

**The TMP micro-positioning stage provides very accurate displacements for pay loads up to 300 N.**

- The TMP stage is driven by stepper motors through a very stiff and irreversible gear.
- The TMP 29-33-300 has a non-recirculating ball-bearing, providing optimal stiffness and accuracy combined with low friction.
- Thanks to these characteristics the TMP stage is a robust and accurate industrial equipment. It can be adapted to fit dedicated requirements.

**Applications:** Optics, Sensors, Structures.



Non contractual photo

## 1 - Technical Data

### Motorisation :

Hybrid stepper motor, bipolar, 200 steps/rev.

Supply voltage	24 to 48V
Current	0.6 A/phase
Resistance	3.5 $\Omega$ /phase
Inductance	1.2 mH/phase

Travel range	29 mm
Resolution	33nm / motor step
High Resolution (HR option)	16nm / motor step
Minimum command increment	2 motor steps
Error RMS	$\leq 75$ nm + 5% of stroke
Hysteresis	$\leq 5$ $\mu$ m
Speed (3000steps/s)	100 $\mu$ m/s

Connector on standard version : male SUB D9

### Maximum load :

Axial, radial and transverse up to 300N.  
Combined load cases must be validated by ISP SYSTEM

### Integrated sensors :

- 2 End Of Travel switches, normally closed
- 1 origin switch, activated at middle stroke, Short term unidirectional repeatability for 10 movements :  $\pm 10$   $\mu$ m RMS

### Options :

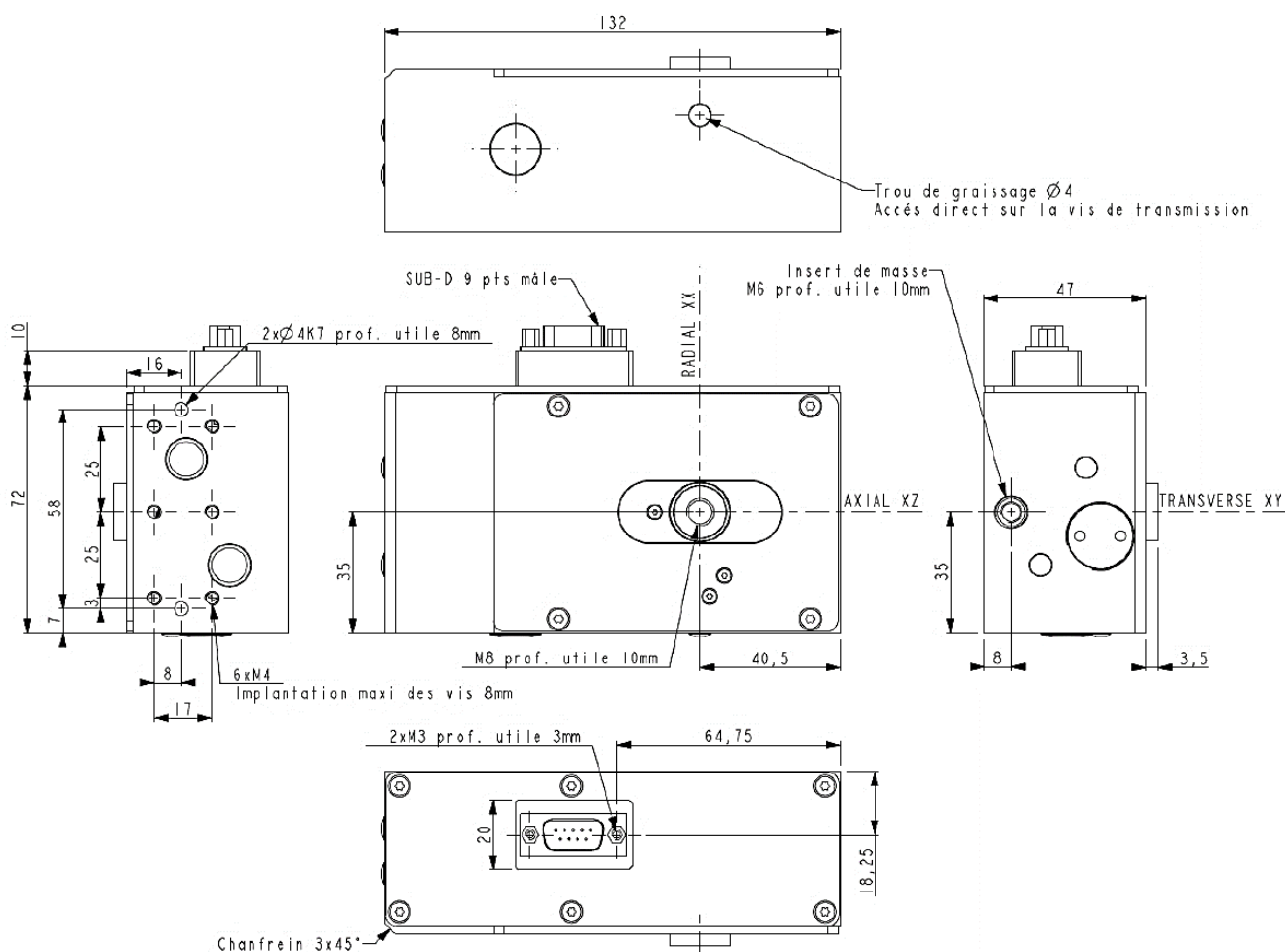
- Compatibility with ISO6 cleanliness
- Version for high vacuum (low operation factor)

**Mass :** 1.7 kg

**Optimal working temperature:** 15 to 25 °C

**Operation factor:** according to the application, please ask ISP SYSTEM.

### 2 - Dimension (mm)



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