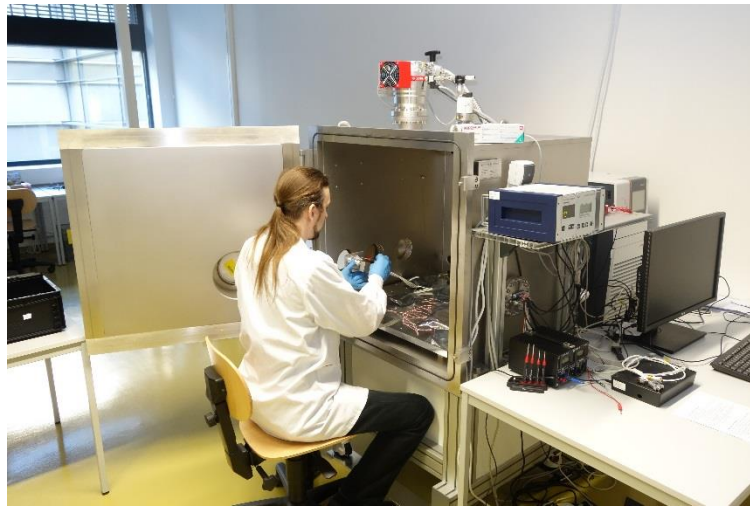


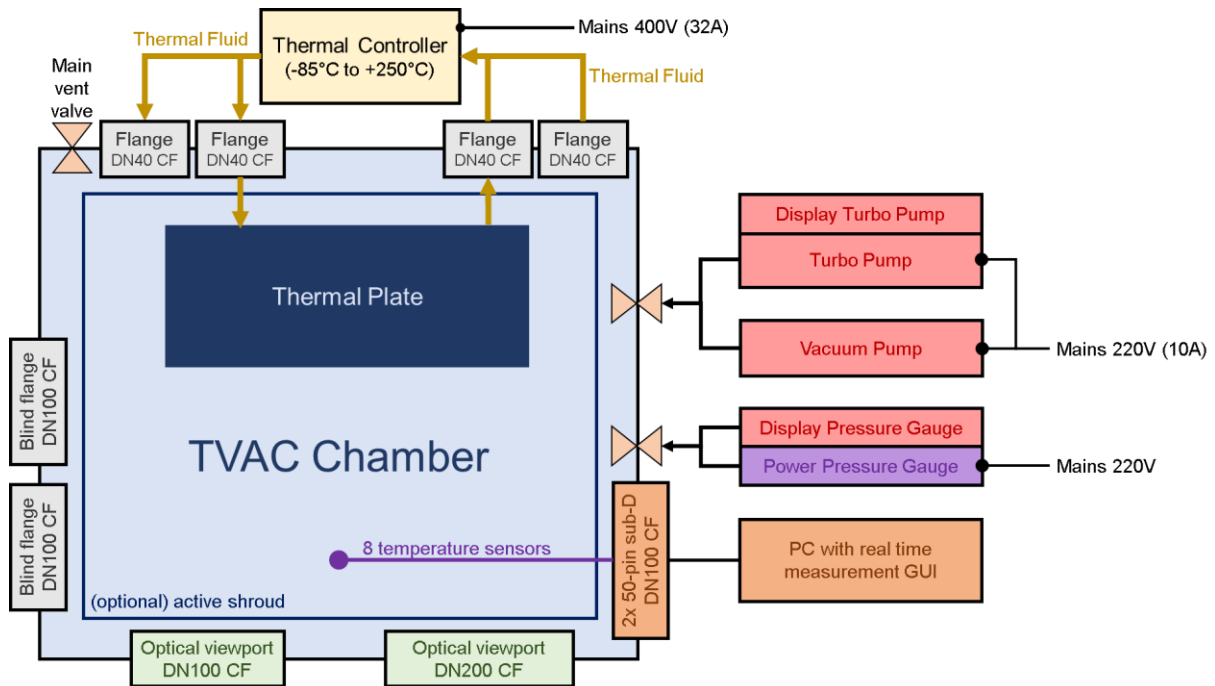
THERMAL VACUUM CHAMBER

Berlin Space Technologies offers cost effective solutions for thermal vacuum tests (TVAC). Our TVAC chambers are built according to the complex test regime of the space industry. They offer automatic safety and logging modes which allow the operator to run the chamber without human supervision.



BST Thermal Vacuum Chamber

Characteristics	Value	Comment
Vacuum Level	<1e-6 mbar	Empty chamber
Pump down time	20min	To <1e-3mbar
Temperature Range	-60°C to +120°C	Thermal plate tested by BST
	-85°C to +250°C	Range of the cooler
Active Shroud	Optional	Via main cooler, optionally via secondary cooler
Thermal cycling gradient	<2K/min	-
Chamber Internal Size (larger versions on request)	750 x 750 x 680 mm ³	With thermal plate only
	700 x 700 x 650 mm ³	With active shroud
Electrical feedthrough	2x 50 pin	More pins on request
Optical feedthrough (max. aperture diameter)	2x 100mm (80mm) 1x 200mm (150mm)	Lambda/4 @ 632nm Other configurations on request
Thermal feedthrough	4x 40mm	For shroud and thermal plate
Additional feedthrough	1x 100mm	E.g. RF feedthrough or other
Automatic Monitoring	Yes	Safety & Data Logging



Block Diagram

Dimensions & Interfaces	Value	Comment
Chamber ext. dimensions w/o cooler systems	1770mm +/- 200mm 920mm +/- 100mm 1620mm +/- 100mm	Height Width Depth
Chamber mass	1200kg +/- 50kg	Basic BST TVAC chamber incl. thermal controller
Power Supply	400V – 32A	Cooler
	220V – 10A	Vacuum & turbo pump
	220V – 3A	Measurement equipment

The BST vacuum chamber is equipped with an autonomous monitoring station. The automated monitoring station can be controlled remotely and includes several automated safety features – thus does not require human attendance. This greatly improves operations as the chamber can now be left running during nights and weekends without human observers.