

TORNADO 405 Sputtering Tilt-Head substrate holder

The Cryofox Tornado 405 is a compact sputtering system with water cooled tilt-head substrate holder for 100 mm (4") substrates. As standard it is equipped with two pcs of 3" tilt magnetrons for single or co-deposition by RF reactive sputtering, a AC-plasma source, and dry vacuum pumps.

The system is a really lab workhorse, and due to the easy access, easy operation, and the high process repeatability, it is a preferred tool for both the young student, and the very experienced scientist.

Typical applications are:

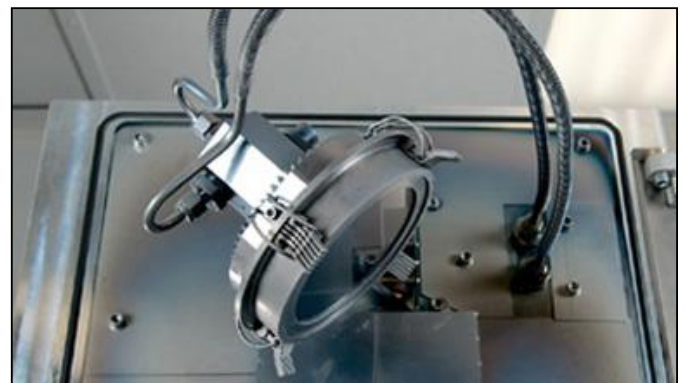
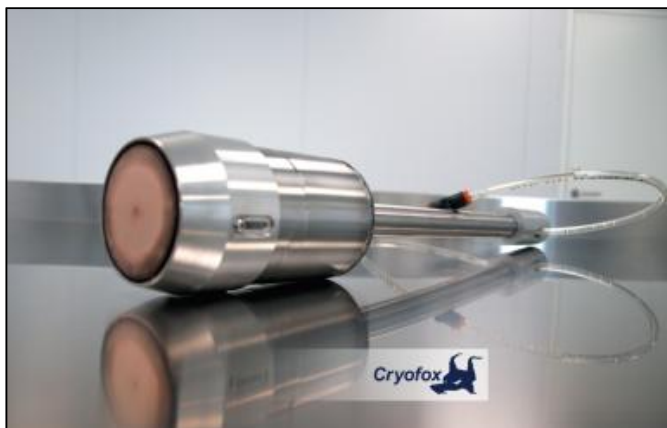
- Oxide and nitride coatings
- Graded cermet layers
- Metal coatings for electrodes
- Hydrophobic or hydrophilic ceramic layers
- Metal electrodes for PV solar samples



The magnetrons can be configured with balanced or unbalanced magnet setup, and are very easy reconfigurable.

It has the latest generation of the advanced Cryosoft3 control software, including the superior recipe system and data logging functions.

As for all our Tornado models, this system is equipped with the high quality turbo molecular pumps and a dry roughing pump from Edwards Vacuum. The TMP has a long-life hybrid bearing configuration. This is ensuring a high up time and low cost operation of the Tornado 306 and 405 models.



Cryofox Division

Polyteknik is an experienced supplier of high tech equipment for PVD and PECVD thin film deposition and specialises in production and development of advanced deposition solutions.

The systems are usually delivered to high tech institutes and companies, typically within the business and activity fields of:

- MEMS fabrication
- Sensor fabrication
- TEM Thermo Electric Modules
- Battery and storage activities
- Solar PV R/D activities
- Solar CSP R/D and fabrication
- Piezo sensors and actuators
- Roll-to-Roll r/d and production
- Special applications

Our deposition systems are based on high quality standard platforms and the easy-to-use Cryosoft3 software for highly advanced processing and datalogging. The advanced processes are typically developed in close cooperation with our customers.

Polyteknik is a trusted supplier of deposition technology and we are proudly announcing that we have an almost global reference list.



TECHNICAL SPECIFICATIONS

Main dimensions	1240 x 1250 x 1500 mm W x H x D
Vacuum chamber	400 x 500 x 485 mm, W x H x D, App. 96 liter
Rotating tool plate	Ø 100 mm substrate holder with tilt, holder for small samples incl.
Roughing pump	35 m ³ /h dry pump
High vacuum pump	Turbo molecular pump 400 l/s, hybrid bearings
Magnetron / RF-power supply	2 pcs of 3
Plasma cleaning	Source and 1400 V, 50 Hz supply
Electric supply	3 x 400 V, 1,5 kVa peak
Cooling water supply	18-25 C, max 1 kW cooling capacity peak
Options:	3rd magnetron, DC sputtering supply, Ion gun, ekstra MFC's