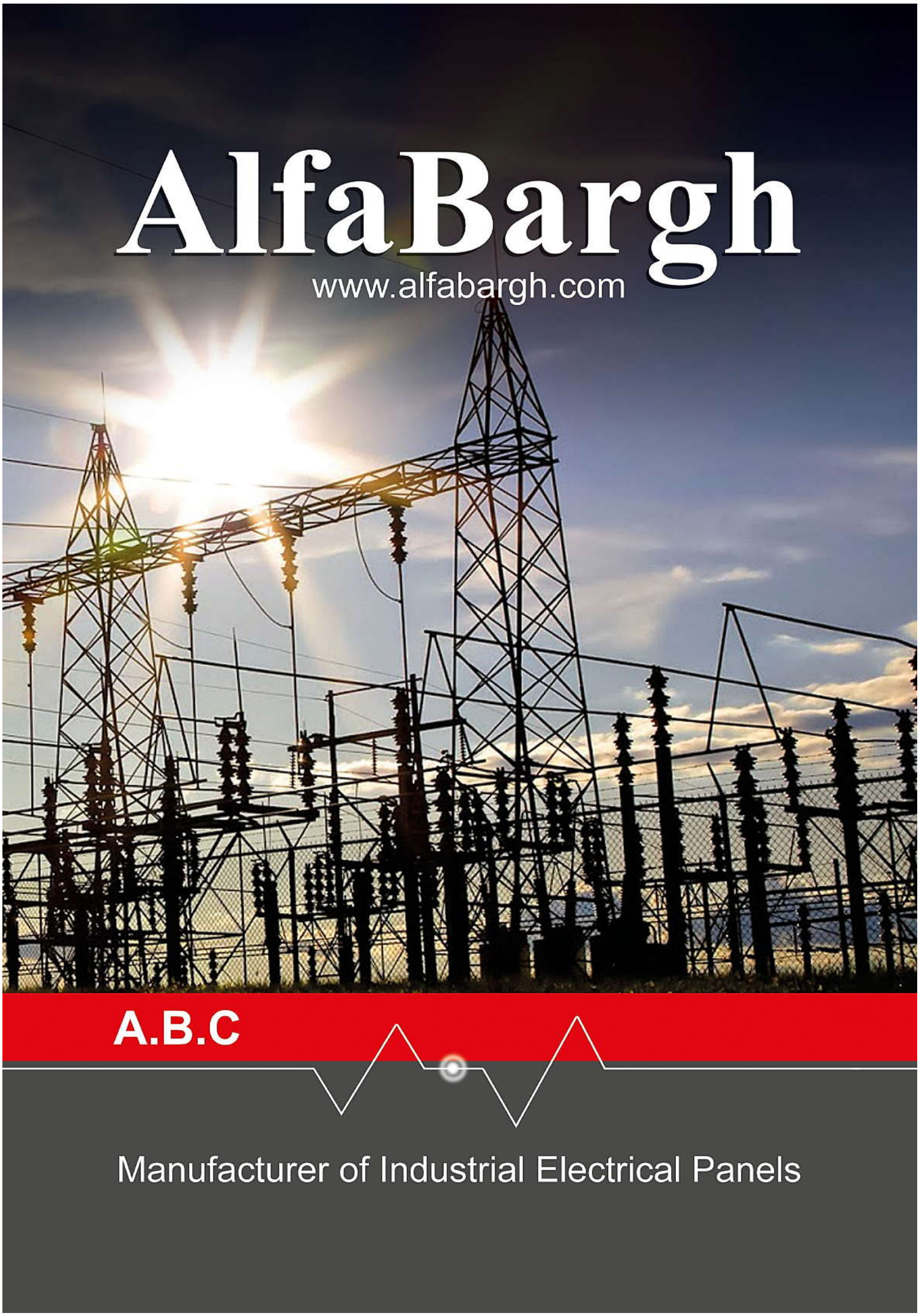
AlfaBargh
www.alfabargh.com
A.B.C
Manufacturer of Industrial Electrical Panels

Alfa Bargh Company is one of the oldest manufacturing companies in the electrical panel industry Iran, which officially established in 1984 . Alfa Bargh started as a pioneer in this field and today, it is one of the leading engineering and manufacturing companies. Our strategy of quality planning and execution in every project has directly elevated in our performance.

We owe our success to the presence of successful and innovative managers as well as our employing experienced consultants and professional personnel.

Furthermore, having access to the latest hardware and software systems all over the company such as in management, sales, quality control and the other production units is most importance to us. All these along with an accommodating and convenient atmosphere help a high level of confidence and credit with them.

The policies of Alfa Bargh Co. are based on the following principles:

1. Offering product and services accordant with universal standards and also customer needs.
2. On time preparation and delivery
3. Preform all commitment before and after sales (10 years after sales service)
4. Continuous research, development, innovation, training and improvement
5. Creating bright vision for company staff and promoting their eligibility and satisfaction in them
6. 10 years warranty after seals

Alfa Bargh

Manufacturer of Industrial Electrical Panels

Departments

Alfa Bargh

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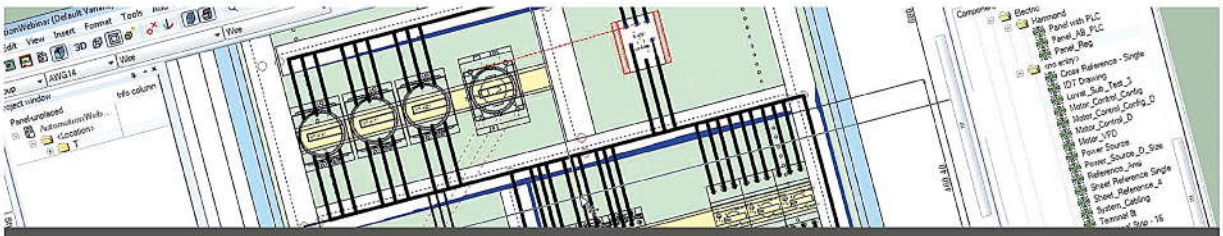

Technical Office

- Check the customer's requirement and drawings presented in order to be matched with relevant standards.
- Provide draft version of layout and electrical diagram to get customer approval
- Provide and send layout to related departments after reviewing drafts based on customer's opinion.
- Provide AS Built diagram and final book

Several software are used including: AUTOCAD, CATIA, EPLAN

Metal Working

Frame and Enclosure prepared according to drawing provided by the technical office in following steps:

Punching, Cutting and Bending:

These steps are done by CNC and NC machines with highest quality and speed and this capability allow meeting the specified requirements of customers.

Welding and finishing processes:

Welding is done with CO2 machines on the parts which require it and then finishing processes to make parts ready for painting.

Enclosure Assembly:

The frames and processed sheet metals are fitted together by using patented joints to shape the completed enclosure assembly.

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Electrostatic Paint

This Step is done by outsourcing contracting with careful monitoring and routine tests and Includes the following steps:

1. Degreasing, rinsing and phosphate
2. Powder Coating
3. Curing

Assembly

Assembling:

Components are installed in the panel.

Busbar production:

Busbars are cut, punched and bent with NC machines according to the panel design.

Panel wiring:

According to the electrical diagram wiring is done and each wire is specifically labeled, making it easier for repairs or periodic services.

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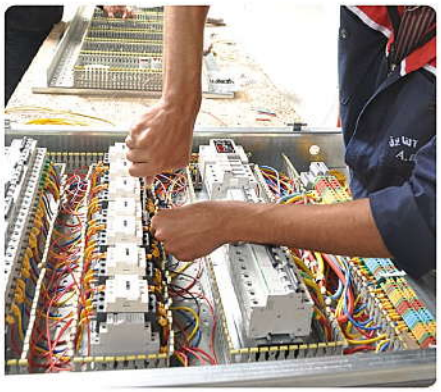

Quality Control

The quality of the product and the plants is guaranteed through the control of all processes: from planning of production activities to tests, to intermediate and final check, until the complete customer satisfactions. It is equipped with a test room which can execute the type tests according to an IEC standard.

- industrial frequency voltage tests up to 100 kV
- current injector up to 4000A
- multi tester(500VAC-1000VDC)

Quality Guarantee

Regarding the implementation of the management system of ISO 9001:2008 on this organization, all the executive processes are correctly conceived and efficiently applied.
This department also does all the planning and reviews to achieve the company goals and policies.

Products

ALF

ALF Panel is a fixed type panel made of 2 mm thick galvanized frame plates, fully joined with bolts and nuts.
This panel can be manufactured in different dimensions based on the customer's request and hence it has a suitable flexibility to meet the consumer's needs. Diversity of accessories and parts provides appropriate selection for various working conditions. ALF Panels are used in:

- Distribution and Motor starters
- Capacitor banks and harmonics solution
- Control and process

Below are some of the advantages:

1-Easy and quick installation
2-Accurate and standard dimensions
3-Solid and high quality frame
4-High degree of IP protection in order to prevent water / dust penetration
5-Expandability
6-Accessiblity from both front and back sides
7- Integrated Earth system

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Manufacturer of Industrial Electrical Panels

ALM

The frame is the same as the ALF type, also:

- Main bus – bar on top
- Separation of bus bar compartment from device compartment
- Separation of each feeder with separate door
- Cable connection from separate compartment
- Freedom of combination of equipped modular plates within the cubicle

ALM panel advantages vs. ALF type:

1. More operator's safety
2. Convenient operation
3. Easier maintenance
4. Safer performance

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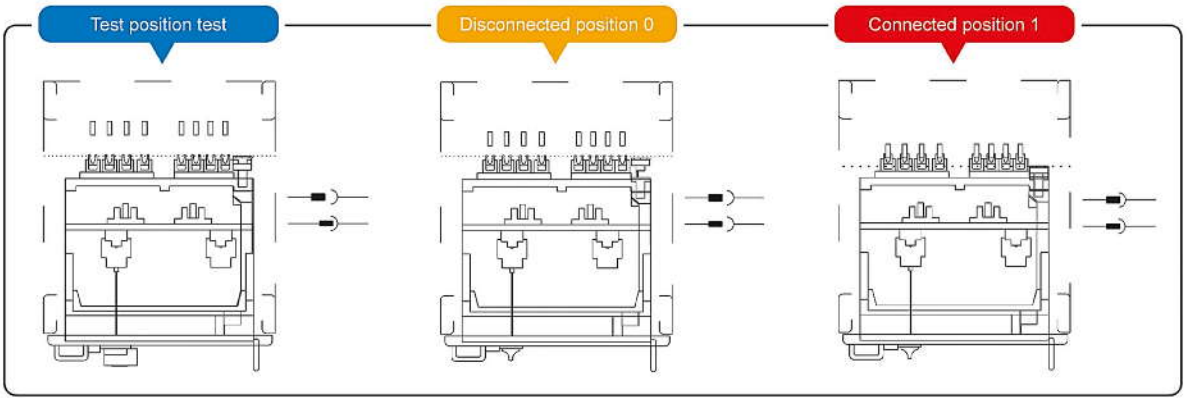
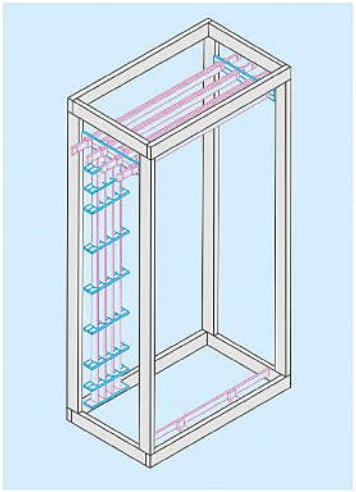
ALW

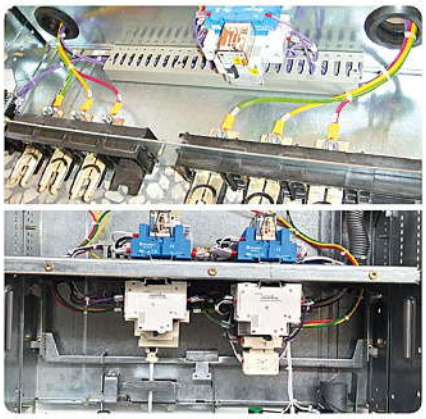
ALW Panel is a withdrawable modular panel that is used as a Motor Control Center (MCC):

- Standardized bus bar position at the top of the cubicle
- Separation of bus bar compartment from device compartment
- 3- and 4-pole bus bar system
- Cable connection from separate compartment
- Modular structure of device compartments
- Easy adaptation to changing operating conditions without shutdown of switch board
- Fully interlock system
- Pressure-relief top covers
- Outgoing feeders up to 250 kW
- Test and disconnected position with protection degree IP 30



The maximum space available for the withdrawable module is 1700 mm and with the capability to lead-in the cable from top or bottom.





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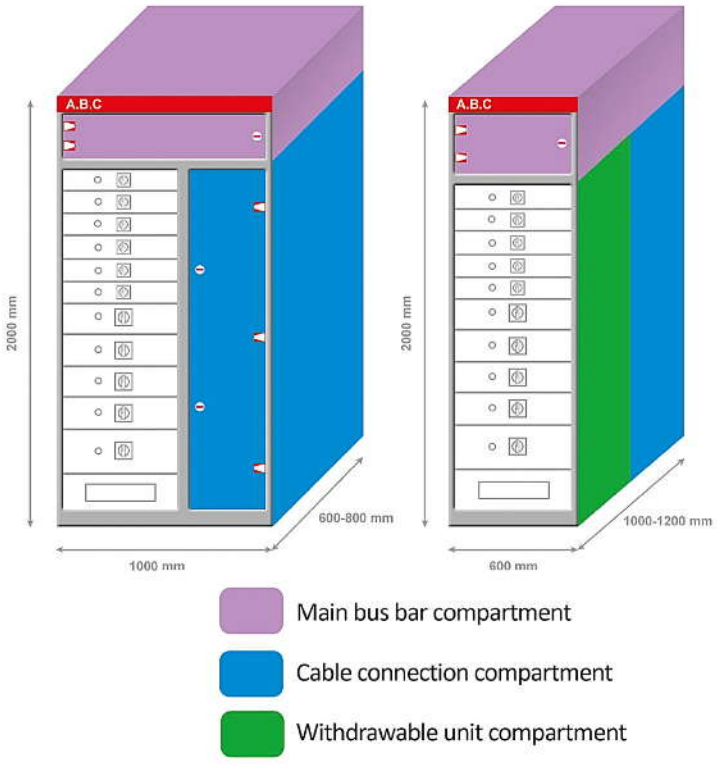
Dimensions of this panel depending on the main bus bar Ampere and cable outgoing are as following:

Technical Data		
Main horizontal busbars	**≤ 3200**	**≤ 4000**
Cubicle height	2000	2000
Depth	600/1000	800/1200
Rate peak withstand current (IPk)	Up to 200 KA	Up to 250 KA
Rate short timewithstand current (ICw)	Up to 80 KA	Up to 100 KA
Phase Conductors (L1 , L2 , L3) quality Dimension (mm)	Up to 2*100*10	Up to 3*100*10
Degree of protection	IP30 to IP54	IP30 to IP54

This model is produced in tow types:

1. cable connection right – hand side
2. cable connection rear



ALC

Frame and enclosure are manufactured from sheet steel with 1.5 and 2mm thickness painted with electrostatic powder paint.
These panels are built in multiple designs and used for measuring, distribution board, and lighting.

Outdoor solution:

By adding a rain protective roof and IP degree up to 54 ALC this panel can be used outdoor as well.

Alfa Bargh

Manufacturer of Industrial Electrical Panels

AMC

Due to improvement of equipment and electrical components we offer compact units solution for all requirements in medium voltage.

General data:

1- Metal-enclosed type
2- Suitable for secondary distribution requirements.
3- Frame is manufactured from galvanized sheet steel in the thickness of 2mm
4- Doors are painted sheet steel in the thickness of 2mm

Advantage:

1. Reduced dimension and wight
2. Higher operator safety
   - Strong enclosure withstanding over internal arc
   - Gas relief duct
   - Separate control compartment
3. integrated earth connection
4. possibility to install mechanical and electrical interlocks
5. possibility to install automation system
6. possibility to install PT and CT
7. expandability

Dimensions:

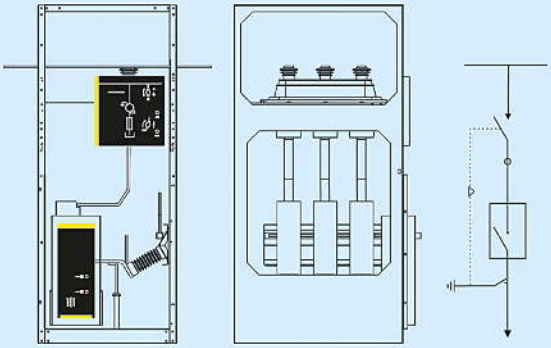
Voltage	Up to 20 KV			33 KV		
Type	**Height (mm)**	**Wight (mm)**	**Depth (mm)**	**Height (mm)**	**Wight (mm)**	**Depth (mm)**
S1 , S2 , S3	1950	500	1000/1050	2260	8000	1450
CD1 , CD2 , CD3	1950	800	1000/1050	2260	800	1450
CD4	1950	1000	1000/1050	2260	800	1450
SINT6	1950	500	1000/1050	-	-	-
M1 , M2 , IC , BR	1950	500**	1000/1050	2260	750	1450

*In case of adding control panel 260mm will be add to depth

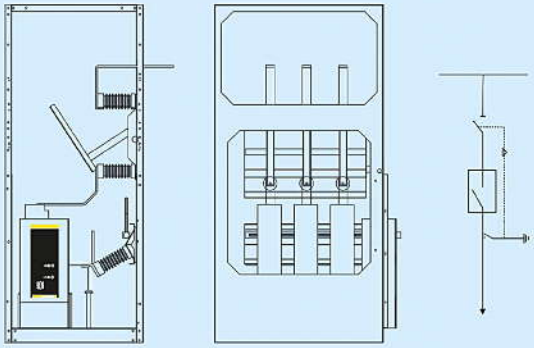
Electrical Characteriestics				
Rated	**ur (KV)**	**17.5**	**24**	**33**
Rated Frequency	fr (Hz)	50 - 60	50 - 60	50 - 60
Rated main busbar current (40 °C)	In(A)	400/630/1250	400/630/1250	400/630/1250
Withstand voltage at 50Hz ,1 min	ud (Kv)	38	50	70
Impulse wthstand voltage	up (Kv)	95	125	170
Rated short time withstand currnet	I sc (KA)	12.5/20	12.5/16/20	16/20

AMC

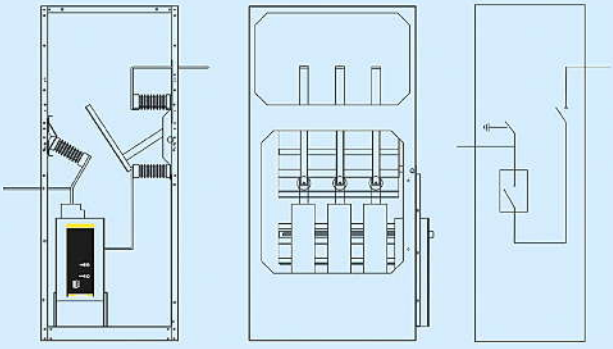
CD1 Incoming or outgoing unit equipped with a vacuum or a SF6 circuit breaker, LBS and earthing switch



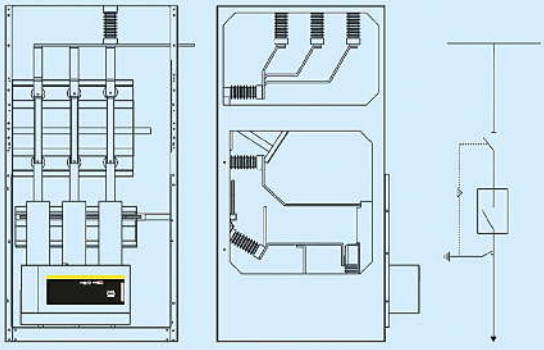
CD2 Incoming or outgoing unit equipped with a vacuum or a SF6 circuit breaker, disconnector switch and earthing switch



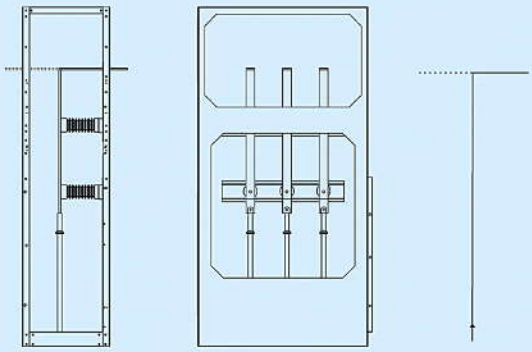
CD3 Coupling unit equipped with a vacuum or a SF6 circuit breaker, disconnector switch and earthing switch



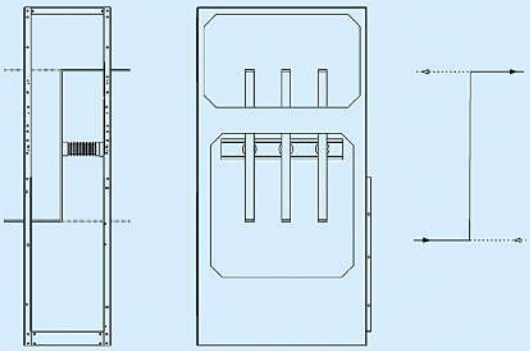
CD4 Incoming or outgoing unit equipped with a vacuum or a SF6 circuit breaker, disconnector switch and earthing switch



IC Direct busbar unit for incoming or outgoing

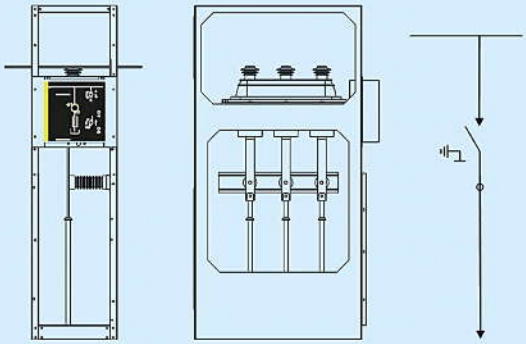


BR Bus riser without switch

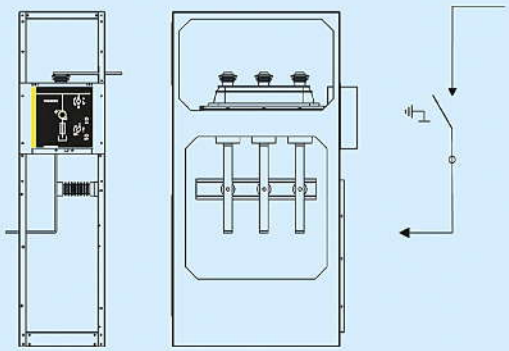


AMC

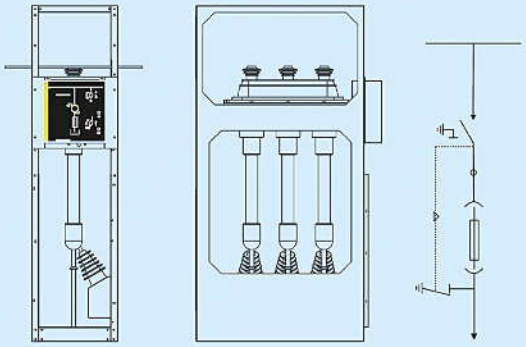
S1 Incoming or outgoing unit equipped with a SF6 load break switch



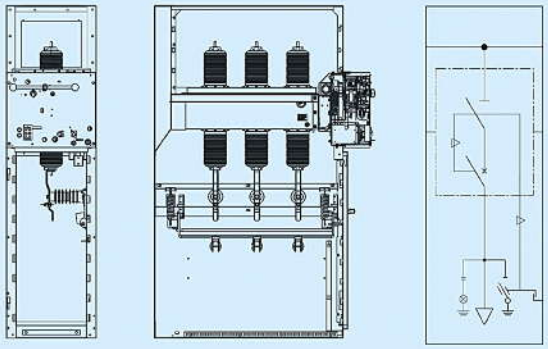
S2 Coupling unit equipped with a SF6 load break switch



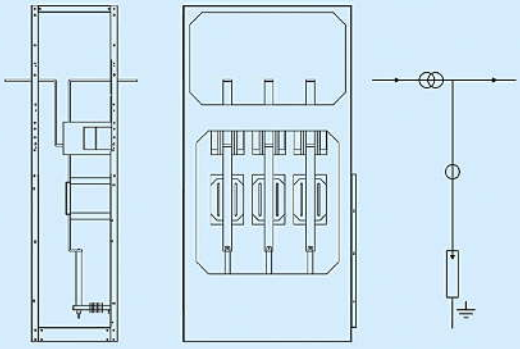
S3 Transformer protection unit equipped with a fused load break switch



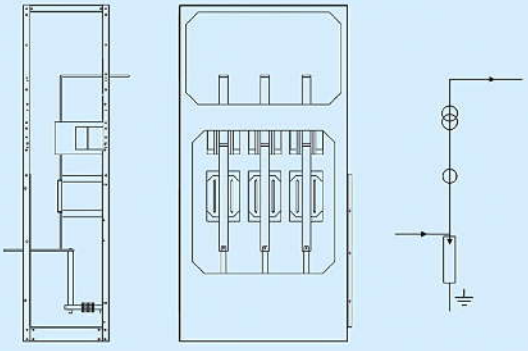
SINT 6 Incoming or outgoing unit equipped with a combined SINTER breaker



M1 Metering unit equipped with VT and CT



M2 Metering unit equipped with VT and CT

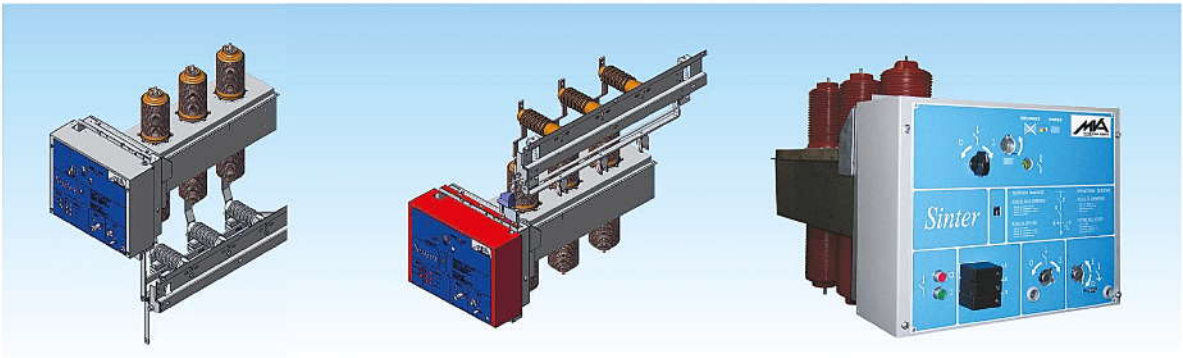


AMC

SINTER

The state-of-the-art combined MV circuit breaker Sinter range is the result of recognized technology synergy for production of vacuum bottles and manufacturing re-known know-how of Italian companies. Sinter circuit breakers are indeed a combined system of breaking and switching, inside a single SF6 insulated enclosure, with pressure lower than 0.5 bars at 45 °C.
Vacuum bottles are used for breaking. As known, the reduced necessary Energy for vacuum arc extinguishment enables to reach a long-lasting electrical life (10.000 rated breaking current operations).
The whole active elements complex (circuit breaker and main switch) are inside a heavy metallic stainless steel structure filled with a huge dielectric SF6 gas. The structure is life-sealed and is holding 6 bushings and an operating mechanism.

Insulation voltage (kV)	24 KV
Insulation level, withstand voltage to earth and between phases:	
-Impulse (kV)	125 KV
-Industrial frequency (kV)	50 KV
between open contacts:	
-Impulse (kV)	60 KV
-Industrial frequency (kV)	145 KV
Rated frequency (Hz)	50 Hz
Rated current (A)	630 A
Short time current (kA)	12.5 - 16 KA
Peak current (kA)	31.5 - 40 KA
Short circuit rated duration (sec)	1 Sec
Electric duration class IEC ٦٢٢٧١-١٠٠	E^2
Rated breaking current (kA)	12.5 - 16 KA
Operations order	O - 0.3 Sec - CO - 3- Sec - CO

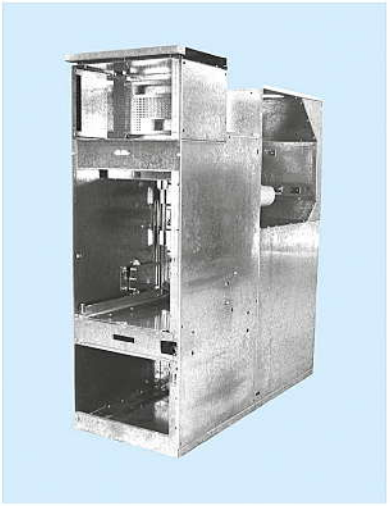


Alfa Bargh
Manufacturer of Industrial Electrical Panels

AMW

Metal-clad medium voltage used for primary power distribution up to 24KV, 2500A.

- Safety mechanical interlocks
- Metallic shutters
- In-door type



Advantage:

1. Cable area easily accessible from the front
2. Reduction in service and maintenance costs.
3. Simplification of the electrical installation.
4. Longer electrical life of all the installation components

Dimension:

24 KV		12 KV			
1000	750	1000	750	600	عرض
2160	2160	2160	2160	2160	ارتفاع
1900	1900	1900	1900	1900	عمق

Shutters:

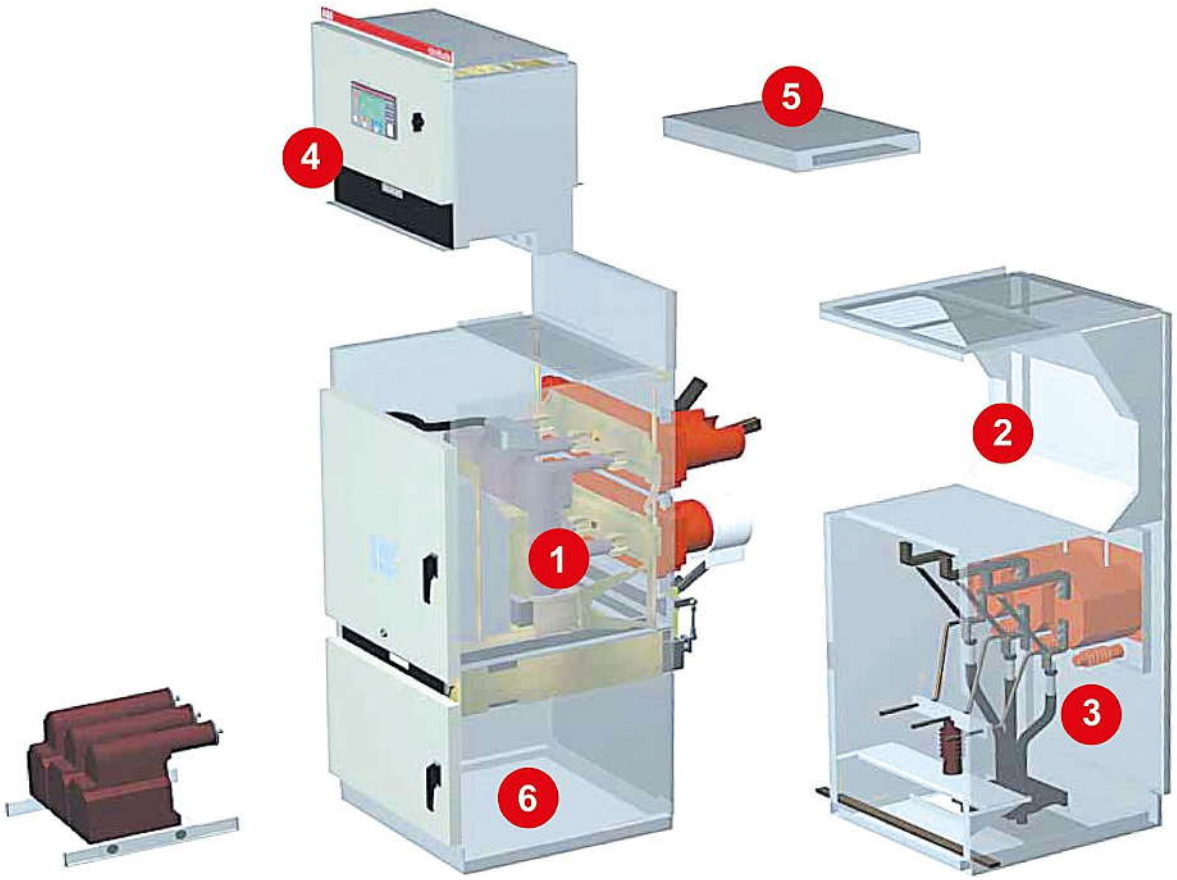
Metallic shutters Connected to earth automatically operated by CB truck.

Earthing switch:

It is operated from the front of the switchgear, with mechanical indicator which shows the switch position. A window allows direct viewing of the earth switch position.
It is mechanically interlock with C.B or contactor and can be interlock with cable compartment door as an additional safety.

AMW

1- Circuit-breaker compartment
2- Busbar compartment
3- Cable compartment
4- Auxiliary box
5- Interconnection wiring duct
6- Voltage transformers compartment



ASF

Shortage and high property prices caused that reducing the occupancy space of the substation has become a very important issue in electrical distribution.
Therefore this company has designed and produced ASF type compact substation.

Advantage:

1. Reducing civil work.
2. Fully factory assembled.
3. Operation convenience.
4. Reducing the installation and start up time.
5. Ability and safety of installation in the public areas.
6. Ability of installing remote control system

The double roof system and the structure are designed to facilitate a natural heat sink and air circulation and also prevent external impacts. The air gap between the two layers of the roof prevents heating through the roof due to sun radiation.
ASF usually divided to three compartment including MV, LV and transformer with individual doors, the dimensions are flexible for any customer requirement.

ASF

Transformer compartment:

- Ability of installation of all kind of transformer up to 1600KVA/36KV
- Ability of removing transformer for repairing or replacing.

MV compartment:

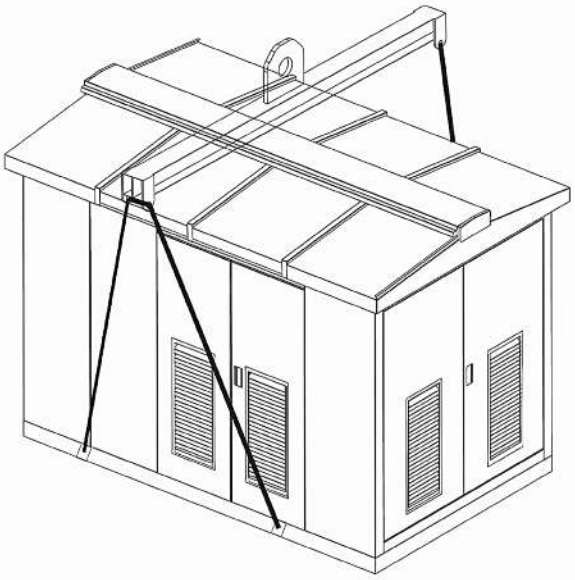
MV switchgear install in this compartment base on customer requirement.

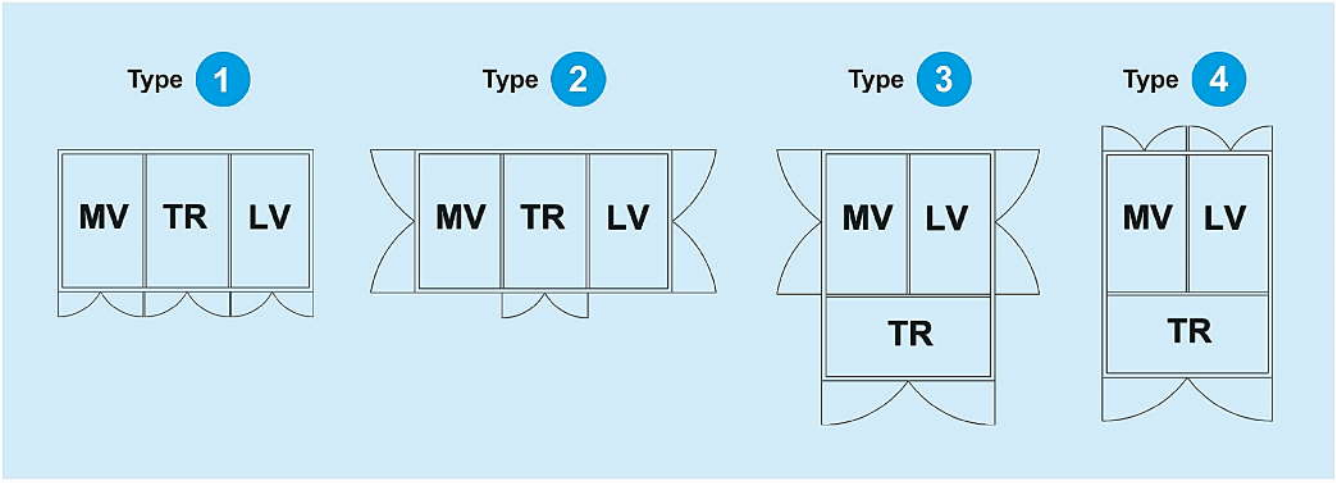
LV compartment:

Wide range of low voltage switchgear, connections and auxiliary equipment for supplying low voltage power and also protective equipment can install in this compartment.

Transportation:

Transportation can be done on open truck or open top containers.





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