

# MBB A 126/145/170

**ARKASIL**

**Type**

**Voltage class**

**PDD-27-21-010**

## PRODUCT DESCRIPTION

MBB A 126/145/170 GIS sealing end has been designed to terminate an extruded XLPE high voltage cable with stranded Cu or Al conductor and Cu or Al multiwire screen. Maximum system voltage  $U_m = 170$  kV.

## TECHNICAL FEATURES

- Dimensions and scope of supply fully comply with IEC 60859 Fig.4 and IEC 62271-209 Fig.5, «Dry type» with  $L_5 = 470$  mm. Extended version with  $L_5 = 757$  mm according to IEC 60859 Fig.2 and IEC 62271-209 Fig 3 is optionally available.
- Pre-tested and pre-assembled parts.
- Completely solid insulation (no gas or liquid insulating medium).
- Cable sheath is electrically insulated from cable enclosure.

## BASIC COMPONENTS

### **INSULATOR:**

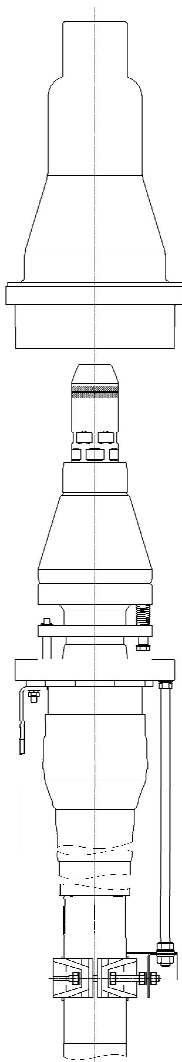
- Composite type epoxy resin insulator with threaded inserts and silver plated current carrying field control insert.
- Pressurizing flange with contact gasket.
- Short version according to IEC 60859 Fig.4 and IEC 62271-209 Fig.5 ( $L_5=470$  mm).

### **CABLE END:**

- Pre molded and factory tested silicone rubber stress-cone with integrated field control element.
- Silver-plated conductor lug with contact bands.
- Branch-pipe.
- Kit of fasteners and sealing materials.
- Earthing angle with M12x40 kit of fasteners.

### **ADDITIONAL OPTIONS:**

- Extension adapter according to IEC 60859 Fig.2 and IEC 62271-209 Fig.3 with  $L_5 = 757$  mm (extended version).
- Adaptation kit for EN50299:2002, EN50299:2014-1, EN50299:2014-2 compliant oil filled transformers.
- Adaptation kit for custom oil filled or SF6 enclosure.
- Optical fiber outlet (O) or armor wires termination
- Conductor cable lug for screwing or welding. Screen bundle cable lug with shearing bolts.
- Separate shipping of male and female parts.
- Testing flange or current plug for voltage/current testing.



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## FIELD OF APPLICATIONS

Epoxy insulator size	A
Maximum system voltage, (kV)	126/145/170
Cable conductor cross-section range, (mm sq.)	Cu: up to 1600 (crimping), up to 1200 (screwing) Al: up to 500 (crimping), up to 1200 (screwing), 630-1600 (welding)
Prepared insulation diameter range, (mm)	47..84
Outer sheath diameter range, (mm)	up to 125
<b>Type test requirements:</b>	
AC testing voltage, (kV)	160/190/218 kV throughout 30 min
Lightning impulse testing voltage, (kV)	10 positive and 10 negative 5/50 $\mu$ s impulses 550/650/750 kV
Partial discharge level, (pC)	below 5 pC at 96/114/131 kV
Nominal operating current, (A)	limited by cable specification
Maximum short circuit current (kA, s)	
<b>Mechanical restrictions:</b>	
SF6 operating pressure range, (MPa)	0.35..0.85 (IEC 62271-209, Cl.5.6)
Maximum radial load at insulator contact face, (kN)	not exceeding 5 kN (static and dynamic, IEC 62271-209, Cl.6.2)
<b>Stress-cone routine test requirements:</b>	
AC testing voltage, (kV)	218 kV throughout 30 min
Partial discharge level, (pC)	below 5 pC 131 kV

## ALL TYPE TESTS ACCORDING TO

IEC 60840

## MISCELLANEOUS

Standard dimensions of GIS sealing end according to IEC 60859 Fig.4 and IEC 62271-209 Fig.5 «Dry type» L5= 470 mm.

## MOUNTING

MBB A 126/145/170 has to be mounted by trained/certified personnel. Mounting site shall be protected from any dust and moisture. Temperature range at installation site +10°C..+40°C.

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**SHELF LIFE OF COMPONENTS:**

Epoxy insulator	30 years
Stress-cone, O-rings, cable sealing, silicone U-profile	5 years
Metallic flanges, branch-pipe, spring guides, adjusting pins, spring elements	30 years
Cable lugs and contact bands	30 years
Fasteners	30 years
Semirings and connector cap	30 years
Contact gasket	30 years
Copper mesh tape	30 years
Mastic tape	2 years
HS tube	5 years
Self-adhesive tape, PVC tape and other winding materials	5 years
OF outlet parts	30 years
Mounting consumables	5 years
Silicone and HV grease	2 years
Al wire for welding	30 years

**STORAGE AND TRANSPORTATION REQUIREMENTS OF KITS:**

1. Kits and parts of MBB A 126/145/170 GIS sealing end shall be stored and transported in original package with intact Arkasil SK LLC label. Label damaging leads to warranty void.
2. Storage conditions for MBB A 126/145/170:
  - Temperature range +5 °C..+40 °C. Temperature shall be above dewpoint anyway.
  - Average relative humidity – 60%.
  - Maximum relative humidity – 80% at 25 °C.
  - Indoor storage conditions only.
  - Packages shall be protected from dust, rain, snow, fog, etc.
  - Aggressive environments (i.e. acids, bases, ozone, solvents) are restricted.
  - Piling according to storage instruction.
3. Transportation requirements:
  - Solid trailer or tent with no direct UV-radiation.
  - Boxes shall be firmly fixed throughout transportation.
  - No falling, striking and excessive shaking is allowed.
4. Shelf life of MBB A 126/145/170 components is specified in the table above. Components with expired shelf life have to be replaced.