

**The TMP Micro-Positioning Stage allows very accurate movement with payload loads up to 200 N.**

- The TMP Stage is driven by a stepper motor, via stiff and irreversible gear.
- The TMP 4-50-200-POL-C-ISO6 has a soft and accurate non-recirculating ball bearing with low friction
- Applications in linear actuator or in motorized mounts
- This stage can be used as actuator with a loading capacity of 200 N without alteration of the movement and complete movement irreversibility
- This industrial product is accurate, reliable and robust.
- The stage can be adapted upon demand.



*Non contractual picture*

**Applications:** Positioning of Optics, Sensors, Frames.

## 1 - Technical Data (LMJ Version)

### Drive :

Hybrid Stepper motor, bipolar 400 steps/turn

Voltage	24V to 48 V
Current	0.35 A/phase
Resistance	33 Ω phase
Inductance	7 mH/phase

### Technical Specification :

Travel range	+/- 14,5 mm
Resolution	25 nm/motor step
Min. control increment	3 steps motor
RMS Error	≤ 90nm + 2% of the travel
Hysteresis	≤ ± 9µm

**Mass :** 1.5 kg

**Optimal working temperature:** 20 to 22 °C

**Service factor :** Upon application, please contact us

Standard model with 9 pin SUB D connector

### Load capacity :

- Axial, radial, and transverse up to 200N
- Load combination must be validated by ISP SYSTEM

### Integrated encoders :

- 2 end of travel switches NC
- 1 homing contact activated on half of the travel
- short term unidirectional repeatability for 10 operation: < 10 µm RMS

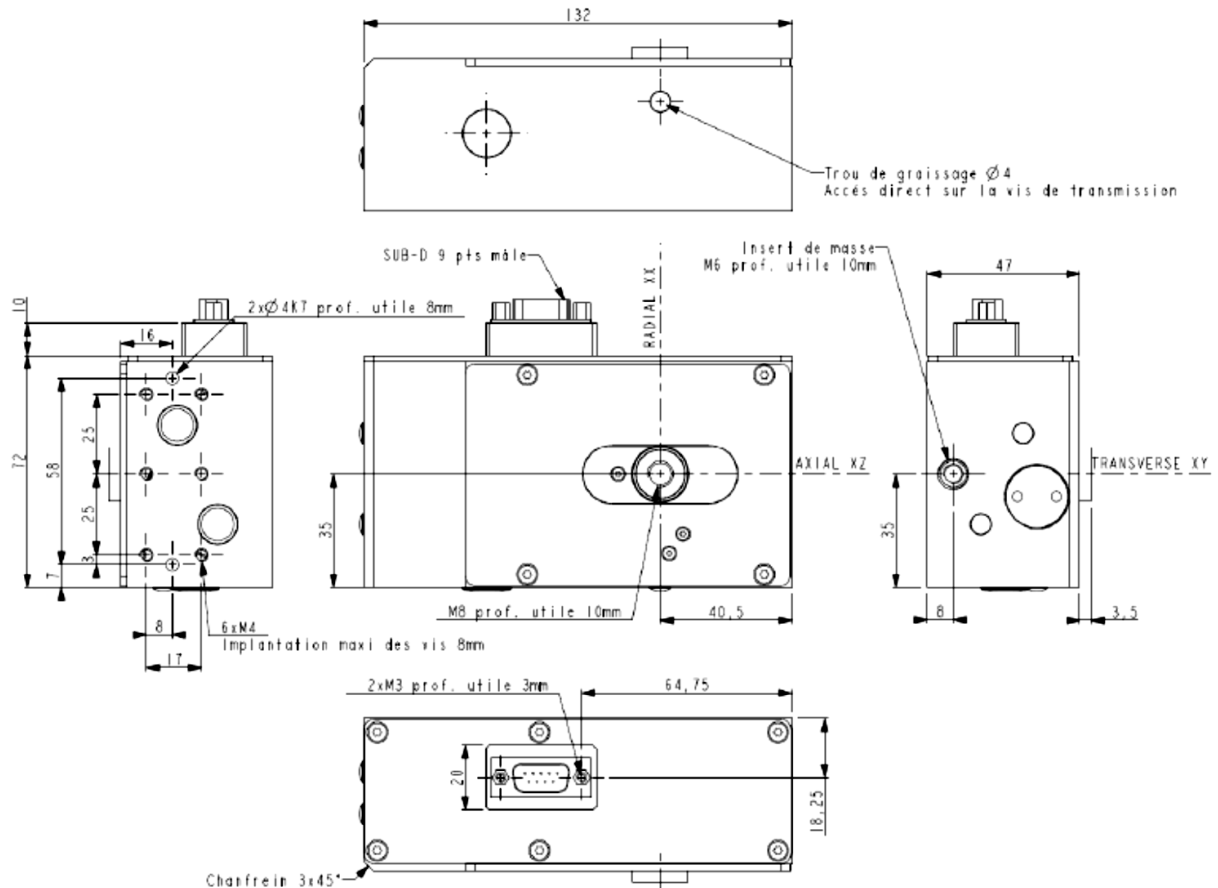
### Stiffness:

- Axial KZ:14.106 N/m
- Radial KX : 15.106 N/m
- Transverse KY : 30.106 N/m

### Options :

- Compatibility with ISO6 clean room operation
- Force polarization device with load capacity of ± 10 N.

## 2 - Dimensions



### Wiring of the actuator :

N°	Ref Signal	Connexion
1	Motor 1 A+	Phase A+
2	Motor 1 A-	Phase A-
3	Motor 1 B+	Phase B+
4	Motor 1 B-	Phase B-
5	Motor 1 BL	Linked to the TMP mechanical Mass
6	Motor 1 CC	Common Contact
7	Motor 1 OR	Original Contact
8	Motor 1 FC-	Contact Limit Switch -
9	Motor 1 FC+	Contact Limit Switch +

### Environmental condition

Characteristic	Unit	On exploitation On mounting And integration	On Storage
Temperature	°C	21 $\pm$ 0.5	18 - 25
Hygrometry	%Hr	40 - 60	40 - 65
Cleanliness Class	-	ISO6	
Pressure	Mbar	Atmospheric pressure	