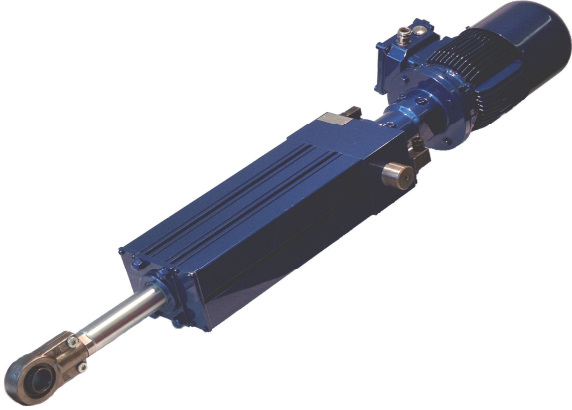
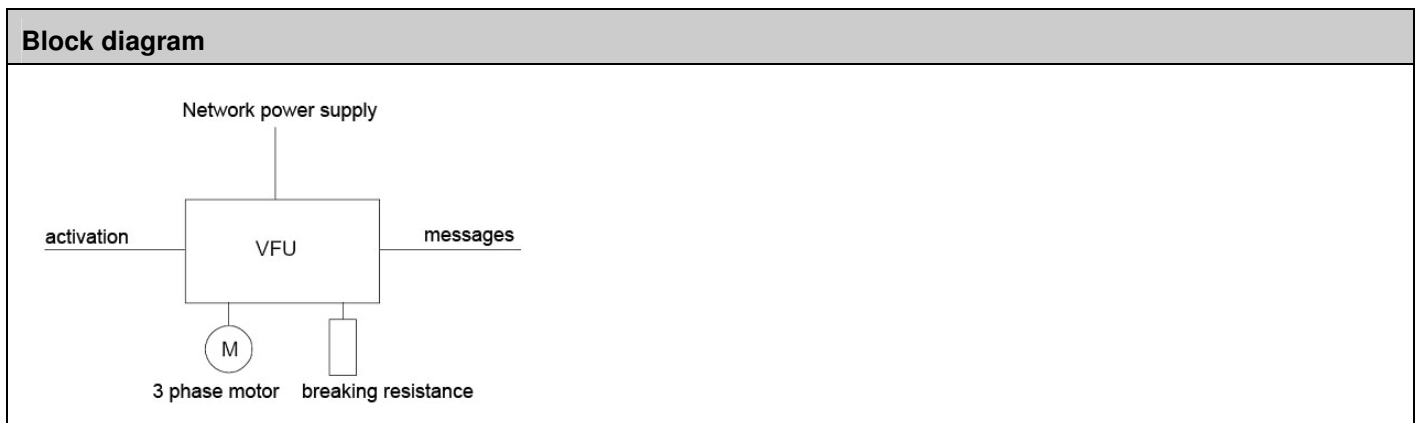


View	Application/functional description
	<p>Function: Electromechanical linear drive</p> <p>Mechanical design: Electric motor with planetary gear in a housing block</p> <p>Connection: Electrical via frequency converter, mechanical trunnion and swivel head</p> <p>Colour/weight: see separate dimension sheets weight: from approx.: 40 ...240 kg (depending on the design)</p> <p>Application: The electric servo cylinder is preferably used for adjusting steering frames. Disadvantages connected with hydraulic systems (oil, leakage, etc.) are avoided. The electro servo cylinder is also suitable for other applications where a load is moved or positioned (adequate dimensioning provided).</p> <p>Function description: The electric servo cylinder is an electromechanical linear drive. It fundamentally consists of the following main components:</p> <ul style="list-style-type: none"> ▪ electric motor (standard: three-phase A.C. asynchronous motor) ▪ spindle converter PGT (planetary gear) with piston rod ▪ housing block with bearing, safety clutch, trunnion ▪ housing made from extruded aluminium, including grease lubrication ▪ end position cushioning (Belleville springs) <p>optional extras :</p> <ul style="list-style-type: none"> ▪ holding brake ▪ adjustable limit switches ▪ position transducers (digital or analogue) ▪ separate fan <p>The electric motor which is activated by a vector-controlled frequency converter (FC) drives the spindle. In the spindle converter, the rotation of the spindle is converted into a linear movement. The speed of the piston rod is proportional to the effective pitch of the PGT planetary gear and the speed of the electric motor. With an analogous input voltage on the vector-controlled frequency converter, the ESZ electric servo cylinder can be continuously controlled with respect to force and direction, like a hydraulic cylinder with servo valve. The safety clutch between the electric motor and the spindle prevents the ESZ electric servo cylinder from being overloaded in any stroke position.</p>



Technical data				
Construction series	10	25	50	100
Maximum force	10 kN	25 kN	50 kN	100 kN
Electric motor (4 pole) 3x400 V, 50 Hz	1.1 kW	2.2 kW	4.0 kW	7.5 kW
Nominal adjusting speed	50 mm/s	50 mm/s	50 mm/s	30 mm/s
Maximum speed	70 mm/s	70 mm/s	50 mm/s	30 mm/s
Nominal stroke (standard strokes)	100 mm, 200 mm, 300 mm, 400 mm, 500 mm			
Ambient temperature	0 °C ... +50 °C (standard)			
Protection type	IP54			
Maintenance interval (as a function of load and temperature)	1000 h ... 5000 h			
Refill grease quantity (each maintenance procedure)	approx. 10 cm ³ ... 20 cm ³ with Mobiltemp SHC32 (from Mobil Oil)			
CE compliant	yes			

Type code									
<u>ESZ</u>	<u>10 -</u>	<u>400</u>	<u>/F</u>	<u>/A</u>	<u>/L</u>	<u>/SC</u>	<u>/D</u>	<u>/11</u>	
									Version
									01...: 1st generation
									11...: 2nd generation (with position-independent lubrication)
									D = Three phase asynchronous motor
									S = Servo motor
									G = Direct current motor with gearing
									Stroke transducer:
									Analogue linear stroke transducer LWH [W]
									Temposonics analogue stroke transducer [T]
									SSI encoder (digital) [SI]
									Profibus-DP (digital) [P]
									CAN-Bus encoder [C]
									Start/Stop encoder [SC]
									L = Separate fan for cooling
									E = Adjustable limit switch, plug connection
									A = External, adjustable limit switch
									F = Holding brake, non-ventable at U = 0V
									FL = Holding brake, ventable at U = 0V
									Nominal stroke in mm (standard):
									100; 200; 300; 400; 500; 600; 700
									(other strokes on request)
									ESZ basic configuration (standard, equipped with):
									• Three phase asynchronous motor with 3 thermal sensors
									• Internal end position dampening
									• Safety coupling
									• Position-independent lubrication (11)
									Installation size: 10
									(Maximum force in kN) 25
									50
									100
									Electro-servo-cylinder, ESZ construction series