Driven by innovation

CSR2 – CRYO SAMPLE ROTATOR 2

Features

- Endless rotation
- Non-magnetic
- High torque output
- Central open aperture
- Integrated scanner functionality
- 20 mK to 375K, vacuum compatible
- Position feedback option -RRS
- Robust design with ceramic roller bearings

Description / Applications

The CSR2 is a compact rotational positioner with high torque output. The use of spring preloaded ceramic roller bearings results in a large load capacity. It is non-magnetic and can be fitted with a resistive sensor for closed loop control.

Specifications

General info	
Type of motion	Rotational
Dimensions	See drawings below
Operational environmental conditions	20 mK to 375 K, ambient to UHV
Weight	41 g
Central open aperture diameter	2 mm
Wobble, typical	±2 mrad
Stepping motion	
Travel range	Endless
Velocity @ 300 K	40 deg/s
Velocity @ 4 K	12 deg/s
Minimal step size @ 300 K	0,02 mrad
Minimal step size @ 4 K	0,02 mrad
Scanning motion	
Scanning range @ 300 K	2,5 mrad
Scanning range @ 4 K	0,5 mrad
Minimal step size	nrad
Drive voltage @ 300 K	-30 V to 120 V
Drive voltage @ 4 K	-30 V to 120 V
Forces and load capacity	
Driving torque @ 300 K	14 Nmm (1,4 Ncm)
Driving torque @ 4 K	9 Nmm (0,9 Ncm)
Load capacity, vertical rotation axis	200 g
Materials	
Main body	Titanium
Piezo actuator	Low voltage multilayer, ceramic insulated
Roller bearings	Ceramic
Model specific information	
-RRS	Resistive Rotary Sensor, typical resolution 10 µrad RMS, range 335 degrees
Electronics CPSC	
Controller Base Cabinet	CAB
Driver for stepping and scanning	CADM
Position readout	RSM

Ordering Information

Available models

CSR2	Cryo Sample Rotator 2
CSR2-RRS	Cryo Sample Rotator 2-Resistive Rotary Sensor

Available Options

-HV	Upgrade to High Vacuum compatibility
-UHV	Upgrade to Ultra High Vacuum compatibility

Accessories

AKM1	Accessory Kit Mechanical 1
AKE1	Accessory Kit Electrical 1

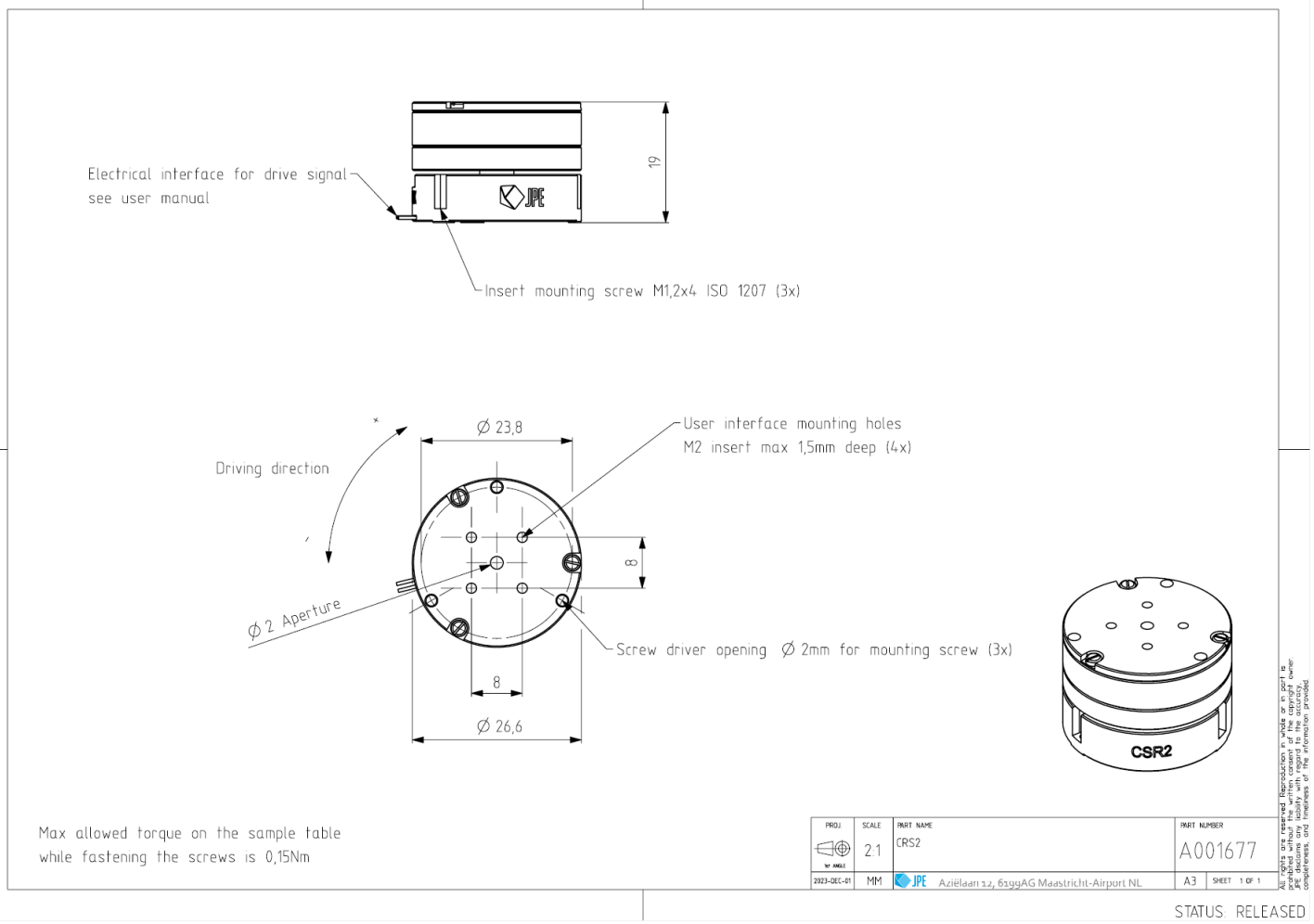
Mechanical and electrical information

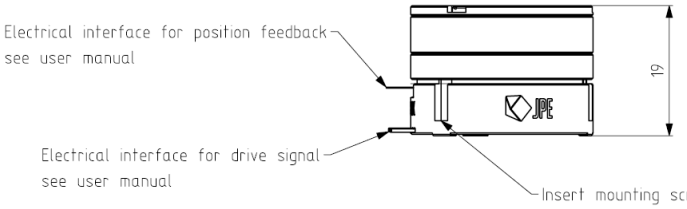
Download 3D step files and manuals from:
https://www.jpe-innovations.com/cryo-nano-products/

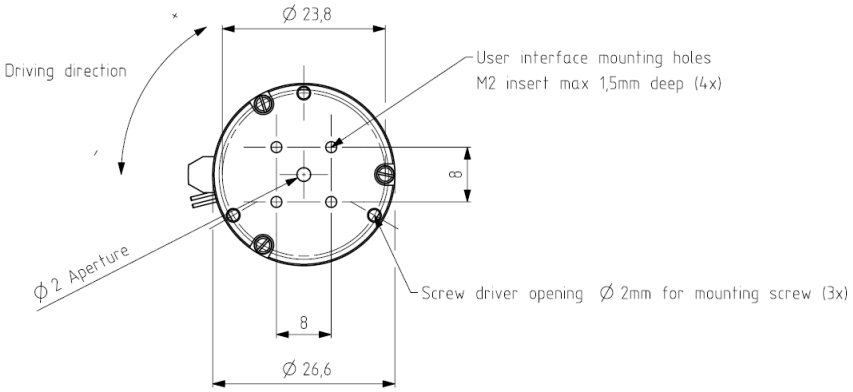
Contact

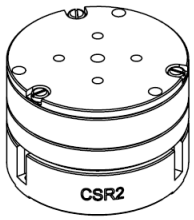
For quotations, specials, or engineering services, please contact us at:
https://www.jpe-innovations.com/contact/

Drawings









Max allowed torque on the sample table while fastening the screws is 0,15Nm

PROJ	SCALE	PART NAME	PART NUMBER
1st ANGLE	2:1	CRS2-RRS	A001624
2023-DEC-01	MM	JPE Aziëlaan 12, 6199AG Maastricht-Airport NL	A3 SHEET 1 OF 1

STATUS: RELEASED