



EGEMAC
Egyptian German Electrical Manufacturing Co.

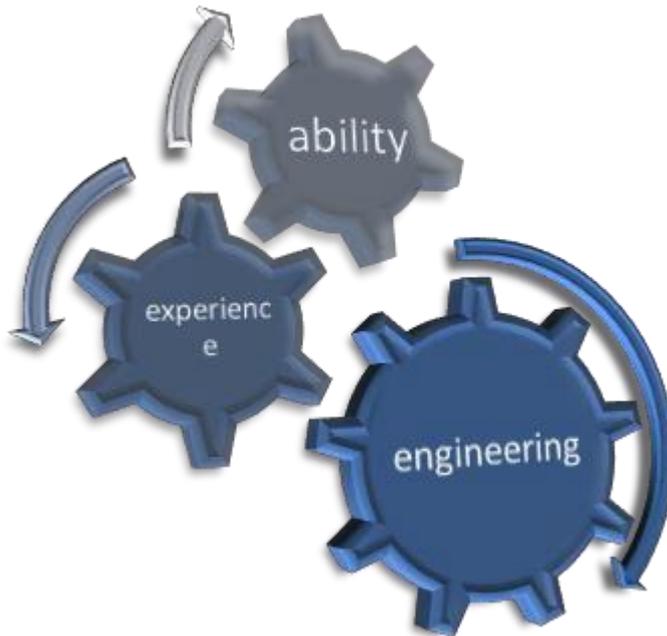
AIR INSULATED METAL ENCLOSED SWITCHGEAR AND CONTROLGEAR



ANGLER SWITCHING DEVICES

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1. GENERAL



General:

Air insulated metal-enclosed cubicles namely **aircub24** offers,

- Simple design indoor type and construction up to 24 kV,
- Optimal dimensions,
- High level personal safety,
- High level operating reliability,
- Different functional units allowing individual configurations,
- Long-term technical solutions for various applications,
- High level service continuity,
- Suitable for remote control and monitoring,

Structures:

aircub24 is divided into compartments.

Mainly consist of four compartments which are ;

1. Busbar compartment
2. Cable compartment
3. Low voltage compartment
4. Operating mechanism compartment

Safety:

- The door/cover of the accessible compartments is mechanically interlocked with the earthing switches,
- There is a surveillance window on front of cover of every cubicle to check inside the cubicle without open the door/cover,
- High voltage indication system in each cubicle,
- **aircub24** has durable design against the thermal and dynamic effects during the internal arc.

Applications:

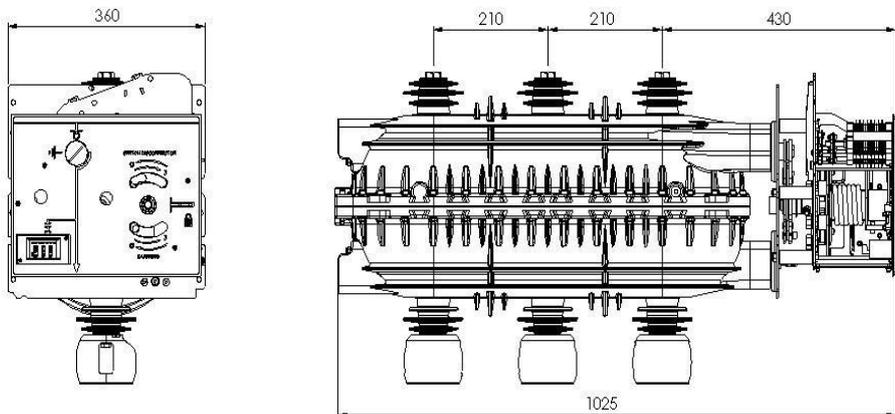
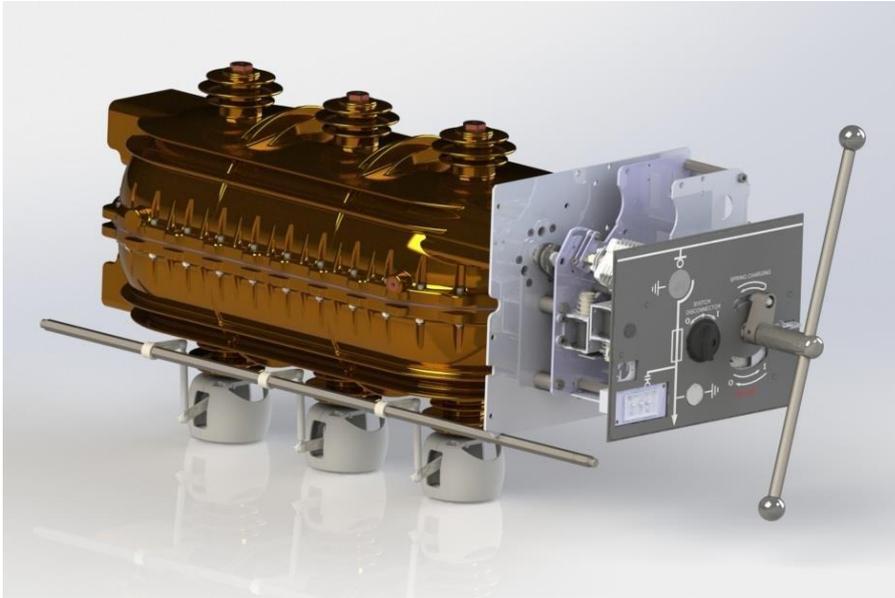
- Secondary electricity distribution networks,
- MV/LV distribution transformer substations
- Manufacturing industry,
- Shopping malls,
- Small size power plants,

2. SWITCHGEAR TYPES

Switch Disconnecter:

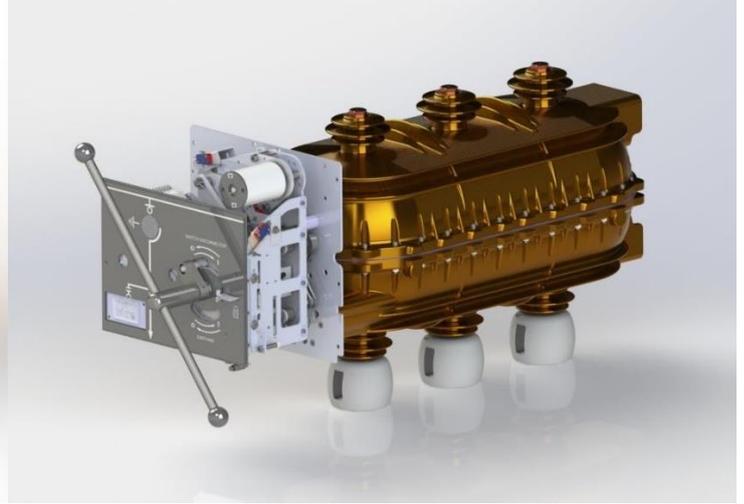
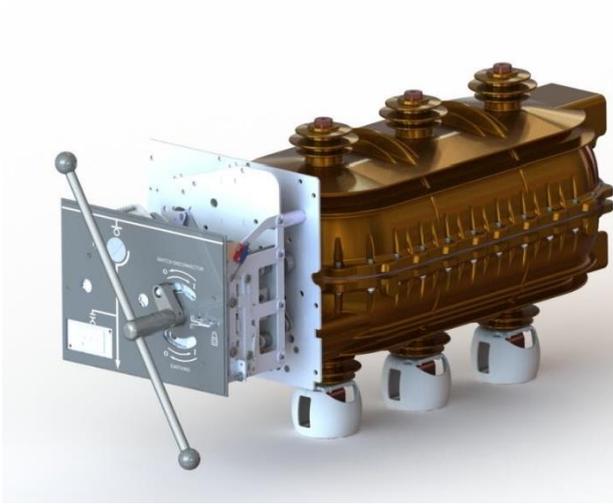
The switch disconnector, type EGYA-24;

- General purpose, comply with IEC60265-1
- Three-phased, three-positioned (OPEN, CLOSED, EARTHED)
- Arc-quenching with SF6 gas
- An enclosure is made of epoxy resin, is filled with SF6 gas and meeting “sealed pressure system”

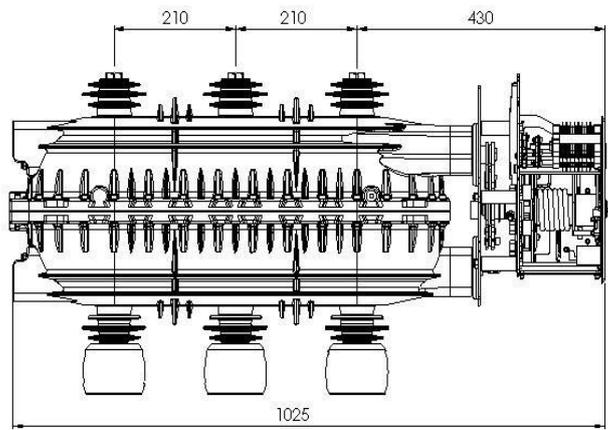
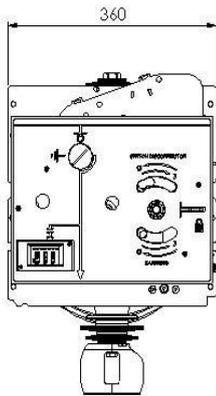


TECHNICAL DIMENSIONS

Disconnecter:



with motor configuration



TECHNICAL DIMENSIONS

TECHNICAL DATA

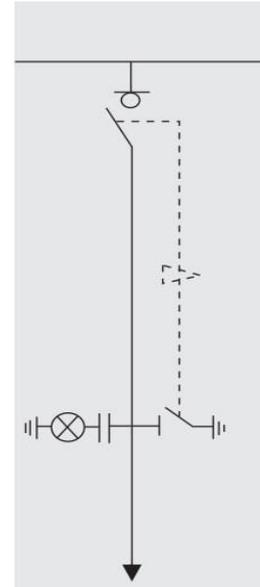
Rated Voltage	24 kV
Type	EGYA-24-S,F
Rated Current	630 A
Rated Power Frequency Withstand Voltage	50/60* kV-rms
Rated Lighting Impulse Withstand Current	125/145* kV-peak
Rated Short Time Withstand Current	20 kA - 1 s
Peak Current	50 kA - peak
Mechanical Endurance	M0
Gas Tightness Type	Sealed Pressure
Applied Standard	IEC 62271 - 102
Earthing Switch	
Electrical Endurance	E0
Mechanical Endurance	M0
<p>*At isolating distance M0: 1000 times "OPENING" and "CLOSING" at no load E0: No "MAKING" capacity</p>	

Operating Mechanism for Switch Disconnecter

<u>Type</u>	<u>Operating Principle</u>	<u>Usage</u>
SM	<ul style="list-style-type: none"> • Stored Energy Operation, • Independent of the operator operation, • The state change (closing, opening or earthing operation) is performed manually by the operator using lever. For motorized type, this operation is performed by the geared motor. 	<ul style="list-style-type: none"> • Switch disconnector
FM	<ul style="list-style-type: none"> • Stored Energy Operation, • Independent of the operator operation, • Energy storing is performed by the operator using lever or charging via geared motor (with motorized mechanism), • Releasing of the energy is performed by the operator with thumb knot manually or with shunt opening release electrically or with striker pin on the switch-fuse combination. 	<ul style="list-style-type: none"> • Switch disconnector • Switch-fuse combination

CUBICLE TYPES

Cubicle with Switch Disconnecter:



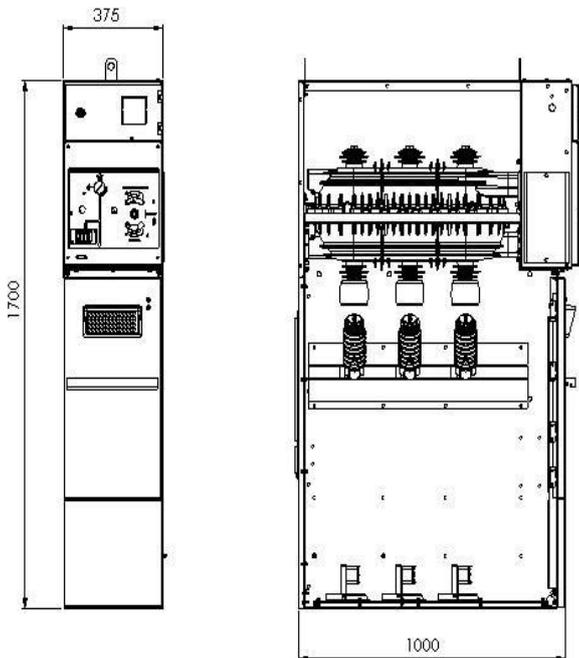
Cubicle with switch disconnecter type, **aircub24.1**, mainly used as an incoming and outgoing feeder in ring or radial network.

Standard Equipment and Accessories

- Three-phased, three-positioned (OPEN, CLOSED, EARTHED) switch disconnecter with SF6 gas insulated.
- Single spring operating mechanism with operating handle,
- Integrated capacitive voltage presence indicator,
- SF6 gas pressure indicator,
- Busbar, earthing bar and field distributors,
- Cable entry with cable support,
- Auxiliary contacts. (2 NO + 2 NC)
- Padlocking facility,
- Anti condensation heater,
- Interlockings (mechanically)

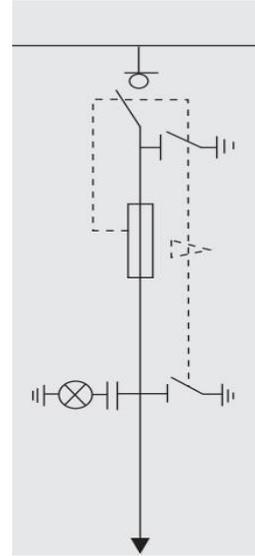
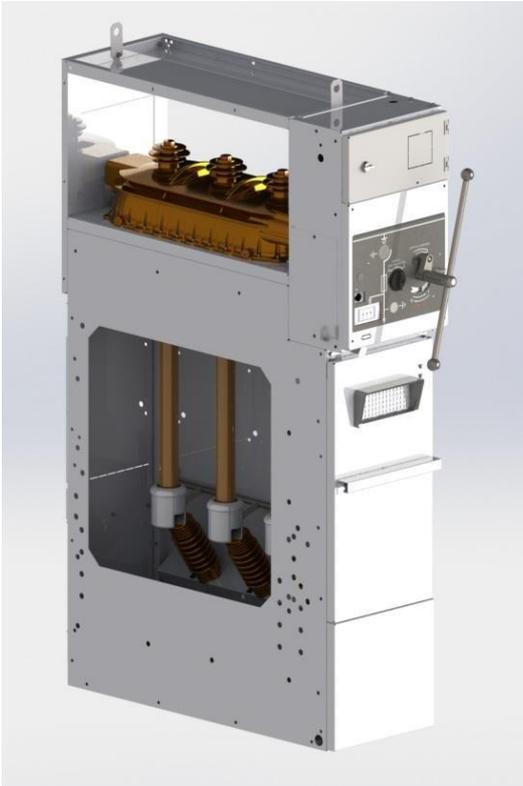
Optional Equipments

- SF6 gas pressure indicator with alarm contact
- Geared motor
- Double spring operating mechanism
- Earth fault indicator
- Remote OPENING and CLOSING operation with cable



TECHNICAL DIMENSIONS

Cubicle with Switch - Fuse Combination:



Switch-fuse combination are used for switching and protection of the MV/LV distribution transformers.

In The combination, the current limiting fuses with striker pin should be used. In case of a fault on any phase, the striker of the pin corresponding phase operates the mechanism and all three phases tripped simultaneously.

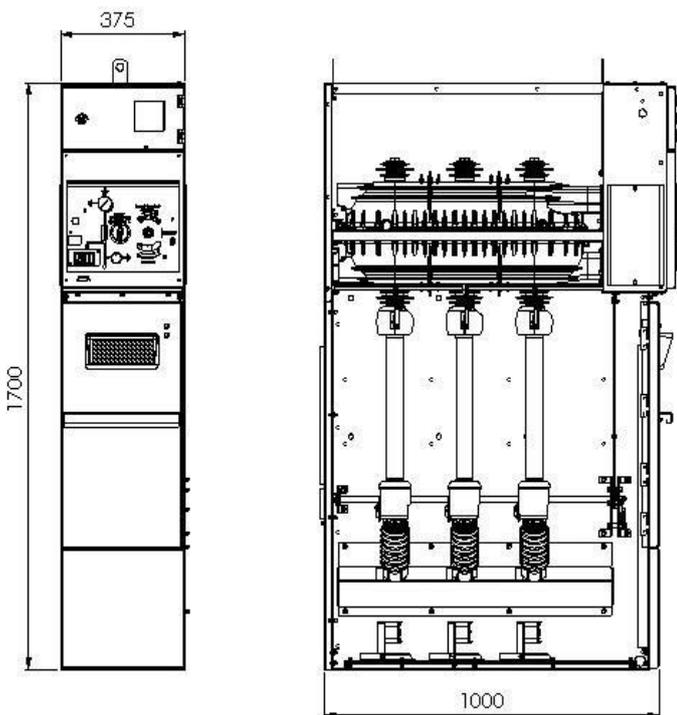
Both sides of the HV fuses is earthed via earthing switches before accessing the fuse/cable compartment. In this way, replacing the HV fuses are done safely.

Standard Equipment and Accessories

- Three-phased, three-positioned (OPEN, CLOSED, EARTHED) switch disconnecter combination with SF6,
- Double spring operating mechanism with operating handle and tripping coil,
- Fuse striker tripping mechanism,
- Integrated capacitive voltage presence indicator,
- SF6 gas pressure indicator,
- Downstream earthing switch (1 kA),
- Busbar, earthing bar and field distributors,
- Cable entry with cable support,
- Auxiliary contacts. (2 NO + 2 NC)
- Padlocking facility,
- Anti-condensation heater,
- Interlockings (mechanically),

Optional Equipment

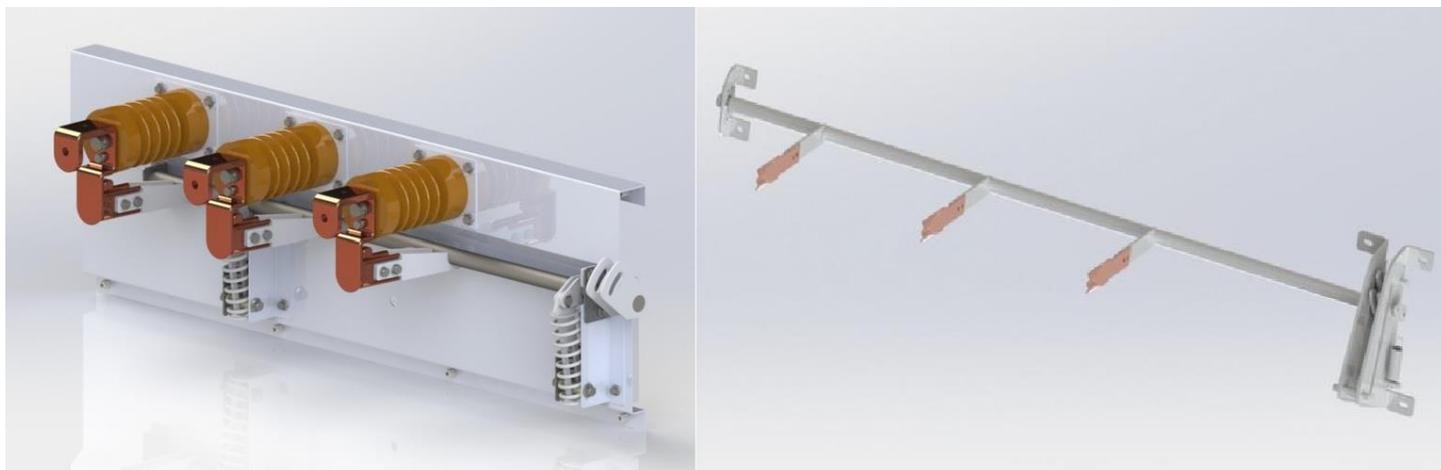
- SF6 gas pressure indicator with alarm contact
- Remote OPENING and CLOSING with cable
- Voltage transformer, surge arrester, AC/DC supply



TECHNICAL DIMENSIONS

3.EQUIPMENT

Earthing Switch:



Rated Voltage	12 kV; 24 kV
Rated Short Circuit Withstand Current	25 kA - 1 s 20 kA - 1 s
Standards Applied	IEC 62271 - 103

Separate measuring panel:



- Support type current transformers
- Support type potential transformers
- Single core or double core



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