



WIT Trolley

Automatic testing of hydrophobic filter cartridges



Description

The WIT Trolley has been developed to make integrity testing of hydrophobic sterilizing grade filters safe and easy in the pharmaceutical industry. Both Water Intrusion and Water Flow tests can be performed. The Sartochek® 4 plus pilots all the pneumatic valves via the integrated SIEMENS PLC. A PT100 sensor measures the water temperature in the water tank and avoids testing with water out of the predefined temperature range.

Installation

Due to its unique design and its fully automatic two step filling procedure the WIT Trolley can test all HIMA correlated hydrophobic sterilizing grade membrane filters at a horizontal distance of more than 100 m and a vertical distance of more than 15 m. The external thermal compensated pressure sensor is installed on the top of the housing and measures the pressure drop exactly where the intrusion | water flow take place. Moving the WIT Trolley during the measurement will have no incidence on the test value.

No cross contamination

The Trolley uses the principle of one way flow. Once the Sartochek® 4 plus has pressurized the water tank and filled the housing to a stable pressure the filter housing is isolated by the filling valve. The gas overpressure in the water tank is vented directly at the water tank and does not go back via the Sartochek® 4 plus.

At the end of the integrity test the test water is drained via the draining valve directly at the housing and does not get in contact with neither the filling tubing nor the water tank.

In-line steam decontamination

The Trolley can be steamed at max temperature of 134 °C (266 °F). The SIEMENS PLC supervises the steaming temperature at the lowest point using a second PT100 sensor. If the steaming temperature increases too much the inlet valve is closed. If the steaming temperature decreases too much the steaming cycle is interrupted and an error message is given. An optional extended steaming version of the Trolley allows for steaming of the filling hose.

Test flexibility

Although connected to the Trolley the Sartochek® 4 plus can perform all types of standard integrity testing via the auxiliary output thus giving a total test flexibility. It can also be connected to up to four Multi-Units (please see separate data sheet) in order to perform an additional test in parallel.

PLC connector and integration

The Sartochek® 4 plus may be triggered by a 24V dry signal from a PLC. The Sartochek® 4 plus printout clearly shows the difference between an integrity test that has been started by an operator from the Sartochek® 4 plus touch screen | key board and via the PLC contact.

The WIT Trolley can thus be integrated into an automated process and deliver a "GO" or a "NO GO" for the following process steps.

Sartorius Stedim Biotech Validation Package

The Sartochek® 4 plus and its Trolley are both delivered with a comprehensive validation package including an IQ & OQ protocol that can be accomplished by qualified Sartorius Stedim Biotech personnel. Assistance for PQ can also be provided from the Sartorius Stedim Biotech Technical Support team.

Technical specifications

Power requirements	110 – 230 V AC 50 60 Hz
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Maximum operating pressure	9999 mbar 145 psi
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Minimum inlet pressure	4000 mbar 58 psi
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Measuring ranges	
Test pressure	100 – 8000 mbar 1.5 – 116 psi
Pressure drop	1 – 2000 mbar 0.01 – 29 psi

System net volume	
- with internal ref. vessel	14 l
- with external ref. vessel	150 l

Order Information	
Order number	17005A---L--5301

Measuring accuracy	
Pressure	± 0.1% full scale ± 9.5 mbar
Pressure drop	± 1 mbar
Volume determination	± 4%
Diffusion	± 5%
Water intrusion	± 5%
Bubble point	± 50 mbar 0.7 psi

Operating conditions	
Ambient temperature	+15 to + 35 °C
Relative humidity	10 – 80%
Max distance between SC4+ and filter housing (horizontal)	100 m
Max distance between SC4+ and filter housing (SC4+ below)	25 m
Max distance between SC4+ and filter housing (SC4+ above)	15 m

Equipment supplied

Trolley	
Hose with valve battery for filling	
Steam trap	
Installation and operating instructions	
Validation package	
Mains lead (country specific)	

Accessories

External pressure transducer*	1ZE---0018
Sartocheck® 4 plus*	26288

Optional version

Extended steaming version	17005A---L--5501
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* to be ordered separately; not part of 17005A---L--5301

- 1: Sartocheck® 4 plus
- 2: Pneumatic & hydraulic compartment
- 3: Electrical compartment
- 4: OP7 screen



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