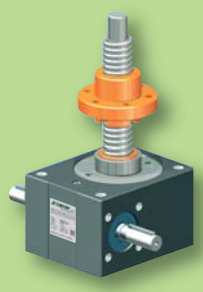
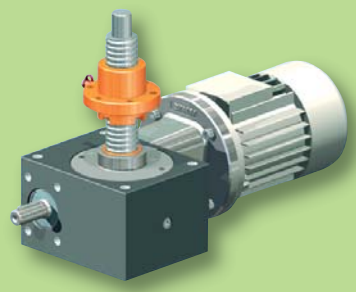
ZIMM Austria
Screw Jack Systems ®

Screw Jacks
GSZ-Series
2.5 - 100 kN



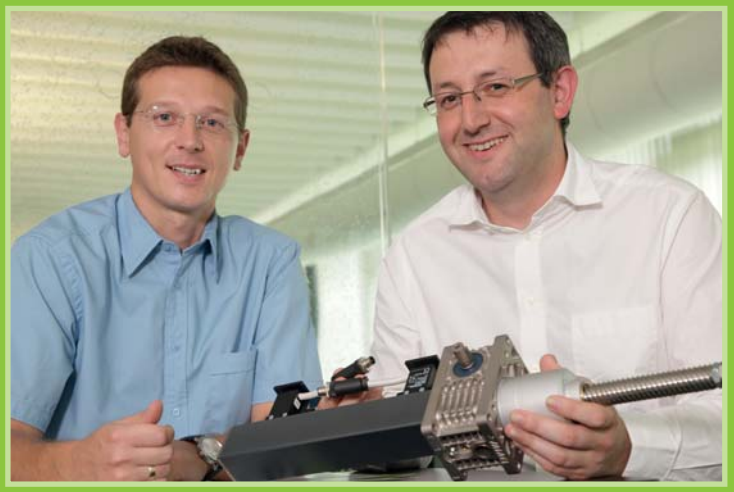


ZIMM – Your Partner for Screw Jack Systems and Transmission Parts

- More than 30 years experience in drive technology
- Internationally active in more than 35 countries world-wide
- Competent consulting and service by backup office and on-site field staff
- Innovative due to continuous new and further development of our product range
- Superior product quality and excellent price-performance ratio
- Short delivery times due to intelligent logistics and warehousing

Renowned companies trust in ZIMM.
Rely on ZIMM – your competent partner in drive technology.

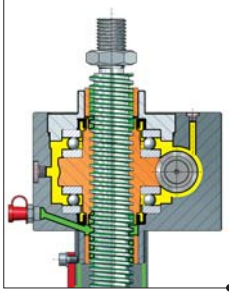
Our team can always help you – we look forward to your inquiries and projects.
Benefit from our experience!



Right: Peter Gridling, Screw Jack Sales Manager
Left: Martin Gfall, Transmission Part Sales Manger

Sizes:
2.5 - 100 kN

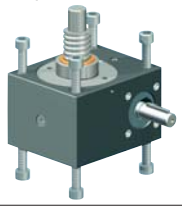
Fluid grease in gear-box enables high-duty applications



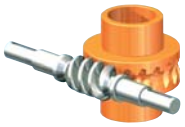
Stainless spindle optional

Corrosion protection

Fixing top or bottom

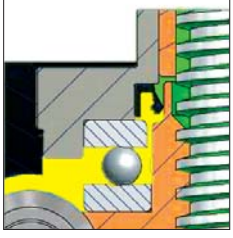


High performance: hardened and ground worm shaft

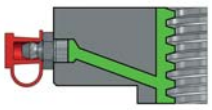


Plane surface, easy to clean

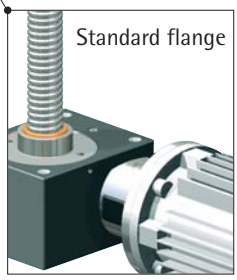
Gearbox sealed



Spindle lubrication



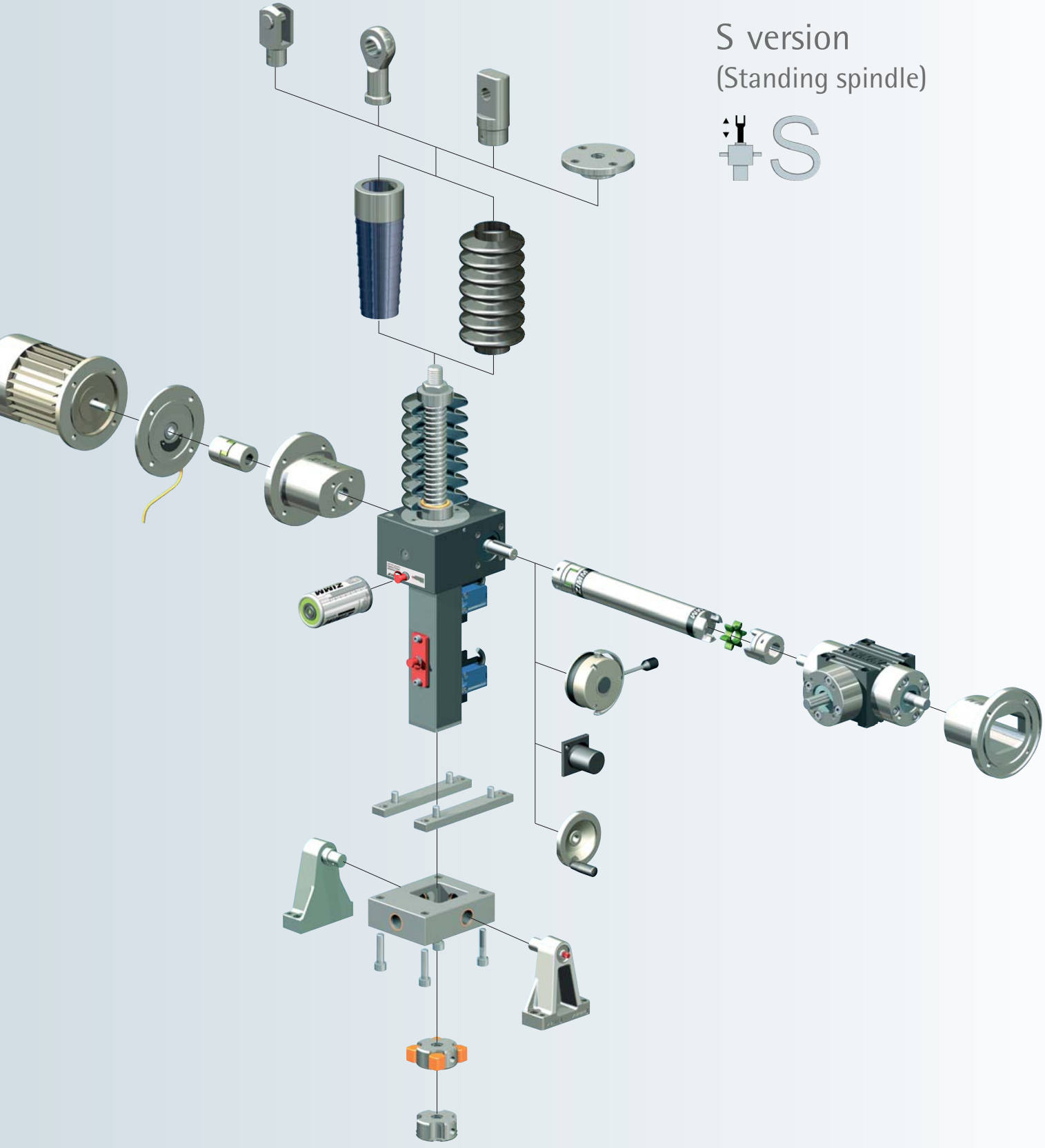
Standard flange



Patents pending for or registered for a range of functions and components!

S version
(Standing spindle)

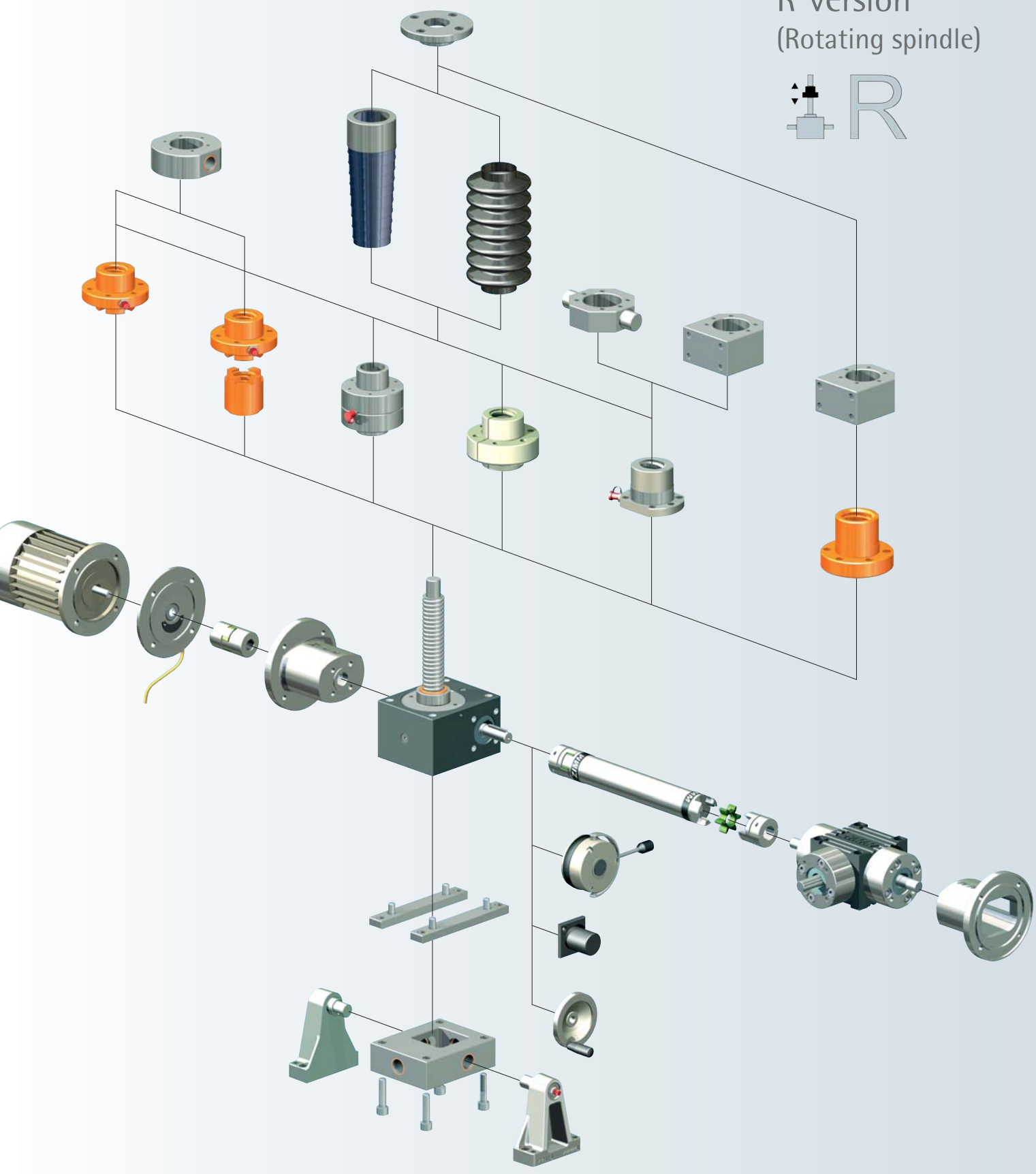
S



Patents pending for or registered for a range of functions and components!

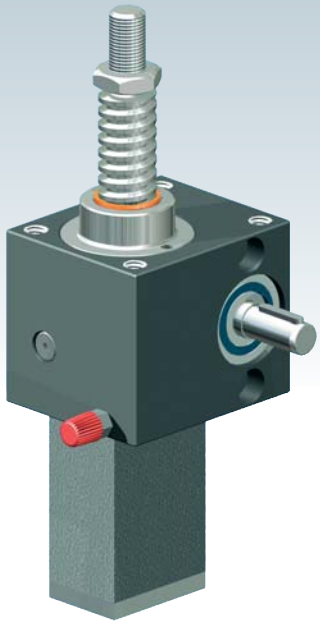
R version
(Rotating spindle)

R

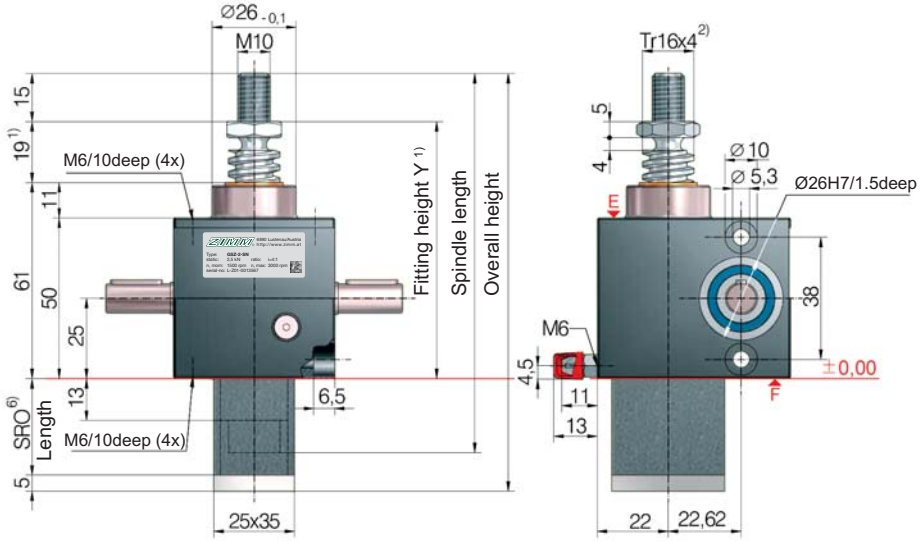


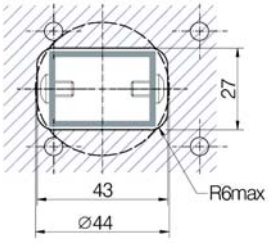
Standard:

Trapezoid thread Tr

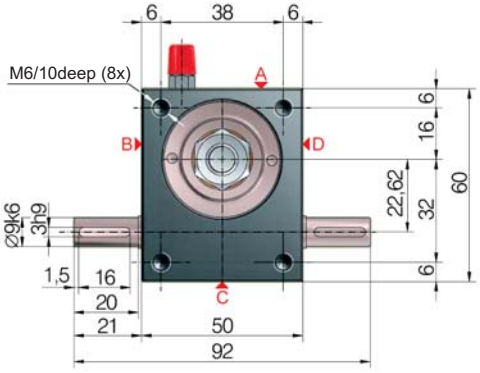


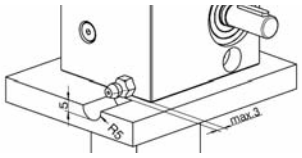
GSZ-2-S Standing spindle 2.5 kN





Breakthrough for protective tube SRO, square 43x27 or round Ø 44





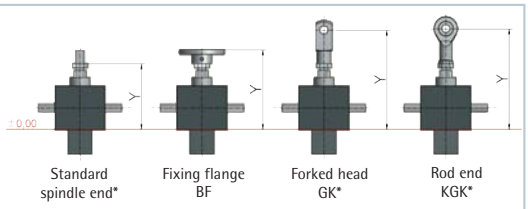
Minimum required space for spindle lubrication (grease pump)

6)Protective tube length SRO with Tr 16x4 spindle

Without escape/ rotation protection	Escape/rotation protection	Rotation protection with limit switch set ESSET	Rotation protection with ESSET + KAR*
47+stroke	62+stroke	117+stroke	139+stroke

*Hinged bearing plate KAR, assembled on side F (below)

1)Fitting height „Y" for 0-stroke with Tr 16x4 spindle



All dimensions in mm

	Y	Y	Y	Y
Without bellows FB	80	96	120	123
GSZ-2-FB-182	117	116	157	160
GSZ-2-FB-364	177	176	217	220

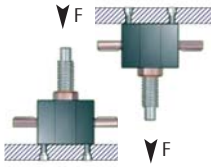
*With bellows connecting ring Z-2-FBR

Standard ratios

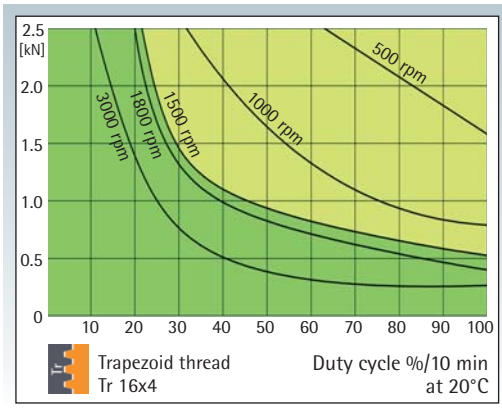
Type	Version	Speed	Standard spindle2)	i	Stroke per drive shaft rotation5)
GSZ-2-SN	Standing	Normal	Tr 16x4	4:1	1.00 mm
GSZ-2-SL	spindle	Low		16:1	0.25 mm
GSZ-2-RN	Rotating	Normal	Tr 16x4	4:1	1.00 mm
GSZ-2-RL	spindle	Low		16:1	0.25 mm

Fixing screw jack

Max. load:	2.5 kN tension and compression load
Screws:	M6, strength class 8.8
Screw-in depth:	8 to 10 mm
Locking torque:	8 Nm
Screw locking:	with Loctite 243



Duty cycle, thermal limit, for S+R

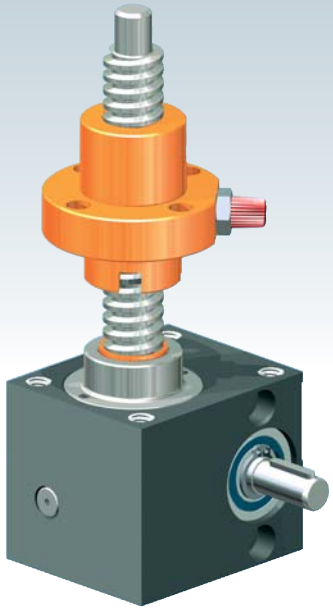


This diagram provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torques for optimum service life are shown on the right (1500 rpm).

KGT: Duty cycle % 1.1 to 2.5 higher

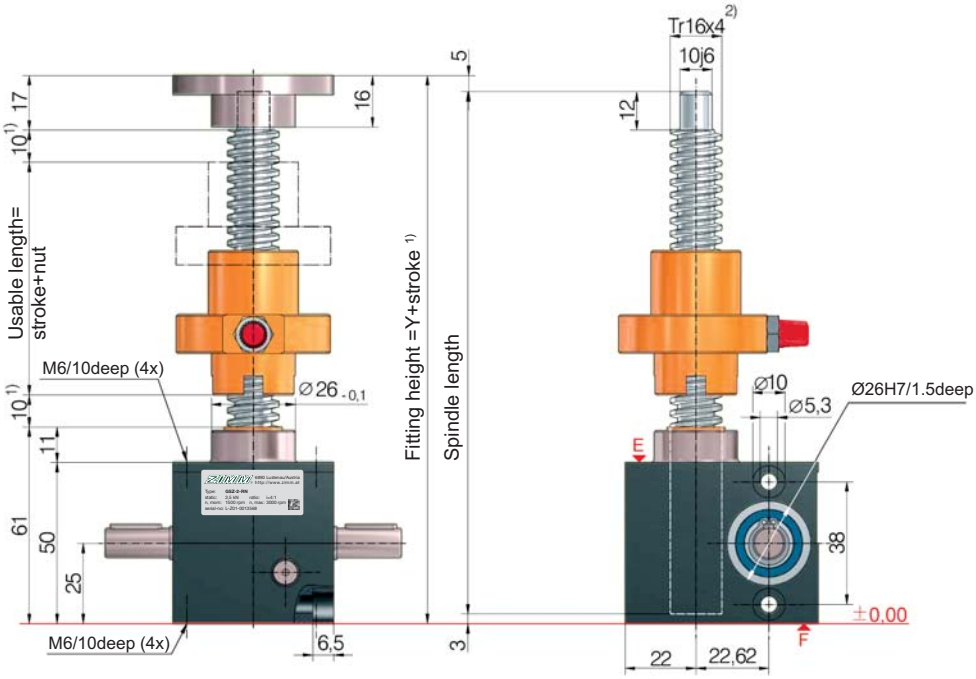
Standard:

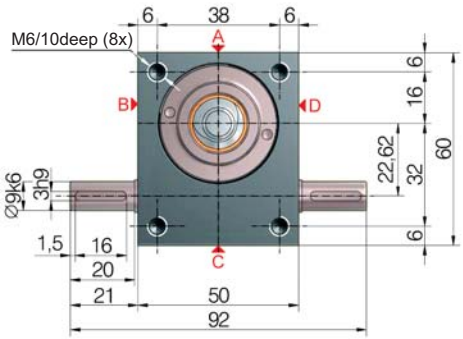
Trapezoid thread Tr	Safety nut SIFA	Ball screw KGT*
Tr	SIFA-R	KGT



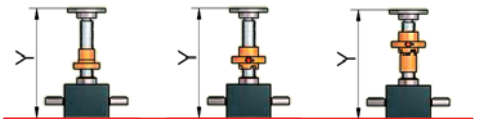
GSZ-2-R Rotating spindle 2.5 kN

2.5 kN





1)Fitting height „Y" for 0-stroke with Tr 16x4 spindle



All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA
	Y	Y	Y
Without bellows FB	132	142	167
2x GSZ-2-FB-182	–	198	223
2x GSZ-2-FB-364	–	318	343

*At ball screw KGT: dimensions and load ratings can be found in Engineering Catalogue

Detailed length calculation can be found in Engineering Catalogue 2008 - Section 2

Technical data series GSZ-2-S / GSZ-2-R

Max. compression / tensile force, static	- 2.5 kN (250 kg)
Max. compression / tensile force, dynamic	- see duty cycle on the left page
Nominal speed	- 1500 rpm
Max. drive shaft speed	- 3000 rpm (load and cycle dependent)
Spindle dimension, standard	- Tr 16x4 2)
Gear reduction	- 4:1 (N) / 16:1 (L)
Housing material	- Aluminium, corrosion protected
Worm shaft	- Steel, stainless, ground
Weight of screw jack	- 0.6 kg
Weight of spindle/m	- 1.21 kg
Gearbox lubrication	- Synth. fluid grease
Spindle lubrication	- Grease lubrication
Gearbox operating temperature	- max. 80°C, higher on request
Mass moment of inertia	- N: 0.081 kg cm², L: 0.037 kg cm²
Input torque (at 1500 rpm)	- max. 1.4 Nm (N), max. 0.5 Nm (L)
Drive through torque	- max. 9 Nm

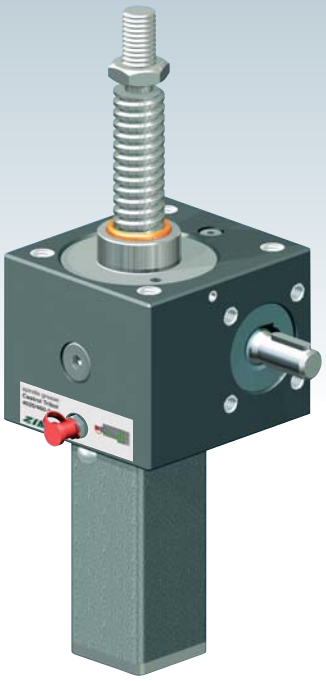
Drive torque M_G (Nm)	- F (kN) x 0.52 3)5) + M_L (N-Normal)
	- F (kN) x 0.15 3)5) + M_L (L-Low)
Breakaway torque	- Drive torque M_G x 1.5
Idling torque 4) M_L (Nm)	- 0.08 (N-Normal) / 0.06 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 10 mm!
See in the Engineering Catalogue Innovations 2008 - Section 2 for checklist

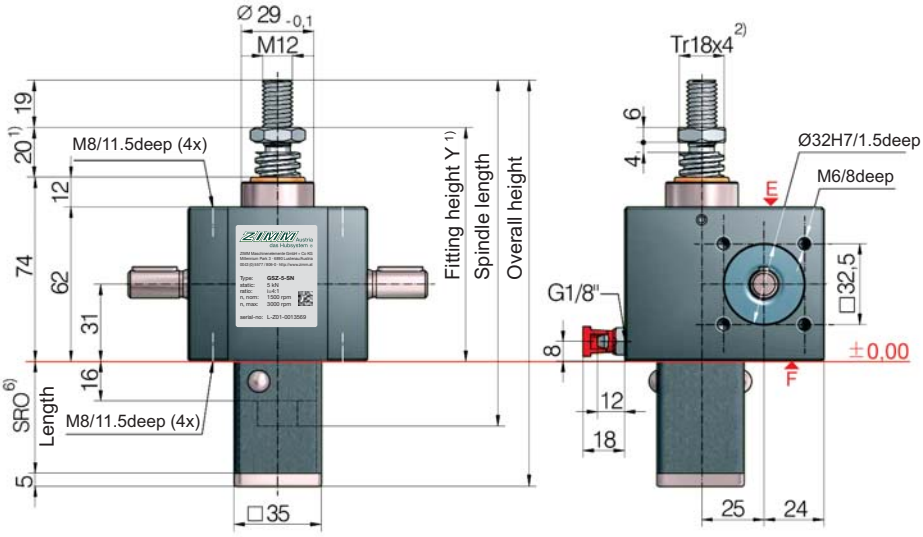
Important information
1) - For bellows extension - see sections 2+7 in the Engineeering Catalogue 2008
2) - Tr 16x4 is standard, others available: 2-pitch, INOX, left-handed stronger spindle Tr 18x4 (only for R version)
3) - Factor includes efficiency, ratio and 30% safety
4) - At 20°C, can be higher when new
5) - For 4 mm spindle pitch

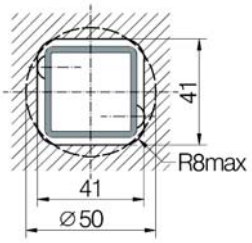
Standard:

Trapezoid thread Tr

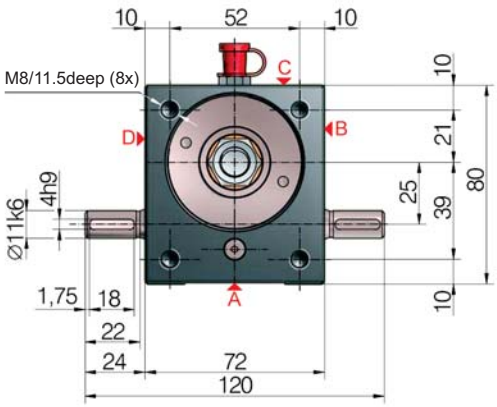


GSZ-5-S Standing spindle 5 kN

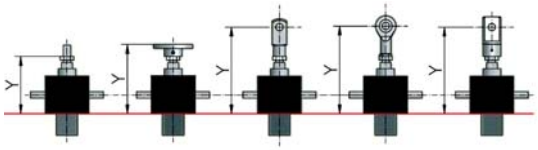




Breakthrough for protective tube SRO, square 41x41 or round Ø 50



1)Fitting height „Y" for 0-stroke with Tr 18x4 spindle



All dimensions in mm

	Standard spindle end*	Fixing flange BF	Forked head GK*	Rod end KGK*	Pivot bearing head SLK
	Y	Y	Y	Y	Y
Without bellows FB	94	114	142	144	142
Z-5-FB-265	127	127	175	177	155
Z-5-FB-500	192	192	240	242	220
Z-5-FB-800	212	212	260	262	240

*With bellows connecting ring Z-5-FBR

6)Protective tube length SRO with Tr 18x4 spindle

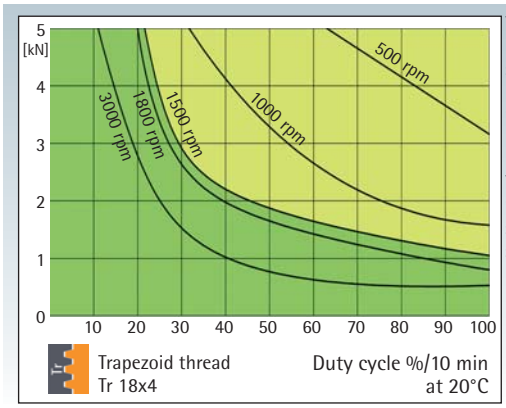
Without escape/ rotation protection	Escape/rotation protection	Rotation protection with limit switch set ESSET	Rotation protection with ESSET + KAR*
46+stroke	61+stroke	119+stroke	140+stroke

*Hinged bearing plate KAR, assembled on side F (below)

Standard ratios

Type	Version	Speed	Standard spindle2)	i	Stroke per drive shaft rotation5)
GSZ-5-SN	Standing	Normal	Tr 18x4	4:1	1.00 mm
GSZ-5-SL	spindle	Low		16:1	0.25 mm
GSZ-5-RN	Rotating	Normal	Tr 18x4	4:1	1.00 mm
GSZ-5-RL	spindle	Low		16:1	0.25 mm

Duty cycle, thermal limit, for S+R

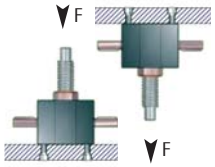


This diagram provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torques for optimum service life are shown on the right (1500 rpm).

KGT: Duty cycle % 1.1 to 2.5 higher

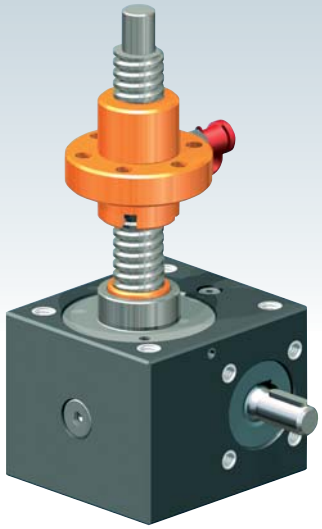
Fixing screw jack

Max. load:	5 kN tension and compression load
Screws:	M8, strength class 8.8
Screw-in depth:	10 to 11.5 mm
Locking torque:	19 Nm
Screw locking:	with Loctite 243



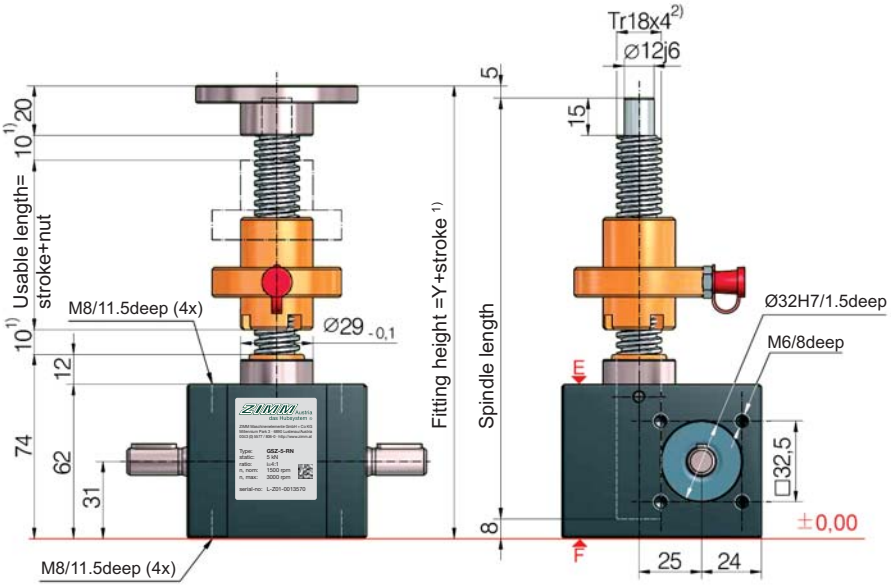
Standard:

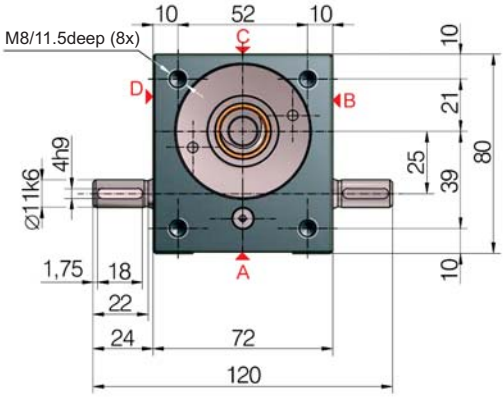
Trapezoid thread Tr	Safety nut SIFA	Ball screw KGT*
		



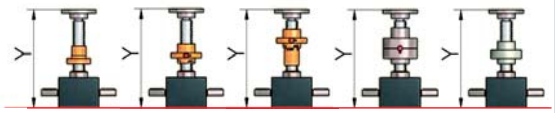
GSZ-5-R Rotating spindle 5 kN

5 kN





1)Fitting height „Y" for 0-stroke with Tr 18x4 spindle



All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greaseless nut FFDM
	Y	Y	Y	Y	Y
Without bellows FB	149	159	184	192	167
2x Z-5-FB-265	–	207	232	240	215
2x Z-5-FB-500	–	337	362	370	345
2x Z-5-FB-800	–	377	402	410	385

*At ball screw KGT: dimensions and load ratings can be found in Engineering Catalogue

Detailed length calculation can be found in Engineering Catalogue 2008 - Section 2

Technical data series GSZ-5-S / GSZ-5-R

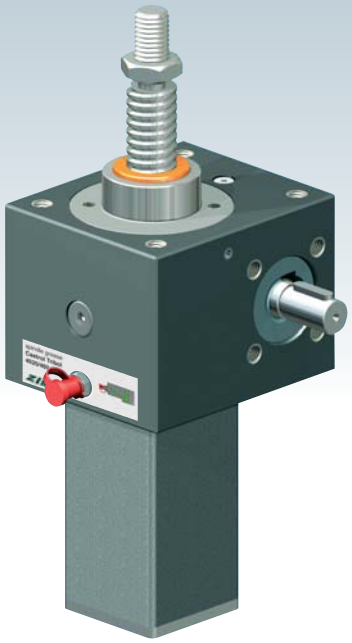
Max. compression / tensile force, static	- 5 kN (500 kg)
Max. compression / tensile force, dynamic	- see duty cycle on the left page
Nominal speed	- 1500 rpm
Max. drive shaft speed	- 3000 rpm (load and cycle dependent)
Spindle dimension, standard	- Tr 18x4 2)
Gear reduction	- 4:1 (N) / 16:1 (L)
Housing material	- Aluminium, corrosion protected
Worm shaft	- Steel, case-hardened, ground, corrosion protected
Weight of screw jack	- 1.2 kg
Weight of spindle/m	- 1.58 kg
Gearbox lubrication	- Synth. fluid grease
Spindle lubrication	- Grease lubrication
Gearbox operating temperature	- max. 80°C, higher on request
Mass moment of inertia	- N: 0.217 kg cm², L: 0.117 kg cm²
Input torque (at 1500 rpm)	- max. 4.7 Nm (N), max. 1.5 Nm (L)
Drive through torque	- max. 39 Nm
Drive torque M_G (Nm)	- F (kN) x 0.62 3)5) + M_L (N-Normal)
	- F (kN) x 0.21 3)5) + M_L (L-Low)
Breakaway torque	- Drive torque M_G x 1.5
Idling torque 4) M_L (Nm)	- 0.10 (N-Normal) / 0.08 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 10 mm!
See in the Engineering Catalogue Innovations 2008 - Section 2 for checklist

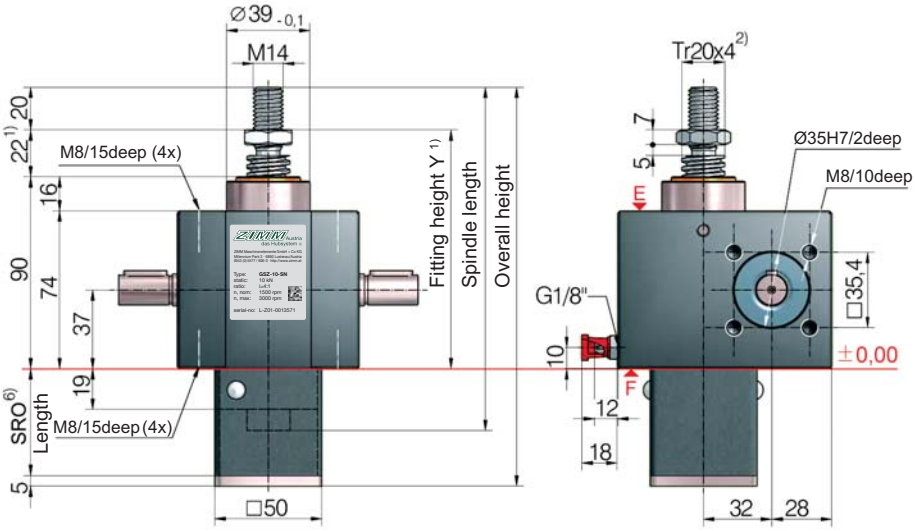
Important information
1) - For bellows or spiral spring extension: see sections 2+7 in the Engineeering Catalogue Innovations 2008
2) - Tr 18x4 is standard, others available: 2-pitch, INOX, left-handed stronger spindle Tr 20x4 (only for R version)
3) - Factor includes efficiency, ratio and 30% safety
4) - At 20°C, can be higher when new
5) - For 4 mm spindle pitch

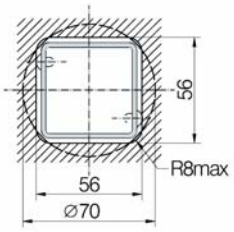
Standard:

Trapezoid thread Tr

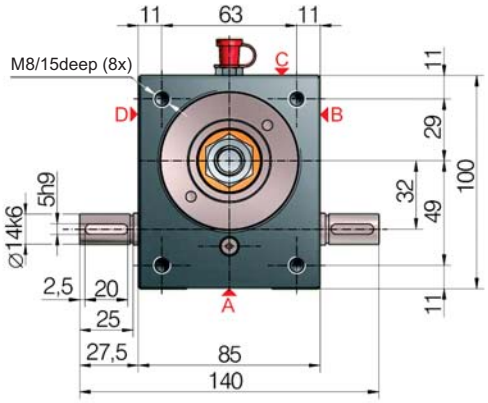


GSZ-10-S Standing spindle 10 kN

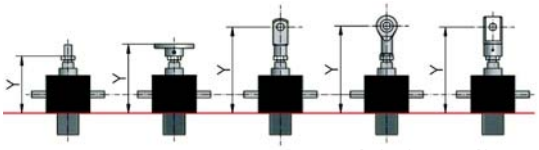




Breakthrough for protective tube SRO, square 56x56 or round Ø 70



1)Fitting height „Y" for 0-stroke with Tr 20x4 spindle



Standard spindle end* | Fixing flange BF | Forked head GK* | Rod end KGK* | Pivot bearing head SLK

All dimensions in mm

	Y	Y	Y	Y	Y
Without bellows FB	112	133	168	173	168
Z-10-FB-340	193	189	249	254	224
Z-10-FB-700	213	209	269	274	244
Z-10-FB-1000	263	259	319	324	294

*With bellows connecting ring Z-10-FBR

6)Protective tube length SRO with Tr 20x4 spindle

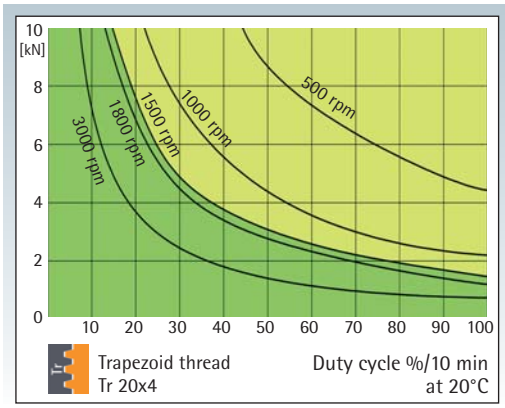
Without escape/ rotation protection	Escape/rotation protection	Rotation protection with limit switch set ESSET	Rotation protection with ESSET + KAR*
49+stroke	69+stroke	121+stroke	141+stroke

*Hinged bearing plate KAR, assembled on side F (below)

Standard ratios

Type	Version	Speed	Standard spindle2)	i	Stroke per drive shaft rotation5)
GSZ-10-SN	Standing	Normal	Tr 20x4	4:1	1.00 mm
GSZ-10-SL	spindle	Low		16:1	0.25 mm
GSZ-10-RN	Rotating	Normal	Tr 20x4	4:1	1.00 mm
GSZ-10-RL	spindle	Low		16:1	0.25 mm

Duty cycle, thermal limit, for S+R

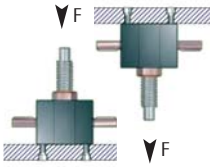


This diagram provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torques for optimum service life are shown on the right (1500 rpm).

KGT: Duty cycle % 1.1 to 2.5 higher

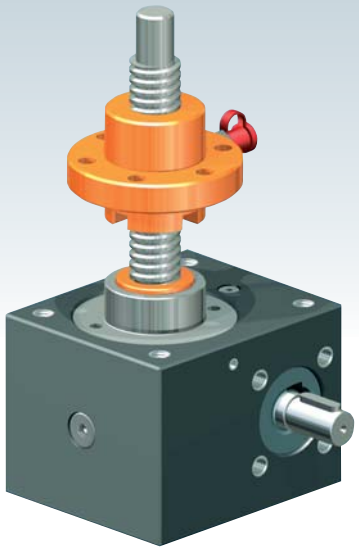
Fixing screw jack

Max. load:	10 kN tension and compression load
Screws:	M8, strength class 8.8
Screw-in depth:	10 to 15 mm
Locking torque:	17 Nm
Screw locking:	with Loctite 243



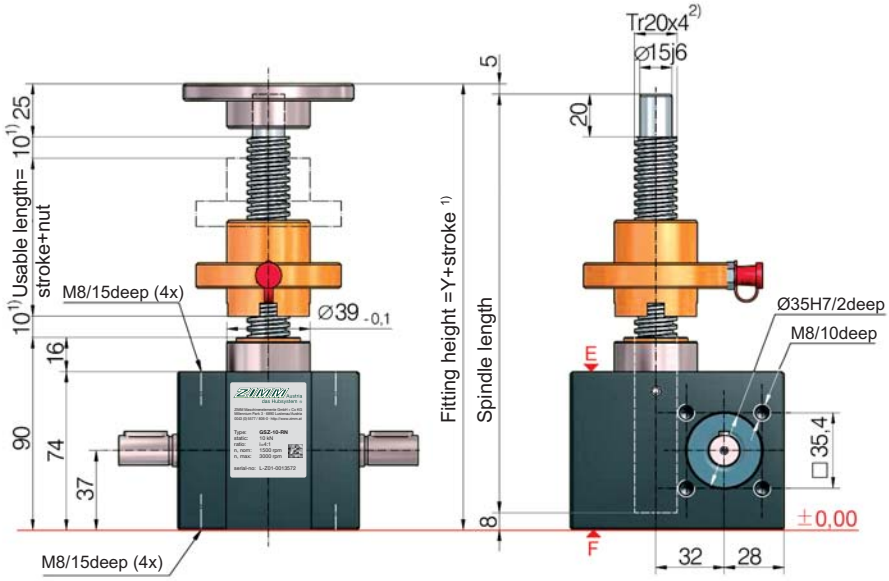
Standard:

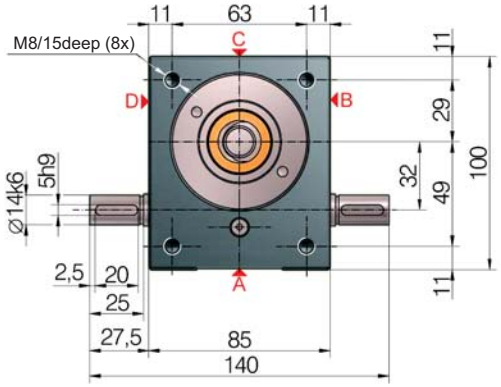
Trapezoid thread Tr	Safety nut SIFA	Ball screw KGT*
		



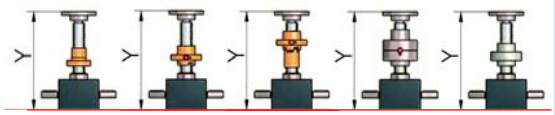
GSZ-10-R Rotating spindle 10 kN

10 kN





1)Fitting height „Y" for 0-stroke with Tr 20x4 spindle



All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greaseless nut FFDM
	Y	Y	Y	Y	Y
Without bellows FB	179	180	219	218	188
2x Z-10-FB-340	–	314	353	352	322
2x Z-10-FB-700	–	354	393	392	362
2x Z-10-FB-1000	–	454	493	492	462

*At ball screw KGT: dimensions and load ratings can be found in Engineering Catalogue

Detailed length calculation can be found in Engineering Catalogue 2008 - Section 2

Technical data series GSZ-10-S / GSZ-10-R

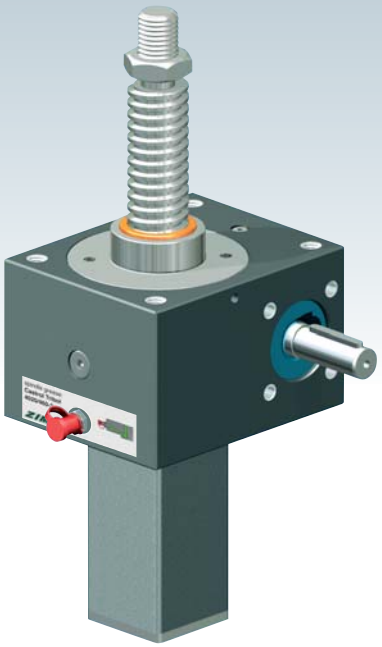
Max. compression / tensile force, static	- 10 kN (1 t)
Max. compression / tensile force, dynamic	- see duty cycle on the left page
Nominal speed	- 1500 rpm
Max. drive shaft speed	- 3000 rpm (load and cycle dependent)
Spindle dimension, standard	- Tr 20x4 2)
Gear reduction	- 4:1 (N) / 16:1 (L)
Housing material	- Aluminium, corrosion protected
Worm shaft	- Steel, case-hardened, ground, corrosion protected
Weight of screw jack	- 2.1 kg
Weight of spindle/m	- 2 kg
Gearbox lubrication	- Synth. fluid grease
Spindle lubrication	- Grease lubrication
Gearbox operating temperature	- max. 80°C, higher on request
Mass moment of inertia	- N: 0.641 kg cm², L: 0.271 kg cm²
Input torque (at 1500 rpm)	- max. 13.5 Nm (N), max. 7.5 Nm (L)
Drive through torque	- max. 57 Nm
Drive torque M_G (Nm)	- F (kN) x 0.64 3)5) + M_L (N-Normal)
	- F (kN) x 0.20 3)5) + M_L (L-Low)
Breakaway torque	- Drive torque M_G x 1.5
Idling torque 4) M_L (Nm)	- 0.26 (N-Normal) / 0.16 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 10 mm!
See in the Engineering Catalogue Innovations 2008 - Section 2 for checklist

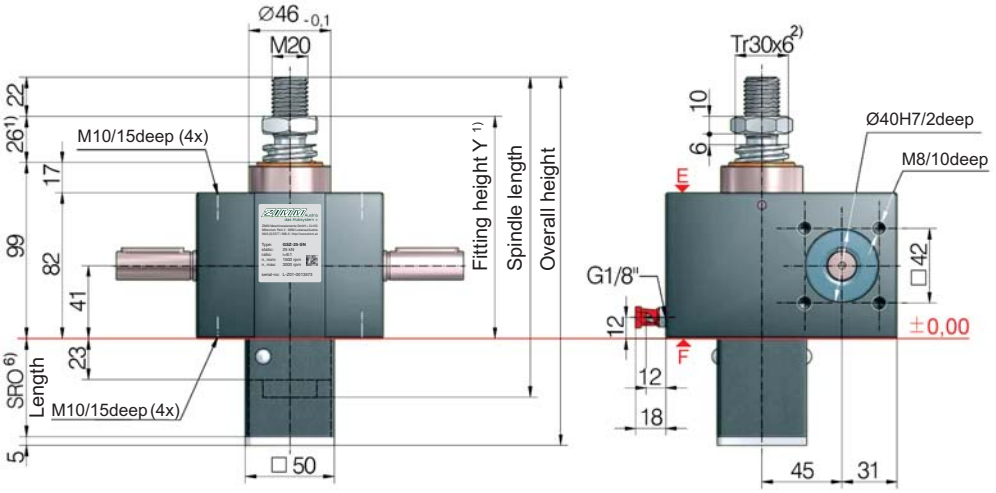
Important information
1) - For bellows or spiral spring extension: see sections 2+7 in the Engineering Catalogue Innovations 2008
2) - Tr 20x4 is standard, others available: 2-pitch, INOX, left-handed stronger spindle Tr 30x6 (only for R version)
3) - Factor includes efficiency, ratio and 30% safety
4) - At 20°C, can be higher when new
5) - For 4 mm spindle pitch

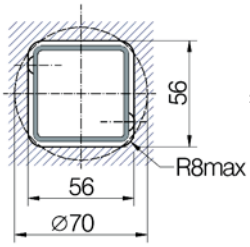
Standard:

Trapezoid thread Tr

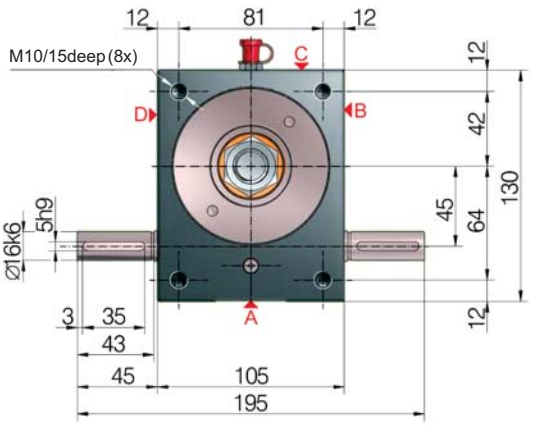


GSZ-25-S Standing spindle 25 kN





Breakthrough for protective tube SRO, square 56x56 or round Ø 70

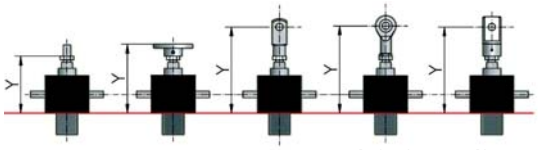


6)Protective tube length SRO with Tr 30x6 spindle

Without escape/ rotation protection	Escape/rotation protection	Rotation protection with limit switch set ESSET	Rotation protection with ESSET + KAR*
53+stroke	73+stroke	125+stroke	149+stroke

*Hinged bearing plate KAR, assembled on side F (below)

1)Fitting height „Y" for 0-stroke with Tr 30x6 spindle



All dimensions in mm

	Y	Y	Y	Y	Y
Without bellows FB	125	148	205	202	205
Z-25-FB-300	200	192	280	277	249
Z-25-FB-700	230	222	310	307	279
Z-25-FB-1000	250	242	330	327	299

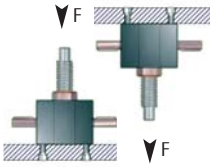
*With bellows connecting ring Z-25-FBR

Standard ratios

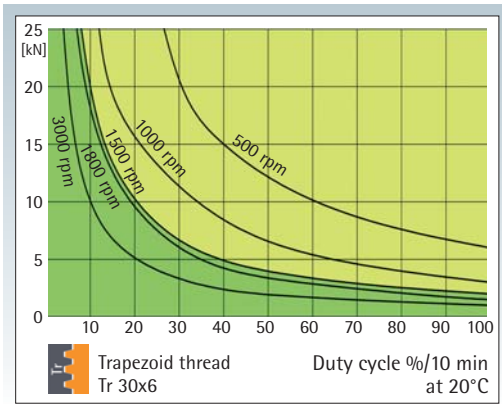
Type	Version	Speed	Standard spindle2)	i	Stroke per drive shaft rotation5)
GSZ-25-SN	Standing	Normal	Tr 30x6	6:1	1.00 mm
GSZ-25-SL	spindle	Low		24:1	0.25 mm
GSZ-25-RN	Rotating	Normal	Tr 30x6	6:1	1.00 mm
GSZ-25-RL	spindle	Low		24:1	0.25 mm

Fixing screw jack

Max. load:	25 kN tension and compression load
Screws:	M10, strength class 8.8
Screw-in depth:	12 to 15 mm
Locking torque:	27 Nm
Screw locking:	with Loctite 243



Duty cycle, thermal limit, for S+R

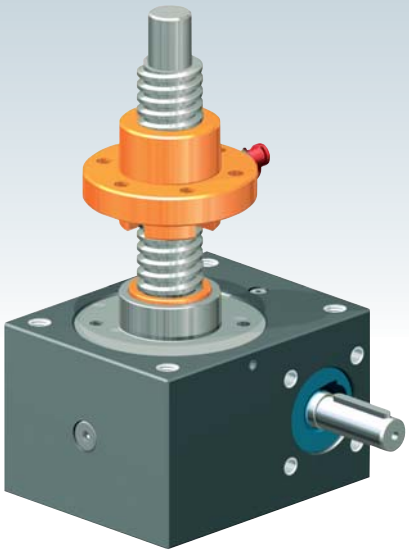


This diagram provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torques for optimum service life are shown on the right (1500 rpm).

KGT: Duty cycle % 1.1 to 2.5 higher

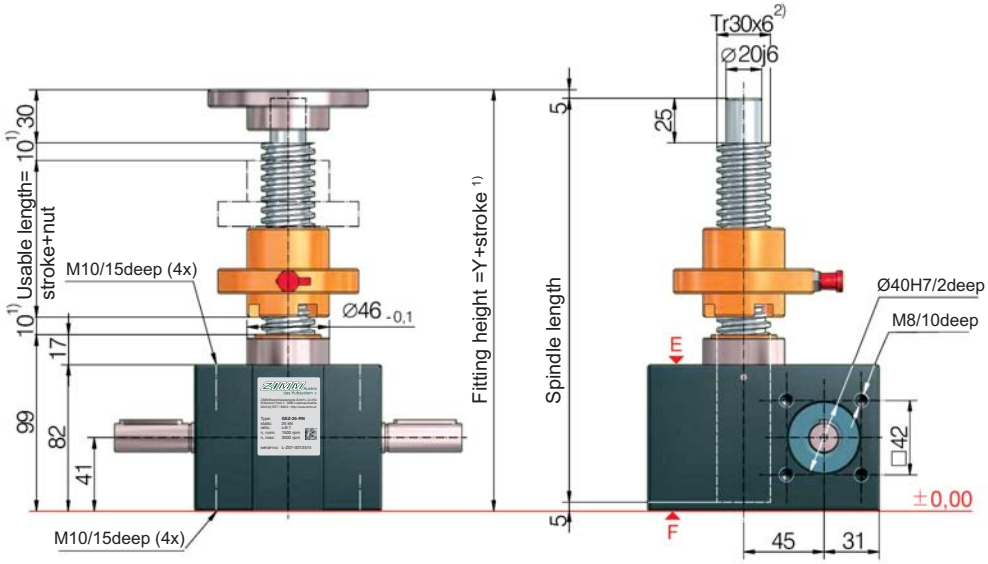
Standard:

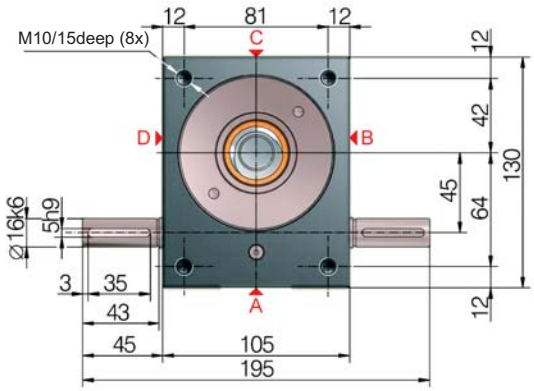
Trapezoid thread Tr	Safety nut SIFA	Ball screw KGT*
		



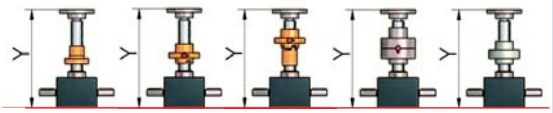
GSZ-25-R Rotating spindle 25 kN

25 kN





1)Fitting height „Y" for 0-stroke with Tr 30x6 spindle



All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greaseless nut FFDM
	Y	Y	Y	Y	Y
Without bellows FB	195	199	244	244	208
2x Z-25-FB-300	–	314	359	359	323
2x Z-25-FB-700	–	374	419	419	383
2x Z-25-FB-1000	–	414	459	459	423

*At ball screw KGT: dimensions and load ratings can be found in Engineering Catalogue

Detailed length calculation can be found in Engineering Catalogue 2008 - Section 2

Technical data series GSZ-25-S / GSZ-25-R

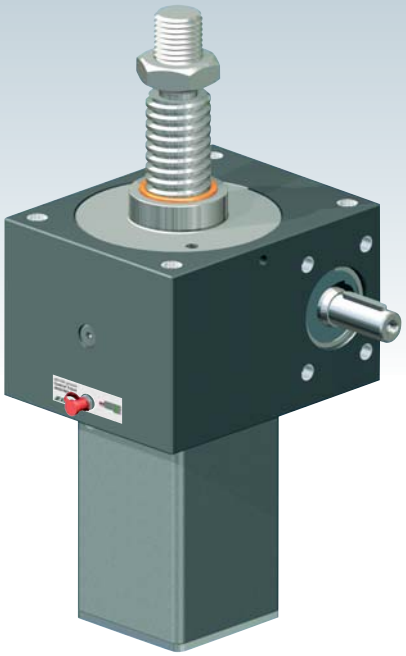
Max. compression / tensile force, static	- 25 kN (2,5 t)
Max. compression / tensile force, dynamic	- see duty cycle on the left page
Nominal speed	- 1500 rpm
Max. drive shaft speed	- 3000 rpm (load and cycle dependent)
Spindle dimension, standard	- Tr 30x6 2)
Gear reduction	- 6:1 (N) / 24:1 (L)
Housing material	- Aluminium, corrosion protected
Worm shaft	- Steel, case-hardened, ground, corrosion protected
Weight of screw jack	- 3.8 kg
Weight of spindle/m	- 4.5 kg
Gearbox lubrication	- Synth. fluid grease
Spindle lubrication	- Grease lubrication
Gearbox operating temperature	- max. 80°C, higher on request
Mass moment of inertia	- N: 1.449 kg cm², L: 0.589 kg cm²
Input torque (at 1500 rpm)	- max. 18 Nm (N), max. 10 Nm (L)
Drive through torque	- max. 108 Nm
Drive torque M_G (Nm)	- F (kN) x 0.63 3)5) + M_L (N-Normal)
	- F (kN) x 0.20 3)5) + M_L (L-Low)
Breakaway torque	- Drive torque M_G x 1.5
Idling torque 4) M_L (Nm)	- 0.36 (N-Normal) / 0.26 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 10 mm!
See in the Engineering Catalogue Innovations 2008 - Section 2 for checklist

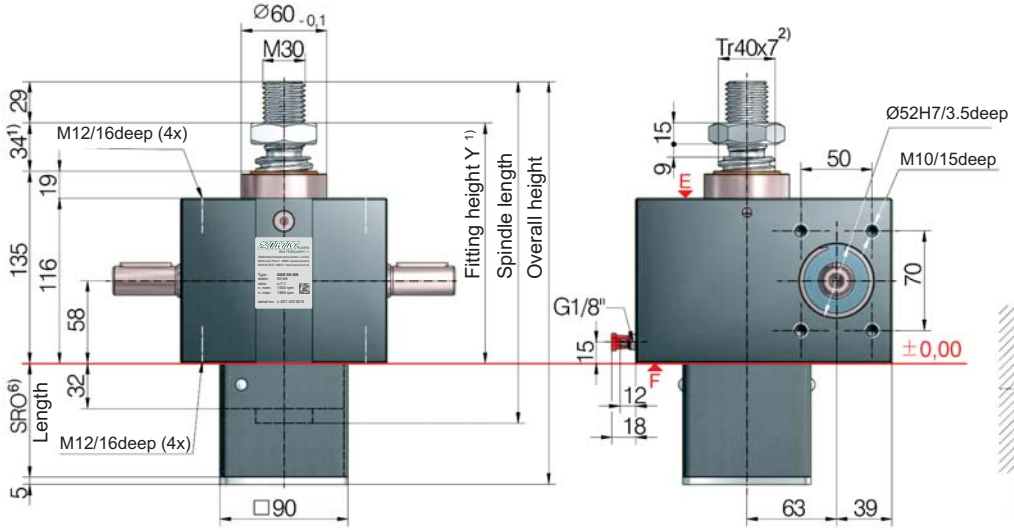
Important information
1) - For bellows or spiral spring extension: see sections 2+7 in the Engineering Catalogue Innovations 2008
2) - Tr 30x6 is standard, others available: 2-pitch, INOX, left-handed stronger spindle Tr 40x7 (only for R version)
3) - Factor includes efficiency, ratio and 30% safety
4) - At 20°C, can be higher when new
5) - For 6 mm spindle pitch

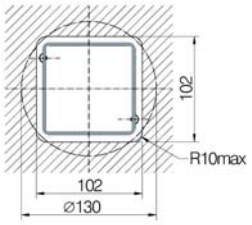
Standard:

Trapezoid thread Tr

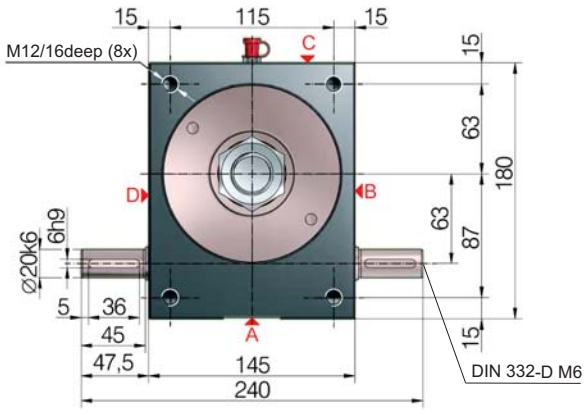


GSZ-50-S Standing spindle 50 kN





Breakthrough for protective tube SRO, square 102x102 or round Ø 130

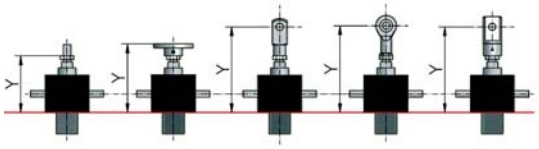


6)Protective tube length SRO with Tr 40x7 spindle

Without escape/ rotation protection	Escape/rotation protection	Rotation protection with limit switch set ESSET	Rotation protection with ESSET + KAR*
62+stroke	92+stroke	144+stroke	169+stroke

*Hinged bearing plate KAR, assembled on side F (below)

1)Fitting height „Y" for 0-stroke with Tr 40x7 spindle



Standard spindle end* | Fixing flange BF | Forked head GK* | Rod end KGK* | Pivot bearing head SLK

All dimensions in mm

	Y	Y	Y	Y	Y
Without bellows FB	169	199	289	279	261
Z-50-FB-390	264	284	384	374	310
Z-50-FB-600	251	235	371	361	297
Z-50-FB-1000	309	293	429	419	355
Z-50-FB-1200	304	288	424	414	350
Z-50-FB-1500	359	343	479	469	405

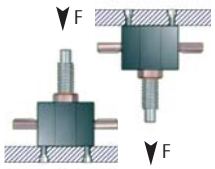
*With bellows connecting ring Z-50-FBR

Standard ratios

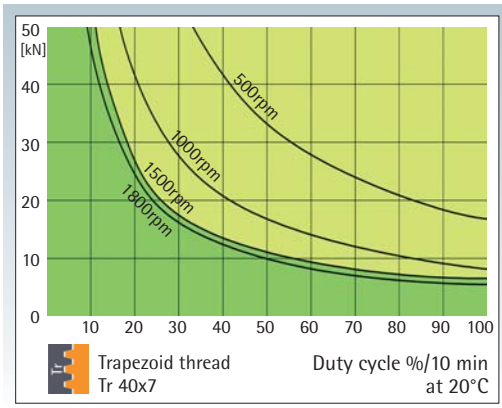
Type	Version	Speed	Standard spindle2)	i	Stroke per drive shaft rotation5)
GSZ-50-SN	Standing	Normal	Tr 40x7	7:1	1.00 mm
GSZ-50-SL	spindle	Low		28:1	0.25 mm
GSZ-50-RN	Rotating	Normal	Tr 40x7	7:1	1.00 mm
GSZ-50-RL	spindle	Low		28:1	0.25 mm

Fixing screw jack

Max. load:	50 kN tension and compression load
Screws:	M12, strength class 8.8
Screw-in depth:	12 to 17 mm
Locking torque:	38 Nm
Screw locking:	with Loctite 243



Duty cycle, thermal limit, for S+R



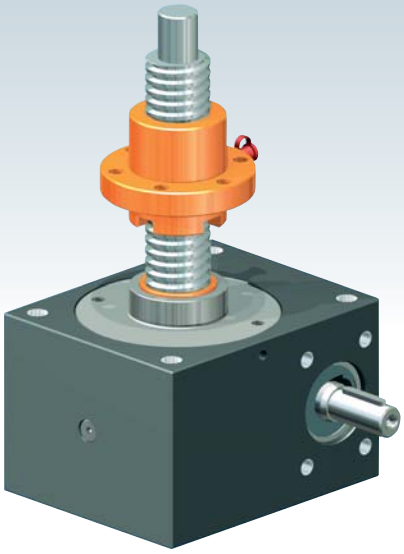
This diagram provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torques for optimum service life are shown on the right (1500 rpm).

KGT: Duty cycle % 1.1 to 2.5 higher

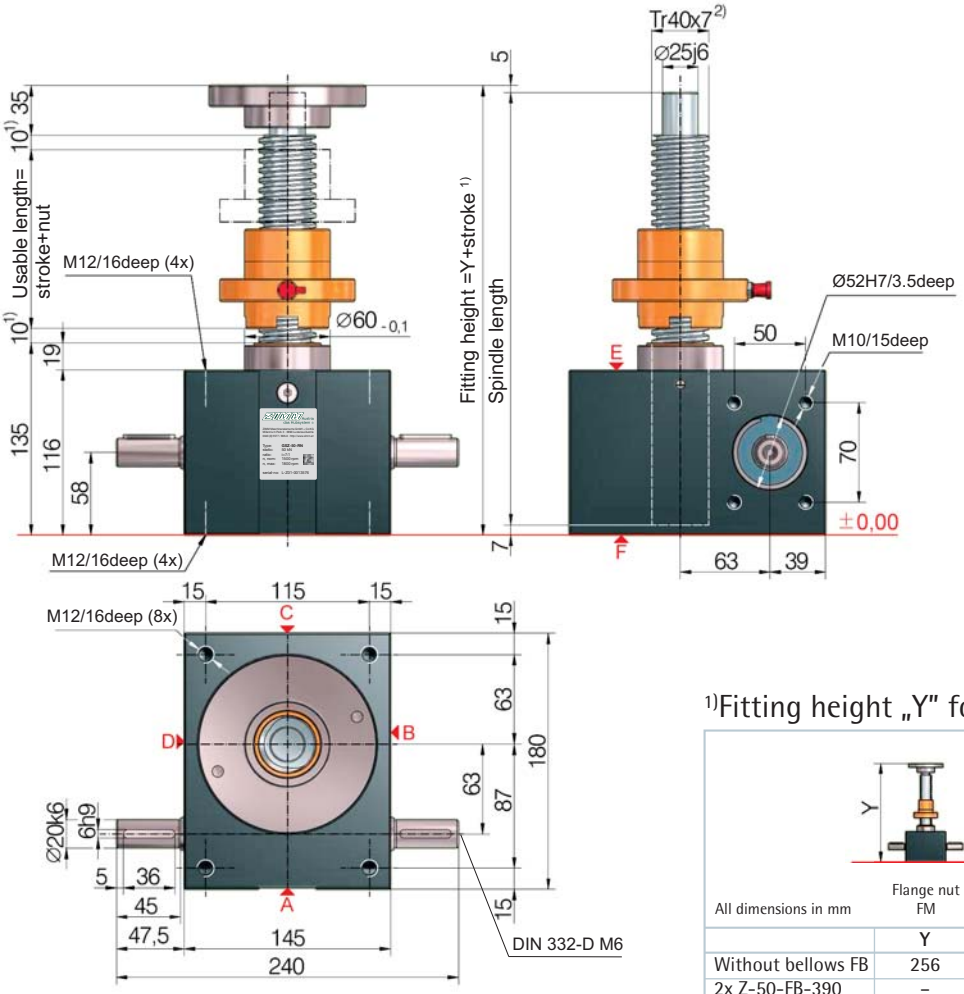
Standard:

Trapezoid thread Tr	Safety nut SIFA	Ball screw KGT*
		

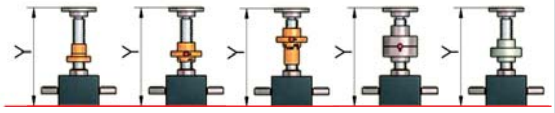
GSZ-50-R Rotating spindle 50 kN



50 kN



1)Fitting height „Y" for 0-stroke with Tr 40x7 spindle



All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greaseless nut FFDM
	Y	Y	Y	Y	Y
Without bellows FB	256	260	323	319	275
2x Z-50-FB-390	–	403	466	462	418
2x Z-50-FB-600	–	377	440	436	392
2x Z-50-FB-1000	–	493	556	552	508
2x Z-50-FB-1200	–	483	546	542	498
2x Z-50-FB-1500	–	593	656	652	608

Detailed length calculation can be found in Engineering Catalogue 2008 - Section 2

*At ball screw KGT: dimensions and load ratings can be found in Engineering Catalogue

Technical data series GSZ-50-S / GSZ-50-R

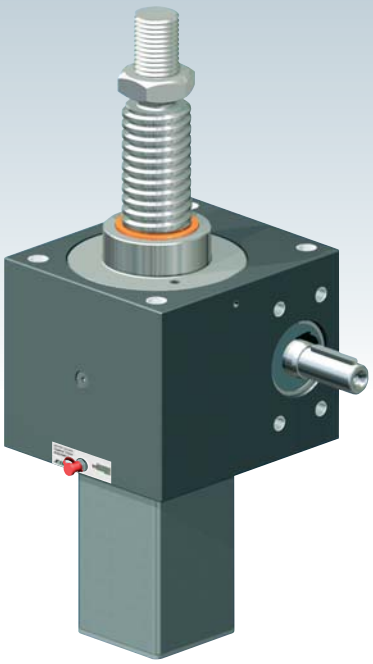
Max. compression / tensile force, static	- 50 kN (5 t)
Max. compression / tensile force, dynamic	- see duty cycle on the left page
Nominal speed	- 1500 rpm
Max. drive shaft speed	- 1800 rpm (load and cycle dependent)
Spindle dimension, standard	- Tr 40x7 2)
Gear reduction	- 7:1 (N) / 28:1 (L)
Housing material	- GGG-50, corrosion protected
Worm shaft	- Steel, case-hardened, ground, corrosion protected
Weight of screw jack	- 15 kg
Weight of spindle/m	- 8 kg
Gearbox lubrication	- Synth. fluid grease
Spindle lubrication	- Grease lubrication
Gearbox operating temperature	- max. 80°C, higher on request
Mass moment of inertia	- N: 6.40 kg cm², L: 2.53 kg cm²
Input torque (at 1500 rpm)	- max. 31.5 Nm (N), max. 10.4 Nm (L)
Drive through torque	- max. 260 Nm
Drive torque M_G (Nm)	- F (kN) x 0.68 3)5) + M_L (N-Normal)
	- F (kN) x 0.23 3)5) + M_L (L-Low)
Breakaway torque	- Drive torque M_G x 1.5
Idling torque 4) M_L (Nm)	- 0.76 (N-Normal) / 0.54 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 10 mm!
See in the Engineering Catalogue Innovations 2008 - Section 2 for checklist

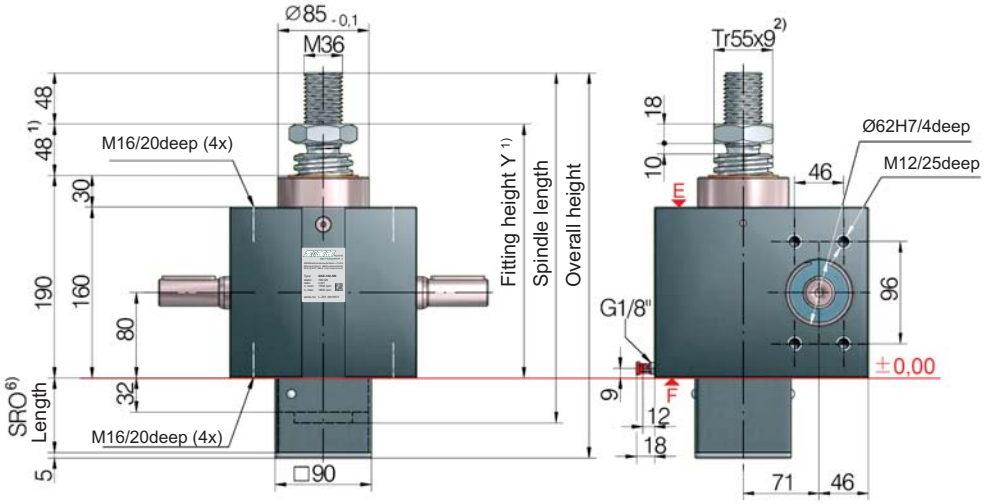
Important information
1) - For bellows or spiral spring extension: see sections 2+7 in the Engineering Catalogue Innovations 2008
2) - Tr 40x7 is standard, others available: 2-pitch, INOX, left-handed stronger spindle Tr 55x9 (only for R version)
3) - Factor includes efficiency, ratio and 30% safety
4) - At 20°C, can be higher when new
5) - For 7 mm spindle pitch

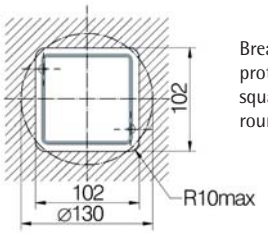
Standard:

Trapezoid thread Tr

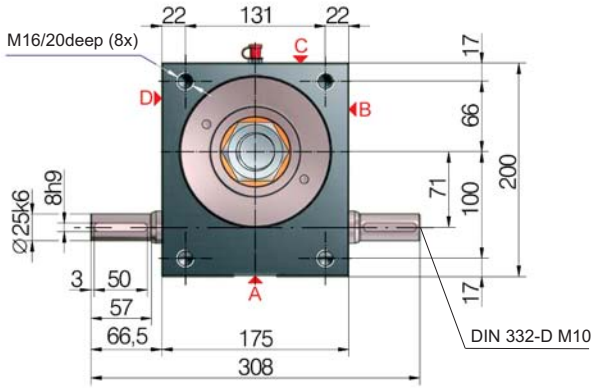


GSZ-100-S Standing spindle 100 kN

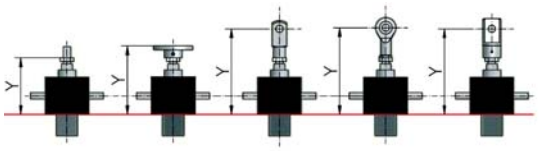




Breakthrough for protective tube SRO, square 102x102 or round Ø 130



1)Fitting height „Y" for 0-stroke with Tr 55x9 spindle



Standard spindle end* | Fixing flange BF | Forked head GK* | Rod end KGK* | Pivot bearing head SLK

All dimensions in mm

	Y	Y	Y	Y	Y
Without bellows FB	238	288	382	380	346
Z-100-FB-285	311	313	455	453	371
Z-100-FB-600	308	310	452	450	368
Z-100-FB-1000	366	368	510	508	426
Z-100-FB-1500	416	418	560	558	476

*With bellows connecting ring Z-100-FBR

6)Protective tube length SRO with Tr 55x9 spindle

Without escape/ rotation protection	Escape/rotation protection	Rotation protection with limit switch set ESSET	Rotation protection with ESSET + KAR*
82+stroke	112+stroke	144+stroke	189+stroke

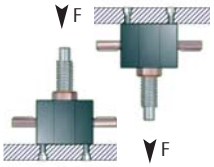
*Hinged bearing plate KAR, assembled on side F (below)

Standard ratios

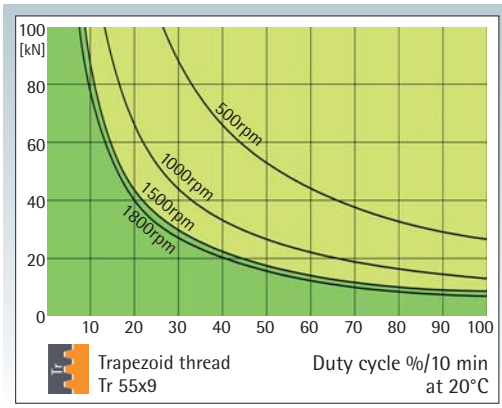
Type	Version	Speed	Standard spindle2)	i	Stroke per drive shaft rotation5)
GSZ-100-SN	Standing	Normal	Tr 55x9	9:1	1.00 mm
GSZ-100-SL	spindle	Low		36:1	0.25 mm
GSZ-100-RN	Rotating	Normal	Tr 55x9	9:1	1.00 mm
GSZ-100-RL	spindle	Low		36:1	0.25 mm

Fixing screw jack

Max. load:	100 kN tension and compression load
Screws:	M16, strength class 8.8
Screw-in depth:	16 to 22 mm
Locking torque:	82 Nm
Screw locking:	with Loctite 243



Duty cycle, thermal limit, for S+R

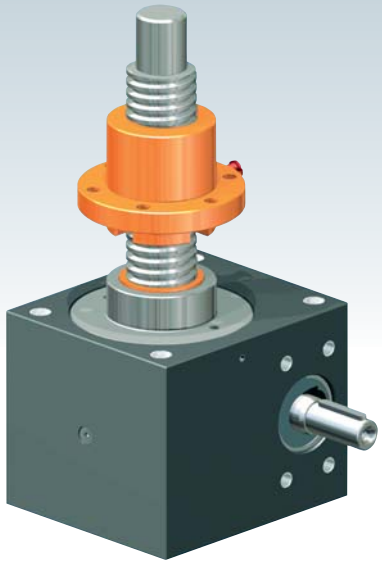


This diagram provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torques for optimum service life are shown on the right (1500 rpm).

KGT: Duty cycle % 1.1 to 2.5 higher

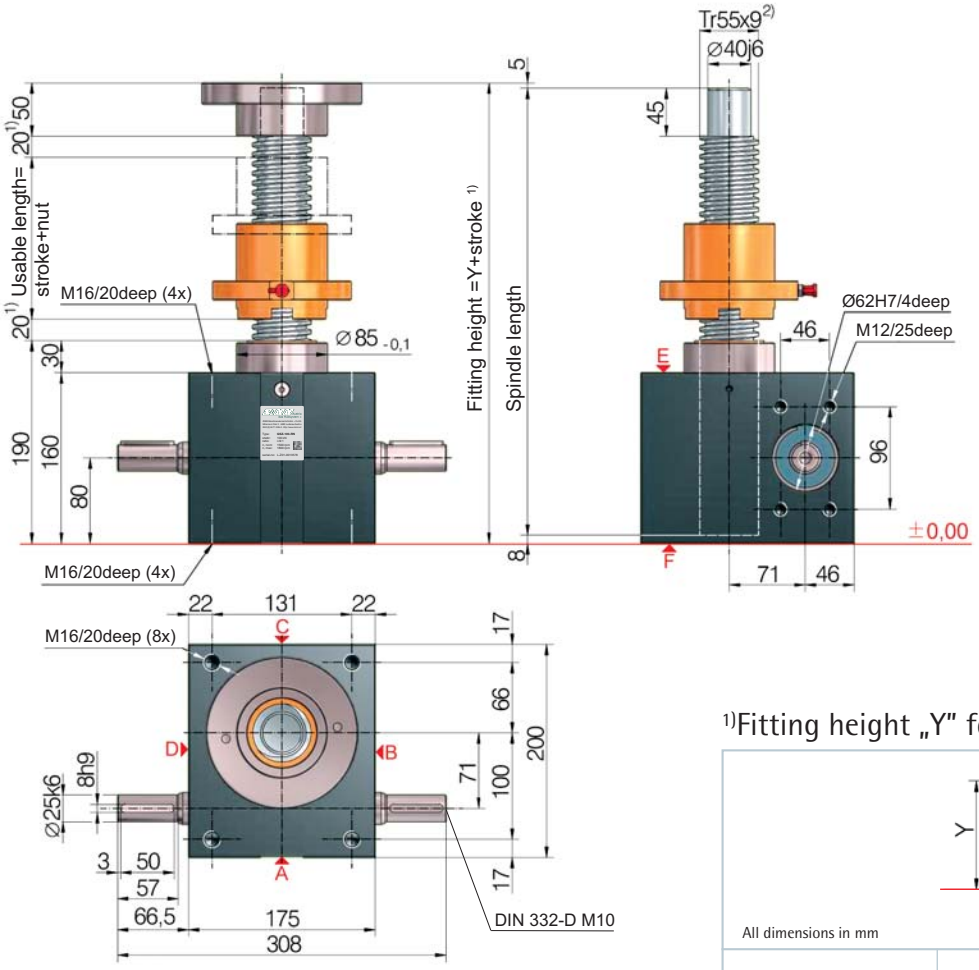
Standard:

Trapezoid thread Tr	Safety nut SIFA	Ball screw KGT*
		

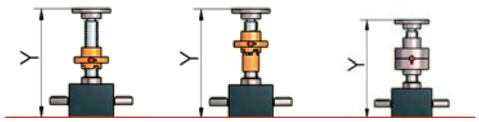


GSZ-100-R Rotating spindle 100 kN

100 kN



1)Fitting height „Y" for 0-stroke with Tr 55x9 spindle



All dimensions in mm	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM
	Y	Y	Y
Without bellows FB	370	453	470
2x Z-100-FB-285	478	561	578
2x Z-100-FB-600	472	555	572
2x Z-100-FB-1000	588	671	688
2x Z-100-FB-1500	688	771	788

*At ball screw KGT: dimensions and load ratings can be found in Engineering Catalogue

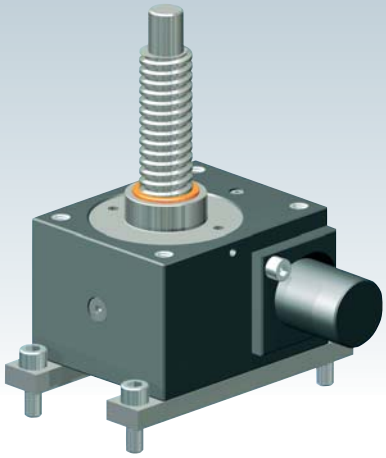
Detailed length calculation can be found in Engineering Catalogue 2008 - Section 2

Technical data series GSZ-100-S / GSZ-100-R

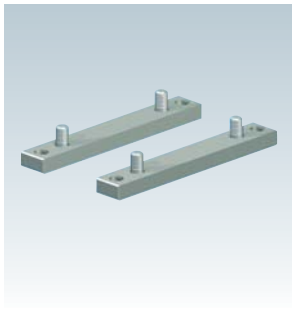
Max. compression / tensile force, static	- 100 kN (10 t)
Max. compression / tensile force, dynamic	- see duty cycle on the left page
Nominal speed	- 1500 rpm
Max. drive shaft speed	- 1800 rpm (load and cycle dependent)
Spindle dimension, standard	- Tr 55x9 2)
Gear reduction	- 9:1 (N) / 36:1 (L)
Housing material	- GGG-50, corrosion protected
Worm shaft	- Steel, case-hardened, ground, corrosion protected
Weight of screw jack	- 33 kg
Weight of spindle/m	- 15.7 kg
Gearbox lubrication	- Synth. fluid grease
Spindle lubrication	- Grease lubrication
Gearbox operating temperature	- max. 80°C, higher on request
Mass moment of inertia	- N: 12.53 kg cm², L: 4.75 kg cm²
Input torque (at 1500 rpm)	- max. 53.4 Nm (N), max. 13.5 Nm (L)
Drive through torque	- max. 540 Nm
Drive torque M_G (Nm)	- F (kN) x 0.72 3)5) + M_L (N-Normal) - F (kN) x 0.23 3)5) + M_L (L-Low)
Breakaway torque	- Drive torque M_G x 1.5
Idling torque 4) M_L (Nm)	- 1.68 (N-Normal) / 1.02 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 20 mm!
See in the Engineering Catalogue Innovations 2008 - Section 2 for checklist

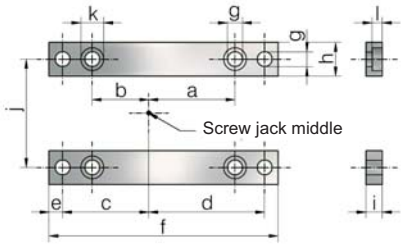
Important information
1) - For bellows or spiral spring extension: see sections 2+7 in the Engineeering Catalogue Innovations 2008
2) - Tr 55x9 is standard, others available: 2-pitch, INOX, left-handed stronger spindle Tr 60x9 (only for R version)
3) - Factor includes efficiency, ratio and 30% safety
4) - At 20°C, can be higher when new
5) - For 9 mm spindle pitch



Accessories

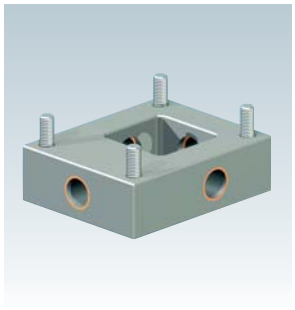


Fixing strip BFL

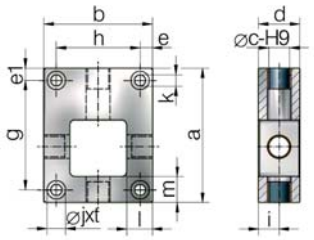


Order No.	a	b	c	d	e	f	g	h	i	j	k	l	kg
GSZ-2-BFL	32	16	29.5	45.5	7.5	90	6.6	14	10	38	11	6.4	0.16
GSZ-5-BFL	39	21	41	59	10	120	9	20	10	52	14	6	0.32
GSZ-10-BFL	49	29	50	70	10	140	9	20	14	63	14	6	0.50
GSZ-25-BFL	64	42	64	86	10	170	11	25	12	81	17	7,5	0.75
GSZ-50-BFL	87	63	90	114	13	230	13	30	20	115	19	7	2.00
GSZ-100-BFL	100	66	101	135	17	270	18	40	25	131	26	11	3.70

Identical to previous MSZ type
Material: Steel corrosion protected, GSZ-2-BFL steel stainless
Delivery incl. screws



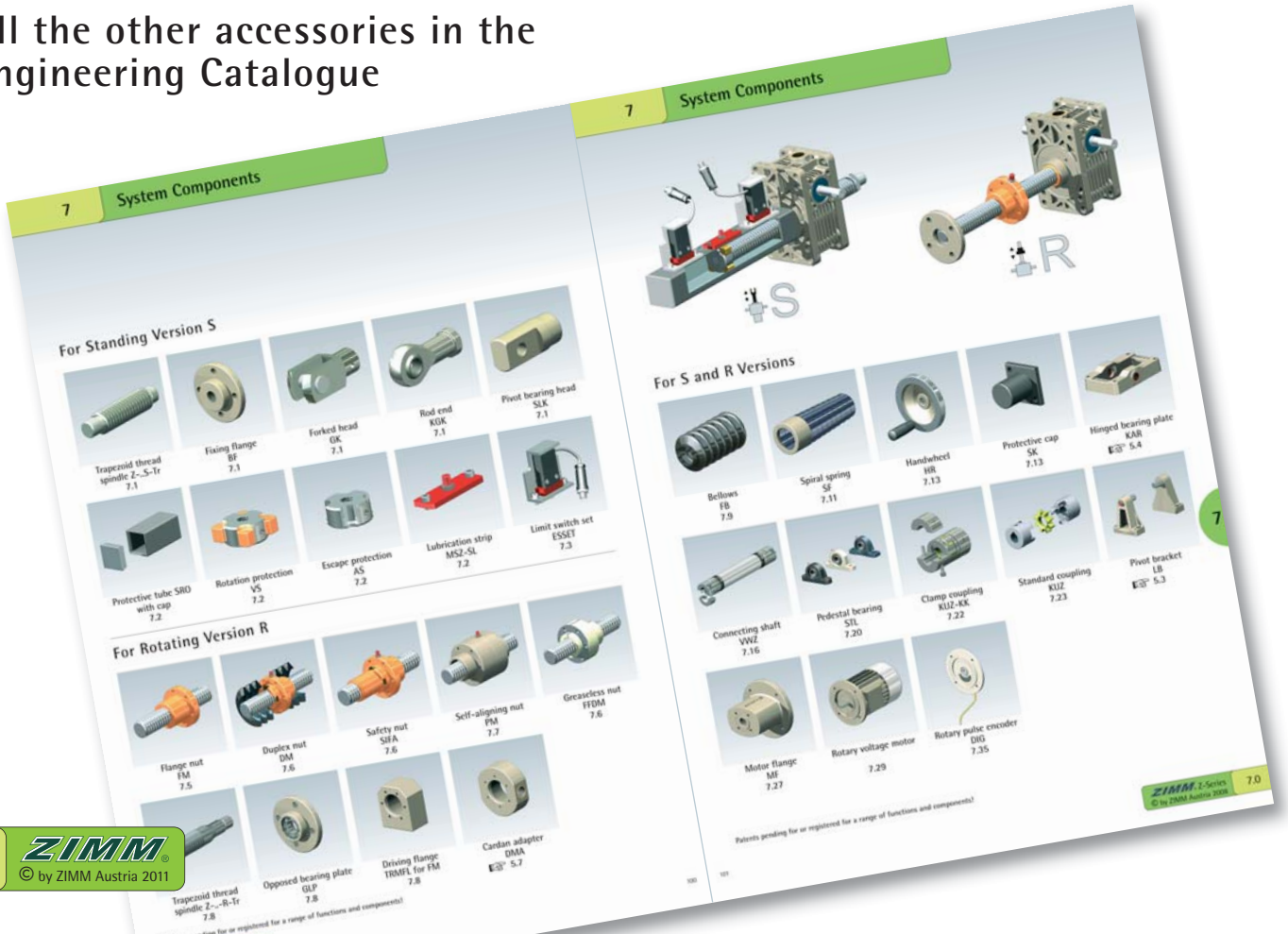
Pivot bearing plate KAR



Order No.	a	b	c	d	e	e1	g	h	i	j	k	l	m	t	kg
GSZ-2-KAR	70	50	16	30	6	6	48	38	15	13	6.6	11	13	8	0.16
GSZ-5-KAR	80	72	16	30	10	10	60	52	15	15	9	18	10	9	0.80
GSZ-10-KAR	100	85	16	30	11	11	78	63	15	15	9	16	11	9	1.15
GSZ-25-KAR	130	105	20	40	12	12	106	81	20	18	11	25	25	11	2.80
GSZ-50-KAR	180	145	30	50	15	15	150	115	25	20	13	24	30	13	5.30
GSZ-100-KAR	200	175	40	70	22	17	166	131	35	26	17	40	30	18	11.1

Identical to previous MSZ type
Material: Steel corrosion protected, GSZ-2-KAR Aluminium, corrosion protected
Delivery incl. screws

All the other accessories in the Engineering Catalogue



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Sizes: 2.5 kN - 1000 kN

...the individual complete system solutions

- Screw jack with trapezoid thread and ball screw
- Bevel gearboxes
- Rotary voltage motor and motor flange
- Limit switch and rotary pulse encoder
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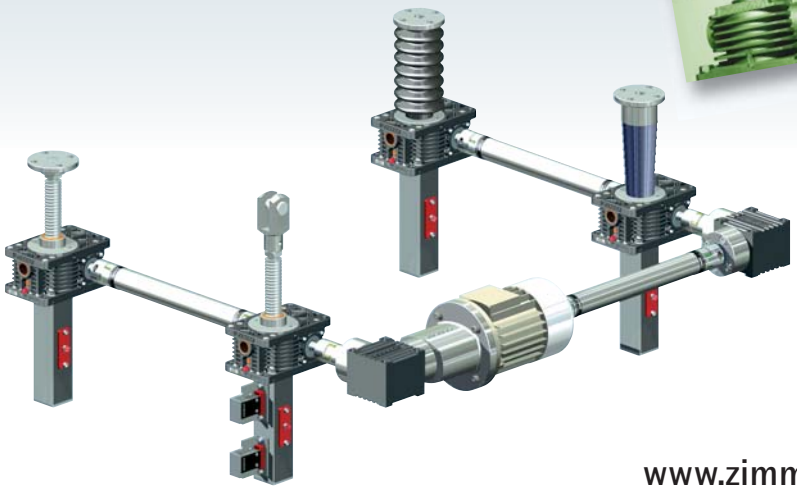
- Mounting parts (forked head, rod end, pivot bearing head, fixing flange, opposed bearing plate, etc.)
- Protective cover (bellow, spiral spring)
- Hinged bearing plate and pivot bracket



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...follow the sun exactly - with tracking drives

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- High reliability
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...wide range of goods

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