

# Technical data ProCam®

	ProCam® TT	ProCam® Align Smart
Alignment degrees of freedom	up to 6 DoF	up to 6 DoF
6 DoF linear alignment resolution	< 0.5 µm	< 0.5 µm
Final sample linear alignment accuracy	< 4 µm <sup>1)</sup>	< 4 µm <sup>1)</sup>
6 DoF tilt alignment resolution	< 0.7 arcsec	< 0.7 arcsec
Final sample tilt alignment accuracy	< 4 arcmin <sup>1)</sup>	< 4 arcmin <sup>1)</sup>
Final roll angle alignment accuracy	< 6 arcmin <sup>1)</sup> (sensor to sensor) < 12 arcmin <sup>1)</sup> (sensor to mechanical reference)	< 6 arcmin <sup>1)</sup> (sensor to sensor) < 12 arcmin <sup>1)</sup> (sensor to mechanical reference)
Sample effective focal length	1 mm ... 12 mm (ColFix) 1.8 mm ... 12 mm (ColMot)	1 mm ... 12 mm (ColFix) 1.8 mm ... 12 mm (ColMot)
Sample diameter	4 mm ... 30 mm (smaller or bigger diameter on request)	4 mm ... 30 mm (smaller or bigger diameter on request)
Field of view: test chart	up to 70° (up to 100° possible after individual clarification)	up to 70° (up to 100° possible after individual clarification)
Field of view: collimators	up to 160° mechanical set up <sup>2)</sup> up to 140° for optical measurement <sup>3)</sup>	up to 160° mechanical set up <sup>2)</sup> up to 140° for optical measurement <sup>3)</sup>
Performance	Max. 300 UPH (Units Per Hour) Calculated on following parameter: sensor board initialization time <1 s, camera frames >30 fps, continuous images from camera, UV snap curing <2 s with preselected lenses. The loading and unloading time is in cycle. (single head, parallelization possible)	60 sec. Cycle time excluding loading/unloading of the sample. Cycle time calculated on following parameter: sensor board initialization time <1 s, camera frames >30 fps, continuous images from camera, UV snap curing <2s with preselected lenses.
Dimensions (h x w x d)	1,875 mm (1,800 mm without flowbox) x 1,400 mm x 1,480 mm; customized	1,840 mm x 1,700 mm x 1,100 mm
Camera interface	Software Development Kit (SDK) provided enabling to connect to all standard interfaces (either MIPI, Parallel, LVDS, Analog or directly to PC via e.g. USB, FireWire, CamLink, GigE).	Software Development Kit (SDK) provided enabling to connect to all standard interfaces (either MIPI, Parallel, LVDS, Analog or directly to PC via e.g. USB, FireWire, CamLink, GigE).
Weight		600 kg ... 800 kg
Type	Stand alone	Stand alone

1) Typical accuracy reached on following sample parameter: pixel size 6µm, F# = 2.8, EFL = 4.5mm.

2) Up to 180° possible after individual clarification, depending on sample and mechanical surrounding, for bigger FoV technical investigations necessary.

3) Depending on distortion, individual clarification necessary.