

ELECTRIC CYLINDER SERIES ELEKTRO ROUND DC



In the ELEKTRO ROUND DC cylinder, the forward movement of the piston rod is obtained via an acme screw and a self-lubricating technopolymer nut. This piston has a guide ring that is calibrated to minimize the backlash with the cylinder liner and reduce vibration during rotation of the screw. The piston also comes with a magnet for magnetic sensors.

The system is driven by a direct current motor available in two versions, 12 and 24VDC. The position of the motor can be controlled using an optional encoder. A resettable optional fuse can be inserted in the cylinder for motor thermal overload protection. The motor used has a planetary gearbox with a 1/13 or 1/25 ratio.

Depending on the configuration (screw pitch and gear ratio), this cylinder can be either irreversible (supporting the load with the motor off) or reversible under load.

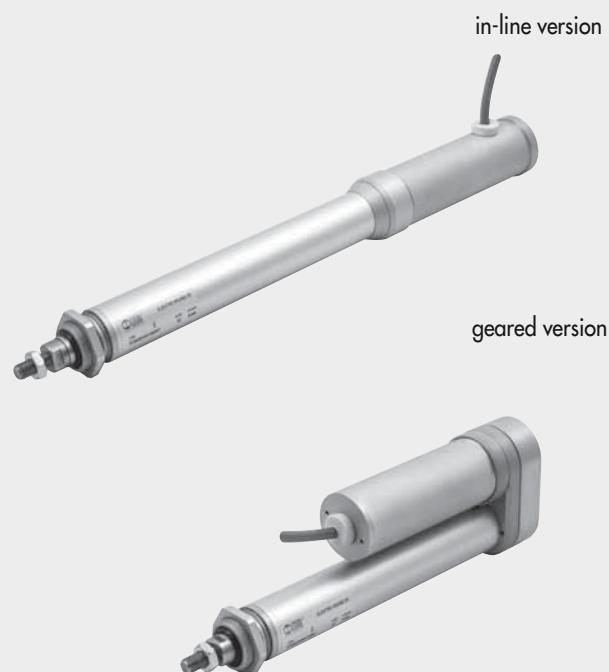
Both versions are supplied without piston rod anti-rotation device, which will be provided by the customer outside the cylinder.

It is available in two versions:

- with an in-line motor, where the motor shaft is connected directly to the screw via a coupling.
- with a geared motor, where the transmission of motion is ensured by three cogwheels with a ratio of 1:1.

This cylinder is designed for use with IP65 protection rating.

The solutions with the acme screw are generally suitable for applications where the number of operations per time unit is reduced; the degree of accuracy is not particularly high due to heating of the screw-lead screw assembly; wear over time does not create inconveniences, no high forces and speeds are required at the same time.



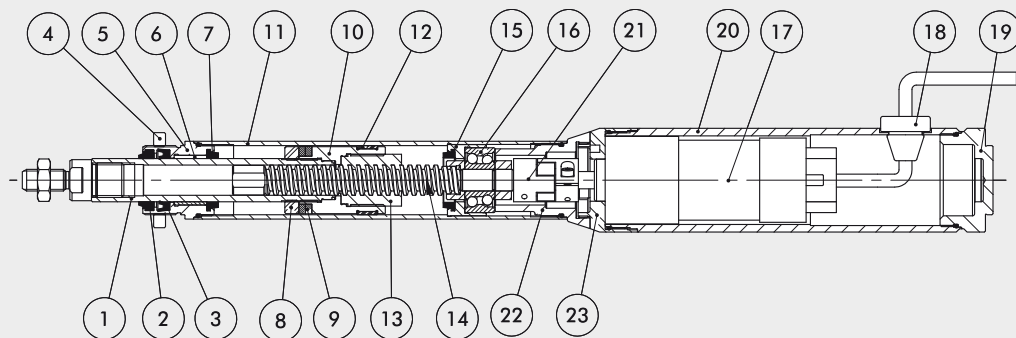
ACTUATORS

ELECTRIC CYLINDER SERIES ELEKTRO ROUND DC

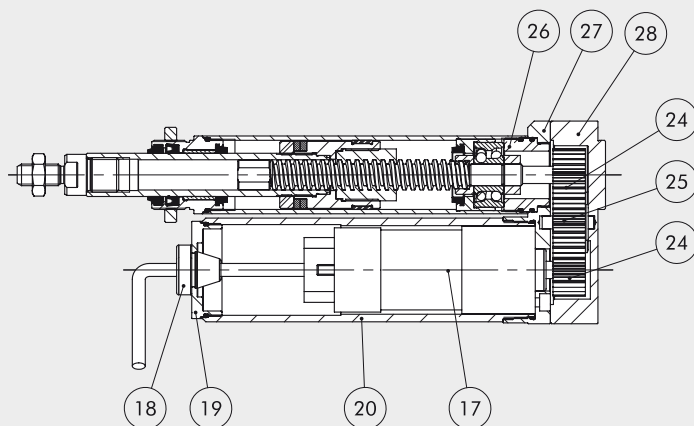
TECHNICAL DATA		Ø 32 pitch 4	Ø 32 pitch 20
Temperature range	°C	from -20 to +60	
Degree of protection		IP65	
Gearing ratio of the planetary gear unit	mm	1/13 or 1/25	
Minimum stroke	mm	25	50
Maximum stroke	mm	1000	
Piston rod diameter	mm	20	
Maximum thrust	N	see graphs on page 1-497	
Maximum speed	mm/s	see graphs on page 1-497	
Maximum load in vertical position and motor powered off (reversibility)	N	irreversible (max recommended 1000)	90 with 1/25 gear ratio 40 with 1/13 gear ratio
Work cycle at 25°C (duty cycle)	%	20 (example: 2 min. ON 8 min. OFF)	
Overall radial oscillation of the piston rod (without load) for 100 mm of stroke	mm	0.4	
Versions		In-line or geared	
Uncontrolled impact at the end of stroke		NOT ALLOWED (it provides an extra-stroke minimum 5 mm)	
Sensor magnet		YES	
Work position		Any	
Motor		Direct current DC	
Supply voltage	VDC	12 or 24	
Input power with MAX torque	W	24	
Input current with MAX torque	A	2 (12VDC) 1 (24VDC)	
Interference suppression		VDR and capacitors	
Direction of rotation		according to polarity	
Encoder (optional)		two channels, three pulses per rev for each channel	
Motor protection		Overload and short-circuiting protection using resettable fuse (optional)	
Power cable (length)	m	2	
Weight at stroke 0, in-line version	g	1247	1224
Weight at stroke 0, geared version	g	1461	1437
Additional weight for each mm stroke	g	1.4	

COMPONENTS

IN-LINE CYLINDER



GEARED CYLINDER

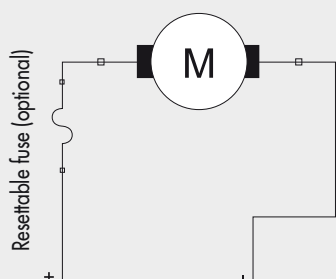


- ① PISTON ROD: ground chrome steel
- ② WIPER RING: polyurethane
- ③ PISTON ROD GASKET: NBR
- ④ FRONT FIXING RING NUT: anodised aluminium
- ⑤ FRONT CYLINDER HEAD: anodised aluminium
- ⑥ GUIDE BUSHING: steel strip with bronze and PTFE insert
- ⑦ BUFFER: polyurethane
- ⑧ MAGNET LOCKING RING NUT: aluminium
- ⑨ MAGNET: plastroferrite
- ⑩ PISTON: aluminium
- ⑪ BARREL: anodized aluminium alloy
- ⑫ GUIDE STRIP: self-lubricated calibrated technopolymer
- ⑬ BALL SCREW: technopolymer
- ⑭ ACME SCREW: hardened steel

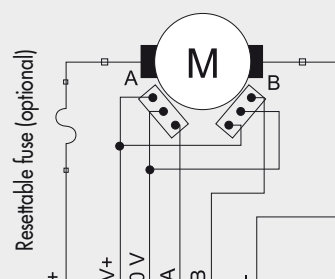
- ⑮ REAR CYLINDER HEAD: anodised aluminium
- ⑯ BEARING: oblique with two ball rings
- ⑰ GEARED MOTOR
- ⑱ CABLE GLAND RUBBER
- ⑲ MOTOR COVER PLUG: anodised aluminium
- ⑳ MOTOR COVER PIPE: anodised aluminium
- ㉑ COUPLING
- ㉒ MOTOR 1 PLATE: anodised aluminium
- ㉓ MOTOR 2 PLATE: anodised aluminium
- ㉔ COGWHEEL: steel
- ㉕ COGWHEEL: technopolymer
- ㉖ THREADED RING: aluminium
- ㉗ TRANSMISSION PLATE: anodised aluminium
- ㉘ COVER: anodised aluminium

CYLINDER CONNECTION AND WIRING DIAGRAM

WITHOUT ENCODER



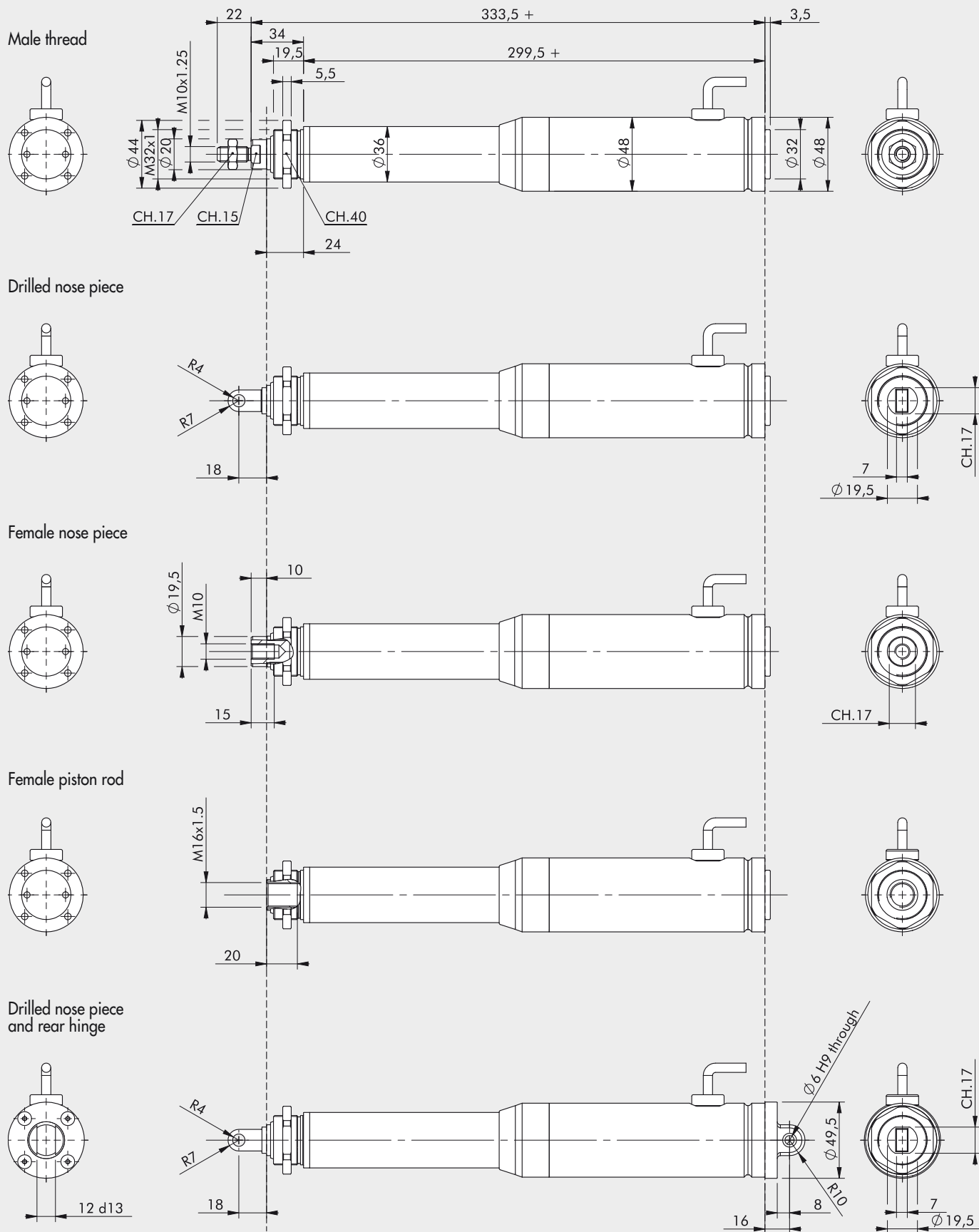
WITH ENCODER



Function	Corresponding wire colour
Motor power supply +	Brown
Motor power supply -	Blue
ENCODER POWER SUPPLY V+ 5-24 VDC	Red
Encoder 0 V supply	Black
Encoder channel A (NPN)	Green
Encoder channel B (NPN)	Yellow
N/A	White
N/A	Gray

DIMENSIONS FOR IN-LINE VERSIONS

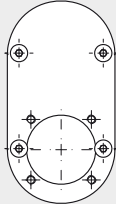
+ = add the stroke



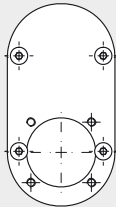
DIMENSIONS FOR GEARED VERSIONS

+ = add the stroke

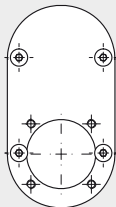
Male thread



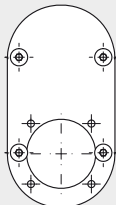
Drilled nose piece



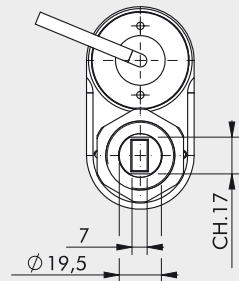
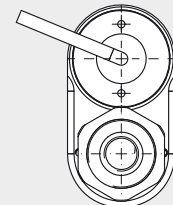
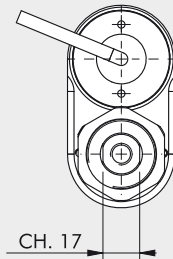
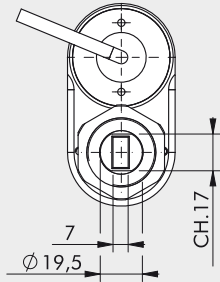
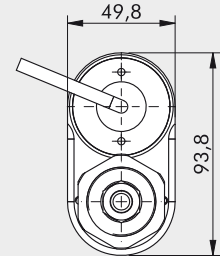
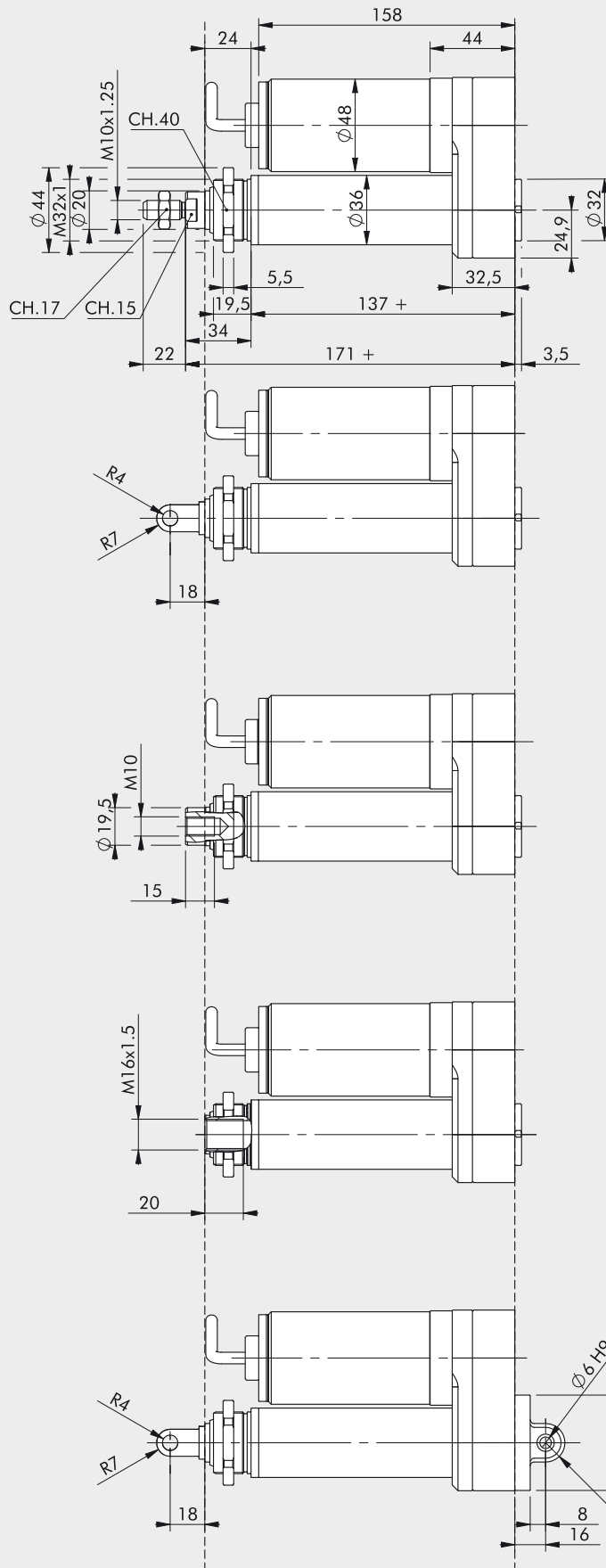
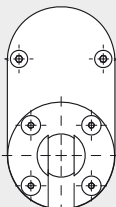
Female nose piece



Female piston rod

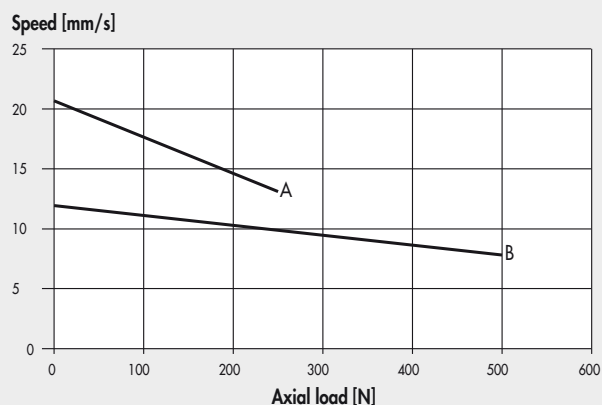


Drilled nose piece and rear hinge



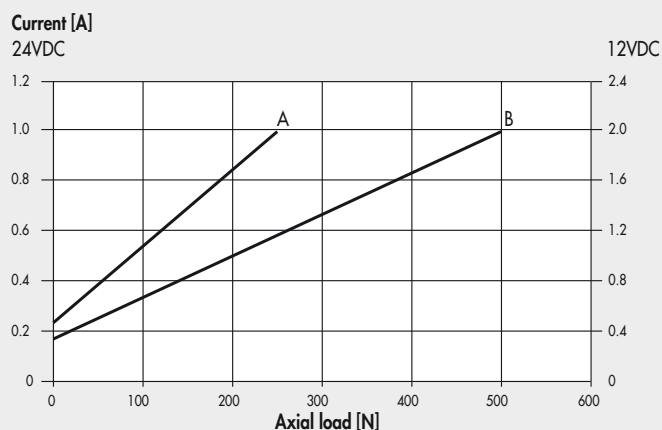
AXIAL LOAD CURVES AS A FUNCTION OF SPEED

Ø32 WITH PITCH 4 WITH DC MOTOR



A = 372032__1_3_0_ (1/13 gear ratio)

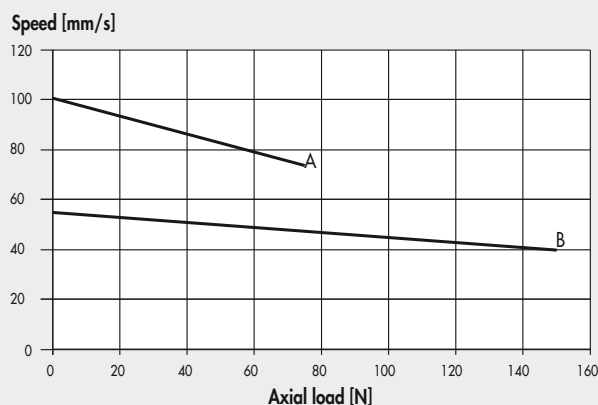
B = 372032__1_3_1_ (1/25 gear ratio)



A = 372032__1_3_0_

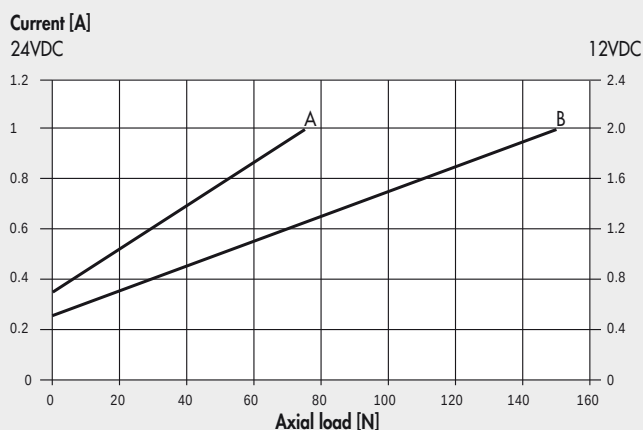
B = 372032__1_3_1_

Ø32 PITCH 20 WITH DC MOTOR



A = 372032__7_3_0_ (1/13 gear ratio)

B = 372032__7_3_1_ (1/25 gear ratio)



A = 372032__7_3_0_

B = 372032__7_3_1_

KEY TO CODES

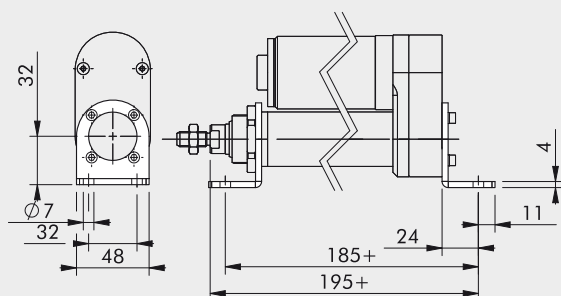
CYL	37 TYPE	2	0	32 BORE	0100 STROKE	1 SCREW PITCH	3 VERSION	3 DRIVE	2 SUPPLY VOLTAGE	0 GEAR RATIO	1 CYLINDER END TYPES
	37 Electric actuators	2 Cylinder Elektro Round DC	0 STD	32		1 Screw pitch 4 7 Screw pitch 20	3 In-line without antirotation IP65 7 Geared without antirotation IP65	3 Motor Direct current	1 12VDC 2 24VDC 3 12VDC + Encoder 4 24VDC + Encoder 5 12VDC + fuse 6 24VDC + fuse 7 12VDC + Encoder + fuse 8 24VDC + Encoder + fuse	0 1/13 1 1/25	1 Thread male 2 Nose piece drilled 3 Nose piece female 4 Piston rod female 5 Nose piece drilled and rear hinge

◆ For the version with a female piston rod, a cap must be provided on the piston rod to ensure IP65 protection.

ACCESSORIES: FIXINGS

FOOT, CODE W095032C001

+ = add the stroke

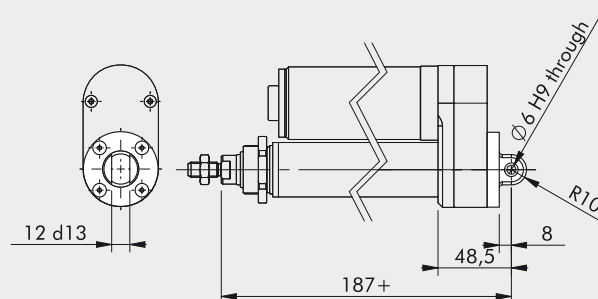


Weight: 111 g

Note: 1 piece per pack complete with 4 screws and 4 roses

ARTICULATED MALE HINGE, CODE W095032C006

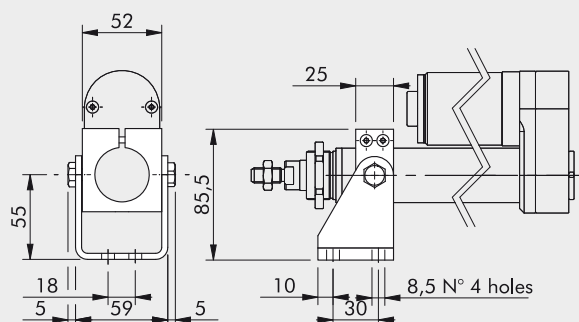
+ = add the stroke



Weight: 41 g

Note: supplied complete with 4 screws and 1 dry bearing

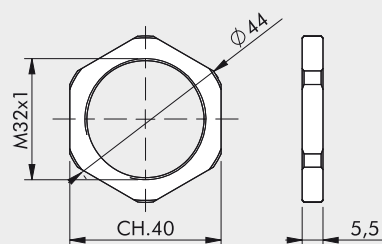
INTERMEDIATE HINGE, CODE W095032C027



Weight: 375 g

Note: supplied complete with 2 screws

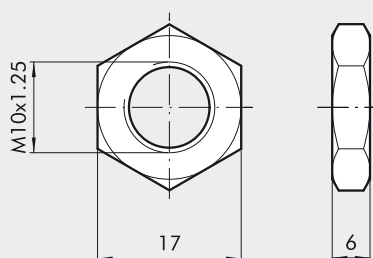
HEAD PIECE RING NUT, CODE W095032C010



Weight: 11 g

Note: individually packed

ROD NUT - MODEL S, CODE 0950322010



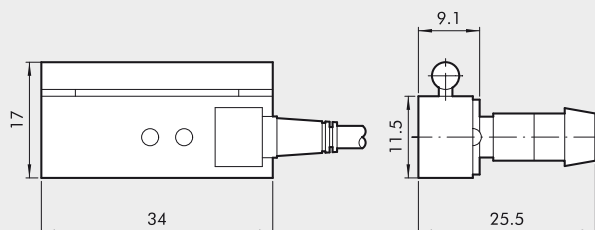
Weight: 6 g

Note: individually packed

NOTES

ACCESSORIES: MAGNETIC SENSORS

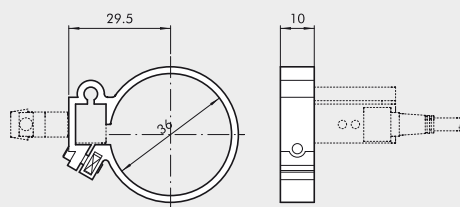
SENSOR SERIES DSM



Code	Description
W0950000201	REED sensor DSM2-C525 HS
W0950000222	EFFECT HALL PNP sensor DSM3-N225
W0950000232	EFFECT NPN sensor DSM3-M225

For technical data see page 1-583

SENSOR CIRCLIP



Code	Bore	Model	Ø	A	B
W0950000132	32	Circlip DXF 36-32	36	29.5	10

NOTES