

TECHNICAL DATASHEET

X-TubeProcessor®_Smart 2.0 with X-Control



DEVICE

Dimensions

Height:	84 cm [33.2"] standard size / 115 cm [45.24"] with HEPA-filter
Depth:	73 cm [28.86"]
Width:	82 cm [32.40"] standard size / 107 cm [42.28"] with labeler

Weight

Without labeler:	approx. 72 kg [159 lbs]
With labeler:	approx. 85 kg [187 lbs]
With labeler and HEPA-Filter:	approx. 95 kg [209 lbs]

Operating Data

Operating voltage:	100-240 VAC, 50/60 Hz (1ph)
Power consumption:	280 W
Air supply:	min. 50l/min. @ 6-8bar (according to DIN ISO 8573-1:2010)
Temperature/humidity:	15 °C - 30 °C / 10% - 80%; non-condensing

Interfaces

1 Ethernet port for connecting control pc to the device
1 Ethernet port for service access
1 USB A port for service access

Housing

Powder coated aluminum, anodized aluminum & Plexiglas, Cleanable with regular detergents (housing only)
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Software

X-Control [Integrated control software compatible with Windows, Linux or MacOS] [HTI-standard REST API interface]

MODULES

Robotic Arm Module Single robotic arm	Cartesian coordinate robotic arm with a universal rotating gripper (patent pending)
Rack Module	Capacity of 6 SBS format racks [Customer specific racks after technical evaluation]
Cap-Feeder Module*	Individual micro screw cap sorting unit with a storing capacity of 1,000 caps and with a quick-empty function
Liquid-Handling Module* Pump calibration: Dispensing accuracy: Available tubing sizes: Source vessel: Suction-/dispensing canula: Additional options:	Watson-Marlow peristaltic pump Inbuilt pump calibration tool <1% - 5% of the dispensing volume [depends on the dispensing volume, density of the liquid and tubing sizes] Wall thickness: 1.6mm Inner diameter: 0.5mm, 0.8mm, 1.6mm max. 1l within the device [passive cooling for smaller vessels possible] * Available per each size of tubing Stainless steel & autoclavable Wall-Touch unit*
Labeling Module* Printing resolution: Tube diameter Label core diameter: Label roll diameter: Label height: Label design software: Operating voltage: Power consumption:	CAB Axon 1.1 thermal transfer printer 600 dpi 7 mm – 22 mm min. 76 mm max. 205 mm 12 mm – 25.4 mm Cablabel S3 [other software after individual clarification] 100-240 VAC, 50/60 Hz (1ph) 100 W
Barcode Reader Module* Supporting codes:	di-soric ID-600 reader 1D & 2D Codes Read the bottom/body barcode on the tube / compare with provided data / store the read barcodes [after individual clarification]
HEPA-Filter Module* Sterility Class Operating voltage: Power consumption:	HEPA-Filter H14 with pre-filter DIN EN ISO 14644 Class 4 100-240 VAC, 50-60 Hz (1ph) 85 W
UV-C Light Module*	UV-C air & surface disinfection with 13W high efficiency emitter
Feedback Units*	Acoustic alarm unit Fault detection connection unit E-Mail notifications Remote Desktop

* Optional modules / units.

COMPACTIBLE TUBES/VIALS & CAPS

Tubes/Vials	Micro screw tubes, cryo vials, HPLC vials, centrifuge tubes or similar
Tube/Vial height:	approx. 32mm [1,26"] – 120mm [4,72"]
Tube/Vial diameter:	approx. 8mm [0,32"] – 18.5mm [0,71"]
Caps	Screw caps
Cap Height:	approx. 6mm [0.236"]
Manufacturer	Sarstedt, SSI, Biozym, Greiner, VWR, Thermo Fisher Scientific, Nunc™, Falcon, FluidX™, micronic, LVL, etc. [others after technical evaluation]
Typical applicable tube types[†]	Micro screw tubes, cryo vials, HPLC vials, glass vials, centrifuge tubes or similar up to 15 ml [and many more]

THROUGHPUT[†]

Filling Capping Labeling	Filling Capping	Capping Labelling	Labelling
200 tubes/hour	310 tubes/hour	220 tubes/hour	370 tubes/hour

[†] Might vary depending on the filling and labeling process. Complete throughput process is performed on 2.0ml Sarstedt tubes in six HTI 48 SBS racks with additional options disabled. Filling process is performed by filling 1000µl distilled water at 24°C using dispensing set ID: 1.6 mm. Labelling process is performed using a 25x30mm labels with thermos transfer option

[‡] Technical verification always required