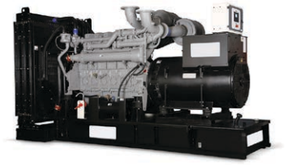
PDS UPGRADE THE POWER

INDEX // POWER DISTRIBUTION SOLUTIONS - PDS

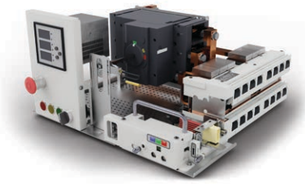
WIDE RANGE OF APPLICATION

Connection from Network to Panel entry via cable or busbar.

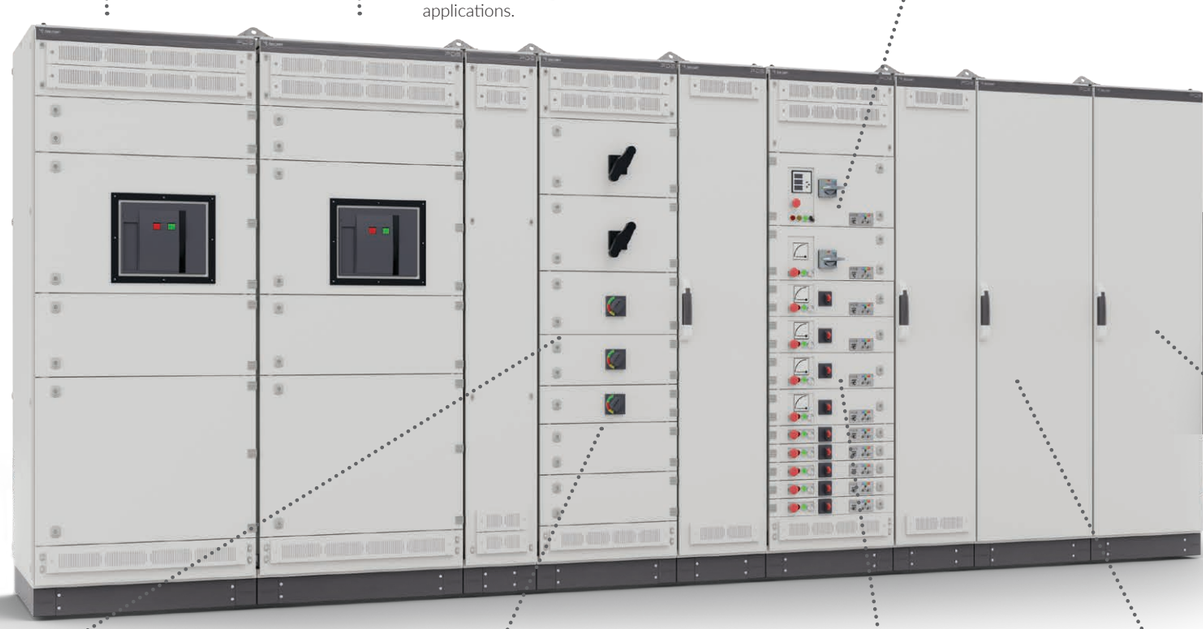
Input-output and coupling applications with withdrawable or fixed Open Type Circuit Breaker (ACB) applications.



Supplying main panel system with cable or busbar connection from generators, automatic starting applications.

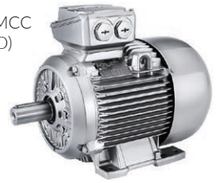


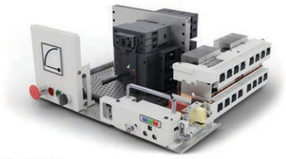
Possibility to replace with the spare equipment within 5 minutes with withdrawable MCCB (Compact Circuit Breaker) applications.



Supplying, or feeding and switching the local distributors with MCCB (Compact Circuit Breaker) applications.

Controlling the motors with Fixed Type MCC (DOL or DSD) applications.

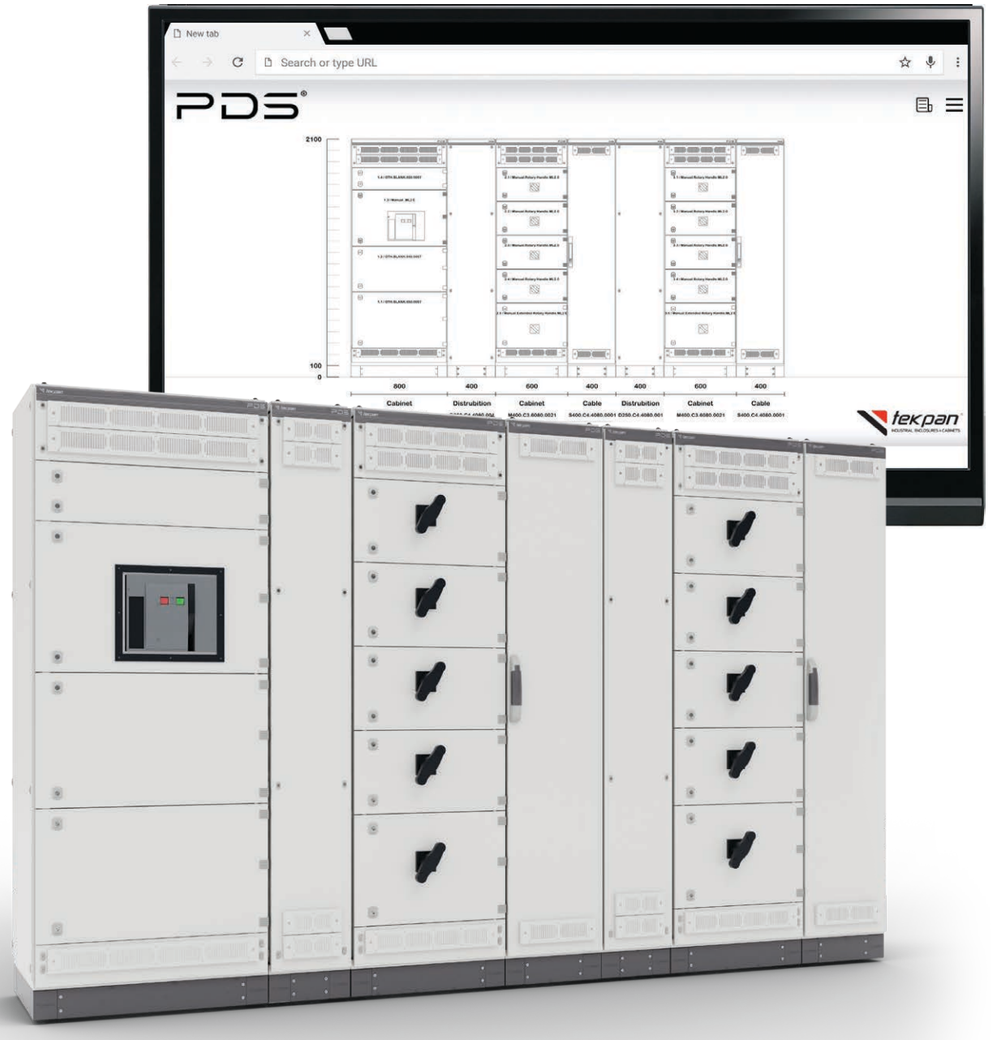




Possibility to replace with the spare equipment within 5 minutes with withdrawable MCC (DOL or DSD) applications.

Full adaptation to the system with system modules with mounting plate or rail in speed control or automation applications.

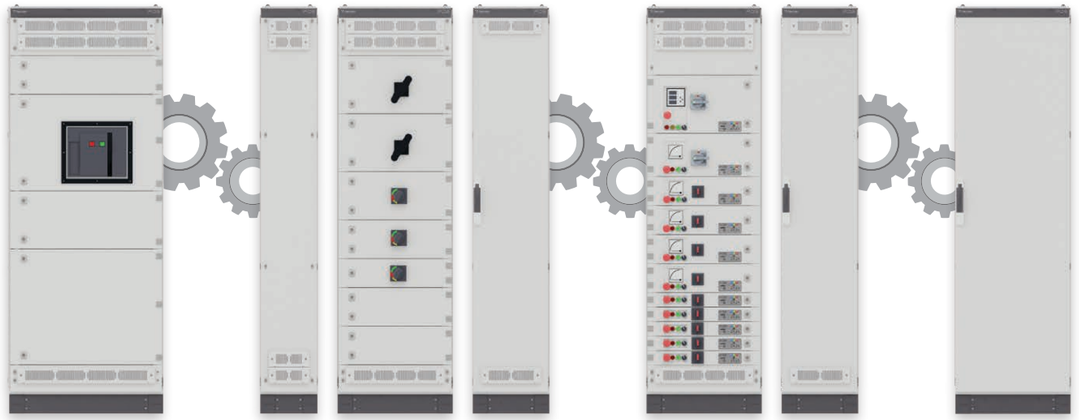
Full adaptation to the system with rail supported mounting modules in compensation applications.



FROM SOFTWARE TO REAL PRODUCT

Perfect consistency with the products you received and the designs you made and approved via software.

COMBINATION OF MODULES
AND COMPLIANCE WITH STANDARDS



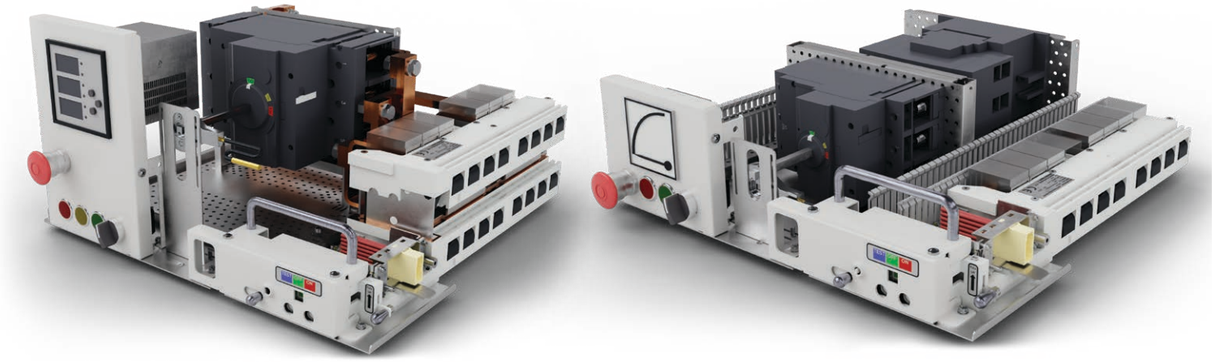
PDS 4000A SYSTEM

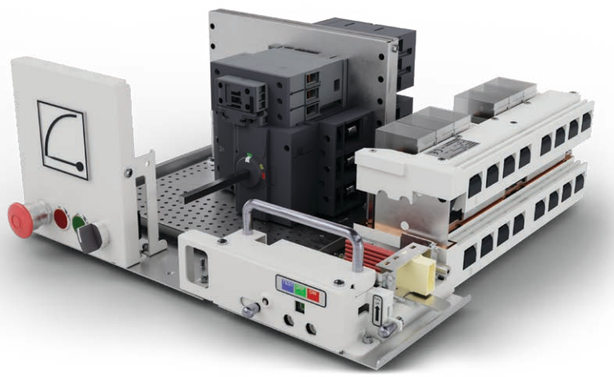
Compatibility between modules is ensured by pursuing all functions of type test from design to test process for the modules designed for different purposes. This way, compliance with standards in product assemblies is ensured independent of persons and perfect consistency is achieved in entire product group.

Applied Standard	IEC 61439-1/2 IEC 61641, IEC 62208 IEC 60529, IEC 60068-3-3
Rated Voltage (Ue)	690 V
Nominal Current (In)	Up to 4000A
Rated Insulation Voltage (Ui)	Up to 1000V
Rated Impulse-Withstand Voltage (Uimp)	Up to 12kV
Degree of Protection (IP)	Up to IP53
Mechanical Strength (IK)	10
Rated Peak Withstand Current (Ipk)	Up to 176kA
Degree of Separation	Form 1-4b
Rated Short Time Withstand Current (Icw)	Max. 85kA – 1s. / 65kA – 3s.
Connection Type	F.F.F – W.W.W
Pollution Degree	3
Material Group	IIIa
Internal Arc Withstand	60kA rms – 0,3ms
Seismic Withstand	Up to ZONE 3

IEC IP53 CE TSE EAC DEKRA cULus SEISMIC TESTED

UNINTERRUPTIBLE POWER





- Your processes will not stop because of faulty or malfunctioning electrical equipment. Without needing power cuts, only the faulty equipment can be replaced within 2-5 minutes with the spare one. Even without needing high technical knowledge and compromising safety.

- Module options up to 630A

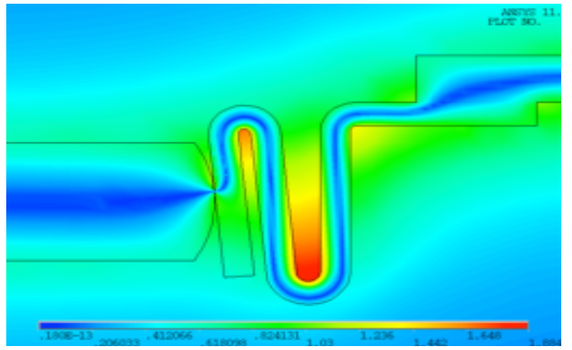
- Motor starting up to 110 kw maximum
- Motor star delta starting up to 110kw maximum

FEATURED PROPERTIES IN WITHDRAWABLE SYSTEMS

CONTROL OUTPUTS

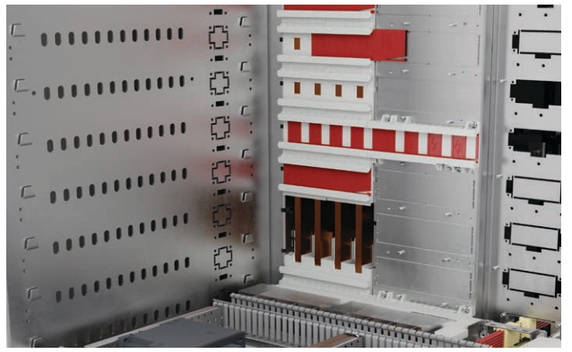
With its modular structure, control connections in the drawers can be made in different combinations. In addition to signal and RJ45 outputs, it is also possible to use cable connectors. It is possible to have up to 96 control outputs from drawers.

COMPRESSED CONNECTION SYSTEM



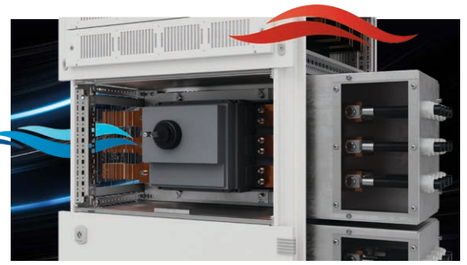
Compressed connection systems in Vertical Busbar connection modules provide a continuous and safe connection thanks to the special structure of internal copper layer. In contrast to conventional connection systems, it is not affected from the magnetic field that occurs during short circuit moment and does not allow contact loss.

VERTICAL BUSBAR SYSTEM



Full insulation between the conductors in vertical busbar compartment is ensured. This way, arc faults occurring in this compartment or in other compartments are prevented from proceeding through the compartment. With the automatic closers at all connection points, user safety is ensured. Thanks to its safe structure, withdrawable systems can be removed when the line is powered.

COOLING SYSTEM



• Continuous cooling thanks to special metal filter application suitable for temperature tests and compatible with high temperature conditions on panel modules.

• Filters are produced from metal material and have IP53 protection class. It can be removed and cleaned from outside. It is resistant to arc flashes and high temperature

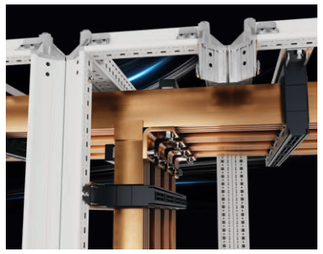
• In Form3 and above closures in the output modules inside the panel, cold air enters from the side and exits from the top air filters by exiting from the top of the mounting plate to the back of the panel. Output modules are prevented from loading heat to each other.

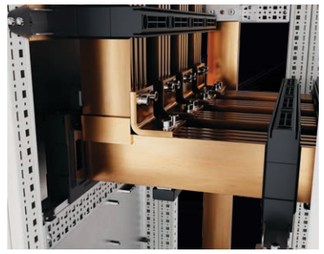
TAKE ADVANTAGE OF ALL BRANDS

PDS system is designed complying to standards, being compatible with the products of all switching equipment manufacturers. You can make the combinations you wish with infinite options of each brand and product.

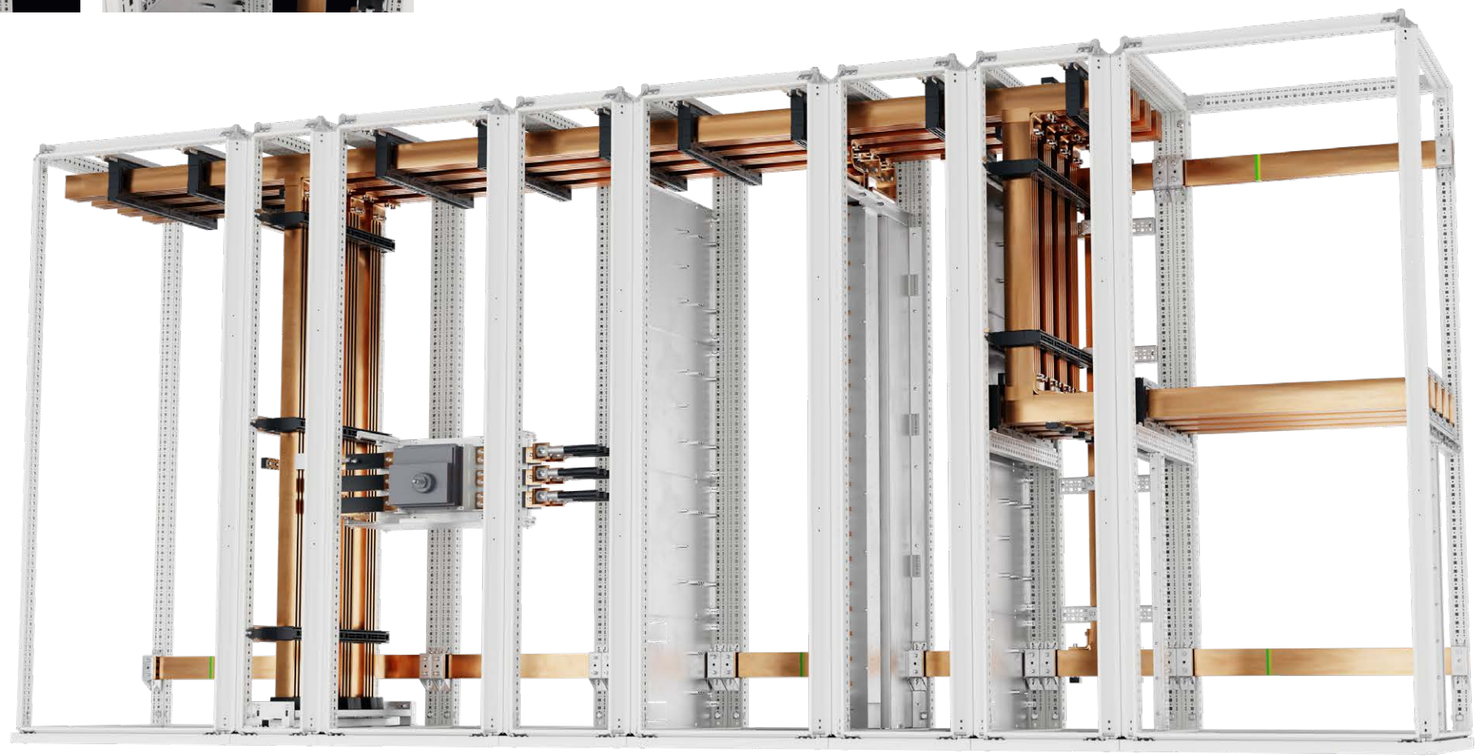
PDS 4000A Plug-In Main Busbar System

MAIN BUSBAR-DISTRIBUTION BUSBAR CONNECTION

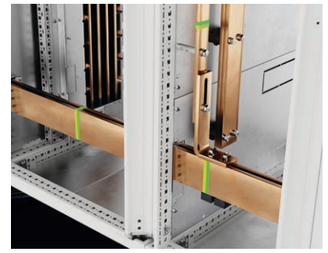




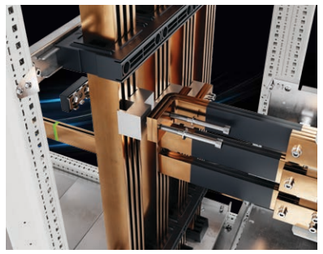
NEUTRAL MAIN BUSBAR-NEUTRAL DISTRIBUTION BUSBAR CONNECTION

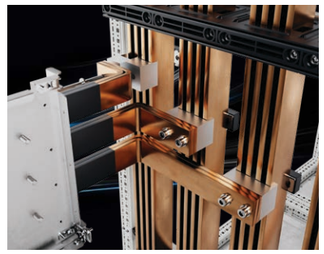


GROUNDING BUSBAR CONNECTION



DISTRIBUTION BUSBAR-MCCB (Compact Circuit Breaker) CONNECTION





Main Busbar Current Carrying Capacity at 25 ° C +30K (A)	Main Busbar	Panel Depth
1350	40/10x2	600mm
1620	50/10x2	600mm
1860	60/10x2	600mm
2300	80/10x2	600mm
2500	40/10x4	800mm
3000	50/10x4	800mm
3400	60/10x4	800mm
4000A	80/10x4	800mm

IEC 61439-1/2

Rated Voltage (Ue) = 690V

Isolation Voltage (Ui) = 1000V

Rated Peak Withstand Current (Ipk) = Up to 176kA

Short Circuit Withstand (Icw)

=Max. 85kA-1sn / 65kA-3sn

GENERAL MECHANICAL and ELECTRICAL CHARACTERISTICS

1.1. CONFIRMITY of IEC EN 61439 - 1&2 STANDARD

- The PDS switchboards have undergone the type tests IEC 61439-1&2 Standard at the international accredited type test laboratories such as Dekra , LVT and exct.
- The results of these tests guarantee the performances of the PDS switchboards and allow the end constructor of the switchboard using TEKPAN-PDS System.
- Metal structures, air, moulded-case and miniature circuit-breakers, not to carry out further type tests, respecting the selection criteria and the assembly instructions of the various components. These results, given below, can be referred to for drawing up the declaration of conformity of the electric switchboard.
- In the tables following, the thermal dissipation values are indicated, referring to all the dimensions of the PDS switchboards and to the type of installation, deriving from the type tests carried out. The dissipated power data (in Watts) are according to the admissible overtemperature inside the switchboard in the upper part, and must be compared with the sum of the powers dissipated by all the components installed inside the switchboard (taking appropriately into account the factor of contemporaneity).

SHORT-CIRCUIT WITHSTAND CURRENT - UP TO 4000A SYSTEM

- Rated short-time short-circuit current (Icw) : **Up to 85kA (1s) , 65kA (3s)**
- Rated max. peak short-circuit current (Ipk) : **Up to 176kA**
- Rated short-time short-circuit current (Icw) in withdrawble module : **Up to 60kA (1s) , Peak(Ipk) : 132kA**

DIELECTRIC PROPERTIES - UP TO 4000A SYSYEM

- Rated service voltage (Ue) : **Up to 690V AC**
- Rated insulation voltage (Ui) : **Up to 1000V AC , Up to 800V AC in withdrawable module**
- Rated impulse withstand voltage(Uimp) : **Up to 12kV , Up to 8kV in withdrawable module**
- The insulation distances are guaranteed by following the PDS metalwork structure instructions and circuit-breaker assembly and mounting instructions of manufacturers.

EFFICIENCY OF THE PROTECTION CIRCUIT

- Following the assembly indications of the metal components, the effective electrical continuity between the exposed conductive parts is verified, with negligible resistance values.
- Protection circuit short-circuit withstand current : phase-earthing busbar : **Icw :60kA (1s) , Ipk:132kA**

GENERAL MECHANICAL and ELECTRICAL CHARACTERISTICS

MECHANICAL OPERATION

- Mechanical operation is verified by following the assembly and mounting instructions for the PDS metalwork structures and instructions for the circuit-breaker manufacturers.

DEGREE OF PROTECTION(IP) ACCORDING TO IEC EN 60529 / MECHANICAL IMPACT (IK)

- Modules with ventilated door and rear panels in Internal Front protection : **Up to IP53 , IK10 / IK08 (Glazed Doors)**
- Modules with ventilated door and rear panels in External Front protection : **Up to IP53 , IK10**
- Modules with ventilated door and rear panels in Withdrawable Module : **Up to IP40 , IK10**
- Modules with ventilated rear panels in Internal Front protection without door : **Up to IP30 , IK08**

MECHANICAL CHARACTERISTICS

MATERIALS :

SHEET PARTS :

- Sheet steel Parts : 6112 grade EN 10130-99 DC01
- Galvanized steel Parts : 1311 grade DIN EN 10142-00 DX51 D+Z
- Frame : 1,50mm galvanized steel + RAL 7035 flat powder coated
- Full front doors : 2,00mm sheet steel + RAL 7035 ragged powder coated
- External Partial doors , Rear Panels : 1,50mm sheet steel + RAL 7035 ragged powder coated
- Top panels and Side panels : 1,50mm sheet steel + RAL 7035 ragged powder coated
- Internal Covers : 1,20mm sheet steel + RAL 7035 flat powder coated
- Base-Plinth Parts : 1,50-2,00-3,00mm Galvanized steel + RAL 7012 ragged Powder Co
- Mounting plates : 2,00mm galvanized steel
- Segregation plates : 1,50mm galvanized steel
- Assembly& Support Rails : 2,00 - 3,00mm sheet steel + zinc coated Cr+3 passivated

PLASTIC PARTS :

- Busbar holders : PolyamidPA (6.6) reinforced with fiberglass , V0 UL 94 (-40°C + 130°C)
- Segragation plates : 3mm Polycarbonat sheet , B-S1-d0 according to EN 13501-1
  - Dry Heat Tested according to IEC 60068-2-2 Test Bb
  - Glow Wire Tested according to IEC 60695-2-10/11

DIE CAST PARTS :

- Aluminum Joint Corner : Etial-160 AlSi9cu3 (A-380)
- Fixing parts : Zinc Zamak 5 (ZnAl4Cu1)

FASTENERS :

- Screws : 8.8 ISO 898-2
- Nuts : 8 ISO 898-2

GLASS on DOOR : 4,00mm Temperred Glass (IK08)