

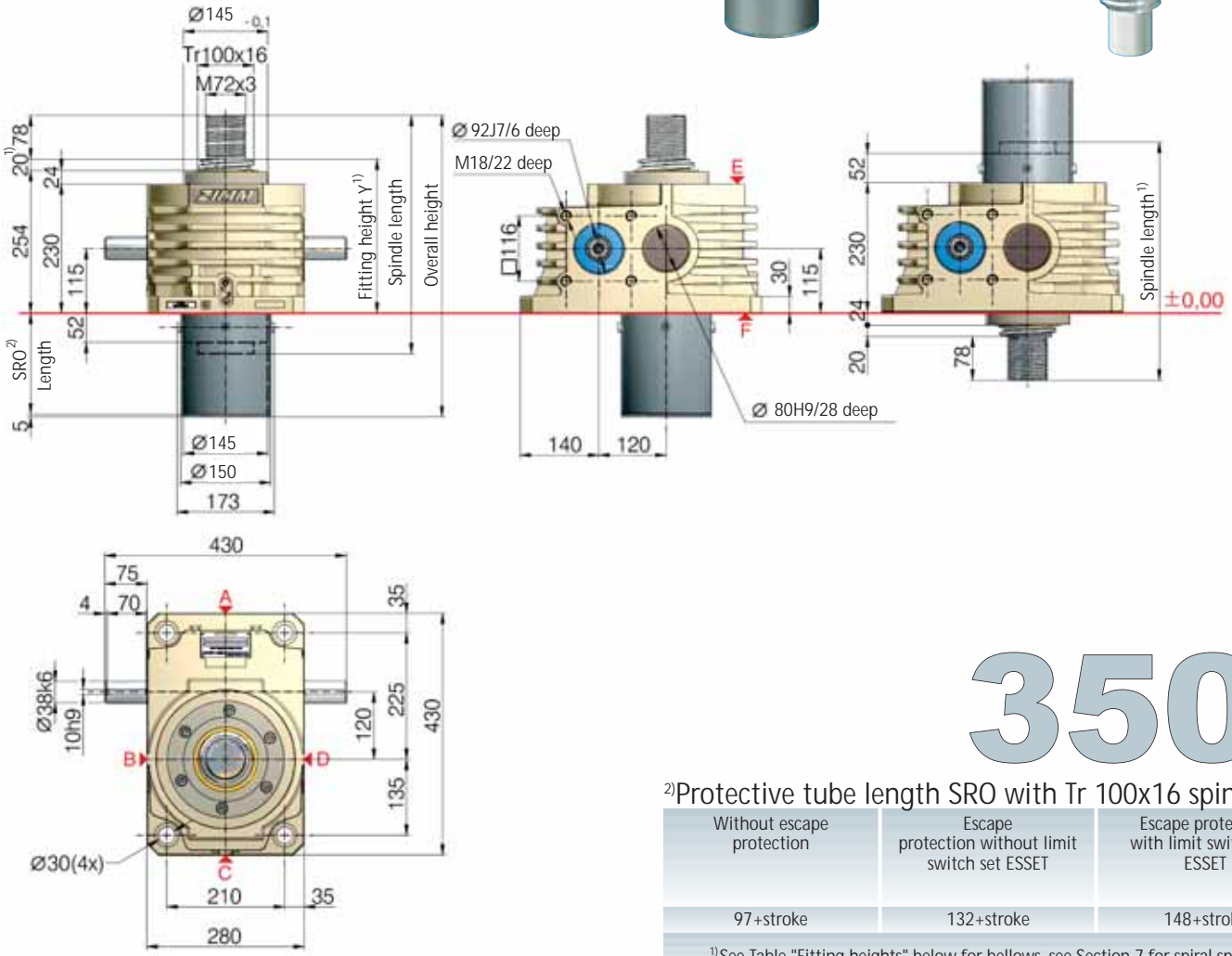
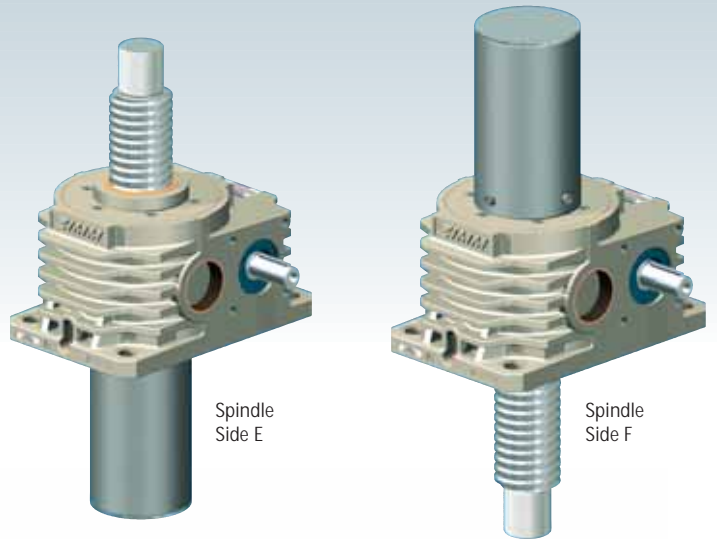
Standard options:



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Section 4.29 ○



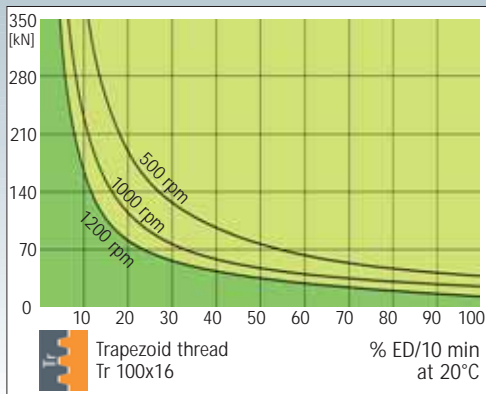
350 kN

²) Protective tube length SRO with Tr 100x16 spindle

Without escape protection	Escape protection without limit switch set ESSET	Escape protection with limit switch set ESSET
97+stroke	132+stroke	148+stroke

¹) See Table "Fitting heights" below for bellows, see Section 7 for spiral springs

Duty cycle, thermal limit, for S+R



This chart provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torque for optimum service life is shown on the right (1500 rpm) and on page 2.15

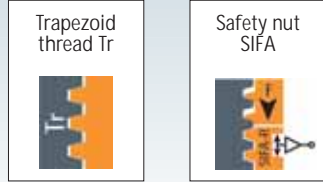
Fitting heights for 0-stroke, with Tr 100x16 spindle

	Standard spindle end*	Fixing flange BF	Forked head GK*	Rod end KGK*	Pivot bearing head SLK
Bellocs FB					
	All dimensions in mm				
	X/Y	X/Y	X/Y	X/Y	X/Y
Without FB	159/274	239/354	-	-	354/469
Z-350-FB-600	262/377	317/432	-	-	432/547
Z-350-FB-900	270/385	325/440	-	-	440/555
Z-350-FB-1500	342/457	397/512	-	-	512/627

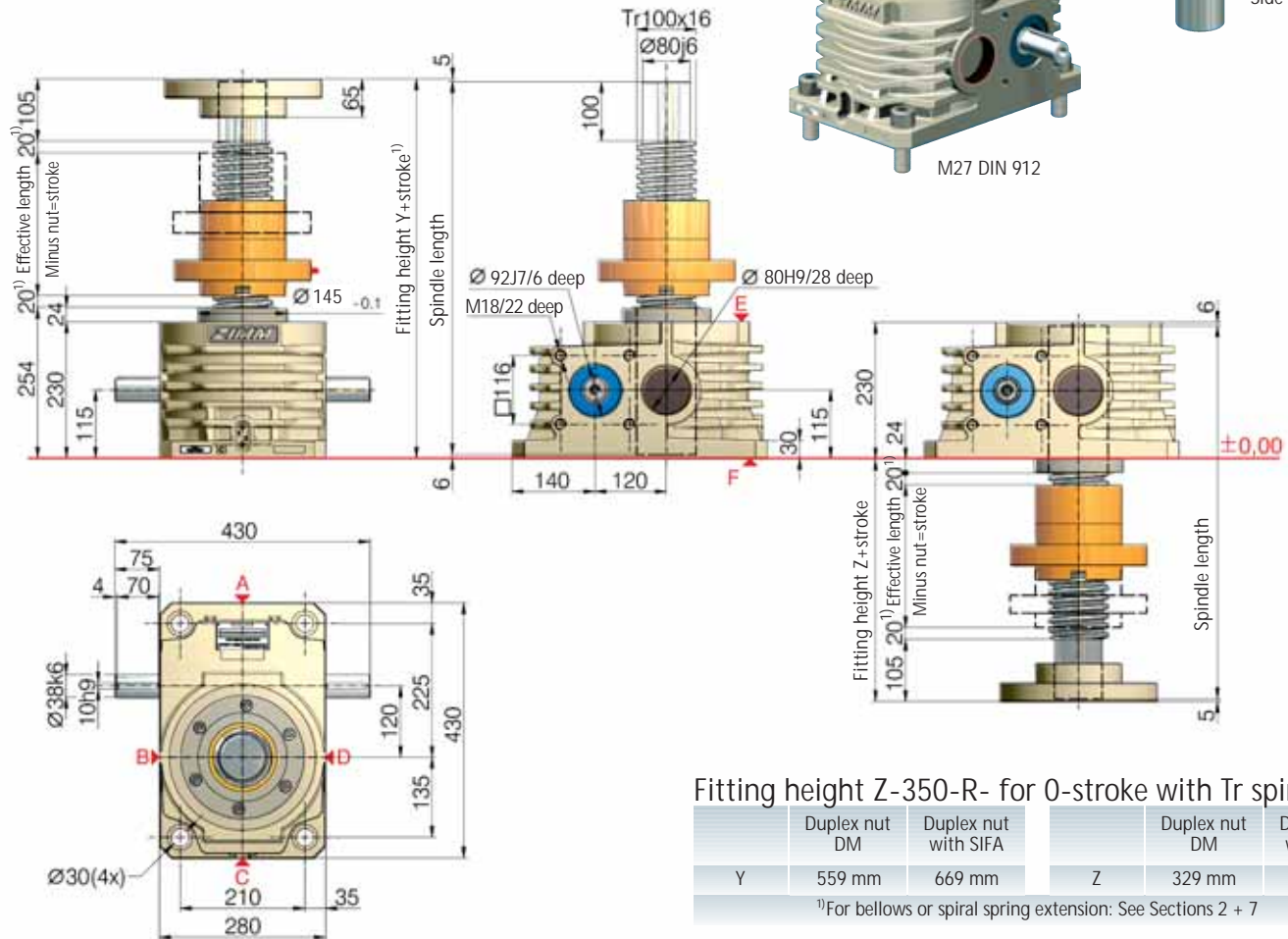
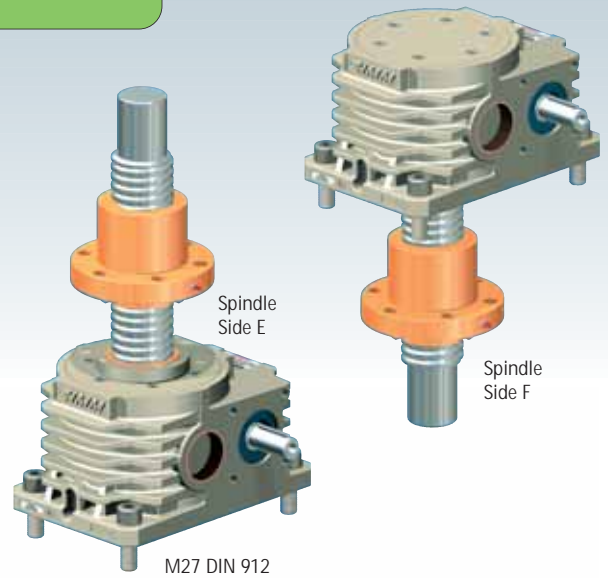
* With bellows connecting ring Z-250-FBR



Standard options:



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Fitting height Z-350-R- for 0-stroke with Tr spindle

	Duplex nut DM	Duplex nut with SIFA		Duplex nut DM	Duplex nut with SIFA
Y	559 mm	669 mm	Z	329 mm	439 mm

¹⁾For bellows or spiral spring extension: See Sections 2 + 7

Standard ratios

Version	Type	Speed	Standard spindle ¹⁾	i	Stroke per drive shaft rotation ⁵⁾
Z-350-SN	Standing spindle	Normal	Tr 100x16	10.66:1	1.5 mm
Z-350-SL		Low		32:1	0.5 mm
Z-350-RN	Rotating spindle	Normal	Tr 100x16	10.66:1	1.5 mm
Z-350-RL		Low		32:1	0.5 mm

Technical data series Z-350-S / Z-350-R

Max. compression / tensile force, static - 350 kN (35 t)
 Max. compression / tensile force, dynamic - see diagram on the left page
 Nominal speed - 1000 rpm
 Max. drive shaft speed - 1200 rpm
 Spindle dimension, standard - Tr 100x16²⁾
 Gear reduction - 10.66:1 (N) / 32:1 (L)
 Housing material - GGG-50, protected against corrosion
 Worm shaft - steel, case-hardened, ground, protected against corrosion
 Weight of screw jack - 112 kg
 Weight of spindle/m - 52 kg
 Gearbox lubrication - synth. ZIMM-Fluid-Grease
 Spindle lubrication - synth. ZIMM-Grease-Paste
 Gearbox operating temperature - max. 80°C, higher on request
 Mass moment of inertia - N: 148.9 kg cm²
 - L: 66.1 kg cm²
 Input torque (at 1500 rpm) - max. 265 Nm (N), max. 100 Nm (L)
 Drive-through torque - max. 1800 Nm

Drive torque M_e (Nm) - F (kN) x 1.09³⁾⁵⁾ + M_i (N-Normal)
 - F (kN) x 0.42³⁾⁵⁾ + M_i (L-Low)
 Breakaway torque - drive torque M_e x 1.5
 Idling torque M_i (Nm) - 3.24 (N-Normal)
 - 2.20 (L-Low)



Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 20 mm!
 See Section 2 for the Checklist.

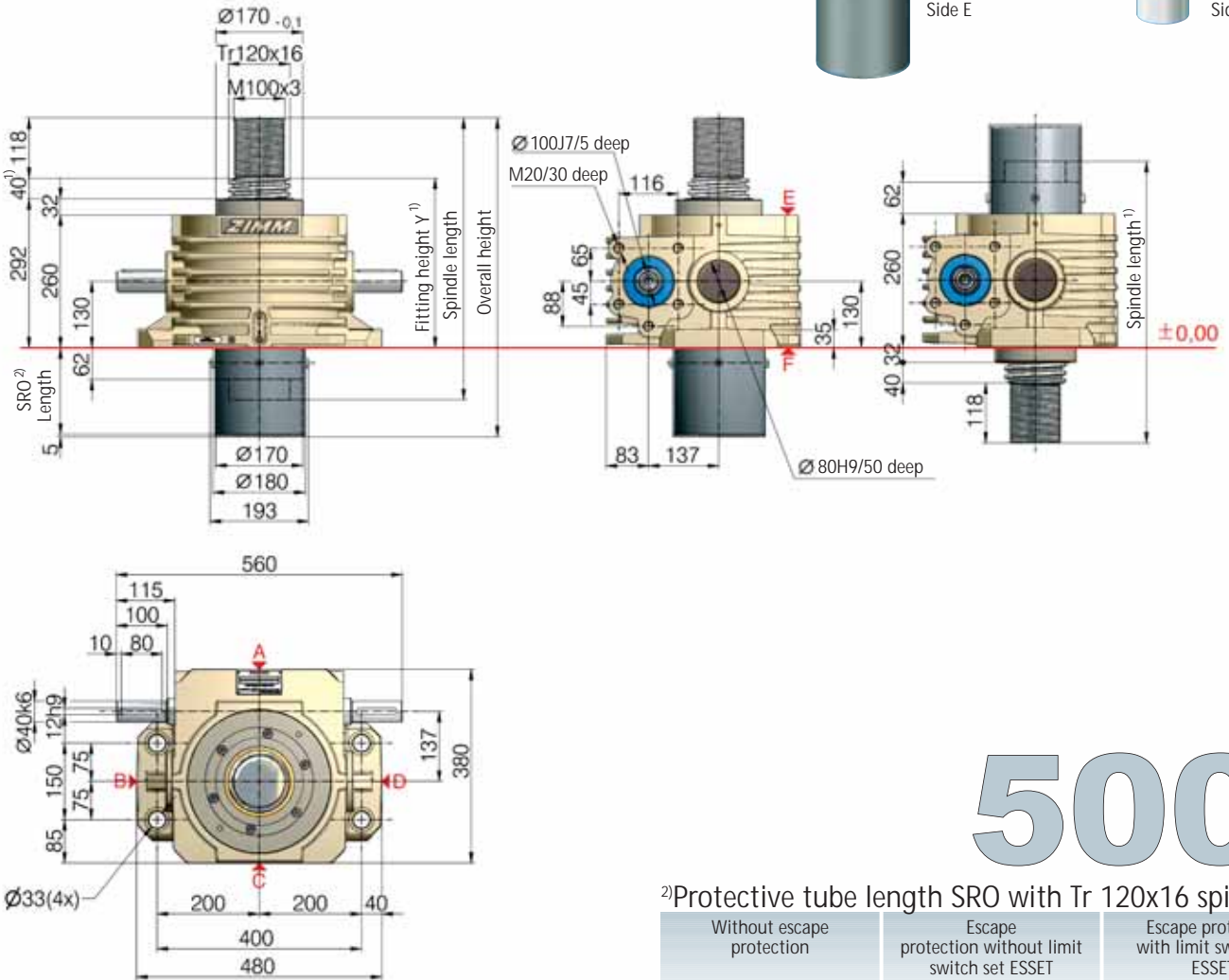
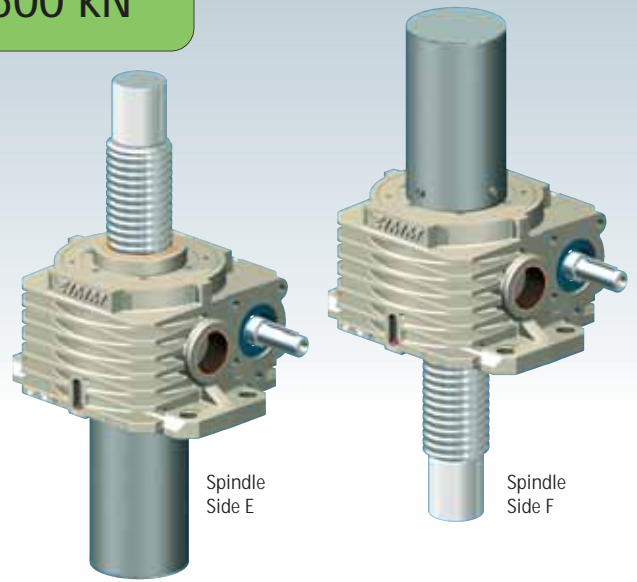
Important information

- 1) - For bellows or spiral spring extension: See Sections 2 + 7
- 2) - Tr 100x16 is standard, others available: 2-pitch, INOX (stainless steel), left-handed, stronger spindle Tr 120x16 (only for R version)
- 3) - Factor includes efficiency, ratio and 30% safety
- 4) - Can be higher when new
- 5) - For 16 mm spindle pitch



Standard options:

<p>Trapezoid thread Tr</p> 	<p>Safety nut SIFA</p> 
This page ●	Section 4.29 ○

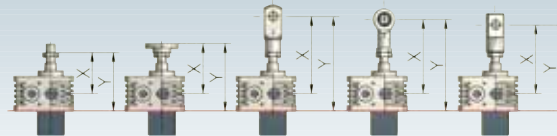


500 kN

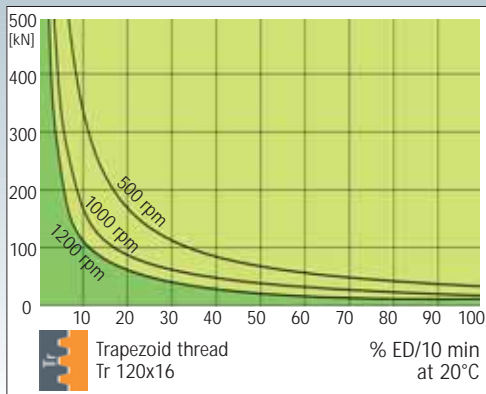
²⁾Protective tube length SR0 with Tr 120x16 spindle

Without escape protection	Escape protection without limit switch set ESSET	Escape protection with limit switch set ESSET
152+stroke	192+stroke	192+stroke

Fitting heights for 0-stroke, with Tr 120x16 spindle

	Standard spindle end*	Fixing flange BF	Forked head GK*	Rod end KGK*	Pivot bearing head SLK
					
<p>Bellocs FB</p> <p>▼</p> <p>All dimensions in mm</p>	X/Y	X/Y	X/Y	X/Y	X/Y
Without FB	202/332	322/452	-	-	447/577



Duty cycle, thermal limit, for S+R

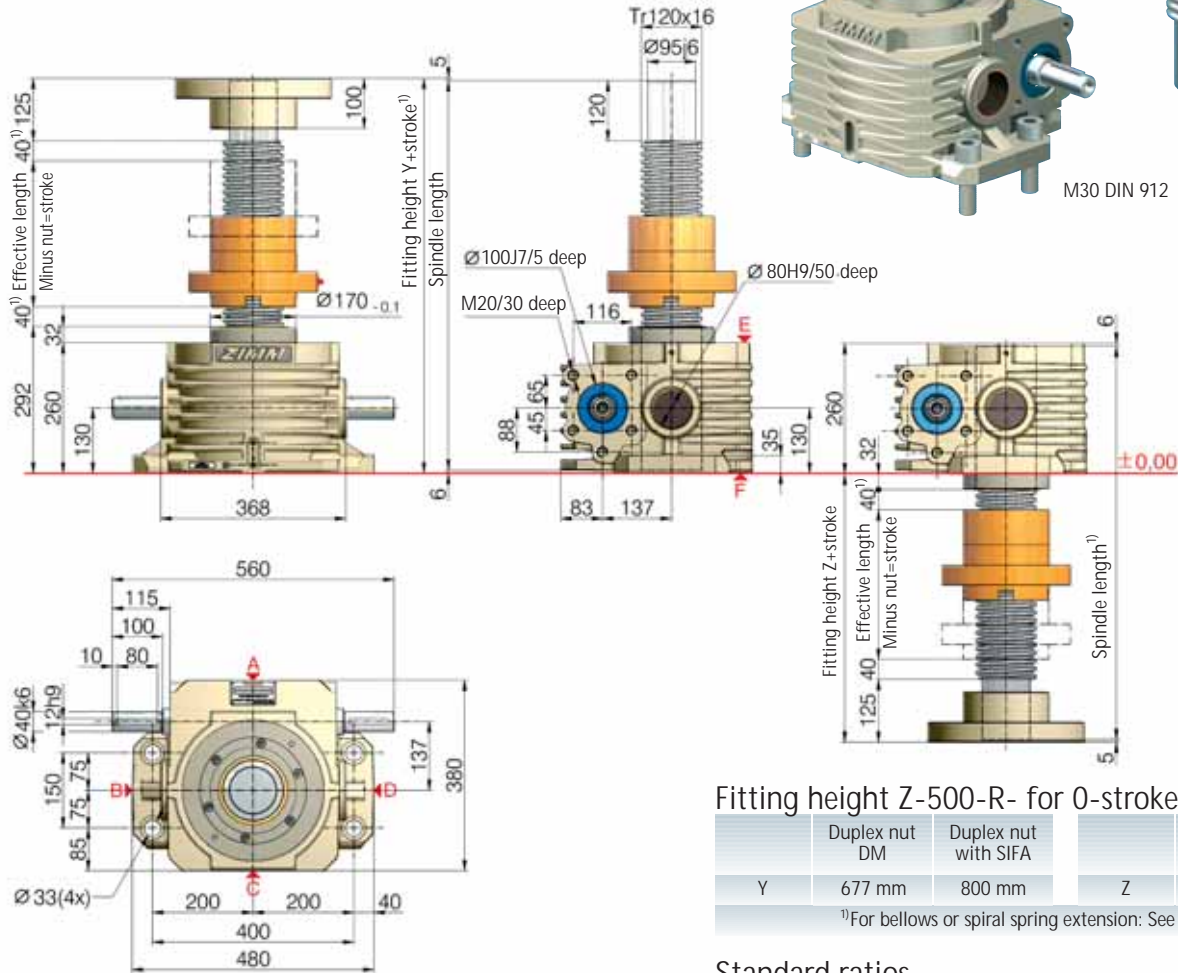
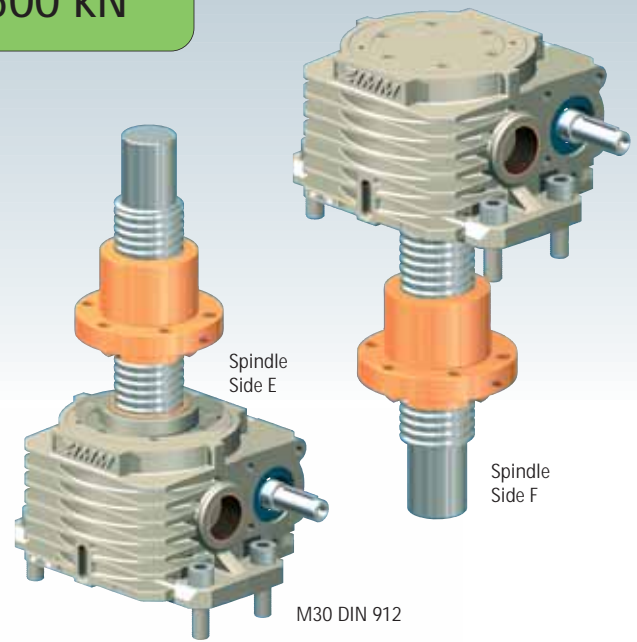


This chart provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torque for optimum service life is shown on the right (1500 rpm) and on page 2.15



Standard options:

<p>Trapezoid thread Tr</p> 	<p>Safety nut SIFA</p> 
This page ●	Section 4.30 ●



Fitting height Z-500-R- for 0-stroke with Tr spindle

	Duplex nut DM	Duplex nut with SIFA		Duplex nut DM	Duplex nut with SIFA
Y	677 mm	800 mm	Z	417 mm	540 mm

¹⁾For bellows or spiral spring extension: See Sections 2 + 7

Standard ratios

Version	Type	Speed	Standard spindle ¹⁾	i	Stroke per drive shaft rotation ⁵⁾
Z-500-SN	Standing spindle	Normal	Tr 120x16	10.66:1	1.5 mm
Z-500-SL		Low		32:1	0.5 mm
Z-500-RN	Rotating spindle	Normal	Tr 120x16	10.66:1	1.5 mm
Z-500-RL		Low		32:1	0.5 mm

Technical data series Z-500-S / Z-500-R

Max. compression / tensile force, static - 500 kN (50 t)
 Max. compression / tensile force, dynamic - see diagram on the left page
 Nominal speed - 1000 rpm
 Max. drive shaft speed - 1000 rpm
 Spindle dimension, standard - Tr 120x16²⁾
 Gear reduction - 10.66:1 (N) / 32:1 (L)
 Housing material - GGG 50, protected against corrosion
 Worm shaft - steel, case-hardened, ground, protected against corrosion
 Weight of screw jack - 168 kg
 Weight of spindle/m - 77 kg
 Gearbox lubrication - synth. ZIMM-Fluid-Grease
 Spindle lubrication - synth. ZIMM-Grease-Paste
 Gearbox operating temperature - max. 80°C, higher on request
 Mass moment of inertia - N: 310.2 kg cm²
 - L: 127.8 kg cm²
 Input torque (at 1500 rpm) - max. 408 Nm (N), max. 170 Nm (L)
 Drive-through torque - max. 1940 Nm

Drive torque M_e (Nm) - F (kN) x 1.24^{3/5)} + M_i (N-Normal)
 - F (kN) x 0.50^{3/5)} + M_i (L-Low)
 Breakaway torque - drive torque M_e x 1.5
 Idling torque ⁴⁾M_i (Nm) - 3.96 (N-Normal)
 - 2.84 (L-Low)



Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 40 mm!
 See Section 2 for Checklists.

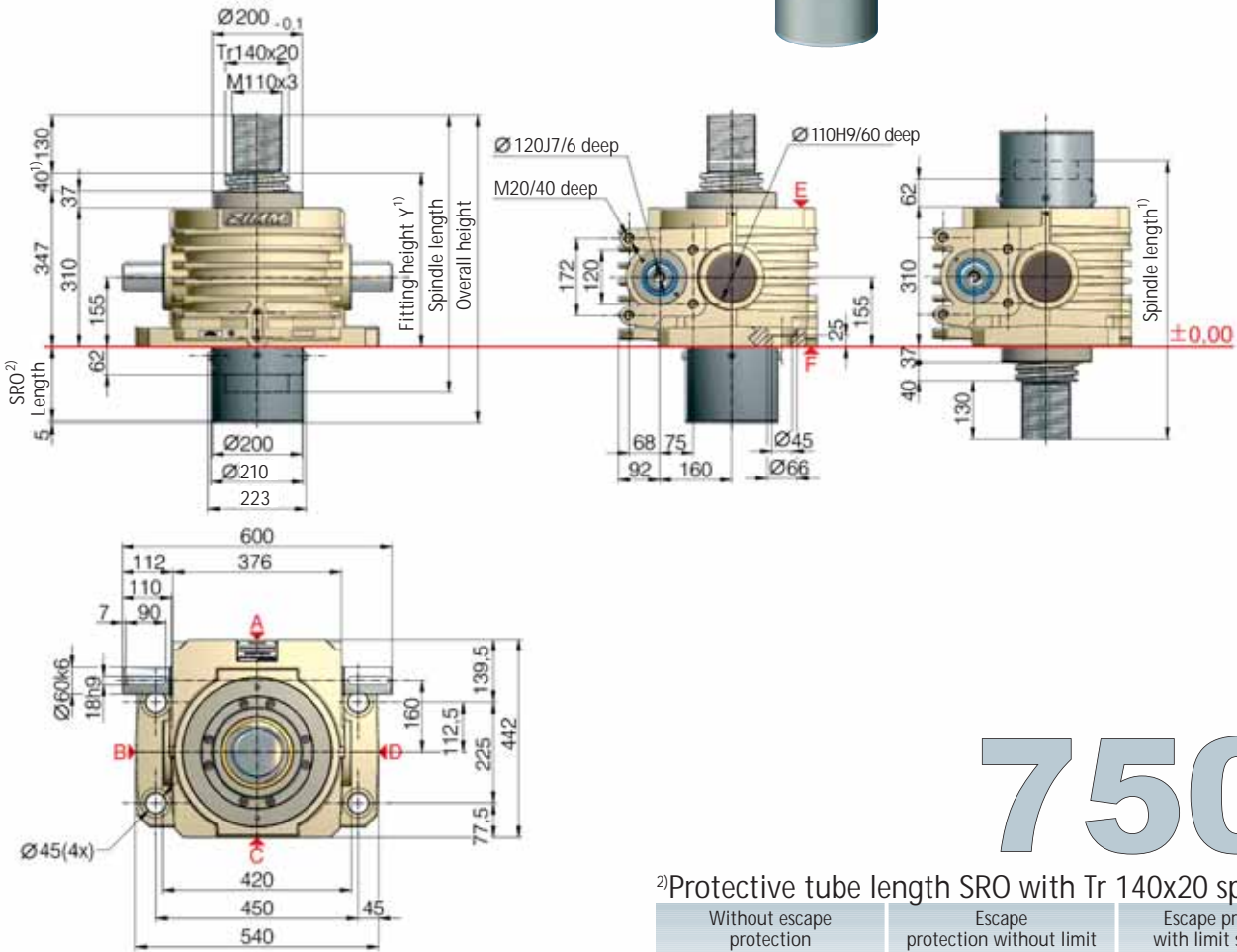
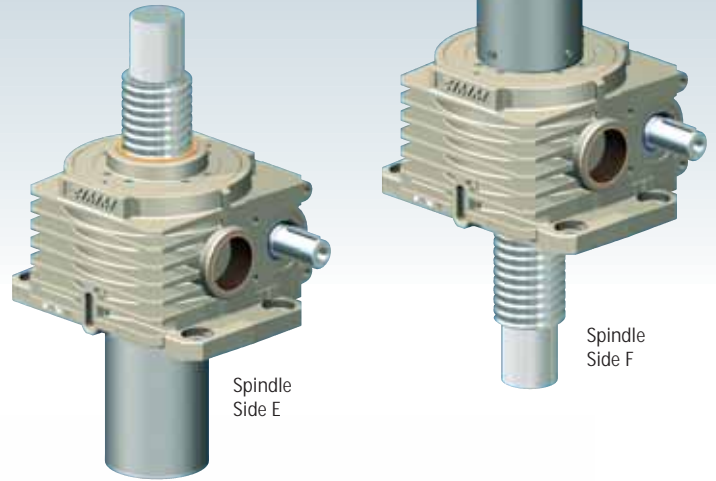
Important information

- 1) - For bellows or spiral spring extension: See Sections 2 + 7
- 2) - Tr 120x16 is standard, others available: 2-pitch, INOX (stainless steel), left-handed, stronger spindle Tr 140x20 (only for R version)
- 3) - Factor includes efficiency, ratio and 30% safety
- 4) - Can be higher when new
- 5) - For 16 mm spindle pitch



Standard options:

<p>Trapezoid thread Tr</p>  <p>This page ●</p>	<p>Safety nut SIFA</p>  <p>Section 4.29 ○</p>
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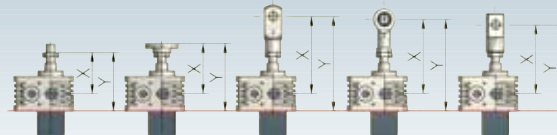


750 kN

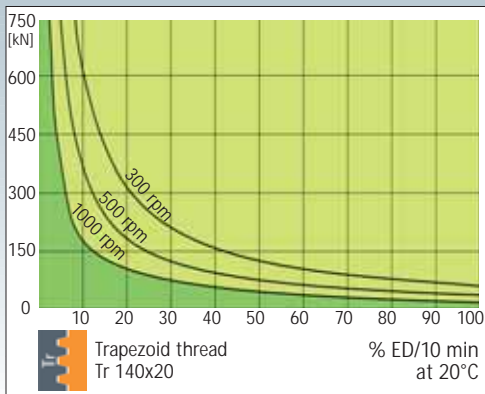
²⁾Protective tube length SRO with Tr 140x20 spindle

Without escape protection	Escape protection without limit switch set ESSET	Escape protection with limit switch set ESSET
152+stroke	192+stroke	192+stroke

Fitting heights for 0-stroke, with Tr 140x20 spindle

	Standard spindle end*	Fixing flange BF	Forked head GK*	Rod end KGK*	Pivot bearing head SLK
 <p>Bellocs FB</p> <p>All dimensions in mm</p>	X/Y	X/Y	X/Y	X/Y	X/Y
Without FB	232/387	364/519	-	-	-

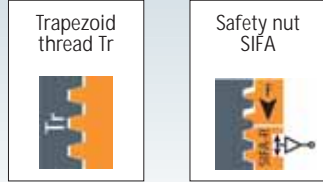
Duty cycle, thermal limit, for S+R



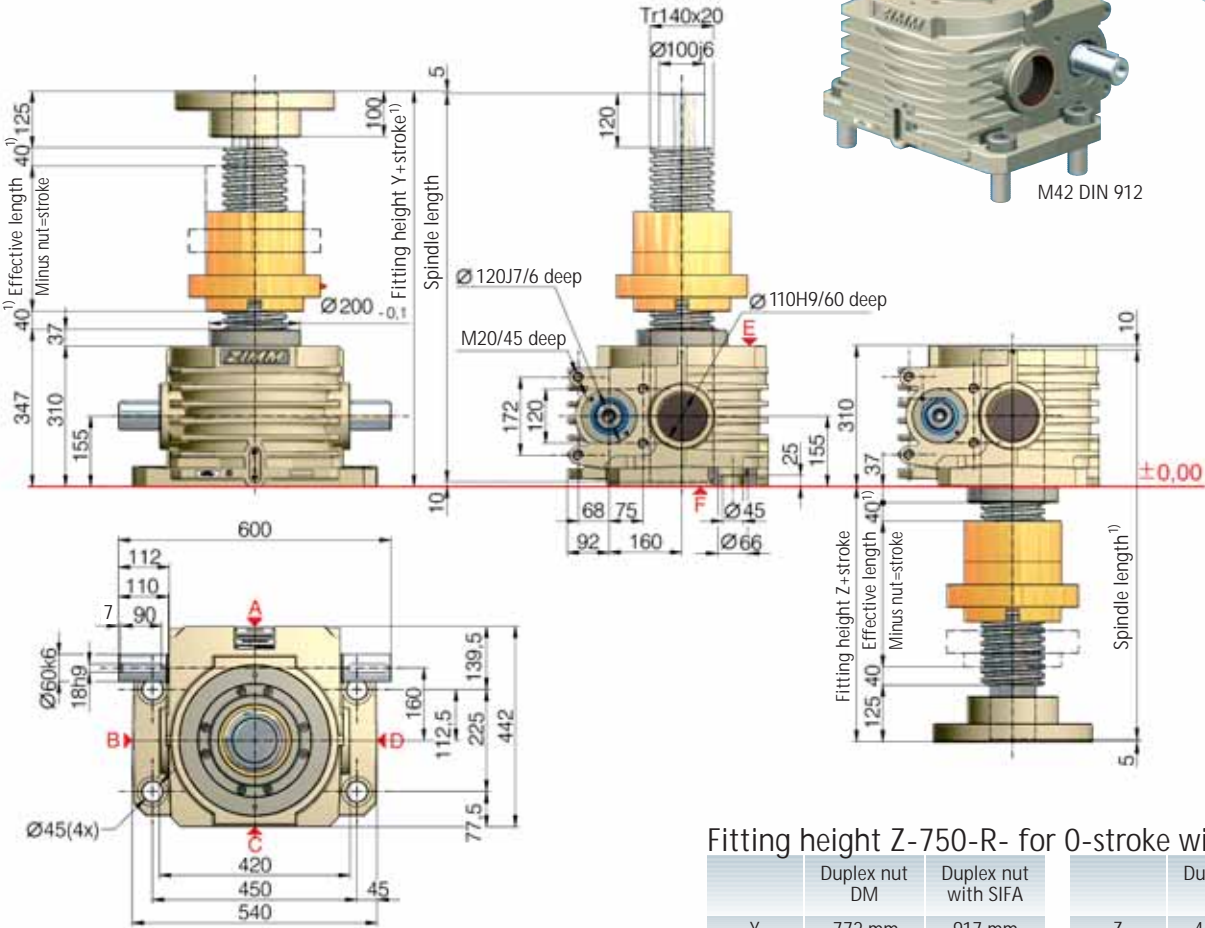
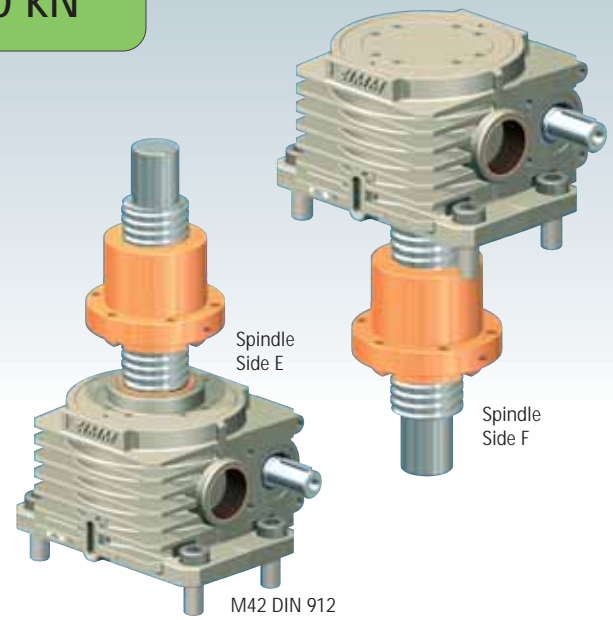
This chart provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torque for optimum service life is shown on the right (1500 rpm) and on page 2.15



Standard options:



This page ● Section 4.30 ●



Fitting height Z-750-R- for 0-stroke with Tr spindle

	Duplex nut DM	Duplex nut with SIFA		Duplex nut DM	Duplex nut with SIFA
Y	772 mm	917 mm	Z	462 mm	607 mm

Standard ratios

Version	Type	Speed	Standard spindle ¹⁾	i	Stroke per drive shaft rotation ⁵⁾
Z-750-SN	Standing spindle	Normal	Tr 140x20	13.33:1	1.5 mm
Z-750-SL		Low		40:1	0.5 mm
Z-750-RN	Rotating spindle	Normal	Tr 140x20	13.33:1	1.5 mm
Z-750-RL		Low		40:1	0.5 mm

Technical data series Z-750-S / Z-750-R

Max. compression / tensile force, static - 750 kN (75 t)
 Max. compression / tensile force, dynamic - see diagram on the left page
 Nominal speed - 1000 rpm
 Max. drive shaft speed - 1000 rpm
 Spindle dimension, standard - Tr 140x20²⁾
 Gear reduction - 13.33:1 (N) / 40:1 (L)
 Housing material - GGG 50, protected against corrosion
 Worm shaft - steel, case-hardened, ground, protected against corrosion
 Weight of screw jack - 262 kg
 Weight of spindle/m - 104 kg
 Gearbox lubrication - synth. ZIMM-Fluid-Grease
 Spindle lubrication - synth. ZIMM-Grease-Paste
 Gearbox operating temperature - max. 80°C, higher on request
 Mass moment of inertia - N: 518.1 kg cm²
 - L: 256.1 kg cm²
 Input torque (at 1500 rpm) - max. 480 Nm (N), max. 210 Nm (L)
 Drive-through torque - max. 4570 Nm

Drive torque M_e (Nm) - F (kN) x 1.22^{3/5)} + M_i (N-Normal)
 - F (kN) x 0.54^{3/5)} + M_i (L-Low)
 Breakaway torque - drive torque M_e x 1.5
 Idling torque ⁴⁾ M_i (Nm) - 7.28 (N-Normal)
 - 4.42 (L-Low)



Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 40 mm!
 See Section 2 for Checklists.

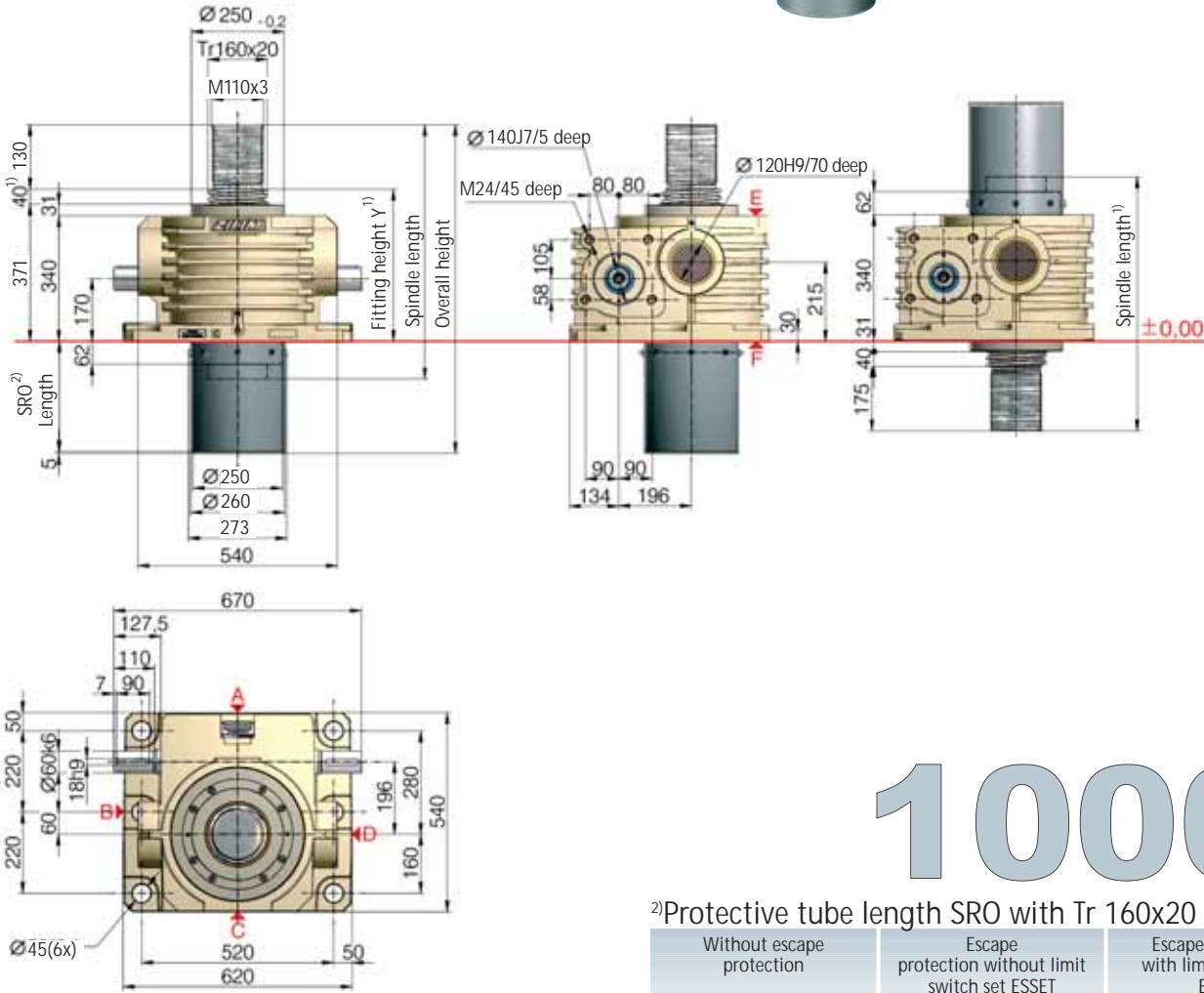
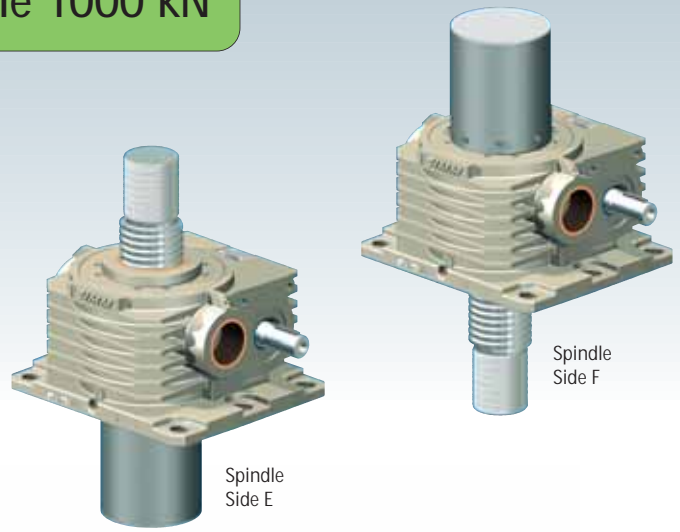
Important information

- 1) - For bellows or spiral spring extension: See Sections 2 + 7
- 2) - Tr 140x20 is standard, others available: 2-pitch, INOX (stainless steel), left-handed, stronger spindle Tr 160x20 (only for R version)
- 3) - Factor includes efficiency, ratio and 30% safety
- 4) - Can be higher when new
- 5) - For 20 mm spindle pitch



Standard options:

<p>Trapezoid thread Tr</p>  <p>This page ●</p>	<p>Safety nut SIFA</p>  <p>Section 4.29 ○</p>
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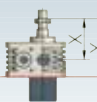
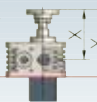
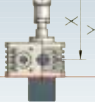
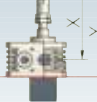
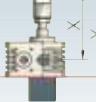


1000 kN

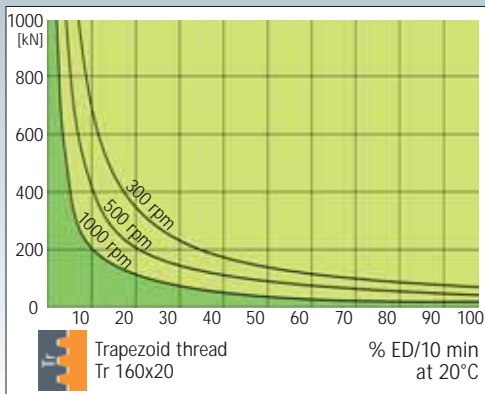
²⁾Protective tube length SRO with Tr 160x20 spindle

Without escape protection	Escape protection without limit switch set ESSET	Escape protection with limit switch set ESSET
152+stroke	192+stroke	192+stroke

Fitting heights for 0-stroke, with Tr 160x20 spindle

	Standard spindle end*	Fixing flange BF	Forked head GK*	Rod end KGK*	Pivot bearing head SLK
Bellocs FB					
	All dimensions in mm				
Without FB	X/Y 196/411	X/Y 328/543	-	-	-

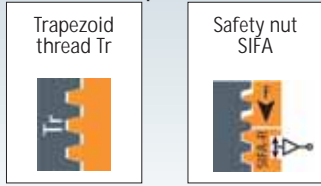
Duty cycle, thermal limit, for S+R



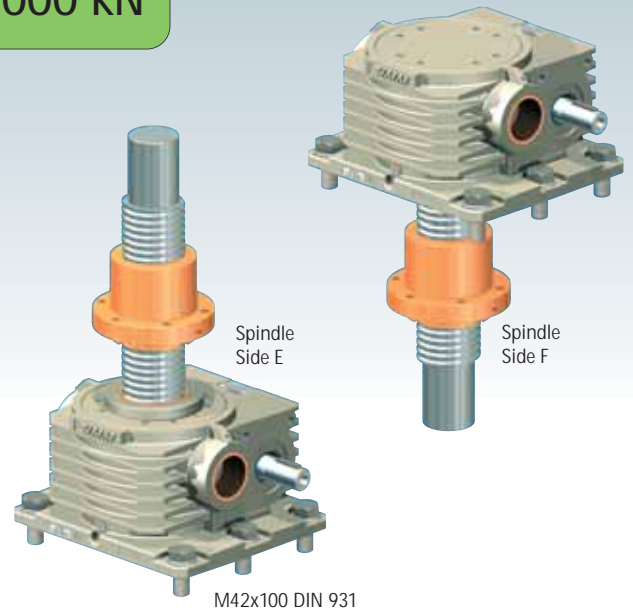
This chart provides approx. figures under standard industrial conditions (ambient temperature etc.) and regular maintenance (lubrication etc.). The maximum input torque for optimum service life is shown on the right (1500 rpm) and on page 2.15



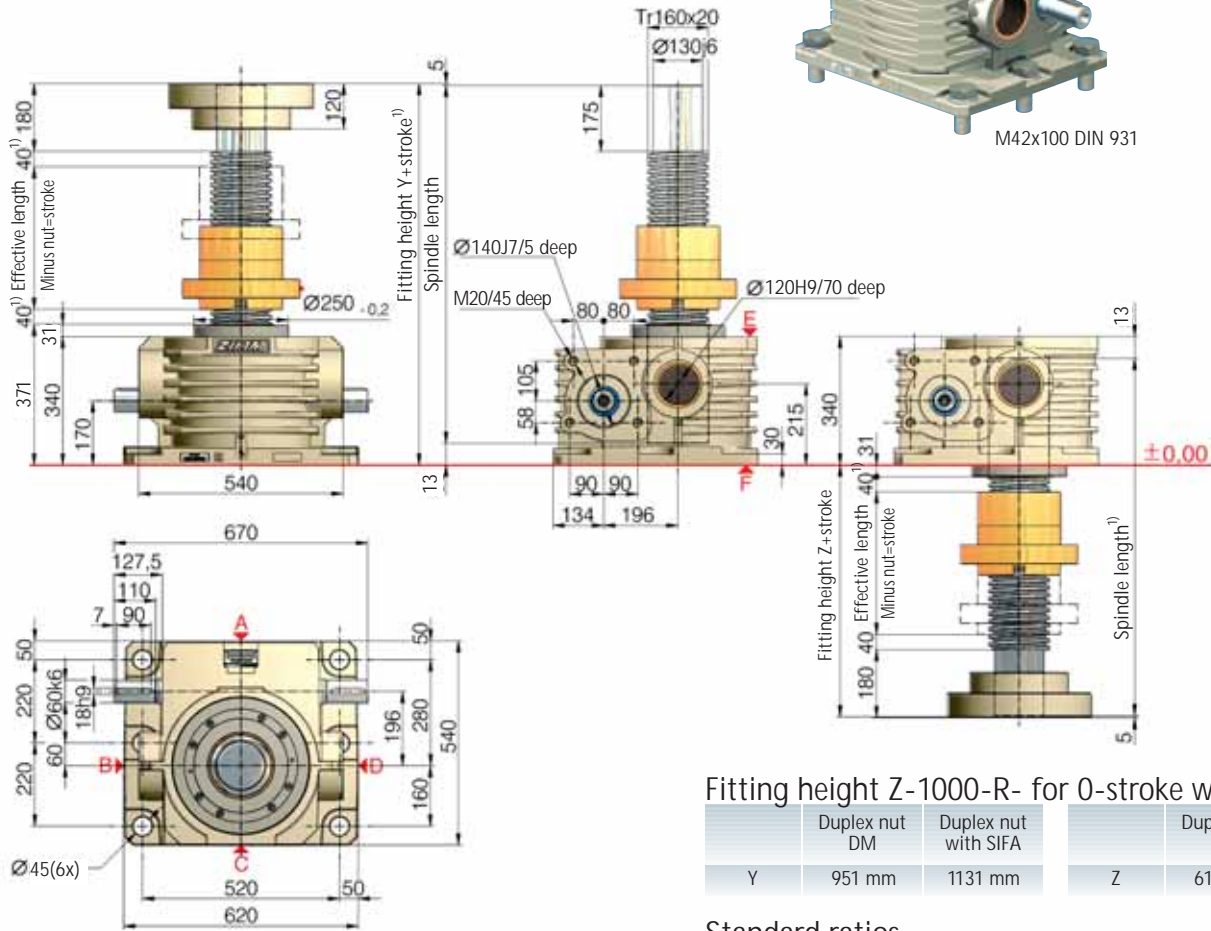
Standard options:



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M42x100 DIN 931



Fitting height Z-1000-R- for 0-stroke with Tr spindle

	Duplex nut DM	Duplex nut with SIFA		Duplex nut DM	Duplex nut with SIFA
Y	951 mm	1131 mm	Z	611 mm	791 mm

Standard ratios

Version	Type	Speed	Standard spindle ¹⁾	i	Stroke per drive shaft rotation ⁵⁾
Z-1000-SN	Standing spindle	Normal	Tr 160x20	13.33:1	1.5 mm
Z-1000-SL		Low		40:1	0.5 mm
Z-1000-RN	Rotating spindle	Normal	Tr 160x20	13.33:1	1.5 mm
Z-1000-RL		Low		40:1	0.5 mm

Technical data series Z-1000-S / Z-1000-R

- Max. compression / tensile force, static - 1000 kN (100 t)
- Max. compression / tensile force, dynamic - see diagram on the left page
- Nominal speed - 1000 rpm
- Max. drive shaft speed - 1000 rpm
- Spindle dimension, standard - Tr 160x20²⁾
- Gear reduction - 13.33:1 (N) / 40:1 (L)
- Housing material - GGG 50, protected against corrosion
- Worm shaft - steel, case-hardened, ground, protected against corrosion
- Weight of screw jack - 408 kg
- Weight of spindle/m - 139 kg
- Gearbox lubrication - synth. ZIMM-Fluid-Grease
- Spindle lubrication - synth. ZIMM-Grease-Paste
- Gearbox operating temperature - max. 80°C, higher on request
- Mass moment of inertia - N: 1058.2 kg cm²
- L: 459.2 kg cm²
- Input torque (at 1500 rpm) - max. 680 Nm (N), max. 450 Nm (L)
- Drive-through torque - max. 4570 Nm

- Drive torque M_e (Nm) - F (kN) x 1.32³⁾⁵⁾ + M_i (N-Normal)
- F (kN) x 0.51³⁾⁵⁾ + M_i (L-Low)
- Breakaway torque - drive torque M_e x 1.5
- Idling torque ⁴⁾M_i (Nm) - 9.70 (N-Normal)
- 5.90 (L-Low)

Between gearbox and nut or nut and end of threads provide for a safety distance of (minimum) 40 mm!
See Section 2 for Checklists.

Important information

- 1) - For bellows or spiral spring extension: See Sections 2 + 7
- 2) - Tr 160x20 is standard, others available: 2-pitch, INOX (stainless steel), left-handed, stronger spindle Tr 190x24 (only for R version)
- 3) - Factor includes efficiency, ratio and 30% safety
- 4) - Can be higher when new
- 5) - For 20 mm spindle pitch





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