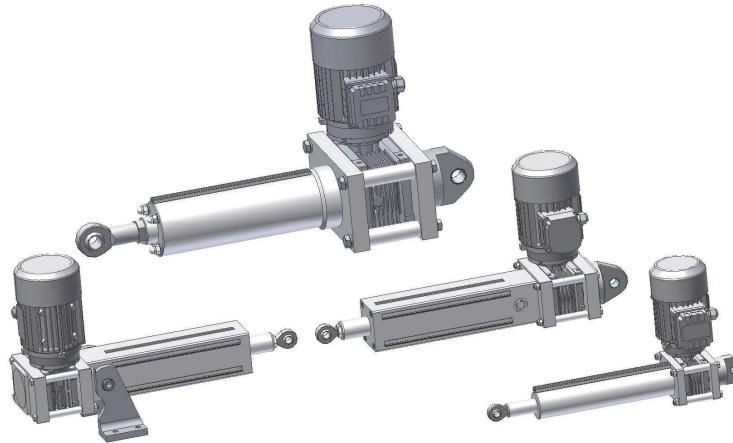


Series S



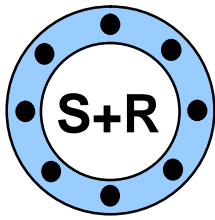
The main feature of the "S" series is the use of a worm gear that allows the mounting of a three-phase motor, DC motor, servo motor or stepping motor.

Two design versions are available. A quadratic aluminium profile is used for the design sizes KV/TV – 20/30 SP, all other design sizes have a round housing.

Different mounting options can be supplied. By default, the round housing design are offered with a rod end bearing on the piston rod and a flanged eye are offered. The types with a quadratic profile tube can be supplied with an eye or a rotary bearing console. Customer specific fixing points are also possible as an alternative.

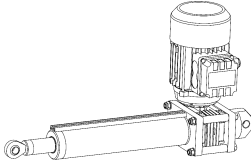
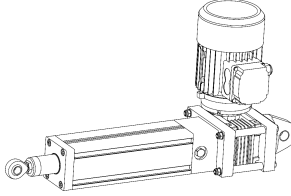
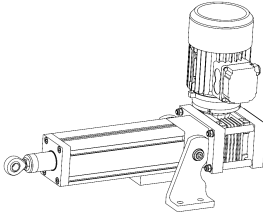
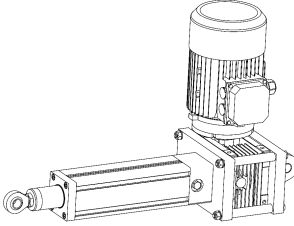
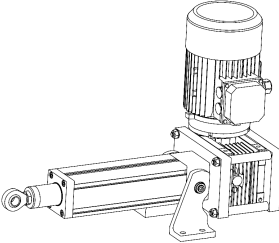
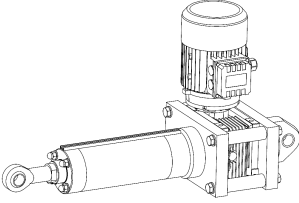
This cylinder has been designed for the difficult operation and ambient conditions in the industry. The lifting cylinders are fully encapsulated and can be mounted in any installation position outdoors as well as in rooms with a high degree of soiling or in areas with potentially explosive atmosphere. The switching is generally carried out using an adjustable limit switch or, upon request, using an overload coupling. The attachment of a sender or potentiometer is also possible as well as the delivery with positioning or synchronizer control. The cylinders are practically maintenance-free.

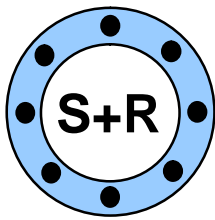
Adjustment force	up to 500 kN
Velocity	up to 500 mm/s
Adjustment path	up to 3,000 mm
Duty cycle	up to 100%
Protection class	IP 65 or higher
Options	Limit switch Overload couplings Sender systems Controls Ex version Stainless steel version



Type overview S Series

Standard product range

			Befestigung: Gelenkauge - Auge	Befestigung: Gelenkauge - Drehlagerfuß
Type designation:	KV-5 SE	TV-5 SE		On request
Spindle version:	Ball screw thread	Trapezoidal thread		
Adjustment force:	Up to 5,000 N	2,500 N to 7,000 N		
Velocity:	11 mm/s to 45 mm/s	6 mm/s to 36 mm/s		
Stroke length:	10 mm to 1,000 mm	10 mm to 1,500 mm		
Duty cycle:	100 %	25 %		
Protection class:	IP 65 or higher	IP 65 or higher		
Type designation:	KV-20 SP	TV-20 SP		
Spindle version:	Ball screw thread	Trapezoidal thread		
Adjustment force:	5,000 N to 15,000 N	4,500 N to 15,000 N		
Velocity:	12 mm/s to 77 mm/s	8 mm/s to 47 mm/s		
Stroke length:	10 mm to 1,500 mm	10 mm to 1,500 mm		
Duty cycle:	100 %	25 %		
Protection class:	IP 65 or higher	IP 65 or higher		
Type designation:	KV-30 SP	TV-30 SP		
Spindle version:	Ball screw thread	Trapezoidal thread		
Adjustment force:	6,000 N to 17,000 N	15,000 N to 25,000 N		
Velocity:	12 mm/s to 120 mm/s	6 mm/s to 38 mm/s		
Stroke length:	10 mm to 1,500 mm	10 mm to 1,500 mm		
Duty cycle:	100 %	25 %		
Protection class:	IP 65 or higher	IP 65 or higher		
Type designation:	KV-50 SE	TV-50 SE		On request
Spindle version:	Ball screw thread	Trapezoidal thread		
Adjustment force:	22,000 N to 50,000 N	25,000 N to 50,000 N		
Velocity:	16 mm/s to 63 mm/s	9 mm/s to 22 mm/s		
Stroke length:	10 mm to 1,500 mm	10 mm to 1,500 mm		
Duty cycle:	100 %	25 %		
Protection class:	IP 65 or higher	IP 65 or higher		



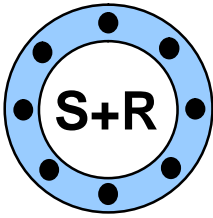
Data sheet S Series

with ball screw thread

Duty cycle 100 %, no self-locking

The selection of other forces and velocities can be supplied.

Type	Spindle	Adjustment force	Velocity	Motor Power	Speed Gear reduction ratio
KV- 5 SE	K 20 x 5	5,000 N	45 mm / s	IEC 63-2 0.37 kW	550 rpm i=5
			23 mm / s	IEC 63-4 0.18 kW	270 rpm i=5
			11mm / s	IEC 63-4 0.12 kW	135 rpm i=10
KV-20 SP	K 25 x 25	5,000 N	77 mm / s	IEC 71-4 0.75 kW	185 rpm i=7.5
	K 25 x 10	10,000 N	46 mm / s	IEC 71-4 0.75 kW	280 rpm i=5
			23 mm / s	IEC 71-4 0.37 kW	140 rpm i=10
	K 25 x 5	15,000 N	23 mm / s	IEC 71-4 0.55 kW	280 rpm i=5
			12 mm / s	IEC 71-4 0.37 kW	140 rpm i=10
KV- 30 SP	K32 x 40	6,000 N	120 mm / s	IEC 90-4 1.1 kW	180 rpm i=7.5
	K 32 x 10	15,000 N	63 mm / s	IEC 80-2 1.5 kW	380 rpm i=7.5
			32 mm / s	IEC 80-4 0.75 kW	190 rpm i=7.5
		25,000 N	31 mm / s	IEC 90-4 1.5 kW	185 rpm i=7.5
	K 32 x 5	17,000 N	16 mm / s	IEC 80-4 0.75 kW	95 rpm i=15
			12 mm / s	IEC 71-4 0.37 kW	140 rpm i=10



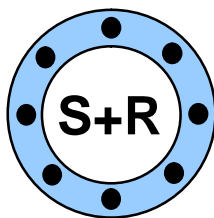
Data sheet S Series

with ball screw thread

Duty cycle 100 %, no self-locking

The selection of other forces and velocities can be supplied.

Type	Spindle	Adjustment force	Velocity	Motor Power	Speed reduction ratio
KV-50 SE	K 50x10	22,000 N	63 mm / s	IEC 90-2 2.2 kW	380 rpm i=7.5
		40,000 N	31 mm / s	IEC 90-4 1.8 kW	185 rpm i=7.5
		50,000 N	23 mm / s	IEC 90-4 1.8 kW	140 rpm i=10
			16 mm / s	IEC 90-4 1.5 kW	95 rpm i=15



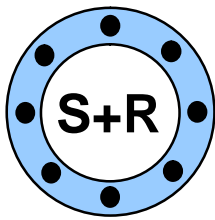
Data sheet S Series

with trapezoidal screw thread

Duty cycle < 40 %

The selection of other forces and velocities can be supplied.

Type	Spindle	Adjustment force	Velocity	Motor Power	Speed gear ratio
TV- 5 SE	Tr 20 x 4	2,500 N	36 mm / s	IEC 63-2 0.37 kW	546 rpm i=5
		3,000 N	18 mm / s	IEC 63-4 0.22 kW	274 rpm i=5
		5000 N	12 mm / s	IEC 63-4 0.22 kW	183 rpm i=7.5
		6,000 N	9 mm / s	IEC 63-4 0.22 kW	137 rpm i=10
		7,000 N	6 mm / s	IEC 63-4 0.18 kW	91 rpm i=15
TV-20 SP	Tr 26 x 5	4,500 N	47 mm / s	IEC 71-2 0.75 kW	568 rpm i=5
		6,500 N	23 mm / s	IEC 71-4 0.55 kW	278 rpm i=5
		9,500 N	15 mm / s	IEC 71-4 0.55 kW	185 rpm i=7.5
		12,000 N	12 mm / s	IEC 71-4 0.55 kW	139 rpm i=10
		15,000 N	8 mm / s	IEC 71-4 0.55 kW	93 rpm i=15



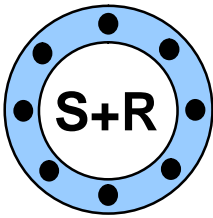
Data sheet S Series

with trapezoidal screw thread

Duty cycle < 40 %

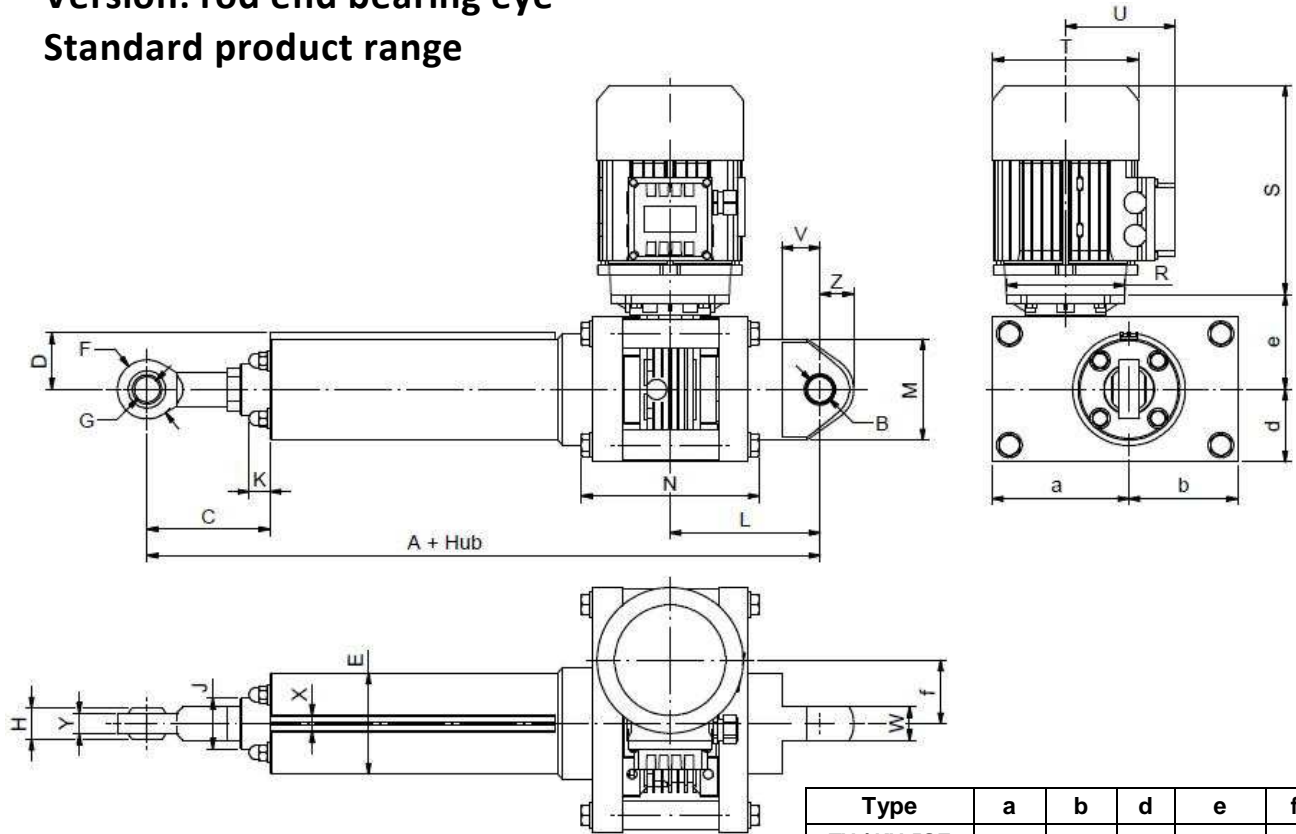
The selection of other forces and velocities can be supplied.

Type	Spindle	Adjustment force	Velocity	Motor Power	Speed gear ratio
TV- 30 SP	Tr 36 x 6	15,000 N	38 mm / s	IEC 90-2 2.2 kW	379 rpm i=7.5
		21,000 N	19 mm / s	IEC 90-4 1.5 kW	187 rpm i=7.5
		25,000 N	14 mm / s	IEC 90-4 1.5 kW	140 rpm i=10
			10 mm / s	IEC 90-4 1.1 kW	92 rpm i=15
			6 mm / s	IEC 80-4 0.75 kW	57 rpm i=20
TV-50 SE	Tr 40 x 7	25,000 N	22 mm / s	IEC 100-4 2.2 kW	188 rpm i=7.5
		30,000 N	16 mm / s	IEC 100-4 2.2 kW	141 rpm i=10
			8 mm / s	IEC 90-4 1.1 kW	69 rpm i=20
	Tr 48 x 8	32,000 N	25 mm / s	IEC 100-4 3.0 kW	190 rpm i=7.5
		42,000 N	19 mm / s	IEC 100-4 3.0 kW	142 rpm i=10
		50,000 N	9 mm / s	IEC 100-4 2.2 kW	70 rpm i=20



Dimensional sheet S Series

Version: rod end bearing eye
 Standard product range



Type	a	b	d	e	f
TV / KV-5SE	72	55	40	55	30
TV / KV-20SP	90	70	50	70	40
TV / KV-30SP	134	98	72	109	63
TV / KV-50SE	166	129	89	126.5	75

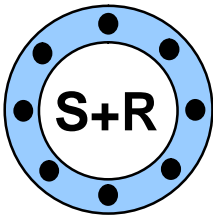
Retracted installation dimension: A + Stroke

Extracted installation dimension: A + 2xStroke, C + Stroke

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	V	W	X	Y	Z
TV-5SE	319	Ø14	87	38	Ø60	36	Ø14	19	Ø30	/	91	Ø60	116	20	20	20	13.5	20
KV-5SE	354	Ø14	87	38	Ø60	36	Ø14	19	Ø30	/	91	Ø60	116	20	20	20	13.5	20
TV-20SP	430	Ø20	94	/	□90	42	Ø16	21	Ø40	/	113	Ø90	150	30	25	/	15	15
KV-20SP	480	Ø20	78	/	□90	42	Ø16	21	Ø40	/	113	Ø90	150	30	25	/	15	15
TV-30SP	493	Ø20	113	/	□90	50	Ø20	25	Ø50	/	130	Ø90	190	30	25	/	18	15
KV-30SP	542	Ø20	86	/	□90	50	Ø20	25	Ø50	/	130	Ø90	190	30	25	/	18	15
TV-50SE	695	Ø30	135	68	Ø120	70	Ø30	37	Ø60	25	177	Ø120	210	45	40	20	25	40
KV-50SE	761	Ø30	135	68	Ø120	70	Ø30	37	Ø60	25	177	Ø120	210	45	40	20	25	40

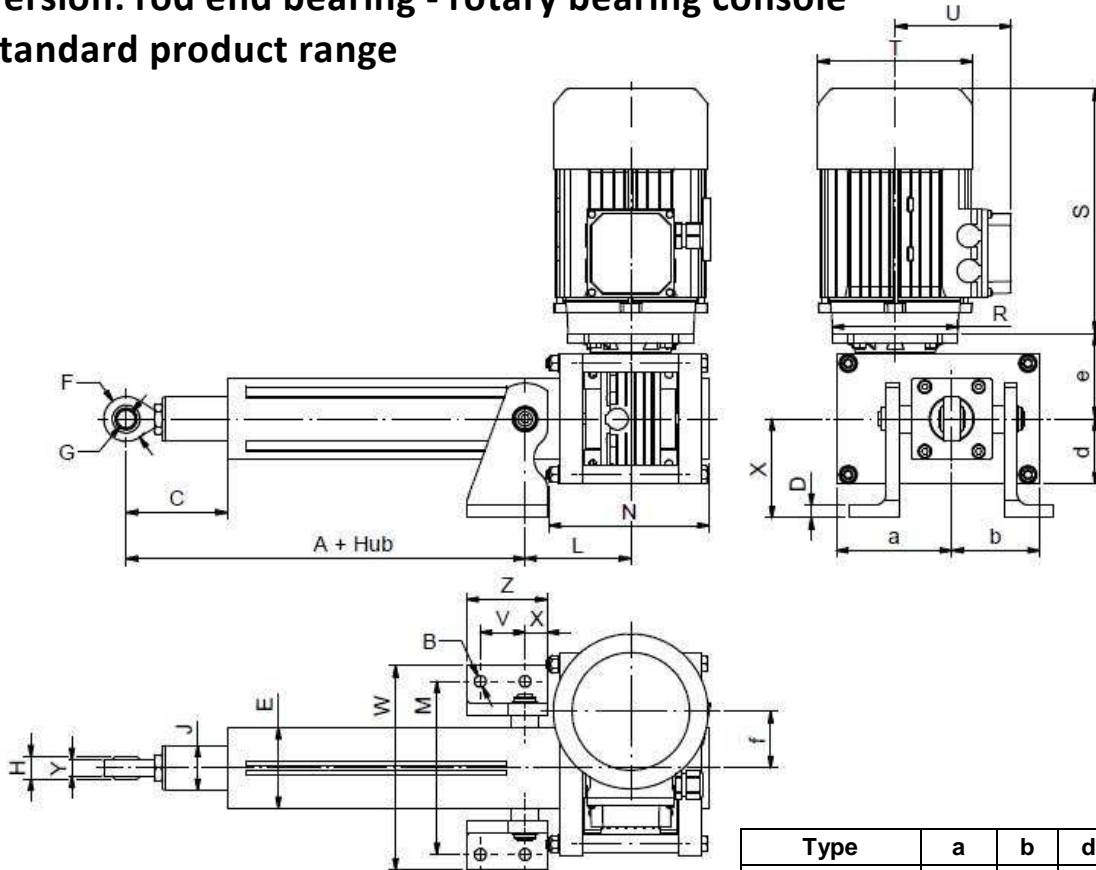
Motor	S	T	U	R
IEC 63	188	Ø121	104	Ø90
IEC63 Brake	246			
IEC 71	209	Ø139	112	Ø105
IEC 71 Brake	273			
IEC 80	232	Ø158	122	Ø120
IEC 80 Brake	304			

Motor	S	T	U	R
IEC 90	273	Ø173	130	Ø140
IEC 90 Brake	350			
IEC 100	308	Ø191	139	Ø160
IEC 100 Brake	390			



Dimensional sheet S Series

Version: rod end bearing - rotary bearing console
Standard product range



Type	a	b	d	e	f
TV / KV-20SP	90	70	50	70	40
TV / KV-30SP	134	98	72	109	63

Retracted installation dimension: A + Stroke

Extracted installation dimension: A + 2xStroke, C + Stroke

Type	A	B	C	D	E	F	G	H	J	L	M	N	V	W	X	Y	Z
TV-20SP	215	Ø13	94	14	□90	42	Ø16	21	Ø40	101	193	150	50	228	25	15	90
KV-20SP	265	Ø13	78	14	□90	42	Ø16	21	Ø40	101	193	150	50	228	25	15	90
TV-30SP	245	Ø13	113	14	□90	50	Ø20	25	Ø50	117	193	190	50	228	25	18	90
KV-30SP	294	Ø13	86	14	□90	50	Ø20	25	Ø50	117	193	190	50	228	25	18	90

Motor	S	T	U	R
IEC 63	188	Ø121	104	Ø90
IEC63 Brake	246			
IEC 71	209	Ø139	112	Ø105
IEC 71 Brake	273			
IEC 80	232	Ø158	122	Ø120
IEC 80 Brake	304			

Motor	S	T	U	R
IEC 90	273	Ø173	130	Ø140
IEC 90 Brake	350			
IEC 100	308	Ø191	139	Ø160
IEC 100 Brake	390			