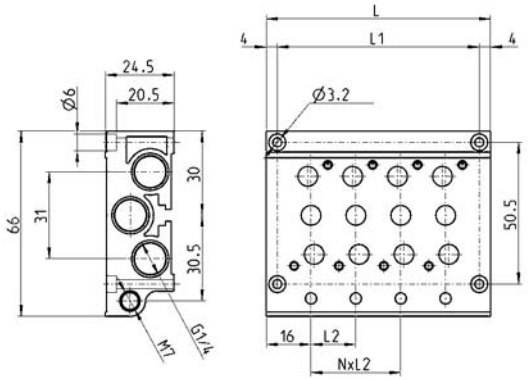
I7



Mod.	Ports	A	Pilot supply	Pilot supply pressure (bar)	Operating pressure (bar)	Flow (Nl/min)	Symbol
EN631-E11-P..	G1/8	9,4	M5	3 ÷ 10	-0,9 ÷ 10	550	G7
EN731-E11-P..	G1/8	9,4	M5	3 ÷ 10	-0,9 ÷ 10	550	H7
EN831-E11-P..	G1/8	9,4	M5	3 ÷ 10	-0,9 ÷ 10	550	I7
EN631-E11-W..	G1/8	8	M5	3 ÷ 10	-0,9 ÷ 10	550	G7
EN731-E11-W..	G1/8	8	M5	3 ÷ 10	-0,9 ÷ 10	550	H7
EN831-E11-W..	G1/8	8	M5	3 ÷ 10	-0,9 ÷ 10	550	I7

Manifold

New



Mod.	N° positions	L	L1	L2
EN531-1004	4	80	72	16
EN531-1006	6	112	106	16
EN531-1008	8	144	136	16

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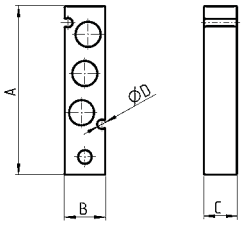
2

CONTROL

Blanking plate for manifolds - base mounted valves

New

The following is supplied:
1x blanking plate
2x screws
1x seal.

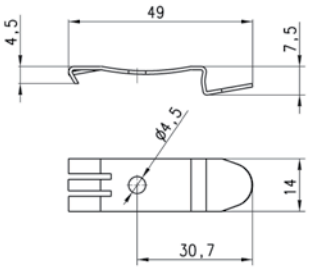


Mod.	Size	A	B	C	ØD
TP-EN531	16	48,2	15,5	6	3,2

Mounting brackets

New

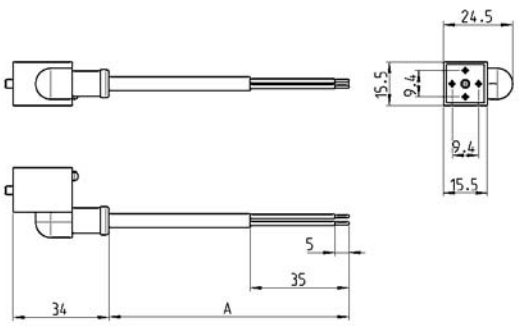
DIN EN 50022 (mm 7,5 x 35 - width 1)
Suitable for all manifolds.
The following is supplied:
2x plates
2x screws
2x nuts



PCF-EN531

In-line connector with cable

New



Mod.	A
125-553-2	2 mt
125-553-5	5 mt

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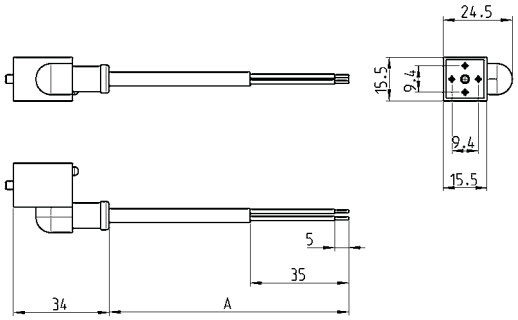
Connector 24DC PN with led for solenoid type P and PN

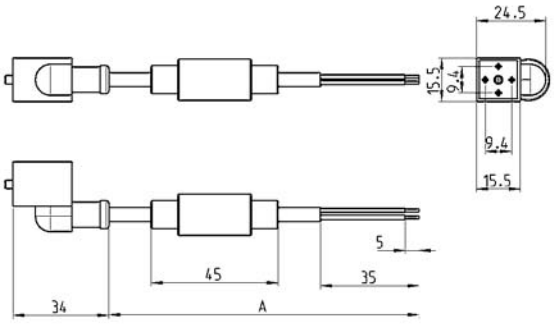
New



Mod.	A
125-503-2	2 mt
125-503-5	5 mt

Conn. V-AC PN with led and bridge rectifier for solenoid P and PN

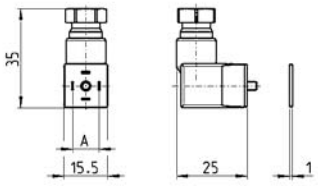
New



Mod.	A
125-903-2	cable 2 mt
125-903-5	cable 5 mt

Connector DIN 43650

New



Mod.	Solenoid type	A
125-800	P	9,4
126-800	W	8

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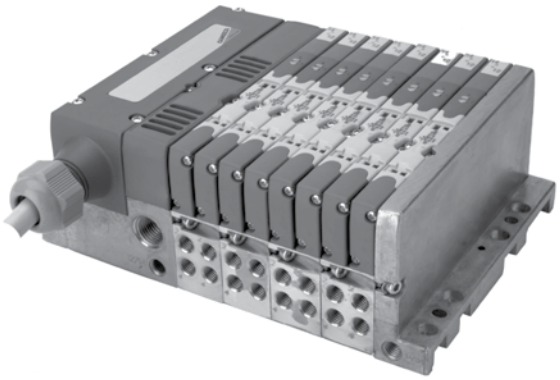
Valve Islands Series H

New

2

Multipole PNP and NPN
Profibus-DP, DeviceNet, CANopen



Thanks to new technology, a large range of options and total flexibility, both in pneumatic - and electrical components, the Series H valve island always offers the best solution for each application. The Series H has been designed to be used in numerous industrial fields, especially in automated systems.

The design and especially the constructional characteristics make the series H ideal in all applications where reliability and quality of the components used is essential for the operation of all industrial automated and dynamic systems.

- Dimension 10,5 mm, modularity 2
- Dimension 21 mm, modularity 1

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GENERAL DATA

New

2

CONTROL

Construction	spool with seals
Ways/positions	5/2 monostable and bistable 5/3 C.C. 2 x 2/2 N.O. 2 x 2/2 N.C. 1 x 2/2 N.C.+ 1 x N.O. 2 x 3/2 N.C. 2 x 3/2 N.O. 1 x 3/2 N.C.+ 1 x 3/2 N.O.
Materials	aluminium spool and HNBR seals brass cartridges technopolymer body and end covers alluminium subbase other NBR seals
Connections	M7 sub-base outputs modularity 1 G 1/8 sub-base outputs modularity 2 Fittings for tube ø 4 ; 6 ; 8 (depending on size) Supply G 1/4 Pilot port M7 Exhaust 3/5 G 1/4 Exhaust 82/84 M7
Temperature	0 ÷ 50°C
Air specifications	Filtered air class 5.4.4 according to ISO 8573.1 If lubrication is necessary use only oil with maximum viscosity 32 Cst.
Dimensions/sizes	10,5 mm 21 mm
Pressure	- 0,9 ÷ 10 bar
Working pressure	3 ÷ 7 bar
Flow rate, Qn	10,5 mm - 400 Nl/min 21 mm - 700 Nl/min
Voltage	24 V DC +/- 10%
Power consumption	0,5 W per coil
Duty cycle	ED 100%
Protection class	IP 65
Max. number of coils multipole	32
Max. number of coils - fieldbus	64
Max. number inputs - fieldbus	64
Mounting position	any position

The company reserves the right to vary models and dimensions without notice.
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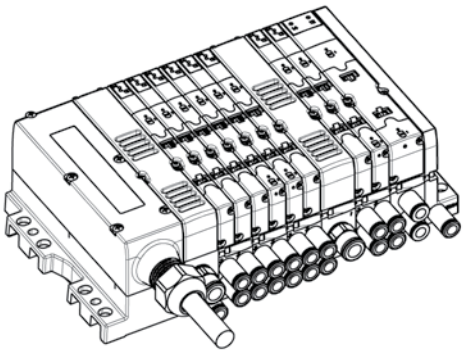
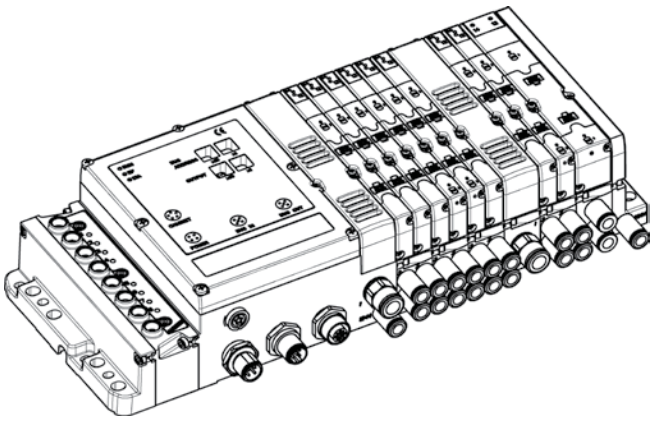
Valve Islands Series H - Multipole and Expandable Fieldbus

New



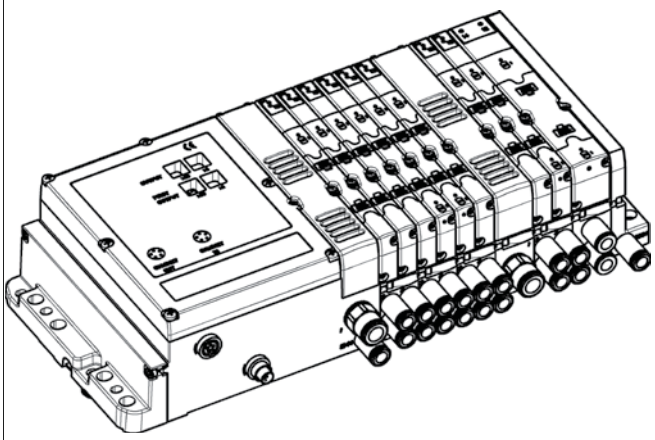


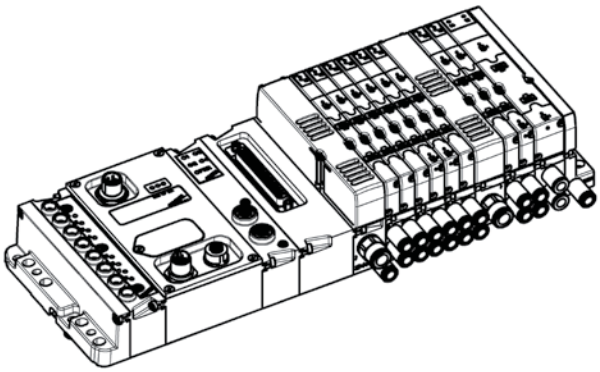
Multipole:
In this configuration Series H can be connected rapidly and safely thanks to the multipole connection with wired cable of sizes of 3 & 5 m(standard).

Expandable fieldbus:
This version enables a direct interface to fieldbus systems such as: Profibus-DP, DeviceNet and CANopen.The various types of electical and pneumatic elements that can be connected, and the possibility to decentralise the expansion Islands gives this model extreme flexibility.

Valve Islands Series H - Expansion and Individual Fieldbus

New





Fieldbus Expansion (local fieldbus):
The Expansion islands can handle electrical and pneumatic outlets up to a 50 m distance from the Island that interfaces directly to theFieldbus net. These expansions communicate with the expandable fieldbus unit (above) through a local fieldbus (Cam.I.Net) and are connected through pre-wired cables (9 poles) of different lengths.

The individual fieldbus version consists of an island that enables the handling of 64 Inputs and 64 Outputs. It does not enable the handling of the Expansions but it can can be equipped with all peripheral elements of the expandable versions.
The whole electronic system can be used in other types of Valve islands (see Individual Fieldbus node Series CX2 on pag. 2/3.20).

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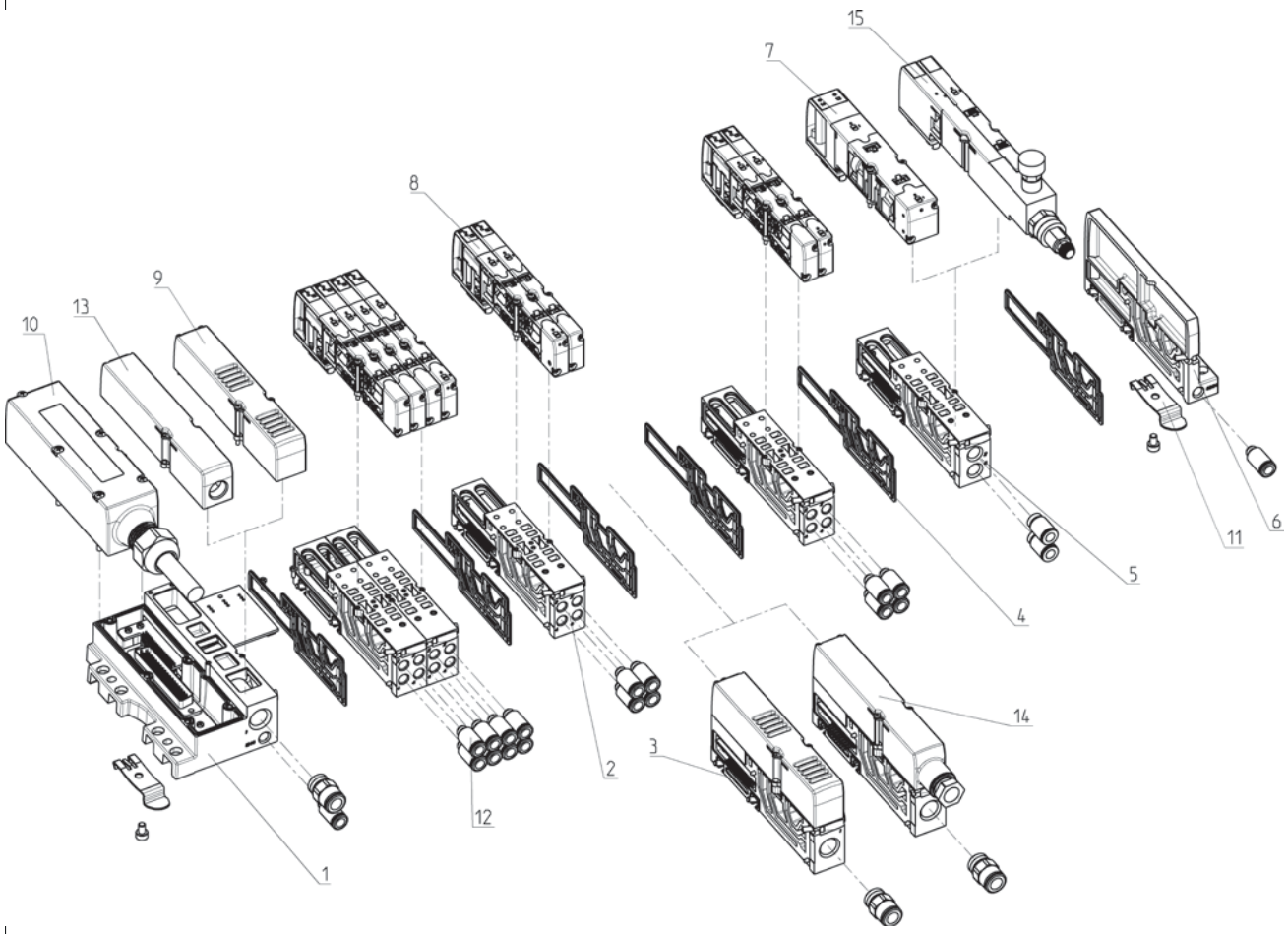
Products designed for industrial applications. Sale to general public is forbidden.

Component's description - Multipole version

New

2

CONTROL



1	Terminal
2	Threaded sub- base size 10,5 modularity 2
3	Intermediate plate for suppl. inlet exhausts (with or without) integrated silencer
4	Interface seal
5	Threaded sub - base size 21 modularity 1
6	Pneumatic terminal (right)
7	Solenoid valve Sizes 2
8	Solenoid valve Sizes 1
9	Silencer
10	Multipole connector (25 or 37 pole) with cable
11	Mounting bracket for DIN rail
12	Quick-release fittings
13	Cover to convey outlets 3 and 5
14	Module for power supply separation
15	Valve size 10,5 with pressure regulator incorporated (total width of 21mm)

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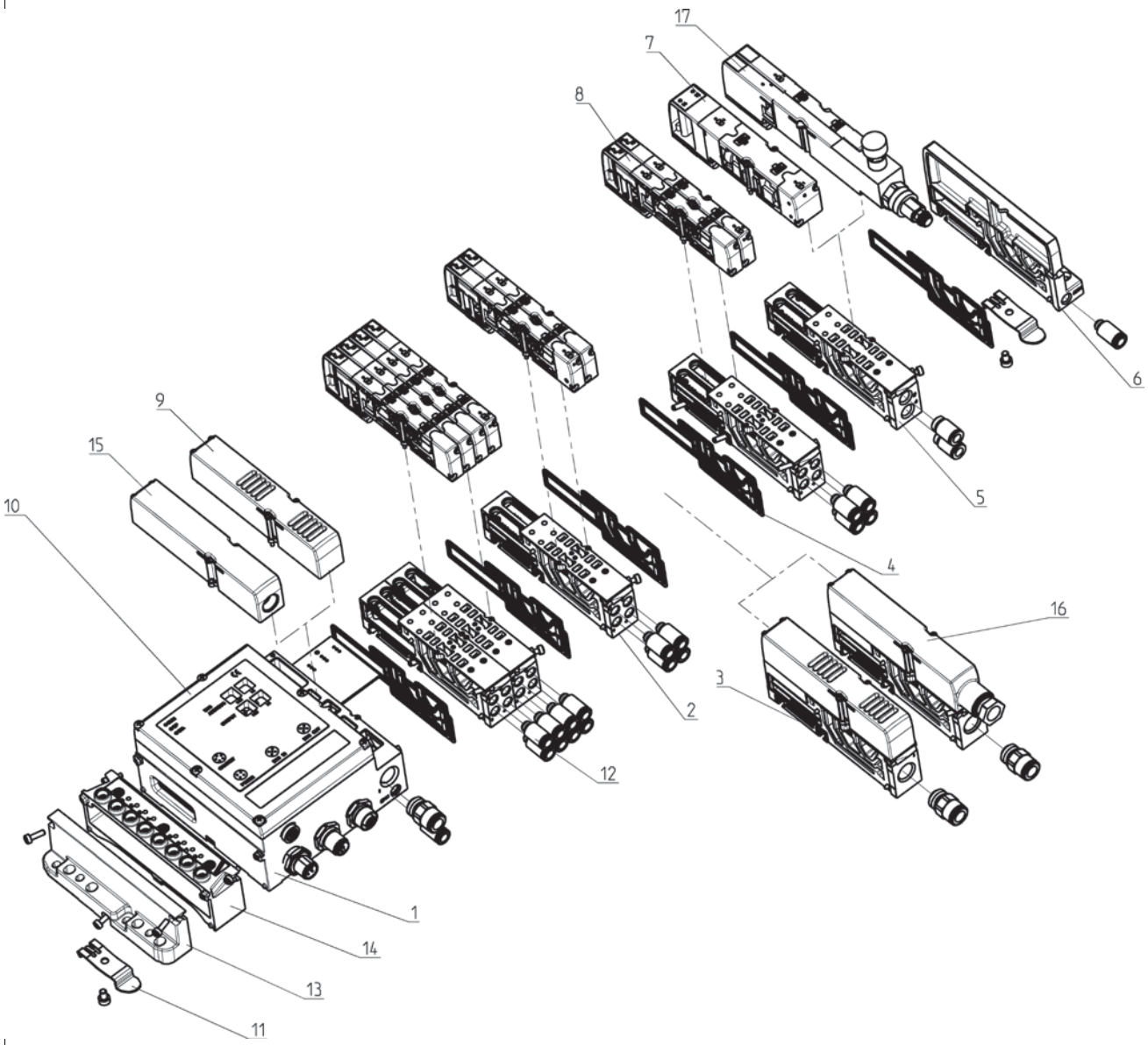
Component's description - Expandable Fieldbus

New



1	Expandable Fieldbus node (Initial Module)
2	Threaded sub - base size 10,5 modularity 2
3	Intermediate plate for suppl. inlet and exhausts (with or without integrated silencer)
4	Interface seals
5	Threaded sub- base size 21 modularity 1
6	Pneumatic terminal (right)
7	Solenoid valve size 2
8	Solenoid valve size 1
9	Silencer
10	Cover
11	Mounting bracket for DIN rail
12	Quick-release fittings
13	Electric terminal (left)
14	Input module (8 inputs/module)
15	Cover to convey outlets 3 and 5
16	Module for power supply separation
17	Valve size 10,5 with pressure regulator incorporated (total width of 21mm)

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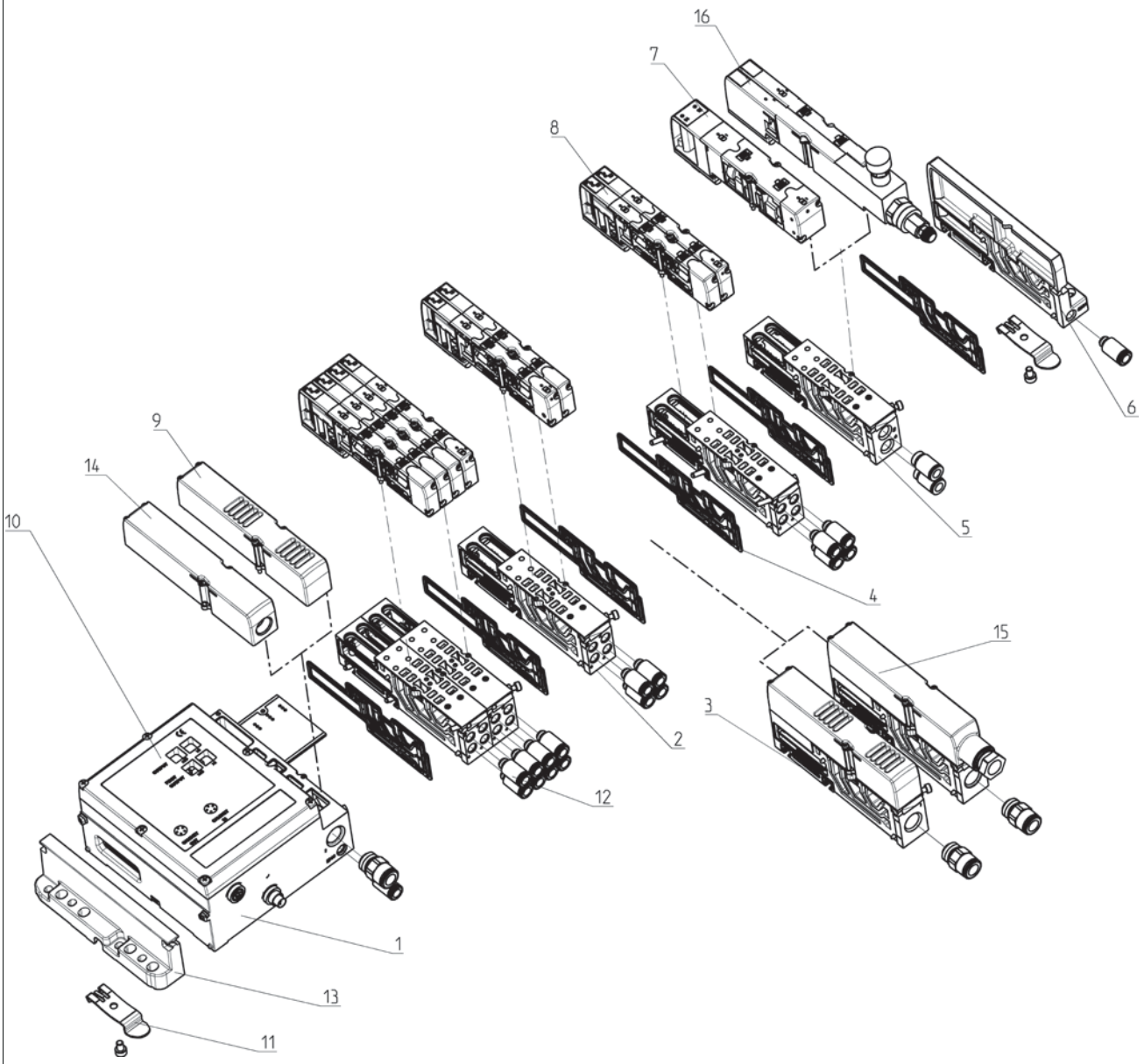
Component's description - Fieldbus expansion version

New



1	Expansion module (local fieldbus)
2	Threaded sub- base size 10,5 modularity 2
3	Intermediate plate suppl. inlet and exhausts (with or without integrated silencer)
4	Interface seals
5	Threaded sub- base size 21 modularity 1
6	Pneumatic terminal (right)
7	Solenoid valve size 2
8	Solenoid valve size 1
9	Silencer
10	Cover
11	Mounting bracket for DIN rail
12	Quick - release fittings
13	Electric terminal (left)
14	Cover to convey outlets 3 and 5
15	Module for power supply separation
16	Valve size 10,5 with pressure regulator incorporated (total width 21mm)

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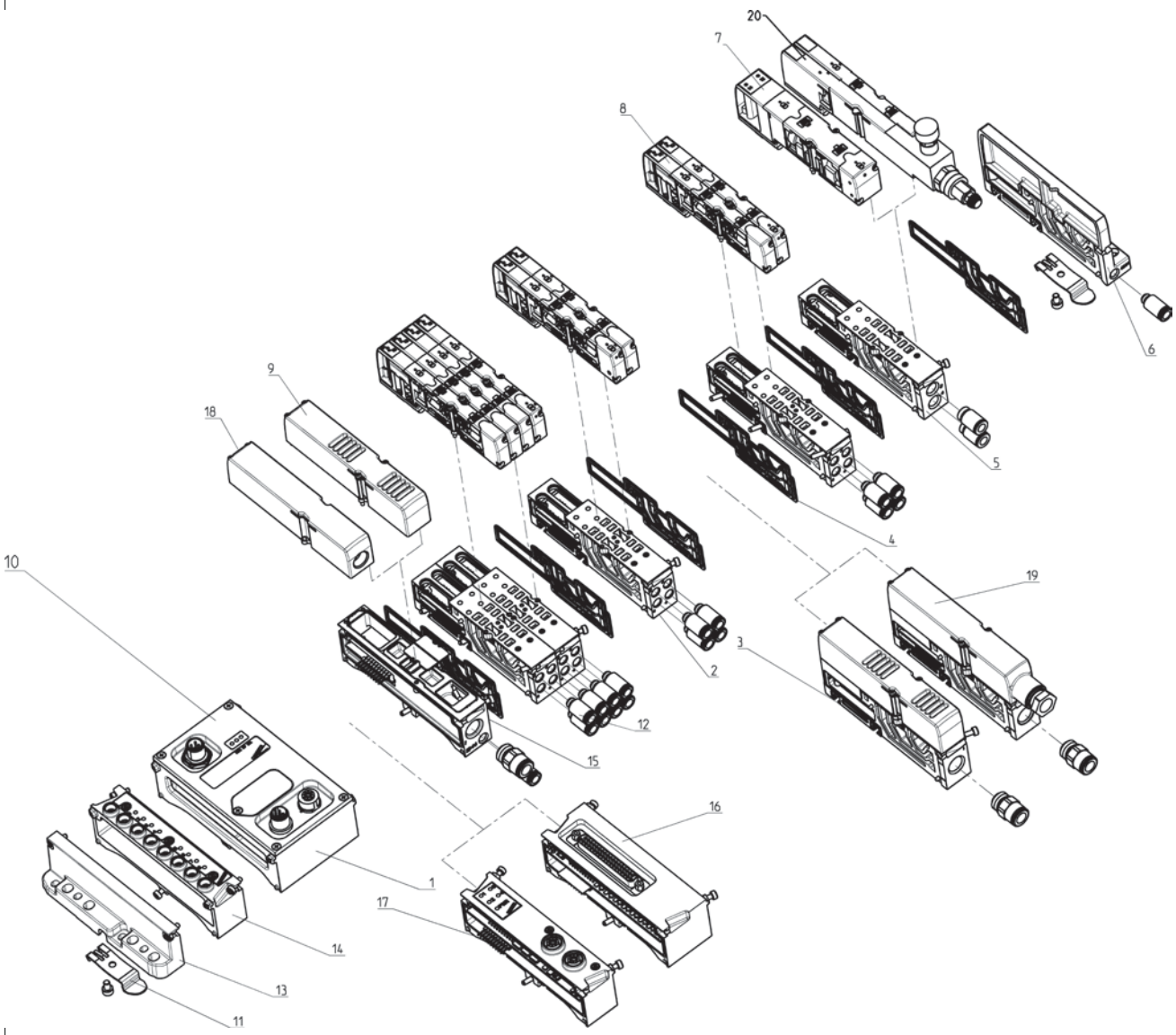
Individual Fieldbus version

New



1	Individual Fieldbus node	**11**	Mounting bracket for DIN rail
2	Threaded subbase size 10,5 modularity 2	**12**	Quick - release fittings
3	Intermed. plate for suppl. inlet/exh. (with/without integr. silencer)	**13**	Electric terminal (left)
4	Interface seals	**14**	Input module (8 inputs/module)
5	Threaded subbase size 21 modularity 1	**15**	Electrical/pneumatic interface module for individual fieldbus node
6	Pneumatic terminal (right)	**16**	Digital output module (D-SUB - 37 pin)
7	Solenoid valve size 2	**17**	Digital output module (2xM12 - 4 outputs)
8	Solenoid valve size 1	**18**	Cover to convey outlets 3 and 5
9	Silencer	**19**	Module for power supply separation
10	Cover	**20**	Valve size 10,5 with integrated pressure regulator

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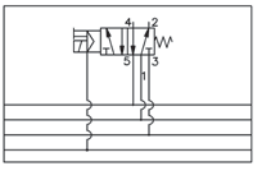
2

CONTROL

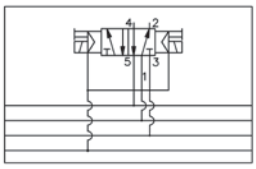
SYMBOLS FOR SOLENOID VALVES

M



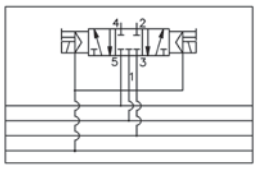
Valve code M
Function 5/2 Monostable

B



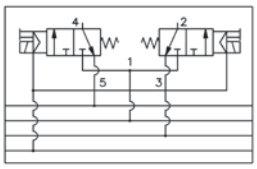
Valve code B
Function 5/2 Bistable

V



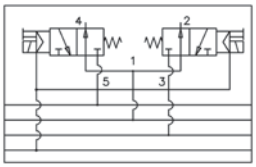
Valve code V
Func. 5/3 Centres Closed

C



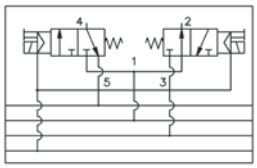
Valve code C
Function 2 x 3/2 N.C.

A



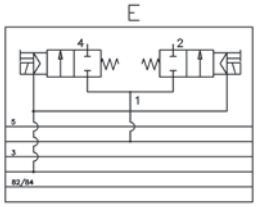
Valve code A
Function 2 x 3/2 N.O.

G



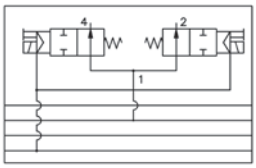
Valve code G
Fn. 1x3/2 N.C.+1x3/2 N.O.

E



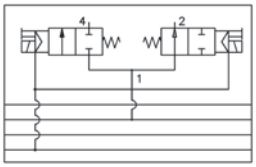
Valve code E
Func. 2 x 2/2 N.C.

F



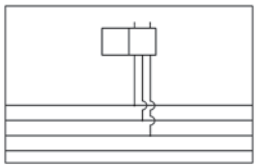
Valve code F
Func. 2x 2/2 N.O.

I

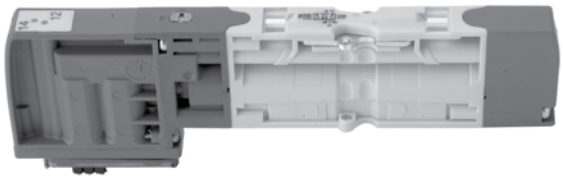


Valve code I
Fn. 1x2/2 N.C.+1x2/2 N.O.

L



Valve code L
Free position



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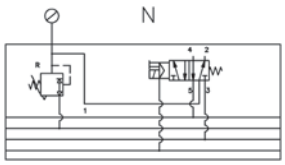
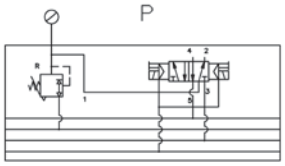
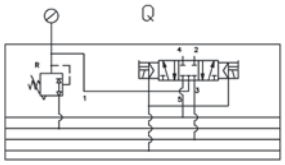
SYMBOLS FOR SOLENOID VALVES WITH INCORPORATED REGULATOR IN THE SUB- BASE



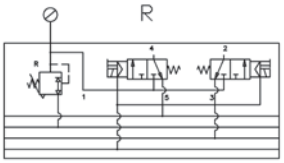
Valve code N
Function 5/2 Monostable



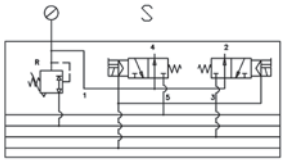
Valve code P
Function 5/2 Bistable



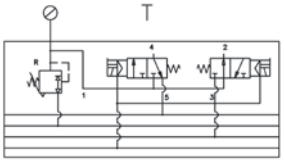
Valve code Q
Function 5/3 Closed centres



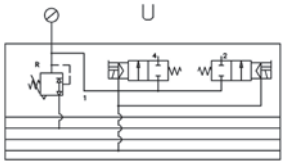
Valve code R
Function 2 x 3/2 N.C.



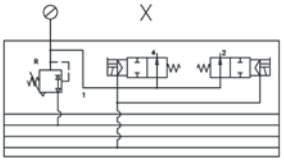
Valve code S
Function 2 x 3/2 N.O.



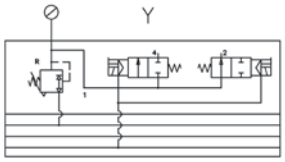
Valve code T
Fn. 1x3/2 N.C.+1x3/2 N.O.



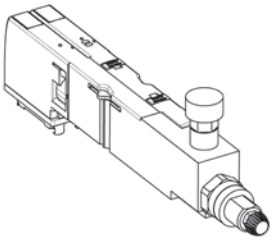
Valve code U
Function 2 x 2/2 N.C.



Valve code X
Function 2 x 2/2 N.O.



Valve code Y
Fn. 1x2/2 N.C.+1x2/2 N.O.



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SUBBASES TYPES

Through subbase size 10,5
A=M7; B=Ø4; C=Ø6

Subbase diaphr. lines 1;3;5
D=M7 E=Ø4 F=Ø6

Subbase diaphr. line 1
L=M7; M=Ø4; N=Ø6

Subbase diaphr. lines 3; 5
G=M7 H=Ø4 I=Ø6

Subbase size 21
Q=1/8; R=Ø6; S=Ø8

x = Supplementary supply + exhaust (conveyed)

K=Mod. for electr. power supply sep.+ suppl. inlet press.

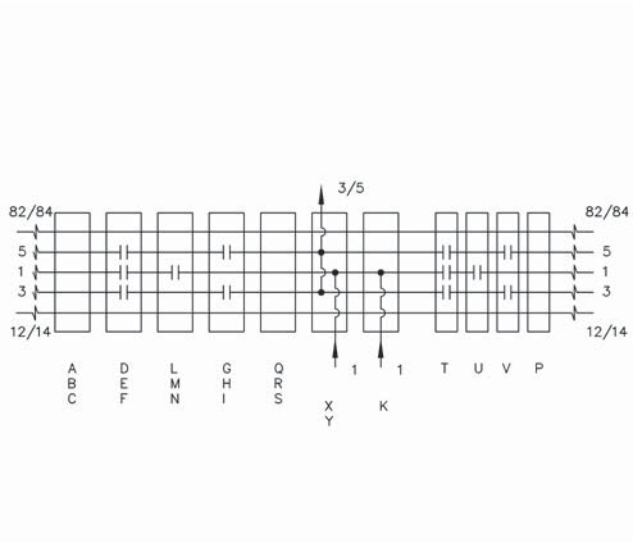
Y = Supplem. supply+ exhaust (with integr. silencer)

U = Diaphragm seal
Line 1

V = Diaphragm seal
Lines 3; 5.

P = Through seal

T = Diaphragm seal
Lines 1 ; 3 ; 5



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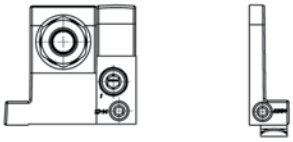
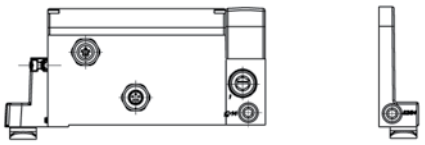
Terminals Series H

New



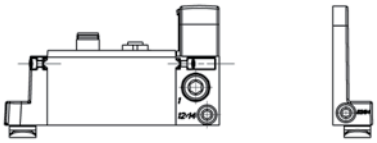
Terminals Multipole version



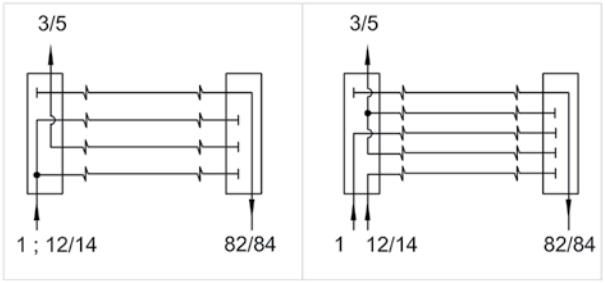
Terminals Expandable Fieldbus version

Terminals Series H

New



Terminals Series H Individual Fieldbus version



Cod.
A - C - E - G - I - M

Cod.
B - D - F - H - L - N

- For a description of the codes mentioned above see page 2.3.15.22 Section (6) for Multipole version.

- For a description of the codes mentioned above see page 2.3.15.24 / 25 Section (7) for Fieldbus version.

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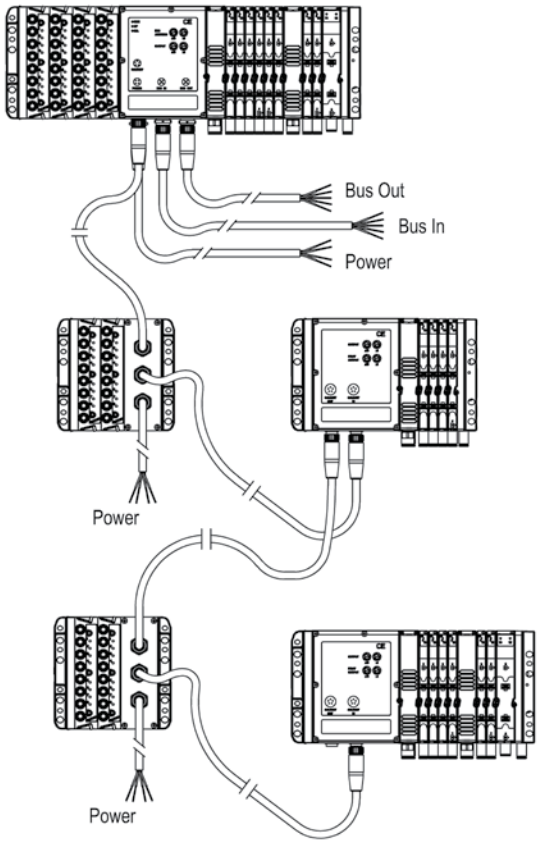
2

CONTROL

Example of Expandable Fieldbus System with both Initial and Expansion Modules

New

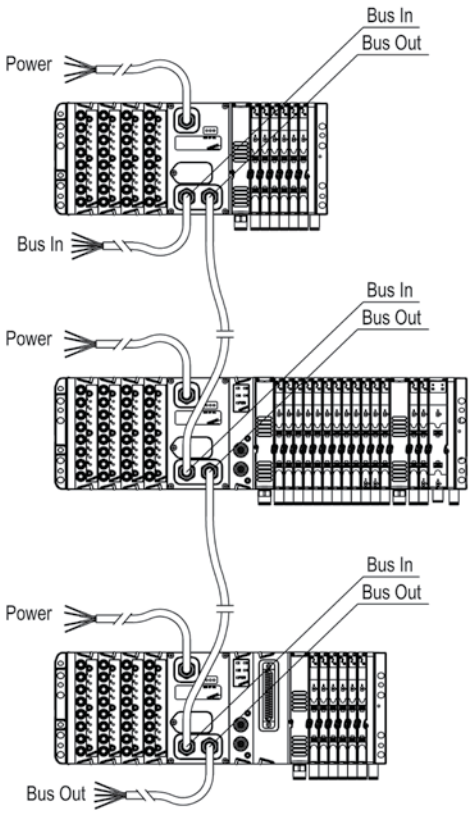
The principal features are: electrical connections on the same side as the pneumatic connections, Bus-In Bus –out system for connection to the Fieldbus network, double electrical supplies, one for control and the other for power, CamiNet outlet to transfer signals to the Expansion modules, with a possibility of connecting a maximum of 15 Expansion modules up to a maximum distance of 50 m. All the internal connections are on circuit boards with plug-in connectors to make future modifications easier to achieve. The Initial module electronics are capable of handling 64 inputs and 64 outputs. The outputs are on the right hand side of the unit and the inputs on the left hand side. The 64 output units allow connection of up to 32 positions for monostable or bistable valves. Custom Made versions enable up to 60 monostable valves (10,5mm only). Any outputs not used on the IM (initial module) are transferred for use by the expansion units.
Different types of elements are available for Outputs, the features of these elements determine the maximum number that can be used. The addressing and configuration is done through rotary switches located under the cover and the LEDs indicate the working state. Expansion modules are only capable of handling Outputs, up to the maximum number allowed for each IM (taken into account the number of outputs used by the IM). Connections between each of the modules are done by using cables (5 core) in various pre-cut lengths with M9 connectors. The use of expansion modules linked via the CamiNet line proves more economical as it does not require a supply and Fieldbus connection, also enabling the use of less powerful controllers.



Example with Individual Fieldbus Modules.

New

The principal features are: electrical connections on the same side as the pneumatic connections, Bus-In Bus –out system for connection to the Fieldbus network, double electrical supplies, one for control and the other for power.
All the internal connections are on circuit boards with plug-in connectors to make future modifications easier to achieve.
This version is capable of handling 64 inputs and 64 outputs.
The outputs are on the right hand side of the unit and the inputs on the left hand side.
The 64 output units allow connection of up to 32 positions for monostable or bistable valves. Custom Made versions enable up to 60 monostable valves (10,5mm only).
Each island represents a node in the field bus network and as it does not have any local Fieldbus outlet it is particularly suited to a single applications or applications with a limited number of Valve islands.
This feature enables economic solutions, as there is a large choice of various Input and Output modules available, which are the same as the Expansion versions.
Both this version and the Initial Module plus expansion version can be equipped with Solenoid valves in size 1 (10,5mm) and size 2 (21mm), or a mixture of both sizes.
Multiple pressure zones and separate electrical supplies are available using intermediate plates.
With mixed islands pneumatic and electrical adaptor plates are not necessary and the number of valve positions will not be reduced as the addressing is done via rotary switches, with the LEDs indicating the working state.



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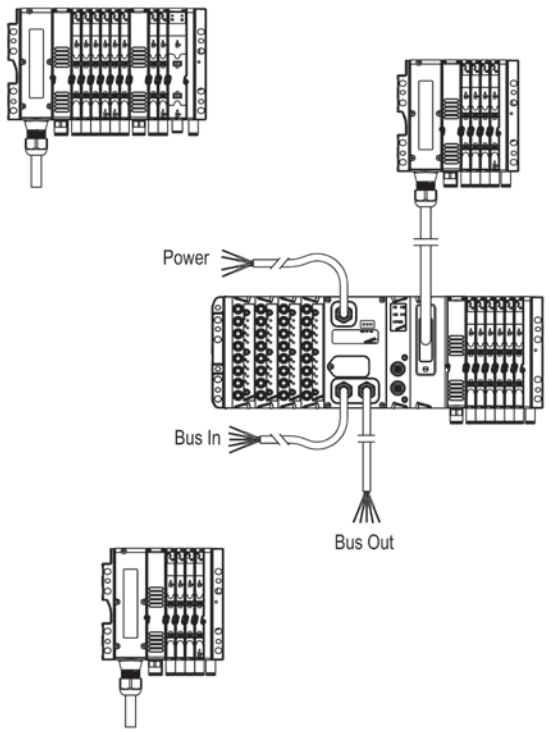
Multipole example

New

2

The Multipole version is available in PNP or NPN version.

The multiplole connector with a pre wired cable (standard length 3 or 5 meter) is available in two versions, with 25 or 37 pins.
The 25 pin version allows connection of up to 12 positions for monostable or bistable valves, (10 pos 21mm). Custom Made versions enable up to 20 monostable valves (10,5 mm valves only). The 37 pin version allows connection of up to 16 positions for monostable or bistable valves, (14 pos for 21mm). Custom Made versions enable up to 28 monostable valves (10,5 mm only).
This Multipole version can be equipped with Solenoid valves in size 1 (10,5mm) and size 2 (21mm), or a mixture of both sizes. Multiple pressure zones and separate electrical supplies are available using intermediate plates.
With mixed islands pneumatic and electrical adaptor plates are not necessary and the number of valve positions will not be reduced.



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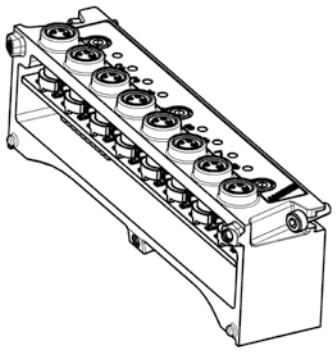
2

CONTROL

Digital input Module Mod. ME-0800-DC (8 digital inputs)

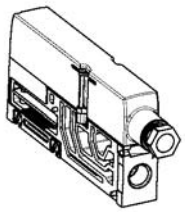
New



GENERAL DATA	
Number of digital inputs	8
Connection	M8 - 3 pin
Module dimension	130 x 25 mm
Signalling Led	Yellow Led for each inlet
Sensors supply	24 V DC +/- 10%
Protection	Overloaded (400 mA every 4 sensors)
Power consumption of the module without load	10 mA
Type of signal	PNP
Proctetion class	IP 65
Operating temperature	0°C ÷ 50°C
Material	Aluminium
Weight	110 g

Module for electr. power supply separation + supplem. inlet press. Mod. HA1S-K

New



GENERAL DATA	
Connection	3 poles
Dimensions	130 x 20 mm
Signalling	None
Supply	24 V dc (+/- 10%)
Electrical protection	Fuse 2 A
Protection class	IP 65
Temperature	0°C ÷ 50 °C
Material	Plastic - Aluminium
Weight	100 g

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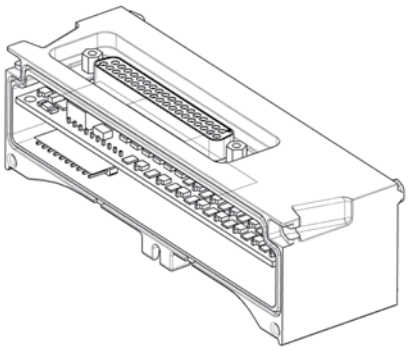
Digital output module (D-SUB - 37 pin) Mod. ME-xxxx-DD

New

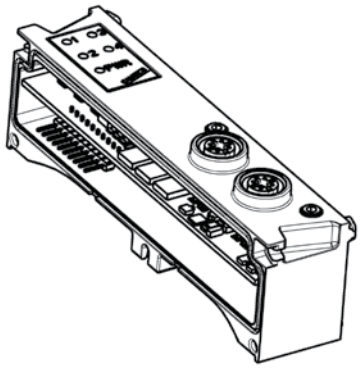


GENERAL DATA

	ME-0032-DD	ME-0024-DD	ME-0016-DD	ME-0008-DD
Number of digital outputs	32	24	16	8
Connection	D-SUB 37 poles	D-SUB 37 poles	D-SUB 37 poles	D-SUB 37 poles
Connectors	1	1	1	1
Dimensions	130 x 25 mm	130 x 25 mm	130 x 25 mm	130 x 25 mm
Type of signal	24 V DC PNP	24 V DC PNP	24 V DC PNP	24 V DC PNP
Protection	Overload (150 mA in outlet)	Overload (150 mA in outlet)	Overload (150 mA in outlet)	Overload (150 mA in outlet)
Power consumption without load	5 mA	5 mA	5 mA	5 mA
Protection class	IP 65	IP 65	IP 65	IP 65
Operating temperature	0°C ÷ 50 °C	0°C ÷ 50 °C	0°C ÷ 50 °C	0°C ÷ 50 °C
Material	Aluminium	Aluminium	Aluminium	Aluminium
Weight	100 g	100 g	100 g	100 g

Digital output module 2xM12 DUO, (4 outputs), Mod. ME-xxxx-DL

New



GENERAL DATA

	ME-0004-DL
Number of digital outputs	4
Connection	M 12 5 Poles Duo
Number of connections	2 Female connectors M 12
Dimensions	130 x 25
Signalling	1 Yellow Led for each single outlet 1 Green Led for power supply presence on the module
Outlet voltage	24 V DC +/- 10%
Signal	24 V DC PNP
Protection	Overload - Supply voltage(150 mA)
Power consumption without load	10 mA
Protection class	IP 65
Temperature	0°C ÷ 50 °C
Material	Aluminium
Weight	100 g

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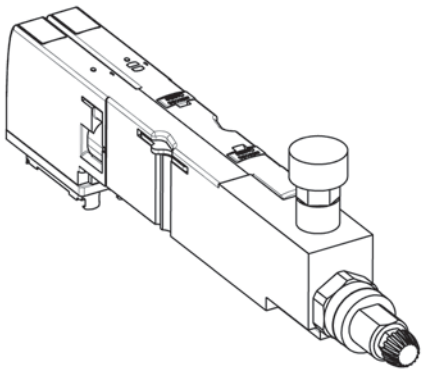
Valve with integrated pressure regulator (on inlet port 1)

New

This solution has the advantage of reducing the valve island's overall height compared to traditional "sandwich" solutions. The total width of this valve is 21mm. With the integrated pressure regulator it is possible to set the supply pressure (port 1) of the valve.



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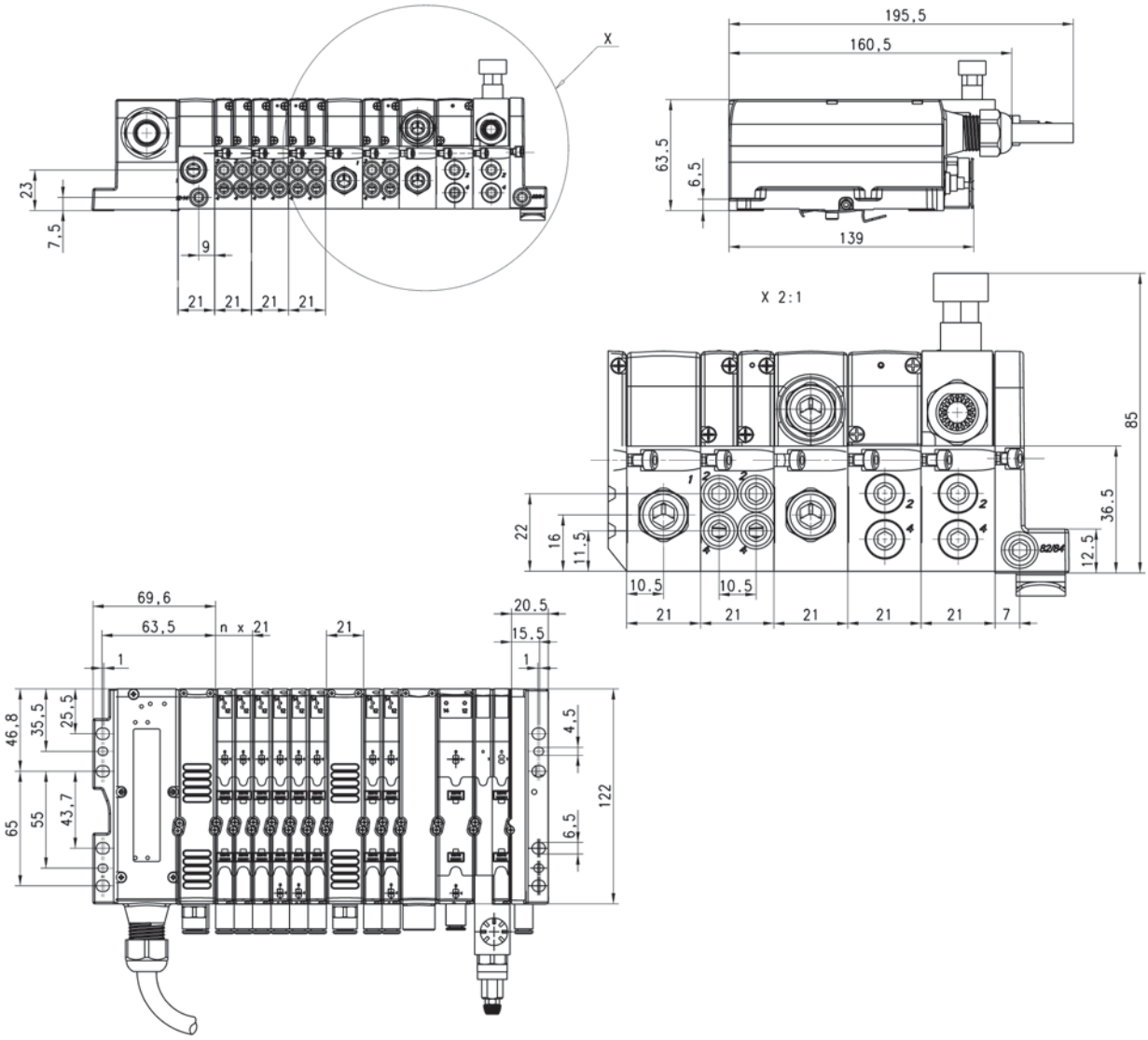
Multipole version

New

2



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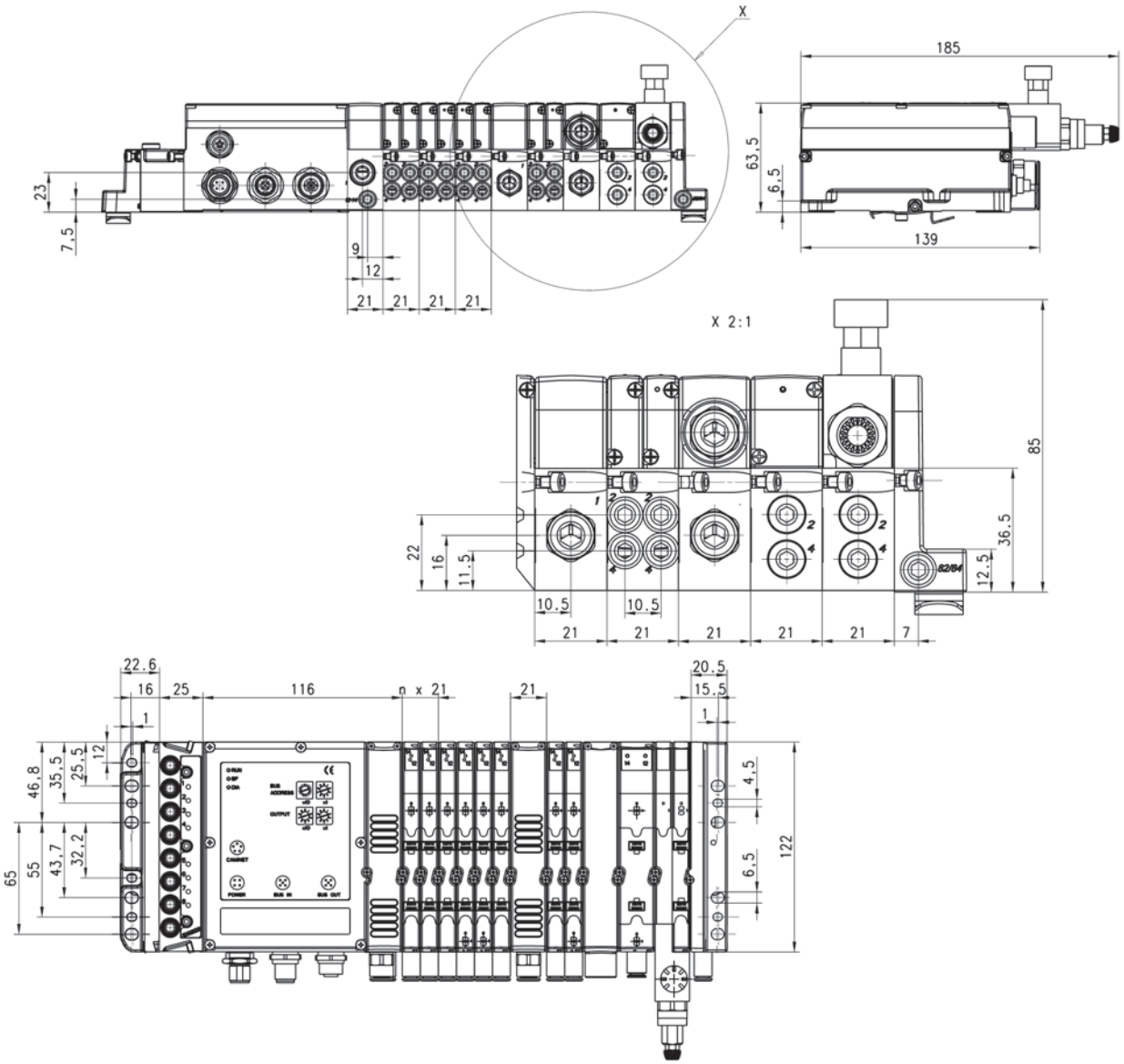
Expandable Fieldbus

New

2

CONTROL



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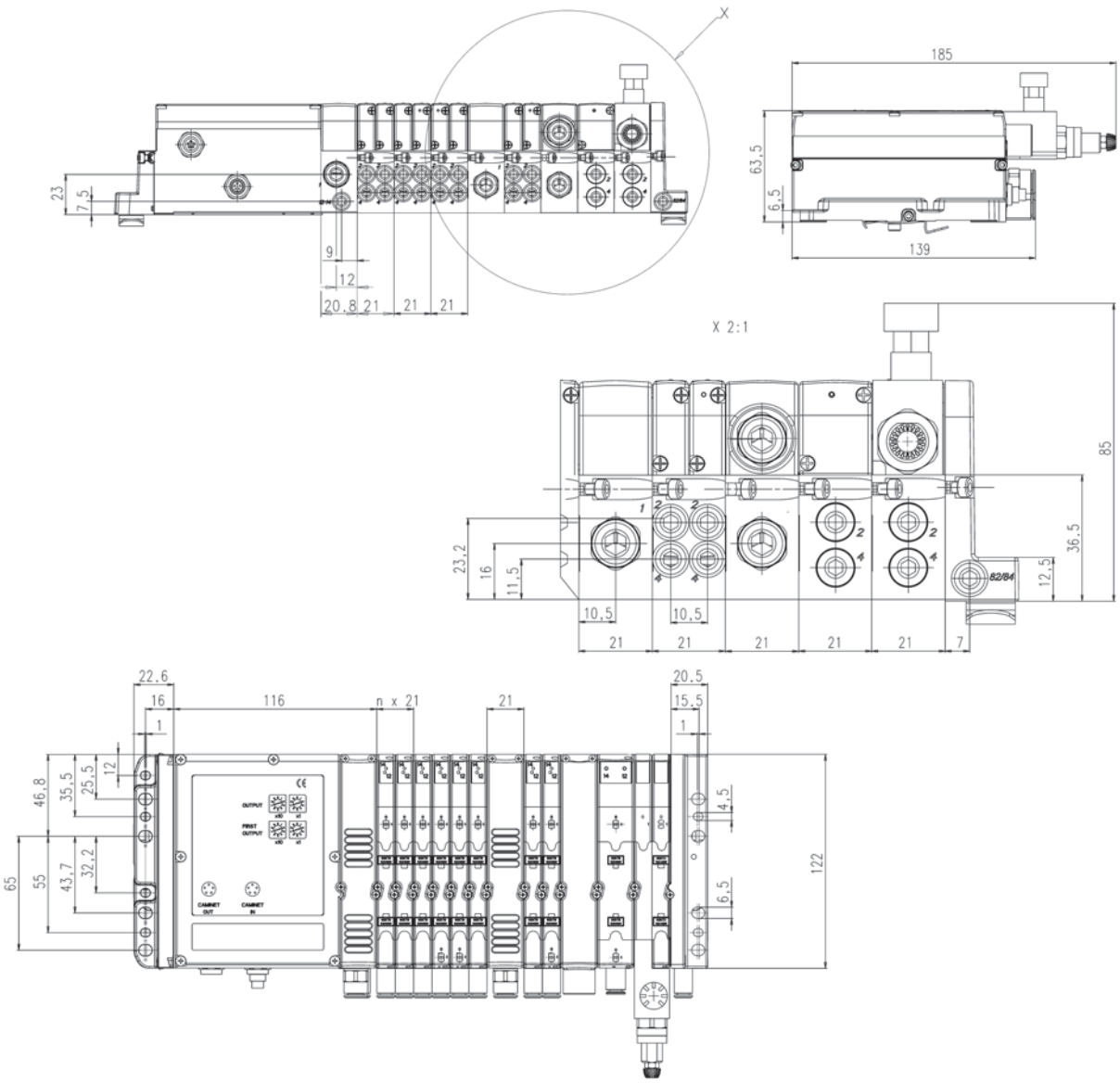
Fieldbus expansion

New

2



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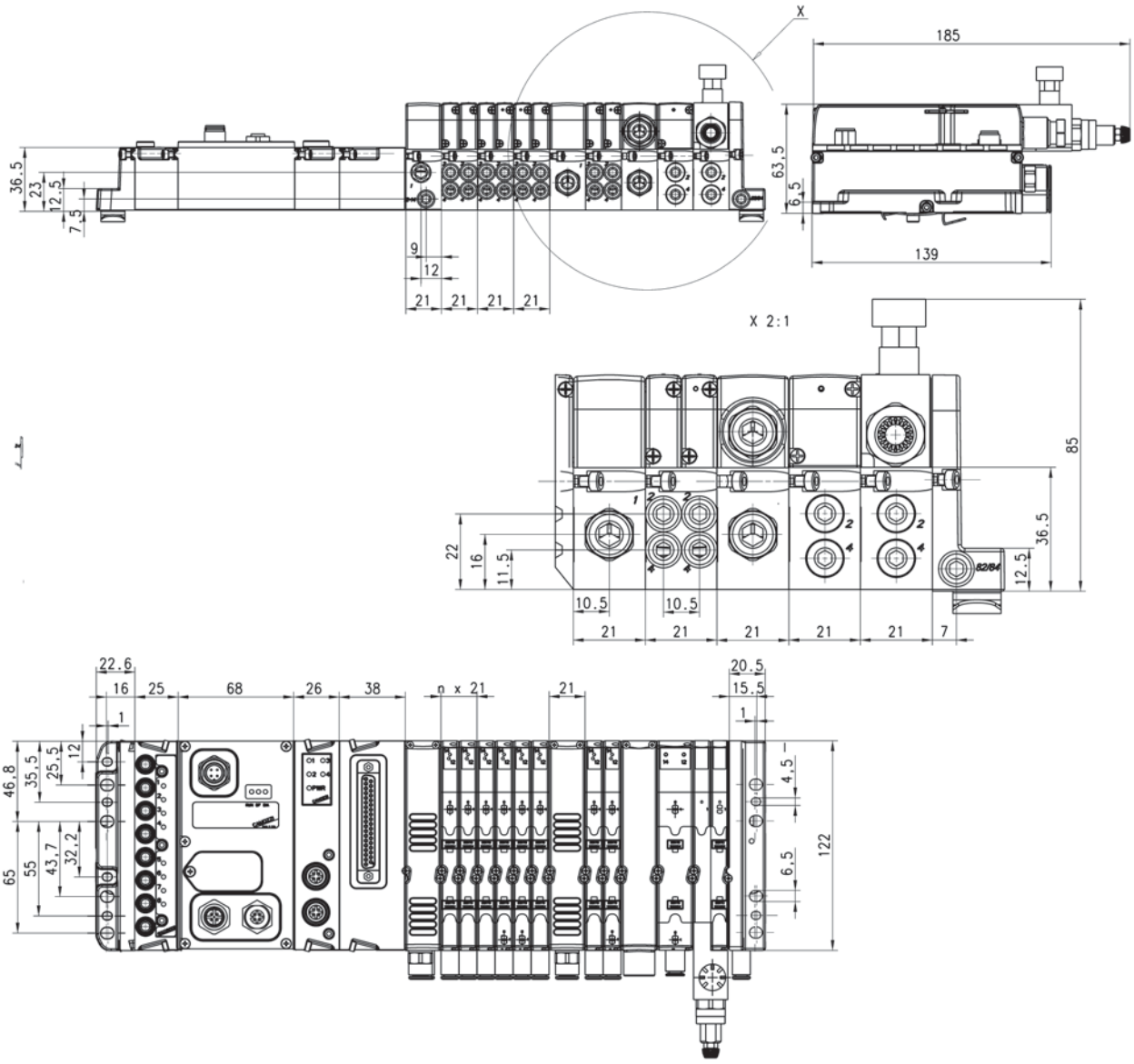
Individual Fieldbus version

New

2

CONTROL



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2

CODING OF VALVE ISLAND SERIES H - MULTIPOLE

H	P	5	M	-	03	-	ABCS	-	MMCCBBB	-	A

H	Series		
P	Type: P = Pneumatic A = Accessories		
5	Size: 1 = 10,5 2 = 21 5 = Mixed (both 10,5 and 21)		
M	Electrical connector: M = Multipole 25 pin PNP N = Multipole 25 pin NPN H = Multipole 37 pin PNP L = Multipole 37 pin NPN		
03	Cable length of the multipole 03 = 3 mt 05 = 5 mt 10 = 10 mt 15 = 15 mt 20 = 20 mt 25 = 25 mt 30 = 30 mt x = length to be defined in meters		
ABCS	Type of sub-bases and seals: Sub-base for two valves Size 1 (10,5mm): A = threaded M7 (ports 2 and 4) B = fittings for tube Ø4 (ports 2 and 4) C = fittings for tube Ø6 (ports 2 and 4) D = channel 1; 3 ; 5 closed - threaded M7 E = channel 1; 3 ; 5 closed - cartridge Ø4 (ports 2 and 4) F = channel 1; 3 ; 5 closed - cartridge Ø6 (ports 2 and 4) G = channel 3 ; 5 closed - threaded M7 H = channel 3 ; 5 closed - cartridge Ø4 (ports 2 and 4) I = channel 3 ; 5 closed - cartridges Ø6 (ports 2 and 4) L = channel 1 closed - threaded M7 M = channel 1 closed - cartridge Ø4 (ports 2 and 4) N = channel 1 closed - cartridge Ø6 (ports 2 and 4)	Sub-bases for solenoid valves size 2: Q = threaded G 1/8 (ports 2 and 4) R = fittings for tube Ø6 (ports 2 and 4) S = fittings for tube Ø8 (ports 2 and 4) Supplementary pressures and exhaust: X = supplementary pressure supply and exh. Y = supplementary pressure supply and exh. (with integrated silencer)	Sub-bases for electrical supply: K = Module for electrical power supply separation + supplementary inlet pressure Seals: T = diaphragm seal - channel 1;3;5 U = diaphragm seal - channel 1 V = diaphragm seal - channel 3; 5
MMCCBBB	Type of solenoid valve Size 1 and 2: M = 5/2 Monostable B = 5/2 Bistable V = 5/3 Centres Closed C = 2 x 3/2 N.C. A = 2 x 3/2 N.O. G = 1 x 3/2 N.C. + 1 x 3/2 N.O. E = 2 x 2/2 N.C. F = 2 x 2/2 N.O. I = 1 x 2/2 N.C. + 1 x 2/2 N.O. L = Free position	Solenoid valve + Pressure regulator on inlet 1 (SIZE 2 ONLY): N = 5/2 Monostable P = 5/2 Bistable Q = 5/3 Centres Closed R = 2 x 3/2 N.C. S = 2 x 3/2 N.O. T = 1 x 3/2 N.C. + 1 x 3/2 N.O. U = 2 x 2/2 N.C. X = 2 x 2/2 N.O. Y = 1 x 2/2 N.C. + 1 x 2/2 N.O.	
A	Terminal plates: Threaded: A = 1; 12/14 in common 3/5; 82/84 threaded ports B = 1; 12/14 separate 3/5; 82/84 threaded ports C = 1; 12/14 in common 3/5; 82/84 with integrated silencer D = 1; 12/14 separate 3/5; 82/84 with integrated silencer	Terminal plates: With cartridges Ø 8 : E = 1; 12/14 in common 3/5; 82/84 conveyable F = 1; 12/14 separate 3/5; 82/84 conveyable G = 1; 12/14 in common 3/5; 82/84 with integrated silencer H = 1; 12/14 separate 3/5; 82/84 with integrated silencer	Terminal plates: With cartridges Ø 10 : I = 1; 12/14 in common 3/5; 82/84 conveyable L = 1; 12/14 separate 3/5; 82/84 conveyable M = 1; 12/14 in common 3/5; 82/84 with integrated silencer N = 1; 12/14 separate 3/5; 82/84 with integrated silencer

In presence of identical consequent codes both for the sub bases as for the valves you need to substitute the letter with the number.
Ex: HP1H-03-AAAAAA-MMMBBB-A is converted to Ex: HP1H-03-6A-3M3B-A.

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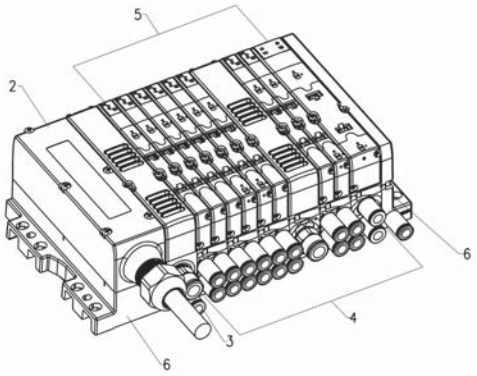
2

CONTROL

Ordering example Island valves Series H - Multipole



CODE

HP (1)		(2)		(3)		(4)		(5)		(6)
		Electrical connection		Cable length:		Sub-base for two valves Size 1 (10,5mm)		Type of Solenoid valve size 1 and 2		Terminal plates - Threaded
1	10	**M**	Multip. 25 pin PNP	**03**	03 m	**A**	Threaded M7	**M**	5/2 Monostable	**A**	1 ; 12/14 in common 3/5 ; 82/84 threaded ports
2	21	**N**	Multip. 25 pin NPN	**05**	05 m	**B**	fittings for tube Ø4	**B**	5/2 Bistable	**B**	1 ; 12/14 separate 3/5 ; 82/84 threaded ports
5	Mixed	**H**	Multip. 37 pin PNP	**10**	10 m	**C**	fittings for tube Ø6	**V**	5/3 Centres Closed	**C**	1 ; 12/14 in common 3/5; 82/84 w. integr. silencer
		L	Multip. 37 pin NPN	**15**	15 m	**D**	channel 1; 3; 5 closed - threaded M7	**C**	2 x 3/2 N.C.	**D**	1 ; 12/14 separate 3/5; 82/84 w. integr. silencer
				20	20 m	**E**	channel 1; 3; 5 closed - cartridge Ø4	**A**	2 x 3/2 N.O.		Terminal plates - with cartridges Ø8 on port 1
				25	25 m	**F**	channel 1; 3; 5 closed - cartridge Ø6	**G**	1 x 3/2 N.C. + 1 x 3/2 N. O.	**E**	1 ; 12/14 in common 3/5 ; 82/84 conveyable
				30	30 m	**G**	channel 3; 5 closed threaded M7	**E**	2 x 2/2 N.C	**F**	1 ; 12/14 separate 3/5 ; 82/84 conveyable
				X	length to be defined in meters	**H**	channel 3; 5 closed - cartridge Ø4	**F**	2 x 2/2 N.O.	**G**	1 ; 12/14 in common 3/5; 82/84 w. integr. silencer
						I	channel 3; 5 closed - cartridge Ø6	**I**	1 x 2/2 N.C. + 1 x 2/2 N.O.	**H**	1 ; 12/14 separate 3/5; 82/84 w. integr. silencer
						L	channel 1 closed - threaded M7	**L**	Free position		Terminal plates - with cartridges Ø10 on port 1
						M	channel 1 closed - cartridge Ø4		Valves with integr. pressure reg. online 1 (Size 2 only)	**I**	1 ; 12/14 in common 3/5 ; 82/84 conveyable
						N	channel 1 closed - cartridge Ø6	**N**	5/2 Monostable	**L**	1 ; 12/14 separate /5 ; 82/84 conveyable
							Sub- base for Valves size 2	**P**	5/2 Bistable	**M**	1 ; 12/14 in common 3/5 ; 82/84 with integrated silencer
						Q	Threaded G1/8	**Q**	5/3 Centres Closed	**N**	1 ; 12/14 separate 3/5; 82/84 w. integr. silencer
						R	fittings for tube Ø6	**R**	2 x 3/2 N.C.		
						S	fittings for tube Ø8	**S**	2 x 3/2 N.O.		
							Supplem. press. and exhaust:	**T**	1 x 3 /2 N.C. 1 x 3 /2 N.O.		
						X	Supplem. pressure supply and exhaust	**U**	2 x 2/2 N.C.		
						Y	Supplem. press. supply and exh. (w. integ. silencer)	**X**	2 x 2/2 N.O.		
							Sub-base for electrical supply	**Y**	1 x 2 /2 N.C. 1 x 2 /2 N.O.		
						K	Module for electrical power supply separation + supplementary inlet pressure				
							Seals				
						T	Diaphr. seal - channel 1; 3; 5				
						U	Diaphr. seal - channel 1				
						V	Diaphr. seal - channel 3; 5				

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CODING OF VALVE ISLAND SERIES H - FIELDBUS

H	P	5	P	-	3A	-	XC	-	ABCS	-	MMCCBBB	-	A

H	Series		
P	Type: P = Pneumatic A = Accessories		
5	Size: 1 = 10,5 2 = 21 5 = Mixed (both 10,5 and 21)		
P	Electrical Connection: P = Profibus-DP (expandable) C = CANopen (expandable) D = DeviceNet (expandable) E = Expansion (only for P-C-D) F = Profibus-DP - Individual Fieldbus G = CANopen - Individual Fieldbus R = DeviceNet - Individual Fieldbus		
3A	Input Modules: 0 = Without inputs A = Input module - 8 digital (8xM8)		
XC	Output Modules: 0 = Without outputs B = Output module - 4 digital (2xM12) C = 8 Output Sub-D 37 pin D = 16 Output Sub-D 37 pin E = 24 Output Sub-D 37 pin F = 32 Output Sub-D 37 pin L = 2 Output Analog. 0-10 V (in anticipation, not avalaible now) N = 2 Output Analog. 4-20 mA (in anticipation, not avalaible now).		
ABCS	Sub- base for two valves size 1 (10,5 mm) A = threaded M7 (ports 2 and 4) B = fittings for tube Ø4 (ports 2 and 4) C = fittings for tube Ø6 (ports 2 and 4) D = channel 1; 3 ; 5 closed - threaded M7 E = channel 1; 3 ; 5 closed - cartridge Ø4 (ports 2 and 4) F = channel 1; 3 ; 5 closed - cartridge Ø6 (ports 2 and 4) X = Pneum. Electr. Interface Y = Pneum. Electr. Interface + external power supply	Type of sub- bases and seals: Q = threaded G1/8 (ports 2 and 4) R = fittings for tube Ø6 (ports 2 and 4) S = fittings for tube Ø8 (ports 2 and 4) Supplementary pressure and exhaust: X = supplementary pressure supply and exhaust Y = supplementary pressure supply and exhaust (with integrated silencer)	Type of sub- bases and seals: Sub-bases for electrical supply: K = module for electrical power supply separation + supplementary inlet pressure Seals: T = diaphragm seal - channel 1; 3; 5 U = diaphragm seal - channel 1 V = diaphragm seal - channel 3 and 5
MMCCBBB	Type of Solenoid valveSize 1 and 2: M = 5/2 Monostable B = 5/2 Bistable V = 5/3 Centres closed C = 2 x 3/2 N.C. A = 2 x 3/2 N.O. G = 1 x 3/2 N.C. + 1 x 3/2 N.O. E = 2x 2/2 N.C. F = 2 x 2/2 N.O. I = 1 x 2/2 N.C. + 1 x 2/2 N.O. L = free position	Solenoid valve +Pressure regulator on line 1 SIZE 2 ONLY: N = 5/2 Monostable P = 5/2 Bistable Q = 5/3 Centres closed R = 2 x 3/2 N.C. S = 2 x 3/2 N.O. T = 1 x 3/2 N.C. + 1 x 3/2 N.O. U = 2 x 2/2 N.C. X = 2 x 2/2 N.O. Y = 1 x 2/2 N.C. + 1 x 2/2 N.O.	
A	Terminal plates: Threaded: A = 1; 12/14 in common 3/5; 82/84 threaded ports B = 1; 12/14 separate 3/5; 82/84 threaded ports C = 1; 12/14 in common 3/5; 82/84 with integrated silencer D = 1; 12/14 separate 3/5; 82/84 with integrated silencer	Terminal plates: With cartridges Ø 8 : E = 1; 12/14 in common 3/5; 82/84 conveyable F = 1; 12/14 separate 3/5; 82/84 conveyable G = 1; 12/14 in common 3/5; 82/84 with integrated silencer H = 1; 12/14 separate 3/5; 82/84 with integrated silencer	Terminal plates: With cartridges Ø 10 : I = 1; 12/14 in common 3/5; 82/84 conveyable L = 1; 12/14 separated 3/5; 82/84 conveyable M = 1; 12/14 in common 3/5; 82/84 with integrated silencer N = 1; 12/14 separated 3/5; 82/84 with integrated silencer

X and Y sub bases e K will be equipped with the threads or cartridges of the same size of the port 1 see the choice " Terminal plates ".

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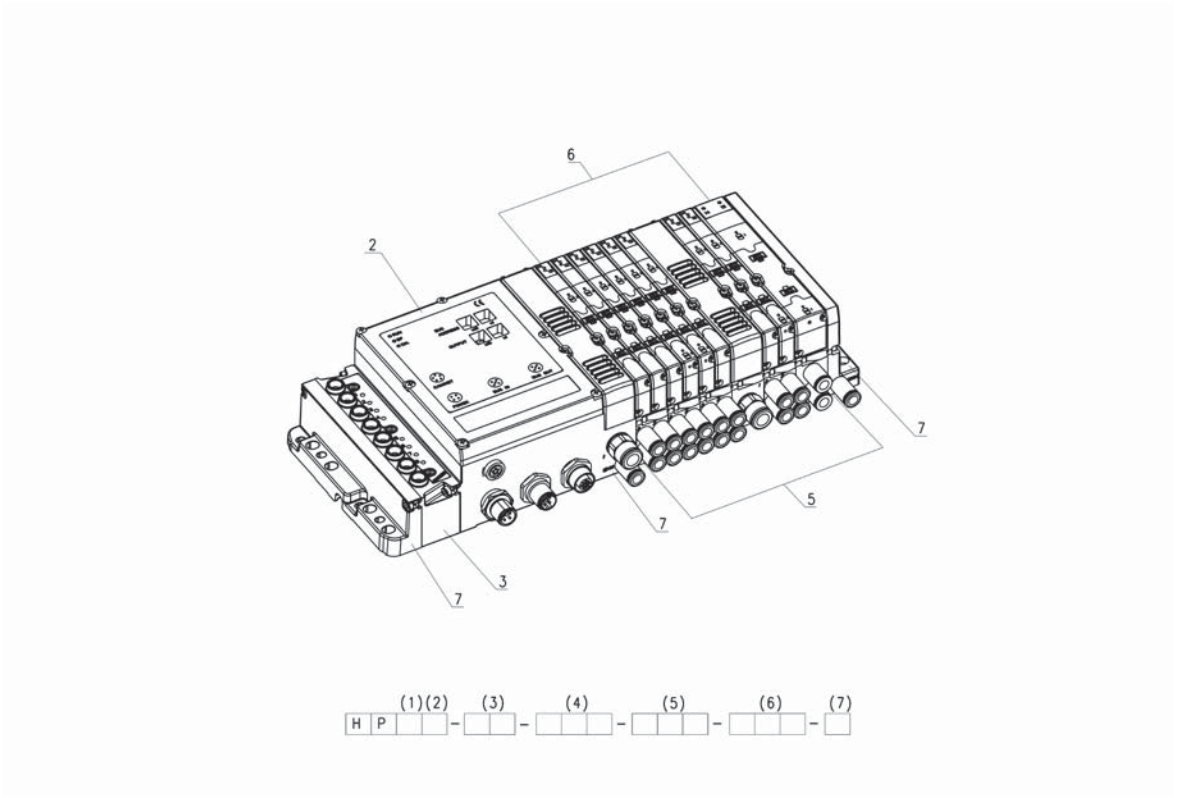
2

CONTROL

Ordering example Valve Island Series H - Fieldbus



CODE

HP (1)		(2)		(3)		(4)		(5)		(6)		(7)
Size		Electrical connector		Input modules		Output modules		Sub-base for two valves Size 1 (10,5mm)		Type of Solenoid valve size 1 and 2		Terminal plates
1	10,5	**P**	Profibus-DP (expandable)	**0**	Without inputs	**A**	Without outputs	**A**	Threaded M7	**M**	5/2 Monostable	**A**	1; 12/14 in common 3/5; 82/84 threaded
2	21	**C**	CANopen (expandable)	**A**	Input module - 8 digital (8xM8)			**B**	fittings for tube Ø4	**B**	5/2 Bistable	**B**	1; 12/14 separate 3/5; 82/84 threaded
5	Mixed	**D**	DeviceNet (expandable)					**C**	fittings for tube Ø6	**V**	5/3 Centres Closed	**C**	1; 12/14 in common 3/5; 82/84 w.silencer
		E	only for P-C-D Expansion					**D**	channel 1; 3; 5 closed - threaded M7	**C**	2 x 3/2 N.C.	**D**	1; 12/14 separate 3/5; 82/84 w. silencer
								E	channel 1; 3; 5 closed - cartridge Ø4	**A**	2 x 3/2 N.O.		Terminal plates - with cartridges Ø8 for size 1
								F	channel 1; 3; 5 closed - cartridge Ø6	**G**	1 x 3/2 N.C. + 1 x 3/2 N.O.	**E**	1; 12/14 in common 3/5; 82/84 conveyable
								G	channel 3; 5 closed threaded M7	**E**	2 X 3/2 N.C.	**F**	1; 12/14 in common 3/5; 82/84 conveyable
								H	channel 3; 5 closed - cartridge Ø4	**F**	2 X 3/2 N.O.	**G**	1; 12/14 in common 3/5; 82/84 w. silencer
								I	channel 3; 5 closed - cartridge Ø6	**I**	1 x 2/2 N.C. + 1 x 2/2 N.O.	**H**	1; 12/14 separate 3/5; 82/84 w. silencer
								L	channel 1 closed - threaded M7	**L**	Free position		Term. plates - w. cartr. Ø8 (size 2 and 5)
								M	channel 1 closed - cartridge Ø4		Valves w. integr. press. reg. online 1 (size 2)	**I**	1; 12/14 in common 3/5; 82/84 conveyable
								N	channel 1 closed - cartridge Ø6	**N**	5/2 Monostable	**L**	1; 12/14 in common 3/5; 82/84 conveyable
									Sub- base for Valves size 2	**P**	5/2 Bistable	**M**	1; 12/14 in common 3/5; 82/84 w. silencer
								Q	Threaded G1/8	**Q**	5/3 Centres Closed	**N**	1; 12/14 separate 3/5; 82/84 w. silencer
								R	fittings for tube Ø6	**R**	2 x 3/2 N.C.		
								S	fittings for tube Ø8	**S**	2 x 3/2 N.O.		
									Suppl. press. + exhaust	**T**	1x3/2 N.C. + 1x3/2 N.A.		
								X	Supplem. press. supply and exh.	**U**	2 x 2/2 N.C.		
								Y	Supplem. press. supply and exh. (w. silencer)	**X**	2 x 2/2 N.A.		
									Sub-base for electr. supply	**Y**	1x 2/2 N.C. + 1x2/2 N.A.		
								K	Electr. supply separ. + suppl. inlet press.				
									Seals				
								T	Diaphr. - channel 1; 3; 5				
								U	Diaphr. - channel 1				
								V	Diaphr. - channel 3; 5				

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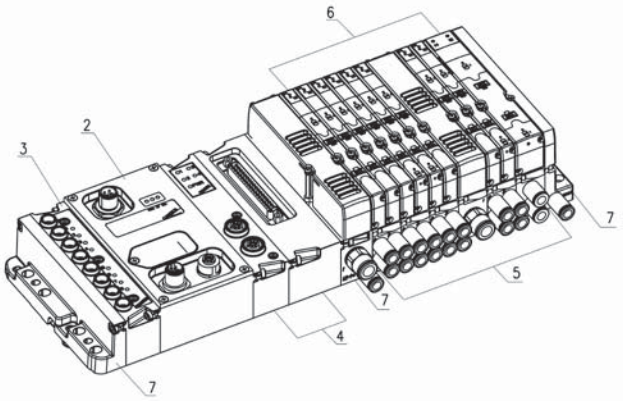
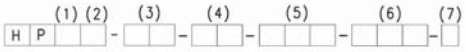
Ordering example Valve Island Series H - Individual





CODE

HP (1)		(2)		(3)		(4)		(5)		(6)		(7)
Size		Eletrical Connection		Input Modules		Output Modules		Sub-base for two valves Size 1 (10,5mm)		Type of solenoid valve Size 1 and 2		Terminal plates - Threaded
1	10,5	**F**	Profibus-DP - Individual Fieldbus	**0**	Without inputs	**0**	Without outputs	**A**	Threaded M7	**M**	5/2 Monostable	**A**	1; 12/14 in common 3/5 ; 82/84 threaded
2	21	**G**	CANopen - Individual Fieldbus	**A**	Input module - 8 digital (8xM8)			**B**	fittings for tube Ø4	**B**	5/3 Bistable	**B**	1; 12/14 separate; 3/5; 82/84 threaded
5	Mixed	**R**	DeviceNet - Individual Fieldbus					**C**	fittings for tube Ø6	**V**	5/3 Centres Closed	**C**	1; 12/14 in common; 3/5; 82/84 w. silencer
								D	channel 1; 3; 5 closed - threaded M7	**C**	2 x 3/2 N.C.	**D**	1; 12/14 separate; 3/5; 82/84 w. silencer
								E	channel 1; 3; 5 closed - cartridge Ø4	**A**	2 x 3/2 N.O.		Terminal plates - with cartridges Ø8 for Size 1
								F	channel 1; 3; 5 closed - cartridge Ø6	**G**	1 x 3/2 N.C. 1 x 3/2 N.O.	**E**	1; 12/14 in common 3/5; 82/84 conveyable
								G	channel 3; 5 closed threaded M7	**E**	2 x 2 /2 N.C.	**F**	1; 12/14 separate 3/5; 82/84 conveyable
								H	channel 3; 5 closed - cartridge Ø4	**F**	2 x 2 /2 N.O.	**G**	1; 12/14 in common 3/5; 82/84 w. silencer
								I	channel 3; 5 closed - cartridge Ø6	**I**	1 x 2 /2 N.C. 1 x 2 /2 N.O.	**H**	1; 12/14 separate 3/5; 82/84 w. silencer
								L	channel 1 closed - threaded M7	**L**	Free position		Term. plates - w. cartr. Ø8 (size 2 and 5)
								M	channel 1 closed - cartridge Ø4		Valves w. integr. press. reg. online (size 2)	**I**	1; 12/14 in common 3/5; 82/84 conveyable
								N	channel 1 closed - cartridge Ø6	**N**	5/2 Monostable	**L**	1; 12/14 separate 3/5; 82/84 conveyable
									Sub- base for Valves size 2	**P**	5/3 Bistable	**M**	1; 12/14 in common 3/5; 82/84 w. silencer
								Q	Threaded G1/8	**Q**	5/3 Centres Closed	**N**	1; 12/14 separate 3/5; 82/84 w. silencer
								R	fittings for tube Ø6	**R**	2 x 3 /2 N.C.		
								S	fittings for tube Ø8	**S**	2 x 3 /2 N.O.		
									Suppl. press. + exhaust	**T**	1x3/2 N.C. 1x3/2 N.O.		
								X	Supplem. press. supply + exh.	**X**	2 x 2 /2 N.C.		
								Y	Supplem. press. supply + exh. (w. silencer)	**Y**	1 x 2 /2 N.C. 1 x 2 /2 N.O.		
									Sub-base for electrical supply				
								K	Electr. supply separ. + suppl. inlet press.				
									Seals				
								T	Diaphr. - channel 1; 3; 5				
								U	Diaphr. - channel 1				
								V	Diaphr. - channel 3; 5				

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CODING: VALVE - SUB BASES - END BLOCKS

2

CONTROL

	EXAMPLE OF CODING SINGLE VALVE (Spare part)	
HP1V-M		
H	Series	
P	Type: P = Pneumatic	
1	Size: 1 = 10,5 2 = 21	
V	Type of accessory: V = Solenoid valve	
-		
M	Type of Solenoid Valve: M = 5/2 Monostable B = 5/2 Bistable V = 5/3 Centres Closed C = 2 x 3/2 N.C. A = 2 x 3/2 N.O. G = 1 x 3/2 N.C. + 1 x 3/2 N.O. E = 2 x 2/2 N.C. F = 2 x 2/2 N.O. I = 1 x 2/2 N.C. + 1 x 2/2 N.O. L = Free position	Solenoid valve +regulator + sub base N = 5/2 Monostable P = 5/2 Bistable Q = 5/3 Centres Closed R = 2 x 3/2 N.C. S = 2 x 3/2 N.O. T = 1 x 3/2 N.C. + 1 x 3/2 N.O. U = 2 x 2/2 N.C. X = 2 x 2/2 N.O. Y = 1 x 2/2 N.C. + 1 x 2/2 N.O.
	EXAMPLE OF CODING OF SUB BASES - Accessories	
HHA1S-A		
H	Series	
A	Type: A = Accessories	
1	Size: 0 = For X-Y-K-T-U-V 1 = 10,5 2 = 21	
S	Type of accessory: R = Sub base Multipole S = Sub base Fieldbus G = Seals	
-		
A	Type of sub-base: A = Through - threaded M7 D = channel 1; 3; 5 closed - threaded M7 G = channel 3; 5 closed - threaded M7 L = channel 1 closed - threaded M7 Q = Threaded G1/8 (ports 2 and 4) X = supplementary pressure supply and exhaust Y = supplementary pressure supply and exhaust (with integrated silencer) K = Module for electrical power supply separation + supplementary inlet pressure	Type of seal: T = diaphragm seal - channel 1;3;5 U = diaphragm seal - channel 1 V = diaphragm seal - channel 3;5 P = Through

The company reserves the right to vary models and dimensions without notice.
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CODING: INPUT/OUTPUT MODULES - Codes multipole connections

	EXAMPLE CODING TERMINALS - Accessories
HA0M-A	
H	Series
A	Type: A = Accessories
0	Size: 0 = Not defined
M	Electrical connection: M = Multipole PNP N = Multipole NPN P = Profibus-DP (expandable) C = CANopen (expandable) D = DeviceNet (expandable) E = Expansion F = Terminals for individual Fieldbus
-	
A	End blocks: A = 1 - 12/14 common 3/5 threaded B = 1 - 12/14 separated 3/5 threaded C = 1 - 12/14 common 3/5 with integrated silencer D = 1 - 12/14 separated 3/5 with integrated silencer
	EXAMPLE OF INPUT / OUTPUT MODULE CODING - Accessories
HA01-D	
H	Series
A	Type: A = Accessories
0	Size: 0 = Not defined
1	Type of accessory: 1 = Input Module 2 = Output Module
-	
D	Type of module D = Digital
	Multipole Connector - Accessory
G4X1-H-3	G4X1-H-3 = Multipole Pin 25 poles IP-65 90° series H cable of 3 m G4X1-H-5 = Multipole Pin 25 poles IP-65 90° series H cable of 5 m G9X1-H-3 = Multipole Pin 37 poles IP-65 90° series H cable of 3 m G9X1-H-5 = Multipole Pin 37 poles IP-65 90° series H cable of 5 m

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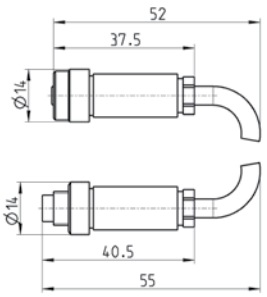
2

CONTROL

Expansion cable

New

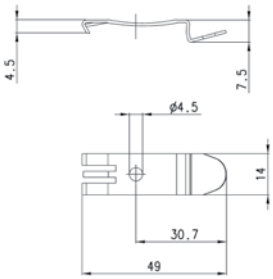


Mod.	Length
CS-FW05HE-D025	0,25 mt
CS-FW05HE-D100	1 mt
CS-FW05HE-D250	2,5 mt
CS-FW05HE-D500	5 mt
CS-FW05HE-DA00	10 mt

Mounting bracket for DIN rail

New

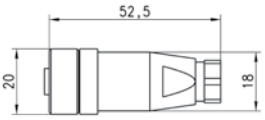
Supplied with:
2x mounting elements
2x screws M4x6 UNI 5931



Mod.
PCF-E520

Power supply connector

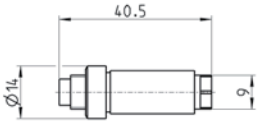
New



Mod.
CS-LF04HB

Connector with terminal resistance Cam.I.Net

New



Mod.
CS-FP05H0

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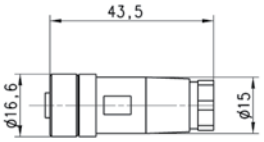
Profibus-DP connector for Bus IN

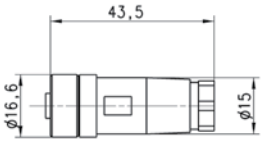
new



Mod.
CS-MF05HC

CANopen / DeviceNet connector for Bus IN

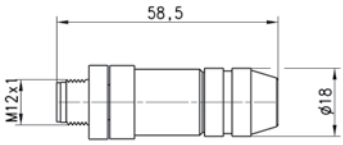
New



Mod.
CS-LF05HC

Profibus-DP connector for Bus OUT

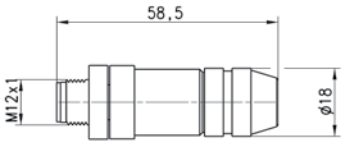
New



Mod.
CS-MM05HC

CANopen connector for Bus OUT

New



Mod.
CS-LM05HC

The company reserves the right to vary models and dimensions without notice.
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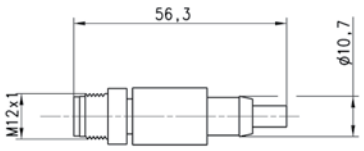
2

CONTROL

Male connector with termination resistence for Profibus-DP

New

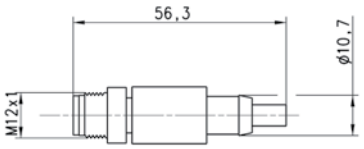


Mod.
CS-MQ05H0

Male connector with terminal resistence

New

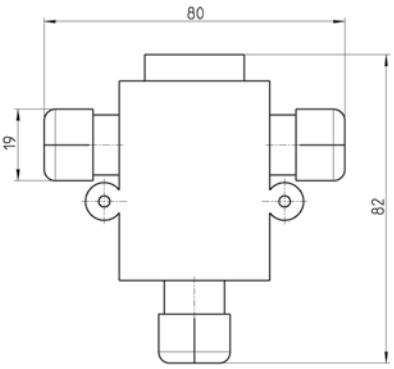
CANopen and DeviceNet



Mod.
CS-LP05H0

Data line tee for CAN network

New



Mod.
CS-AA05EC

Blanking plug M8 for inlets module

New

Mod.
CS-DFTP

The company reserves the right to vary models and dimensions without notice.
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Individual Fieldbus nodes CP2, CC2, CD2

New

Interface with the most widespread Fieldbus Protocols: Profibus-DP; CANopen and DeviceNet

- Maximum flexibility in use
- Mounting in arduous conditions
- Easily modifiable.

The serial module CX2 can be used both integrated on different valve series (Series 3, Series H) and as external component. This device allows the connection of up to a max of 64 solenoids and 64 inputs on the base unit, so applications other than pneumatics are a possibility. Thanks to its aluminium support structure, this solution is IP65 rated with high mechanical strength. It is therefore suitable for mounting in arduous conditions.

Electric output modules that can be coupled are: connection D-Sub- 37 pin for 8; 16; 24; 32 outlets or with two M12 connections for 4 outlets. Input modules have 8xM8 connections and allow the connection of sensors rated up to a max of 100mA. All communication modules are connected by plug and socket granting the maximum flexibility, and addressing is done by rotary switch for easy configuration.

GENERAL DATA

Number of digital output	64
Number of digital input	64
Maximum input absorption	1,5 A
Maximum output absorption	3 A
Signalling Led	CP2: 1 led green RUN, 1 led red DIA, 1 led red BF CD2: 1 led green IO, 1 led red NS, 1 led red MS CC2: 1 led green RUN, 1 led red DIA, 1 led red BF
FieldBus Protocol	CP2: Profibus-DP CD2: DeviceNet CC2: CanOpen
Maximum number of nodes	CP2: 32/127 CD2: 64 CC2: 127
Maximum Baud rate	CP2: 12 Mbit/sec CD2: 500 Kbit/sec CC2: 1 Mbit/sec
Logical supply voltage	24VDC (-15% / + 20%)
Power supply voltage	24VDC (for the tolerance, consider the total loads of the connected inputs)
Protection	overload and reverse polarity
Protection class	IP65
Conform with standards	EN-61326-1 EN-61010-1
Operating temperature	0-50°C
Material	Aluminium
Weight	250 g
Dimensions	130x68 mm

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

2

CONTROL

CODING EXAMPLE

CP2	3A	BC

CP2	CP2 = Fieldbus Profibus Dp CC2 = Fieldbus CANOpen CD2 = Fieldbus DeviceNet
3A	0 = no module nA = numbers of modules 8 Input (n= 1÷8)
BC	0 = no module nB = numbers of modules 4 output M12 duo nC = numbers of modules 8 output sub-d 37 pin nD = numbers of modules 16 output sub-d 37 pin nE = numbers of modules 24 output sub-d 37 pin nF = numbers of modules 32 output sub-d 37 pin (es. 3 modules A + 2 modules E= 3A2E)

Individual Fieldbus nodes

New

see the drawing on following page

Mod.	FieldBus Protocol
CP2	Profibus-DP
CC2	DeviceNet
CD2	CANopen

The company reserves the right to vary models and dimensions without notice.
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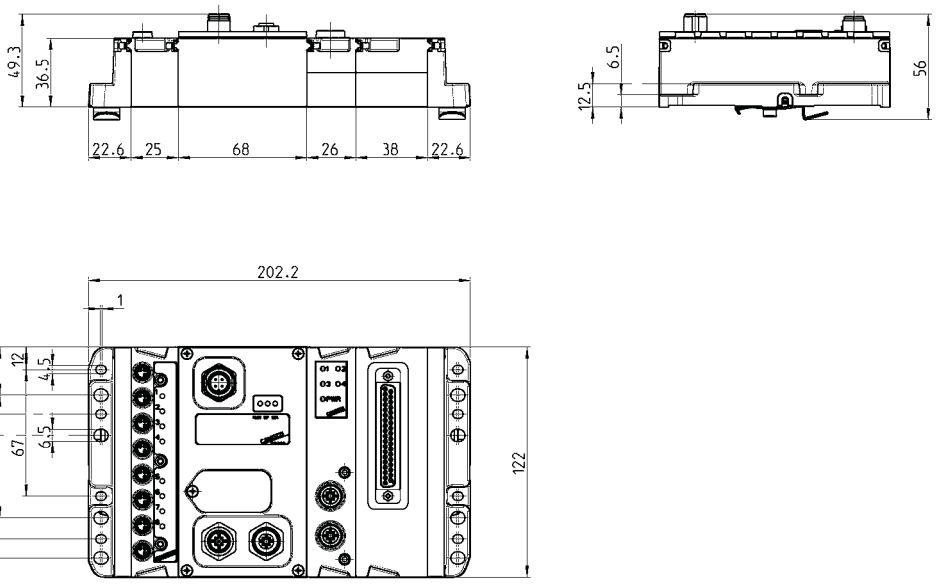
System description

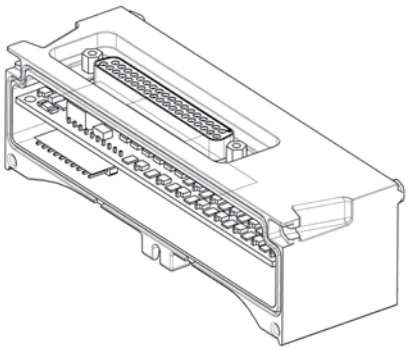
New

The principal features are: electrical connections on the same side as the pneumatic connections, Bus-In Bus-Out system for connection to the Fieldbus network, double electrical supplies, one for control and the other for power. This version is capable of handling 64 inputs and 64 outputs.
The output modules can be positioned on the right hand side of the node and they provide either 2 x M12 or 37 pole Sub-D connection. In the same way it is possible to position the input modules on the left hand side, which provide 8 inputs with M8 connection.
All the elements can be easily inserted because of their direct connection to the plate.
It is possible to use this node directly integrated on pneumatic solutions such as Series 3 and Series H.
Each node is part of the serial system.
The addressing is done via rotary switches, with the Leds indicating the working state.
Manuals and configuration files are available on our website: www.camozzi.com in the Section Products/Download.



Digital output module (D-SUB - 37 pin) Mod. ME-xxxx-DD

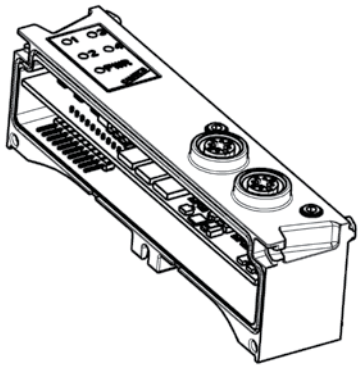
New



	ME-0032-DD	ME-0024-DD	ME-0016-DD	ME-0008-DD
Number of digital outputs	32	24	16	8
Connection	D-SUB 37 poles	D-SUB 37 poles	D-SUB 37 poles	D-SUB 37 poles
Connectors	1	1	1	1
Dimensions	130 x 25 mm	130 x 25 mm	130 x 25 mm	130 x 25 mm
Type of signal	24 V DC PNP	24 V DC PNP	24 V DC PNP	24 V DC PNP
Protection	Overload (150 mA in outlet)	Overload (150 mA in outlet)	Overload (150 mA in outlet)	Overload (150 mA in outlet)
Power consumption without load	5 mA	5 mA	5 mA	5 mA
Protection class	IP 65	IP 65	IP 65	IP 65
Operating temperature	0°C ÷ 50 °C	0°C ÷ 50 °C	0°C ÷ 50 °C	0°C ÷ 50 °C
Material	Aluminium	Aluminium	Aluminium	Aluminium
Weight	100 g	100 g	100 g	100 g

Digital output module 2xM12 DUO, (4 outputs), Mod. ME-0004-DL

New



	ME-0004-DL
Number of digital outputs	4
Connection	M 12 5 Poles Duo
Number of connections	2 Female connectors M 12
Dimensions	130 x 25
Signalling	1 Yellow Led for each single outlet 1 Green Led for power supply presence on the module
Outlet voltage	24 V DC +/- 10%
Signal	24 V DC PNP
Protection	Overload - Supply voltage (150 mA)
Power consumption without load	10 mA
Protection class	IP 65
Temperature	0°C ÷ 50 °C
Material	Aluminium
Weight	100 g

The company reserves the right to vary models and dimensions without notice.
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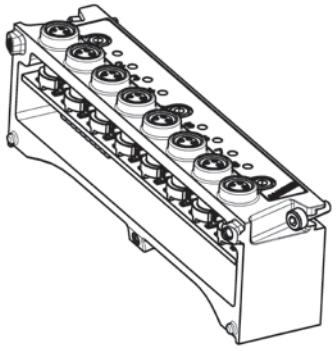
Digital input Module Mod. ME-0800-DC (8 digital inputs)

New



Number of digital inputs	8
Connection	M8 - 3pin
Module dimension	130x25 mm
Signalling led	yellow led for each inlet
Sensors supply	24VDC +/- 10%
Protection	overloaded (400 mA every 4 sensors)
Power consumption of the module without load	10 mA
Type of signal	PNP
Protection class	IP65
Operating temperature	0-50°C
Material	Aluminium
Weight	110 g

The company reserves the right to vary models and dimensions without notice.
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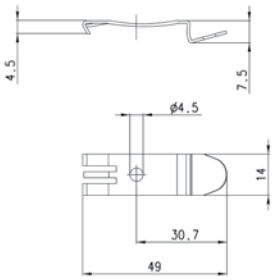
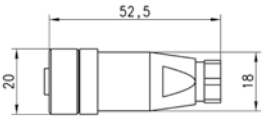
Mounting brackets

DIN EN 50022 (mm 7,5 x 35 - width 1)
Suitable for all manifolds.
The following is supplied:
2x plates
2x screws



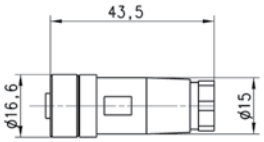
Mod.
PCF-E520

Power supply connector



Mod.
CS-LF04HB

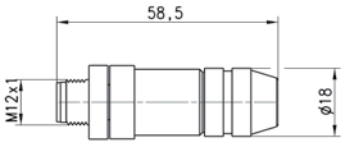
Connector for Bus-In



Mod.	
CS-MF05HC	ProfiBus DP
CS-LF05HC	CANOpen - DeviceNet

Connector for Bus-Out

New



Mod.	
CS-MM05HC	Profibus DP
CS-LM05HC	CANOpen - DeviceNet

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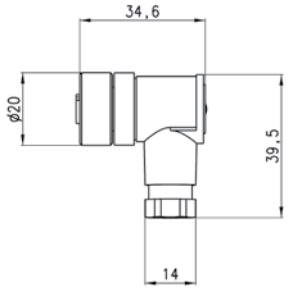
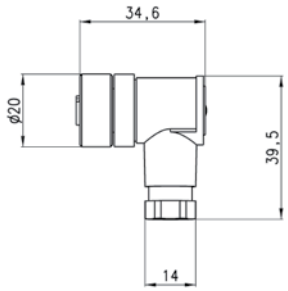
Power supply angular connector



Mod.
CS-LR04HB

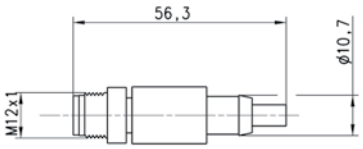
Bus-In angular connector



Mod.	
CS-MR05HC	Profibus DP
CS-LR05HC	CANOpen - DeviceNet

Male connector with terminal resistence

New



Mod.	
CS-MQ05H0	Profibus DP
CS-MP05H0	CANOpen - DeviceNet

Blanking plug for inlets/outlets module

New

Mod.	
CS-DFTP	Blanking plug M8 for inlets module
CS-LFTP	Blanking plug M128 for outlets module

The company reserves the right to vary models and dimensions without notice.
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Micro pressure regulators Series CLR

New

3

TREATMENT

Micro pressure regulators with banjo in technopolymer Ports G1/4, G1/8

Series CLR micro pressure regulators are available with G1/8 and G1/4 connections. A piston with relieving and VS function (valve with fast draining) has been incorporated into its design. The body is in brass, while the connection fitting is in technopolymer which guarantees maximum lightness. With a threaded top part of the body both direct mounting to a valve outlet (1/8 and 1/4 threads) and panel mounting are easily facilitated.

The pressure is precisely regulated simply by turning the polymer knob with a locking nut available to set the desired output.

GENERAL DATA

Construction	piston
Materials	brass, technopolymer, NBR
Ports	G1/8 - G1/4
Weight	Kg 0,035
Mounting	in-line or panel mounting (in any position)
Operating temperature	0°C ÷ 50°C
Inlet pressure	2 ÷ 10 bar
Outlet pressure	0,5 ÷ 10 bar
Nominal flow	see graphs
Secondary pressure relieving	standard (all regulators are provided with high relief flow VS function)

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

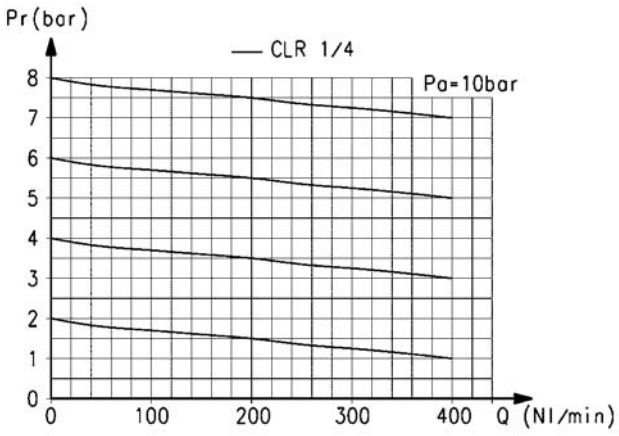
CODING EXAMPLE

CL	R	1/8	-	4

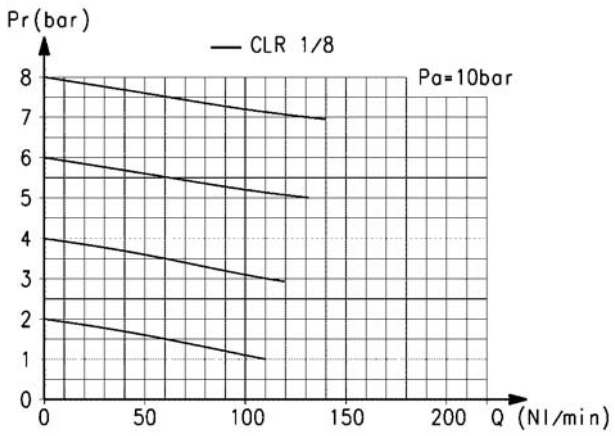
CL	SERIES
R	R = REGULATOR
1/8	PORTS: 1/8 = G1/8 1/4 = G1/4
4	TUBE: 4 = Ø4 mm (G1/8 only) 6 = Ø6 mm 8 = Ø8 mm

FLOW DIAGRAMS

New



Pa = Inlet pressure (10 Bar) -
Pr = Regulated pressure - Q = Flow
CLR 1/4-6 6 bar ΔP1 = 209 Nl/min
CLR 1/4-8 6 bar ΔP1 = 310 Nl/min



Pa = Inlet pressure (10 Bar) -
Pr = Regulated pressure - Q = Flow
CLR 1/8-4 6bar ΔP1 = 90 Nl/min - CLR 1/8-6 6bar ΔP1 = 120 Nl/min - CLR 1/8-8 6bar ΔP1 = 120 Nl/min

The company reserves the right to vary models and dimensions without notice.
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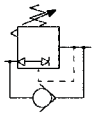
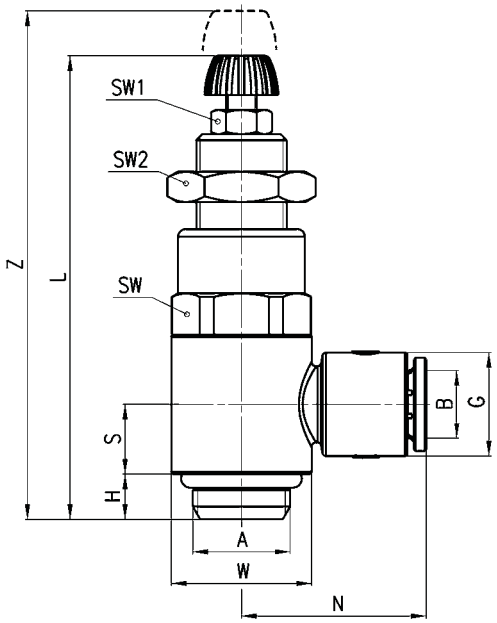
Micro pressure regulators Series CLR

New





DIMENSIONS

Mod.	A	B	G	H	L	N	S	W	SW	SW1	SW2	Z
CLR 1/8-4	G1/8	4	11,6	5	52	21	7,75	14	14	7	14	59
CLR 1/8-6	G1/8	6	11,6	5	52	21	7,75	14	14	7	14	59
CLR 1/8-8	G1/8	8	13,9	5	52	22,5	7,75	14	14	7	14	59
CLR 1/4-6	G1/4	6	13,9	6	59,5	24,5	9,25	18,6	17	7	17	68
CLR 1/4-8	G1/4	8	13,9	6	59,5	24,5	9,25	18,6	17	7	17	68

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Pressure microregulators Series T

New

Ports G1/8 and G1/4

Series T pressure regulators are available with G1/8 and G1/4 brass connections.
A self-relieving piston has been incorporated into the design to allow decreasing adjustments.
Non-relieving versions are also available.

All models are equipped with a valve enabling fast draining (VS) which is useful when a regulator should be inserted between the valve and cylinder (or capacity) without any negative influence on the exhaust.

GENERAL DATA

Construction	piston
Materials	brass, technopolymer, NBR
Ports	G1/8 - G1/4
Weight	g 95
Pressure gauge ports	G1/8
Mounting	in-line or panel mounting (in any position)
Operating temperature	-10°C ÷ 50°C
Inlet pressure	0 ÷ 12 bar
Outlet pressure	0, 5 ÷ 10 bar
Nominal flow	see graphs
Secondary pressure relieving	standard

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

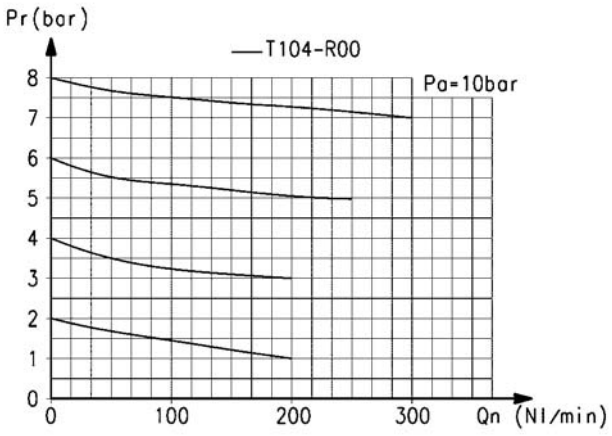
CODING EXAMPLE

T	1	08	-	R	0	0

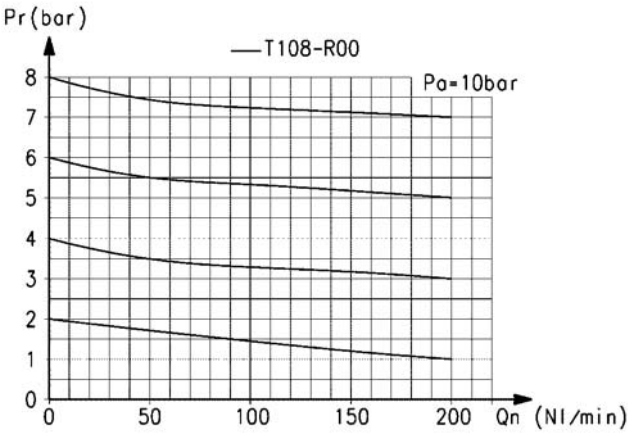
T	SERIES
1	SIZE
08	PORTS: 08 = G1/8 04 = G1/4
R	REGULATOR
0	OPERATING PRESSURE: 0 = 0,5 ÷ 10 1 = 0 ÷ 4 2 = 0 ÷ 2 7 = 0 ÷ 7 (standard)
0	DESIGN TYPE: 0 = self-relieving 1 = non relieving

FLOW DIAGRAMS

New



Flow diagram for model: T104-R00
Pa = Inlet pressure (10 bar)
Pr = Regulated pressure
Qn = Flow



Flow diagram for model: T108-R00
Pa = Inlet presure (10 bar)
Pr = Regulated pressure
Qn = Flow

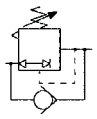
The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

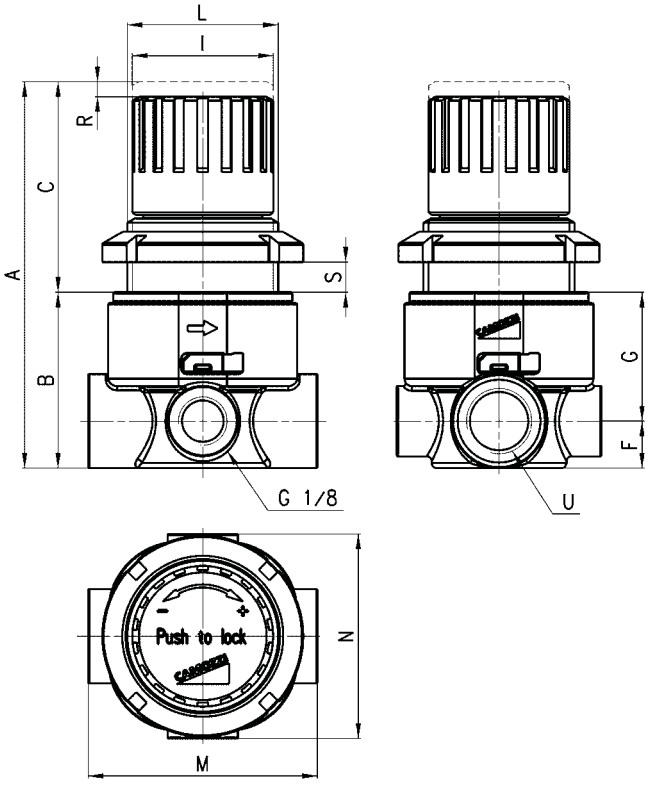
3

TREATMENT

Pressure microregulator Series T

New





DIMENSIONS

Mod.	A	B	C	F	G	I	L	M	N	R	S	U
T108-R00	77	35	42	9,5	25,5	28	M30X1,5	46	41	3	7	G1/8
T104-R00	77	35	42	9,5	25,5	28	M30X1,5	46	41	3	7	G1/4

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Basic ejectors Series VEBL

New

Basic ejectors in technopolymer without moving parts, based on the Venturi principle.
Different sizes available, with internal nozzle from 0,5 to 2,5 mm and with suction rate from 8 to 207 l/min.

- No moving parts for long life and low maintenance
- Reduced weight
- Rapid generation of vacuum
- Easy installation, on proper support too
- Optimized dimensions

Basic ejectors Series VEBL are universal type ejectors made in technopolymer suitable for most industrial applications such as:
- Industrial robotics in most sectors
- Wood industry
- Packaging industry
- Food industry

GENERAL DATA

Description	Basic ejector
Materials	- body in technopolymer - silencier in technopolymer - internal nozzle in brass

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

CODING EXAMPLE

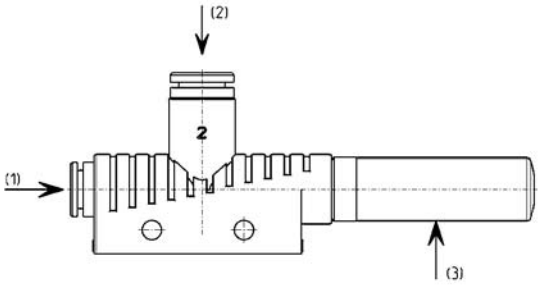
VE	BL	-	10H	-	T2

VE	SERIES: VE = Vacuum ejector
BL	VERSION: BL = basic light
10H	NOZZLE DIAMETER: 05H = 0,5 mm 07H = 0,7 mm 10H = 1 mm 15H = 1,5 mm 20H = 2 mm 25H = 2,5 mm
T2	TYPE OF CONNECTION (ON SUPPLY SIDE): T1 = plier - tube Ø4 T2 = plier - tube Ø6 T3 = plier - tube Ø8

TECHNICAL DATA

New

1 = Compressed air inlet
2 = Vacuum inlet
3 = Exhaust



Usable fluids:
compressed air, olied and not, according to ISO 8573-1:2001 class 7-4-4

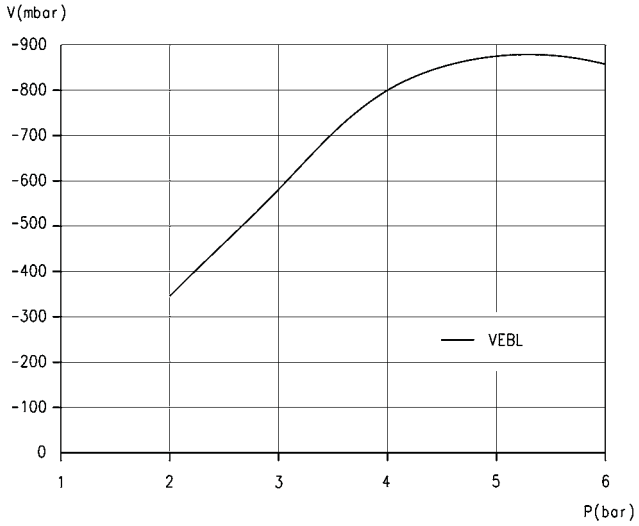
TECHNICAL DATA

Mod.	Ø nozzle (mm)	Obtainable relative pressure (mbar)	Vacuum flow (l/min)	Air consumption (l/min)	Operating pressure (bar)	Optimum operating pressure (bar)	Operating temperature (bar)	Weight (kg)	Noise level gripped [dB(A)]	Noise level free [dB(A)]	Suggested internal Ø for tubes [mm] up to 2m	Max n° of ejectors for one support
VEBL-05H-T1	0,5	-840	8	13,5	3...6	4,5	0...60	0,0075	53	58	2/2	11
VEBL-07H-T1	0,7	-850	16	22	3...6	4,5	0...60	0,0075	59	65	2/2	11
VEBL-10H-T2	1	-850	38	48	3...6	4,5	0...60	0,022	59	65	4/6	7
VEBL-15H-T2	1,5	-850	71	105	3...6	4,5	0...60	0,022	65	72	4/6	7
VEBL-20H-T3	2	-850	127	197	3...6	4,5	0...60	0,050	68	77	6/8	5
VEBL-25H-T3	2,5	-850	215	311	3...6	4,5	0...60	0,050	70	78	6/8	5

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

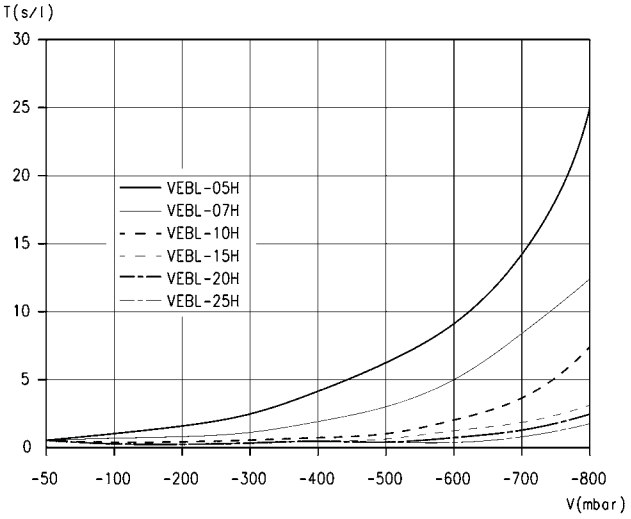
Diagrams VEBL

New



LEGEND:
V = Vacuum values
P = Working pressure

Note: vacuum reachable with different supply pressures

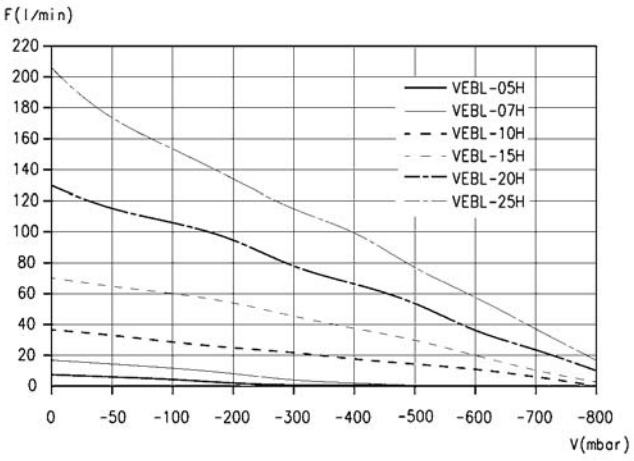


LEGEND:
T = Evacuation time
V = Vacuum values

Note: evacuation time for different vacuum values

Diagrams VEBL

New



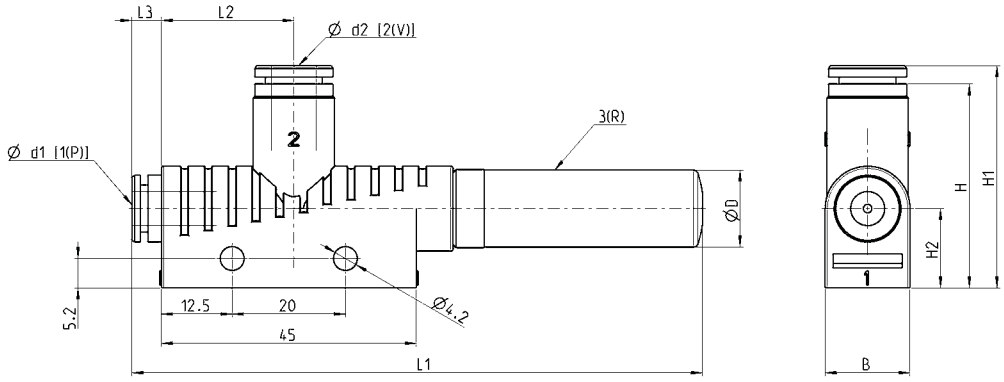
LEGEND:
F = Suction rate
V = Vacuum values

Note: Suction rate with different vacuum values

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Ejectors VEBL-05H...25H

New



DIMENSIONS										
Mod.	B	d1	d2	D	H	H1	H2	L1	L2	L3
VEBL-05H-T1	10	4	4	9	26	28	12	71	18	2
VEBL-07H-T1	10	4	4	9	26	28	12	71	18	2
VEBL-10H-T2	15	6	8	14	34	40	14	97	22	5,5
VEBL-15H-T2	15	6	8	14	34	40	14	97	22	5,5
VEBL-20H-T3	20	8	10	20	39	45,5	17	168	24,5	5,5
VEBL-25H-T3	20	8	10	20	39	45,5	17	168	24,5	5,5

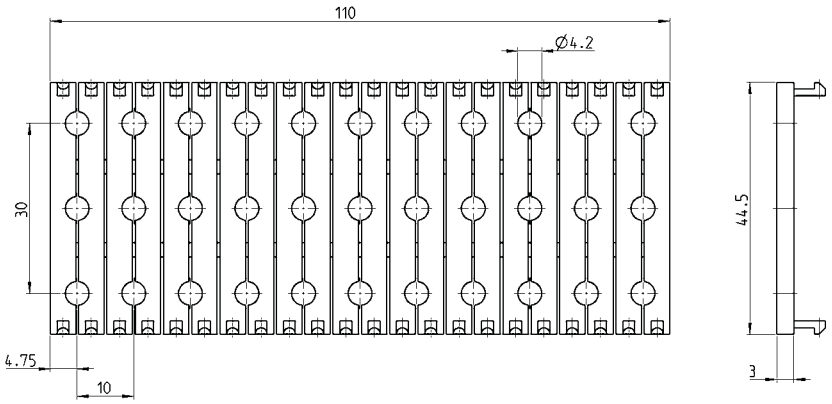
The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

5

VACUUM

Accessories VEBL-ST

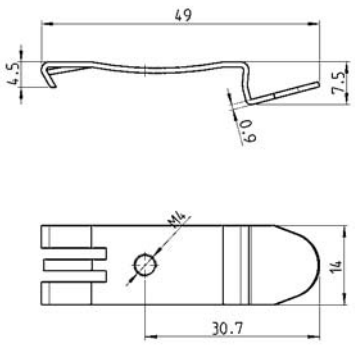
New



Mod.
VEBL-ST

Accessories VEBL-PCF

New



Mod.
VEBL-PCF

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Inline ejectors Series VEDL

New

Vacuum compact ejectors in technopolymer without moving parts, based on the Venturi principle, used for direct installation on suction pads. Available in two sizes with internal nozzle of 0,5 and 0,7 mm and with suction rate from 8 to 16 l/min.

- No moving parts for long life and maintenance
- Easy and fast installation directly at the gripping point
- Optimized dimensions
- Reduced weight, 5 g only, ideal for dynamic applications
- Low air consumption

Generally, these vacuum compact ejectors are used for direct installation inline between the suction pad and compressed air supply.
This substantially reduces the volume to be evacuated and allows therefore shorter cycle times.

GENERAL DATA

Description	Inline ejectors
Materials	- body in technopolymer - internal nozzle in brass

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

CODING EXAMPLE

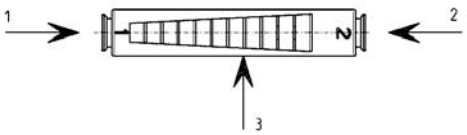
VE	DL	-	05	-	T1

VE	SERIES: VE = vacuum ejector
DL	VERSION: DL = inline light
05	NOZZLE DIAMETER: 05 = 0,5 mm 07 = 0,7 mm
T1	TYPE OF CONNECTION (ON SUPPLY SIDE): T1 = plier - tube Ø4

TECHNICAL DATA

New

1 = Compressed air inlet
2 = Vacuum inlet
3 = Exhaust



Usable fluids:
compressed air, oiled
and not, according to ISO
8573-1:2001 class 7-4-4

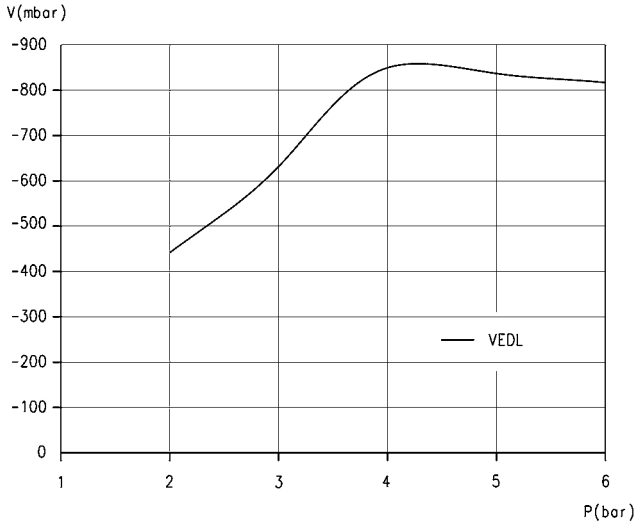
TECHNICAL DATA

Mod.	Ø nozzle (mm)	Obtainable relative pressure (mbar)	Vacuum flow (l/min)	Air consumption [l/min]	Operating pressure	Optimum operating pressure (bar)	Operating temperature (°C)	Weight (kg)	Noise level gripped [dB(A)]	Noise level free [dB(A)]	Suggested internal Ø for tubes (mm) up to 2 m
VEDL-05-T1	0,5	-830	8	13	3...6	4,5	0...60	0,005	52	60	2/2
VEDL-07-T1	0,7	-850	15	25	3...6	4,5	0...60	0,005	55	63	2/2

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

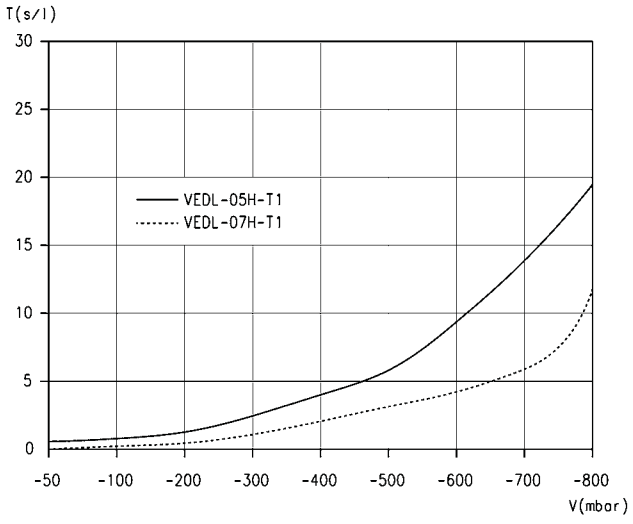
Diagrams VEDL

New



LEGEND:
V = Vacuum values
P = Working pressure

Note: Vacuum reachable with different supply pressures.

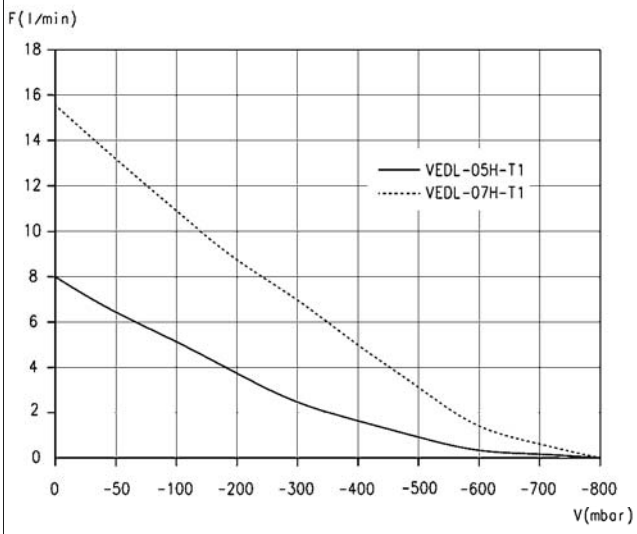


LEGEND:
T = Evacuation time
V = Vacuum values

Note: Evacuation time for different vacuum values.

Diagrams VEDL

New



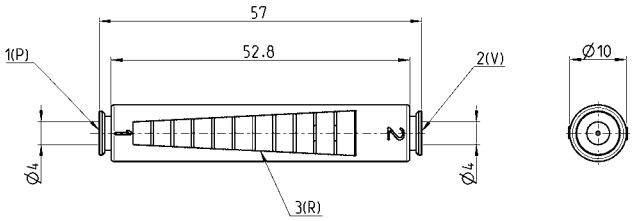
LEGEND:
F = Suction rate
V = Vacuum values

Note: Suction rate with different vacuum values.

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Inline ejector VEDL

New



Mod.
VEDL-05-T1
VEDL-07-T1

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Inline vacuum filters Series FVD

New

For use in vacuum systems with minor to medium levels of dirt.
Direct mounting on the suction pad.

- Hose connection and blocking nut
- Transparent body with an arrow indicating the flow direction
- Replaceable filter element
- Transparent cartridge to check the filter's conditions

These filters can be mounted directly on the suction pad.
The filter element can be easily substituted and its conditions can be checked thanks to its transparent wrapping.

GENERAL DATA

Description	Inline filter
Materials	- body in technopolymer - cloth filter

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

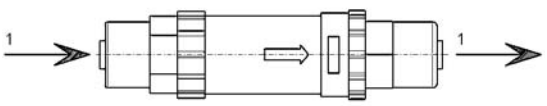
CODING EXAMPLE

FVD	-	6/4	-	50

FVD	SERIES: FVD = inline filter
6/4	CONNECTIONS: 6/4 = tube 6 8/6 = tube 8
50	FILTER ELEMENT: 50 = 50 µm

TECHNICAL DATA

New



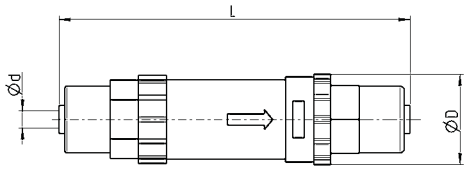
TECHNICAL DATA

Mod.	Filter element (µm)	Nominal flow (l/min)	Max vacuum (mbar)	Max pressure at 25°C (bar)	Max pressure at 50°C (bar)	Weight (kg)
FVD-6/4-50	50	32	-990	7	5	0,006
FVD-8/6-50	50	66	-990	7	5	0,010

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Inline filter - Series FVD

New



DIMENSIONS			
Mod.	d	D	L
FVD-6/4-50	6	16	61
FVD-8/6-50	8	23	68

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Vacuum cup filters Series FVT

New

Used as pre-filters and fine filters for air with varying amounts of contamination, for the protection of the vacuum generator.
Mounted as protection for the ejector.

- Wide range of sizes
- Recycling filter cartridge
- Replaceable filter element
- Transparent filter cup to check the filter's conditions

These filters can be mounted directly under the ejectors to protect them in case of dusty environmental conditions. The filter element can be substituted very easily and its conditions can be checked thanks to its transparent wrapping.
These filters can be wall-mounted through a proper bracket.
Filtering of vacuum and air up to 7bar.

GENERAL DATA

Description	Cup filter
Materials	- body in technopolymer - filter in polyethylene (PE)

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

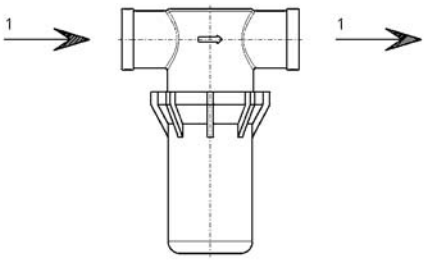
CODING EXAMPLE

FVT	-	FF	-	1/4	-	80

FVT	SERIES: FVT = cup filter
FF	THREAD SIZE: FF = female-female
1/4	CONNECTIONS: 1/8 = G1/8 1/4 = G1/4 3/8 = G3/8 1/2 = G1/2 3/4 = G3/4
80	FILTER ELEMENT: 80 = 80 µm

TECHNICAL DATA

New



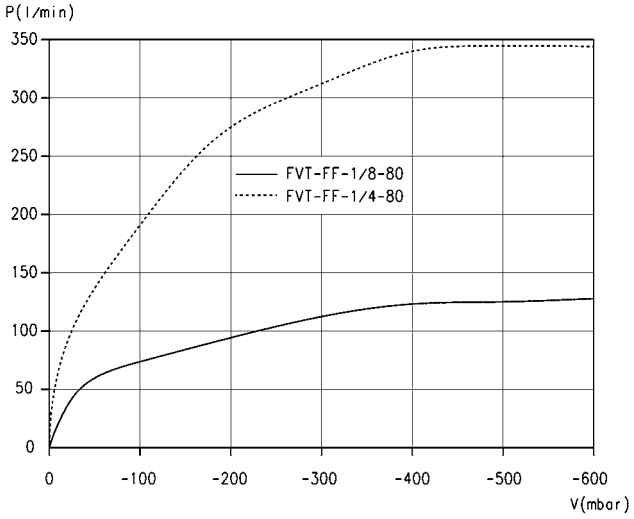
TECHNICAL DATA

Mod.	Filter element (µm)	Nominal flow (l/min)	Max vacuum (mbar)	Max pressure at 25°C (bar)	Max pressure at 50°C (bar)	Weight (kg)
FVT-FF-1/8-80	80	45	-990	7	5	0,049
FVT-FF-1/4-80	80	110	-990	7	5	0,047
FVT-FF-3/8-80	80	245	-990	7	5	0,079
FVT-FF-1/2-80	80	300	-990	7	5	0,076
FVT-FF-3/4-80	80	600	-990	7	5	0,164

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

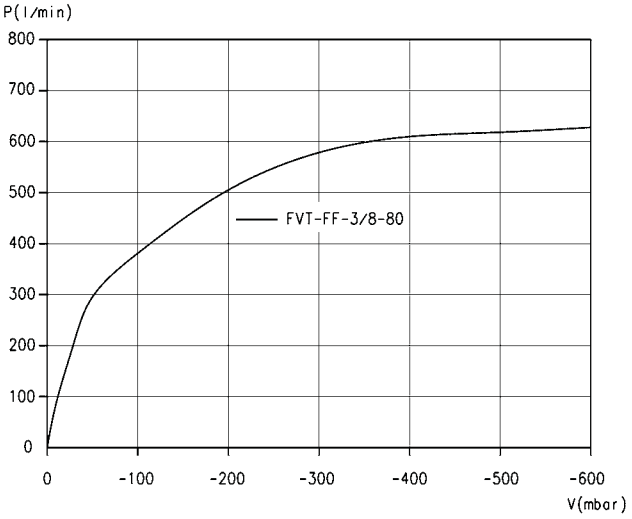
Diagrams FVT

New



LEGEND:
P = Volumetric flow
V = Vacuum values

Note: Flow rate for different vacuum values

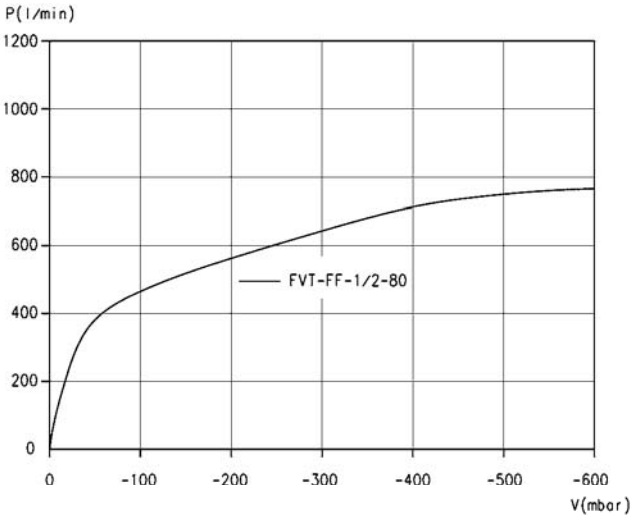


LEGEND:
P = Volumetric flow
V = Vacuum values

Note: Flow rate for different vacuum values

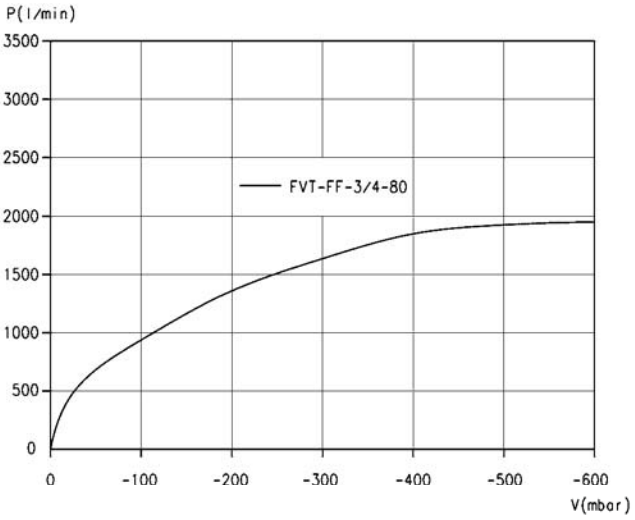
Diagrams FVT

New



LEGEND:
P = Volumetric flow
V = Vacuum values

Note: Flow rate for different vacuum values



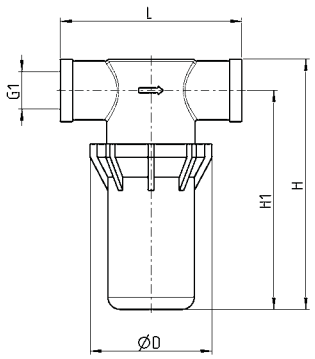
LEGEND:
P = Volumetric flow
V = Vacuum values

Note: Flow rate for different vacuum values

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Cup filter - Series FVT

New

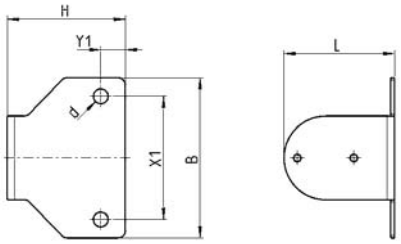


DIMENSIONS

Mod.	D	G1	H	H1	L
FVT-FF-1/8-80	48	G1/8-F	60	50	58
FVT-FF-1/4-80	48	G1/4-F	60	50	76
FVT-FF-3/8-80	48,5	G3/8-F	101	88	77,2
FVT-FF-1/2-80	48	G1/2-F	101	88	77,2
FVT-FF-3/4-80	75	G3/4-F	137	118	90,5

Mouting foot bracket

New



DIMENSIONS

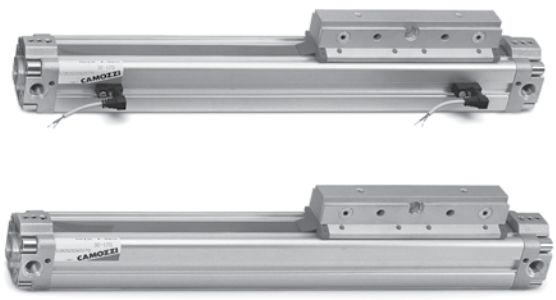
Mod.	B	d	H	L	X1	Y1
FVT-FF-1/8-80-B	65	6	48	45	50	10
FVT-FF-3/4-80-B	85	6	52	70	70	10

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

RODLESS CYLINDERS

Rodless cylinders Series 50

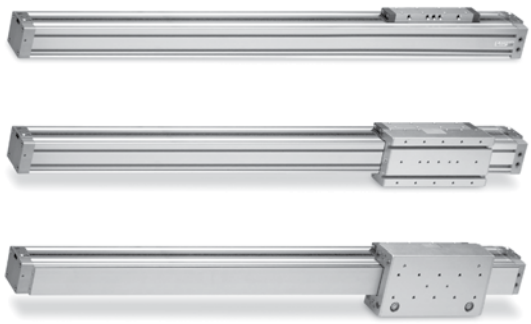
1 / 8.05



Double-acting, magnetic, cushioned
ø 16, 25, 32, 40, 50, 63, 80

Rodless Cylinders Series 52

1 / 8.10

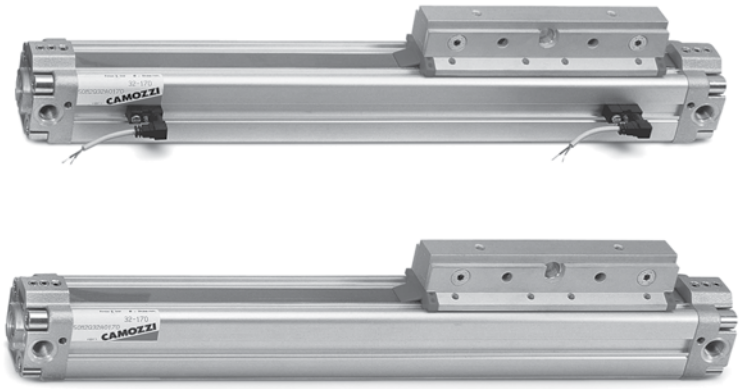


Double-acting, magnetic, cushioned
ø 25, 32, 40, 50, 63

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Rodless cylinders Series 50

Double-acting, magnetic, cushioned
ø16, 25, 32, 40, 50, 63, 80



- Four ports on each chamber
- Possibility of double supply on one side (on request)
- Possibility to supply each chamber from one side

The Series 50 rodless cylinders are available in 7 different diameters to cover as many applications as possible. A permanent magnet is assembled on the cylinder piston allowing the position to be detected by means of proximity switches positioned on the sliding axis. This series of cylinder is normally supplied with end-stroke cushioning, that can be regulated by means of a screw located on the end-cover.

The Series 50 cylinders are recommended to be used according to the load values and torque forces detailed in the relative tables.

GENERAL DATA

Type of construction	rodless with integral carriage
Operation	double-acting
Materials	aluminium end-covers, piston and barrel, PU and NBR seals
Type of mounting	foot mounted
Strokes min - max	for all bores 100 ÷ 4000 mm
Operating temperature	0°C ÷ 50°C(with dry air - 10°C)
Operating pressure	1 ÷ 8 bar
Speed	10 ÷ 1000 mm/sec (without load)
Fluid	clean air, without lubrication If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

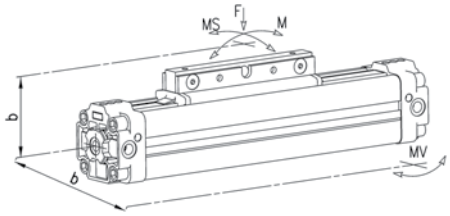
CODING EXAMPLE

50	M	2	P	50	A	0500

50	SERIES
M	VERSION M= standard magnetic
2	OPERATION 2 = double-acting cushioned
P	MATERIALS P = anodized AL profile tube Polyurethane and NBR seals standard carriage U = anodized AL profile tube Polyurethane and NBR seals carriage flange
50	BORE 16 mm 25 mm 32 mm 40 mm 50 mm 63 mm 80 mm
A	TYPE OF MOUNTING A = standard
0500	STROKE (see table)

MAXIMUM PERMITTED LOADS AND TORQUE FORCES

M = F x b
MS = F x b
MV = F x b
Note: Loads and bending torque are valid if applied separately.

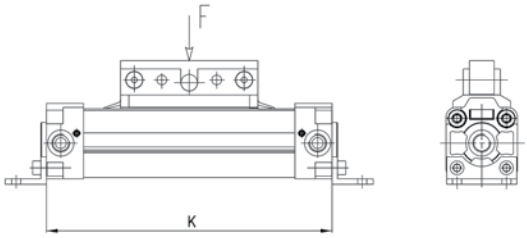


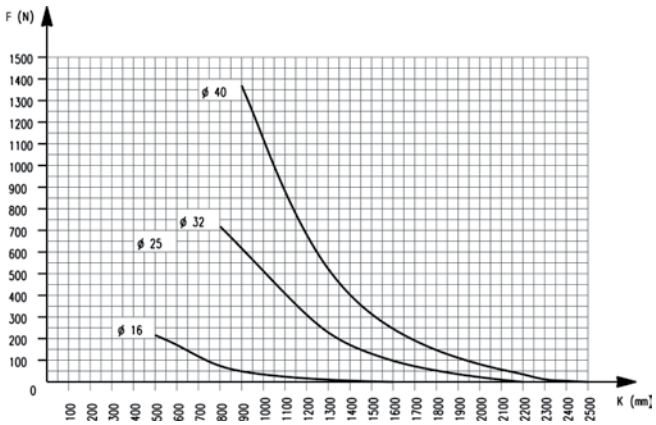
DIMENSIONS

Ø	Max. load permitted(N)	Max. bending torque force permitted(Nm)	Max. bending torque force permitted(Nm)	Torsional torque force permitted(Nm)
16	218	3,1	0,5	1
25	660	12,4	1,9	5
32	720	30	4	8
40	1370	39	4	9
50	1600	122	11	16
63	2210	190	19	26
80	3770	305	30	47

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

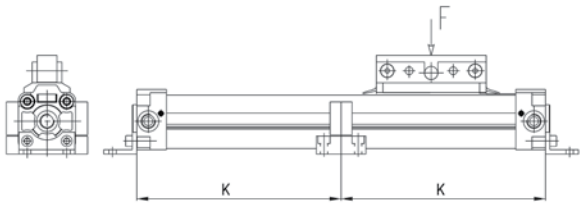
LOADS ACCORDING TO SUPPORTS DISTANCE

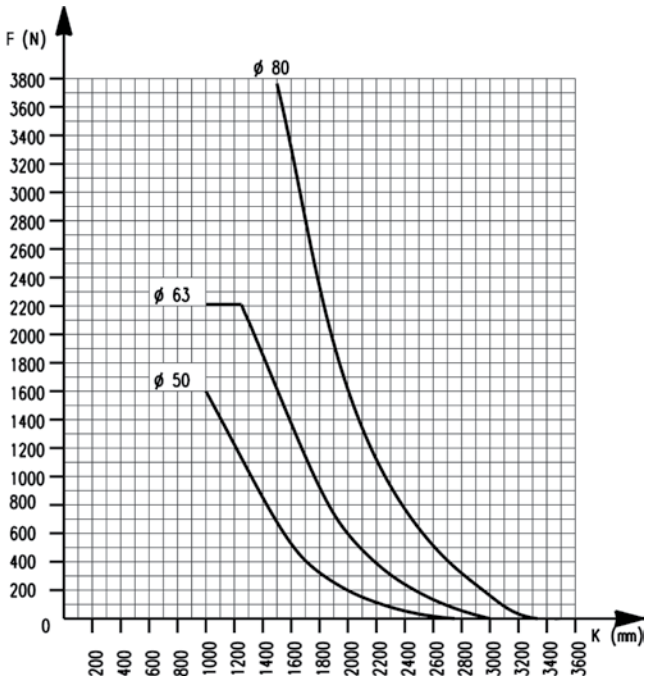




Note: This chart has been made according to a max. distance of 0.5 mm Load (N).
Once the load and the cylinder diameter have been fixed, the chart gives the K values beyond which it is necessary to put an intermediate feet Mod. BH-50.

LOADS ACCORDING TO SUPPORTS DISTANCE





Note: This chart has been made according to a max. distance of 0.5 mm Load (N).
Once the load and the cylinder diameter have been fixed, the chart gives the K values beyond which it is necessary to put an intermediate feet Mod. BH-50.

The company reserves the right to vary models and dimensions without notice.
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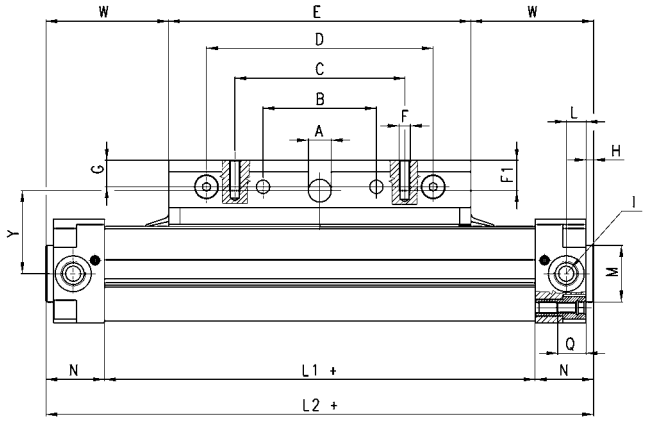
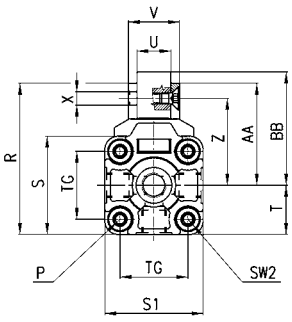
Cylinders Mod. 50M2P (with standard carriage)





DIMENSIONS

Ø	A	B	C	D	E	F	F1	G	H	I	L	L1+	L2+	M	N	P	Q	R	S	S1	T	U	V	Z	X	Y	W	AA	BB	TG	SW2
16	5	32	48	64	76	M4	8	6	2	M5	5,3	100	130	16	15	M3	8	42,5	28	27	13,5	10	18	24	4,5	24,5	27	29	30	18	4
25	8	50	80	100	120	M5	10	13	2,5	G1/8	9,5	150	200	22	25	M5	13,5	63	40	40	20	15	23	33	5,5	38	40	43	46	27	6
32	12	60	90	120	160	M6	15	14	4	G1/4	10,5	188	250	30	31	M6	15	80	52	52	26	18	27	46	7	48,5	45	54	60	36	6
40	12	55	90	110	150	M6	12	12	4	G1/4	17,5	226	300	35	37	M6	15	88,5	63	63	31,5	18	28	49	7	51	75	57	61	43	6
50	12	70	110	140	180	M6	12	12	4	G1/4	13,5	272	350	40	39	M8	16	103	74,5	76	38	18	28	57	7	59	85	65	69	53	10
63	16	90	140	180	220	M8	15	15	4	G3/8	17,5	342	430	45	44	M8	16	125	92	94	47	19	30	68	9	70	105	78	83	67	10
80	20	120	180	240	280	M10	20	18	4	G1/2	32	408	520	45	56	M10	18,5	153,5	115,5	117	58,5	20	32	83	11	86	120	95	101	83	12

The company reserves the right to vary models and dimensions without notice.
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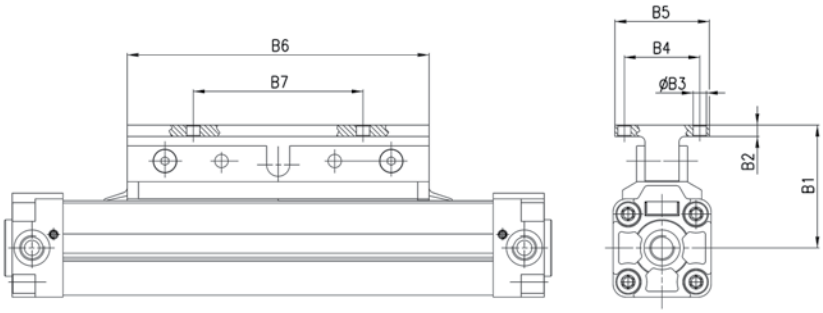
Cylinders Mod. 50M2U (with carriage flange)

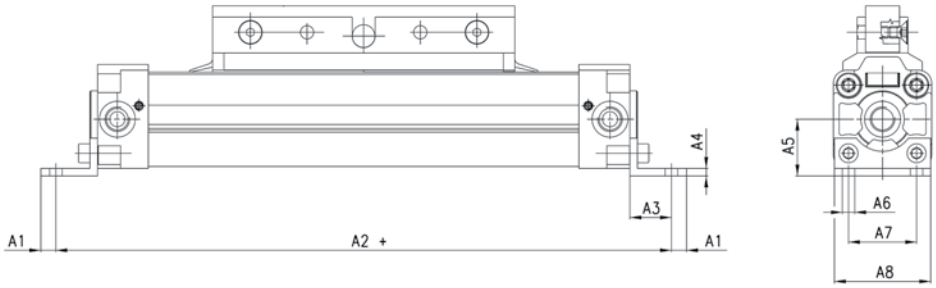


DIMENSIONS

Ø	B1	B2	B3	B4	B5	B6	B7
16	36	4	4,5	25	40	76	50
25	51	5	5,5	35	50	120	70
32	66	6	7	40	50	160	90
40	66	6	7	45	60	150	80
50	74	6	7	45	60	180	100
63	89	7	9	60	80	220	130
80	108	8	11	75	100	280	180

Foot mount Mod. B-50

+ = add the stroke



DIMENSIONS

Mod.	A1	A2+	A3	A4	A5	A6	A7	A8
B-50-16	3	150	12	3	15	3,6	18	26
B-50-25	6,5	232	18,5	3	22	5,5	27	39
B-50-32	8	286	22	4	30	6,6	36	51
B-50-40	13,5	325	16,5	4	38	9	30	62
B-50-50	13,5	375	16,5	6	48	9	40	75
B-50-63	11	460	19	6	57	11	48	93
B-50-80	18,5	555	21,5	6	72	14	60	116

The company reserves the right to vary models and dimensions without notice.
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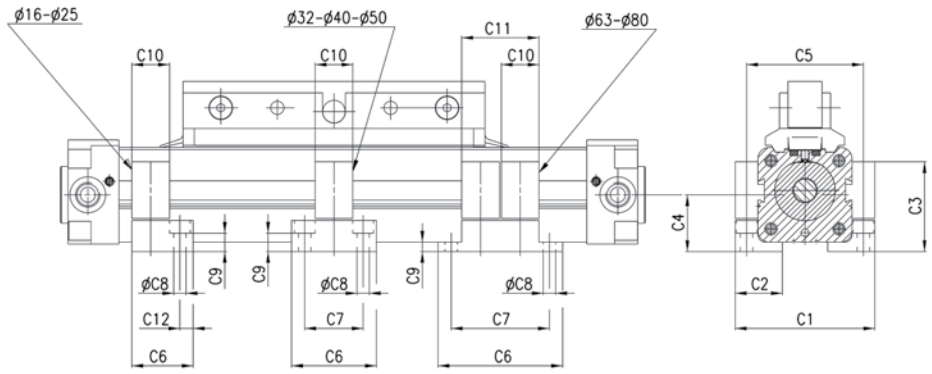
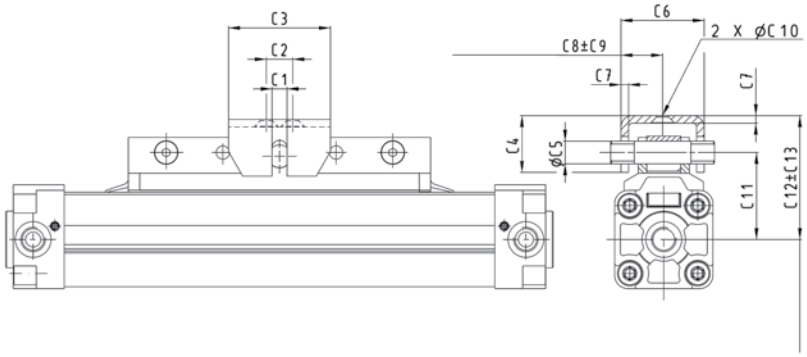
Brackets Mod. BH-50



DIMENSIONS

Mod.	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
BH-50-16	42	12	25	15	34	20	-	3,4	4,5	12	-	4
BH-50-25	56	21	32,6	22	47	22	-	5,5	10,1	12	-	5
BH-50-32	74	25	47,5	30	62	45	31	6,6	9,7	20	-	-
BH-50-40	85	35	56	38	73	60	45	6,6	18,2	20	-	-
BH-50-50	98	32	67,5	48	86	60	45	6,6	29,7	20	-	-
BH-50-63	126	50	78,5	57	109	74	56	9	11	20	41	-
BH-50-80	155	65	96	72	135	80	60	11	14,5	20	41	-

Self-compensating adaptor Mod. CF-50



DIMENSIONS

Mod.	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
CF-50-25	6	16	40,8	22,9	7,9	31,5	3	15,8	1,2	5,6	38	55,4	4,5
CF-50-32	9,3	50	76,4	27,4	11,9	38,1	3,8	19	1,7	7,1	48,5	69,4	5,5
CF-50-40	9,3	50	76,4	24,4	11,9	38,1	3,8	19	1,2	7,1	51	70,9	3,5
CF-50-50	9,3	80	114,6	37,1	11,9	43,9	6,1	22	1,8	8,6	59	89,2	5,9
CF-50-63	12,7	100	134,6	42,2	15,9	43,9	6,1	22	0,8	8,6	70	104,7	6,5
CF-50-80	12,7	125	159,5	42,2	19,9	50,3	6,1	25,1	3	11	86	122,2	5

The company reserves the right to vary models and dimensions without notice.
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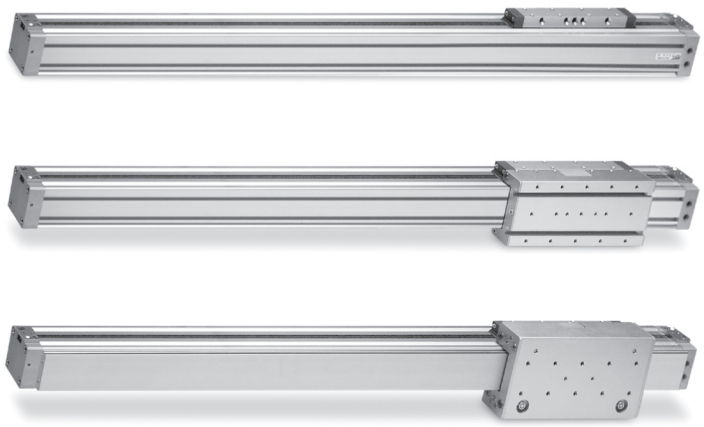
Rodless Cylinders Series 52

New

Double-acting, magnetic, cushioned ø25, 32, 40, 50, 63



- Three main versions, Basic, Slide bearing and Roller bearing
- Extra short carriage as option for all versions
- Possibility of feeding both chambers from one side only

The Rodless Cylinders Series 52 are available in 5 diameters, 25, 32, 40, 50 and 63 mm and comes in three main versions such as Basic (M), with Slide bearing (G) and with Roller bearings (R). Furthermore these three main versions are each available with either standard- or short carriage to cover a wider range of applications.

A permanent magnet is assembled on the piston allowing the position to be detected by means of proximity switches positioned in grooves located on three sides on the cylinder profile. The cylinder is equipped with an end stroke cushioning which can be regulated by means of a screw located on each end cover of the cylinder.
The Rodless Cylinder Series 52 is also available in versions with air supply from one side (end cover) only if needed.

GENERAL DATA

Models	Standard, with slide bearings, with roller bearings, air supply from one or both sides, with standard or short carriage For sizes 50 - 63 roller bearings version is not available.
Materials	Al (anodized), plastic, hardened steel, seals: NBR, PU
Operating temperature	- 10°C ÷ + 70 °C
Speed	10 ÷ 1000 mm/sec (without load)
Fluid	filtered air, without lubrication*. If lubricated air is used, it is recommended to use ISO VG32 oil. Once applied the lubrication should never be interrupted. If speeds exceed 1 m/s lubricated air is recommended.
Bore size	Ø 25 Ø 32 Ø 40 Ø 50 Ø 63
Operating pressure	1 ÷ 8 Bar 1,5 ÷ 8 Bar (Ø 25 for “R” version)
Connection	G1/8 (Ø 25; 32) G1/4 (Ø 40) G3/8 (Ø 50; 63)
Cushioning length (mm)	14 mm - Ø 25 20 mm - Ø 32 25 mm - Ø 40 22 mm - Ø 50 32 mm - Ø 63
Strokes	up to 6000 mm

The company reserves the right to vary models and dimensions without notice.
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CODING EXAMPLE

52	M	2	P	40	A	0500

52	SERIES
M	VERSION M = standard G = with slide bearing R = with roller bearing (only Ø25 - 32 - 40)
2	OPERATION 2 = double-acting, cushioned, with air supply from both sides 8 = double-acting, cushioned, with air supply from one side only
P	MATERIALS P = anodized AL profile tube, NBR and Polyurethane seals, standard carriage C = anodized AL profile, NBR and Polyurethane seals, short carriage
40	BORE 25 mm 32 mm 40 mm 50 mm 63 mm
A	TYPE OF MOUNTING A = standard
0500	STROKE (see table)

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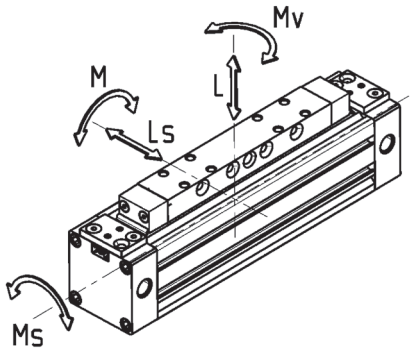
LOADS AND TORQUE FORCES Ø 25 - 32

New

COMPLEX LOADS
If more than one force and torque is applied simultaneously, they have to be calculated according to the following formula: L/L (max)+ Ls/Ls (max)+ M/M (max)+ Ms/Ms (max)+ Mv/Mv (max) ≤1.
For models 52M, the load and torque values refer to the center of the tube.
For models 52G/52R the load and torque values refer to the center point of the external guide. It is also necessary for these models to guarantee on the fixing surface a max 0.1 flatness's value.
The load and torque values refer to a velocity of: Models 52M/52G/52M/52G ≤ 0,2 m/s, models 52R ≤ 2 m/s.
For the adjustment coefficients of loads see page 1.8.10.04



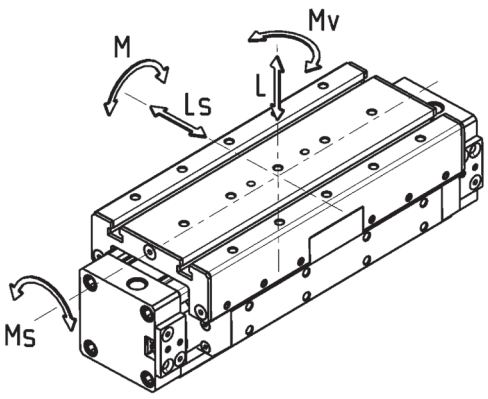


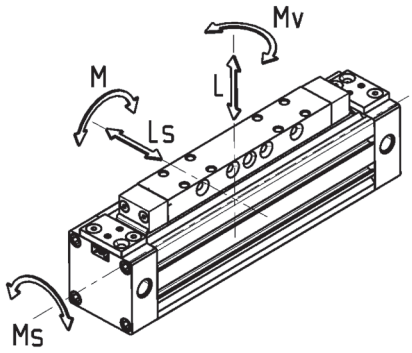
Table showing the maximum permitted loads and torque forces

Mod.	L Max (N)	Ls Max (N)	M Max (Nm)	Ms Max (Nm)	Mv Max (Nm)	Mass at 0 mm stroke (kg)	Additional mass per 100 mm (kg)
52M2P25A - 52M8P25A	270	-	13	2,5	11	0,88	0,30
52M2C25A - 52M8C25A	270	-	8	2	7	0,62	0,30
52G2P25A - 52G8P25A	580	580	23	10	23	1,31	0,30
52G2C25A - 52G8C25A	340	340	9	5	9	0,88	0,30
52R2P25A - 52R8P25A	850	1300	65	35	105	1,97	0,42
52R2C25A - 52R8C25A	850	1300	29	35	64	1,33	0,42
52M2P32A - 52M8P32A	300	-	30	3	24	1,40	0,39
52M2C32A - 52M8C32A	300	-	15	3	12	0,96	0,39
52G2P32A - 52G8P32A	850	850	33	15	33	2,09	0,39
52G2C32A - 52G8C32A	460	460	14	6,5	14	1,35	0,39
52R2P32A - 52R8P32A	900	1500	79	40	125	2,96	0,48
52R2C32A - 52R8C32A	900	1500	36	40	76	1,91	0,48

LOADS AND TORQUE FORCES Ø 40 - 50 - 63

New

COMPLEX LOADS
If more than one force and torque is applied simultaneously, they have to be calculated according to the following formula: L/L (max)+ Ls/Ls (max)+ M/M (max)+ Ms/Ms (max)+ Mv/Mv (max) ≤1.
For models 52M, the load and torque values refer to the center of the tube.
For models 52G/52R the load and torque values refer to the center point of the guide.
The load and torque values refer to a velocity of: Models 52M/52G ≤0,2 m/s Models 52R ≤2 m/s
If the velocity exceeds 0.2m/s for the models 52M/52G, the load and torque values have to be multiplied by the coefficients according to the table.
For the adjustment coefficients of loads see page 1.8.10.04



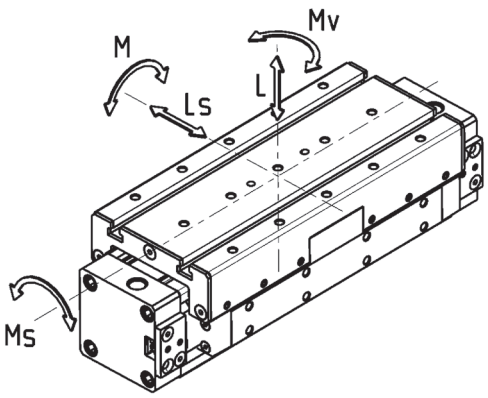


Table showing the maximum permitted loads and torque forces

Mod.	L Max (N)	Ls Max (N)	M Max (Nm)	Ms Max (Nm)	Mv Max (Nm)	Mass at 0 mm stroke (kg)	Additional mass per 100 mm (kg)
52M2P40A - 52M8P40A	650	-	60	4	54	2,41	0,52
52M2C40A - 52M8C40A	650	-	30	4	27	1,65	0,52
52G2P40A - 52G8P40A	1120	1120	60	25	60	3,58	0,52
52G2C40A - 52G8C40A	600	600	25	11	25	2,30	0,52
52R2P40A - 52R8P40A	1200	2000	190	67	118	5,89	0,74
52R2C40A - 52R8C40A	1200	2000	85	67	72	3,84	0,74
52M2P50A - 52M8P50A	800	-	80	17	74	5,30	0,96
52M2C50A - 52M8C50A	800	-	38	17	32	3,50	0,96
52G2P50A - 52G8P50A	1550	1500	200	70	200	7,28	0,96
52G2C50A - 52G8C50A	820	800	60	40	60	4,63	0,96
52M2P63A - 52M8P63A	1400	-	110	17	100	8,10	1,32
52M2C63A - 52M8C63A	1400	-	50	17	48	5,40	1,32
52G2P63A - 52G8P63A	2200	2000	300	102	300	11,02	1,32
52G2C63A - 52G8C63A	1100	1100	105	56	105	7,10	1,32

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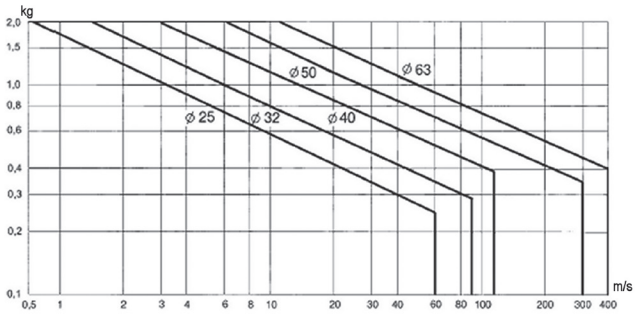
END CUSHION DIAGRAM

NEW

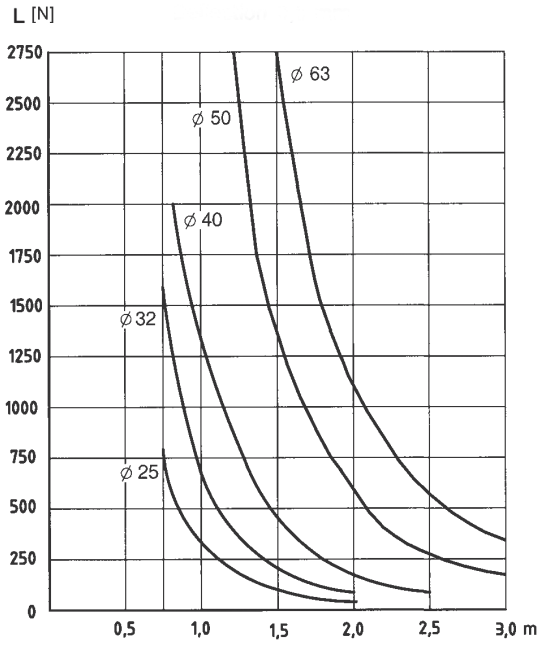


The end cushion regulating screw has to be regulated to obtain a smooth movement at the end of stroke.
In those applications which have different values than the ones stated in the diagram, external shock-absorbers have to be used.
The shock-absorber should be centrally located with respect to the center of the mass.
The diagram applies for horizontal operations.

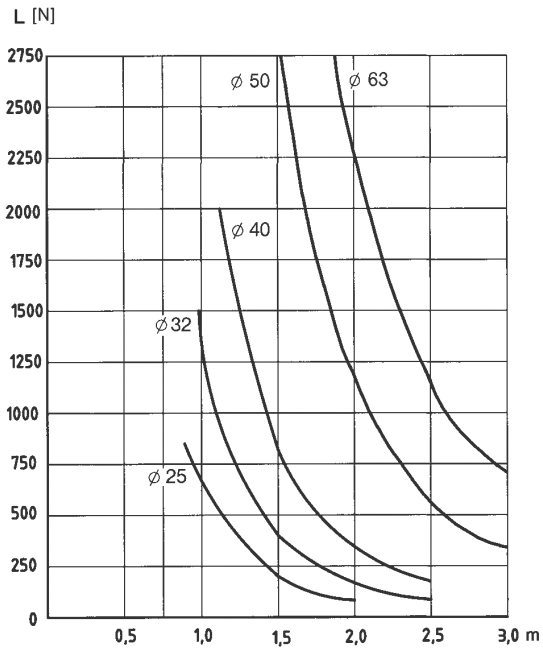
Correction coefficient, loads see page 1.8.10.03.
speed - coefficient:
0,2 m/s - 1
0,3 m/s - 0,75
0,4 m/s - 0,5
0,5 m/s - 0,4
0,75 m/s - 0,27
1 m/s - 0,2

LOADS ACCORDING TO SUPPORTS DISTANCE

NEW



DEFLECTION 0.5 mm
The charts have been made according to a max. deflection of 0.5 mm and 1 mm when a load (N) is applied.
The charts give the max distance between two supports in order to stay within the deflection range given.



DEFLECTION 1 mm
The charts have been made according to a max. deflection of 0.5 mm and 1 mm when a load (N) is applied.
The charts give the max distance between two supports in order to stay within the deflection range given.

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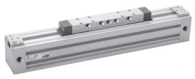
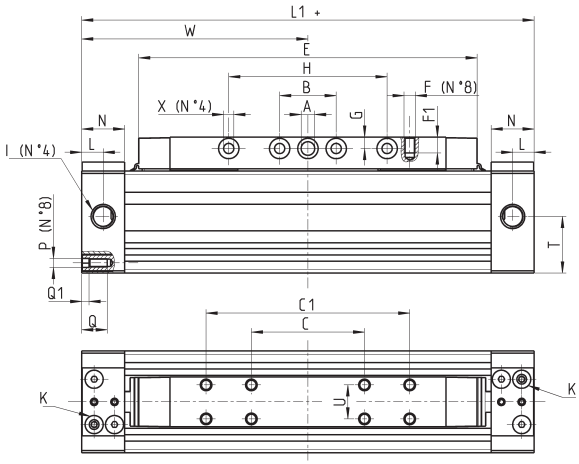
Mod. 52M2P

New

The cylinder has two supply ports “I” for both endcovers. The operator needs to choose which one of the two ports to use on each endcover. The remaining port has to be closed with the supplied tap.



+ = add the stroke
K = cushion regulation screw



DIMENSIONS

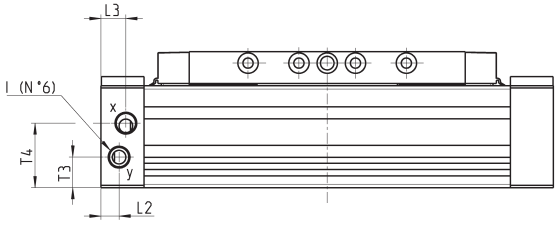
Mod.	Ø	W	E	L1	I	B	G	N	L	øA	øX	S1	T	Z	C1	C	U	F	F1	H	V	S	R	P	TG	Q	Q1
52M2P25A	25	100	149,5	200	G1/8	25	5	19	9,5	6	4,5	49	25	4,5	90	50	15	M5	7	70	22	45	60	M4	36	11	3
52M2P32A	32	120	184,5	240	G1/8	25	5,5	19	9,5	6	5,5	58	32	7,5	130	45	15	M5	7	100	22	54	69	M5	41	11	4
52M2P40A	40	150	222,5	300	G1/4	25	7	23	11,5	7	6,5	68	38	7,5	160	90	15	M5	9	130	22	64	82	M6	49	12	4
52M2P50A	50	175	262	350	G3/8	35	9	30	17	10	8,5	94	59	12,5	150	60	34	M8	16	180	46	90	115	M8	65	17	5
52M2P63A	63	200	300	400	G3/8	50	9,5	30	17	10	8,5	110	68,5	14,0	240	80	34	M8	16	180	46	106	131	M8	78	17	5

Mod. 52M8P

New

The cylinder has six supply ports (I) , three for one direction (x-h-w) , and the other three (y-z-k) for the opposite direction. With supporting feet (Mod. B-52 / BA-52), ports “h” and “z” have to be closed.

Where no dimensions are presented, refer to dimensions of cylinder model 52M2P.



DIMENSIONS

Mod.	Ø	T1	T2	T3	T4	L2	L3	I
52M8P25A	25	13,5	29,5	13,5	28,5	8	11	G1/8
52M8P32A	32	17,5	34,5	17,5	34,5	9,5	9,5	G1/8
52M8P40A	40	15,5	38	20,5	42,5	11,5	11,5	G1/4
52M8P50A	50	29,5	59	29	59	17	17	G3/8
52M8P63A	63	34	68,5	34	68,5	17	17	G3/8

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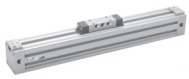
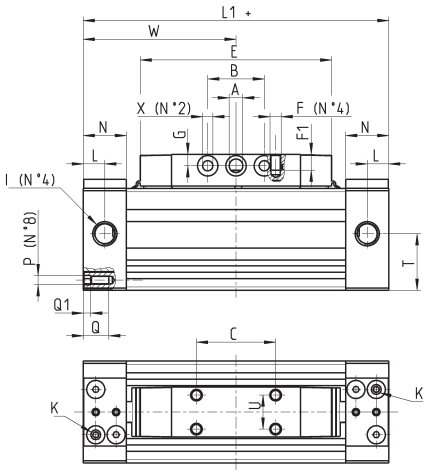
Mod. 52M2C

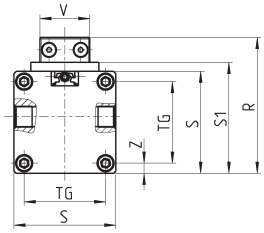
New

The cylinder has two supply ports “I” for both endcovers. The operator needs to choose which one of the two ports to use on each end cover.The remaining port has to be closed with the supplied tap.



+ = add the stroke
K = cushion regulation screw





DIMENSIONS

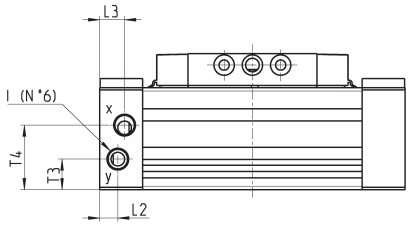
Mod.	Ø	W	L	L1	I	B	G	N	E	⌀A	⌀X	R	C	F	F1	U	T	V	S	S1	TG	P	Z	Q	Q1
52M2C25A	25	67,5	9,5	135	G1/8	25	5	19	84,5	6	4,5	60	35	M5	7	15	25	22	45	49	36	M4	4,5	11	3
52M2C32A	32	77,5	9,5	155	G1/8	25	5,5	19	99,5	6	5,5	69	45	M5	7	15	32,5	22	54	58	41	M5	7,5	11	4
52M2C40A	40	95	11,5	190	G1/4	25	7	23	112,5	7	6,5	82	50	M5	9	15	38,5	22	64	68	49	M6	7,5	12	4
52M2C50A	50	105	17	210	G3/8	35	9	30	122	10	8,5	115	64	M8	16	34	59	46	90	94	65	M8	12,5	17	5
52M2C63A	63	125	17	250	G3/8	50	9,5	30	150	10	8,5	131	80	M8	16	34	68,5	46	106	110	78	M8	14	17	5

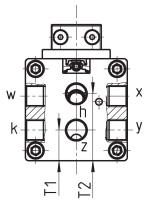
Mod. 52M8C

New

The cylinder has six supply ports (I) , three for one direction (x-h-w) , and the other three (y-z-k) for the opposite direction. With supporting feet (Mod. B-52 / BA-52), ports “h” and “z” have to be closed.

Where no dimensions are presented, refer to dimensions of cylinder model 52M2C.





DIMENSIONS

Mod.	Ø	T1	T2	T3	T4	L2	L3	I
52M8C25A	25	13,5	29,5	13,5	28,5	8	11	G1/8
52M8C32A	32	17,5	34,5	17,5	34,5	9,5	9,5	G1/8
52M8C40A	40	15,5	38	20,5	42,5	11,5	11,5	G1/4
52M8C50A	50	29,5	59	29	59	17	17	G3/8
52M8C63A	63	34	68,5	34	68,5	17	17	G3/8

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

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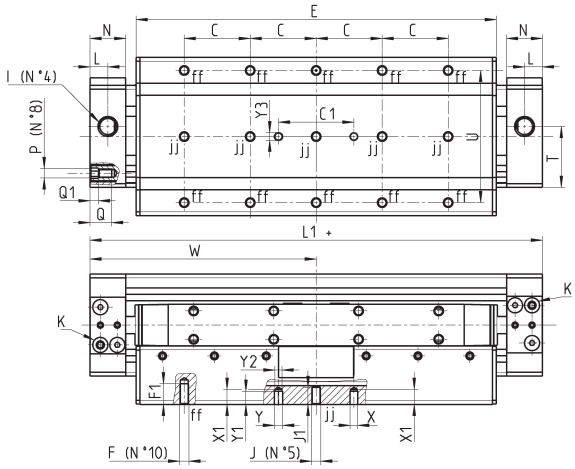
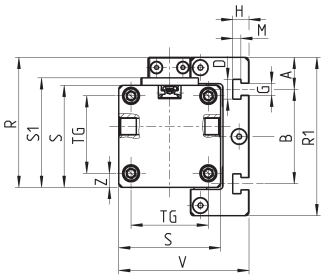
Mod. 52G2P

New

The cylinder has two supply ports “I” for both endcovers. The operator needs to choose which one of the two ports to use on each end cover. The remaining port has to be closed with the supplied tap.

jj = these holes are present in cylinder Ø32 only
+ add the stroke
K = cushion regulation screw





DIMENSIONS

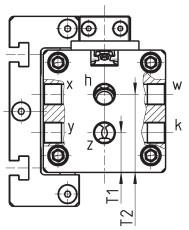
Mod.	Ø	W	E	L1	I	L	T	U	N	C	F	F1	D	B	A	H	G	M	J	J1	TG	Z	S	R1	P	V	Q	Q1	ø Y2	Y	ø X	Y1	X1	Y3	C1	S1	R
52G2P25A	25	100	159	200	G1/8	9,5	25	30	19	30	M5	8	10,5	50	12,5	8,5	6,5	4,5	-	-	36	4,5	45	75	M4	59	11	3	4	4,5	4	4,5	5,5	4	40	49	60
52G2P32A	32	120	191	240	G1/8	9,5	32,5	70	19	35	M5	11	10,5	50	17	8,5	6,5	4,5	M5	9	41	7,5	54	84	M5	69	11	4	4	4,5	4	7	8	4	40	58	69
52G2P40A	40	150	246	300	G1/4	11,5	38	55	23	55	M6	12	10,5	80	10	8,5	6,5	4,5	-	-	49	7,5	64	100	M6	79	12	4	6	6,5	6	7	8	6	40	68	82
52G2P50A	50	175	270	350	G3/8	17	59	42	30	50	M8	16	10,5	94	23	8,5	6,5	4,5	-	-	65	12,5	90	133	M8	112,5	17	5	-	6,5	6	3	3	6	40	94	115
52G2P63A	63	200	320	400	G3/8	17	68,5	60	30	60	M8	16	10,5	110	24	8,5	6,5	4,5	-	-	78	14	106	150	M8	134,5	17	5	-	6,5	6	6,5	6,5	6	40	110	132

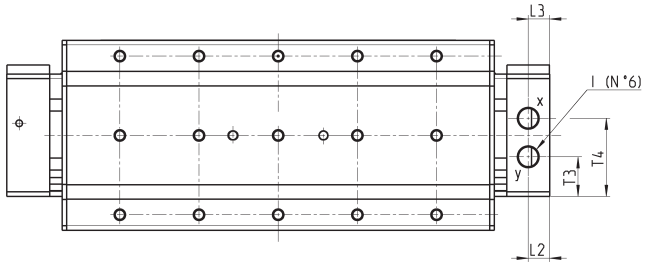
Mod. 52G8P

New

The cylinder has six supply ports (I) , three for one direction (x-h-w) , and the other three (y-z-k) for the opposite direction. With supporting feet (Mod. B-52 / BA-52), ports “h” and “z” have to be closed.

Where no dimensions are presented, refer to dimensions of cylinder model 52M2C





DIMENSIONS

Mod.	Ø	T1	T2	T3	T4	L2	L3	I
52G8P25A	25	13,5	29,5	13,5	28,5	8	11	G1/8
52G8P32A	32	17,5	34,5	17,5	34,5	9,5	9,5	G1/8
52G8P40A	40	15,5	38	20,5	42,5	11,5	11,5	G1/4
52G8P50A	50	29,5	59	29	59	17	17	G3/8
52G8P63A	63	34	68,5	34	68,5	17	17	G3/8

The company reserves the right to vary models and dimensions without notice.
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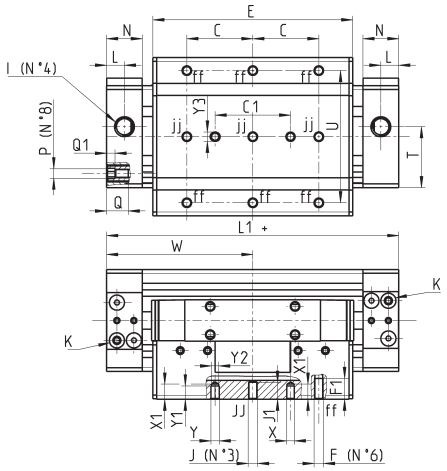
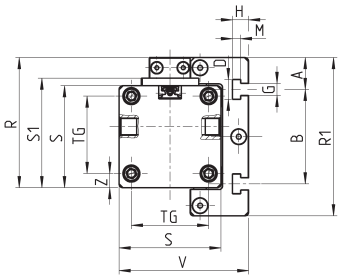
Mod. 52G2C

New

The cylinder has two supply ports “I” for both endcovers. The operator needs to choose which one of the two ports to use on each end cover. The remaining port has to be closed with the supplied tap.

jj = these holes are present in cylinder Ø32 only
+ add the stroke
K = cushion regulation screw





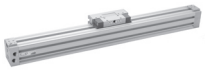
DIMENSIONS

Mod.	Ø	W	E	L1	I	L	T	U	N	C	F	F1	D	B	A	H	G	M	J	J1	TG	Z	S	R1	P	V	Q	Q1	⌀Y2	Y	⌀X	Y1	X1	Y3	C1	S1	R
52G2C25A	25	67,5	94	135	G1/8	9,5	25	30	19	30	M5	8	10,5	50	12,5	8,5	6,5	4,5	-	-	36	4,5	45	75	M4	59	11	3	4	4,5	4	4,5	5,5	4	40	49	60
52G2C32A	32	77,5	106	155	G1/8	9,5	32,5	70	19	35	M5	11	10,5	50	17	8,5	6,5	4,5	M5	9	41	7,5	54	84	M5	69	11	4	4	4,5	4	7	8	4	40	58	69
52G2C40A	40	95	136	190	G1/4	11,5	38,5	55	23	55	M6	12	10,5	80	10	8,5	6,5	4,5	-	-	49	7,5	64	100	M6	79	12	4	6	6,5	6	7	8	6	40	68	82
52G2C50A	50	105	148	210	G3/8	17	59	42	30	50	M8	16	10,5	94	23	8,5	6,5	4,5	-	-	65	12,5	90	133	M8	113	17	5	-	6,5	6	3	3	6	40	94	115
52G2C63A	63	125	180	250	G3/8	17	68,5	60	30	60	M8	16	10,5	110	24	8,5	6,5	4,5	-	-	78	14	106	150	M8	134,5	17	5	-	6,5	6	6,5	6,5	6	40	110	132

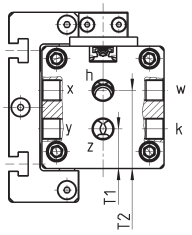
Mod. 52G8C

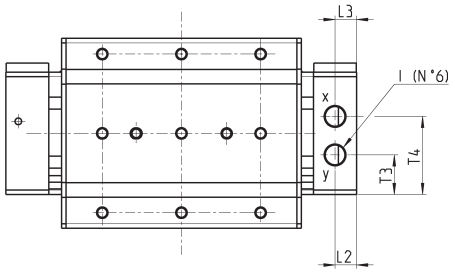
New

The cylinder has six supply ports (I) , three for one direction (x-h-w),and the other three for the opposite direction (y-z-k). With supporting feet (mod. B-52 / BA-52), ports “h” and “z” have to be closed .



Where no dimensions are presented, refer to dimensions of cylinder model 52G2C. The guide can be applied on the right side on request.





DIMENSIONS

Mod.	Ø	T1	T2	T3	T4	L2	L3	I
52G8C25A	25	13,5	29,5	13,5	28,5	8	11	G1/8
52G8C32A	32	17,5	34,5	17,5	34,5	9,5	9,5	G1/8
52G8C40A	40	15,5	38	20,5	42,5	11,5	11,5	G1/4
52G8C50A	50	29,5	59	29	59	17	17	G3/8
52G8C63A	63	34	68,5	34	68,5	17	17	G3/8

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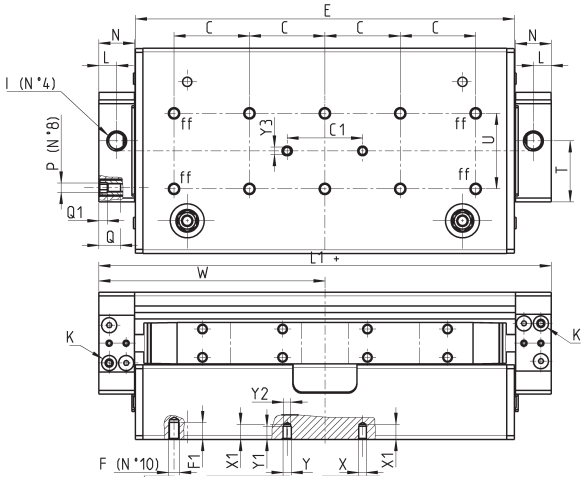
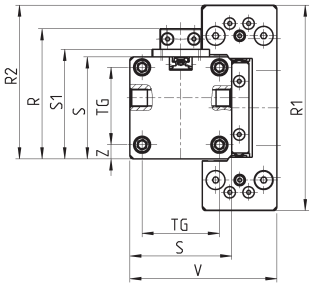
Mod. 52R2P

New

The cylinder has two supply ports “I” for both endcovers. The operator needs to choose which one of the two ports to use on each end cover. The remaining port has to be closed with the supplied tap.

ff = these holes are not present in cylinder 25
+ add the stroke
K = cushion regulation screw





DIMENSIONS

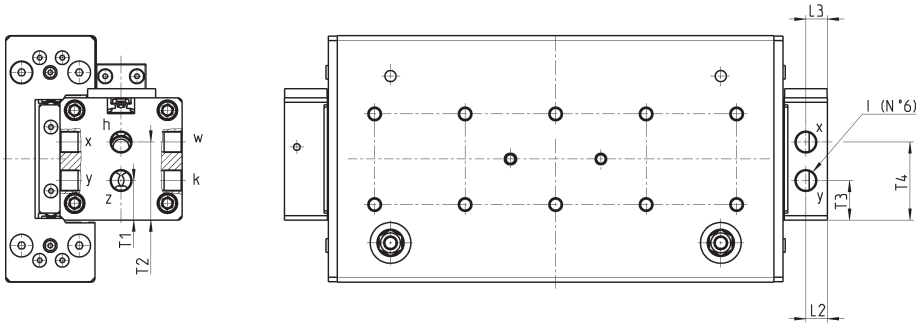
Mod.	Ø	W	E	L1	I	L	T	U	N	C	F	F1	TG	Z	S	R1	P	V	Q	Q1	⌀Y2	Y	⌀X	Y1	X1	Y3	C1	S1	R2	R
52R2P25A	25	100	160	200	G1/8	9,5	25	40	19	40	M5	7,5	36	4,5	45	97	M4	68	11	3	4	4,5	4	7	8	4	40	49	71	60
52R2P32A	32	120	201	240	G1/8	9,5	32,5	40	19	40	M6	9	41	5,5	54	109	M5	78	11	4	4	4,5	4	7	8	4	40	58	81,5	69
52R2P40A	40	150	252	300	G1/4	11,5	38	55	23	55	M6	12	49	7,5	64	145	M6	90.5	12	4	6	6,5	6	7	8	6	40	68	104,5	82

Mod. 52R8P

New

The cylinder has six ports, three for one direction (x-h-w), and the other three (y-z-k) for the opposite direction. With supporting feet (Mod. B-52 / BA-52), ports “h” and “z” have to be closed.

Where no dimensions are presented, refer to dimensions of cylinder model 52R2P.



DIMENSIONS

Mod.	Ø	T1	T2	T3	T4	L2	L3	I
52R8P25A	25	13,5	29,5	13,5	28,5	8	11	G1/8
52R8P32A	32	17,5	34,5	17,5	34,5	9,5	9,5	G1/8
52R8P40A	40	15,5	38	20,5	42,5	11,5	11,5	G1/4

The company reserves the right to vary models and dimensions without notice.
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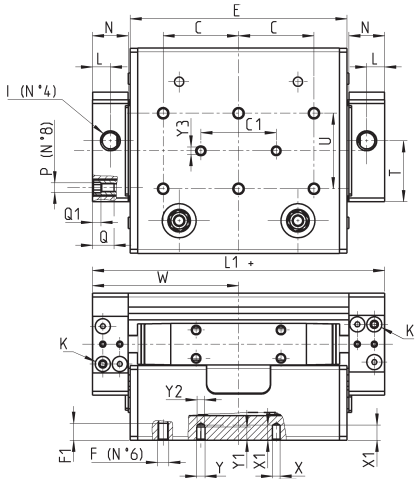
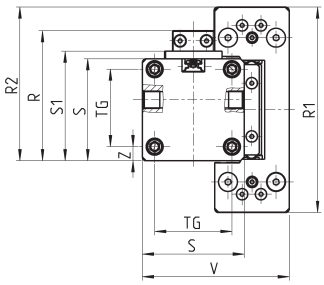
Mod. 52R2C

New

The cylinder has two supply ports “I” for both endcovers. The operator needs to choose which one of the two ports to use on each end cover. The remaining port has to be closed with the supporting tap.

+ = add the stroke
K = cushion regulation screw





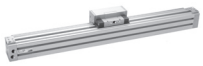
DIMENSIONS

Mod.	Ø	W	E	L1	I	L	T	U	N	C	F	F1	TG	Z	S	R1	P	V	Q	Q1	⌀Y2	Y	⌀X	Y1	X1	Y3	C1	S1	R2	R
52R2C25A	25	67,5	95	135	G1/8	9,5	25	40	19	20	M5	7,5	36	4,5	45	97	M4	68	11	3	4	4,5	4	7	8	4	40	49	71	60
52R2C32A	32	77,5	115	155	G1/8	9,5	32,5	40	19	40	M6	9	41	5,5	54	109	M5	78	11	4	4	4,5	4	7	8	4	40	58	81,5	69
52R2C40A	40	95	143,5	190	G1/4	11,5	38	55	23	55	M6	12	49	7,5	64	145	M6	90,5	12	4	6	6,5	6	7	8	6	40	68	104,5	82

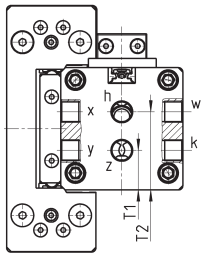
Mod. 52R8C

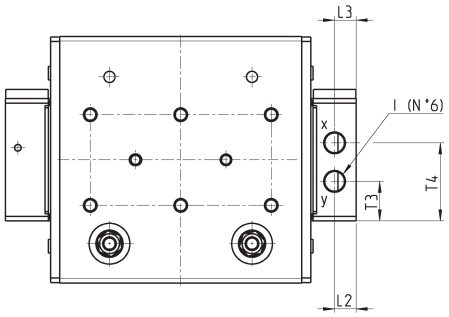
New

The cylinder has six supply ports (I) , three for one direction (x-h-w) , and the other three (y-z-k) for the opposite direction. With supporting feet (Mod. B-52 / BA-52), ports “h” and “z” have to be closed.



Where no dimensions are presented, refer to dimensions of cylinder model 52R2C.





DIMENSIONS

Mod.	Ø	T1	T2	T3	T4	L2	L3	I
52R8C25A	25	13,5	29,5	13,5	28,5	8	11	G1/8
52R8C32A	32	17,5	34,5	17,5	34,5	9,5	9,5	G1/8
52R8C40A	40	15,5	38	20,5	42,5	11,5	11,5	G1/4

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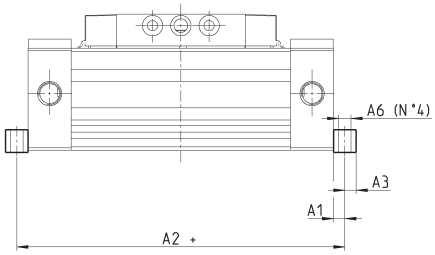
Foot mount Mod. B-52

New

The following is supplied:
2x feet
4x screws

+ = add the stroke



DIMENSIONS

Mod.	Ø	A1	A2 Series 52...P...	A2 Series 52...C...	A3	A4	A5	Ø A6	A7	A8	A9
B-52-25	25	5	210	145	5	4,5	5,5	5,5	36	45	22
B-52-32	32	7,5	255	170	7,5	7,5	8,5	7	41	51	25
B-52-40	40	7,5	315	205	7,5	7,5	8,5	9	49	64	25
B-52-50	50	7,5	365	225	7,5	12,5	13,5	8.5	65	89	40
B-52-63	63	7,5	415	265	7,5	14	15	8.5	78	105	50

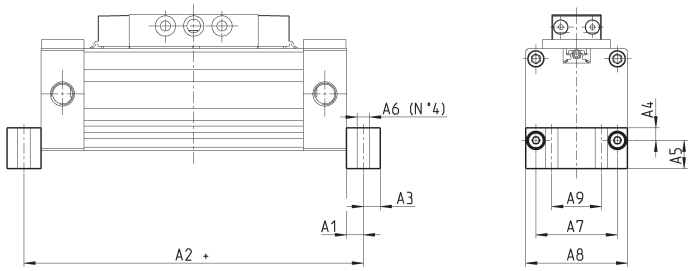
Foot mount Mod. BA-52

New

These are to be used with intermediate bracket (Mod. BH-52... and BL-52...)

The following is supplied:
2x feet
4x screws

+ = add the stroke



DIMENSIONS

Mod.	Ø	A1	A2 Series 52...P...	A2 Series 52...C...	A3	A4	A5	Ø A6	A7	A8	A9
BA-52-25	25	7,5	215	150	7,5	5,5	12,5	5,5	36	45	22
BA-52-32	32	7,5	255	170	7,5	16,5	17,5	7	41	51	25
BA-52-40	40	7,5	315	205	7,5	8,5	17,5	9	49	64	25
BA-52-50	50	7,5	365	225	7,5	12,5	27,5	8,5	65	89	40
BA-52-63	63	7,5	415	265	7,5	11	29	8,5	78	105	50

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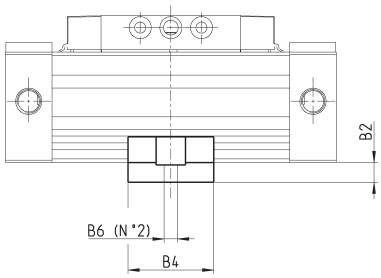
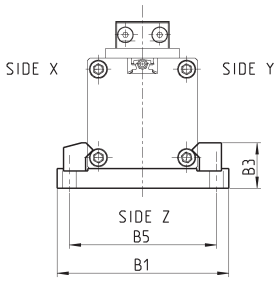
Intermediate brackets Mod.BH and BL 52-32

New

Assembling by using two intermediate brackets without using the feet bracket. If the application requires the assembling of an intermediate bracket on sides X-Y, it is necessary to use model BL-52-32 (only Ø32).

The following is supplied:
1x intermediate bracket
4x screws





DIMENSIONS

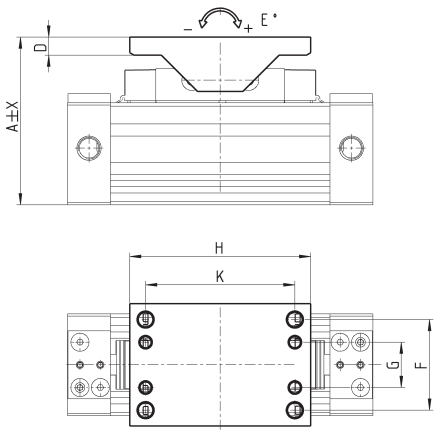
Mod.	Ø	B1	B2	B3	B4	B5	Ø B6
BH-52-25	25	70	8	18,5	35	60	5,5
BH-52-32	32	85	10	18,5	40	73	6,5
BL-52-32	32	85	10	18,5	40	73	6,5
BH-52-40	40	105	10	18,5	40	90,5	9
BH-52-50	50	138	15	30	70	120	11
BH-52-63	63	154	15	36	70	136	11

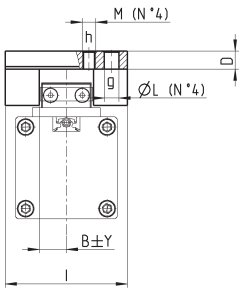
Self-compensating adaptor Mod.CF-52

New

The self-compensating adaptor is used to compensate the difference between the rodless cylinder and the external guide system. Suitable for cylinders mod. 52M2P/52M2C/52M8P/52M8C.

The following is supplied:
1x adaptor
1x pin
2x feet
2x seeger





DIMENSIONS

Mod.	Ø	A	X	E°	B	Y	D	I	F	G	H	K	Ø L	M
CF-52-25-32	25	74	1	±8	12	0,8	8	54	40	20	80	66	6,5	M6
CF-52-25-32	32	82	0,5	±6	12	0,8	8	54	40	20	80	66	6,5	M6
CF-52-40	40	94,5	0,5	±6	12	0,8	8	54	40	20	80	66	6,5	M6
CF-52-50-63	50	130,5	0,5	±5	24	0,8	11	80	51	23	122	102	9	M8
CF-52-50-63	63	146	0,5	±4,5	24	0,8	11	80	51	23	122	102	9	M8

The company reserves the right to vary models and dimensions without notice.
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ROTARY CYLINDERS

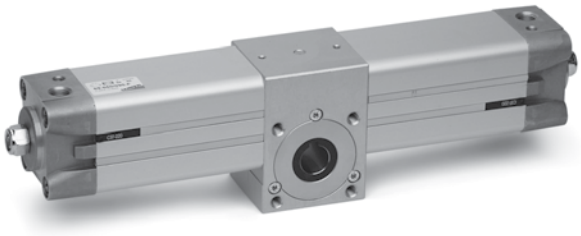
Rotary cylinders Series 18

1 / 6.05

Non magnetic, cushioned, ø 32, 40, 50, 63, 80, 100, 125

Rotary cylinders Series 69

1 / 6.10



Magnetic, cushioned, ø 32, 40, 50, 63, 80, 100, 125

Rotary cylinders Series 30

1 / 6.15

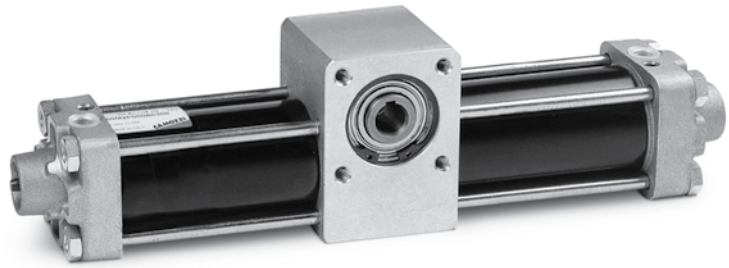
Cushioned and not cushioned
Standard rotational angles 90° and 180°
ø 50, 63, 80, 100

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

1

Rotary cylinders Series 18

Non magnetic, cushioned
ø32, 40, 50, 63, 80, 100, 125
Rotational angles 90° and 180°



The rotary cylinders 18 Series have been designed with seven different bores in order to satisfy a large range of operational requirements. As a result of their design and the materials used, these cylinders can be used in extreme conditions with optimum results.
The rack and pinion are made of hardened ground steel and the pinion is mounted on two bearings.
In the cylinder end caps there are screws, which allow rotation to be adjusted by ± 7°.

GENERAL DATA

Type of construction	with tie-rods
Operation	double-acting
Materials	aluminium end-blocks, ST35 tube, NBR seals, other parts hardened steel
Operating temperature	0 ÷ 80°C (with dry air -20°C)
Standard rotation angles	90° - 180°
Operating pressure	0,5 ÷ 10 bar
Fluid	clean air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

TABLE OF TORQUE FORCE IN Nm (THEORETICAL)

Ø	1 Bar	2 Bar	3 Bar	4 Bar	5 Bar	6 Bar	7 Bar	8 Bar	9 Bar	10 Bar
32	1,42	2,84	4,26	5,68	7,10	8,50	9,94	11,36	12,77	14,19
40	2,22	4,44	6,65	8,87	11,09	13,31	15,52	17,74	19,96	22,18
50	3,47	6,93	10,40	13,86	17,33	20,79	24,26	27,72	31,19	34,65
63	6,60	13,20	19,81	26,41	33,01	39,61	46,21	52,82	59,42	66,02
80	10,65	21,29	31,94	42,58	53,23	63,87	74,52	85,17	95,81	106,46
100	22,18	44,36	66,54	88,71	110,89	133,07	155,25	177,43	199,61	221,78
125	34,65	69,31	103,96	138,62	173,27	207,92	242,58	277,23	311,90	346,50

CODING EXAMPLE

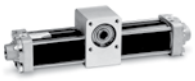
18	-	050	/	090

18	SERIES
050	BORE 32 mm 40 mm 50 mm 63 mm 80 mm 100 mm 125 mm
090	ROTATIONAL ANGLES 90 - 180°

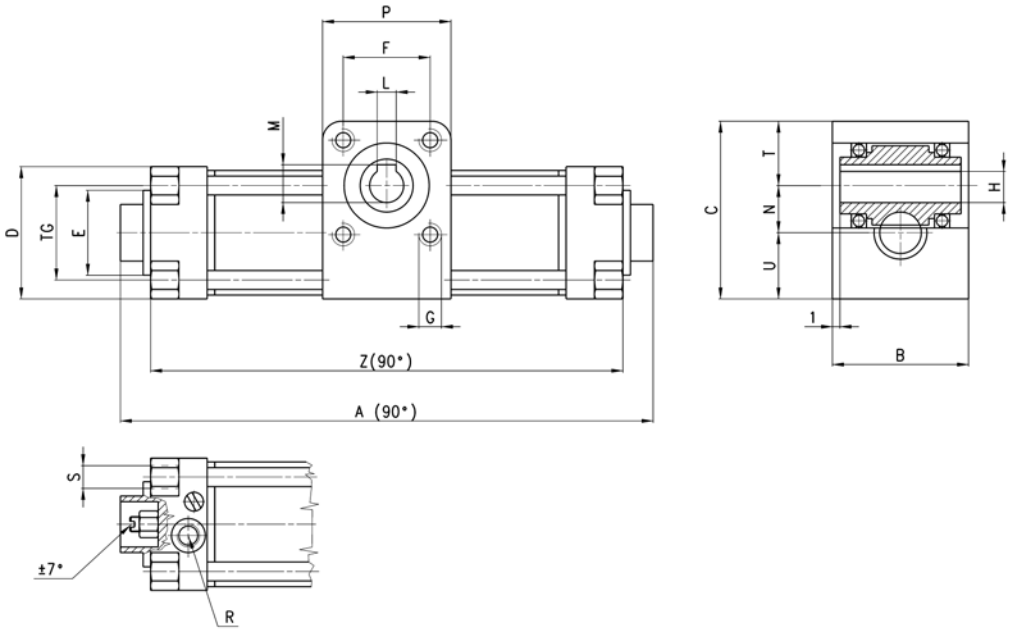
The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Rotating cylinders Series 18

* increase in “A” and “Z” for each 90° of rotation



Note: Grease the rack using a suitable grease gun.



DIMENSIONS

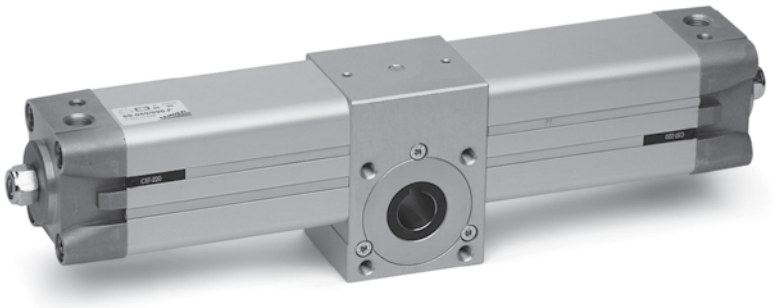
Ø	A	*	B	C	D	E^{Øh8}	F	G	H^{Øh7}	L	M	N	P	R	S	T	U	TG	Z
32	298	63	52	85	47	25	50	M6	15	5	17.3	26.5	68	G1\8	M6	34	24.5	32.5	254
40	298	63	56	89	54	32	50	M6	15	5	17,3	26,5	68	G1\4	M6	34	28,5	38,2	254
50	298	63	66	94	65	38	50	M8	15	5	17.3	26.5	68	G1\4	M8	34	33,5	46,6	258
63	366	75,5	80	111	78	35	60	M8	20	6	22,8	31	80	G3/8	M8	40	40	58,5	314
80	366	75,5	98	120	97	45	60	M10	20	6	22.8	31	80	G3\8	M10	40	49	72	314
100	426	100,5	118	153	116	45	80	M10	25	8	28,3	41	102	G3\8	M10	53	59	89	374
125	432	100,5	142	165	140	53	80	M12	25	8	28.3	41	102	G1/2	M12	53	71	110	381

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Rotary cylinders Series 69

Magnetic, cushioned
ø32, 40, 50, 63, 80, 100, 125
Rotational angles 90° and 180°

» Male or female version
» Clean design



The rotary cylinders of the 69 Series are available in seven different bores from 32 to 125mm and in order to satisfy a large range of operational requirements, they are available in two different versions, one with male pinion and one with female.
As a result of their design and the materials used, these cylinders can be used in extreme conditions with optimum results.
On the heads there is a screw which allows rotation to be adjusted by ± 5°.

GENERAL DATA

Type of construction	with internal tie-rods
Operation	double-acting
Materials	end blocks AL, tube AL, seals NBR, body AL, rack steerack guide shoe in acetal resin; pinion in hardened steel
Type of mounting	threaded holes in the central body by means of Series 60 brackets
Bore	ø 32, 40, 50, 63, 80, 100, 125
Operating temperature	0°C ÷ 80°C (with dry air - 20°C)
Standard rotation angles	90°,180° (others on request)
Bearings	Ball bearings (ø 32 mm teflon bronze guide)
Operating pressure	1 ÷ 10 bar
Fluid	clean air, without lubrication If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

TABLE OF TORQUE FORCE IN Nm (THEORETICAL)

Ø	1 Bar	2 Bar	3 Bar	4 Bar	5 Bar	6 Bar	7 Bar	8 Bar	9 Bar	10 Bar
32	1,2	2,4	3,6	4,8	6	7,2	8,4	9,6	10,8	12
40	2,25	4,5	6,75	9	11,25	13,5	15,75	18	20,25	22,5
50	3,9	7,8	11,7	15,6	19,5	23,4	27,3	31,2	35,1	39
63	7,3	14,6	21,9	29,2	36,5	43,8	51,1	58,4	65,7	73
80	15,7	31,4	47,1	62,8	78,5	94,2	109,9	125,6	141,3	157
100	26,35	52,7	79,05	105,4	131,75	158,1	184,45	210,8	237,15	263,5
125	51	102	153	204	255	306	357	408	459	510

CODING EXAMPLE

69	-	050	/	090	-	F

69	SERIES
050	BORE 32 mm 40 mm 50 mm 63 mm 80 mm 100 mm 125 mm
090	ROTATIONAL ANGLES 90 - 180°
F	PINION F = Female M = Male

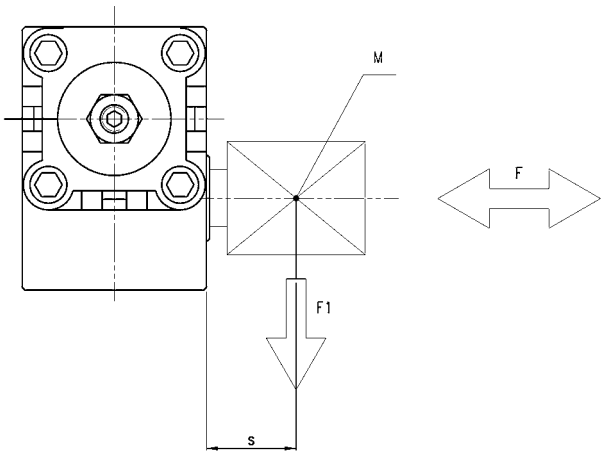
The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

AXIAL LOAD

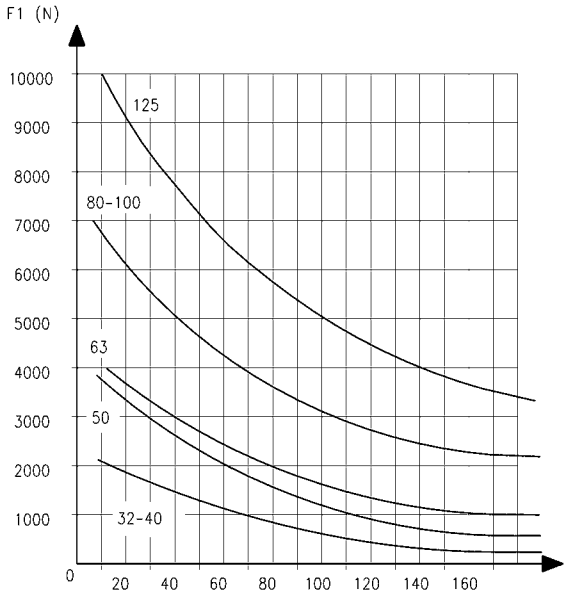
Max. axial load F with F1 = 0

Ø	32	40	50	63	80	100	125
Force F	100 N	100 N	120 N	120 N	200 N	250 N	300 N

RADIAL LOAD



M = Barycenter of the applied theorical load.



Max. radial load F1 with F = 0

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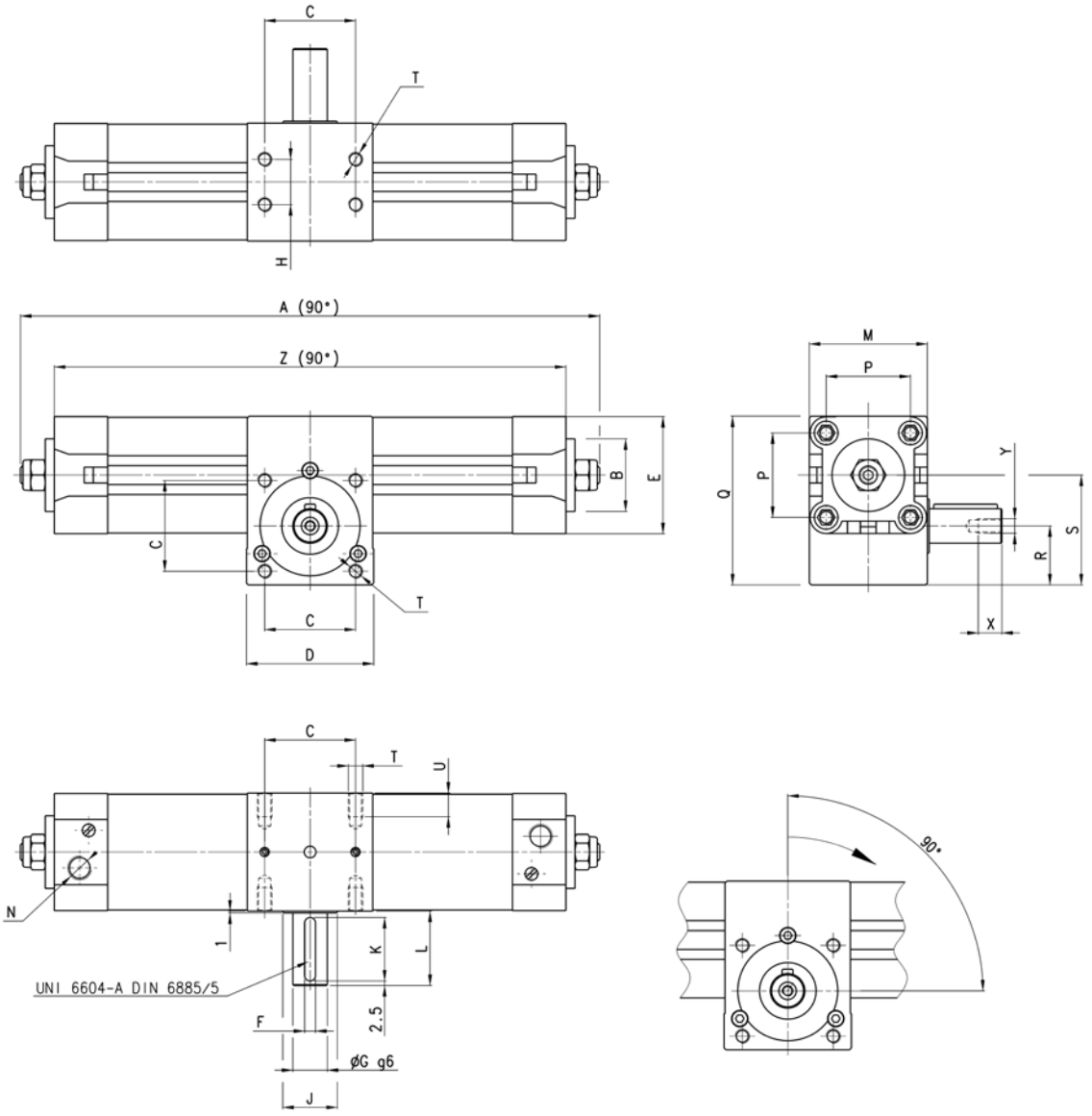
Mod. 69 male pinion

* increase in “A” and “Z” for each 90° of rotation



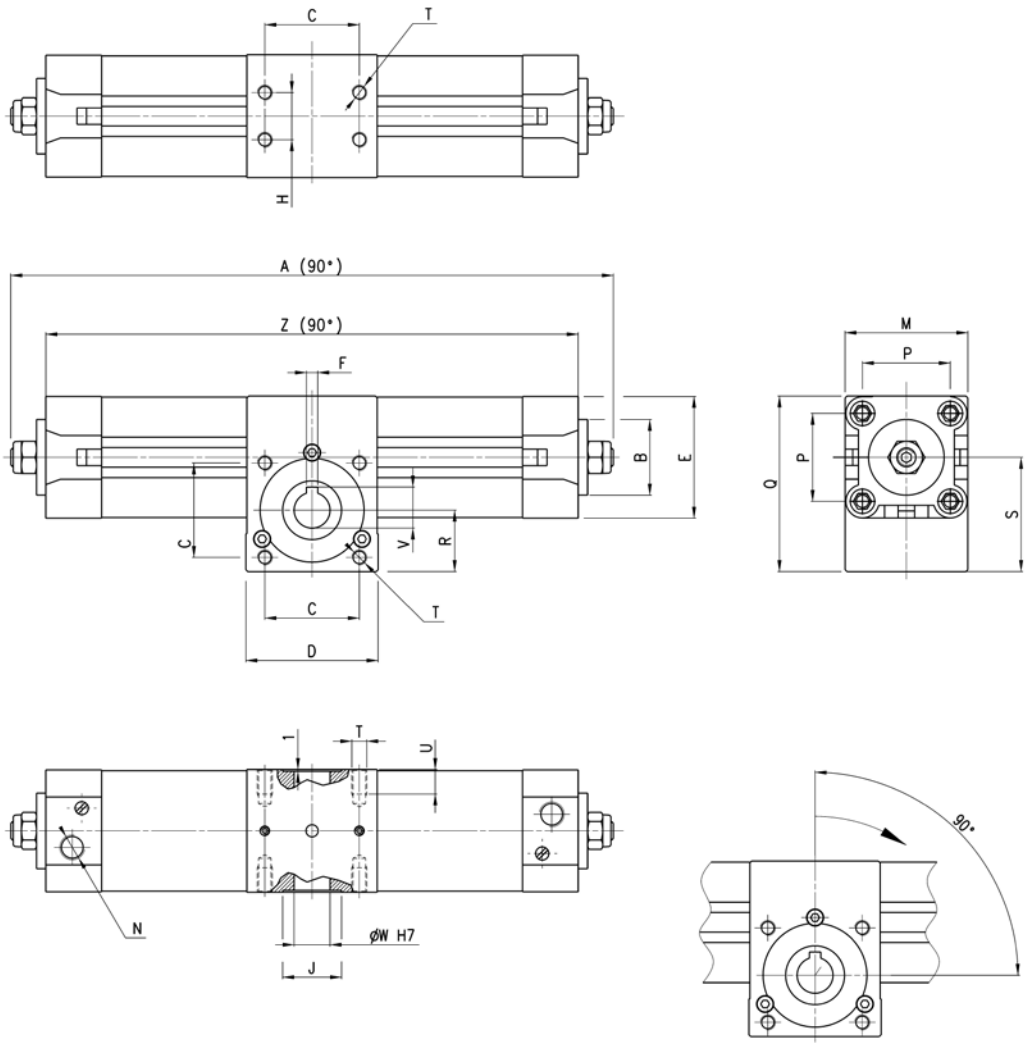
DIMENSIONS

Ø	A	B	*	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	Y	X	Z
32	249	30	47	33	50	46	5	14	18	25	25	31	50	G1/8	32,5	71,5	25	46,5	M6	10	M5	12,5	219
40	295	35	56,5	40	60	55	5	14	22	25	25	31	60	G1/4	38	82	30	54,5	M6	10	M5	12,5	263
50	316	40	63	50	70	64,5	6	19	25	30	35	41	65	G1/4	46,5	94	32,5	60,5	M8	13	M6	16	282
63	357	45	74,5	60	75	75	8	24	35	30	35	41	75	G3/8	56,5	110	37	70,8	M8	13	M8	19	325
80	443	45	99	80	99	93	8	28	50	45	45	51	99	G3/8	72	142	50	93,5	M10	16	M8	19	404
100	472	55	107	80	115	110	10	38	60	50	45	51	115	G1/2	89	156,5	54	99	M10	16	M10	22	434
125	549	60	132	90	125	135	10	38	70	60	45	51	140	G1/2	110	188	60	118	M12	20	M10	22	505

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Mod. 69 female pinion

* increase in “A” and “Z” for each 90° of rotation



DIMENSIONS

Ø	A	B	*	C	D	E	F	H	J	M	N	P	Q	R	S	T	U	V	W	Z
32	249	30	47	33	50	46	5	18	25	50	G1/8	32,5	71,5	25	46,5	M6	10	16,3	14	219
40	295	35	56,5	40	60	55	5	22	25	60	G1/4	38	82	30	54,5	M6	10	16,3	14	263
50	316	40	63	50	70	64,5	6	25	30	65	G1/4	46,5	94	32,5	60,5	M8	13	21,8	19	282
63	357	45	74,5	60	75	75	6	35	30	75	G3/8	56,5	110	37	70,8	M8	13	21,8	19	325
80	443	45	99	80	99	93	8	50	45	99	G3/8	72	142	50	93,5	M10	16	27,3	24	404
100	472	55	107	80	115	110	8	60	50	115	G1/2	89	156,5	54	99	M10	16	31,3	28	434
125	549	60	132	90	125	135	8	70	60	140	G1/2	110	188	60	118	M12	16	31,3	28	505

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Rotary cylinders Series 30

Cushioned and not cushioned
Standard rotational angles 90° and 180°
ø 50 - 63 - 80 - 100

Series 30 rotary cylinders are constructed from profiled aluminium, their compact dimensions and clean lines give a good aesthetic appearance. A unique wear resistant guide block gives increased service life to the unit. On the heads there is a screw which allows rotation to be adjusted by ± 5°.

GENERAL DATA

Type of construction	profile
Operation	double acting
Materials	aluminium profile body & end blocks - NBR seals - other parts - hardened steel
Mounting	by means of holes in body
Bore	ø 50 - 63 - 80 - 100
Installation	in any position
Working temperature	0°C ÷ 50°C (- 20°C on dry air)
Standard rotation	90° - 180°
Operating pressure	0.5 ÷ 10 bar
Fluid	clean air with or without lubrication

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

TABLE OF TORQUE FORCE IN Nm(THEORETICAL)

Ø	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar
50	2,08	4,16	6,24	8,32	10,40	12,48	14,55	16,63	18,71	20,79
63	4,40	8,80	13,20	17,61	22,01	26,41	30,81	35,21	39,61	44,01
80	7,10	14,19	21,29	28,39	35,49	42,58	49,68	56,78	63,87	70,97
100	16,63	33,27	49,90	66,54	83,17	99,80	116,44	133,07	149,07	166,34

CODING EXAMPLE

30	-	050	/	090	-	3

30	SERIES
050	BORE 50 mm 63 mm 80 mm 100 mm
090	ROTATIONAL ANGLES 90 - 180°
3	Not cushioned

The company reserves the right to vary models and dimensions without notice.
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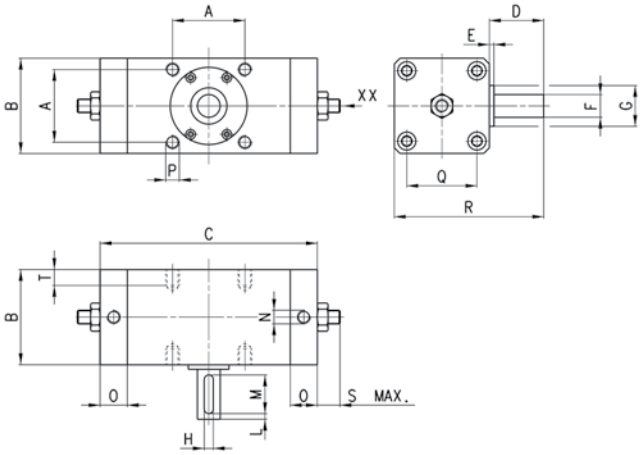
Rotary cylinders Series 30

XX = Screw for stroke regulation

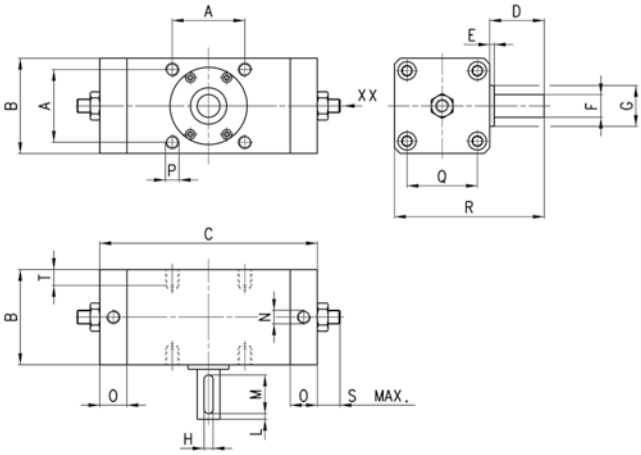


DIMENSIONS

Mod.	A	B	C	D	E	F h7	G	H	L	M	N	O	P	Q	R	S	T
30-50-090	48	62	162	36	2.5	15	25	5	5	25	G1/8	23	M8 x 1.25	46	98	8	8
30-63-090	60	76	186	41	2.5	17	30	6	5	30	G1/8	24	M10 x 1.5	57	117	8	12
30-80-090	72	92	195	50	3	20	35	6	5	35	G1/4	23,5	M12 x 1.75	70	142	9	13
30-100-090	85	112	247	60	4	25	40	8	5	40	G3/8	26	M12 x 1.75	85	172	9	14
30-50-180	48	62	199	36	2.5	15	25	5	5	25	G1/8	26	M8 x 1.25	46	98	8	8
30-63-180	60	76	237	41	2.5	17	30	6	5	30	G1/8	24	M10 x 1.5	57	117	8	12
30-80-180	72	92	245	50	3	20	35	6	5	35	G1/4	23,5	M12 x 1.75	70	142	9	13
30-100-180	85	112	313	60	4	25	40	8	5	40	G3/8	26	M12 x 1.75	85	172	9	14

Rotary cylinders Series 30

XX = Screw for stroke regulation



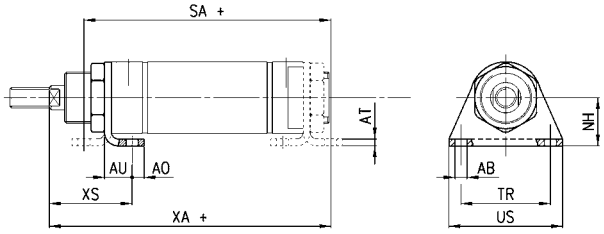
DIMENSIONS

Mod	A	B	C	D	E	F h7	G	H	L	M	N	O	P	Q	R	S	T
30-050/090-3	48	62	150	36	2.5	15	25	5	5	25	G1\8	17	M8 x 1.25	46	98	8	8
30-063/090-3	60	76	172	41	2.5	17	30	6	5	30	G1\8	17	M10 x 1.5	57	117	8	12
30-080/090-3	72	92	191	50	3	20	35	6	5	35	G1\4	21,5	M12 x 1.75	70	142	9	13
30-100/090-3	85	112	245	60	4	25	40	8	5	40	G3\8	25	M12 x 1.75	85	172	9	14
30-050/180-3	48	62	187	36	2.5	15	25	5	5	25	G1\8	17	M8 x 1.25	46	98	8	8
30-063/180-3	60	76	233	41	2.5	17	30	6	5	30	G1\8	17	M10 x 1.5	57	117	8	12
30-080/180-3	72	92	241	50	3	20	35	6	5	35	G1\4	21,5	M12 x 1.75	70	142	9	13
30-100/180-3	85	112	311	60	4	25	40	8	5	40	G3\8	25	M12 x 1.75	85	172	9	14

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Foot mount Mod. B

Material: zinc-plated steel.
Supplied with:
1x foot
1x front end cap nut mod. V



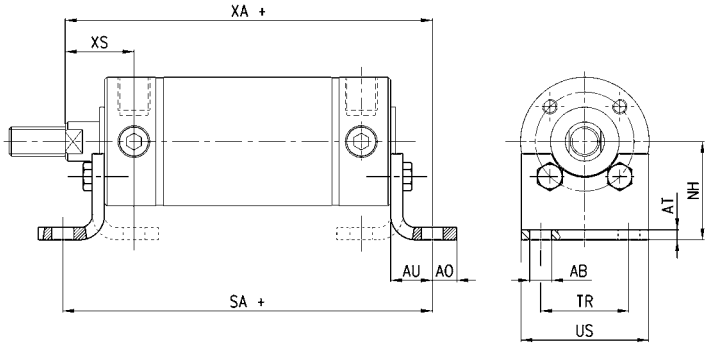
+ = add the stroke

DIMENSIONS

Mod.	Ø	⌀AB	AO	AT	AU	NH	SA+	TR	US	XA+	XS
B-27-20	20	5,5	6	3	13	20	79	32	42	83	27
B-27-25	25	6,6	8	3	12,5	22	78	38	49	82	26
B-27-32	32	6,6	8	4	16	25	95	40	54	102	35
B-27-40	40	7	7	4	16	28	99	52	66	107	36

Foot mount Mod. B

Material: zinc-plated steel.
Supplied with:
2x feet
4x screws



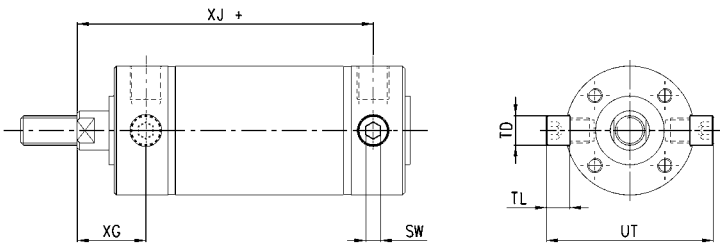
+ = add the stroke

DIMENSIONS

Mod.	Ø	⌀AB	AO	AT	AU	NH	SA+	TR	US	XA+	XS
B-27-50	50	9	10	4	17	40	118	36	52	114	26
B-27-63	63	9	10	5	19	47	124	45	61	118	27

Threaded trunnion pin Mod. T

Material: stainless steel.
Supplied with:
2x pins



+ = add the stroke

DIMENSIONS

Mod.	Ø	SWSW	⌀TD^{h9}	TL	UT	XG	XJ+
T-27-50	50	6	12	9,5	68	26	84
T-27-63	63	6	14	11	84	26	86

The company reserves the right to vary models and dimensions without notice.
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Compact minicylinders Series 14

Single-acting
ø 6, 10, 16 - Strokes 5, 10, 15 mm
with Super-rapid fitting ø 4 and M5 port

- Compact design
- With threaded or non threaded piston rod
- Threaded body

The single-acting compact minicylinder Series 14, has been designed for installation in small spaces. The design allows the cylinders to be inserted into threaded blocks incorporated in the machine.

All of the minicylinders are supplied with a Super-Rapid fitting incorporated in a tube dia. 4 or with a M5 thread. They are available in two versions with either a threaded or a non threaded piston rod.

GENERAL DATA

Type of construction	compact, non magnetic
Operation	single-acting
Materials	body OT 58 - NBR seals - other stainless steel
Operating pressure	P. min 2,5 bar - P. max 8 bar
Operating temperature	0°C ÷ 80°C (with dry air - 20°C)
Fluid	clean air, without lubrication, if lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.
Bore	ø 6, 10, 16
Stroke	see table
Mounting method	by means of threaded body

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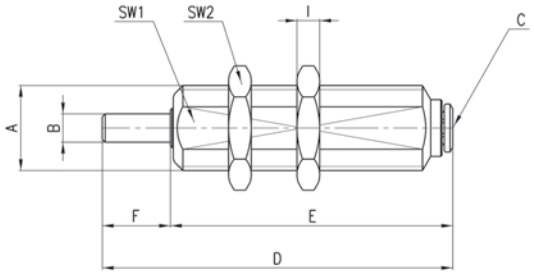
Compact minicylinders with non threaded piston rod Mod. 14N1A

Super - Rapid fitting incorporated.

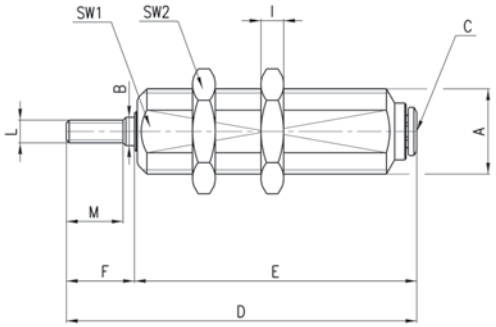


DIMENSIONS

Mod.	Ø	STROKE	A	B	C	D	E	F	SW1	SW2	I
14N1A06A05	6	5	M10x1	3	4\2	34	29	5	9	12	3
14N1A06A10	6	10	M10x1	3	4\2	42	37	5	9	12	3
14N1A06A15	6	15	M10x1	3	4\2	47	42	5	9	12	3
14N1A10A05	10	5	M15x1,5	5	4\2	50	38	12	13	19	4
14N1A10A10	10	10	M15x1,5	5	4\2	57	45	12	13	19	4
14N1A10A15	10	15	M15x1,5	5	4\2	62	50	12	13	19	4
14N1A16A05	16	5	M22x1,5	6	4\2	53,5	39,5	14	20	27	5
14N1A16A10	16	10	M22x1,5	6	4\2	62	48	14	20	27	5
14N1A16A15	16	15	M22x1,5	6	4\2	67	53	14	20	27	5

Compact minicylinders with threaded piston rod Mod. 14N1A

Super - Rapid fitting incorporated.



DIMENSIONS

Mod.	Ø	STROKE	A	B	C	D	E	F	SW1	SW2	I	L	M
14N1A06B05	6	5	M10x1	3	4\2	38	29	9	9	12	3	M3x0,5	7
14N1A06B10	6	10	M10x1	3	4\2	46	37	9	9	12	3	M3x0,5	7
14N1A06B15	6	15	M10x1	3	4\2	51	42	9	9	12	3	M3x0,5	7
14N1A10B05	10	5	M15x1,5	5	4\2	50	38	12	13	19	4	M4x0,7	10
14N1A10B10	10	10	M15x1,5	5	4\2	57	45	12	13	19	4	M4x0,7	10
14N1A10B15	10	15	M15x1,5	5	4\2	62	50	12	13	19	4	M4x0,7	10
14N1A16B05	16	5	M22x1,5	6	4\2	53,5	39,5	14	20	27	5	M5x0,8	12
14N1A16B10	16	10	M22x1,5	6	4\2	62	48	14	20	27	5	M5x0,8	12
14N1A16B15	16	15	M22x1,5	6	4\2	67	53	14	20	27	5	M5x0,8	12

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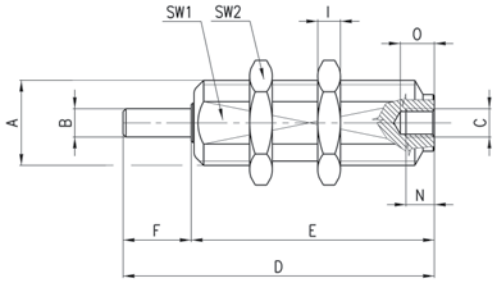
Compact minicylinders with non threaded piston rod Mod. 14N1M

Threaded port.

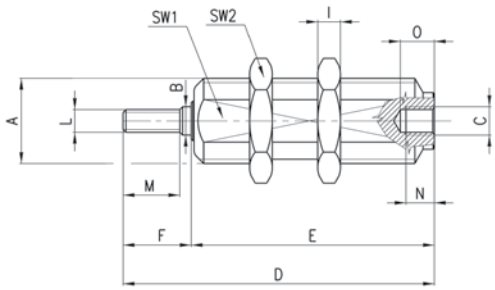


DIMENSIONS

Mod.	Ø	STROKE	A	B	C	D	E	F	SW1	SW2	I	N	O
14N1M06A05	6	5	M10x1	3	M5	28	23	5	9	12	3	5	6
14N1M06A10	6	10	M10x1	3	M5	36	31	5	9	12	3	5	6
14N1M06A15	6	15	M10x1	3	M5	41	36	5	9	12	3	5	6
14N1M10A05	10	5	M15x1,5	5	M5	43	31	12	13	19	4	5	6
14N1M10A10	10	10	M15x1,5	5	M5	50	38	12	13	19	4	5	6
14N1M10A15	10	15	M15x1,5	5	M5	55	43	12	13	19	4	5	6
14N1M16A05	16	5	M22x1,5	6	M5	46,5	32,5	14	20	27	5	5	6
14N1M16A10	16	10	M22x1,5	6	M5	55,5	41,5	14	20	27	5	5	6
14N1M16A15	16	15	M22x1,5	6	M5	60,5	46,5	14	20	27	5	5	6

Compact minicylinders with threaded piston rod Mod. 14N1M

Threaded port.



DIMENSIONS

Mod.	Ø	STROKE	A	B	C	D	E	F	SW1	SW2	I	L	M	N	O
14N1M06B05	6	5	M10x1	3	M5	32	23	9	9	12	3	M3x0,5	7	5	6
14N1M06B10	6	10	M10x1	3	M5	40	31	9	9	12	3	M3x0,5	7	5	6
14N1M06B15	6	15	M10x1	3	M5	45	36	9	9	12	3	M3x0,5	7	5	6
14N1M10B05	10	5	M15x1,5	5	M5	43	31	12	13	19	4	M4x0,7	10	5	6
14N1M10B10	10	10	M15x1,5	5	M5	50	38	12	13	19	4	M4x0,7	10	5	6
14N1M10B15	10	15	M15x1,5	5	M5	55	43	12	13	19	4	M4x0,7	10	5	6
14N1M16B05	16	5	M22x1,5	6	M5	46,5	32,5	14	20	27	5	M5x0,8	12	5	6
14N1M16B10	16	10	M22x1,5	6	M5	55,5	41,5	14	20	27	5	M5x0,8	12	5	6
14N1M16B15	16	15	M22x1,5	6	M5	60,5	46,5	14	20	27	5	M5x0,8	12	5	6

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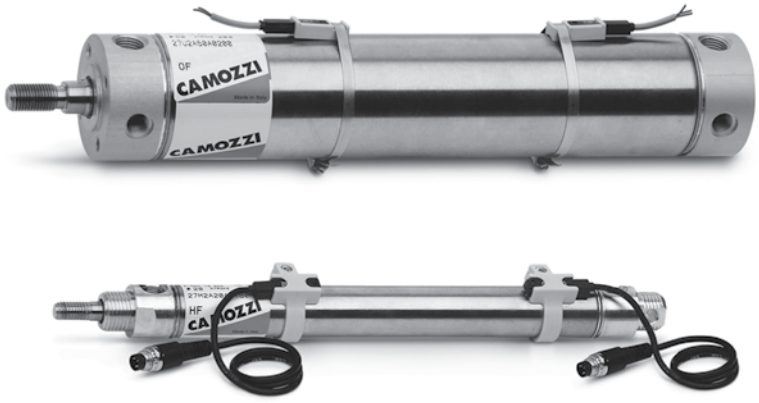
Magnetic cylinders Series 27

Double-acting, magnetic
ø 20, 25, 32, 40, 50, 63



- Reduced dimensions
- Different mounting options
- Perfect alignment, perfect linearity

The Series 27 have been designed to reduce the cylinders sizes as much as possible. These cylinders have been constructed with clean lines using stainless steel for both the tube and the rod and aluminium for the end blocks.

The choice of material and other design features have provided the basis for a range of versatile and reliable cylinders. The precise method of securing the tube to the end block ensures that all the parts are perfectly aligned. Mechanical cushioning has been fitted on these cylinders in order to reduce noise produced by the piston impact on the end-blocks. Series 27 cylinders are suitable for assembling with magnetic sensors. Various mounting bracket accessories are available to enable the cylinders to be fitted to suit the requirements of a particular application.

GENERAL DATA

Type of construction	flanged
Operation	double acting
Materials	aluminium end blocks - stainless steel piston - thermoplastic resin- piston seals and rod seals PU
Mounting	feet - trunnion - steel bar - pins
Strokes min-max	all diameters 10 - 1000 mm
Bores	ø 20, 25, 32, 40, 50, 63
Operating temperature	0°C ÷ 80°C (with dry air - 20°C)
Operating pressure	1 ÷ 10 bar
Speed	10 ÷ 1000 mm/sec (no load)
Fluid	filtered air, without lubrication if lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

The company reserves the right to vary models and dimensions without notice.
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STANDARD STROKES FOR DOUBLE-ACT. CYL. SERIES 27, 27M, 27T (ø20÷40)and SERIES 27U (ø20÷63)

Ø	10	25	40	50	80	100	125	160	200	250	300	320	400	500
20	■	■	■	■	■	■	■	■	■	■	■	■	■	■
25	■	■	■	■	■	■	■	■	■	■	■	■	■	■
32	■	■	■	■	■	■	■	■	■	■	■	■	■	■
40	■	■	■	■	■	■	■	■	■	■	■	■	■	■
50	■	■	■	■	■	■	■	■	■	■	■	■	■	■
63	■	■	■	■	■	■	■	■	■	■	■	■	■	■

CODING EXAMPLE

27	M	2	A	20	A	0050

27	SERIES
M	VERSION M = rear end block upper round port for ø 20-25-32-40 T = rear end block rear round port for ø 20-25-32-40 U = rear end block upper round port for ø 20-25-32-40-50-63
2	OPERATION 2 = double - acting
A	MATERIALS A = rolled stainless steel rod stainless steel tube
20	BORE 20 mm 25 mm 32 mm 40 mm 50 mm 63 mm
A	TYPE OF DESIGN A = standard
0050	STROKE (see table)

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MAGNETIC CYLINDERS SERIES 27

Rod fork end Mod. GY

Coupling piece Mod. GKF (New)

Self aligning rod Mod. GK (New)

Threaded trunnion pin Mod. T

Piston rod socket joint Mod. GY

Swivel ball joint Mod. GA

Foot mount Mod. B

Foot mount Mod. B

Nose nut Mod. V

Rear trunnion bracket Mod. I

Piston rod lock nut Mod. U

All accessories are supplied separately except for piston rod lock nut Mod. U

Rear trunnion bracket Mod. I

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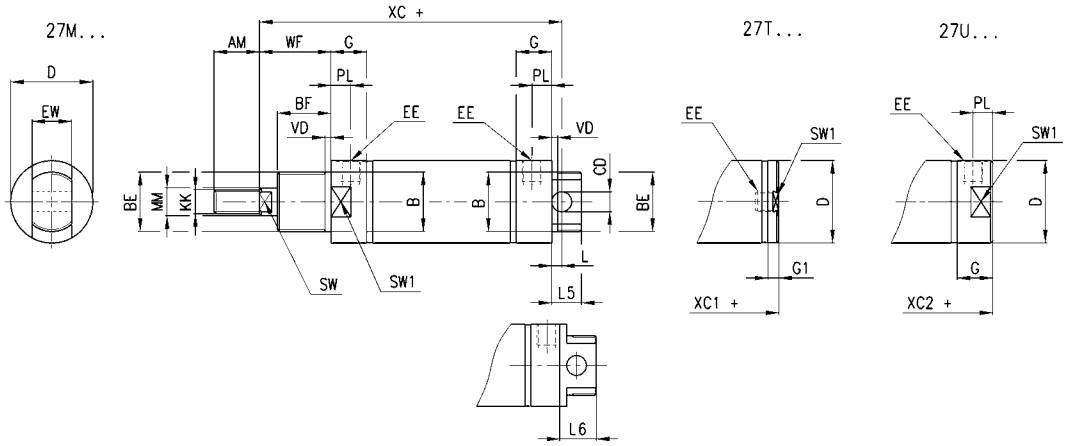
Cylinders Series 27 (Ø 20, 25, 32, 40)

+ = add the stroke

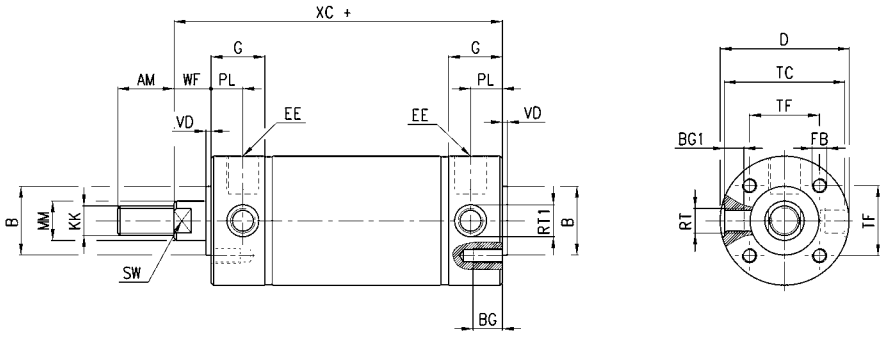


DIMENSIONS

Ø	AM	B	BF	BE	⌀CD^{h9}	⌀D	EE	EW	G	G1	KK	L	L6	⌀MM	L5	PL^{h9}	SW	VD	WF	XC+	XC1+	XC2+	SW1
20	14	16	12	M16x1,5	6	21,5	G1\8	12	15,5	8	M8x1,25	7	-	8	13	9	7	3	17	77	62,5	70,8	19
25	16	18	12	M18x1,5	8	26,5	G1\8	14	15,5	8	M10x1,25	9	-	10	17	9	9	3	16,5	78,5	62	69,5	24
32	22	22	15	M22x1,5	8	33,5	G1\8	16	17,5	5,5	M10x1,25	7	20	12	15	9	10	3	23	93	74	86	30
40	23	30	15	M30x1,5	10	41,5	G1\8	20	18	5,5	M12x1,25	5	24	16	15	10	13	3	24	96	78,5	91	38

Cylinders Series 27(Ø 50, 63)

+ = add the stroke



DIMENSIONS

Ø	AM	⌀B	BG	BG1	⌀D	EE	FB	G	KK	⌀MM^{h9}	PL	RT	RT1	SW	TC	TF	VD	WF	XC +
50	23	28	12	8	52,5	G1\4	M6	22	M12x1,25	16	13	M10x1	13	13	49	28,5	2	13	97
63	30	35	12	9,5	65,5	G1\4	M8	22	M16x1,5	20	13	M12x1,5	15	17	62	35,5	2	13	99

The company reserves the right to vary models and dimensions without notice.
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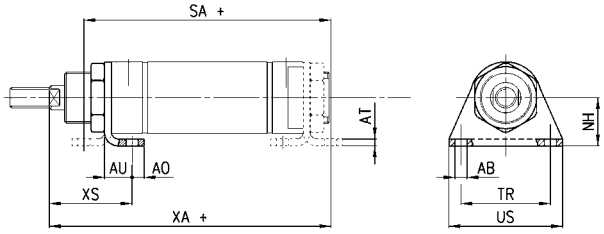
Foot mount Mod. B

Material: zinc-plated steel.
Supplied with:
1x foot
1x front end cap nut mod. V



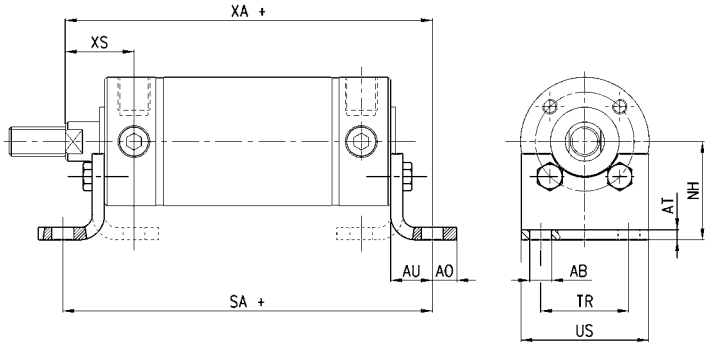
+ = add the stroke

DIMENSIONS

Mod.	Ø	⌀AB	AO	AT	AU	NH	SA+	TR	US	XA+	XS
B-27-20	20	5,5	6	3	13	20	79	32	42	83	27
B-27-25	25	6,6	8	3	12,5	22	78	38	49	82	26
B-27-32	32	6,6	8	4	16	25	95	40	54	102	35
B-27-40	40	7	7	4	16	28	99	52	66	107	36

Foot mount Mod. B

Material: zinc-plated steel.
Supplied with:
2x feet
4x screws



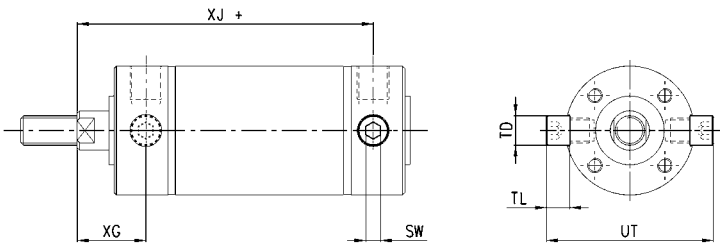
+ = add the stroke

DIMENSIONS

Mod.	Ø	⌀AB	AO	AT	AU	NH	SA+	TR	US	XA+	XS
B-27-50	50	9	10	4	17	40	118	36	52	114	26
B-27-63	63	9	10	5	19	47	124	45	61	118	27

Threaded trunnion pin Mod. T

Material: stainless steel.
Supplied with:
2x pins



+ = add the stroke

DIMENSIONS

Mod.	Ø	SWSW	⌀TD^{h9}	TL	UT	XG	XJ+
T-27-50	50	6	12	9,5	68	26	84
T-27-63	63	6	14	11	84	26	86

The company reserves the right to vary models and dimensions without notice.
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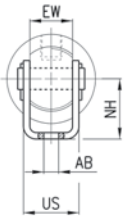
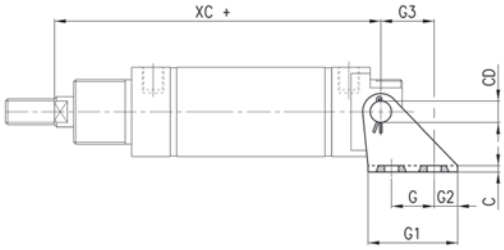
Rear trunnion bracket Mod. I

Material: zinc-plated steel.
Supplied with:
1x female hinge
1x pin
2x Seeger





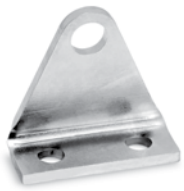
+ = add the stroke

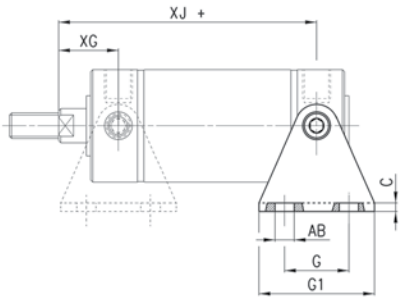
DIMENSIONS

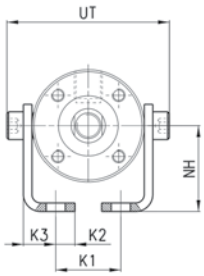
Mod.	Ø	G	G1	G2	G3	C	XC+	⌀AB	US	NH	⌀CD	EW
I-27-20	20	15	30	8	18,5	1,5	77	5,5	15	20	6	12
I-27-25	25	15	33	9	20	2	78,5	6,6	18	22	8	14
I-27-32	32	15	35	10	20	2	93	6,6	20,5	25	8	16
I-27-40	40	20	42	11	25	3	96	7	26	28	10	20

Rear trunnion bracket Mod. I

Material: zinc-plated steel.
Supplied with:
2x pins
2x feet







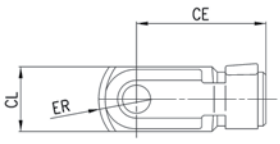
+ = add the stroke

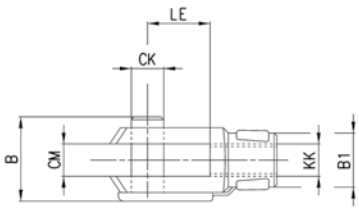
DIMENSIONS

Mod.	Ø	G	G1	C	XJ+	XG	⌀AB	K1	K1	K2	K3	NH	UT
I-27-50	50	30	54	4	84	26	9	9	30,5	9	15	40	68
I-27-63	63	40	64	5	86	26	9	9	40,5	9	17,5	47	84

Rod fork end Mod.G

ISO 8140
Material: zinc-plated steel.





DIMENSIONS

Mod.	Ø	⌀CK	LE	CM	CL	ER	CE	KK	B	⌀B1
G-20	20	8	16	8	16	10	32	M8x1,25	22	14
G-25-32	25-32	10	20	10	20	12	40	M10X1,25	26	18
G-40	40-50	12	24	12	24	14	48	M12X1,25	32	20
G-50-63	63	16	32	16	32	19	64	M16X1,5	40	26

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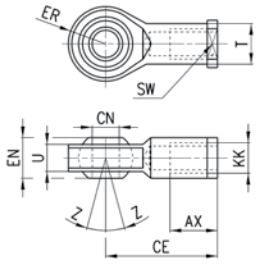
Swivel ball joint Mod. GA

ISO 8139
Material: zinc-plated steel.

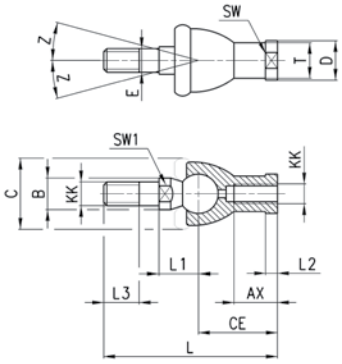


DIMENSIONS

Mod.	Ø	⌀CN(H7)	U	EN	ER	AX	CE	KK	⌀T	Z	SW
GA-20	20	8	9	12	12	16	36	M8x1,25	12,5	6,5	14
GA-32	25-32	10	10,5	14	14	20	43	M10X1,25	15	6,5	17
GA-40	40-50	12	12	16	16	22	50	M12X1,25	17,5	6,5	19
GA-50-63	63	16	15	21	21	28	64	M16X1,5	22	7,5	22

Piston rod socket joint Mod.GY

Material: zama and zinc-plated steel.

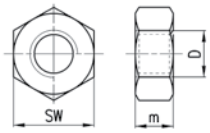


DIMENSIONS

Mod.	Ø	KK	L	CE	L2	AX	E	⌀B	⌀C	T	D	L1	L3	SW1	SW	Z
GY-20	20	M8X1,25	65	32	5	16	8	12	24	12,5	16	16	12	10	14	15
GY-25-32	25-32	M10X1,25	74	35	6,5	18	10	14	28	15	19	19,5	15	11	17	15
GY-40	40-50	M12X1,25	84	40	6,5	20	12	19	32	17,5	22	21	17	17	19	15
GY-50-63	63	M16X1,5	112	50	8	27	16	22	40	22	27	27,5	23	19	22	11

Piston rod lock nut Mod. U

UNI EN ISO 4035
Material: zinc-plated steel.

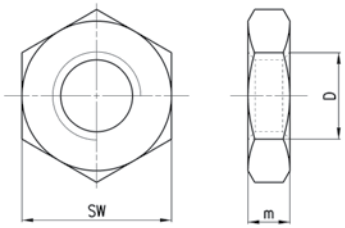


DIMENSIONS

Mod.	Ø	D	m	SW
U-20	20	M8X1,25	5	13
U-25-32	20-32	M10X1,25	6	17
U-40	40-50	M12X1,25	7	19
U-50-63	63	M16X1,5	8	24

Nose nut Mod.V

UNI EN ISO 4035
V-27-25 / V-42-32 not according norm.
Material: zinc-plated steel.



DIMENSIONS

Mod.	Ø	D	m	SW
V-12-16	20	M16X1,5	6	24
V-27-25	25	M18X1,5	5	24
V-20-25	32	M22X1,5	10	32
V-42-32	40	M30x1,5	8	-

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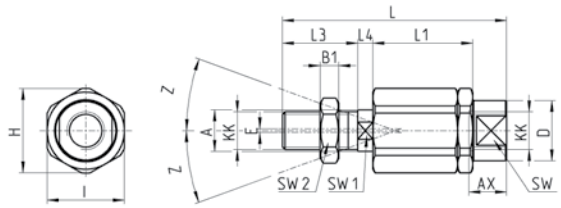
Self aligning rod Mod. GK

New

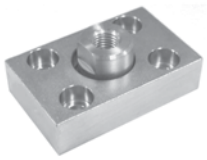


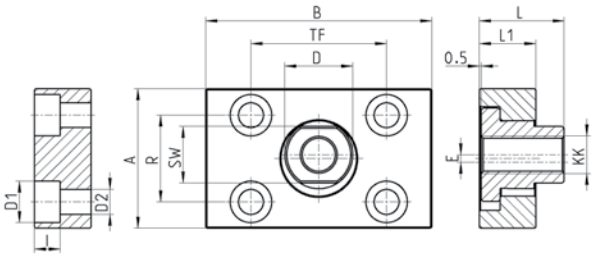
DIMENSIONS

Mod.	Ø	KK	L	L1	L3	L4	Ø A	Ø D	H	I	SW	SW1	SW2	B1	AX	Z	E
GK-20	20	M8x1,25	57	26	21	5	8	12,5	19	17	11	7	13	4	16	4	2
GK-25-32	25-32	M10x1,25	71,5	35	20	7,5	14	22	32	30	19	12	17	5	22	4	2
GK-40	40	M12x1,25	75,5	35	24	7,5	14	22	32	30	19	12	19	6	22	4	2
GK-50-63	50-63	M16x1,5	104	53	32	10	22	32	45	41	27	20	24	8	30	3	2

Coupling piece Mod. GKF

New





DIMENSIONS

Mod.	Ø	KK	A	B	R	TF	L	L1	I	Ø D	Ø D1	Ø D2	SW	E
GKF-20	20	M8x1,25	30	35	20	25	22,5	10	-	14	5,5	-	13	1,5
GKF-25-32	25-32	M10x1,25	37	60	23	36	22,5	15	6,8	18	11	6,6	15	2
GKF-40	40	M12x1,25	56	60	38	42	22,5	15	9	20	15	9	15	2,5
GKF-50-63	50-63	M16x1,5	80	80	58	58	26,5	15	10,5	25	18	11	22	2,5

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Cylinders Series 42

Single and double-acting magnetic
Ø 32, 40, 50, 63 cushioned

» Perfect alignment
» Different mounting options

**The Series 42 cylinders have been designed without tie rods to assure an extremely clean design.
Stainless steel has been used for the tube and the rod of this cylinder series, while the end cover is made in anodized aluminium. This cylinder series is normally equipped with adjustable end-stroke cushioning Moreover, these cylinders are equipped with a mechanical cushioning in order to make the impact of the piston less noisy as it reaches the end of the stroke.**

GENERAL DATA

Type of construction	compact - flanged
Operation	single-acting or double-acting
Materials	aluminium end - blocks - stainless steel AISI 304 tube - stainless steel AISI 420B rod - other parts see coding
Type of mounting	front flange, rear flange, feet, front and rear trunnion, threaded pins
Strokes min - max	10 - 1000 mm
Operating temperature	0 ÷ 80°C (with dry air 20°C)
Operating pressure	1 ÷ 10 bar (double-acting); 2 ÷ 10 bar (single-acting)
Speed	10 ÷ 1000 mm/sec (NO LOAD)
Fluid	clean air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

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1

MOVEMENT

STANDARD STROKES FOR DOUBLE-ACTING CYLINDERS SERIES 42

✖ = Double acting
■ = Single acting

Ø	25	50	75	80	100	125	150	160	200	250	300	320	400	500
32	✖ ■	✖ ■	✖ ■	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
40	✖ ■	✖ ■	✖ ■	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
50	✖ ■	✖ ■	✖ ■	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
63	✖ ■	✖ ■	✖ ■	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖

CODING EXAMPLE

42	M	2	N	050	A	0200

42	SERIES
M	VERSION M= standard magnetic
2	OPERATION 1 = single-acting (front spring) 2 = double-acting (front and rear cushions) 3 = double-acting (no cushion) 4 = double-acting (rear cushions) 5 = double-acting (front cushion) 6 = double-acting (through-rod with front and rear cushions) 7 = single-acting (through-rod)
N	MATERIALS N = rod stainless steel AISI 420B - tube stainless steel AISI 304 - NBR seals
050	BORE 32 mm 40 mm 50 mm 63 mm
A	TYPE OF DESIGN A = standard (screw with ring V+ lock for nut for rod U)
0200	STROKE (see table)

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CYLINDERS SERIES 42

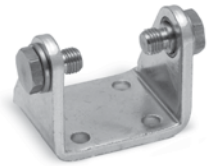
Coupling piece Mod. GKF (New)

Self aligning rod Mod. GK (New)

Piston rod socket joint Mod. GY

Rod fork end Mod. G

Foot mount Mod. P



Trunnion Mod. I

Swivel ball joint Mod. GA

Brack threaded pins Mod. T

Piston rod lock nut Mod. U

All accessories are supplied separately, except for piston rod lock Mod. U

Nose nut Mod. V

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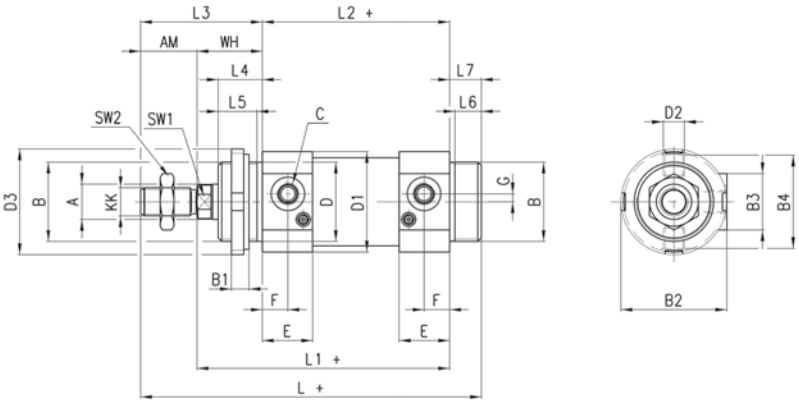
Cylinders Series 42

N.B. : the single-acting cylinders, sizes L, L1 and L2 are increased by 25 mm.

+ = add the stroke



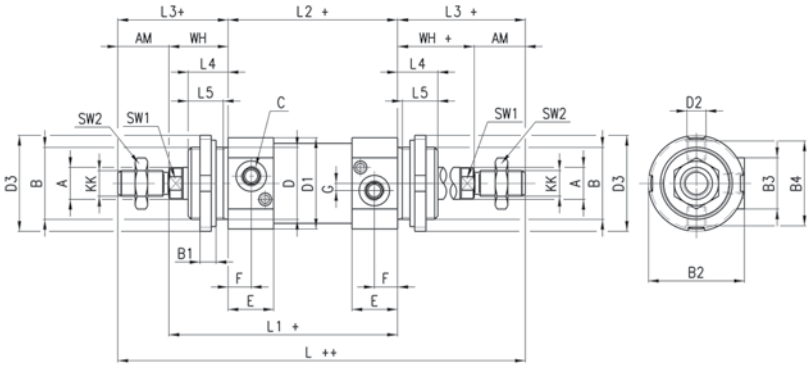
DIMENSIONS

Ø	A	KK	B	B1	B2	B3	B4	C	D^{d11}	D1	D2	D3	E	F	G	SW1	SW2	AM	WH	L +	L1 +	L2 +	L3	L4	L5	L6	L7	Cushion stroke
32	12	M10x1.25	M30x1.5	8	41.5	28	36	G1\8	30	38	M8x1	42	23.5	10.5	5	10	17	22	26	156	120	94	48	18	15	11	14	17
40	16	M12x1.25	M38x1.5	10	50	30	43	G1\4	38	46	M10x1	50	29	15	5	13	19	24	30	175	135	105	54	22	19	13	16	24
50	20	M16x1.5	M45x1.5	10	58.5	32	54	G1\4	40	57	M12x1.5	60	28.5	14.5	4.5	17	24	32	37	193	143	106	69	25	22	15	18	22
63	20	M16x1.5	M45x1.5	10	70.5	46.5	66	G3\8	45	70	M14x1.5	60	35	15	7	17	24	32	37	208	158	121	69	25	22	15	18	27

Cylinders Series 42

Through rod.
N.B. : the single-acting cylinders, sizes L, L1 and L2 are increased by 25 mm.

+ = add the stroke
++ = add the stroke 2 times



DIMENSIONS

Ø	A	KK	B	B1	B2	B3	B4	C	D	D1	D2	D3	E	F	G	SW1	AM	SW2	WH +	L ++	L1 +	L2 +	L3+	L4	L5	Cushion stroke
32	12	M10x1.25	M30x1.5	8	41.5	28	36	G1\8	30	38	M8x1	42	23.5	10.5	5	10	22		26	190	145	119	48	18	15	17
40	16	M12x1.25	M38x1.5	10	50	30	43	G1\4	38	46	M10x1	50	29	15	5	13	24		30	213	160	130	54	22	19	24
50	20	M16x1.5	M45x1.5	10	58.5	32	54	G1\4	45	57	M12x1.5	60	28.5	14.5	4.5	17	32		37	244	168	131	69	25	22	22
63	20	M16x1.5	M45x1.5	10	70.5	46.5	66	G3\8	45	70	M14x1.5	60	35	15	7	17	32		37	259	158	121	69	25	22	22

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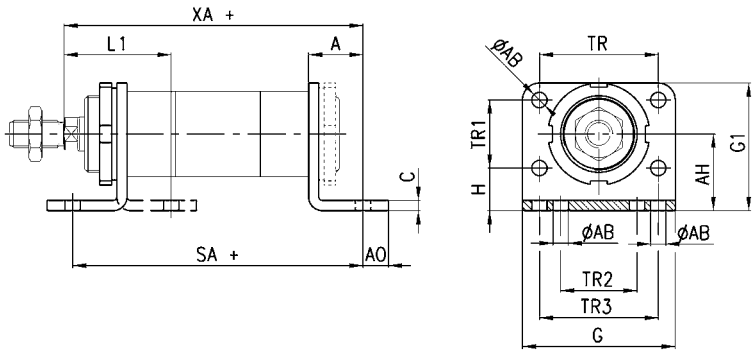
Foot mount Mod. P

Material: zinc-plated steel.

Supplied with:
1x nut
2x single feet

+ = add the stroke



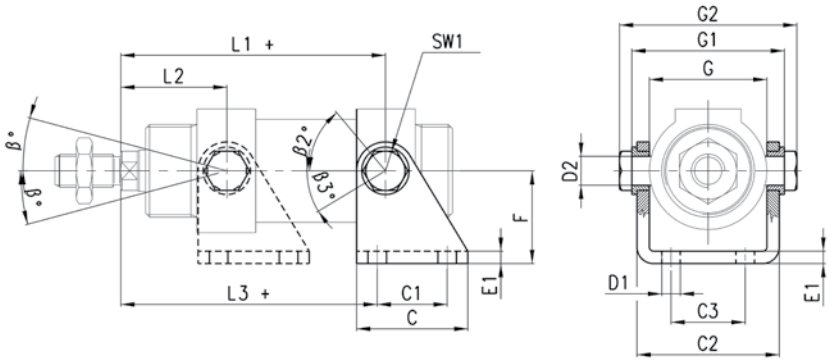
DIMENSIONS

Mod.	Ø	L1	SA +	XA +	A	AB	AO	AH	C	G	G1	TR	TR1	TR2	TR3	H
P-42-32	32	46	142	144	24	7	11	32	4	66	53	52	28	32	52	18
P-42-40	40	53	161	163	28	9	15	36	5	80	61	60	30	36	60	21
P-42-50	50	63	170	175	32	9	15	45	6	90	75	70	40	45	70	25
P-42-63	63	63	185	190	32	9	10	50	6	96	85	76	50	50	76	25

Trunnion Mod. I

Material: zinc-plated steel.

+ = add the stroke



DIMENSIONS

Mod.	Ø	L1 +	L2	L3 +	C	C1	C2	C3	D1	D2	E1	F	SW1	G	G1	G2
I-42-32	32	109,5	36,5	105,5	40	24	46,1	20	7	10	4	35	13	38,1	50,1	58,1
I-42-40	40	120	45	117	50	30	56,1	28	9	12	5	40	17	46,1	60,1	70,1
I-42-50	50	128,5	51,5	124,5	54	34	69,1	36	9	14	6	45	19	57,1	74,1	86,1
I-42-63	63	143	52	142	65	35	82,1	42	9	16	6	50	19	70,1	88,1	100,1

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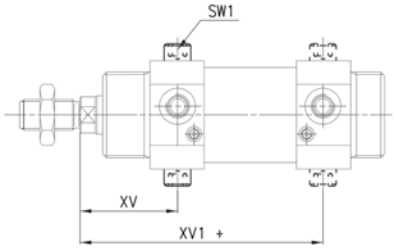
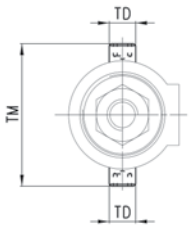
Bracket with threaded pins (a pair) Mod. T

Material: stainless steel.
Supplied with:
2x pins



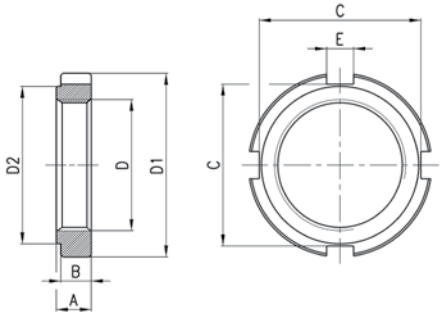


+ = add the stroke

DIMENSIONS						
Mod.	Ø	XV	XV1+	TD	TM	SW1
T-42-32	32	36,5	109,5	10	51	5
T-42-40	40	45	120	12	61	6
T-42-50	50	51,5	128,5	14	75	6
T-42-63	63	52	143	16	90	8

Nose nut Mod.V-42

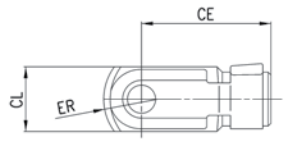
Material: zinc-plated steel

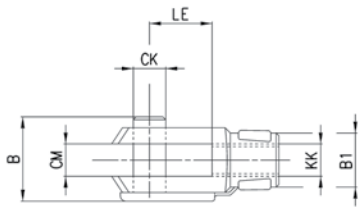


DIMENSIONS								
Mod.	Ø	D	D1	D2	A	B	C	E
V-42-32	32	M30X1,5	42	36	8	7	37	6,2
V-42-40	40	M38x1,5	50	48	10	9	44	7,2
V-42-50-63	50-63	M45x1,5	60	56	10	9	53	7,2

Rod fork end Mod.G

ISO 8140.
Material: stainless steel.





DIMENSIONS										
Mod.	Ø	⌀CK	LE	CM	CL	ER	CE	KK	B	B1
G-25-32	32	10	20	10	20	12	40	M10X1,25	26	18
G-40	40	12	24	12	24	14	48	M12X1,25	32	20
G-50-63	50-63	16	32	16	32	19	64	M16X1,5	40	26

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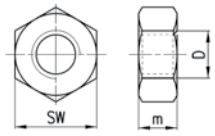
Piston rod lock Mod. U

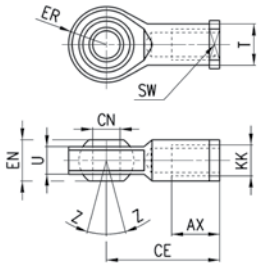


DIMENSIONS

Mod.	Ø	D	m	SW
U-25-32	32	M10X1,25	6	17
U-40	40	M12X1,25	7	19
U-50-63	50-63	M16X1,5	8	24

Swivel ball joint Mod. GA

ISO 8139.
Material: zinc-plated steel.

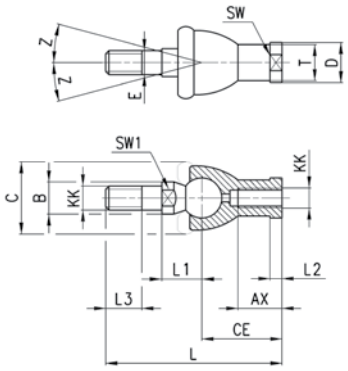


DIMENSIONS

Mod.	Ø	⌀CN	U	EN	ER	AX	CE	KK	T	Z	SW
GA-32	32	10	10,5	14	14	20	43	M10X1,25	15	6,5	17
GA-40	40	12	12	16	16	22	50	M12X1,25	17,5	6,5	19
GA-50-63	50-63	16	15	21	21	28	64	M16X1,5	22	7,5	22

Piston rod socket joint Mod.GY

Material: zama and zinc-plated steel.



DIMENSIONS

Mod.	Ø	KK	L	CE	L2	AX	SW	SW1	L1	L3	⌀T	⌀D	E	⌀B	⌀C	Z
GY-32	32	M10x1,25	74	35	6,5	18	17	11	19,5	15	15	19	10	14	28	15
GY-40	40	M12x1,25	84	40	6,5	20	19	17	22	17	17,5	22	12	19	32	15
GY-50-63	50-63	M16x1,5	112	50	8	27	22	19	27,5	23	22	27	16	22	40	11

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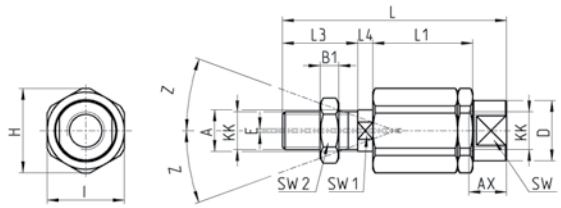
Self aligning rod Mod. GK

New

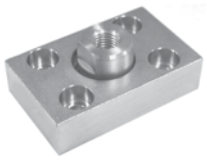


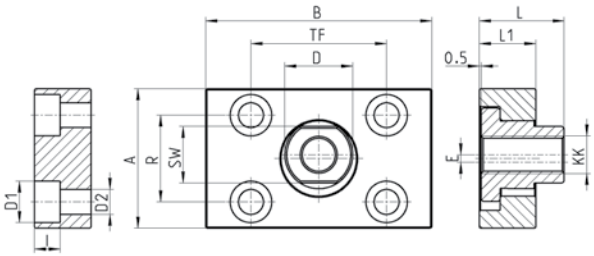
DIMENSIONS

Mod.	Ø	KK	L	L1	L3	L4	Ø A	Ø D	H	I	SW	SW1	SW2	B1	AX	Z	E
GK-25-32	32	M10x1,25	71,5	35	20	7,5	14	22	32	30	19	12	17	5	22	4	2
GK-40	40	M12x1,25	75,5	35	24	7,5	14	22	32	30	19	12	19	6	22	4	2
GK-50-63	50-63	M16x1,5	104	53	32	10	22	32	45	41	27	20	24	8	30	3	2

Coupling piece Mod. GKF

New





DIMENSIONS

Mod.	Ø	KK	A	B	R	TF	L	L1	I	ØD	ØD1	ØD2	SW	E
GKF-25-32	32	M10x1,25	37	60	23	36	22,5	15	6,8	18	11	6,6	15	2
GKF-40	40	M12x1,25	56	60	38	42	22,5	15	9	20	15	9	15	2,5
GKF-50-63	50-63	M16x1,5	80	80	58	58	26,5	15	10,5	25	18	11	22	2,5

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