

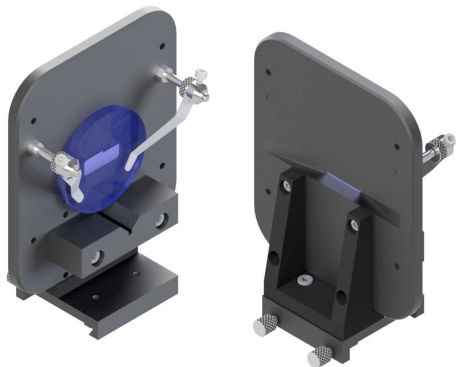
# Spectrophotometer Photon RT

The spectrophotometer Photon RT is designed for automatical measurement of the reflection and transmission of optical coatings for p- and s- polarisations of light beams under the incident angles from 0° up to 75° (transmission) and from 8° up to 75° (reflection) in the wavelength range from 185nm up to 5200nm without manual adjustment of the measured plane samples with the size up to 152.4mm as well as cubes and prisms with complicated forms with size up to 50mm. The software and its mathematical algorithms allow to derive the spectral characteristics of the refractive indices and absorption coefficients of the glass substrates and coating layers as well as the thicknesses of the coating layers.

available spectral ranges:	185-1700nm    380-3500nm 185-5200nm    380-1700nm 185-3500nm    380-5200nm
photometric functions:	absolute transmission and reflection for p- and s- polarisations
variable angle measurements:	0° - 75° (transmission) 8° - 75° (reflection) up to 85° optional
optical density:	up to OD4
min. clear aperture of sample:	6mm x 2mm
beam displacement compensation:	+/-60mm (depends on AOI)
wavelength resolution:	0.3nm for 185- 350nm 0.6nm for 350-990nm 1.2nm for 990-2450nm 2.4 up for 2450-5200nm
wavelength accuracy:	+/-0.25nm for 185- 350nm +/-0.5nm for 350-990nm +/-1.0nm for 990-2450nm +/-2.0nm for 2450-5200nm
repeating accuracy:	+/-0.12nm for 185- 350nm +/-0.25nm for 350-990nm +/-0.5nm for 990-2450nm +/-1.0nm for 2450-5200nm
scanning speed:	600 wavelength points per minute
angle resolution:	0.01°
max. plane sample size:	CA 120mm (up to 152.4mm possible)
max. cube / prism size:	50x50x50mm (up to 152.4mm possible)
device size:	425 x 656 x 285mm (W x D x H)
device weight:	up to 50kg
power input:	110/220V, 50/60Hz



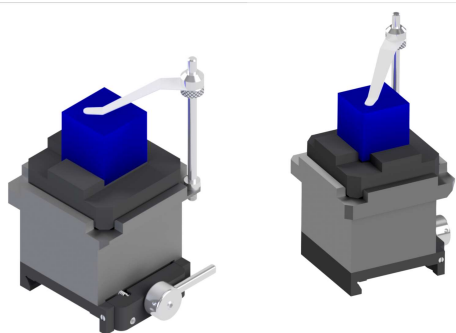
## Spectrophotometer Photon RT



### Standard non-motorized sample stage

included in basic delivery set

transmission and reflection measurements on plane surfaces at angles of incidence  $0^\circ$  up to  $75^\circ$

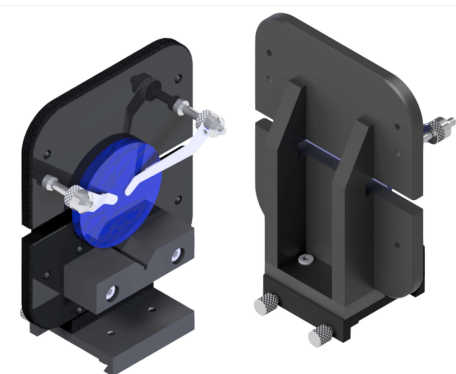


### Standard non-motorized stage for prism measurements

included in basic delivery set

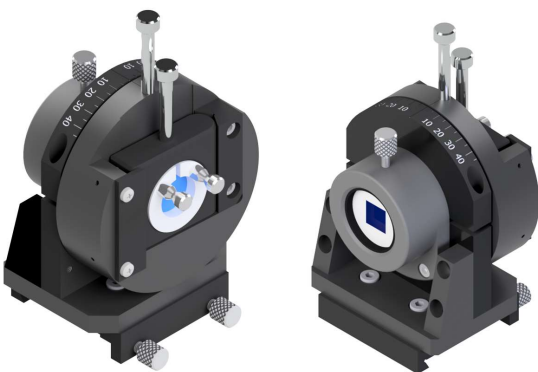
transmission and reflection measurements on cubes and prisms under variable transmission and reflection angles as well as the angles of incidence

consists of basic stage and inserts 25.4mm and 12.7mm



### 7085 non-motorized stage

transmission and reflection measurements on plane surfaces under the angles of incidence  $70^\circ \dots 85^\circ$



### QW non-motorized stage

transmission measurement of the phase retardation plates with external mounting diameter 25mm

the phase plate is manually rotated around the beam propagation axis at  $\pm 45^\circ$

built-in analyzer 220-2200nm, or 380-2200nm, or 1500-5000nm

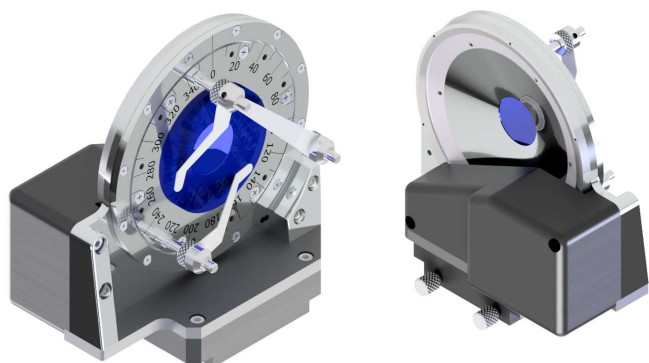
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### Z motorized stage

unattended baseline calibration and measurement of the sample without opening the lid. Especially useful when the sample needs to be measured under the same ambient conditions

transmission and reflection measurements under the angles of incidence up to 75°



### R motorized stage

3D reflection/transmission analyses

sample rotation around the beam propagation axis

sample size dia 25mm ... dia 70mm

transmission and reflection measurements under the angles of incidence up to 60°

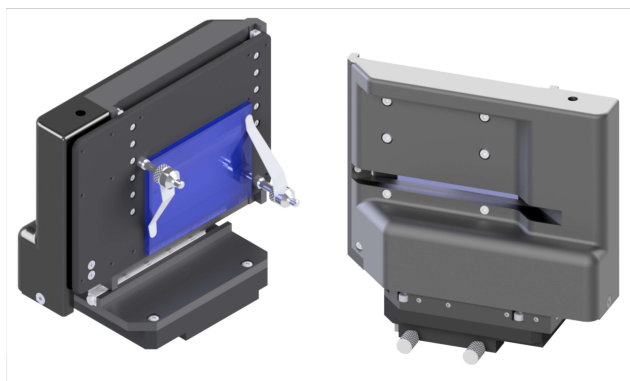


### MP10 TR45 multiposition motorized stage

sequential baseline calibration and measurement of multiple samples with equal diameter

transmission and reflection measurements under angles of incidence up to 45°

consists of a stage base and a separate replaceable multiposition wheels with 10 positions dia 25/25.4mm or 20 positions dia 12.5/12.7mm



### XY TR45 motorized stage

XY mapping of the sample for verification of the uniformity of the coating

X-range +/-25mm, Y-range +/-20mm, mapping area 50x40mm, sample size 134x91mm

transmission and reflection measurements under angles of incidence up to 45°

## Spectrophotometer Photon RT

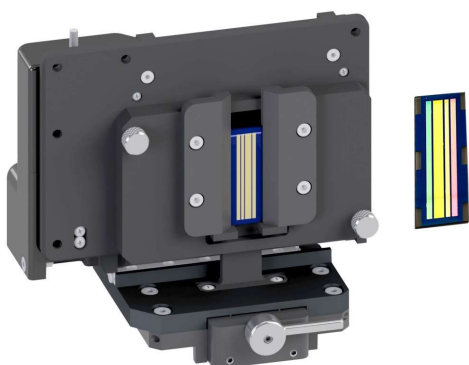


### XY T10 motorized stage

XY mapping of the sample for verification of the uniformity of the coating

X-range  $\pm 55\text{mm}$ , Y-range  $\pm 20\text{mm}$ , mapping area  $110 \times 40\text{mm}$ , sample size  $180 \times 91\text{mm}$

transmission measurements under angles of incidence up to  $10^\circ$



### XY-MZF motorized stage

unattended transmission measurement of multizone filters and linear variable filters

- 0.3mm width of the beam spot
- width of individual filter zone down to 0,7mm
- measurement step down to 0,1 mm
- maximum coated filter area (X Y):  $50,0 \times 40,0\text{mm}$
- computer-controlled zone detection, zone centering measurement, filter mapping



### QW motorized stage

transmission measurement of the phase retardation plates with external mounting diameter 12.7mm and 25.4mm

the phase plate is rotated around the beam propagation axis  $\pm 45^\circ$

built-in analyzer 220-2200nm, or 380-2200nm, or 1500-5000nm