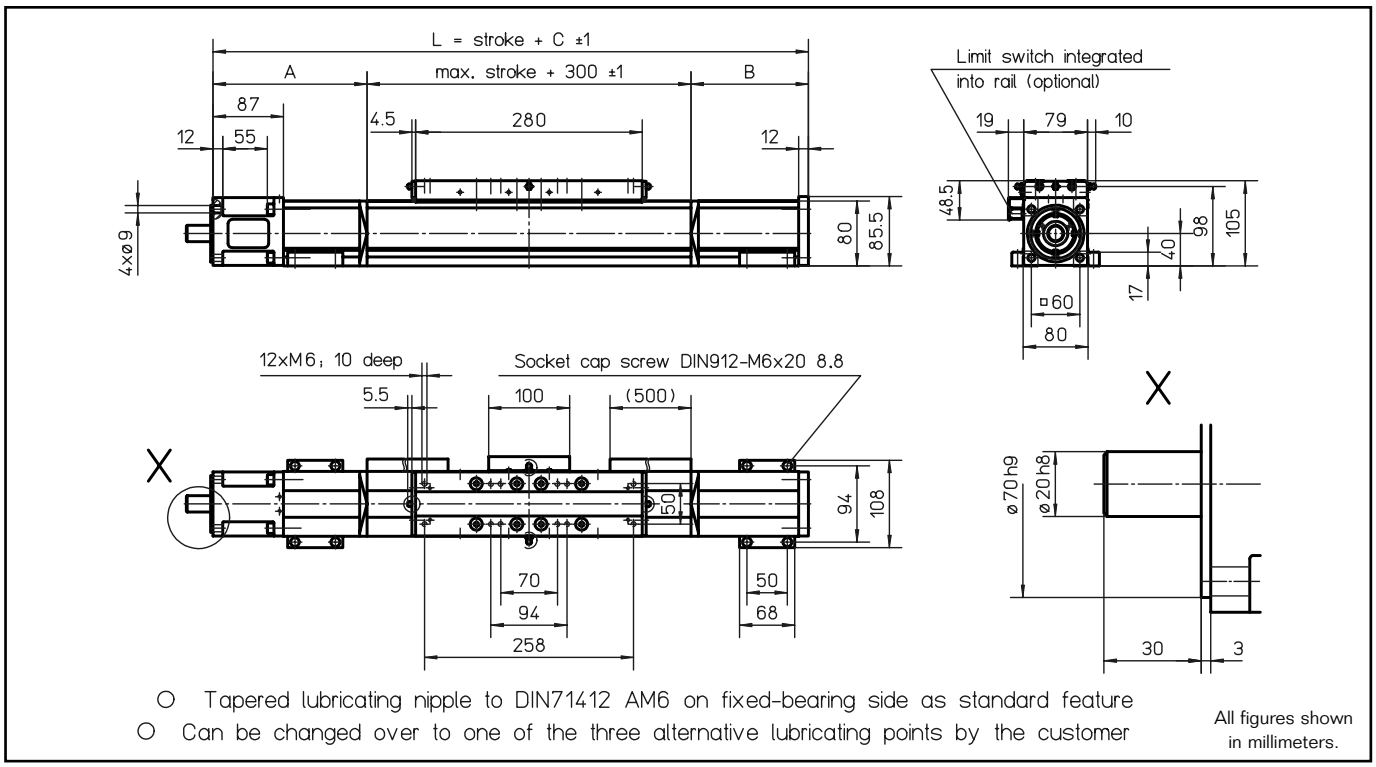
# WIESEL™ *POWER*Line® WM80

## with ball screw drive and integrated linear ball-bearing guide




○ Tapered lubricating nipple to DIN71412 AM6 on fixed-bearing side as standard feature
○ Can be changed over to one of the three alternative lubricating points by the customer

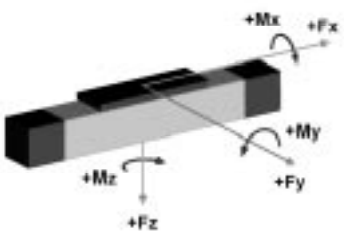
All figures shown in millimeters.

### Technical data

Linear speed: . . . . . .max. 2.5 m/s
Repeatability: . . . . . .± 0.01 mm
Acceleration: . . . . . .max. 20 m/s²
Rotational speed: . . . . . .max. 3000 rpm
Drive element: . . . . . .Pretensioned ball screw drive
Diameter: . . . . . .25 mm
Lead: . . . . . .5, 10, 20, 50 mm
Stroke length: . . . . . .up to 11.000 mm
with lead 50 mm
max. 5000 mm
Power bridge: . . . . . .280 or 450 mm long
see page 62
Geometrical moment of inertia: . . .ly 1.9 x $10^6$ $mm^4$
lz 1.9 x $10^6$ $mm^4$

Weights
Basic unit with zero stroke: . . . . .11.57 kg
100 mm stroke: . . . . . .1.08 kg
Power bridge with carriage: . . . . .4.26 kg
Provided: . . . . . .4 pieces KAO mounting brackets

### Loads and load moments




| Load | dynam. [N] |
|---|---|
| Fx drive | 5000 |
| Fy | 3000 |
| ± Fz | 3000 |
| **Load moment** | **dynam. [Nm]** |
| Mx | 350 |
| My[1)] | 300 |
| Mz[1)] | 300 |

1) Increase of the admissible values by the use of a long power bridge or additional free-sliding power bridge (pages 62 and 63).

### Unit conversions

**Length:**
1 m=1000 mm=39.37 inches
1 inch=25.4 mm

**Force:**
1 N=0.225 lbf
1 lbf=4.45 N

**Moment of Force:**
1 Nm=0.738 lb • ft=8.85 lb • inches
1 lb • ft=1.36 Nm

**Geometrical moment of inertia:**
1 $m^4$=$10^{12}$ $mm^4$=2.4025 x $10^6$ $in^4$

**Mass moment of inertia:**
1 kg • $m^2$=$10^4$ kg • $cm^2$=0.738 lb • ft • $s^2$

**Mass:**
1 kg=2.2 lb

### Idle torques [Nm]

| Rotational speed [rpm] | Lead P [mm] 5 | 10 | 20 | 50 |
|---|---|---|---|---|
| 150 | 0.8 | 1.4 | 1.6 | 2.3 |
| 1500 | 1.4 | 1.9 | 2.0 | 2.8 |
| 3000 | 1.8 | 2.3 | 2.3 | 3.4 |

**Note:** For tube lengths of 5400 mm and over, the tubular profile is composed of two parts. The joint must be adequately supported. It may be possible to position the joint according to customer´s wishes. For screw leads > 20 mm, excess lengths cannot be implemented.

### Additional lengths as a function of the stroke

| Stroke length [mm] | A [mm] | B [mm] | Additional length C [mm] |
|---|---|---|---|
| 0–780 | 120 | 80 | 500 |
| 781-1535 | 170 | 125 | 595 |
| 1536-2375 | 190 | 145 | 635 |
| 2376-3205 | 215 | 170 | 685 |
| 3206-4045 | 235 | 190 | 725 |
| 4046-4885 | 255 | 210 | 765 |
| 4886-5000 | 280 | 235 | 815 |