

Update : 12/19/2022



*Non contractual picture*

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

## 1 - Description

- 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.

## 2 - Applications

Positioning of Optics, Sensors, Frames.

### 3 - Technical Data

DRIVE	
Hybrid Stepper motor, bipolar 400 steps/turn	
Voltage	24V to 48V
Current	0.35 A/phase
Resistance	33 $\Omega$ phase
Inductance	7 mH/phase

TECHNICAL SPECIFICATION	
Travel range	+/- 14.5mm
Resolution	25 nm/motor step
Min. control increment	3 steps motor
RMS Error	$\leq 90\text{nm}$ + 2% of the travel
Hysteresis	$\leq \pm 9\mu\text{m}$
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  $\mu\text{m}$  RMS

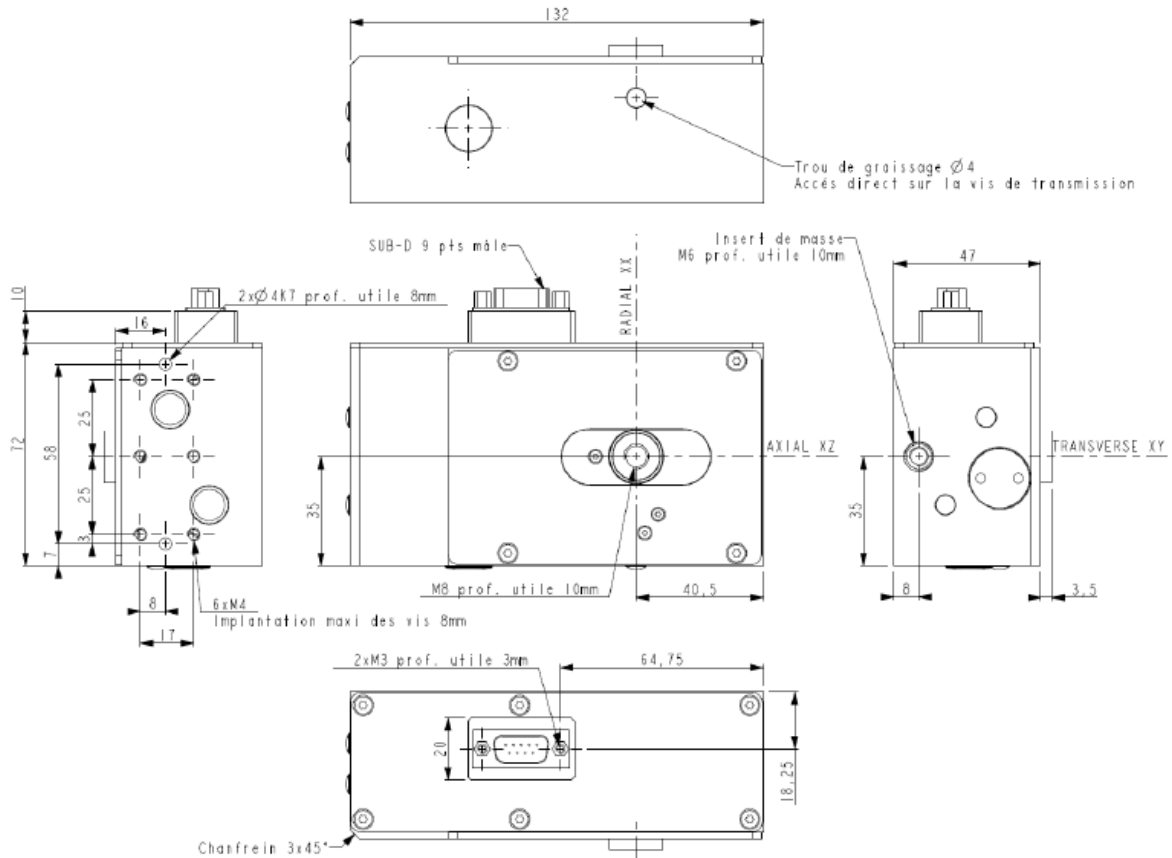
#### Stiffness

- Axial KZ:  $14 \cdot 10^6$  N/m
- Radial KX :  $15 \cdot 10^6$  N/m
- Transverse KY :  $30 \cdot 10^6$  N/m

#### Options

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

## 4 - Dimensions



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 +

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