

ELECTRIC CYLINDER SERIES ELEKTRO ROUND DC



In the ELEKTRO ROUND DC cylinder, the forward movement of the piston rod is obtained via trapezoidal (acme) or lead 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 24VDC direct current motor. The position of the motor can be controlled using an optional encoder. A resettable fuse is 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.

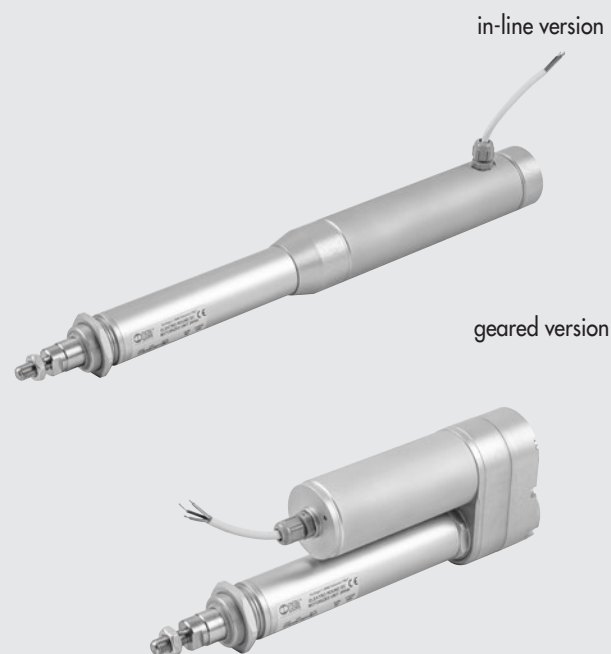
Both versions are supplied without piston rod anti-rotation device, which will be provided by the customer outside the cylinder.

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 belt and pulleys with a ratio of 1:1.

This cylinder is designed for use with IP65 protection rating.

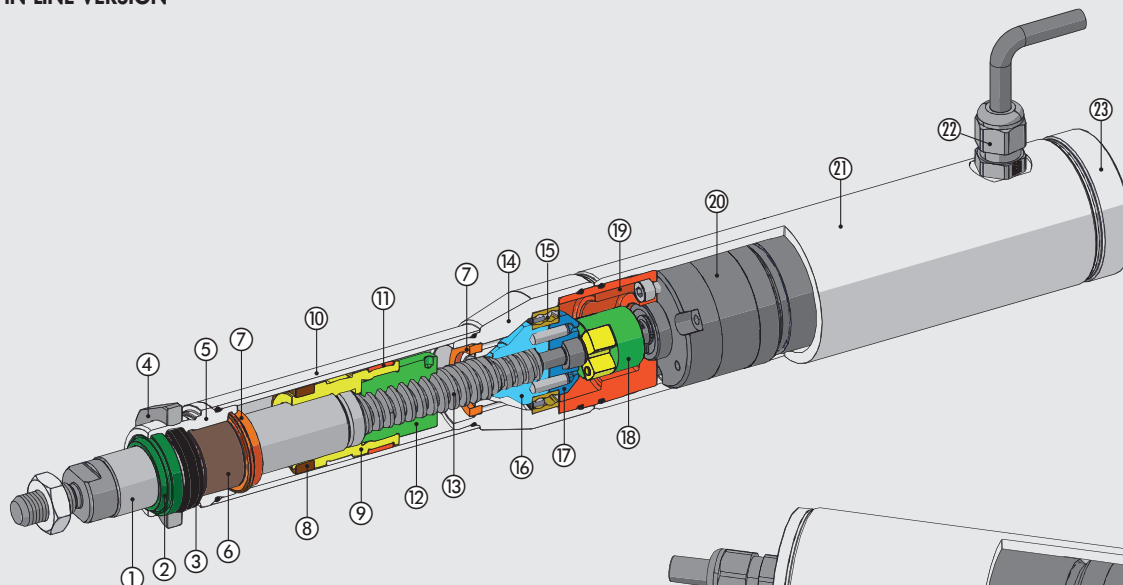
The solutions with the trapezoidal screw (acme) are generally suitable for applications where the number of operations per time unit is reduced; the degree of accuracy is not particularly high due to heating of the screw-lead screw assembly; wear over time does not create inconveniences, no high forces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



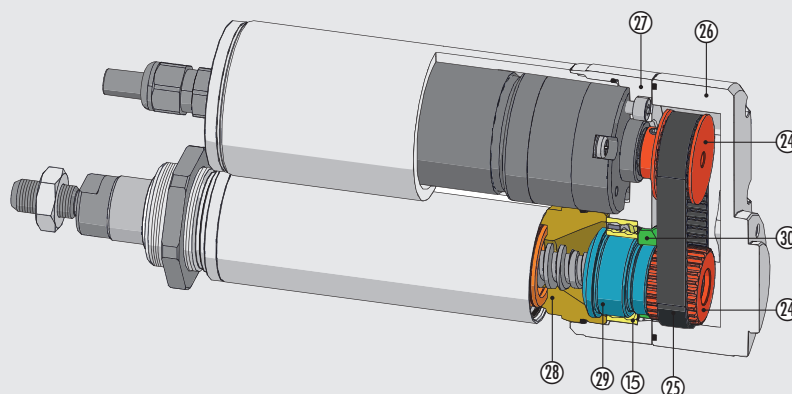
TECHNICAL DATA	Ø 32 pitch 4		Ø 32 pitch 25	
	Temperature range	°C from -20 to +60		
Degree of protection	IP65			
Gearing ratio of the planetary gearbox	1/13 or 1/25			
Minimum stroke	mm 30			
Maximum stroke	mm 1000			
Piston rod diameter	mm 20			
Maximum thrust	N see graphs on page A5.73			
Maximum speed	mm/s see graphs on page A5.73			
Maximum load in vertical position and motor powered off (reversibility)	irreversible (max recommended 1000)		70 with 1/25 gear ratio 20 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 24			
Input power with MAX torque	W 24			
Input current with MAX torque	A 1 (24VDC)			
Interference suppression	VDR and capacitors			
Direction of rotation	according to polarity			
Encoder (optional)	two channels, three pulses/motor rev for each channel, NPN			
Motor protection	Overload and short-circuiting protection using resettable fuse			
Power cable (length)	m 2			
Weight	at stroke 0, in-line version		g 1282	
	at stroke 0, geared version		g 1415	
	additional for each mm stroke		g 2.5	
			g 1256	
			g 1389	

COMPONENTS

IN-LINE VERSION



GEARED VERSION

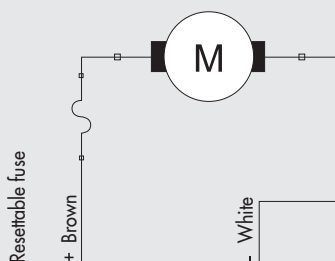


- ① PISTON ROD: ground chrome steel
- ② WIPER RING: polyurethane
- ③ PISTON ROD GASKET: NBR
- ④ FRONT FIXING RING NUT: anodized aluminium
- ⑤ FRONT CYLINDER HEAD: anodized aluminium
- ⑥ GUIDE BUSHING: steel strip with bronze and PTFE insert
- ⑦ BUFFER: polyurethane
- ⑧ MAGNET: plastoferrite
- ⑨ PISTON: aluminium
- ⑩ BARREL: anodized aluminium alloy
- ⑪ GUIDE STRIP: self-lubricated calibrated technopolymer
- ⑫ BALL SCREW: technopolymer
- ⑬ SCREW (ACME): hardened steel
- ⑭ REAR CYLINDER HEAD: anodized aluminium
- ⑮ BEARING: oblique with two ball rings

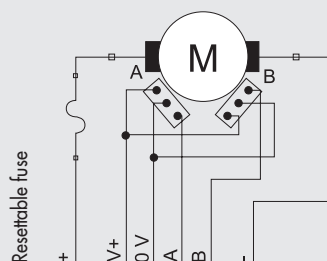
- ⑯ BEARING ADAPTER 1: anodized aluminium
- ⑰ BEARING ADAPTER 2: anodized aluminium
- ⑱ COUPLING
- ⑲ MOTOR PLATE: anodized aluminium
- ⑳ GEARED MOTOR
- ㉑ MOTOR COVER PIPE: anodized aluminium
- ㉒ FAIRLEAD
- ㉓ MOTOR COVER PLUG: anodized aluminium
- ㉔ PULLEY: aluminium
- ㉕ DRIVE TOOTHED BELT
- ㉖ COVER: anodized aluminium
- ㉗ TRANSMISSION PLATE: anodized aluminium
- ㉘ THREADED RING: anodized aluminium
- ㉙ BEARING ADAPTER 3: anodized aluminium
- ㉚ RING NUT

CYLINDER CONNECTION AND WIRING DIAGRAM

WITHOUT ENCODER



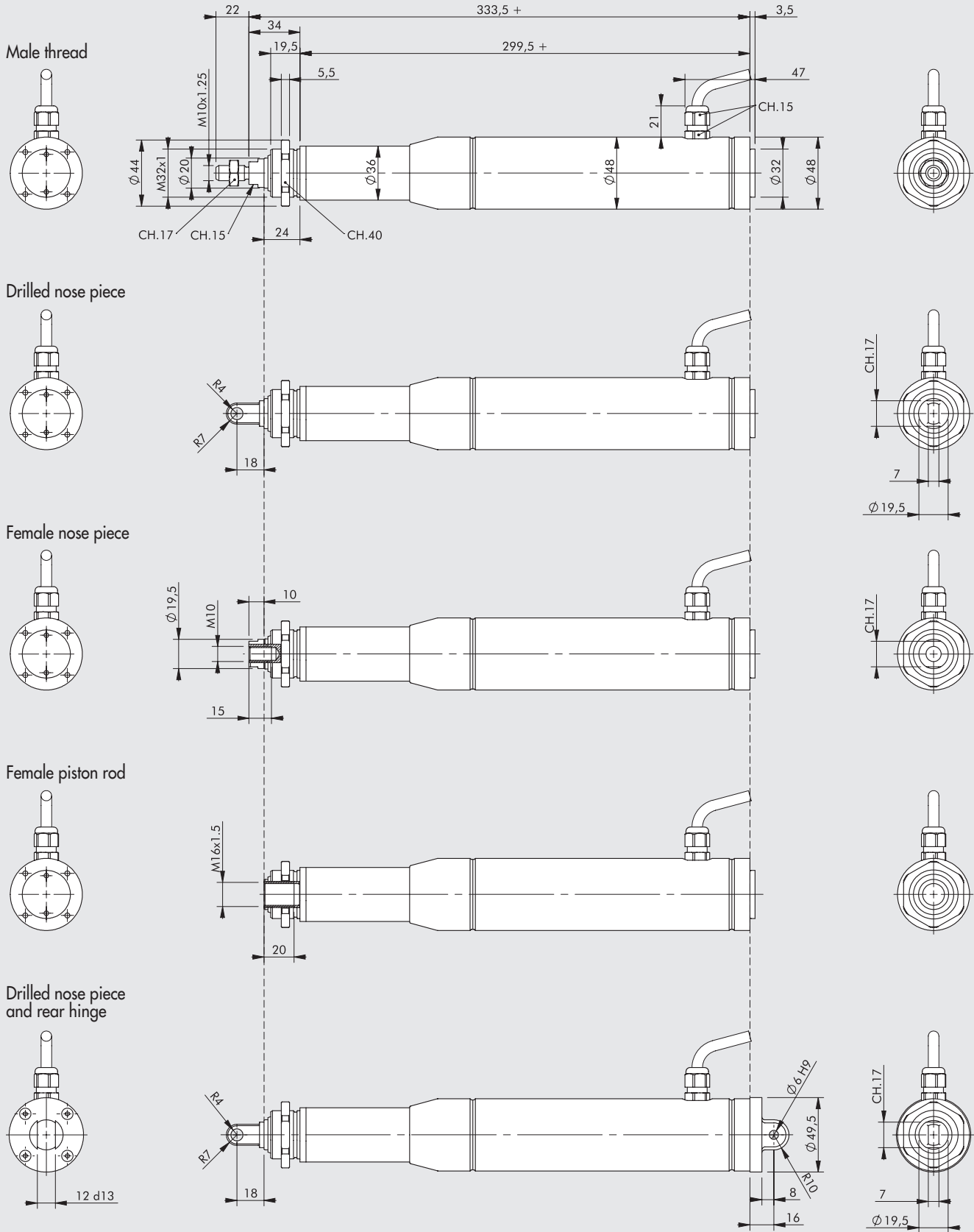
WITH ENCODER



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

DIMENSIONS FOR IN-LINE VERSIONS

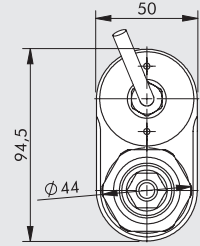
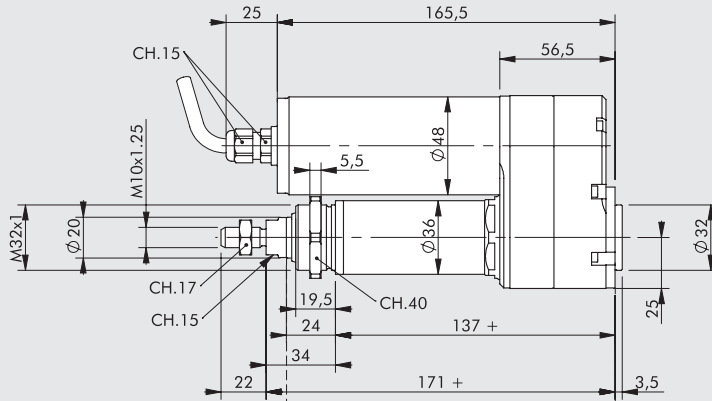
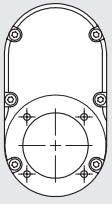
+ = ADD THE STROKE



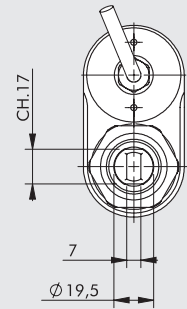
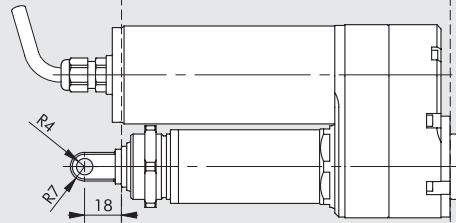
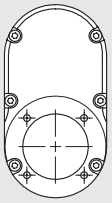
DIMENSIONS FOR GEARED VERSIONS

+ = ADD THE STROKE

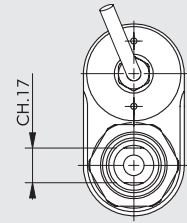
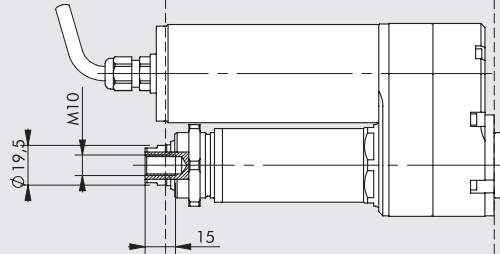
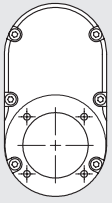
Male thread



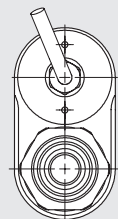
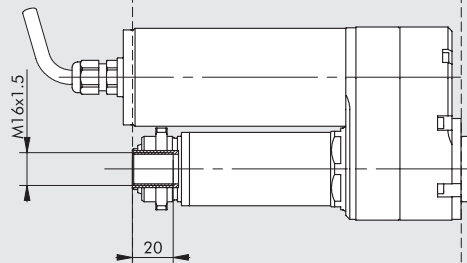
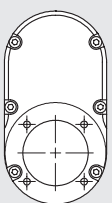
Drilled nose piece



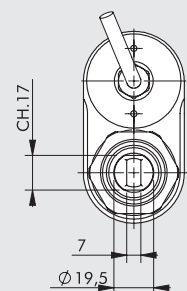
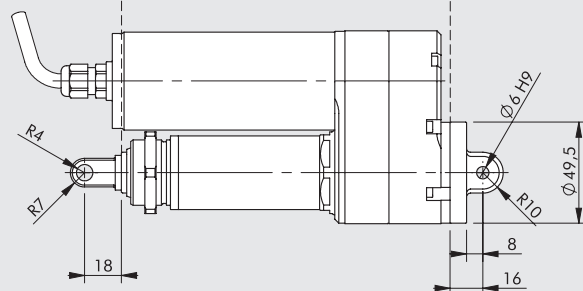
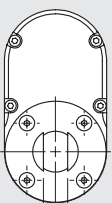
Female nose piece



Female piston rod



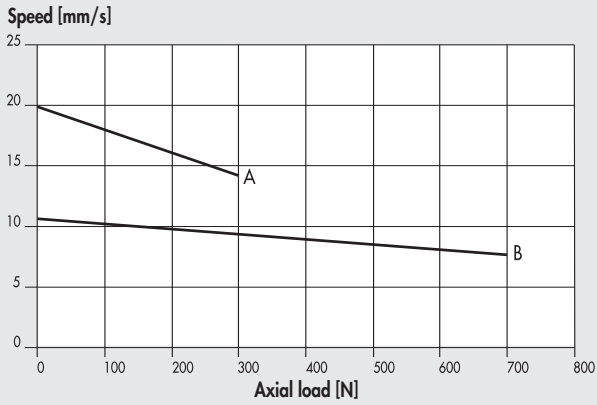
Drilled nose piece and rear hinge



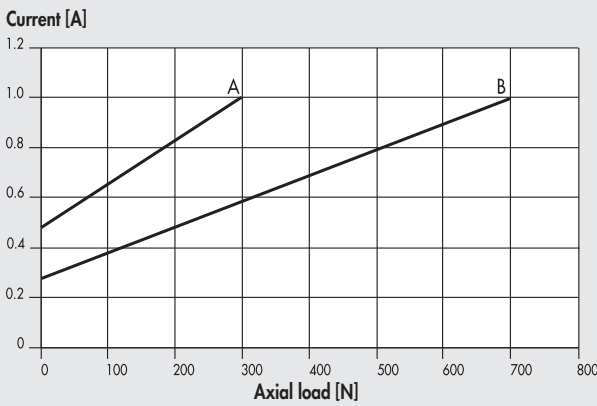
12 d13

AXIAL LOAD CURVES AS A FUNCTION OF SPEED

Ø32 WITH PITCH 4 WITH DC MOTOR

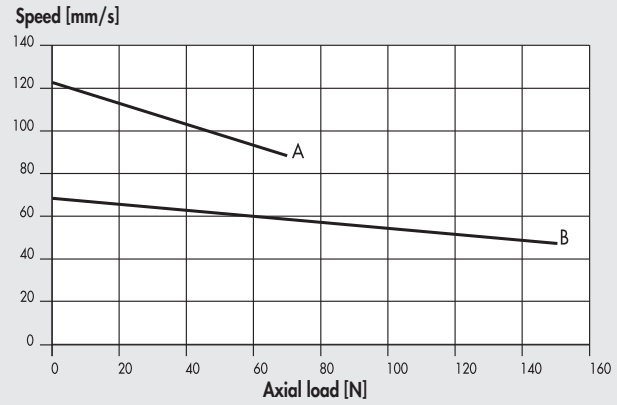


A = 372032__L_3_0_ (1/13 gear ratio) B = 372032__L_3_1_ (1/25 gear ratio)

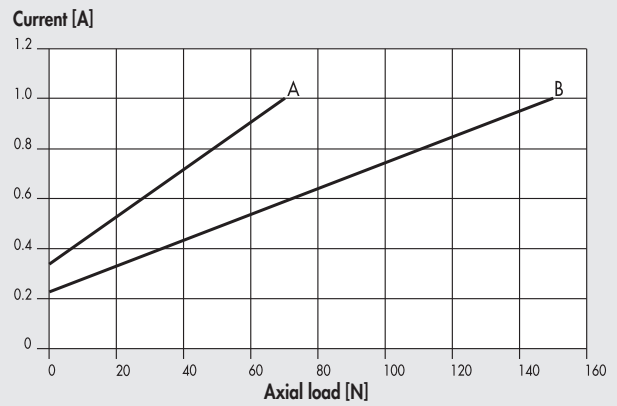


A = 372032__L_3_0_ B = 372032__L_3_1_

Ø32 PITCH 25 WITH DC MOTOR



A = 372032__L_3_0_ (1/13 gear ratio) B = 372032__L_3_1_ (1/25 gear ratio)



A = 372032__L_3_0_ B = 372032__L_3_1_

ACTUATOR-DRIVE COUPLING

ACTUATOR		DRIVE	
Code	Description	Code	Description
372032__3	ELECTRIC CYLINDER SERIES ELEKTRO ROUND DC	37D3112000	E.DIRECT DRIVE FOR DIRECT CURRENT MOTORS

N.B.: The Round DC cylinder needs no drive for "basic" operation.

KEY TO CODES

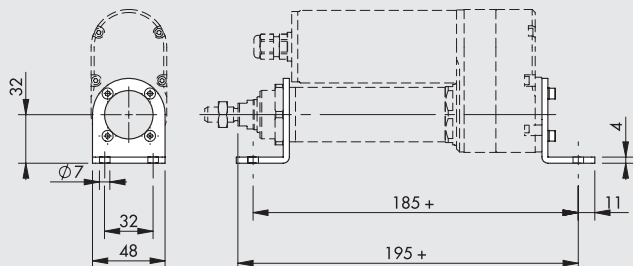
CYL	37	2	0	32	0100	1	3	3	6	0	1
	TYPE			BORE	STROKE	SCREW PITCH	VERSION	DRIVE	SUPPLY VOLTAGE	GEAR RATIO	CYLINDER END TYPES
	37 Electric actuators	2 Cylinder Elektro Round DC	0 STD	32		1 Screw pitch 4 L Screw pitch 25	3 In-line without non-rotating IP65 7 Geared without non-rotating IP65	3 Motor Direct current	6 24VDC + 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

+ = ADD THE STROKE

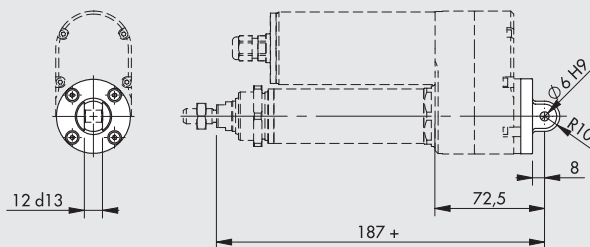


Code W095032C001 Weight [g] 111

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

ARTICULATED MALE HINGE

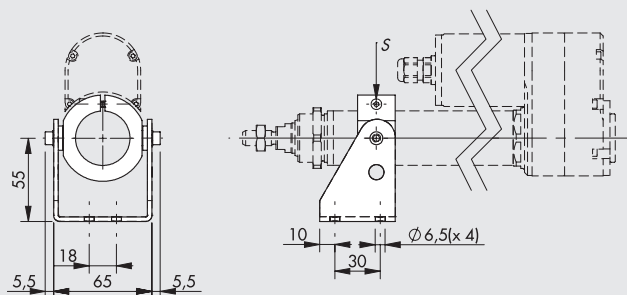
+ = ADD THE STROKE



Code W095032C006 Weight [g] 41

Note: supplied complete with 4 screws and 1 dry bearing

INTERMEDIATE HINGE

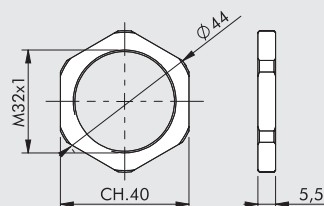


Code W095032C027 Weight [g] 302

Note: supplied complete with 2 screws

IMPORTANT: Screw tightening torque S: 2 Nm max

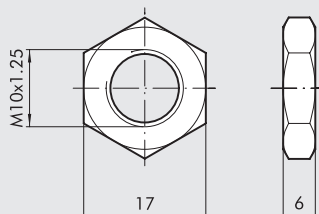
HEAD PIECE RING NUT



Code W095032C010 Weight [g] 11

Note: individually packed

ROD NUT - MODEL S



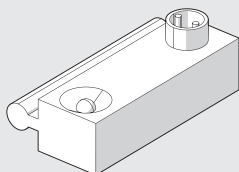
Code 0950322010 Weight [g] 6

Note: individually packed

NOTES

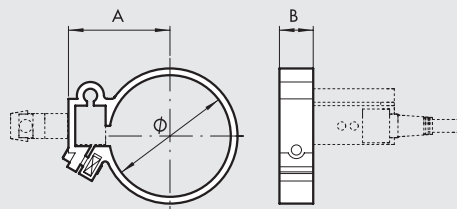
ACCESSORIES: MAGNETIC SENSORS

SENSOR SERIES DSM



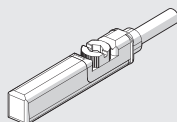
For codes and technical data, see [chapter A6](#).

SENSOR BRACKET DSM



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

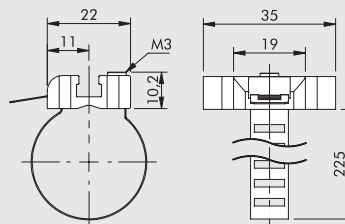
SENSOR, SQUARE TYPE



For codes and technical data, see [chapter A6](#).

Note: Latest generation, secure fixing

SENSOR BRACKET, SQUARE TYPE



Code	Model
W0950001103	Sensor bracket 8 to 63

Note: Individually packed

MATERIAL

Bracket: stainless steel
Sensor holder: zamak

NOTES