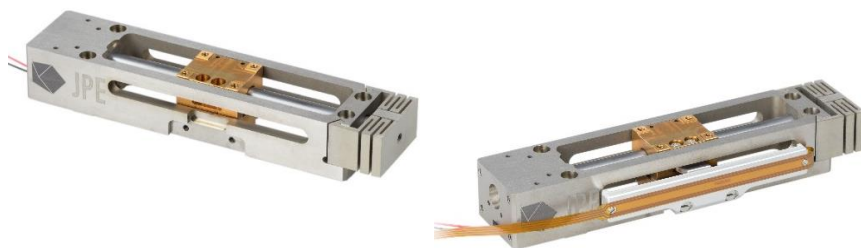


CLD₂ – CRYO LINEAR DRIVE 2



Features

- 51.5 mm stroke
- Non-magnetic
- Integrated scanner functionality
- Compact and robust design
- 20 mK to 375 K, vacuum compatible
- Materials: titanium, phosphor bronze
- Large driving force
- Ceramic guide axis for long lifetime
- Position feedback option -RLS

Description / Applications

The Cryo Linear Drive is a long stroke linear stage with an unrivaled 51.5 mm stroke in a compact and robust package. The combination of stepping and scanning functionality offers a solution for long stroke applications in cryogenic positioning. Position feedback can be fitted for closed loop control. Non-magnetic materials are used for compatibility with experiments in magnetic fields.

Specifications

General info	
Type of motion	Linear
Dimensions	See drawings below
Operational environmental conditions	20 mK to 375 K, ambient to UHV
Weight	190 g, -RLS adds 15 g
Stepping motion	
Travel range	51,5 mm
Velocity @ 300 K	3 mm/s
Velocity @ 3 K	1 mm/s
Minimal step size @ 300 K	100 nm
Minimal step size @ 4 K	100 nm
Drive voltage	-30 V to 120 V
Scanning motion	
Scanning range @ 300 K	10 micron
Scanning range @ 4 K	2 micron
Minimal step size	Sub-nm
Drive voltage @ 300 K	-30 V to 120 V
Drive voltage @ 4 K	-30 V to 120 V
Forces and load capacity	
Driving force @ 300 K	2 N
Load capacity @ 300 K, horizontal motion	500 g
Load capacity @ 300 K, vertical motion	200 g
Materials	
Main body	Titanium, phosphor bronze
Piezo actuator	Low voltage multilayer, ceramic insulated
Guide axis	Ceramic
Model specific information	
-RLS	Resistive Linear Sensor, typical resolution 200 nm RMS
-V, -HV or -UHV	Level of vacuum compatibility, see the glossary on the homepage for details
Electronics CPSC	
Controller Base Cabinet	CAB
Driver for stepping and scanning	CADM
Position readout	RSM

Ordering Information

Available Models

CLD2-V	Cryo Linear Drive 2
CLD2-RLS-V	Cryo Linear Drive 2-Resistive Linear Sensor

Available Options

-HV	Upgrade to High Vacuum compatibility
-UHV	Upgrade to Ultra High Vacuum compatibility (not available for -RLS model)

Accessories

AKM1	Accessory Kit Mechanical 1
AKE1	Accessory Kit Electrical 1

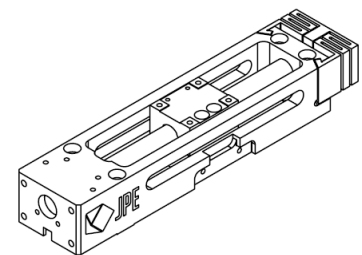
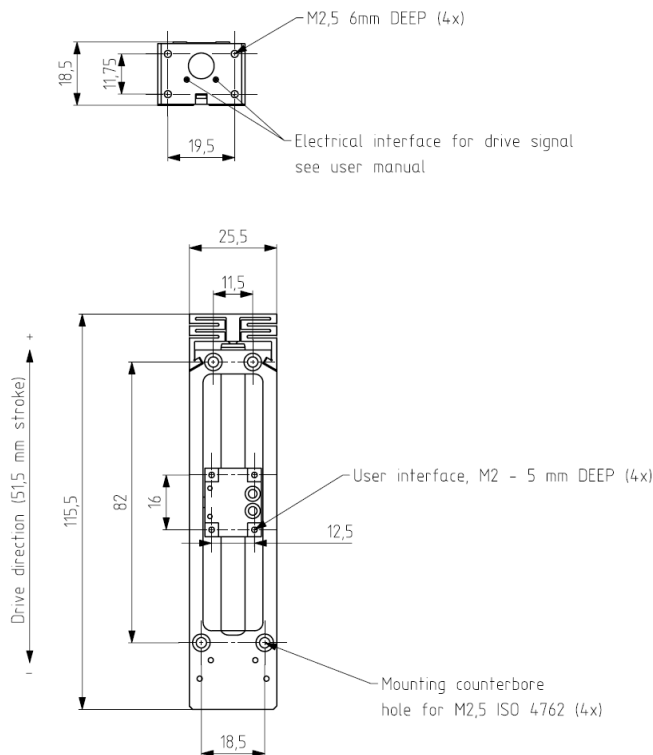
Mechanical and electrical information

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

Contact

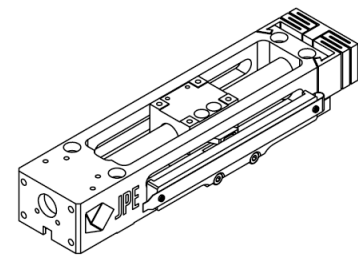
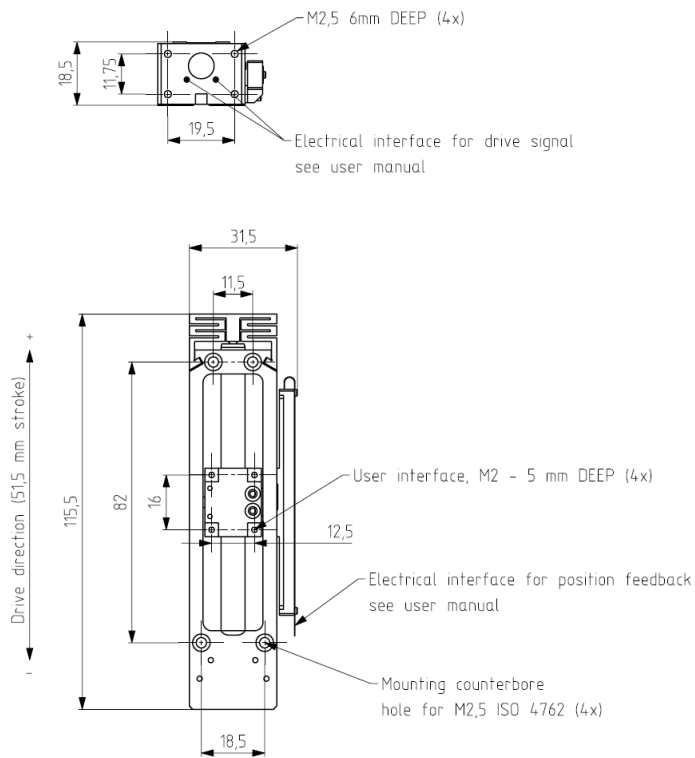
For quotations, specials, or engineering services, please contact us at:
<https://www.jpe-innovations.com/contact/>

Drawings



PROJ.	SCALE	PART NAME	PART NUMBER
2023-FEB-17	1:1	CLD2	A001639
MM	JPE	Aziëlaan 12, 6599AG Maastricht-Airport NL	A3 SHEET 1 OF 1

STATUS: RELEASED



PROJ.	SCALE	PART NAME	PART NUMBER
	1:1	CLD2-RLS	A001643
2023-FEB-17	MM	 Aziëlaan 12, 6199AG Maastricht-Airport NL	A3 SHEET 1 OF 1

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STATUS: RELEASED