

# EA15-HP5

## HEMISPHERICAL ENERGY ANALYSER



XPS | UPS\* | ARPES\*\* | AES\*\* | ISS\*\*

### DESCRIPTION

The PREVAC EA15-HP5 hemispherical energy analyser, which is based on the EA15 analyser, allows due to special designed extraction cones and automatic vacuum control, high-resolution PES measurements in static and dynamic environments **up to 5 mbar**.

Equipped with a total number of 11 slits, the analyser offers the possibility to choose between best energy resolution and best intensity. According to given photoelectron energy the analyser is set up with up to 8 predefined PE to satisfy customer's requirements.

### DETECTORS

- **MCP-CCD detector**
  - 40 mm diameter dual MCP detector
  - 656 energy channels available simultaneously
  - 494 angular spatial channels available simultaneously
  - 90 fps
- **7-MCD detector** (for UHV)
- **DLD detector** (for UHV, on request)

### ANALYSER PACKAGE

The PREVAC analyser package includes:

- EA15-HP5 hemispherical energy analyser
- RUDI-EA2 high stable and low noise electronics
- SPECTRIUM acquisition and analyser control software with Windows OS computer system.

### ADDITIONAL INFORMATION

EA15-HP5 hemispherical energy analyser can be controlled directly by LabVIEW programming environment.

**NOTE** | The use of a mu-metal analysis vacuum chamber or an inner mu-metal shielded chamber in combination with PREVAC EA15-HP5 analyser is recommended in order to minimize influence of external magnetic fields and to maximize performance of the analyser.

### TECHNICAL DATA

Mounting flange	DN 100 CF
Bakeout temperature	up to 120 °C
Working distance	1-2 mm (dependent on cone opening)
Analyser mean radius	150 mm
Pass energies	<b>XPS</b> 20, 50, 100, 200 eV <b>XPS/UPS &amp; XPS/UPS/ARPES</b> 1, 2, 5, 10, 20, 50, 100, 200 eV
Energy resolution	<b>XPS</b> < 20 meV FWHM <b>XPS/UPS &amp; XPS/UPS/ARPES*</b> < 3 meV FWHM
Kinetic energy range	0.5 - 3000 eV
Acquisition modes	fixed, scan
Transmission and angular lens mode:	
▪ lens acceptance angle (transmission mode)	+/- 15°
▪ lens acceptance angle (angular mode)	+/- 10°
Maximum energy window in fixed mode	12.5 % of pass energy (for MCP-CCD)
Completely designed of non-magnetic materials	

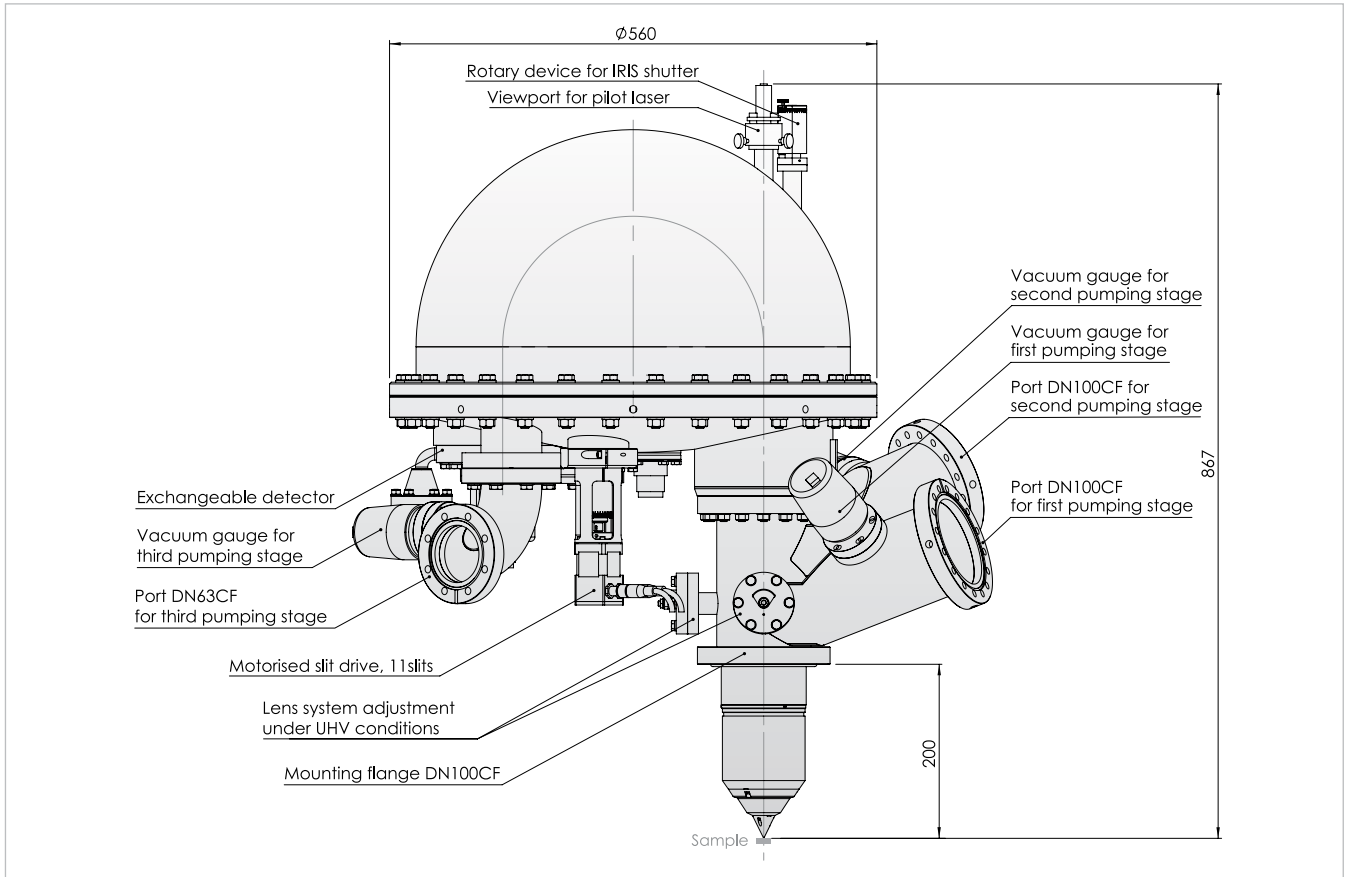
### SPECTRIUM SOFTWARE



\* up to 0.1 mbar.  
\*\* only in UHV conditions, without cone



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EA15-HP1