Telstar
Life Science solutions

Clean Room Components

Wall Panel

PCHM	Description	Measurements		
		Height	Width	Thickness
Rockwool (RW)	Sandwich panels consisting of two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. Panels have a peripheral aluminum frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Stainless steel sheet can be supplied for use in hazardous environments or in cleaning zones upon Client request. All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to European UNE-EN-13501:2009 Standard. Fire Behavior - A-2 Smoke Production- S1 Flammable Drops- d0.	6000 (max)	200 - 1200 (min/max)	50
Honeycomb (HC)		6000 (max)	200 - 1200 (min/max)	50
PU foam (PIR)	Sandwich panels consisting of two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. Panels have a peripheral aluminum frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Factory-made cut outs upon Client request. All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to European UNE-EN-13501:2009 Standard. Fire Behavior - B Smoke Production- S1 Flammable Drops- d0.	6000 (max)	200 - 1200 (min/max)	50
Extruded Polystyrene (XPS)	Sandwich panels consisting of two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. Panels have a peripheral aluminum frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Factory-made cut outs upon Client request. All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - D Smoke Production- S3 Flammable Drops- d0.	6000 (max)	200 - 1200 (min/max)	50
H2O2 Special Coating (Certified)	Sandwich panels of extruded polystyrene (XPS), finished with two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. This type of panel includes a special coating that resists H2O2. Panel has been tested against the most common H2O2 decontamination systems (Test certificate available). Factory-made cut outs upon Client request. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - B Smoke Production- S2 Flammable Drops- d0. CE marked according to European standard UNE-EN-14509:2007/AC:2009.	6000 (max)	200 - 1200 (min/max)	50
Stainless Steel (SS)	Sandwich panels consisting of two oven-lacquered stainless steel sheets, 0.5-0.6 mm in thickness. Standard panel core of XPS (other cores available). Panels have a peripheral aluminum frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Factory-made cut outs upon Client request. All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - B Smoke Production- S3 Flammable Drops- d0.	6000 (max)	200 - 1200 (min/max)	50
PZRF **Rockwool (RW)**	Sandwich panels consisting of two High Pressure laminated (HPL) sheets, each 3 mm in thickness in a Rockwool and Honeycomb. All panels are supplied with a plastic film protection to avoid damage during installation procedures. No frame around the core as standard.	3040 (max)	200 - 1280 (min/max)	50

Ceiling Panel

PCHM	Description	Measurements		
		Height	*Width*	*Thickness*
Rockwool (RW)+ 2 fibro silicate layers	Sandwich panels consisting of two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. Panels have a peripheral galvanized steel frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Cut outs on ceiling panels for equipment installation are normally factory-made (cut outs for terminal filtration boxes, lighting fixtures, etc.). All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - A-2 Smoke Production- S1 Flammable Drops-d0.	200/6000 (min/max)	1200	50
Honeycomb (HC)		200/6000 (min/max)	1200	50
PU foam (PIR)	Sandwich panels consisting of two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. Panels have a peripheral galvanized steel frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Cut outs on ceiling panels for equipment installation are normally factory-made (cut outs for terminal filtration boxes, lighting fixtures, etc.). All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - B Smoke Production- S1 Flammable Drops- d0.	200/6000 (min/max)	1200	50
Extruded Polystyrene (XPS)	Sandwich panels consisting of two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. Panels have a peripheral galvanized steel frame that reinforces stability, thereby ensuring perfect alignment during the assembly and mounting process. Cut outs on ceiling panels for equipment installation are normally factory-made (cut outs for terminal filtration boxes, lighting fixtures, etc.). All panels are supplied with a plastic film protection to avoid damage during installation procedures. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - D Smoke Production- S3 Flammable Drops- d0.	200/6000 (min/max)	1200	50
H2O2 Special Coating (Certified)	Sandwich panels of extruded polystyrene (XPS), finished with two oven-lacquered galvanized steel sheets, 0.5-0.6 mm in thickness. This type of panel includes a special coating that resists H2O2. Panel has been tested against the most common H2O2 decontamination systems (Test certificate available). Factory-made cut outs upon Client request. Reaction to fire: according to the European UNE-EN-13501:2009 Standard. Fire Behavior - B Smoke Production- S2 Flammable Drops-d0. CE marked according to European standard UNE-EN-14509:2007/ AC:2009.	200/6000 (min/max)	1200	50
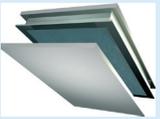
Auxiliary Panel

Aluminum Connector	**Description** The panels are assembled and joined together by means of an aluminum connector of 30x30 mm, forming a continuous self-supporting structure. The joints are sealed with a continuous silicone bead.
Galvanized U - Profile	The panels are coupled by a galvanized U-shaped sheet-metal channel fixed to the floor.

Galvanized I - Adjustable Grid Support **Aluminum I - Grid Profile** **Aluminum Panel Connector Profile**	The ceiling panels are attached to each other by an aluminum profile connector, thereby making a continuous and self-supporting unit. Panel suspension is achieved by special connectors, levelling supports and galvanized screwed rods making a perfectly walkable ceiling solution. All panel joints are sealed with a continuous silicone bead.

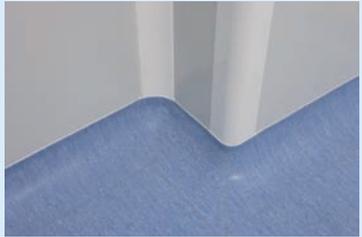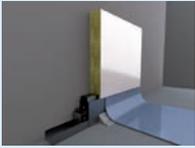|	
Covings for ceiling **Covings for walls and flooring**	Anodized aluminum profiles specially designed to avoid 90º transitions between the walls, ceiling and floor. Aluminum profiles have a small recess to ensure correct thickness of the joint when sealed.
Aluminum convex joint profile	Anodized aluminum profiles, easy to clean, used for horizontal and vertical joints between panels in convex corners. Aluminum profiles have a small recess to ensure correct thickness of the joint when sealed.
Aluminum Internal Corner Piece **Aluminum External Corner Piece**	Anodized aluminum solid pieces, easy to clean, used for both horizontal and vertical joints between panels in concave and convex corners. This component facilitates assembly of the coving profiles to obtain a perfectly sanitary finish.

Auxiliary Panel

Adjustable Base (lm)

Description

The coved sanitary finish between the floor and the wall is made using the flooring material to ensure a continuous and even line. Wall panel fixation system is designed using an adjustable base which allows horizontal leveling of the profile, accommodating slight defects on the leveling of the floor and permitting a continuous finish between the wall and the floor.


Doors & View Panels

ALTP

Doors are made of the same material as 50 mm sandwich panels, with a rounded aluminum edging specially designed to avoid particulate build-up. Doors are installed between wall panels creating a continuous structure and facilitating surface cleaning. Doors include hinges with ramp system, lifting the door panel when opening, thus avoiding potential rubbing against the floor and facilitating door closing. Hinges are placed on the external side of the doors, leaving enough space for cleaning purposes. View window can be included upon Client request. Clean Room doors have a hidden magnetic closing system, avoiding the installation of handles, slips or slides. System is completely flush on both sides.
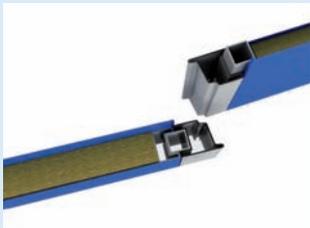
SINGLE 800

SINGLE 900

SINGLE 1000
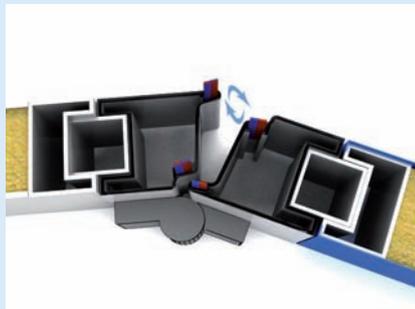
DOUBLE 800 + 800

DOUBLE 800 + 400

DOUBLE 800 + 400

Door with external surface of a High Pressure Laminated (HPL) sheet of 3mm in thickness and aluminum frame specially designed to avoid particulate build-up. Doors are installed between wall panels creating a continuous structure and facilitating surface cleaning. Doors include hinges with ramp system lifting the door panel when opening, thus avoiding potential rubbing against the floor and facilitating door closing. Hinges are placed on the external side of the doors, leaving enough space for cleaning purposes. View window can be included upon client request. System is completely flush on both sides. Doors include nylon finished ergonomic handle with hidden screws, which are easy to assemble.

SINGLE 800

DOUBLE 800 + 800

Doors & View Panels

100% air-tight doors

	Air-tight doors, with both the frame and the panel constructed in stainless steel. Drive control included. The system has successfully passed the DOP test (Dispersed Oil Particulate test, to test if leakage appears). Compressed Air supply is required.	**2100x1200 mm**

View Panel

	Double glass window, flush mounted design, made of 5+5 mm double laminated glass. The design enables assembly and disassembly independently of adjacent panels. Other dimensions available upon Client request.	**DW1000 Dimensions: 1200x1000 mm**
	Glass panel manufactured in 5+5 mm tempered glass. Standard dimensions 1200x2000 mm. Support in SS304. Specially designed for internal partitions in the same room (lockers, secondary packaging areas, etc).	**SPW Dimensions: 1200x2000 mm**
	Emergency window to be installed in clean room areas. Made of 6mm tempered glass, totally flush on the clean side. In case of emergency it can be broken with a small hammer. Glass shatters into small, non-cutting pieces to allow the escape though the frame. Other dimensions available upon Client request.	**EEW Dimensions: 800x2000 mm**

Door Optionals

	Semaphore integrated in the door frame, completely flush-mounted. Includes push button, red/green/yellow lights, alarm siren and 5 m cable with RJ45 connection.	**Integrated Control Light**
	Hidden in the base of the door frame, the bottom seal increases the air tightness of the door and reduces HVAC air leakage.	**Retractable door bottom seal**
	Door closer to be installed on pharma door up to 1100 mm (door panel size). Adjustable to control closing speed and eliminate impact between frame and door panel.	**Mechanical door closer**
	Electromechanical Interlocking device includes open door sensor. 24 V DC, suitable for SAS, Airlocks or where two or more doors are latched. Note: Complete interlocking systems for several doors can be provided upon Client request. Other options available on request are: stainless steel kick-plates, door closer, various models of handles or hinges, PLC interlock system, etc.	**Teprolock System**

HVAC

Terminal Filtration Boxes

Description

Terminal filtration diffusers for clean and sterile rooms provide a localized particle free environment. Designed to hold HEPA/ULPA filters for clean rooms with turbulent air flow. Galvanized steel, fully welded seams, white epoxy paint, oven baked to assure the air tightness of the unit. Top or side connection available. Perforated diffusers as standard (other options available). Designed together with Telstar Validation Team, Terminal Filtration Boxes include two tap connections accessible from the room for a proper integrity test and to simplify the control and maintenance of the unit. H14 filter included (low pressure drop and high flow rate for energy saving).

Specifications

	Filter Dimensions mm	AirFlow m3/h (Pa)	Weight Kg
3P6	H14 305x610x66	300 (130)	15
3P6	H14 610x610x66	600 (120)	21
9P6	H14 915x610x66	900 (120)	28
12P6	H14 1220x610x66	1200 (120)	37

Stainless steel return grille with G4 filter included for integration at return air raisers (vertical or horizontal).

500x300 mm (other dimensions available under request)

Luminaries

Description

Measurements

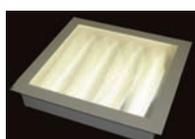| Description	Length	Width	Depth
Clean room lighting fixture/luminary, sanitary type, 2x36 W; Light fittings constructed in 1mm oven lacquered steel sheet to fit the sandwich type ceiling panel. Possible to inspect from both the top and the bottom (bottom part has no screws; it is fastened with internal springs). OSRAM electronic ballast included. Transparent diffuser (other diffusers available on request: Prismatic diffuser, opal diffuser or safety glass) IP54, CE mark.	610	305	100
Clean room lighting fixture/luminary, sanitary type, 4x36 W; Light fittings constructed in 1 mm oven lacquered steel sheet to fit the sandwich type ceiling panel. Possible to inspect from both the top and the bottom (bottom part has no screws; it is fastened with internal springs). OSRAM electronic ballast included. Transparent diffuser (other diffusers available on request: Prismatic diffuser, opal diffuser or safety glass). IP54, CE mark.	610	610	100
Tear drop lighting fixtures/luminaries, TL5 lamps, 58 W, for Laminar or Unidirectional airflow /weighting booths areas. Shape is specially designed to minimize disturbance to the airflow. IP20, CE mark.	1548	42	76
Clean Room lighting fixture/luminary, LED, 5200 lm (39 W)/8800 lm (72 W). Highly efficient LED panels. Body of the fitting is made of steel sheet, powder painted in white. Electronic control circuit incorporated. Emergency version available as an option. IP65, CE mark.	596	596	75

Electrical Components

Description

	Electric outlet frame with sliding stainless steel cover for easy cleaning. Complete socket with 230 V AC European type electric outlet.	**Sliding socket for clean room area**
	Radar technology is used to activate lights in pharmaceutical areas to guarantee absolute hygiene. Light on by simple hand movement in front of the sensor. No contact necessary with the sensor. System is also suitable for automatic doors. IP52.	**Handsfree Switch for clean room area**
	Display for clean room areas for installation inside a panel (flush mounted). Three (3) analog inputs (Temperature, Pressure, Humidity). Values and corresponding units are displayed alternatively. IP65.	**Digital pressure/ temperature/humidity transmitter**
	Access controlled through user's fingerprint. Unit with RFID 125 kHz + biometric unit modules, RS-485 and Ethernet interfaces.	**Biometric unit access control**
	B/W Video Camera with 500x582 px 420 TV lines. Recessed into the wall, stainless steel version of the front panel (dimensions 80x120 mm). 12V DC Power supply. IP65.	**Adjustable camera for clean room area**
	Rotation release emergency switch; 80x120 mm front panel covered with polycarbonate film; UL compliant. Joint-free ergonomic design for easy cleaning.	**Emergency push button**

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