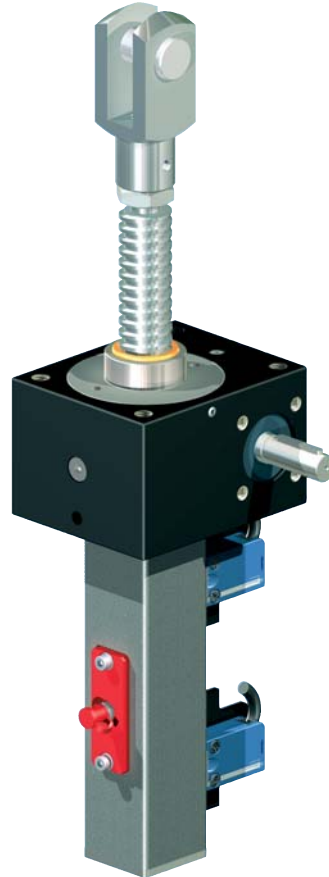
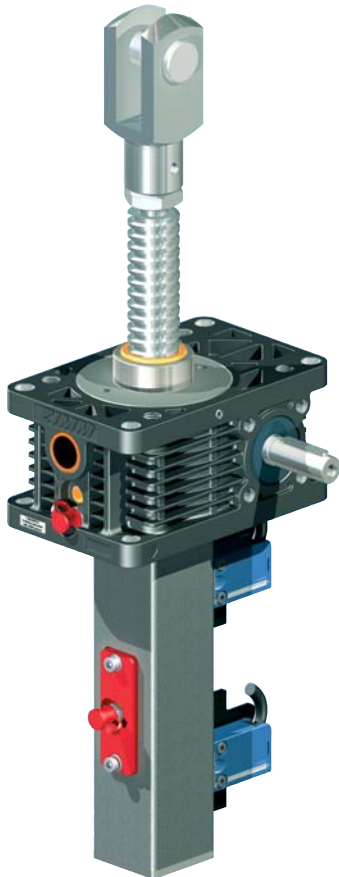


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**Screw Jack Systems  
MSZ Alu series**

The preferred range  
with full range

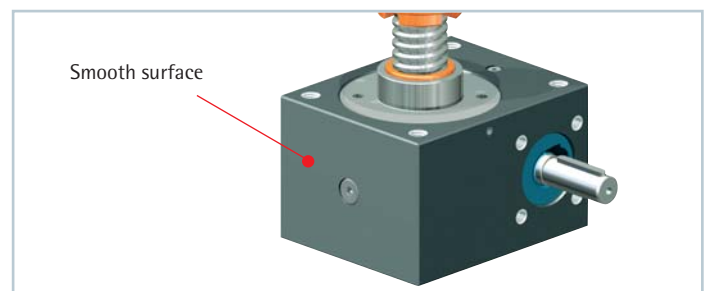
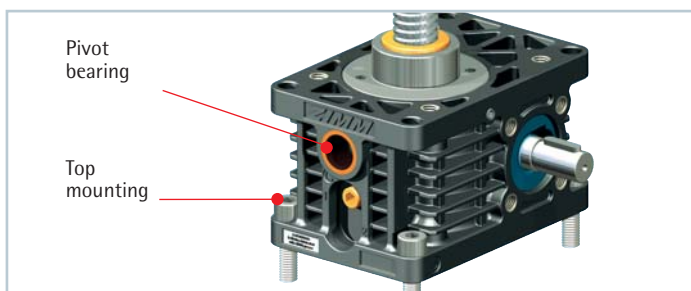


## Z series

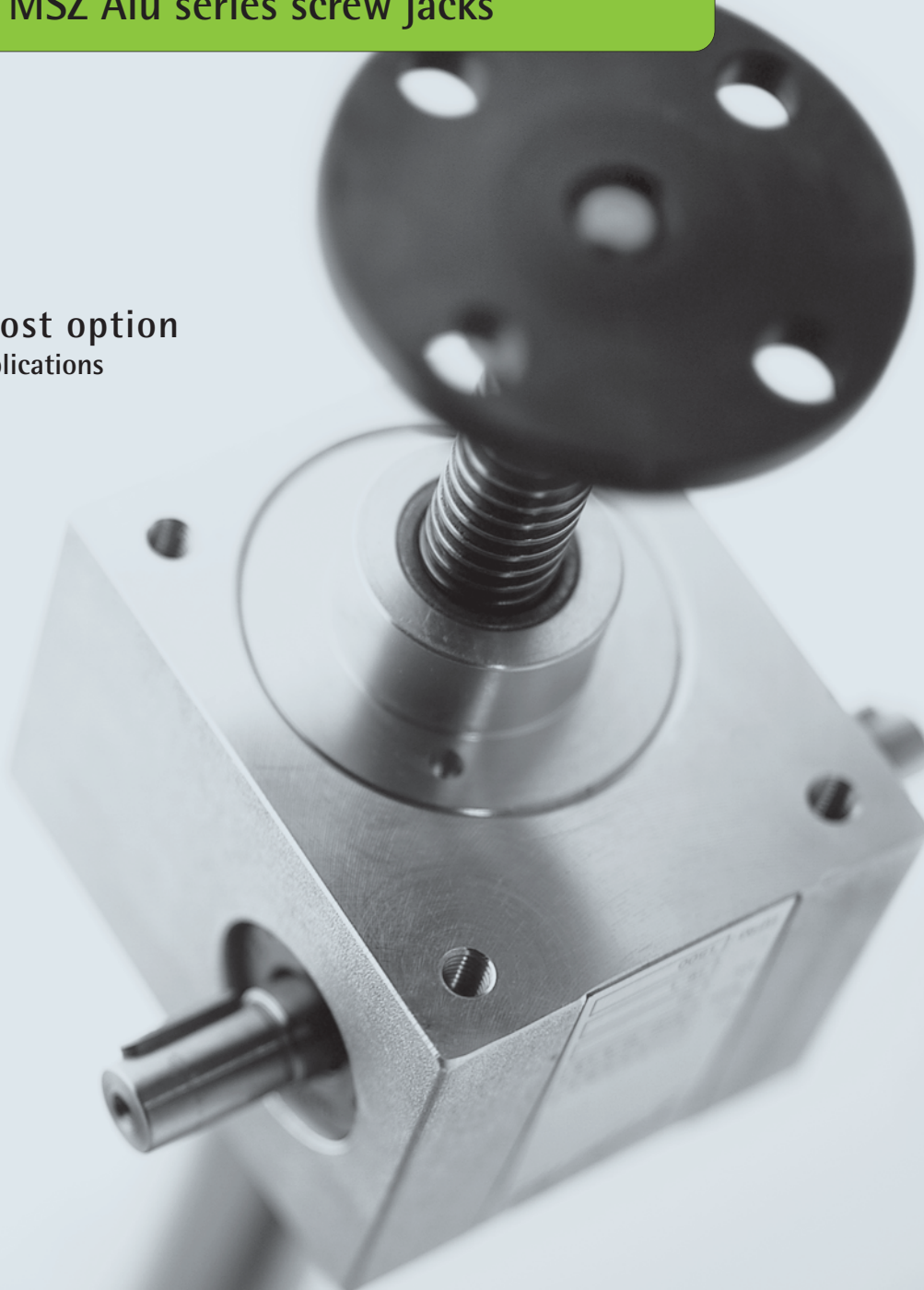
Z series screw jacks are the preferred range with the largest number of types. The Z series feature through holes for top mounting and integral pivot bearings, features not available on the GSZ series

## GSZ series

GSZ series screw jacks are designed for applications where smooth surface are required. These screw jacks are easier to clean.



The low-cost option  
for simple applications



## MSZ Alu series

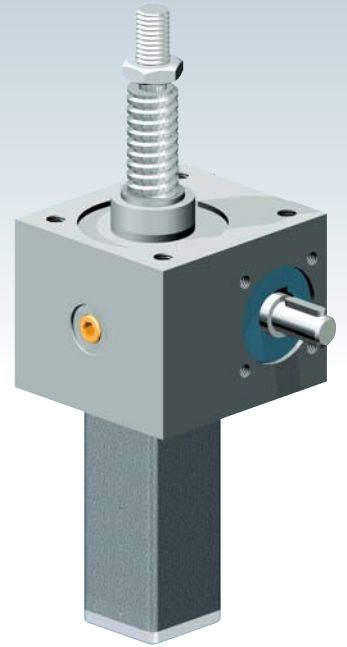
The MSZ Alu gearboxes are low-cost options for simple applications such as manual control or motor operation with lower duty cycle. So, the stroke applications can be realized economically.

*Peter Gridling, Sales Manager at ZIMM, Austria*

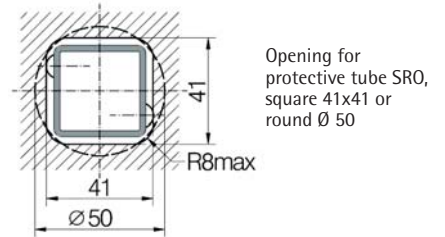
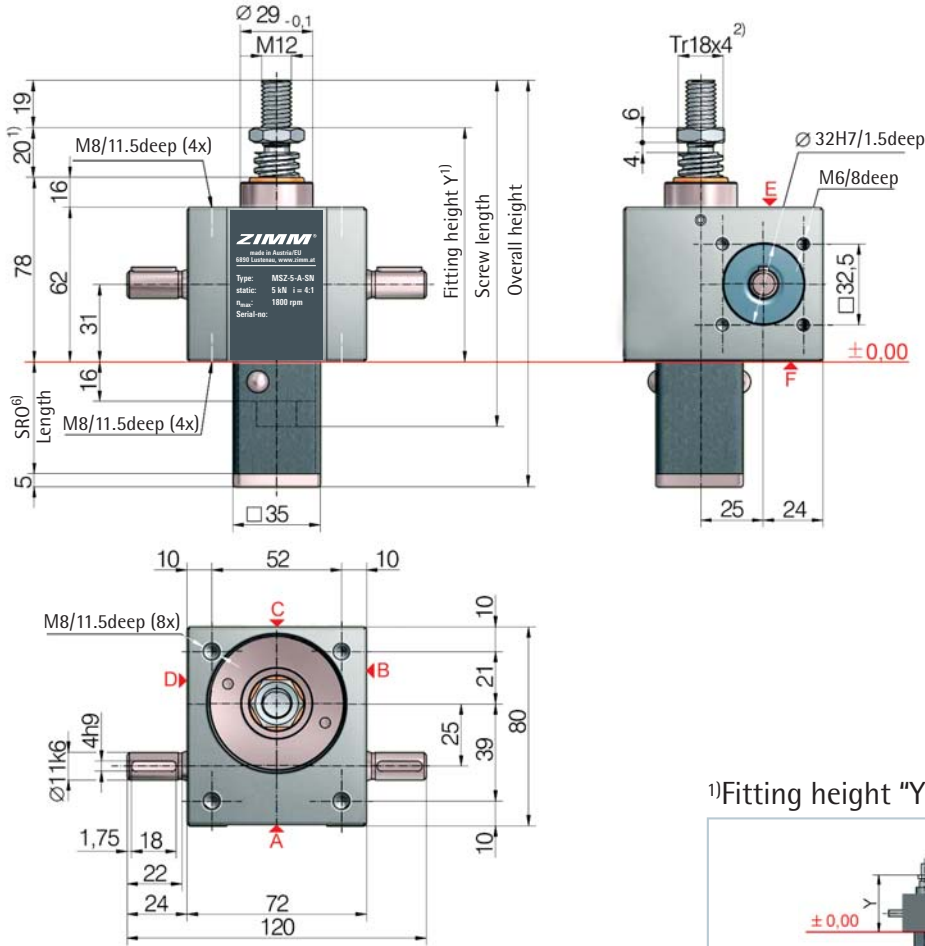


### FACTS: MSZ Alu series

- Size 5 kN, 10 kN, 25 kN
- For simple, minor applications
- Manual adjustment
- Motor operation with lower duty cycle
- Customary dimensions



MSZ-5-A-S translating screw 5 kN

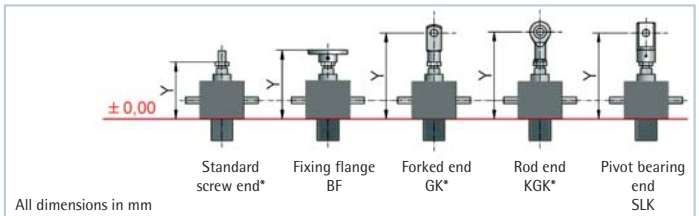


6) Protective tube length SRO with Tr 18x4 screw

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

\*Hinged bearing plate KAR, fitted on face F (below).

1) Fitting height "Y" for 0-stroke, with Tr 18x4 screw



All dimensions in mm

Bellocs FB	Y	Y	Y	Y	Y
without bellocs 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

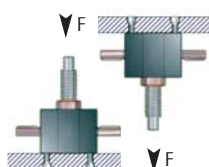
\*with bellocs fixing ring Z-5-FBR

Standard ratios

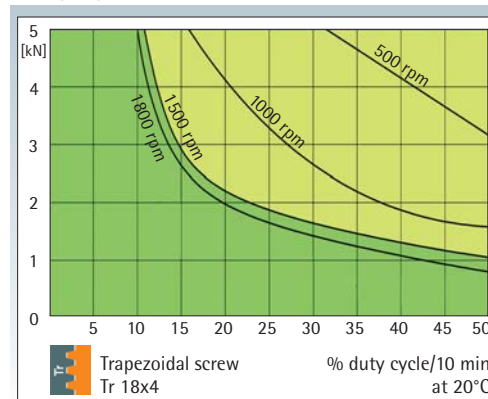
Type	Version	Speed	Standard screw <sup>2)</sup>	i	Stroke per drive shaft rotation <sup>5)</sup>
MSZ-5-A-SN	Translating	Normal	Tr 18x4	4:1	1.00 mm
MSZ-5-A-SL	screw	Low speed		16:1	0.25 mm
MSZ-5-A-RN	Rotating	Normal	Tr 18x4	4:1	1.00 mm
MSZ-5-A-RL	screw	Low speed		16:1	0.25 mm

Screw jack mounting

- max. load: 5 kN compressive and tensile load
- Screw: M8, strength class 8.8
- Screw-in depth: 10 to 11.5 mm
- Tightening torque: 19 Nm
- Screw locking: with Loctite 243



Duty cycle thermal limit, for S+R



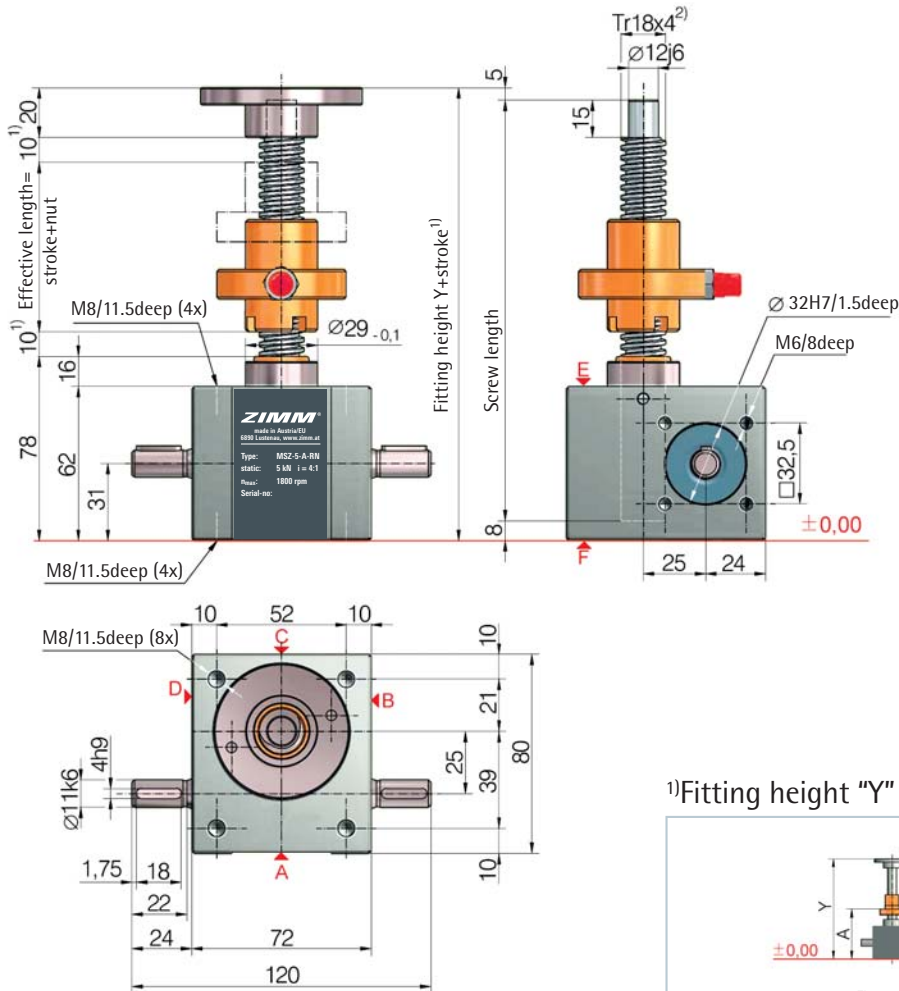
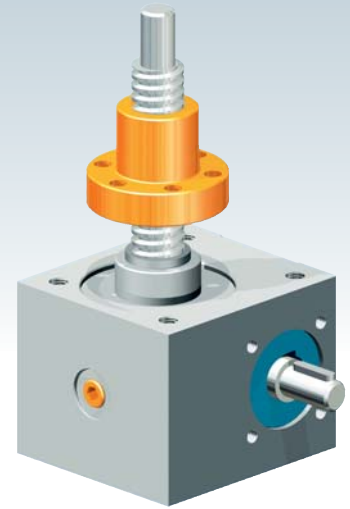
These curves are for guidance under standard industrial conditions (ambient temperature etc.) and correct maintenance (lubrication etc.). The max. input drive torques for optimum service life are at the right page - technical data (1500 rpm).

Trapezoidal screw

Tr



## MSZ-5-A-R rotating screw 5 kN



<sup>1)</sup>Fitting height "Y" for 0-stroke, with Tr 18x4 screw

All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greasless nut FFDM
	Y/A	Y/A	Y/A	Y/A	Y/A
Bellows FB	153/100	163/113	188/138	196/145	171/121
without bellows FB	-	211/136	233/158	244/168	219/144
2x Z-5-FB-265	-	341/201	363/223	374/233	349/209
2x Z-5-FB-500	-	381/221	401/243	414/253	389/229

Detailed instructions for determining the length can be found in catalogue XII (Section 8)

# 5

kN

## Technical data series MSZ-5-A-S / MSZ-5-A-R

max. compressive/tensile force, static	- 5 kN (500 kg)
max. compressive/tensile force, dynamic	- see duty cycle curves
Nominal speed	- 1500 rpm
max. drive shaft speed	- 3000 rpm (depending on the load and duty cycle)
Screw size standard	- Tr 18x4 <sup>2)</sup>
Gear ratio	- 4:1 (N) / 16:1 (L)
Housing material	- aluminium
Worm shaft	- steel
Weight of screw jack body	- 1.04 kg
Weight of screw/m	- 1.58 kg
Gearbox lubrication	- grease lubrication
Screw lubrication	- grease lubrication
Gearbox operating temperature	- max. 60°C, higher on request
Moment of inertia	- N: 0.217 kg cm <sup>2</sup> / L: 0.117 kg cm <sup>2</sup>
Input torque (at 1500 rpm)	- max. 4.7 Nm (N) / max. 1.5 Nm (L)
Drive-through torque	- max. 39 Nm

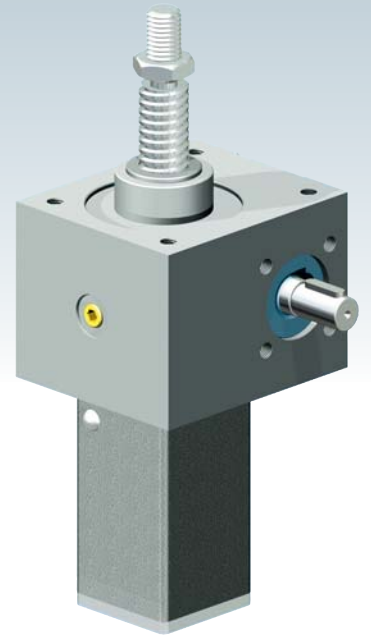
Drive torque $M_G$ (Nm)	- $F$ (kN) $\times$ 0.62 <sup>3)5)</sup> + $M_L$ (N-normal)
Breakaway torque	- $F$ (kN) $\times$ 0.21 <sup>3)5)</sup> + $M_L$ (L-low speed)
Idling torque <sup>4)</sup> $M_L$ (Nm)	- Drive torque $M_G$ $\times$ 1.5
	- 0.10 (N-normal) / 0.08 (L-low speed)

Between gearbox and nut or nut and end of thread, provide for a safety distance of (minimum) 10 mm!

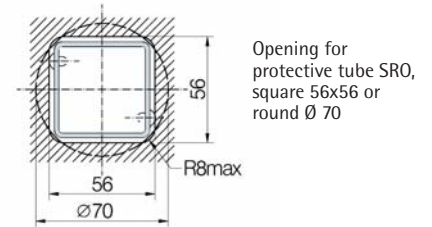
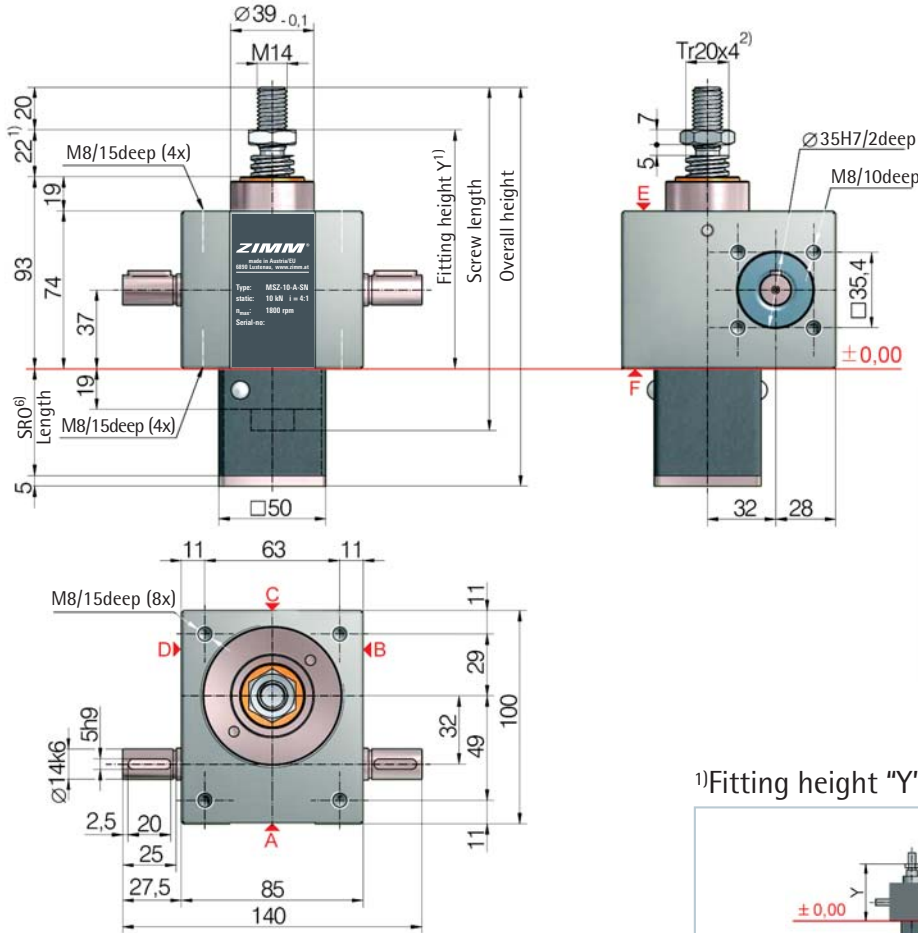
See for the checklist in catalogue Screw Jack Systems XII (Section 7).

## Important information

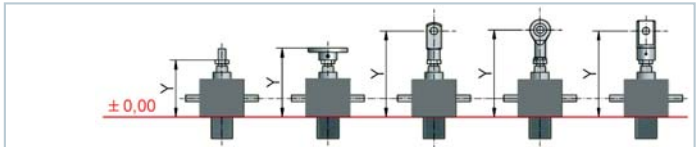
- 1) - extension if a bellows or spiral spring is fitted: see the table or catalogue XII (Section 8)
- 2) - Tr 18x4 is standard, also available: stainless steel only for the R version: double-pitch, left-handed, increased screw Tr 20x4
- 3) - factor includes efficiency, ratio and 30% safety
- 4) - at 20°C, can be higher when new
- 5) - for a 4 mm screw pitch



## MSZ-10-A-S translating screw 10 kN



1) Fitting height "Y" for 0-stroke, with Tr 20x4 screw



All dimensions in mm

Bellocs FB	Y	Y	Y	Y	Y
without bellocs 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 bellocs fixing ring Z-10-FBR

6) Protective tube length SRO with Tr 20x4 screw

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

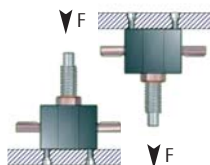
\*Hinged bearing plate KAR, fitted on face F (below)

### Standard-Übersetzungen

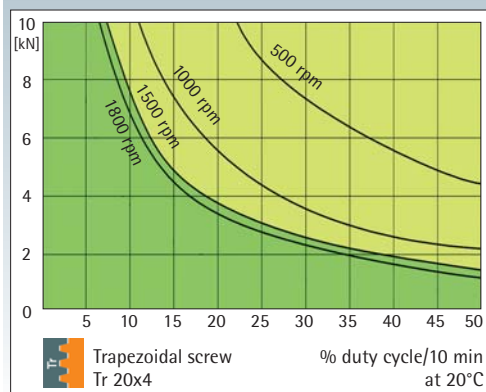
Type	Version	Speed	Standard screw <sup>2)</sup>	i	Stroke per drive shaft rotation <sup>5)</sup>
MSZ-10-A-SN	Translating	Normal	Tr 20x4	4:1	1.00 mm
MSZ-10-A-SL	screw	Low speed		16:1	0.25 mm
MSZ-10-A-RN	Rotating	Normal	Tr 20x4	4:1	1.00 mm
MSZ-10-A-RL	screw	Low speed		16:1	0.25 mm

### Screw jack mounting

- max. load: 10 kN compressive and tensile load
- Screw: M8, strength class 8.8
- Screw-in depth: 10 to 15 mm
- Tightening torque: 17 Nm
- Screw locking: with Loctite 243



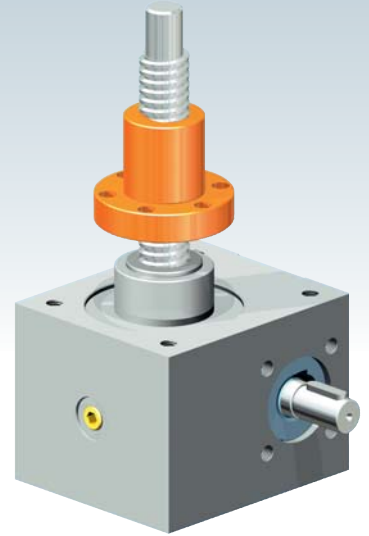
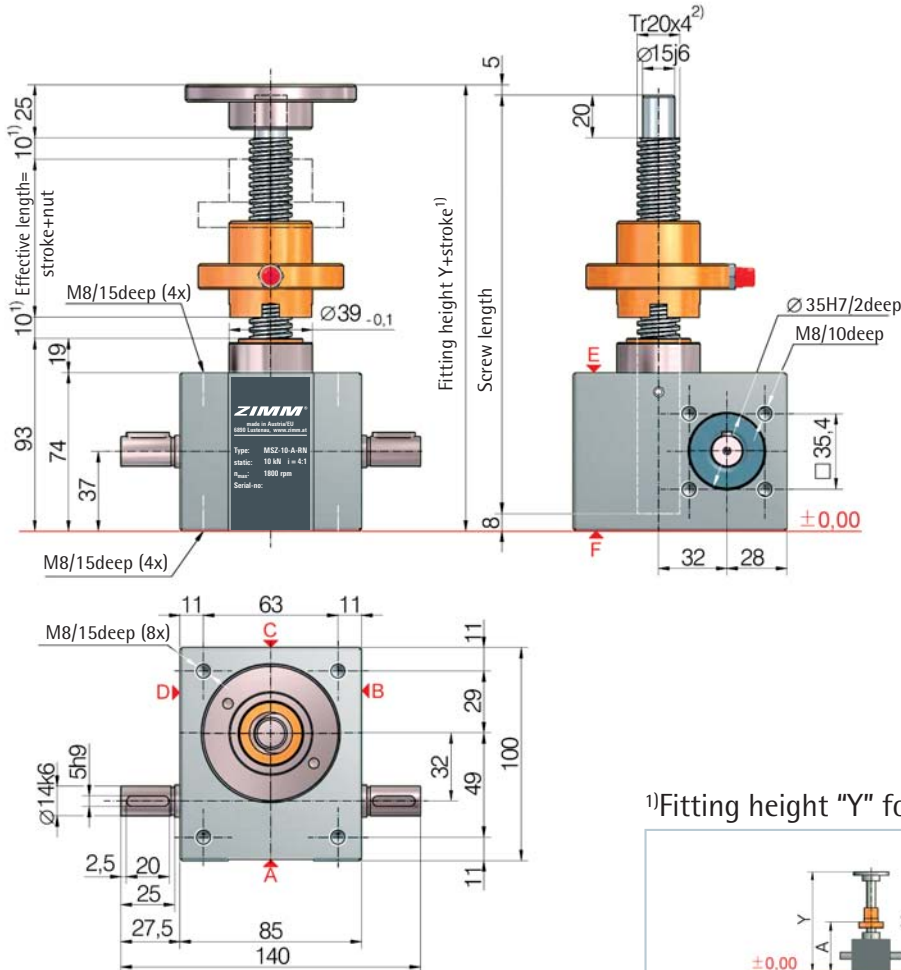
### Duty cycle thermal limit, for S+R



These curves are for guidance under standard industrial conditions (ambient temperature etc.) and correct maintenance (lubrication etc.). The max. input drive torques for optimum service life are at the right page - technical data (1500 rpm).



## MSZ-10-A-R rotating screw 10 kN



<sup>1)</sup>Fitting height "Y" for 0-stroke, with Tr 20x4 screw

All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greasless nut FFDM
<b>Bellows FB</b>	Y/A	Y/A	Y/A	Y/A	Y/A
without bellows FB	182/115	183/128	222/167	221/162	191/136
2x Z-10-FB-340	-	317/196	353/232	355/230	325/204
2x Z-10-FB-700	-	357/216	393/252	395/250	365/224
2x Z-10-FB-1000	-	457/266	493/302	495/300	465/274

Detailed instructions for determining the length can be found in catalogue XII (Section 8)

# 10 kN

### Technical data series MSZ-10-A-S / MSZ-10-A-R

max. compressive/tensile force, static	- 10 kN (1 t)
max. compressive/tensile force, dynamic	- see duty cycle curves
Nominal speed	- 1500 rpm
max. drive shaft speed	- 1800 rpm (depending on the load and duty cycle)
Screw size standard	- Tr 20x4 <sup>2)</sup>
Gear ratio	- 4:1 (N) / 16:1 (L)
Housing material	- aluminium
Worm shaft	- steel
Weight of screw jack body	- 2.0 kg
Weight of screw/m	- 2.0 kg
Gearbox lubrication	- grease lubrication
Screw lubrication	- grease lubrication
Gearbox operating temperature	- max. 60°C, higher on request
Moment of inertia	- N: 0.641 kg cm <sup>2</sup> / L: 0.271 kg cm <sup>2</sup>
Input torque (at 1500 rpm)	- max. 13.5 Nm (N) / max. 7.5 Nm (L)
Drive-through torque	- max. 57 Nm

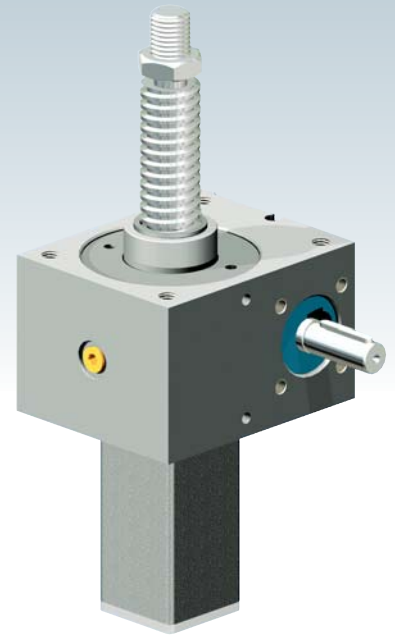
Drive torque $M_G$ (Nm)	- $F$ (kN) $\times$ 0.64 <sup>3)5)</sup> + $M_i$ (N-normal)
Breakaway torque	- $F$ (kN) $\times$ 0.20 <sup>3)5)</sup> + $M_i$ (L-low speed)
Idling torque <sup>4)</sup> $M_L$ (Nm)	- Drive torque $M_G$ $\times$ 1.5
	- 0.26 (N-normal) / 0.16 (L-low speed)

Between gearbox and nut or nut and end of thread, provide for a safety distance of (minimum) 10 mm!

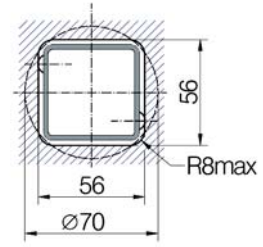
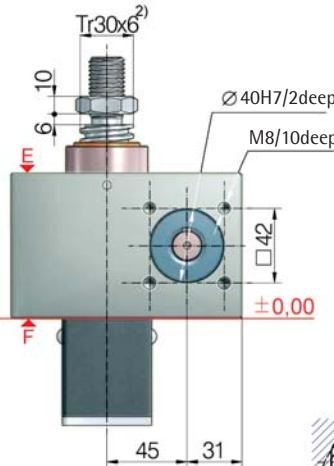
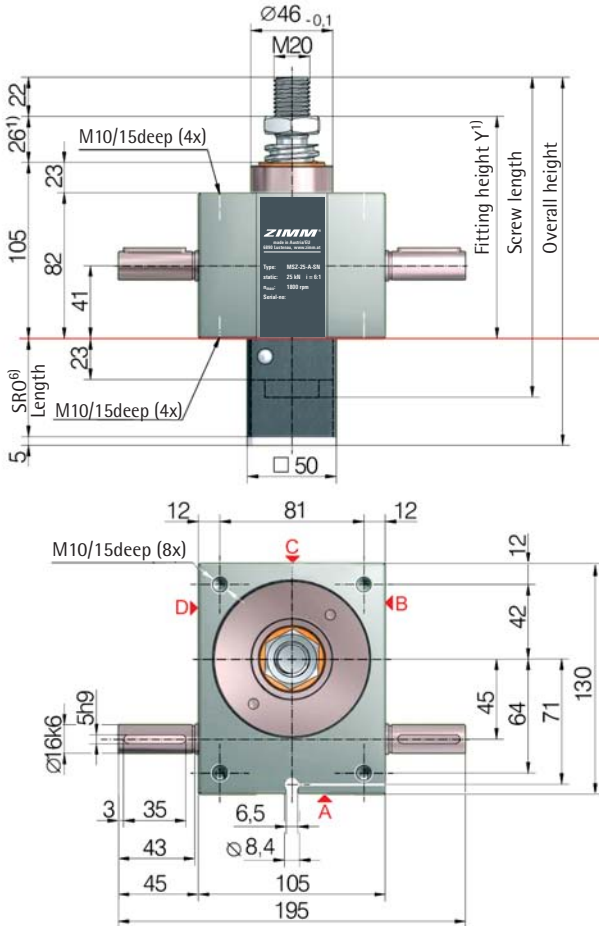
See for the checklist in catalogue Screw Jack Systems XII (Section 7).

#### Important information

- 1) - extension if a bellows or spiral spring is fitted: see the table or catalogue XII (Section 8)
- 2) - Tr 20x4 is standard, also available: stainless steel only for the R version: double-pitch, left-handed, increased screw Tr 30x6
- 3) - factor includes efficiency, ratio and 30% safety
- 4) - at 20°C, can be higher when new
- 5) - for a 4 mm screw pitch

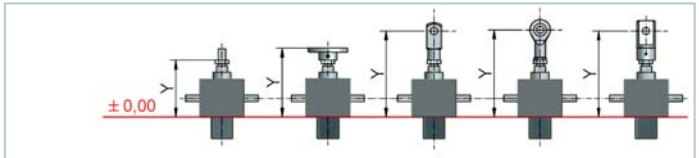


## MSZ-25-A-S translating screw 25 kN



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

### 1) Fitting height "Y" for 0-stroke, with Tr 30x6 screw



All dimensions in mm

Bellocs FB	Y	Y	Y	Y	Y
without bellocs 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

### 6) Protective tube length SRO with Tr 30x6 screw

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

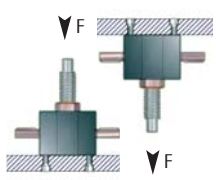
\*Hinged bearing plate KAR, fitted on face F (below)

### Standard ratios

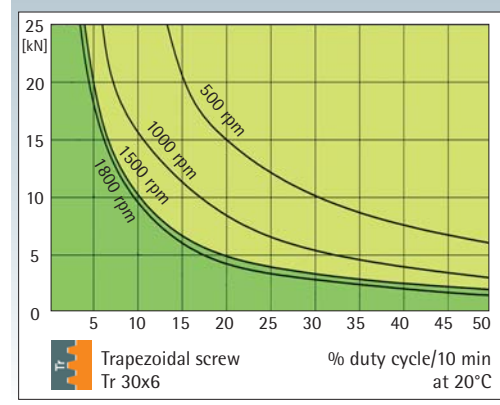
Type	Version	Speed	Standard screw<sup>2)</sup>	i	Stroke per drive shaft rotation<sup>5)</sup>
MSZ-25-A-SN	Translating	Normal	Tr 30x6	6:1	1.00 mm
MSZ-25-A-SL	screw	Low speed		24:1	0.25 mm
MSZ-25-A-RN	Rotating	Normal	Tr 30x6	6:1	1.00 mm
MSZ-25-A-RL	screw	Low speed		24:1	0.25 mm

### Screw jack mounting

- max. load: 25 kN compressive and tensile load
- Screw: M10, strength class 8.8
- Screw-in depth: 12 to 15 mm
- Tightening torque: 27 Nm
- Screw locking: with Loctite 243



### Einschaltdauer-Kennfeld, thermisch, für S+R



These curves are for guidance under standard industrial conditions (ambient temperature etc.) and correct maintenance (lubrication etc.). The max. input drive torques for optimum service life are at the right page - technical data (1500 rpm).

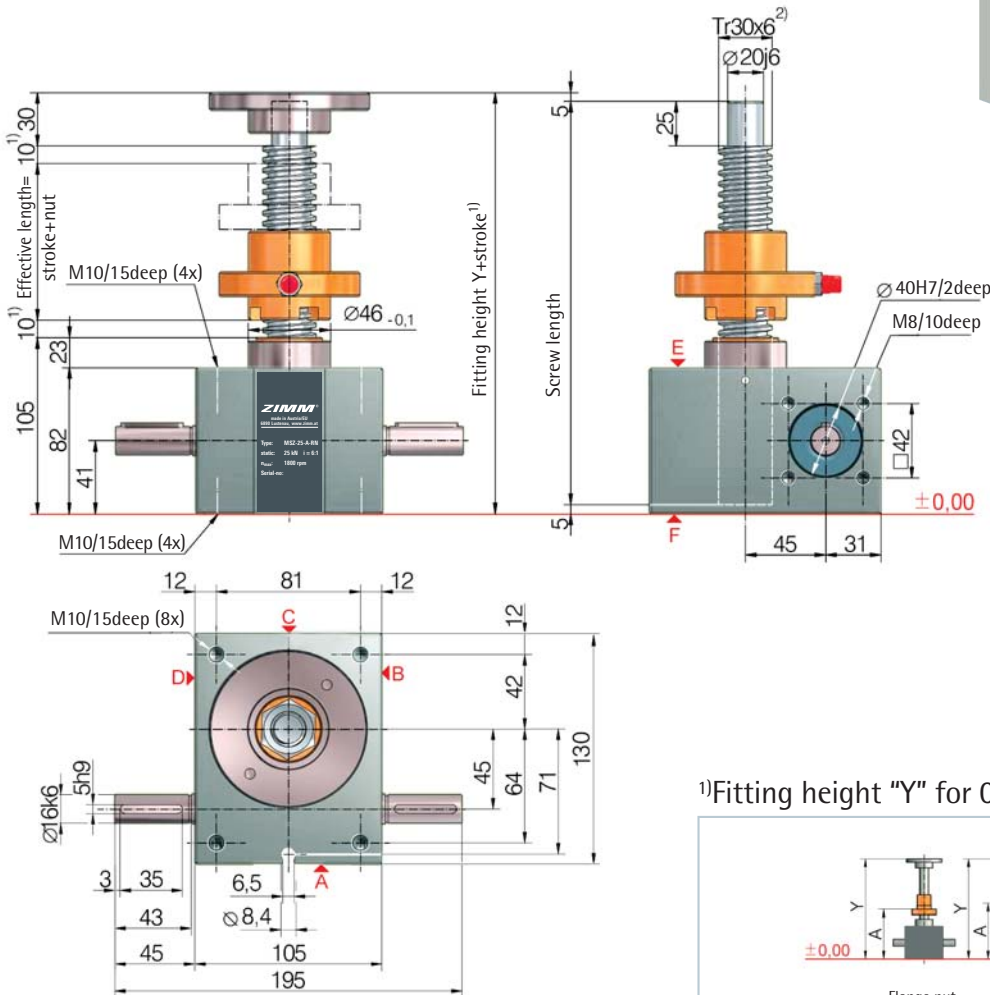
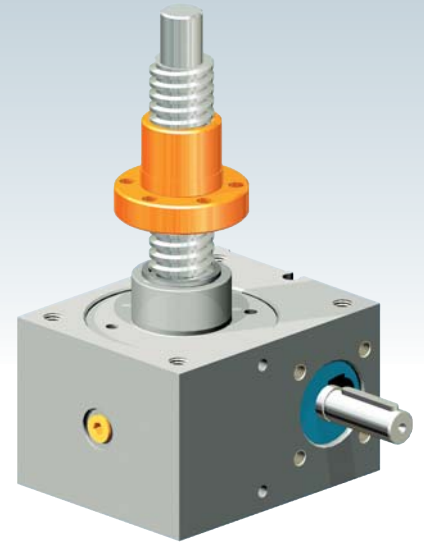


Trapezoidal screw

Tr



## MSZ-25-A-R rotating screw 25 kN



<sup>1)</sup>Fitting height "Y" for 0-stroke, with Tr 30x6 screw

All dimensions in mm	Flange nut FM	Duplex nut DM	Duplex nut DM with SIFA	Self-aligning nut PM	Greasless nut FFDM
	Y/A	Y/A	Y/A	Y/A	Y/A
Bellocs FB	201/129	205/142	250/187	250/183	212/151
without bellocs FB	-	320/202	359/241	365/243	331/213
2x Z-25-FB-300	-	380/232	419/271	424/273	391/243
2x Z-25-FB-700	-	420/252	459/291	465/293	431/263

Detailed instructions for determining the length can be found in catalogue XII (Section 8)

# 25 kN

## Technical data series MSZ-25-A-S / MSZ-25-A-R

max. compressive/tensile force, static	- 25 kN (2.5 t)
max. compressive/tensile force, dynamic	- see duty cycle curves
Nominal speed	- 1500 rpm
max. drive shaft speed	- 1800 rpm (depending on the load and duty cycle)
Screw size standard	- Tr 30x6 <sup>2)</sup>
Gear ratio	- 6:1 (N) / 24:1 (L)
Housing material	- aluminium
Worm shaft	- steel, case-hardened, ground
Weight of screw jack body	- 3.8 kg
Weight of screw/m	- 4.5 kg
Gearbox lubrication	- grease lubrication
Screw lubrication	- grease lubrication
Gearbox operating temperature	- max. 60°C, higher on request
Moment of inertia	- N: 1.449 kg cm <sup>2</sup> / L: 0.589 kg cm <sup>2</sup>
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) $\times$ 0.63 <sup>3)5)</sup> (N-normal)
	- $F$ (kN) $\times$ 0.20 <sup>3)5)</sup> (L-low speed)
Breakaway torque	- Drive torque $M_G \times 1.5$
Idling torque <sup>4)</sup> $M_L$ (Nm)	- 0.36 (N-normal) / 0.26 (L-low speed)

Between gearbox and nut or nut and end of thread, provide for a safety distance of (minimum) 10 mm!

See for the checklist in catalogue Screw Jack Systems XII (Section 7).

## Important information

- 1) - extension if a bellows or spiral spring is fitted: see the table or catalogue XII (Section 8)
- 2) - Tr 30x6 is standard, also available: stainless steel only for the R version: double-pitch, left-handed, increased screw Tr 40x7
- 3) - factor includes efficiency, ratio and 30% safety
- 4) - at 20°C, can be higher when new
- 5) - for a 6 mm screw pitch

Wide range of accessories



**i** The right accessories can be found in the catalogue Screw Jack Systems XII

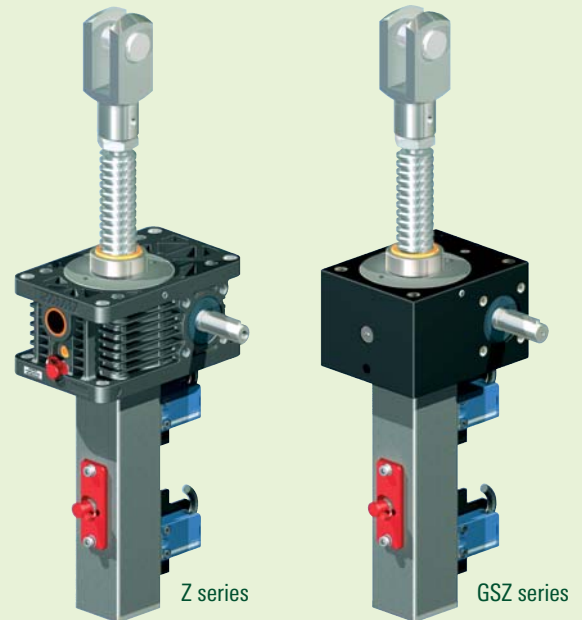


## ZIMM – screw jacks Z series and GSZ series

A screw jack gearbox is an electromechanical drive and is used where weights have to be very accurately controlled and carefully positioned.

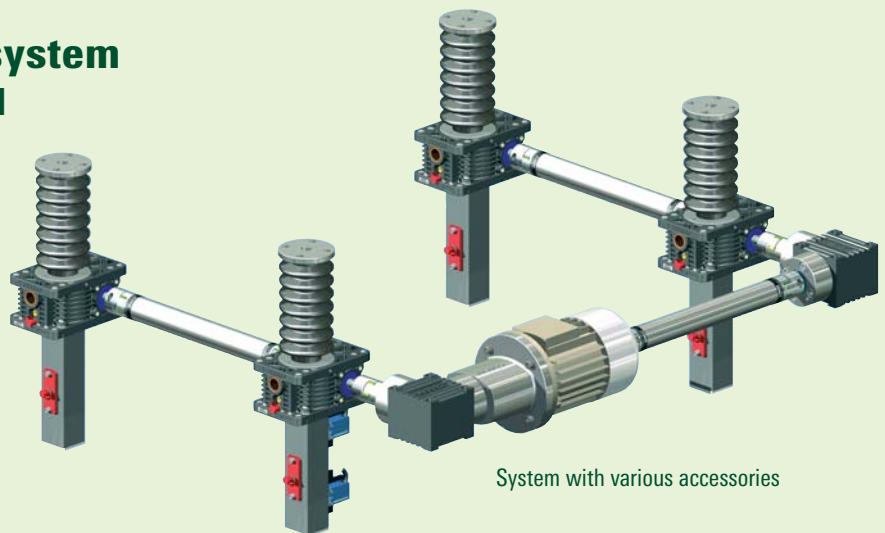
### Some areas of use

- Assembly lines of practically every renowned motor manufacturer
- Elevating platforms and aircraft manufacture assembly and maintenance
- Production lines:
  - for flat screen manufacture
  - for production of plastic profiles for the window industry
  - for the manufacture of sheet steel and steel profiles, insulated glass for fleece materials, hygiene products and insulation material
- Packing machines
- Drinks bottle filling and labelling plants
- Paper processing plants
- Food processing industry



## ZIMM – building block system Sizes from 2.5 kN to 1000 kN

- Screw jacks with trapezoidal or ball screws
- Safety nuts
- Bevel gearboxes
- Three phase AC motors and motor flanges
- Limit switches and rotary pulse encoders
- Couplings and connecting shafts
- Attachments (fork heads, ball heads, pivot bearing heads, clamping flanges, opposed bearing plates, etc.)
- Protective covers (bellows, spiral springs)
- Pivot bearing plates and pivot mounts



## ZIMM – ball screw jacks Sizes from 5 kN to 1000 kN

- Loads from 5 kN to 1000 kN
- Diameter 16 to 160 mm
- Leads from 5 to 80 mm
- Stroke speeds from 1 to 125 mm/s with high loads
- Low power consumption

### Lubrication systems

Proper lubrication for screw jack equipment

## Catalogue Screw Jack Systems XII available in:

German | English | French | Italian | Spanish | Polish  
Korean | Chinese

### CAD product configurator

CAD-Download: [www.zimm.eu](http://www.zimm.eu)

Visit us at: [www.zimm.eu](http://www.zimm.eu)

**ZIMM**<sup>®</sup> Austria  
Screw Jack Systems

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