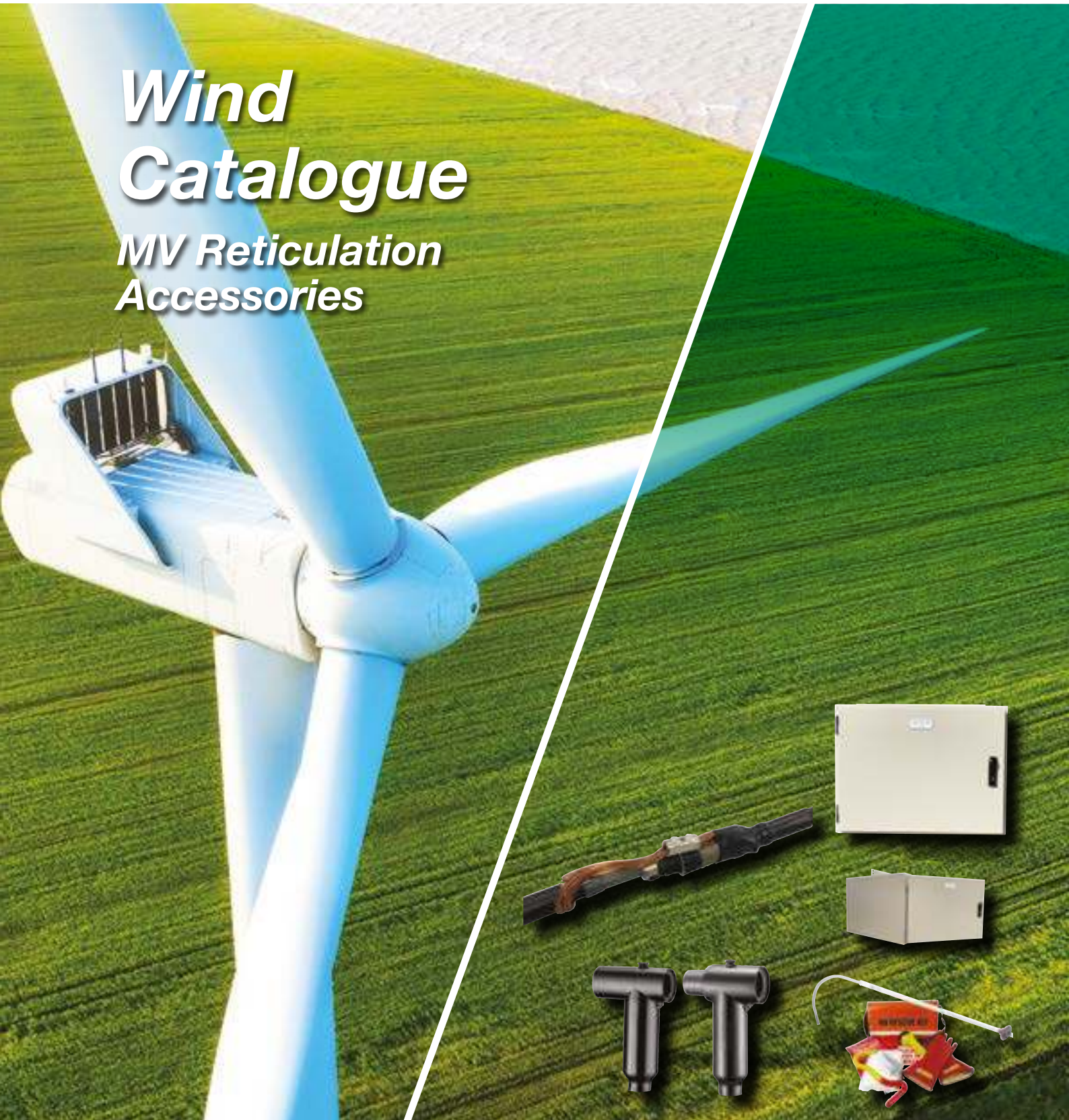


Wind Catalogue

*MV Reticulation
Accessories*



ENERGY IS OUR BUSINESS

SICAME AUSTRALIA



Welcome



“Sicame is a worldwide industrial group specialising in products and services relating to the distribution of electrical energy.”

Comprising of 52 companies across 5 continents, our group supplies product used to build and maintain electrical networks all over the globe.

We specialise in the development and manufacture of specialised power distribution products, for both utility and commercial networks.

In Australia, we have established a strong reputation as a leading supplier of insulation piercing connectors and associated electrical equipment. Our products have been widely adopted by electrical utilities across Australia highlighting the quality and functionality of the product we have to offer. Furthermore, we are accredited to the ISO 14001 and 9001 environmental and quality standards.

In response to the increase in opportunities for our product in wind farm applications, this catalogue seeks to illustrate the solutions we can provide for this market with specific reference to medium voltage underground joints and terminations.

As a proud Australian manufacturer, with in house design and testing capabilities, we have a unique set of attributes that enable us to efficiently offer solutions pieced together with components which have already been successfully adopted in both domestic and international markets.

We look forward to assisting you find your solution.

Contents

- 5 Group Sicame - Testing and Accreditation
- 6 MV Reticulation on Wind Farm
- 8 Medium Voltage Joints and Terminations
- 10 Junction Cabinets
- 12 Seperable Connectors
- 14 MV Safety Equipment



Group Sicame - Testing & Accreditation

Testing resources and laboratories are at the heart of Group Sicame's R&D strategy.

All Sicame accessories are tested and comply with international standards.

HD 629 S2-2006

Test requirements on accessories for use on power cables of rated voltage from 3.6/6 (7.2) KV up to 20.8/36 (42) KV:

Part 1: Cable with extruded insulation. Part 2: Cable with impregnated paper insulation.

EN 61442:2006

Test methods for accessories for power cables with rated voltage from 6 KV (Um - 7.2KV) up to 36 KV (Um -42KV)

IEC 60502-2 Ed 2.0

Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) –

Part 2: Cables for rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV).

IEEE Std 404

Standard for extruded and laminated dielectric shielded cable joints rated 2.5KV to 500KV.

IEEE Std 48

Standard for test procedures and requirements for alternating-current cable terminations used on shielded cables having laminated insulation rated 2.5KV through 765KV or extruded insulation rated 2.5KV through 500KV.



Accreditation n 1-1068
Scope available on
www.cofrac.fr

MV Reticulation on Wind Farm

1

Underground Joints



2

Junction Cabinets



3

Separable Connectors



4

Portable Earthing & Safety Gear



Medium Voltage Joints and Terminations

■ Heat Shrink Technology

Full range of heat shrink accessories for joints and terminations up to 36 kV.

- Installation at low temperature
- Long storage time
- Three-layer tube.

■ Cold Shrink Technology

Full range of cold shrink accessories for joints and terminations up to 36 kV.

- Easiest and quickest assembly
- Extremely reliable
- Product customisation for individualised needs.

Three-Layer Tube for Joint Body

Used in cold and heat shrink, the 3-layer joint body is in mainly EPDM rubber material.

EPDM rubber

EPDM materials present superior properties when it comes to mechanical strength, tear resistance and high molecular resistance to humidity.

■ Mechanical Connectors

Complete range of range-taking mechanical connectors for MV cables.

- Screw shear flush/recessed within connector body
- Suitable for either a hand-ratchet or impact wrench
- Integral moisture block
- Suitable for aluminium or copper cables.



Optional termite protection can be integrated.

Medium Voltage Joints and Terminations

■ Testing and Standards

HD 629 S2-2006

Test requirements on accessories for use on power cables of rated voltage from 3.6/6 (7.2 kV) up to 20.8/36 (42) kV:

Part 1: cable with extruded insulation;

Part 2: cable with impregnated paper insulation.

EN 61442:2006

Test methods for accessories for power cables with rated voltage from 5kV ($U_m = 7.2$ kV) up to 36 kV ($U_m = 42$ kV).

IEC 60502-2 Ed.2.0

Power cables with extruded insulation and their accessories for rated voltages from 1 kV ($U_m = 1.2$ kV) up to 30 kV ($U_m = 36$ kV) -

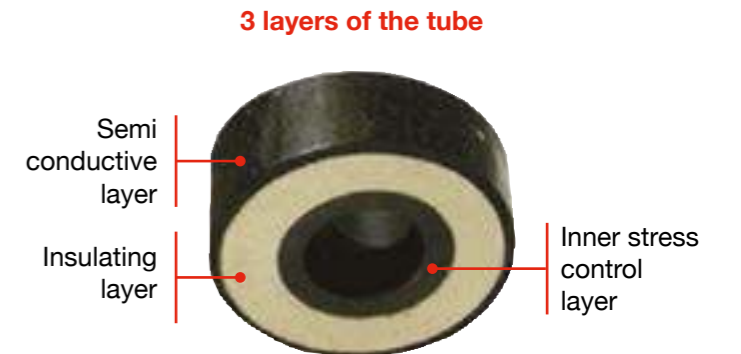
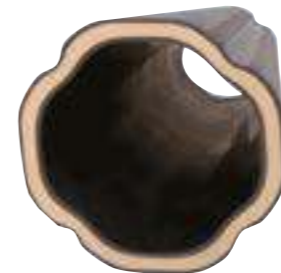
Part 2: cables for rated voltages from 6 kV ($U_m = 7.2$ kV) up to 30 kV ($U_m = 36$ kV).

IEEE Std 404

Standard for extruded and laminated dielectric shielded cable joints rated 2.5 kV to 500 kV.

IEEE Std 48

Standard for test procedures and requirements for alternating-current cable terminations used on shielded cables having laminated insulation rated 2.5 kV through 765 kV or extruded insulation rated 2.5 kV through 500 kV.



Junction Cabinets

■ 33kV Junction Box

- Streamlining 33kV AC underground reticulation (two cables to one junction point)
- Above ground for ease of access and maintenance
- Double door entry design
- Powder coated 1.6mm thick galvanised steel construction
- Strengthened internal chassis with through wall bushings mounted
- Suitable for push on T-Connectors IEC TYPE C 630A
- Integrated cable clamps for mechanical stress relief
- Cable glands inclusive
- Three point lockable cabinet
- Bespoke solutions available.



Junction Cabinets

■ 33kV Junction Box

Capable of Integrating Surge Protection
- Rear T-Body Connection



Integrated Earth Bar



Separable Gland Plates (3mm Aluminium)
for Ease of Cable Termination



Lifting Hooks and x 4 Mounting Points



Separable Connectors

Application

Sicame front 'T-body' and rear coupling screened elbow connectors are fully submersible when mated with suitable bushing or plugs. The products are used to terminate polymeric cable so that they can be connected to apparatus such as transformers, switchgear and other equipment.

Available in 24, 36 and 42kV voltage classes.

The Sicame T-body connectors are suitable for indoor or outdoor applications and can be used for all polymeric cable types (XLPE, ETP etc.) with copper or aluminium conductors. The design is especially suited for the harsh offshore and wind farm environment, where long runs and large cable sizes are needed.

Key Features

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug
- High quality peroxide cured EPDM insulating body
- Type 'C' 630A interface (1250A interface for the 42 kV)
- Mounting can be vertical, horizontal or any angle in between
- No minimum phase clearance requirements
- 100% electrical tested at factory.

All our references are tested in accordance with IEC 60502-4.

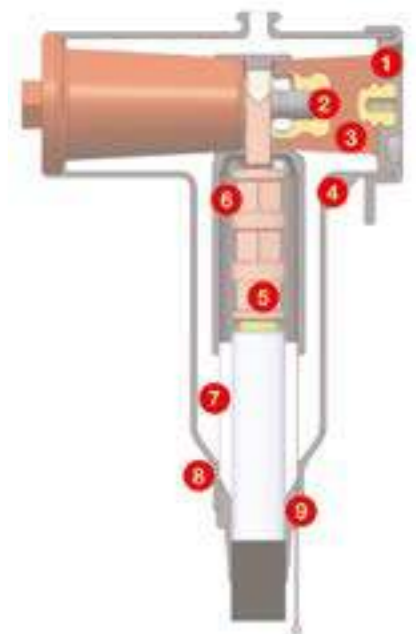
Surge Arrestors



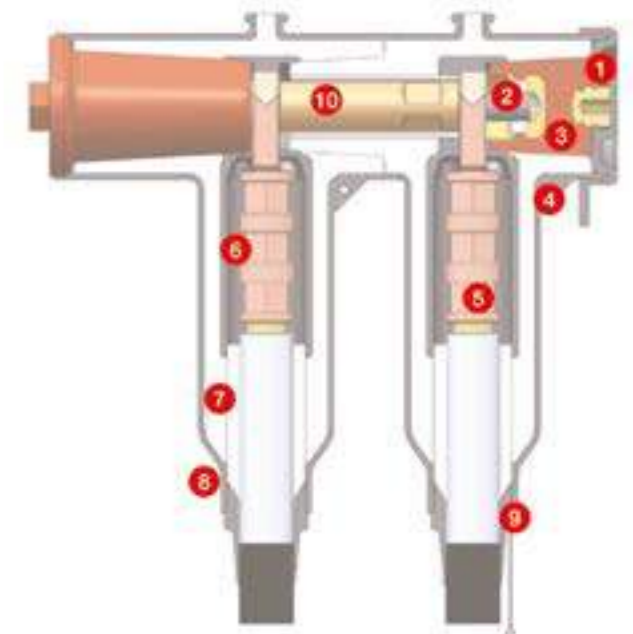
Separable Connectors

Detailed Composition of the Sicame CST/CSC Series

- Rubber End Cap**
Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.
- Stud**
Stainless steel studs.
- Insulating Plug**
Molded epoxy insulating plug provides excellent electrical, thermal and mechanical reliability.
- Drain Wire Tab**
Drain wire tabs provide a convenient point to connect drain wire to ensure grounding of the connector shield.
- Compression Connector / Shearbolt Connector**
Compression connector / shearbolt connector made of aluminium, copper or bimetel (aluminium/copper).
- Conducting Insert**
Precision molded peroxide cured conducting insert provides corona-free electrostatic shielding of the compression connector.
- Insulation Layer**
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.
- Conducting Shield**
Precision molded peroxide cured conducting shield provides ground shield continuity.
- Cable Adapter**
Molded cable adapter, sized to fit the cable insulation, provides stress relief for the terminated cable.
- Contact Rod**
Copper made contact rod provides a constant current transfer path.



Front T-body connector



Coupling (rear) T-body connector

MV Safety Equipment

■ Rescue kits

Rescue kits are designed to be used by a safety observer for the safe rescue and assistance of victims of electrical shock and other injuries when working on switchboards, installations and substations.



■ Voltage Detectors

Characteristics

- Precise and stable operating threshold
- High environmental resistance (impacts, vibrations, moisture)
- Temperature conditions: class N (IEC 61243-1 standard)
- Use from 50 to 60 Hz.



MV Safety Equipment

■ Portable Earthing

- Manufactured to IEC-61230
- Customised to requirements of customer, covering a wide range of operating conditions and applications
- Locally assembled in Australia.





Sicame Australia HQ
23-25 Union Circuit
Yatala, QLD Australia
(+61) 7 3807 7022
sales@sicame.com.au
www.sicame.com.au

Sicame Australia NSW
140 Glendenning Road
Glendenning, NSW Australia
(+61) 2 9621 3155
sales@sicame.com.au
www.sicame.com.au

or contact your nearest
Sicame office at Sicame.com

*Information contained here is correct as
at time of publication and is subject to
change without notice.*