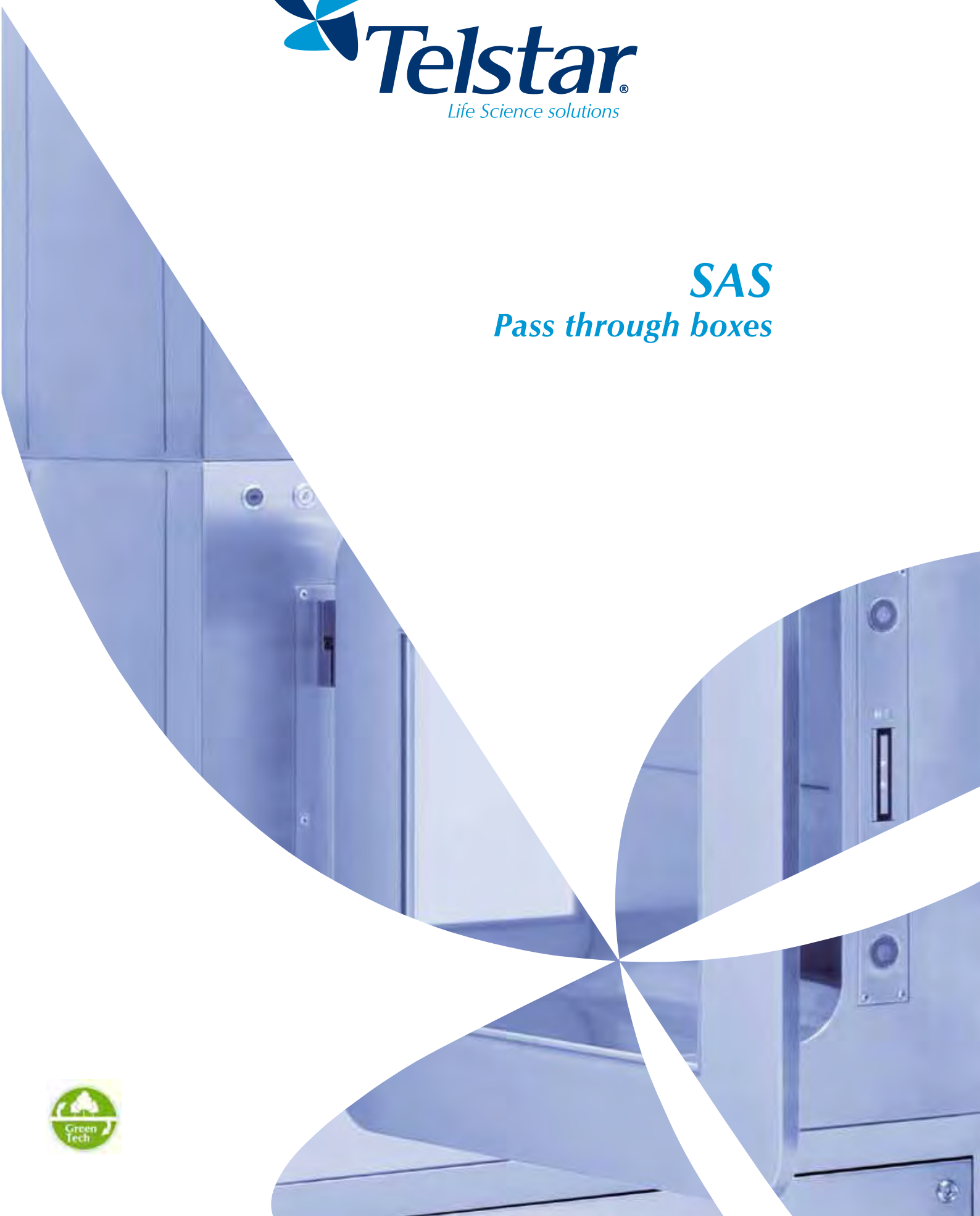
Telstar®
Life Science solutions

SAS
Pass through boxes



Telstar SAS
Life Science solutions

Pass through boxes

The requirements for processes involved in the manufacture of pharmaceuticals and similar regulated products are becoming increasingly demanding, which in turn requires the use of equipment able to guarantee the quality of final product.

Telstar SAS systems are specially designed for the safe transfer of materials between classified areas or between a classified area and a non-classified area. Telstar SAS systems can be configured to bio-decontaminate the materials being transferred; thereby reducing the burden on the exit atmosphere.

Telstar equipment is compliant with all major quality standards, provides good ergonomics and ease of use and the modular design enables various configurations to suit the requirements of each particular process.

Telstar provides 3 types of SAS:

Pass through SAS

Ventilated SAS

Biological SAS

Biological SAS

Key features

- Frame and chamber constructed completely in AISI 304 stainless steel, with radiused corners and continuous welded joints, resulting in surfaces which are easily cleaned.
- Doors with 6mm double-glass security windows provide a safe and clear view of the internals of the chamber.
- Various configurations enable adaptation to the process environment (double, triple or quadruple door units).
- Doors with inflatable gaskets to guarantee the air tightness between classified areas and between classified areas and the internals of the chamber.
- Interlock system guarantees that entry and exit doors cannot be open at the same time.
- Modular system. At any time after installation the opening direction of the doors is switchable to match the requirements of the process.
- UV germicidal lamp internal to the chamber.
- Equipped with a ventilation system which provides chamber flushing with HEPA filtration, on both inlet and exhaust.
- Equipment provides facilities for coupling an external hydrogen peroxide generator to bio-decontaminate the internal surfaces of the chamber.
- Pushbuttons installed on each side of the SAS to open the doors and activate the UV lamp.
- Emergency Stop accessible from either side of the pass box.
- Pass box with EC fans, including a fan speed controller that provides reduced energy consumption and increased filter life.
- Highly energy efficient equipment. Technology Green Tech.

Available Models

BIOLOGICAL SAS

MODEL	Useful dimensions of the chamber			External dimensions			Weight
	Depth	Width	Height	Depth	Width	Height	
	mm	mm	mm	mm	mm	mm	kg
SAS BIO 400	400	400	400	400	800	1.400	175
SAS BIO 600	600	600	600	600	1.000	1.600	200
SAS BIO 900	900	900	900	900	1.300	1.900	250
SAS BIO 1200	1.200	1.200	1.200	1.200	1.600	2.200	300

TECHNICAL SPECIFICATIONS

Installed power	850 W
Power consumption	500 W
Voltage	230 V 50 Hz/60Hz
Air classification	ISO Class 5 (EUGMP Class A)
Air flow	Non-laminar
Working pressure	Negative pressure (adjustable)
Lighting	UV germicidal lamp
Noise level	< 65 dB
Temperature	Uncontrolled
Humidity	Uncontrolled
Filtration	Flushing with HEPA 14 filtration in inlet and exhaust
Pre-filters	Inlet filters are protected by G4 pre-filters
Bio-decontamination	Includes two points for connection of an external hydrogen peroxide generator (Optional integrated hydrogen peroxide generator)
Air tightness	Doors with inflatable seals

Pass Through SAS

Key features

- Frame and chamber constructed completely in AISI 304 stainless steel, with radiused corners and continuous welded joints, resulting in surfaces which are easily cleaned.
- Doors with 6mm double-glass security windows provide a safe and clear view of the internals of the chamber.
- Various configurations enable adaptation to the process environment (double, triple or quadruple door units).
- Interlock system guarantees that entry and exit doors cannot be open at the same time.
- Modular system. At any time after installation the opening direction of the doors is switchable to match the requirements of the process.
- UV germicidal lamp internal to the chamber.
- Pushbuttons installed on each side of the SAS to open the doors and activate the UV lamp.
- Green Tech equipment.

Available Models

PASS THROUGH SAS

MODEL	Useful dimensions of the chamber			External dimensions			Weight
	Depth	Width	Height	Depth	Width	Height	
	mm	mm	mm	mm	mm	mm	kg
SAS PT 400	400	400	400	400	800	600	50
SAS PT 600	600	600	600	600	1.000	800	75
SAS PT 900	900	900	900	900	1.300	1.100	125
SAS PT 1200	1.200	1.200	1.200	1.200	1.600	1.400	175

TECHNICAL SPECIFICATIONS

Installed power	100 W
Power consumption	70 W
Voltage	230 V 50 Hz/60Hz
Air classification	Unclassified
Lighting	UV germicidal lamp
Temperature	Uncontrolled
Humidity	Uncontrolled
Filtration	No filtration system

Ventilated SAS

Key features

- Frame and chamber constructed completely in AISI 304 stainless steel, with radiused corners and continuous welded joints, resulting in surfaces which are easily cleaned.
- Doors with 6mm double-glass security windows provide a safe and clear view of the internals of the chamber.
- Various configurations enable adaptation to the process environment (double, triple or quadruple door units).
- Interlock system guarantees that entry and exit doors cannot be open at the same time.
- Modular system. At any time after installation the opening direction of the doors is switchable to match the requirements of the process.
- UV germicidal lamp internal to the chamber.
- Equipped with a ventilation system which provides chamber flushing with HEPA filtration, on both inlet and exhaust.
- Pushbuttons installed on each side of the SAS to open the doors and activate the UV lamp.
- Emergency Stop accessible from either side of the pass box.
- Pass box with EC fans, including a fan speed controller that provides reduced energy consumption and increased filter life.
- Highly energy efficient equipment. Technology Green Tech.

TECHNICAL AREA

Available Models

VENTILATED SAS

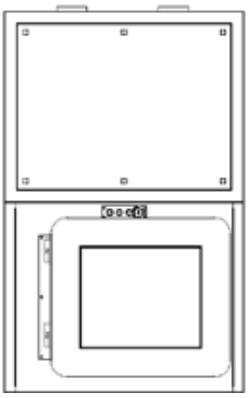
MODEL	Useful dimensions of the chamber			External dimensions			Weight
	Depth mm	Width mm	Height mm	Depth mm	Width mm	Height mm	kg
SAS HEPA 400	400	400	400	400	800	1.400	175
SAS HEPA 600	600	600	600	600	1.000	1.600	200
SAS HEPA 900	900	900	900	900	1.300	1.900	250
SAS HEPA 1200	1.200	1.200	1.200	1.200	1.600	2.200	300

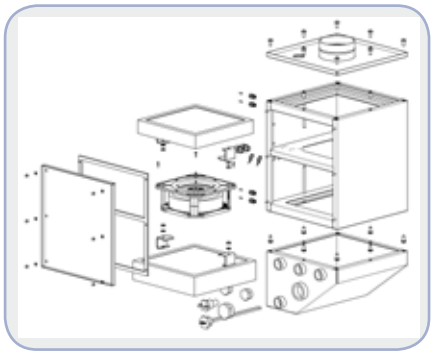
TECHNICAL SPECIFICATIONS

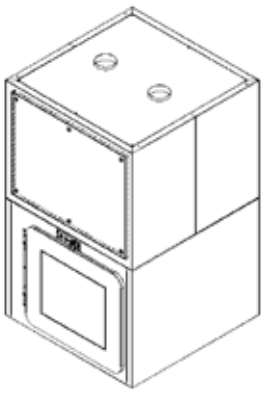
Installed power	400 W
Power consumption	280 W
Voltage	230 V 50 Hz/60Hz
Air classification	ISO Class 5 (EUGMP Class A)
Air flow	Non-laminar
Working pressure	Positive or negative pressure (adjustable)
Lighting	UV germicidal lamp
Noise level	< 65 dB
Temperature	Uncontrolled
Humidity	Uncontrolled
Filtration	Flushing with HEPA 14 filtration in inlet and exhaust
Pre-filters	Inlet filters are protected by G4 pre-filters

Construction details

SAS VENTILATED LAYOUT







PRESSURE JOINT DETAIL
(SAS PT AND SAS HEPA MODELS)

FLUSH JOINT DETAIL
(SAS BIO MODELS)

Available options

A comprehensive range of alternative configurations, options and accessories enables the Telstar SAS systems to be customised to customer requirements.

- Frame in stainless steel AISI 304L or 316L
- Qualification Services (DQ, IQ and OQ)
- Modules with custom dimensions and shapes to enable integration with protected zones

TECHNICAL AREA DETAIL

COMPLETELY DESIGNED IN 3D

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Life Science solutions

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ISO 9001: Certified Company
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