



Stainless Steel Enclosures for Aggressive Environments

Universal Enclosures
Selection Guide 2021
Industry and Infrastructure Solutions

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Schneider
Electric



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In Exposed Environments, Particular Attention Must be Paid to the Choice of Enclosures

Applications with Aggressive Environments

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In some segments and applications, hygiene, corrosion resistance and robustness requirements can be very high:



Food & beverage, pharmaceutical industries, cosmetics, medical laboratories, clean rooms

Cleanliness is fundamental.



Coastal areas, harbours and vessels, oil & gas and petrochemical industries, mining water, waste water

The need is for high resistance to corrosion and mechanical strength.



Infrastructures (airports, subway stations, tunnels)

Due to public exposure (potential vandalism or accidents), the mechanical strength of enclosures must be optimum. Also, they must resist corrosion given the exposure to bad weather or permanent humidity of the installation.

Why Use Stainless Steel Enclosures

Depending on the application, different kinds of chemical compositions need to be considered. Resistance to corrosion basically depends on this.

In some areas, sanitation and ease of cleaning are critically important. The easy clean ability of stainless steel makes it the first choice for strict hygiene conditions.

Among the main reasons for using stainless steel instead of other materials are:

- Low corrosion.
- Higher mechanical strength than other metallic materials.
- Broad range of operational temperatures (-40°C/+80°C).
- Easy to shape.
- Hygienic due to the easy clean ability (as clean as glass and far superior to plastics and aluminum).

The enclosures solution for high requirement environments: stainless steel combined with an appropriate finish.

Stainless Steel is the Solution to Resist Aggression in Exposed Environments

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How to Choose the Grade for your Stainless Steel Solutions

Stainless steel is an alloy of steel with a controlled amount of chromium (Cr), at least 10.5% of its mass, in addition to other elements that give it substantial physical and chemical properties.

Schneider Electric stainless steel enclosures have been specially designed for the chemical, oil and food & beverage industries, among others, which are particularly demanding in terms of hygiene and resistance to corrosion, and use 2 main grades of stainless steel for enclosures: 304L (also called 1.4307) and 316L (also called 1.4404).

The following table shows the percentages of the main alloy elements that make up these two grades of stainless steels. The resistance of the material to aggressive agents in the environment depends mainly on these alloys:

Type of stainless steel		Chemical composition (%)			
AISI grade	EN	Carbon	Chromium	Nickel	Molybdenum
304L	1.4307	< 0.03	17-19	8-10	0
316L	1.4404	< 0.03	17-19	10-13	2-2.25

The difference is provided by:
 - The high mix content of nickel and chromium
 - The presence or absence of a molybdenum additive, which enhances protection against saline attacks



304L Stainless Steel

Most commonly used in the food and beverage industry for its corrosion resistance and its cleanability.

- Corrosion prevention especially in the presence of organic acids (acetic, vinyl).
- Resistance to the action of nitrous gases in the presence of condensation water and in most aggressive environments.



316L Stainless Steel

Recommended in saline or chlorinated environments for its very high corrosion resistance due to the presence of molybdenum.

- Optimal intercrystalline corrosion resistance.
- Optimal prevention of pitting corrosion.
- Especially suitable for environments charged with acidity, chlorine (5% at 20°C), bromine and saline halides or using very corrosive additives and solvents.

AGGRESSIVE AGENTS

Our recommendations in the presence of:

- **Alkaline solutions:**
Cold solutions have practically no action, but the same is not true of concentrated and hot solutions.
- **Saline solutions:**
The behavior is generally fairly good, except in the presence of certain salts such as chlorides; nitrates, on the contrary, promote passivation and improve resistance.
- **Food products:**
There is generally no problem of corrosion except with certain products which contain natural or added sulfurous components, such as mustard and white wines.
- **Organic products:**
These generally have no action on stainless steels, except if they are chlorinated. Glues, soaps, tars, petroleum products, etc. pose no problem.
- **Salts and other molten mineral products:**
Alkaline products corrode all stainless steels, but nitrates, cyanides, acetates etc. do not attack them. Most other salts and molten metals cause rapid damage.
- **Chlorides** (salt in particular):
316L
- **Marine atmospheres:**
316L
- **Nitric acid:**
304L (316L if impurities in the acid).
- **Sulphuric acid:**
316L (depends on the concentration).
- **Phosphoric acid:**
304L/316L (beware of impurities, and in particular hydrofluoric acid).
- **Acid sulfites** (paper mills):
316L
- **Hydrochloric acid:**
Corrosion increases progressively with the concentration; stainless steel prohibited.
- **Organic acids:**
Acetic, oxalic, citric acids, etc. have practically no effect.

Finish Option is Essential for Strict Hygiene Conditions

The surface condition plays an important role in combating bacteria. Lower surface roughness means that fewer bacteria become incrustated. Therefore, lower surface roughness means fewer bacteria, less adhesion of materials and an impeccable finish.

Choosing a finish also means selecting the appearance of the enclosures to match the environment of other machines and equipment:

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Scotch-Brite® Brushing Grain 320 (Standard Offer)

- The method used is a brushing technique defined by the ASTM (American Society for Testing and Materials) for optimum corrosion resistance.
- Finish very commonly used for the chemical and food and beverage industries.
- Surface roughness is improved thanks to an additional polishing process which offers more efficient characteristics against polluting elements, $Ra \leq 0.8 \mu\text{m}$.



Micro-Beading (On-Request)

- Bombardment of the entire surface with miniscule ceramic balls, treated at very high speed.
- Typical application: pharmaceutical and food and beverage industries.
- Increased hardness, surface roughness $Ra \approx 0.8 \mu\text{m}$, silky appearance, reduced adherence of materials and allows disinfection.



Protective Painting (On-Request)

Greatest protection against attacks, external pollution and metallic particle spatter.

- Provides ultimate corrosion protection.
- Typical applications: marine, seaside, off-shore.



TECHNICAL & MAINTENANCE RECOMMENDATIONS

To be avoided

- On the outer surfaces of the enclosure, avoid contact with ferrous materials (aluminum, zinc, steel) which could cause scratching and hence lead to rusting.
- Metallic brushes and pads: risk of pitting corrosion if the equipment used is made from ordinary steel.
- Pads and powders, as these are too abrasive: risk of scratches which attract dirt and tend to cause corrosion.
- Drilling in the workshop: risk of contamination of the stainless steel, damage to the tool, burrs, etc.
- Descale with hydrochloric acid.
- Disinfect with pure liquid bleach.

To be preferred

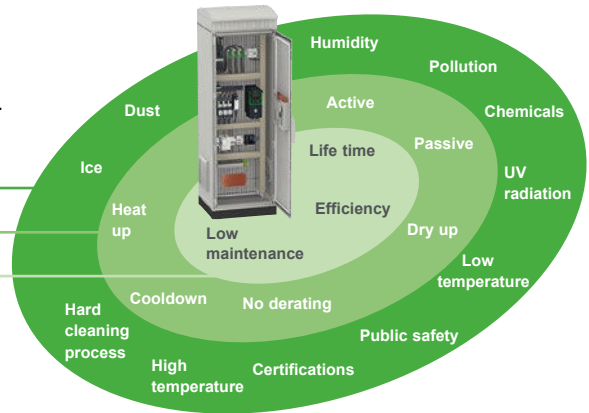
- Stainless steel may be placed in contact with copper and nickel.
- Installation of plastic washers between the cubicle and the lifting eyebolts.
- Usage of stainless steel screws and nuts, stainless steel locks and handles.
- Gentle nylon sponges and brushes.
- Pressure jet cleaners at a distance of one meter.
- Rinsing in clean water and complete drying.
- When making cutouts in stainless steel, use special tools to avoid the risk of damaging the tools or contaminating the enclosure.

How to Select the Optimum Stainless Steel Enclosure According to Environmental Constraints

Correct Selection of an Enclosure and Thermal Solution

Many influences must be considered when defining an enclosure system. They may be split into three groups:

- Protection (Equipment and people)
- Thermal management
- Solution profitability



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The Environment and the Enclosure

The table below is only indicative and not binding. It shows, in a general concept, the optimized performance of the Universal Enclosures ranges according to the environmental conditions, taking into account technical and commercial criteria:

- Highly recommended
- Recommended
- Not recommended

Environment	Enclosure material						
	Steel	Steel Heavy Duty	304L Stainless Steel	316L Stainless Steel	316L Stainless Steel Paint	Polyester	Polyester Heavy Duty
Indoor clean environment ⁽¹⁾	■■■	■	■	■	■	■	■
Hard cleaning process ⁽²⁾	-	-	■■■	■■■	-	-	-
Outdoor (no public access)	-	■■■	■	■	■	■■■	■■■
Outdoor (public access)	-	■	■	■	■	■	■■■
Harsh chemicals	-	■	■■■	■■■	■■■	■■■	■■■
Solar radiation	-	■■■	-	■ ⁽⁴⁾	■ ⁽⁴⁾	■■■	■■■
Sand storm	-	-	■■■	■■■	-	■	■
Operating temperature > 40°C ⁽³⁾	■■■	■■■	■■■	■■■	■■■	■■■	■■■
Operating temperature < 5°C ⁽³⁾	■■■	■■■	■■■	■■■	■■■	■■■	■■■
Salty environment	-	-	-	■■■	■■■	■■■	■■■
Sea water splashes	-	-	-	■■■	■■■	■■■	■■■
Humidity > 70% ⁽³⁾	-	■■■	■■■	■■■	■■■	■■■	■■■
Impact	■■■	■■■	■■■	■■■	■■■	■■■	■■■
Vandalism	-	■■■	■	■	■	■	■■■
Burglary	-	■■■	■	■	■	■	■■■
Strong pollution	■	■■■	■■■	■■■	■■■	■■■	■■■
Vibration (Marine application)	■■■	-	■■■	■■■	■■■	■■■	-
Seismic	■■■	-	-	-	-	-	-
Electro Magnetic Interference	■■■	-	-	-	-	-	-

⁽¹⁾ Not considering F&B process
⁽²⁾ e.g. F&B process
⁽³⁾ Always using ClimaSys solutions
⁽⁴⁾ Marine solar plants



BENEFITS OF STAINLESS STEEL ENCLOSURES

“Choose the optimal solution for where cleanliness or protection from chemicals is required”

- Two standard types of enclosures: 304L & 316L.
- Three types of finishing: Scotch-Brite® (standard), Micro-Beaded (on request) and Painted (on request).
- Shares accessories with other ranges.
- Full integration with ClimaSys Thermal management systems.
- Customization services.



Benefits of Stainless Steel Enclosures

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Resistance to Corrosion & Hygiene

- High resistance to corrosion. 304L and 316L stainless steels provide the best solutions for applications in extremely demanding environments.
- The high quality of the standard Scotch-Brite® brushed finish enables very easy maintenance while avoiding contamination. Painted or micro-beaded finish (on request).



Sealing

- Protection rating of IP66 and IP55 versions according to IEC 62208: complete protection against dust and water spray.
- Polyurethane gasket.
- Gutter-shaped front profile.
- Three closure points for the double door versions.



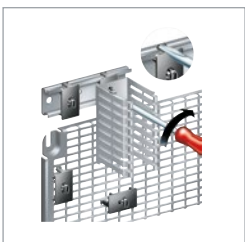
Robustness and Durability

- Resistance to external mechanical impacts according to IEC 62208:
 - IK10: plain door,
 - IK08: glazed door.
- Door reinforcement frame or profile.
- Stainless steel hinges.



Large Range of Accessories

- Stainless steel accessories: canopy, wall-fixing lugs. Hygienic feet, plinth, eyebolts.
- Large selection of locks available in stainless steel.
- Compatible with common accessories from the Spacial offers: mounting plates, inner doors, modular chassis, cross-rails...



Convenience and Time Savings

- Complete range of accessories for installation, cable management, etc.
- Reversible door opening to 120°.
- Adjustment rails perforated with a pitch of 25 mm.
- Perforated reinforcement frame allowing accessories to be mounted on the door.

Thermal Management Systems

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The thermal management system must guarantee the control of temperature and humidity inside the enclosure.

The correct solution must be based on a robust process starting with the environmental diagnostic; the parameters are then calculated, and the best architecture is defined (Enclosures + Equipment installed + Thermal solution).



ClimaSys offers have the best solutions for Spacial Stainless Steel enclosures:



ClimaSys CU
Stainless steel cooling units
Equipped with a condenser battery protected with an easy-clean coating, helping prevent the formation of bacteria and improving their efficiency.



ClimaSys CE
Stainless steel air-water exchangers
Recommended for installation in agrifood industries where ambient temperatures are around 18°-20°C and/or environments where external-internal elements remain separated.



ClimaSys CV
Ventilation systems
Dedicated solutions in stainless steel, with IP55 fan and grid covers to help protect ventilation systems against jets of water or other liquids during cleaning processes, and maintain the IP55.

With the ClimaSys range, Schneider Electric proposes a comprehensive offer meeting all needs:

- Cooling
- Heating
- Regulating
- Homogenizing

Schneider Electric also proposes a design software program, ProClima, which calculates the thermal balance and then suggests one or more thermal management solutions.

	ClimaSys Smart Ventilation System	ClimaSys			
Cooling	<p>New</p> <p>Smart ventilation systems</p>	<p>Forced ventilation systems</p>	<p>Air-air exchangers</p>	<p>Air-water exchangers</p>	<p>Cooling units</p>
Heating		<p>Resistance heaters</p>			
Controlling	<p>New</p> <p>Smart thermal control accessories</p>	<p>Thermal control accessories</p>			
Thermal data	<p>EffiClima software</p>	<p>ProClima software</p>			

Thermal Management Systems

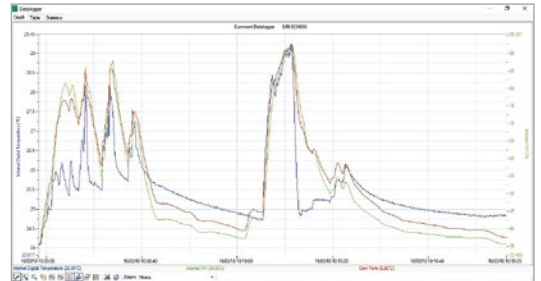
Thermal Calculation: EffiClima & ProClima



EffiClima

What it does: create a complete and accurate tracking report of thermal conditions - temperature, humidity, and dew point for your machine or process and environment.

How to get it: type "EffiClima" into the www.se.com search box.



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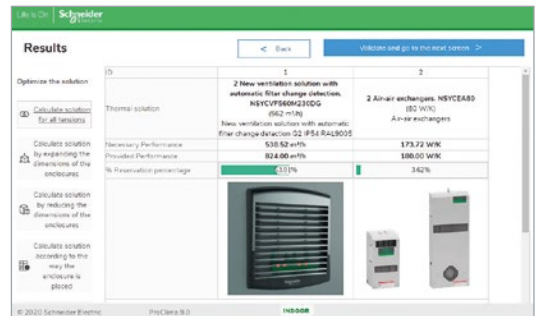
ProClima

What it does: this thermal calculation software package calculates and selects the thermal accessories required for enclosures containing electrical and electronic equipment.

Helps prevent breakdown issues due to overheating of devices in control panels.

How to access to it: type proclima.se.com into your internet browser.

Available for all Universal Enclosures ranges.



FOR MORE TECHNICAL INFORMATION



Control Panel Technical Guide
How to reduce damage to components through effective thermal management
Ref.: CPTG001_EN



Control Panel Technical Guide
How to protect electrical equipment from condensation
Ref.: UE12MK03EN



Control Panel Technical Guide
How to define the right outdoor solution and optimize its durability
Ref.: CPTG006_EN



Customization Service Levels to Adapt to your Need

Customized Solutions

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Specific:

The co-developed offer



- We can produce enclosures for you with special dimensions, finish options, accessories and logistic needs.
- You participate in the whole process to develop your "Tailor-made" solution.

Agreement on delivery date.



CUSTOMIZATION SERVICE AVAILABILITY DEPENDING ON THE OFFER

	Steel	Stainless steel	Insulating material
Boxes	● ○	○	● ○
Wall-mounting	● ○	○	● ○
Compact floor-standing	● ○	○	● ○
Modular floor-standing	● ○	○	● ○

● Configured offers

○ Specific offers

Customized Solutions

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Installation simplified

- Enclosures delivered with cut-outs: you don't need special tools



Life time increased

- Cut-outs made before painting to help guarantee better anti-corrosion/sealing
- Painting service for better protection



Quality improved

- No burrs on edges of cut-outs
- Guaranteed machining tolerances



Aesthetics

- Large choice of colors
- External surfaces with no scratches



Higher performances

- Adapted thermal management
- Upgraded stainless steel type



Logistics

- Flexible management of your logistic option (scheduled delivery service for on-going orders, etc.).
- Special packaging



Time saving

- Delivered with cut-outs & painting: no wasted time



Ergonomic design

- Customized project dedicated to your specific needs

Standards and Certifications

Standards for Stainless Steel Enclosures (1/2)

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Tested and certified according to the IEC 62208 standard

Enclosure resistance is tested in extreme conditions of exposure:

Corrosion resistance:

Exposure to alternate cycles of humidity (95%) and salt mist during 24 cycles of 24 hours

Note: the IEC 62208 standard requires the IP and IK to be declared and verified.

Ingress Protection Code:

This standard defines the IP degrees of protection against access to hazardous parts and against ingress of solid objects and water:

- SBX: IP66
- S3X: IP66 single door version, IP55 double door version
- SMX: IP66 single door version, IP55 double door version
- SFX: IP66 single door version, IP55 double door version

Impact Protection Code:

This standard defines the degrees of protection that enclosures provide to electrical equipment against external mechanical impacts.

Note: IK10 is required for plain doors; IK08 for glazed doors.

- SBX: IK10
- S3X: IK10 plain door version, IK08 glazed door version
- SMX: IK10
- SFX: IK10

Tested and certified according to UL (Underwriters Laboratories)

The basic standards used to investigate products in this category are UL 508A, "Industrial Control Panels, " CAN/CSA-C22.2 No. 14, "Industrial Control Equipment," CAN/CSA C22.2 No.94-M91, "Special Purpose Enclosures", and CAN/CSA C22.2 No. 73, "Electrically Equipped Machine Tools".

- SBX: type 1, 2, 3, 3R, 4, 4X, 5, 12 & 13
- S3X single door version: type 1, 2, 3, 3R, 4, 4X, 5, 12 & 13
- S3X double door version: type 1, 12
- SMX single door version: type 1, 2, 3, 3R, 4, 4X, 5, 12 & 13
- SMX double door version: type 1, 12 & 13
- SFX single door version: type 1, 2, 3, 3R, 4, 4X, 5, 12 & 13
- SFX double door version: type 1

Standards and Certifications

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Standards for Stainless Steel Enclosures (2/2)

Corrosion resistance equivalence according to ISO 12944-2

The ISO 12944-2 standard refers to the protection of steel structures against corrosion by protective paint systems, although its practical use can be extended to areas where protection is not provided by paint.

As a reference, this is the type of Spatial stainless steel enclosure to choose, according to the category and resistance to corrosion:

- **304L stainless steel with Scotch-Brite® finish enclosures: Level C3H**

Outdoor environment: Urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity.

Indoor environment: Production rooms with high humidity and some air pollution, e.g. food-processing plants, laundries, breweries, dairies.

Durability: High

- **316L stainless steel with Scotch-Brite® finish enclosures: Level C4H**

Outdoor environment: Industrial areas and coastal areas with moderate salinity.

Indoor environment: Chemical plants, swimming pools, coastal ship and boatyards.

Durability: High

- **316L stainless steel painted enclosures: Level C5H (on-request)**




Outdoor environment: Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity.

Indoor environment: Buildings or areas with almost permanent condensation and with high pollution.

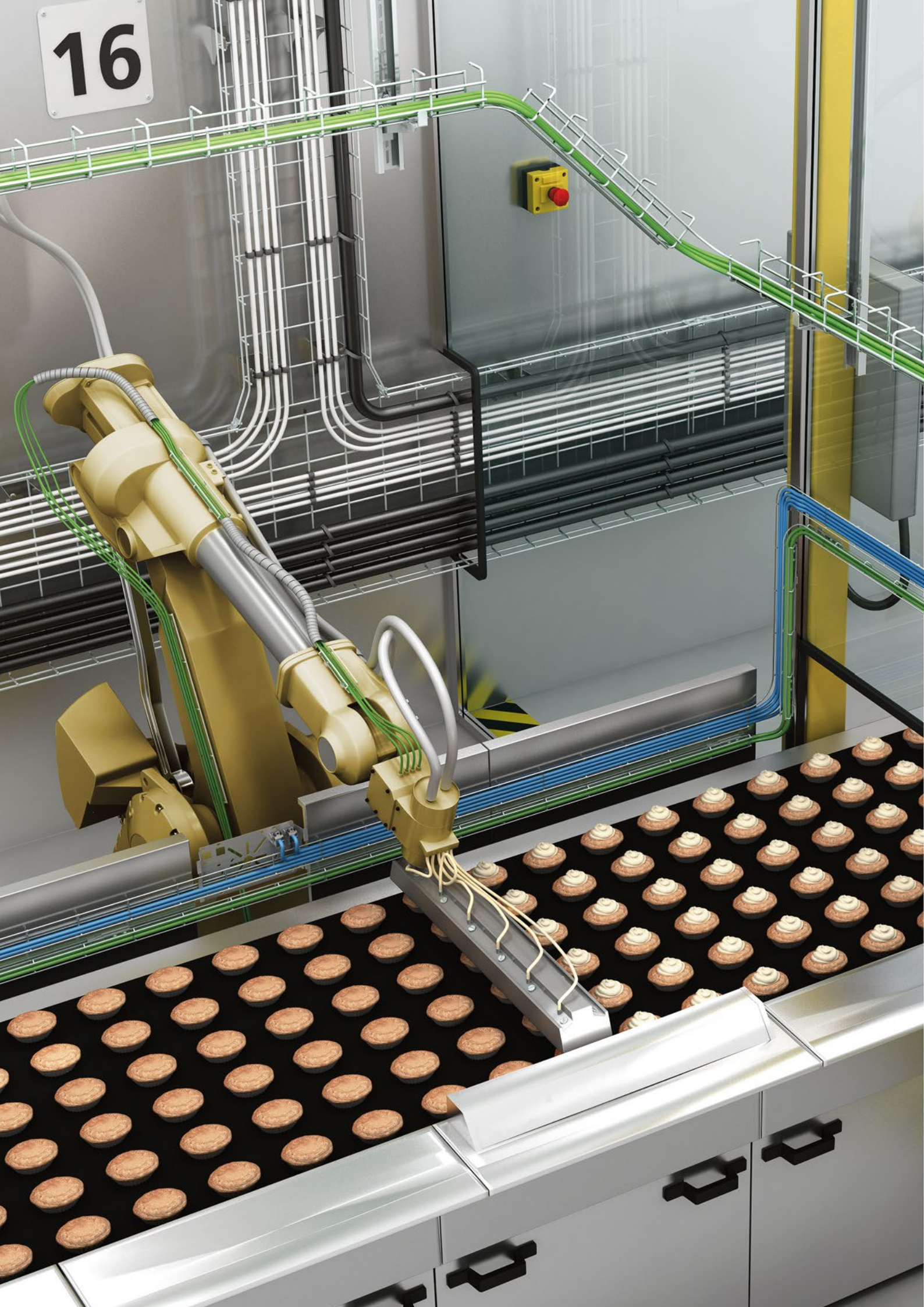
Durability: High

Range	Assemblies alone		
	Empty assemblies for low-voltage switchgear	Standards for industrial equipment and UL classification	Marine environment classification or approval for protection and resistance to vibrations
	Standard/Directive		
	IEC 62208	UL508A and CAN CSA C22- 2 no. 14	Rules of certifying bodies
Spatial Stainless steel enclosures			
SBX	●	●	●
S3X	●	●	●
SMX	● ⁽¹⁾	●	● ⁽¹⁾
SFX	● ⁽¹⁾	●	● ⁽¹⁾

⁽¹⁾ Only for 1 door versions

Official certification body		
Bureau Veritas	Bureau Veritas Marine Division	Underwriters Laboratories
		
●	●	●

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Cable Support

Defem Special Purpose Mesh Trays

> When hygiene is key



This solution allows high-pressure cleaning systems to be used without any worries. Defem mesh trays can withstand the strictest sanitary regulations and the non-bundled cables will stay in place during cleaning.

The food and beverage industry has the most rigorous regulations on hygiene and sanitation. Every part of the installation has to endure high-pressure washing and harsh detergents. The ingenious shapes of the C-, G- and Z-mesh trays provide excellent protection of and access to the cables.

Thanks to the smooth, high quality welding points with no cavities, undesired substances will be prevented from accumulating.

Dimensions



C-Mesh tray,
120x100 mm



G-Mesh tray,
75x95 mm



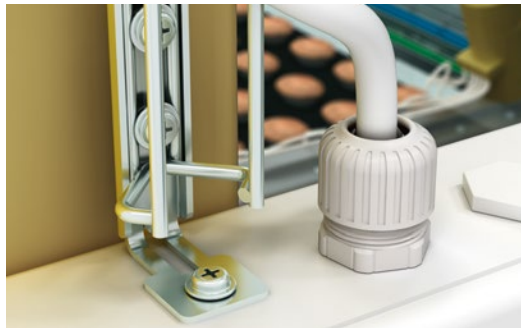
Z-Mesh tray,
75x75 mm

Defem Mini Mesh Trays

> Flexibility in detail



Discover our Defem Mesh Tray offer today by clicking or scanning the QR code.



Measure and cut the mini mesh tray to the desired length, secure it with our dedicated accessories – and you are done.

The mini mesh trays offer the fastest way to route all types of small cables. Though modest in size, the mini mesh trays can withstand any type of high-pressure water or air cleaning. The Mini mesh B30-D also provides excellent protection of the cables against impacts in tough environments.

Dimensions



Mini Mesh B30-D,
30x24 mm



Mini Mesh B30-U,
46x15 mm



Mini Mesh B30-I,
60x6 mm



Product Selection Tables

Spacial SBX

Stainless Steel Industrial Boxes

Wall-Mounting Enclosures



Characteristics			Spacial SBX Flat box
			Box with plain faces
Material			AISI 304L stainless steel, thickness of 1.2 mm.
Finish			Scotch-Brite® brushed.
Ingress protection rating			IP66
Mechanical protection rating			IK10
Standards			IEC 62208 and the RoHS directive.
Certifications*			<ul style="list-style-type: none"> ■ UL, BV, BVM ■ Nema Type 4, 4X, 13 according to UL 508A standard
External dimensions (mm)			Box
Height	Width	Depth	SBX
150	150	80	NSYSBX15158
	300	80	NSYSBX15308
200	200	80	NSYSBX20208
	300	80	NSYSBX20308
	400	120	NSYSBX204012
300	300	120	NSYSBX303012

* Certifications pending.

B

Mounting Accessories



External dimensions (mm)			Box	Mounting plate	DIN rail	Fixing lugs	Sealing kit
Height	Width	Depth	SBX	Mounting plate			
150	150	80	NSYSBX15158	NSYMM11SB	NSYAMRD15357SB	NSYAEFPFSBX*	NSYPPSB*
	300	80	NSYSBX15308	NSYMM13SB	NSYAMRD30357SB		
200	200	80	NSYSBX20208	NSYMM22SB	NSYAMRD20357SB		
	300	80	NSYSBX20308	NSYMM23SB	NSYAMRD30357SB		
	400	120	NSYSBX204012	NSYMM24SB	NSYAMRD40357SB		
300	300	120	NSYSBX303012	NSYMM33SB	NSYAMRD30357SB		
Supply			1	1	10	4	1

* Same reference for all dimensions.

Spacial S3X

Stainless Steel Wall-Mounting Enclosures

Wall-Mounting Enclosures



Characteristics					Spacial S3X		
					304L stainless steel		316L stainless steel
					Plain door	Glazed door**	Plain door
					Enclosure with plain door.	Enclosure with glazed door, Securit® glass, 4 mm thick.	Enclosure with plain door.
Material					AISI 304L		AISI 316L
Finish					Scotch-Brite® brushed		
Thickness					10/10° - 15/10° mm		
Ingress protection rating					IP66 (1 door) or IP55 (2 doors)		
Mechanical protection rating					IK10	IK08	IK10
Standards					IEC 62208		
Certifications					<ul style="list-style-type: none"> ■ UL 508A ■ CAN/CSA 22 ■ NEMA: □ 1-door enclosure: type 1, 2, 3, 3R, 4, 4X, 5, 12, 13 □ 2-door enclosure: type 1, 12, 12K 		
External dimensions (mm)			No. of locks	No. of doors	304L stainless steel		316L stainless steel
Height	Width	Depth			Plain door	Glazed door**	Plain door
300	200	150	1	1	NSYS3X3215	-	NSYS3X3215H
	250	150	1	1	NSYS3S302515	-	NSYS3S302515H
	300	150	1	1	NSYS3X3315	-	NSYS3X3315H
400	300	150	1	1	NSYS3X4315	-	NSYS3X4315H
		200	1	1	NSYS3X4320	NSYS3X4320T	NSYS3X4320H
	400	200	1	1	NSYS3X4420	-	NSYS3X4420H
	600	200	1	1	NSYS3X4620	-	NSYS3X4620H
500	400	200	2	1	NSYS3X5420	NSYS3X5420T	NSYS3X5420H
600	400	200	2	1	NSYS3X6420	NSYS3X6420T	NSYS3X6420H
	600	250	2	1	NSYS3X6625	-	NSYS3X6625H
	1000	300	*	2	NSYS3X601030	-	-
	1200	300	*	2	NSYS3X601230	-	-
700	500	250	2	1	NSYS3X7525	NSYS3X7525T	NSYS3X7525H
800	600	250	2	1	NSYS3X8625	NSYS3X8625T	NSYS3X8625H
	800	300	2	1	NSYS3X8830	-	NSYS3X8830H
	1000	300	*	2	NSYS3X801030	-	-
	1200	300	*	2	NSYS3X801230	-	-
1000	800	300	2	1	NSYS3X10830	NSYS3X10830T	NSYS3X10830H
	1000	300	*	2	NSYS3X101030	-	NSYS3X101030H
1200	800	300	2	1	NSYS3X12830	-	NSYS3X12830H
	1000	300	*	2	NSYS3X121030	-	NSYS3X121030H

* Three-point closure system. ** The glazed door has no reinforcement.



Spacial S3X

Stainless Steel Wall-Mounting Enclosures

Mounting Accessories



External dimensions (mm)			No. of modules	References					
Height	Width	Depth		Mounting plate					Step slides
				Plain	Silkscreened	Microperforated	Telequick	Modular	
300	200	150	-	NSYMM32	-	NSYMF32	NSYMR32	-	-
	250	150	-	NSYMM3025	-	-	NSYMR3025	-	-
	300	150	-	NSYMM33	-	NSYMF33	NSYMR33	-	-
400	300	150	24	NSYMM43	NSYMS43	NSYMF43	NSYMR43	NSYDLM24	-
		200	24	NSYMM43	NSYMS43	NSYMF43	NSYMR43	NSYDLM24	NSYSDCR200
	400	200	-	NSYMM44	NSYMS44	NSYMF44	NSYMR44	-	NSYSDCR200
		600	200	-	NSYMM64	NSYMS64	NSYMF64	NSYMR46	-
500	400	200	48	NSYMM54	NSYMS54	NSYMF54	NSYMR54	NSYDLM48	NSYSDCR200
600	400	200	48	NSYMM64	NSYMS64	NSYMF64	NSYMR64	NSYDLM48P	NSYSDCR200
	600	250	84	NSYMM66	NSYMS66	NSYMF66	NSYMR66	NSYDLM84P	NSYSDCR250
	1000	300*	-	NSYMM106	-	NSYMF106	NSYMR106	-	NSYSDCR300
	1200	300*	-	NSYMM126	-	NSYMF126	-	-	NSYSDCR300
700	500	250	66	NSYMM75	NSYMS75	NSYMF75	NSYMR75	NSYDLM66	NSYSDCR250
	500	250	88	-	-	-	-	NSYDLM88	-
800	600	250	84	NSYMM86	NSYMS86	NSYMF86	NSYMR86	NSYDLM84	NSYSDCR250
	600	250	112	-	-	-	-	NSYDLM112	-
	800	300	-	NSYMM88	-	NSYMF88	NSYMR88	-	NSYSDCR300
	1000	300*	-	NSYMM108	-	NSYMF108	NSYMR108	-	NSYSDCR300
	1200	300*	-	NSYMM128	-	NSYMF128	NSYMR128	-	NSYSDCR300
1000	800	300	234	NSYMM108	-	NSYMF108	NSYMR108	NSYDLM240	NSYSDCR300
	1000	300	-	NSYMM1010	-	NSYMF1010	NSYMR1010	-	NSYSDCR300
1200	800	300	-	NSYMM128	-	NSYMF128	NSYMR128	-	NSYSDCR300
	1000	300	-	NSYMM1210	-	NSYMF1210	NSYMR1210	-	NSYSDCR300

* Three-point closure system.

B

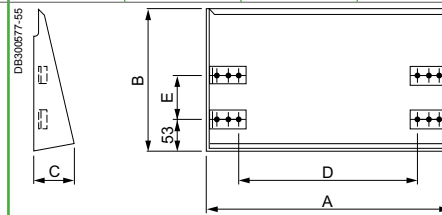
Spacial S3X

Stainless Steel Wall-Mounting Enclosures

Canopy



Characteristics		Canopy									
Material		304L stainless steel sheet									
Finish		Scotch-Brite® brushed									
Thickness		15/10 ⁶ mm									
Installation		Direct fixing to the body of the enclosure									
Supply		Delivered with the fixings required for installation									
No. of locks	No. of doors	For wall-mounting enclosures (mm)			Dimensions (mm)					References	
		Height	Width	Depth	A	B	C	D	E		
1	1	300	200	150	205	183	51	120	-	NSYTX2015	
			250	150	205	183	51	120	-	NSYTX2515	
			300	150	305	183	51	220	-	NSYTX3015	
		400	300	150	305	183	51	220	-	NSYTX3015	
			300	200	305	233	51	220	70	NSYTX3020	
			400	200	405	233	70	320	70	NSYTX4020	
2	1	500	400	200	405	233	70	320	70	NSYTX4020	
			600	400	200	405	233	70	320	70	NSYTX4020
			600	250	605	283	70	520	120	NSYTX6025	
*	2	600	1000	300	1005	333	70	920	170	NSYTX10030	
			1200	300	1205	333	70	1120	120	NSYTX12030	
2	1	700	500	250	505	283	70	420	120	NSYTX5025	
			600	250	605	283	70	520	120	NSYTX6025	
			800	300	805	333	70	720	170	NSYTX8030	
*	2	800	1000	300	1005	333	70	920	170	NSYTX10030	
			1200	300	1205	333	70	1120	120	NSYTX12030	
2	1	1000	800	300	805	333	70	720	170	NSYTX8030	
*	2	1000	1000	300	1005	333	70	920	170	NSYTX10030	
2	1	1200	800	300	805	333	70	720	170	NSYTX8030	
*	2	1200	1000	300	1005	333	70	920	170	NSYTX10030	



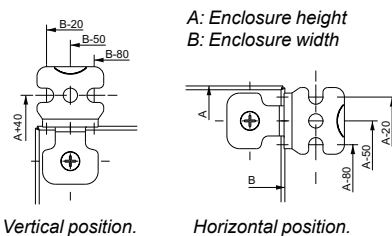
* Three-point locking system.

B

Fixing



Characteristics	Wall-fixing lugs	
Material	304L stainless steel	316L stainless steel
Installation	<ul style="list-style-type: none"> ■ Mounting of the wall-fixing lugs in horizontal or vertical position ■ Fixing from the outside 	
Maximum load	250 kg	
Supply	Set of four wall-fixing lugs	
References	NSYPFCX	NSYPFC2X

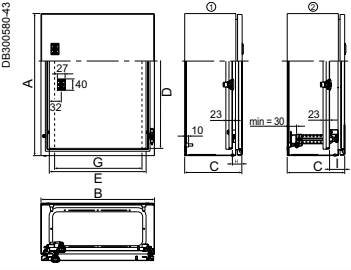


Spacial S3X Stainless Steel Wall-Mounting Enclosures

Inner Door



Characteristics		Inner door						References
		<ul style="list-style-type: none"> ■ 3-mm double-bar lock. ■ Not compatible with door retainer and door switch. Consult us. 						
Material		Steel						
Installation		<ul style="list-style-type: none"> ■ As standard, an inner door and a mounting plate can be mounted on the step slides, at the same time ■ Can be mounted either on the front side of the enclosure or on step slides (not supplied as standard) 						
Maximum load		30 kg/m ²						
Supply		1 inner door						
For wall-mounting enclosures (mm)		Dimensions (mm)						References
Height (A)	Width (B)	D	E	G	H	I (min.)		
400	300	349	241	208	32	51	NSYPIN43	
500	400	449	341	308	32	51	NSYPIN54	
600	400	549	341	308	32	51	NSYPIN64	
700	500	649	441	408	32	51	NSYPIN75	
800	600	749	541	508	32	51	NSYPIN86*	
1000	800	949	741	708	32	51	NSYPIN108*	
1200	800	1149	741	708	32	52	NSYPIN128*	

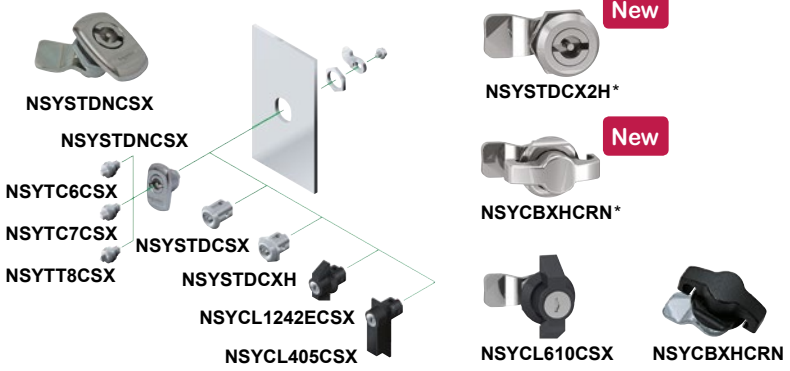


- ① NSYPIN inner door fixed directly to the enclosure.
- ② NSYPIN inner door fixed to the adjustable NSYSDCR●● support. In this case, both the inner door and the mounting plate may be depth adjustable.

B

* Equipped with welded vertical profiles in order to facilitate cable management.

Locking Options



3-point lock options		
Type	Handle lock	Screw-driver insert
Material	100% stainless steel	Zamak
Protection rating	IP66 according to IEC 60529	
References		
	NSYTSML	NSYTSMLS3D

* Standard escutcheon delivered with double door enclosure version

1-point lock options												
Type	Double-bar lock		Insert			Round lock			Handle lock			
	Escutcheon with insert	3 mm	Triangular	Square		Round			Padlock	1242E	405	610
			8 mm	7 mm	6 mm	3 mm (spare)	3 mm					
Material	Chrome-plated zamak		304L stainless steel			Chrome-plated zamak	304L stainless steel	316 stainless steel	316 stainless steel	Chrome-plated zamak	Polyamide	
Protection rating	IP66											
References												
	NSYSTDNC SX	NSYTT8CSX	NSYTC7CSX	NSYTC6CSX	NSYSTDCSX	NSYSTDCXH	NSYSTDCX2H*	NSYCBXHCRN*	NSYCL1242ECSX	NSYCL405CSX	NSYCL610CSX	

* Consult us for availability.

Spacial S3X

Stainless Steel Wall-Mounting Enclosures

Hoisting

New



Characteristics	Eyebolts*
Material	304 stainless steel
Maximum load	210 kg per enclosure when slinging at 60°
Supply	Reinforcing brackets attached to the rings (these brackets also act as a drilling template)
Reference	
Set of 2 M8 eyebolts	NSYAELYTCRXG8

* Consult us for availability.

Door Accessories




Characteristics	Door switch for wall-mounting enclosures	Wall-mounting door retainer
Material	<ul style="list-style-type: none"> Switch/commutator unit equipped with support and fixings for direct fixing to the enclosure. Can be used to control lighting, air-conditioning units, etc. It is not compatible with installing the 19" swing rack and the internal door. NC + NO contact, 10 A/500 V. 	Steel To lock the door in the open position. <ul style="list-style-type: none"> It is installed on enclosures with heights from 400 mm and widths from 300 mm. Door opening angle: 120°. Earthing connection of the enclosure by means of the reinforcement rail. Earthing accessories supplied with the enclosure (earth-connection wire to be ordered separately). Warning: cannot be installed on 19" mounting plates or on enclosures equipped with internal door.
Supply	1 door switch and fixing elements	
Reference		
	NSYINLCRN	NSYAEDRSCST

B

Cable Entries



New

Characteristics	Stainless steel cable gland with lamellar insert							References	
	Applications: Outdoor, food and beverage industries, pharmaceutical industry and other sensitive applications.								
Supply	<ul style="list-style-type: none"> The cable glands are supplied with nuts Pack of 5 (M12 and M16), 4 (M20 and M25), or 2 (M32 and M40) 								
Dimensions (mm)	Ø min / max	Drill Ø	TD	TL	H		AISI 304L	AISI 316L	
M12	3/6.5	12 to 12.2	12	12	22	14	NSYCGX12	NSYCGX12H	
M16	5/10	16 to 16.2	16	12	28.5	20	NSYCGX16	NSYCGX16H	
M20	6/12	20 to 20.2	20	12	24	22	NSYCGX20	NSYCGX20H	
M25	11/17	25 to 25.2	25	12	32.5	27	NSYCGX25	NSYCGX25H	
M32	15/21	32 to 32.3	32	15	36	34	NSYCGX32	NSYCGX32H	
M40	19/28	40 to 40.3	40	15	43.5	43	NSYCGX40	NSYCGX40H	

Spacial SMX

Stainless Steel Monobloc Floor-Standing Enclosures

Monobloc Floor-Standing Enclosures



Characteristics			Spacial SMX	
Material			Stainless steel sheet floor-standing enclosure, folded and welded.	
Finish			<ul style="list-style-type: none"> ■ 304L stainless steel ■ 316L stainless steel ■ Scotch-Brite® brushed finish ■ Painted finishes (on request) 	
Thickness			15/10 ^e mm	
Ingress protection rating			IP66 single door enclosure	
Mechanical protection rating			IK10	
Standards			IEC 62208	
Certifications			<ul style="list-style-type: none"> ■ UL 508 ■ CAN/CSA 22 ■ NEMA: □ 1-door enclosure: type 1, 2, 3, 3R, 4, 4X, 5, 12, 12K, 13 □ 2-door enclosure: type 1, 12, 12K, 13 	
External dimensions (mm)			Number of front doors	
Height (A)	Width (B)	Depth (C)	Stainless steel enclosure	
			304L	316L
1400	1000	300	2	NSYSMX141030
1600	800	400	1	NSYSMX16840
1800	600	400	1	NSYSMX18640
	800	400	1	NSYSMX18840
	1200	400	2	NSYSMX181240
2000	1600	400	2	NSYSMX181640
	800	500	1	NSYSMX20850
	1000	400	2	NSYSMX201040
	1200	500	2	NSYSMX201250
	1600	600	2	NSYSMX201660

B

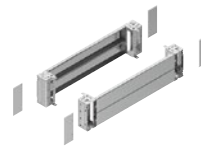
Floor



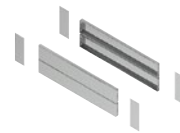
Plinth height 100 mm
(4 corners + front and back)



Plinth height 100 mm
(Set of 2 side panels)



Plinth height 200 mm
(4 corners + front and back)



Plinth height 200 mm
(Set of 2 side panels)

Characteristics		Stainless steel plinths																
Material		Stainless steel, AISI 304L					Stainless steel, AISI 316L											
Finish		Scotch-Brite® brushing, to help guarantee the durability in applications where contact with the floor increases the risk of corrosion																
Installation		Mounting in the holes for fixing the enclosures to the floor Suitable for steel floor-standing enclosures (SF and SM)																
External dimensions (mm)			Plinth height 100 mm				Plinth height 200 mm				Plinth height 100 mm				Plinth height 200 mm			
Height (A)	Width (B)	Depth (C)	Kit (4 corners + front and back)		Set of 2 side panels		Kit (4 corners + front and back)		Set of 2 side panels (x2)		Kit (4 corners + front and back)		Set of 2 side panels		Kit (4 corners + front and back)		Set of 2 side panels (x2)	
1400	1000	300	NSYSFPX10100		NSYSPSX3100		NSYSFPX10200		NSYSPSX3200		NSYSFPX10100H		NSYSPSX3100H		NSYSFPX10200H		NSYSPSX3200H	
1600	800	400	NSYSFPX8100		NSYSPSX4100		NSYSFPX8200		NSYSPSX4200		NSYSFPX8100H		NSYSPSX4100H		NSYSFPX8200H		NSYSPSX4200H	
1800	600	400	NSYSFPX6100		NSYSPSX4100		NSYSFPX6200		NSYSPSX4200		NSYSFPX6100H		NSYSPSX4100H		NSYSFPX6200H		NSYSPSX4200H	
		800	NSYSFPX8100		NSYSPSX4100		NSYSFPX8200		NSYSPSX4200		NSYSFPX8100H		NSYSPSX4100H		NSYSFPX8200H		NSYSPSX4200H	
	1200	NSYSFPX12100		NSYSPSX4100		NSYSFPX12200		NSYSPSX4200		NSYSFPX12100H		NSYSPSX4100H		NSYSFPX12200H		NSYSPSX4200H		
2000	1600	400	NSYSFPX16100		NSYSPSX4100		NSYSFPX16200		NSYSPSX4200		NSYSFPX16100H		NSYSPSX4100H		NSYSFPX16200H		NSYSPSX4200H	
		800	NSYSFPX8100		NSYSPSX5100		NSYSFPX8200		NSYSPSX5200		NSYSFPX8100H		NSYSPSX5100H		NSYSFPX8200H		NSYSPSX5200H	
	1000	NSYSFPX10100		NSYSPSX4100		NSYSFPX10200		NSYSPSX4200		NSYSFPX10100H		NSYSPSX4100H		NSYSFPX10200H		NSYSPSX4200H		
	1200	NSYSFPX12100		NSYSPSX5100		NSYSFPX12200		NSYSPSX5200		NSYSFPX12100H		NSYSPSX5100H		NSYSFPX12200H		NSYSPSX5200H		
	1600	NSYSFPX16100		NSYSPSX6100		NSYSFPX16200		NSYSPSX6200		NSYSFPX16100H		NSYSPSX6100H		NSYSFPX16200H		NSYSPSX6200H		

Spacial SMX

Stainless Steel Monobloc Floor-Standing Enclosures

Canopy



Characteristics		Canopy	
		Helps guarantee very high protection of the enclosure when used outdoors.	
Material	<ul style="list-style-type: none"> ■ 304L stainless steel sheet ■ Other types of stainless steel, contact us 		
Finish	<ul style="list-style-type: none"> ■ Scotch-Brite® brushed ■ Other finishes, contact us 		
Thickness	15/10° mm		
Installation	It is fixed in the same holes as the eyebolt. Delivered with fixings. Other dimensions and canopy for sets, contact us		
External dimensions (mm)		Top-mounting	
Height	Width	Depth	References
1400	1000	300	NSYSCMX10030
1600	800	400	NSYSCMX8040
1800	600	400	NSYSCMX6040
		800	NSYSCMX8040
	1200	400	NSYSCMX12040
		1600	NSYSCMX16040
2000	800	500	NSYSCMX8050
		1000	NSYSCMX10040
	1200	500	NSYSCMX12050
		1600	NSYSCMX16060

B

Locking Options



The Spacial SMX & SFX enclosures are delivered as standard with retractable handles made from painted zamak with a 5 mm double bar insert, spare ref. NSYMCSX
Transformation of the standard insert by other shape inserts or barrels according to the following table:

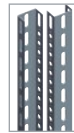
Characteristics		Locking options					
Type	Shape insert	Square insert.			Triangular insert.		Padlocking system Padlocking device.
		5 mm double-bar insert.	6 mm	8 mm	6.5 mm	8 mm	
Supply	Insert with key	Insert with key		1 pack		1 pack	
References		NSYTDB5ME	NSYTC6ME	NSYTC8ME	NSYTT6ME	NSYTT8ME	NSYBCME

Characteristics		Locking options					
Type	Barrels	Reinforced key and barrel.	JIS key and barrel.	Manual.	Barrel and key 405E.	Barrel and key 610E.	Barrel and key 1242E.
		1 pack	1 pack	1 pack	Barrels with 1 key	Barrels with 1 key	Barrels with 1 key
References		NSYTLRME	NSYTLJISME	NSYTMME	NSYTCL405ME	NSYTCL610ME	NSYTL1242EME

Spacial SMX

Stainless Steel Monobloc Floor-Standing Enclosures

Mounting Accessories



Characteristics			Plain mounting plate	Vertical uprights	
External dimensions (mm)				Standard	Technical
Height (A)	Width (B)	Depth (C)			
1400	1000	300	NSYMP1410	-	NSYTVR14
1600	800	400	NSYMP168	-	NSYTVR16
1800	600	400	NSYMP186	NSYVR18	NSYTVR18
	800	400	NSYMP188	NSYVR18	NSYTVR18
	1200	400	NSYMP1812	NSYVR18	NSYTVR18
	1600	400	NSYMP1816	NSYVR18	NSYTVR18
2000	800	500	NSYMP208	NSYVR20	NSYTVR20
	1000	400	NSYMP2010	NSYVR20	NSYTVR20
	1200	500	NSYMP2012	NSYVR20	NSYTVR20
	1600	600	NSYMP2016	NSYVR20	NSYTVR20

B

Other Accessories



Characteristics	Eyebolts*	Wall-fixing lugs	Hygienic feet
	-	For SMX.	Recommended for applications that require special hygiene conditions.
Material	304 stainless steel	304L stainless steel	316L stainless steel
Installation	It is fixed using the fixing nuts supplied	Mounting of the wall-fixing lugs in horizontal or vertical position Fixing from the outside	Adjustable between 140 mm and 200 mm in height
Maximum load	340 kg for 1 eyebolt in vertical direction	-	Per foot: 100 kg
Supply	Set of four M12 eyebolts	Set of four wall-fixing lugs	Set of 4 adjustable feet
References	NSYSMXEB	NSYFCMX	NSYPHX200

* Consult us for availability.

Spacial SFX

Stainless Steel Modular Floor-Standing Enclosures

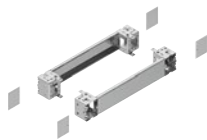
Modular Floor-Standing Enclosures



Characteristics			Spacial SFX	
Material			304L stainless steel 316L version (on request)	
Finish			<ul style="list-style-type: none"> ■ Scotch-Brite® brushed finish ■ Painted finishes (on request) 	
Thickness			15/10° mm	
Ingress protection rating			IP66 single door enclosure	
Mechanical protection rating			IK10	
Standards			IEC 62208	
Certifications			<ul style="list-style-type: none"> ■ UL 508 ■ NEMA: 1-door enclosure: type 1, 2, 3, 3R, 4, 4X, 5, 12, 12K, 13 	
External dimensions (mm)			Number of front doors	
Height (A)	Width (B)	Depth (C)	Stainless steel suitable enclosure	
			304L	
1800	600	400	1	NSYSFX18640
	800	400	1	NSYSFX18840
	1200	400	2	NSYSFX181240
2000	600	500	1	NSYSFX20650
	800	400	1	NSYSFX20840
	800	600	1	NSYSFX20860
	1000	600	2	NSYSFX201060
	1200	600	2	NSYSFX201260

B

Floor



Plinth height 100 mm
(4 corners + front and back)



Plinth height 100 mm
(Set of 2 side panels)

Characteristics			Stainless steel plinths			
Material			Stainless steel, AISI 304L			
Finish			Scotch-Brite® brushing, to help guarantee the durability in applications where contact with the floor increases the risk of corrosion			
Installation			Mounting in the holes for fixing the enclosures to the floor Suitable for steel floor-standing enclosures (SF and SM)			
External dimensions (mm)			Plinth height 100 mm		Plinth height 200 mm	
Height (A)	Width (B)	Depth (C)	Kit (4 corners + front and back)	Set of 2 side panels	Kit (4 corners + front and back)	Set of 2 side panels (x2)
1800	600	400	NSYSFPX6100	NSYSPSX4100SF	NSYSFPX6200	NSYSPSX4200SF
	800	400	NSYSFPX8100	NSYSPSX4100SF	NSYSFPX8200	NSYSPSX4200SF
	1200	400	NSYSFPX12100	NSYSPSX4100SF	NSYSFPX12200	NSYSPSX4200SF
	1600	400	NSYSFPX16100	NSYSPSX4100SF	NSYSFPX16200	NSYSPSX4200SF
2000	600	500	NSYSFPX6100	NSYSPSX5100SF	NSYSFPX6200	NSYSPSX5200SF
	800	400	NSYSFPX8100	NSYSPSX4100SF	NSYSFPX8200	NSYSPSX4200SF
	800	600	NSYSFPX8100	NSYSPSX6100SF	NSYSFPX8200	NSYSPSX6200SF
	1000	600	NSYSFPX10100	NSYSPSX6100SF	NSYSFPX10200	NSYSPSX6200SF
	1200	500	NSYSFPX12100	NSYSPSX5100SF	NSYSFPX12200	NSYSPSX5200SF
	1200	600	NSYSFPX12100	NSYSPSX6100SF	NSYSFPX12200	NSYSPSX6200SF
	1600	600	NSYSFPX16100	NSYSPSX6100SF	NSYSFPX16200	NSYSPSX6200SF

Spacial SFX

Stainless Steel Modular Floor-Standing Enclosures

Canopy



Characteristics		Canopy	
		Helps guarantee very high protection of the enclosure when used outdoors.	
Material	<ul style="list-style-type: none"> ■ 304L stainless steel sheet ■ Other types of stainless steel, contact us 		
Finish	<ul style="list-style-type: none"> ■ Scotch-Brite® brushed ■ Other finishes, contact us 		
Thickness	15/10° mm		
Installation	It is fixed in the same holes as the eyebolt. Delivered with fixings. Other dimensions and canopy for sets, contact us		
External dimensions (mm)			
Height (A)	Width (B)	Depth (C)	
1800	600	400	NSYSCX6040
	800	400	NSYSCX8040
	1200	400	NSYSCX12040
2000	600	500	NSYSCX6050
	800	400	NSYSCX8040
	800	600	NSYSCX8060
	1000	600	NSYSCX10060
	1200	600	NSYSCX12060

Locking Options

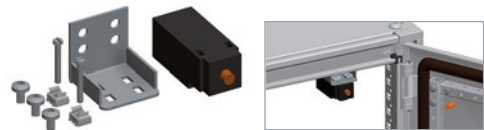


The Spacial SMX & SFX enclosures are delivered as standard with retractable handles made from painted zamak with a 5mm double bar insert, spare ref. NSYMCSX
Transformation of the standard insert by other shape inserts or barrels according to the following table:

Characteristics		Locking options						
Type	Shape insert	Square insert.				Triangular insert.		Padlocking system Padlocking device.
		5 mm double-bar insert.	6 mm	7 mm	8 mm	6.5 mm	8 mm	
Supply	Insert with key	Insert with key			1 pack		1 pack	
References								
		NSYTDB5ME	NSYTC6ME	NSYTC7ME	NSYTC8ME	NSYTT6ME	NSYTT8ME	NSYBCME

Characteristics		Locking options					
Type	Barrels	Reinforced key and barrel.	JIS key and barrel.	Manual.	Barrel and key 405E.	Barrel and key 610E.	Barrel and key 1242E.
		1 pack	1 pack	1 pack	Barrels with 1 key	Barrels with 1 key	Barrels with 1 key
Supply							
References							
		NSYTLRME	NSYTLJISME	NSYTMME	NSYTCL405ME	NSYTCL610ME	NSYTL1242EME

Door Accessories

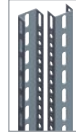


Characteristics		Door switch	
		For Spacial SFX	
		<ul style="list-style-type: none"> ■ The switch is fixed to the structure of the enclosure. ■ Drilled M20 cable entry for cable gland. ■ NC + NO contact, 10 A/500 V. 	
Supply	1		
Reference	NSYDCM20		

Spacial SFX

Stainless Steel Modular Floor-Standing Enclosures

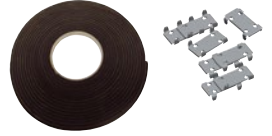
Mounting Accessories



Characteristics			Side panels	Plain mounting plate	Vertical uprights	
			<ul style="list-style-type: none"> Side panels including a polyurethane sealing gasket. Their special design helps guarantee the protection of the door gasket. 	-	-	
Material			304L stainless steel sheet	-	-	
External dimensions (mm)					Standard	Technical
Height (A)	Width (B)	Depth (C)				
1800	600	400	NSY2SPX184	NSYMP186	NSYVR18	NSYVR18
	800	400	NSY2SPX184	NSYMP188	NSYVR18	NSYVR18
	1200	400	NSY2SPX184	NSYMP1812	NSYVR18	NSYVR18
2000	600	500	NSY2SPX205	NSYMP206	NSYVR20	NSYVR20
	800	400	NSY2SPX204	NSYMP208	NSYVR20	NSYVR20
	800	500	NSY2SPX205	-	-	-
	800	600	NSY2SPX206	NSYMP208	NSYVR20	NSYVR20
	1000	600	NSY2SPX206	NSYMP2010	NSYVR20	NSYVR20
	1200	600	NSY2SPX206	NSYMP2012	NSYVR20	NSYVR20

B

Other Accessories



Characteristics	Eyebolts*	Lifting bracket	Hygienic feet	Coupling kit
Material	304 stainless steel	Treated steel	316L stainless steel	<ul style="list-style-type: none"> Flat connectors and brackets: zinc-coated steel (NSYSFBK19) Sealing gasket: EPDM (NSYSFXJG)
Ingress protection rating	-	-	-	IP55
Installation	It is fixed using the fixing nuts supplied	They are fixed instead of the eyebolts on two suitable enclosures side-by-side, helping guarantee the rigidity of the enclosure when lifted	Adjustable between 140 mm and 200 mm in height	Fixing from the inside of the enclosures
Maximum load	540 kg when slinging at 60°	1300 kg when slinging at 60°	Per foot: 100 kg	-
Supply	Set of four M12 eyebolts	Set of four lifting brackets	Set of four adjustable feet	-
References				
	NSYSMXEB	NSYPUNX	NSYPHX200	NSYSFBK19 + NSYSFXJG

* Consult us for availability.

Spacial SDX, SDCX Stainless Steel HMI Enclosures

HMI Enclosures and Accessories



Spacial SDX - IP55 - IK10 304L stainless steel					Front and rear plinth		Plinth side panels	
Dimensions (mm)			Control desk references	No. of front doors	Plinth references		Plinth references	
Height	Width	Depth			100 mm	200 mm	100 mm	200 mm
1000	600	500	NSYSDX6	1	NSYSPFX6100	NSYSPFX6200	NSYSPSX5100	NSYSPSX5200
1000	600	500	NSYSDX6	1	NSYSPFX6100	NSYSPFX6200	NSYSPSX5100	NSYSPSX5200
1000	800	500	NSYSDX8	1	NSYSPFX8100	NSYSPFX8200	NSYSPSX5100	NSYSPSX5200
1000	800	500	NSYSDX8	1	NSYSPFX8100	NSYSPFX8200	NSYSPSX5100	NSYSPSX5200
1000	800	500	NSYSDX8	1	NSYSPFX8100	NSYSPFX8200	NSYSPSX5100	NSYSPSX5200
1000	1000	500	NSYSDX10	2	NSYSPFX10100	NSYSPFX10200	NSYSPSX5100	NSYSPSX5200
1000	1000	500	NSYSDX10	2	NSYSPFX10100	NSYSPFX10200	NSYSPSX5100	NSYSPSX5200
1000	1000	500	NSYSDX10	2	NSYSPFX10100	NSYSPFX10200	NSYSPSX5100	NSYSPSX5200
1000	1000	500	NSYSDX10	2	NSYSPFX10100	NSYSPFX10200	NSYSPSX5100	NSYSPSX5200
1000	1200	500	NSYSDX12	2	NSYSPFX12100	NSYSPFX12200	NSYSPSX5100	NSYSPSX5200
1000	1200	500	NSYSDX12	2	NSYSPFX12100	NSYSPFX12200	NSYSPSX5100	NSYSPSX5200
1000	1200	500	NSYSDX12	2	NSYSPFX12100	NSYSPFX12200	NSYSPSX5100	NSYSPSX5200
1000	1200	500	NSYSDX12	2	NSYSPFX12100	NSYSPFX12200	NSYSPSX5100	NSYSPSX5200
1000	1200	500	NSYSDX12	2	NSYSPFX12100	NSYSPFX12200	NSYSPSX5100	NSYSPSX5200

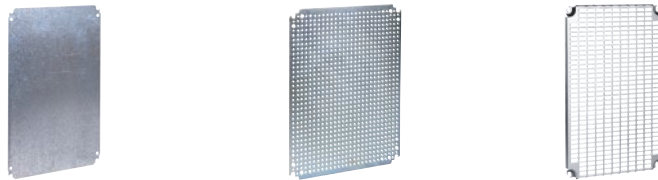
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Spacial SDCX - IP55 - IK10 - Modular Console - 304L stainless steel			Blanking covers
Modular Console Width (mm)	Depth: 200 mm	Depth: 300 mm	
400	NSYSDCX42	NSYSDCX43	NSYRPX2
600	NSYSDCX62	NSYSDCX63	-
400	NSYSDCX42	NSYSDCX43	2 x NSYRPX2
400	2 x NSYSDCX42	2 x NSYSDCX43	-
600	NSYSDCX62	NSYSDCX63	NSYRPX2
400	NSYSDCX42	NSYSDCX43	3 x NSYRPX2
600	NSYSDCX62	NSYSDCX63	2 x NSYRPX2
600	NSYSDCX62	NSYSDCX63	2 x NSYRPX2
400 + 600	NSYSDCX42 + NSYSDCX62	NSYSDCX43 + NSYSDCX63	-
400	NSYSDCX42	NSYSDCX43	4 x NSYRPX2
400 + 600	NSYSDCX42 + NSYSDCX62	NSYSDCX43 + NSYSDCX63	NSYRPX2
600	NSYSDCX62	NSYSDCX63	3 x NSYRPX2
600	NSYSDCX62	NSYSDCX63	3 x NSYRPX2
600	2 x NSYSDCX62	2 x NSYSDCX63	-

Spacial SDX, SDCX Stainless Steel HMI Enclosures

Accessories



Mounting plates for modular consoles					
Modular console width (mm)	Fixing center-to-center distance (mm)		Plain mounting plate	Microperforated mounting plate	Telequick mounting plate
	Height	Width			
400	325	325	NSYMM44	NSYMF44	NSYMR44
600	625	325	NSYMM64	NSYMF64	NSYMR64



B

Pneumatic opening stay						
Description	Nominal load per stay (N)	Stay reference	Description	Max. load on lid (kg)	Control desk references	Standard supply stay
Holds the desk lid in open position at an angle of 75°. Delivered with fixings.	244	NSYPLS24	The stays are delivered as standard with the control desks, according to the following table.	13	NSYSDX6	NSYPLS24
	300	NSYPLS30		13	NSYSDX8	NSYPLS24
	-	-		17	NSYSDX10	NSYPLS30
	-	-		15	NSYSDX12	NSYPLS30

Spacial SMX PC Stainless Steel PC Rack

PC Rack



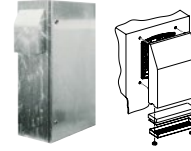
Characteristics			304L stainless steel PC racks	Front plinth		Plinth side panels	
Height (mm) (A)	Width (mm) (B)	Depth (mm) (C)	References	100 mm	200 mm	100 mm	200 mm
1600	600	600	NSYSMX16660PC	NSYSPFX6100	NSYSPFX6200	NSYSPSX6100	NSYSPSX6200
1800	600	600	NSYSMX18660PC	NSYSPFX6100	NSYSPFX6200	NSYSPSX6100	NSYSPSX6200

B

ClimaSys

Thermal Management Systems

Ventilation Systems with Filters



Fan flow rate (m ³ /h)			Voltage (V)	Forced ventilation			
Free with filter	With 1 outlet grille	With 2 outlet grilles		Fan with filter	Outlet grille	Covers	Spare filter for cover
50 Hz	50 Hz	50 Hz		IP54 - RAL 7035	IP54 - RAL 7035	IP55 Stainless steel	Set of five
38	25	33	230	NSYCVF38M230PF	NSYCAG92LPF	-	-
38	27	35	115	NSYCVF38M115PF			
58	39	47	24 DC	NSYCVF38M24DPF			
44	34	41	48 DC	NSYCVF38M48DPF			
85	63	71	230	NSYCVF85M230PF	NSYCAG125LPF	NSYCAP125LXF	NSYCAF125L55
79	65	73	115	NSYCVF85M115PF			
80	57	77	24 DC	NSYCVF85M24DPF			
79	59	68	48 DC	NSYCVF85M48DPF			
165	153	161	230	NSYCVF165M230PF	NSYCAG223LPF	NSYCAP223LXF	NSYCAF223L55
164	153	161	115	NSYCVF165M115PF			
188	171	179	24 DC	NSYCVF165M24DPF			
193	171	179	48 DC	NSYCVF165M48DPF			
302	260	268	230	NSYCVF300M230PF			
302	263	271	115	NSYCVF300M115PF			
262	221	229	24 DC	NSYCVF300M24DPF	NSYCAG291LPF	NSYCAP291LXF	NSYCAF291L55
247	210	218	48 DC	NSYCVF300M48DPF			
562	473	481	230	NSYCVF560M230PF			
582	485	494	115	NSYCVF560M115PF			
838	718	728	230	NSYCVF850M230PF			
983	843	854	115	NSYCVF850M115PF			
931	798	809	400	NSYCVF850M400PF			

B

ClimaSys

Thermal Management Systems

Cooling Systems



Air-water exchangers



Side-mounting models - IP55				
Cooling power W10A35 (W)	Hydraulic circuit maximum pressure	Voltage (V)	Stainless steel	UL stainless steel
1000	5 bar	1 x 230	NSYCEWX1K	NSYCEWX1KUL
1750	5 bar	1 x 230	NSYCEWX1K8	NSYCEWX1K8UL
2500	5 bar	1 x 230	NSYCEWX2K5	NSYCEWX2K5UL
3500	5 bar	1 x 230	NSYCEWX3K5	NSYCEWX3K5UL
4500	5 bar	1 x 230	NSYCEWX4K5	NSYCEWX4K5UL
6000	5 bar	1 x 230	NSYCEWX6K	NSYCEWX6KUL
6000	8 bar	2 x 400-440	NSYCEWX6K2P4	-



Cooling units

B



Side-mounting models - IP55			
Cooling power L35-L35 W (Btu/h)	Voltage (V AC)	Stainless steel	UL stainless steel
380 (1297)	230	NSYCUX400	-
640 (2184)	230	NSYCUX600	NSYCUX600UL
820 (2798)	230	NSYCUX800	NSYCUX800UL
1000 (3412)	230	NSYCUX1K	NSYCUX1KUL
1000 (3412)	400	NSYCUX1K2P4	NSYCUX1K2P4UL
1250 (4265)	230	NSYCUX1K2	NSYCUX1K2UL
1600 (5459)	230	NSYCUX1K6	NSYCUX1K6UL
1600 (5459)	400	NSYCUX1K62P4	NSYCUX1K62P4UL
2000 (6824)	230	NSYCUX2K	NSYCUX2KUL
2000 (6824)	400	NSYCUX2K3P4	NSYCUX2K3P4UL
2900 (9895)	400	NSYCUX3K3P4	NSYCUX3K3P4UL
3850 (13137)	400	NSYCUX4K3P4	NSYCUX4K3P4UL

Top-mounting models - IP54		
Cooling power L35-L35 W (Btu/h)	Voltage (V)	Stainless steel
410 (1399)	230	NSYCUX400R
820 (2798)	230	NSYCUX800R
1150 (3924)	230	NSYCUX1K2R
1550 (5289)	230	NSYCUX1K5R
2050 (6995)	230	NSYCUX2KR
2050 (6995)	400	NSYCUX2K3P4R
2900 (9895)	400	NSYCUX3K3P4R
3850 (13137)	400	NSYCUX4K3P4R

Side-mounting SLIM models - IP55		
Cooling power L35-L35 W (Btu/h)	Voltage (V)	UL stainless steel
1100 (3753)	230	NSYCUSX1K1UL
1100 (3753)	400	NSYCUSX1K12P4UL
1500 (5118)	230	NSYCUSX1K5UL
1500 (5118)	400	NSYCUSX1K52P4UL
2000 (6824)	230	NSYCUSX2KUL
2000 (6824)	400	NSYCUSX2K3P4UL
2500 (8530)	230	NSYCUSX2K5UL
2500 (8530)	400	NSYCUSX2K52P4UL
3200 (10919)	230	NSYCUSX3K2UL
3200 (10919)	400	NSYCUSX3K23P4UL

ClimaSys Thermal Management Systems



ClimaSys CR: Insulated Resistance Heaters



Insulated resistance heaters - 2 poles		
Power (W)	Voltage (V)	References
10	110-250 AC	NSYCR10WU2C*
10	12-24 DC	NSYCR10WU1C
20	110-250 AC	NSYCR20WU2C*
20	12-24 DC	NSYCR20WU1C



Insulated resistance heaters - 4 poles		
Power (W)	Voltage (V)	References
55	110-250 AC	NSYCR50WU2C*
55	12-24 DC	NSYCR50WU1C
55	270-420 AC	NSYCR50WU3C
100	110-250 AC	NSYCR100WU2C*
100	12-24 DC	NSYCR100WU1C
100	270-420 AC	NSYCR100WU3C
147	110-250 AC	NSYCR150WU2C*
147	12-24 DC	NSYCR150WU1C



Insulated resistance heater with fan		
Power (W)	Voltage (V)	Reference
177	230 AC	NSYCR170W230VVC*



Thermofans		
Power (W)	Voltage (V)	References
400/550	120 AC	NSYCRP1W120VTVVC*
400/550	230 AC	NSYCRP1W230VTVVC*

* Models with UL certification.



ClimaSys CR: Aluminium Resistance Heaters



Aluminium resistance heaters		
Power (W)	Voltage (V)	References
Power cord		
10	12-24 DC	NSYCR10WU1
10	110-250 AC	NSYCR10WU2*
20	12-24 DC	NSYCR20WU1
20	110-250 AC	NSYCR20WU2*
Terminal block		
20	270-420 AC	NSYCR20WU3
55	12-24 DC	NSYCR55WU1
55	110-250 AC	NSYCR55WU2*
55	270-420 AC	NSYCR55WU3
90	12-24 DC	NSYCR100WU1
90	110-250 AC	NSYCR100WU2*
90	270-420 AC	NSYCR100WU3
150	12-24 DC	NSYCR150WU1
150	110-250 AC	NSYCR150WU2*
150	270-420 AC	NSYCR150WU3



Aluminium resistance heaters with fan		
Power (W)	Voltage (V)	References
250	115 AC	NSYCR250W115VV*
250	230 AC	NSYCR250W230VV*
400	115 AC	NSYCR400W115VV*
400	230 AC	NSYCR400W230VV*
200	115 AC	NSYCRS200W115V
200	230 AC	NSYCRS200W230V

* Models with UL certification.



ClimaSys CR: Ultra Thin Resistance Heaters



Ultra thin resistance heaters*						
Power (W)	Voltage (V)	Inrush current (A)	Height (mm)	Width (mm)	Depth (mm)	References (1)
10	120	0.08	130	250	1.6	NSYCRS10W120V
10	240	0.04	130	250	1.6	NSYCRS10W240V
25	120	0.21	130	250	1.6	NSYCRS25W120V
25	240	0.10	130	250	1.6	NSYCRS25W240V
50	120	0.42	200	320	1.6	NSYCRS50W120V
50	240	0.21	200	320	1.6	NSYCRS50W240V
100	120	0.83	280	450	1.6	NSYCRS100W120V
100	240	0.42	280	450	1.6	NSYCRS100W240V
200	120	1.67	400	650	1.6	NSYCRS200W120V
200	240	0.83	400	650	1.6	NSYCRS200W240V

* Ultra thin resistance heaters can be manufactured with different dimensions and power ratings than those indicated above. Please contact us.
 (1) All Ultra thin resistance heaters are UL certified.

B

ClimaSys

Thermal Management Systems



ClimaSys CC: Thermal Control

Mechanical controllers



NC thermostat

Control a resistance heater or an alarm	
Setting range	References
0...+60 °C	NSYCCOTHC
+32...+140 °F	NSYCCOTHCF



NO thermostat

Control a fan or an alarm	
Setting range	References
0...+60 °C	NSYCCOTH0
+32...+140 °F	NSYCCOTH0F



Double thermostat

Control a resistance heater and a fan	
Setting range	References
0...+60 °C	NSYCCOTHD
+32...+140 °F	NSYCCOTHDF



Thermostat with inverse contact

Control a resistance heater or a fan	
Setting range	References
0...+60 °C	NSYCCOHI
+32...+140 °F	NSYCCOHIH

B

Electronic controllers



Electronic thermostat

Control a resistance heater or a fan		
Setting range	Display	References
-40 °C... +80 °C	°C or °F	NSYCCOTH30VID NSYCCOTH120VID NSYCCOTH230VID

7 different operating modes.
Option of installing one or two external sensors.



Electronic hygostat

Control relative humidity		
Setting range	Display	References
20 %...80 %	% RH	NSYCCOYH30VID NSYCCOYH120VID NSYCCOYH230VID

2 different operating modes.



Electronic hygrotherm

Control temperature and relative humidity		
Setting range	Display	References
-40 °C... +80 °C	°C or °F	NSYCCOYHT30VID NSYCCOYHT120VID NSYCCOYHT230VID

3 different operating modes.
Option of installing an external sensor.

Sensors



External temperature sensor (double insulation)	
Reference	NSYCCASTE



Thermal Accessories for Outdoor Heavy Duty Enclosures



Fanbox	
Voltage (V)	References
24 DC	NSYCVF550M24FB
48 DC	NSYCVF550M48FB
115 AC	NSYCVF550M115FB
230 AC	NSYCVF550M230FB



Roof filter for fanbox	
Reference	NSYCAF190



IP55 HD Metal Grille	
Reference	NSYCAAG223LFHD



Filter	
Reference	NSYCAF223T



Anti-vandalism kit for HD metal grille	
Reference	NSYCAAPVHD



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