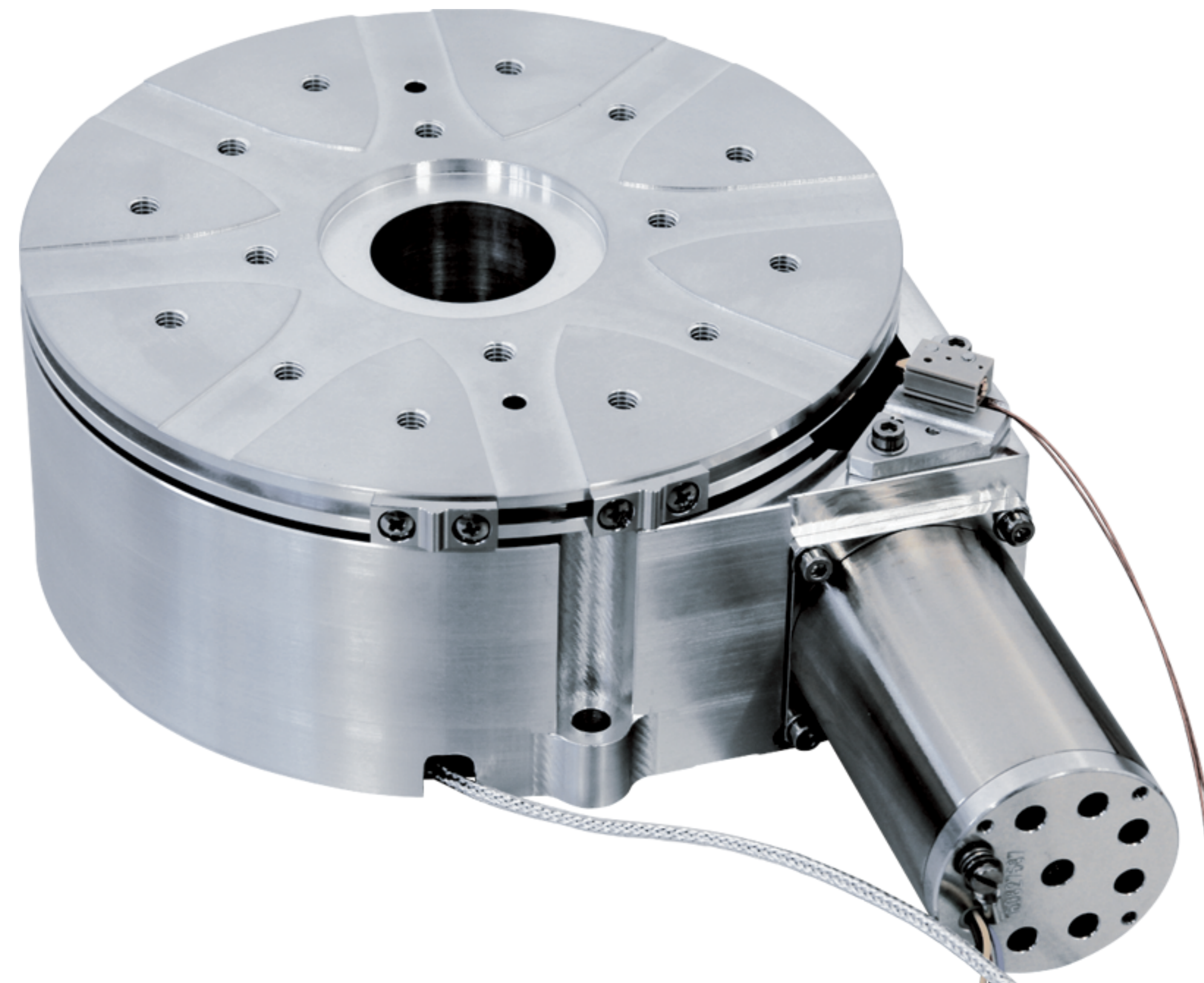


VRSP

Vacuum Rotation Stage Plus

VRSP is the hi-end rotation stage, thought to deliver the highest performance in a compact shape. A solid body machined by a block of aluminium alloy integrates an accurate pre-loaded crossed roller bearing made of stainless steel. A stainless steel/PEEK worm/wheel gear is actuated by a VSS Phytron motor, PEEK micro-switches are integrated in the mechanics for end of run and freely settable pins allows an easy limitation of the travel range in working conditions. An absolute RESA encoder ring can be integrated in the stage for highest accuracy and position repeatability. The VSS motor can be also integrated with a resolver as well as temperature sensors. These mechanics can be lubricated with UHV grease or dry lubrication for more demanding applications. UHV and UHVG can also be operated in Hard Rad environments.



VRSP Vacuum Rotation Stage Plus

- high precision/ high load
- absolute direct encoded ring
- adjustable end of run
- optional dry lubrication

Motor	VSS43.200.1,2 200 step/revolution	+ resolver option with 1024 point per revolution	+ absolute encoder ring
Worm/wheel gear	95:1		
Resolution	0,019°	0,0037°	0,09urad per count (26 bit read-head)
Minimum incremental motion	0,002° (microstep/open loop)	0,002° (microstep/open loop)	0,0001° (microstep/C-loop)
Repeatability	+/- 0,002°		+/- 0,0001°
Travel range	+/- 360° can be freely limited by adjustable micro switches		
Max speed	20°/s recommended: limited by duty cycle in vacuum		
Axial load capacity	150 N		
Moment	Please contact us for a proper calculation		

*Note

100% of the stages are singularly tested and measured with the interferometer and documents with actual data

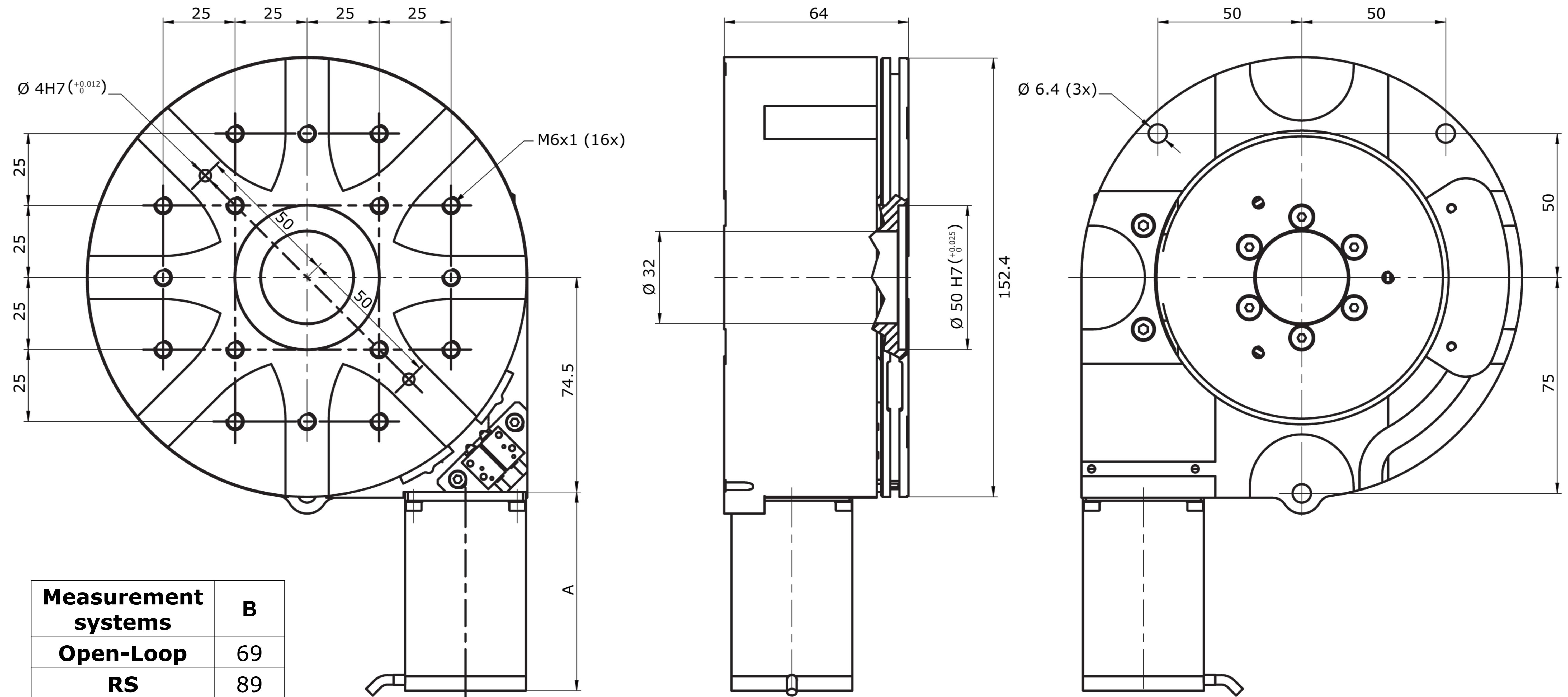


VRSP

Vacuum Rotation Stage Plus



- for multi-axes assemblies, overall system specifications, duty-cycle analysis or any special requirements, please contact us;
- be aware of the duty cycle limitations of motors in vacuum especially with dry lubrication, please check the data-sheet: https://www.phytron.eu/fileadmin/user_upload/produkte/motoren_aktuatoren/pdf/ds-vacuum-en.pdf;
- we can deliver a turn key solution from the vacuum stage to the electrical connection in vacuum and air to the control electronics, let us know your requirements.



Ordering Information

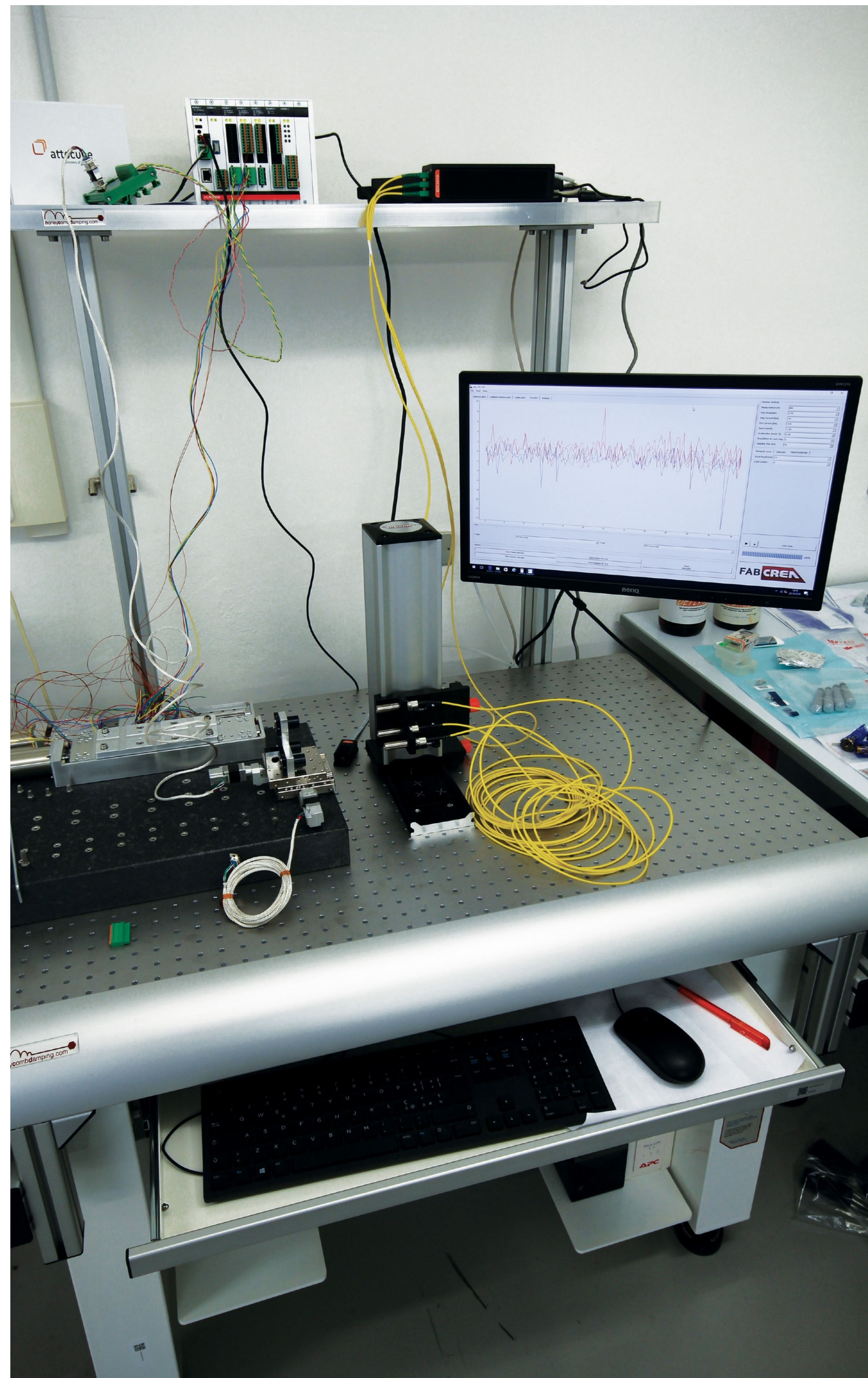
Part Number	Travel range	Temperature sensors	Microswitch	Measurement system	Cable length
VRSP	50	1	1	FV (fine vacuum)	K type
				HV (high vacuum)	
	100	2	2	UHVG (ultra high vacuum grease)	PT100

e.g.: VRSP-HV-2-ARS-PT100 = rotation stage for HV environment, 2 micro switches, RESA encoder ring (26 bit read-head), PT100 temperature sensor integrated in the motor windings, 500mm vacuum leads



VRSP

Vacuum Rotation Stage Plus

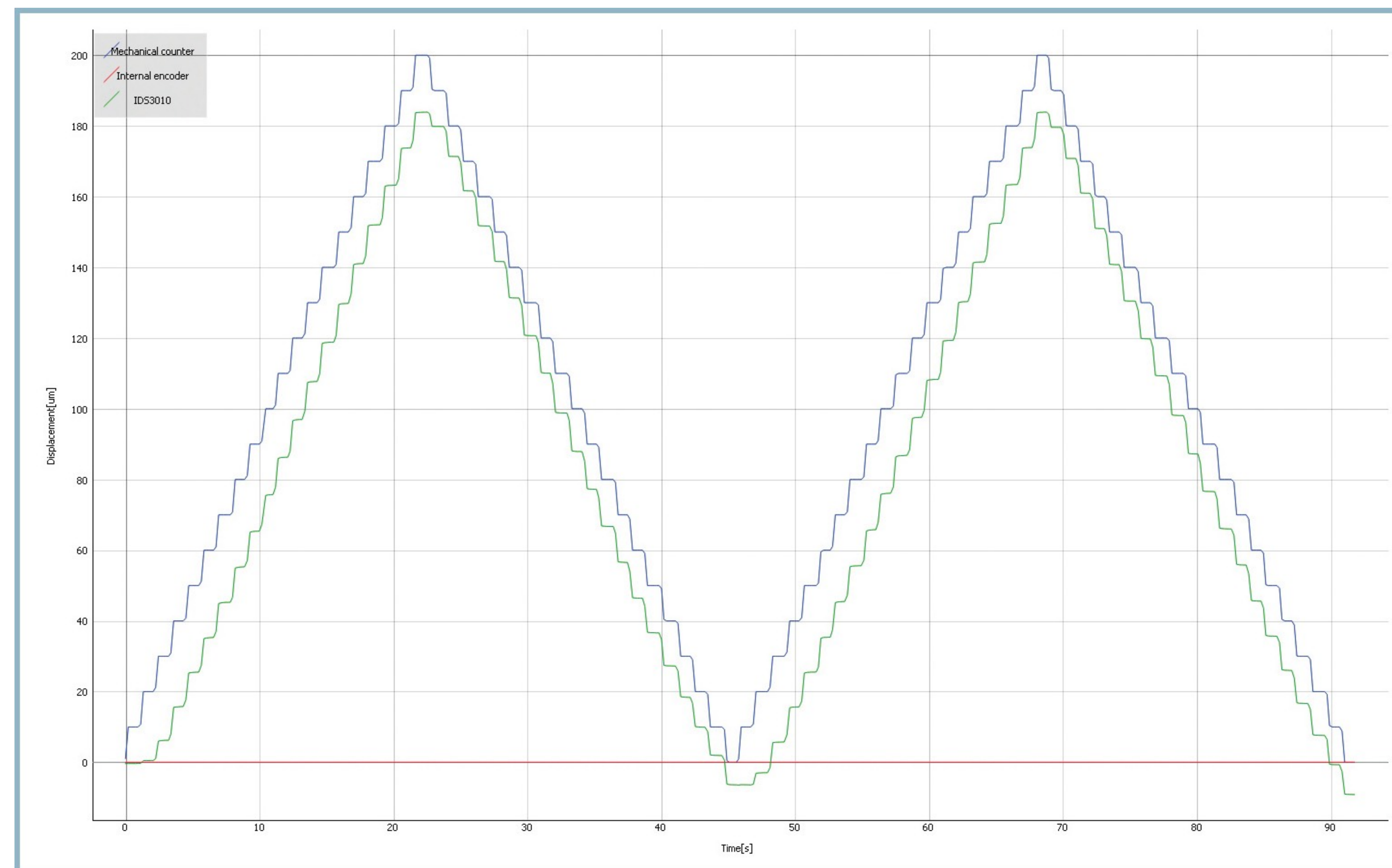


All of our vacuum stages are designed with special care for HV or UHV use: the mechanic design, the material choice and the mounting procedures guarantee minimum outgassing and long durability. Optionally we can provide an RGA chart. After an accurate washing and drying process of the components, stages are mounted in a clean environment.

A three axes Fabry-Perot interferometer is used to optimize the precision mounting as well as doing a calibration and measurement of the mechanics. All stages have to pass a stress test before the measurement and are finally delivered with an ID including s/n, calibration parameters, and main measured specifications. Optionally we can perform multi-axes systems measurements in requested conditions such as load, moment... Optionally we can also do measurements in vacuum by using a fiber optic feed-through. Special packaging saves the vacuum preparation for the final installation in the vacuum chamber.

VRSP Vacuum Rotation Stage Plus

- high precision/ high load
- absolute direct encoded ring
- adjustable end of run
- optional dry lubrication



Questionnaire

Fill in this questionnaire and mail it to ufficiovendite@vacuumfab.it to get our consultancy for the positioning system design, free of charges:

CUSTOMER'S REFERENCE

Name, surname:
Phone Number:

Institute/company:
Email:

WEIGHT/SPECIMEN INFORMATION

Dimensions (mm):

length

width

height

Shape: (description or better attach drawing)

Weight (g):

Center of gravity coordinates from the center of the carrier (mm):

X

Y

Z

Notes:

POSITIONING REQUIREMENT

Travel range required (mm):

Positioning resolution required (μm):

Repeatability required (μm):

Applied force (N):

Applied Moment (Nm):

Speed required (mm/s):

Acceleration required (mm/s^2):

Duty Cycle:

Other degrees of freedom required: please specify and possibly add a sketch and a description of the application

uni-directional

bi-directional

Fx

Fy

Fz

Mx

My

Mz

WIRING REQUIREMENT

Cable length in air from the mechanics to the controller (m):

CONTROLLER REQUIREMENT

Motion control type:

Positioning application type:

Computer connection port:

Software compatibility:

point to point

linear interpolation

contouring

high resolution

high repeatability

other (specify)

Ethernet

USB

EPICS

DLL

LabVIEW

TANGO

Notes:

Date and signature: