



VHP – DECONTAMINATION LOCK

TECHNICAL
SHEET

SPECIFICATIONS

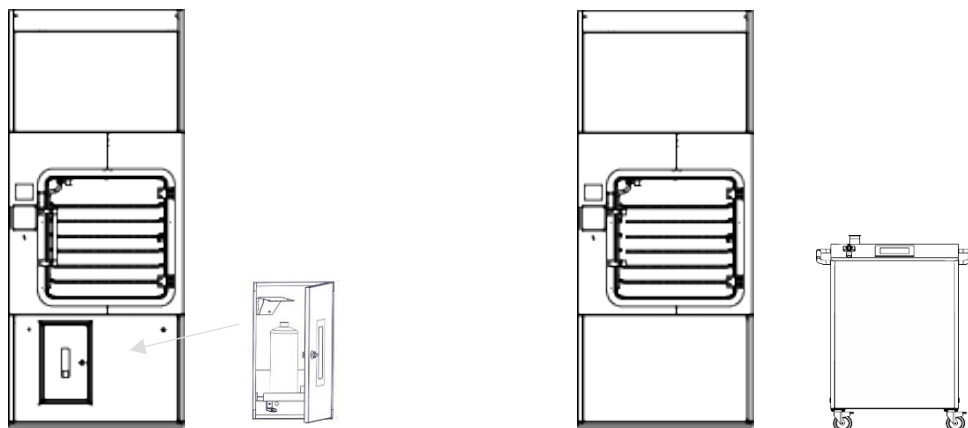
The **decontamination pass-through chamber** is used as a material pass-through for transferring materials between rooms with different cleanliness classes or different BSL.

- Decontamination of equipment and materials using **hydrogen peroxide** vapour.
- **Can be integrated** into partition walls.
- **Low operating costs.**
- **Long service life.**
- **Minimal maintenance.**
- **Easy handling.**

STANDARDS AND CERTIFICATIONS: 2006/42/EC, 2014/30/EC, EN 12469, ISO 14644-7, EN ISO 9001:2016, EN ISO 14001:2016, ISO 45001:2018

Tightness class	3 according to ISO 10648-2
Cleanliness class	"B" according to EU GMP standard
Construction material	AISI 304 stainless steel, SB finish
Interleaving chamber material	AISI 304 stainless steel, 3 mm thick, with orbital ground stainless steel finish , Ra <0.6 µm
Filtration	HEPA H14 inlet and outlet filtration
Operation	Autonomous decontamination cycle
Rounded corners	R = 50 mm

CUSTOMER SOLUTION



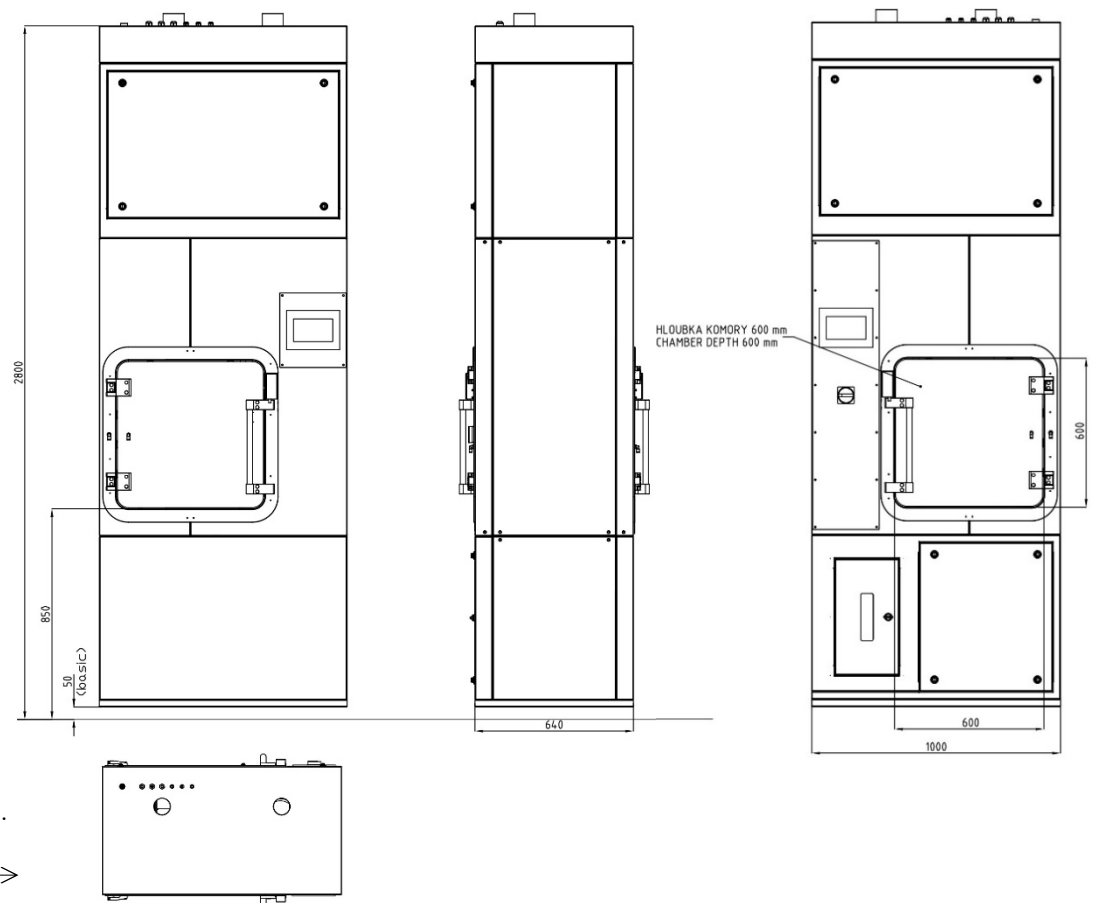
With integrated generator

With external generator H₂O₂

TECHNICAL PARAMETERS

Product name	Decontamination Lock - VHP
Product type	YSK
Electrical system	L+N+PE / TN-S-230 V / 50 Hz
Total installed power consumption	0.9 kW / 3.0 kW (external / integrated VHP generator)
Protection	IP54/IP20 – operation/other

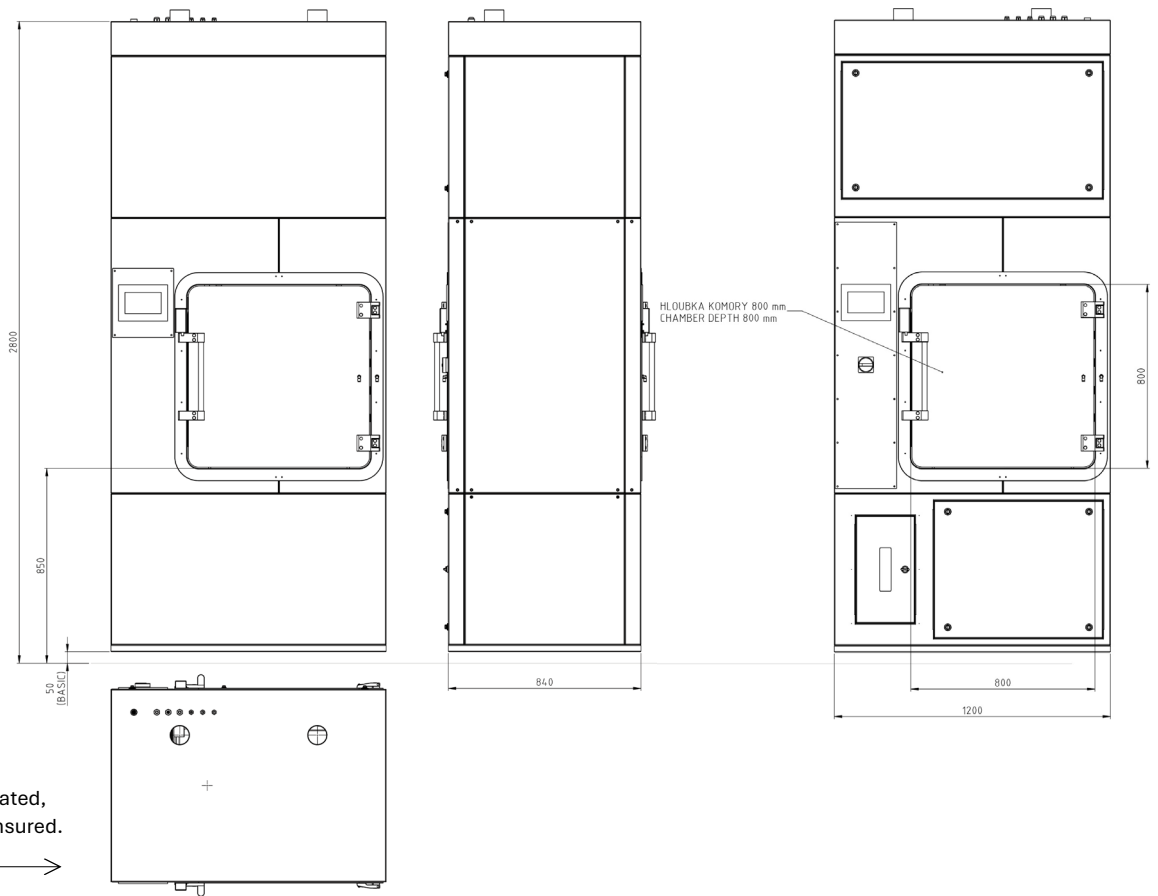
600 mm variant



Standard cabin dimensions in mm

	Width	Height	Depth	Flow
Chamber dimensions	600	600	600	
Shelf dimensions	490		490	
Overall cabin dimensions	100	280	640	
Supply/exhaust air duct DN 80				110 m ³ /h

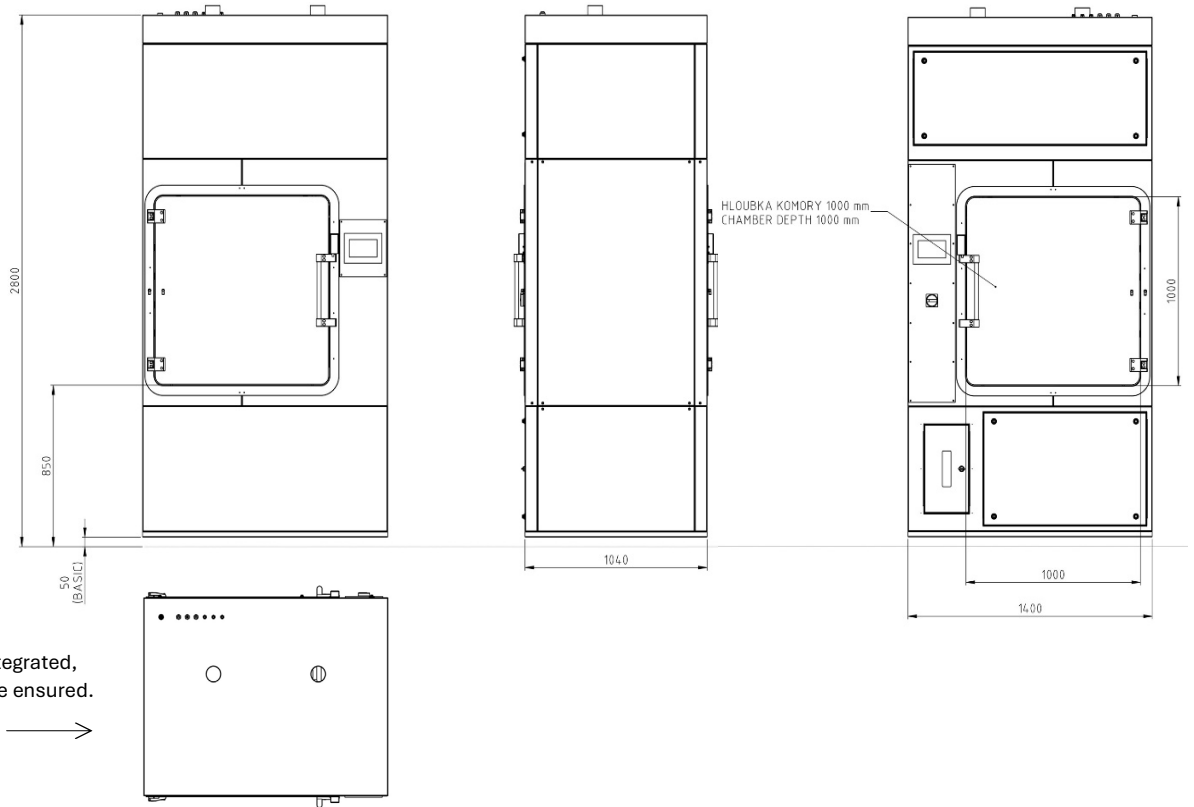
800 mm variant



Standard cabin dimensions in mm

	Width	Height	Depth	Flow
Chamber dimensions	800	800	800	
Shelf dimensions	690		690	
Overall cabin dimensions	1200	2800	840	
Supply/exhaust air duct DN 80				200 m ³ /h

Variant 1000 mm



Standard cabin dimensions in mm

	Width	Height	Depth	Flow
Chamber dimensions	1000	1000	1000	
Shelf dimensions	890		890	
Total cabin dimensions	1400	2800	1040	
Supply/Exhaust air duct DN 80				300 m ³ /h

HMI PANEL



- The device is controlled by a Siemens color touch screen.
- There is one panel on each side of the device.
- The Simatic control system from Siemens is intuitive and user-friendly.
- The screen displays actual environmental parameters and monitors emergency conditions.
- The system has remote access for operator support.
- HMI panels allow for different levels of access rights.

Control unit	SIEMENS PLC with touch panel (HMI)
Signalling	Acoustic and HMI (door status, cycle)
Sensors	Door status, chamber pressure

REQUIREMENTS CONNECTION

Compressed air	<p>Purity according to ISO 8573.1 (1-3-1)</p> <p>Pressure: 6 bar</p> <p>Supply: 10 m³/h – external, 60 m³/h – integrated VHP generator</p>
Electric power supply	<p>Power supply: L+N+PE / TN-S–230 V / 50 Hz</p> <p>Power input: 0.9 kW / 3.0 kW (external / integrated)</p>
Data communication with the superior system and VHP generator via:	<ul style="list-style-type: none"> • Modbus TCP/IP, Profinet – Ethernet data socket in the same network as the superior system/ Puriter • Modbus RTU – addressable Harting socket with defined address
Ambient temperature	Min. 21 °C.
HVAC – Supply/Exhaust	<p>600 mm version:</p> <p>110 m³/h – DN 80 (outer ø 85 mm), DIN 11850</p> <p>800 mm version:</p> <p>200 m³/h – DN 80 (outer ø 85 mm), DIN 11850</p> <p>1000 mm version:</p> <p>300 m³/h – DN 100 (outer ø 101.6 mm), ASME BPE</p>
Separate ventilation branch	For hydrogen peroxide vapor venting

DECONTAMINATION



- **35% hydrogen peroxide (H₂O₂).**
- The decontamination process takes place **at normal temperature** (25 to 35 °C) **and atmospheric pressure.**
- Surface decontamination of the loaded material with a **reduction of biological load by 6 orders of magnitude (10⁻⁶).**
- **Leaves no toxic residues.**
- **Possibility to validate** the decontamination cycle.

Chemical decontamination method	Chemical (H ₂ O ₂)
Cycle	Fully automatic
Filtration	HEPA H14, 99.995% efficiency

STANDARD EQUIPMENT

Mobile wire shelves	Allow sterilization of the product from all sides 2 shelves , adjustable in 4 positions, spacing 150 mm
HVAC Supply/Exhaust	600 mm version: 110 m ³ /h – DN 80 (outer ø 85 mm), DIN 11850 800 mm version: 200 m ³ /h – DN 80 (outer ø 85 mm), DIN 11850 1000 mm version: 300 m ³ /h – DN 100 (outer ø 101.6 mm), ASME BPE
H₂O₂ supply (for external VHP generator)	Clamp D3=50.5 mm, DN40, DIN32676, Type A
Compressed air connection	Through the sealed cabin ceiling with internal thread G1/2
Rotronic sensor	Temperature and humidity measurement

OPTIONAL EQUIPMENT

Tightness class upgrade	Option to modify the device to tightness class 2 according to ISO 10648-2
High concentration (HC) H₂O₂ sensor	Located inside the cabin to maintain control over the decontamination process
Low concentration (LC) H₂O₂ sensor	Located inside the cabin to maintain control over the decontamination process
Low concentration (LC) H₂O₂ sensors -2 pcs	Installed externally on both sides of the cabin to ensure operator safety
Catalyst	Accelerates the chemical reaction
Interleaving chamber material	AISI 316L stainless steel, 3 mm thick, polished or orbital ground surface finish, Ra <0.6 µm
Shelves	Option to adjust the number and position of shelves