



Ausrüstung für Arbeiten unter Spannung
in Innenraumanlagen bis 36 kV

Equipment for Live Working in indoor
substations up to 36 kV



Trockenreinigen / Dry cleaning

Feuchtreinigen / Wet cleaning

Schalterwartung / Maintenance tools

Überbrückungssystem / Jumpering system

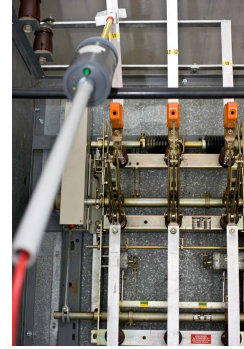
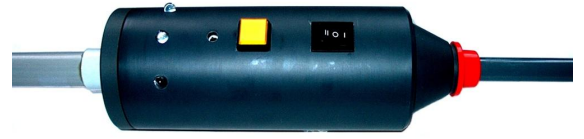
Isolieröl nachfüllen / Re-filling device

Zubehör / Accessory

the strong
Partner
for your
Safety

earth fault warning device up to 24 kV

- to show earth fault and earth fault shocks
- reacts by 40% overvoltage or under voltage
- for hooking in busbar and overhead line
- through switch applicable for 12 and 24 kV
- loud acoustic signal
- overvoltage or undervoltage is also displayed by an optical signal
- therefore the time delayed information through the network control station will be supported by immediately display
- an other suspension device on request



24 kV

Description	Material number
earth fault warning device 12 / 24 kV	7497000

crossbar MV - cleaning and maintenance

- made out of PVC
- through a retrofitting universal bracket (7 660 001) for crossbar, to fix different hot sticks
- crossbar has 2 cross-bracing (protective strip) in ca. 600 or 1200 mm height
- through the crossbar the minimum working distance is adjustable while live working
- crossbar used as visual and physical barrier
- for cells up to 160 cm wide
- crossbar is demountable
- operating tools with 35 mm diameter or less can be fixed



Description	Material number
crossbar, cleaning and maintenance in MV installations	7660401
universal bracket crossbar size 1	7660001

dry cleaning set, monitoring hygrometer

- dry cleaning set for indoor and outdoor installations
- special working-heads for intensive cleaning
- plug-in coupling for easy working-head change
- delivery in case for transport and storage tools of the cleaning set up to 36 kV
- monitoring hygro-thermometer
- case made of fiberglass-reinforced plastic
- do not use during rainfall

- 1 1,0 Stck. 7480011 : case, red, cleaning-set, 1250 x 300 x 200 mm
- 2 1,0 Stck. 7480012 : suction tube with handling zone 36 kV
- 3 2,0 Stck. 7480013 : extension 200 mm 36 kV
- 4 2,0 Stck. 7480014 : extension 400 mm 36 kV
- 5 1,0 Stck. 7480015 : extension 800 mm 36 kV
- 6 1,0 Stck. 7480038 : brush, cylindrical, small 36 kV
- 7 1,0 Stck. 7480039 : brush, conical 36 kV
- 8 1,0 Stck. 7480089 : adapter for small brush 36 kV
- 9 1,0 Stck. 7480300 : brush up to 36 kV without bristles bound head
- 10 1,0 Stck. 7480022 : brush, cylindrical 36 kV
- 11 1,0 Stck. 7480037 : brush bended, length: 390 mm 36 kV
- 12 1,0 Stck. 7480024 : nozzle 60 mm 36 kV
- 13 1,0 Stck. 7480091 : nozzle 60mm, extra long 36 kV
- 14 1,0 Stck. 7480023 : nozzle 110 mm 36 kV
- 15 1,0 Stck. 7480026 : nozzle 210 mm 36 kV
- 16 1,0 Stck. 7480017 : suction tube angles 90° 36 kV
- 17 1,0 Stck. 7480018 : suction tube angles 45° 36 kV
- 18 1,0 Stck. 7480060 : cleaning sponge for cleaning set 40, not for live working!
- 19 1,0 Stck. 7480500 : cleaning sponge for MV set components, 25 mm, not for live
- 20 1,0 Stck. 7480035 : monitoring hygro-thermometer, with humidity control, acoustic
- 21 1,0 Stck. 7480225 : insulated mirror, indoor installations with gear coupling up to 36
- 22 1,0 Stck. 7480041 : adapter suction hose MV dry cleaning
- 23 1,0 Stck. 050008 : null null
- 24 1,0 Stck. 050009 : null null

 **36 kV**



Description	Material number
dry cleaning set 1-36 kV with monitoring hygro-thermometer	7480100

MV dry cleaning set

- dry cleaning set for indoor and outdoor installations
- for dry cleaning of transformer and switchgear installations
- special working-heads for intensive cleaning
- plug-in coupling for easy working-heads change
- do not use during rainfall
- delivery in case for transport and storage tools of the cleaning set up to 36 kV
- made out of fiberglass-reinforced plastic, empty



 **36 kV**

Description	Material number
dry cleaning set 1-36 kV	7480000
case, red, cleaning-set, 1250 x 300 x 200 mm	7480011

suction tube with handling zone, MV dry cleaning

- operation tube \varnothing 40 mm, length 1200 mm, with handling zone, limiting disc, insulating component, red ring and extension component
- handhold for dry cleaning combined with suction-hose-adapter and extension or working heads



 36 kV

Description	Material number
suction tube with handling zone 36 kV	7480012

extension, MV dry cleaning

- insulating tube \varnothing 40 mm, with lower and upper connector



 36 kV

Description	Material number
extension 200 mm 36 kV	7480013
extension 400 mm 36 kV	7480014
extension 800 mm 36 kV	7480015
extension 1500 mm 36 kV	7480049

storage bag for extensions, MV dry cleaning

- to storage extensions and working heads up to 150 cm length
- made out of synthetic leather



Description	Material number
storage bag for extension, MV dry cleaning	7480280

suction tube angle, MV dry cleaning

- insulating tube 40 mm diameter
- new: with permanent laser marking



 36 kV

Description	Material number
suction tube angles 45° 36 kV	7480018
suction tube angles 90° 36 kV	7480017

nozzle, MV dry cleaning

- for cleaning of smooth surfaces, e.g. floors, walls
- nozzle 60, length 200 mm
- nozzle 60 extra long, length 300 mm - specially suitable to clean cooling fins of transformers
- nozzle 110, length: 200 mm
- nozzle 210, length: 240 mm - specially suitable to suction walls or floors
- new: with permanent laser marking



 36 kV

Description	Material number
nozzle 60 mm 36 kV	7480024
nozzle 60mm, extra long 36 kV	7480091
nozzle 110 mm 36 kV	7480023
nozzle 210 mm 36 kV	7480026

brush 250 mm, MV dry cleaning

- to clean difficult accessible isolators and system constructions
- connectable to 40 mm tube
- new: with permanent laser marking



 36 kV

Description	Material number
brush, cylindrical 36 kV	7480022

brush 200 mm, MV dry cleaning

- to clean difficult accessible isolators and system constructions
- connectable to 40 mm tube
- without brush bound head
- new: with permanent laser marking



 36 kV

Description	Material number
brush up to 36 kV without bristles bound head	7480300

brush small cylindrical, MV dry cleaning

- tube diameter 25 mm
- bristles cylindrical
- new: with permanent laser marking



 36 kV

Description	Material number
brush, cylindrical, small 36 kV	7480038

brush small cylindrical, MV dry cleaning

- tube diameter 25 mm
- bristles cylindrical
- without brush bound head
- new: with permanent laser marking



 36 kV

Description	Material number
brush, small, cylindrical 36 kV without bristles bound head	7480350

brush small conical, MV dry cleaning

- tube diameter 25 mm
- bristles conical
- new: with permanent laser marking



 36 kV

Description	Material number
brush, conical 36 kV	7480039

brush small conical, MV dry cleaning

- tube diameter 25 mm
- bristles conical
- without brush bound head
- new: with permanent laser marking



 36 kV

Description	Material number
brush, small, conical 36 kV without bristles bound head	7480400

brush bended, dry cleaning set

- brush diameter 40 mm, 390 mm length
- to clean insulators and difficult accessible places
- new: with permanent laser marking



 36 kV

Description	Material number
brush bended, length: 390 mm 36 kV	7480037

adapter for small brush, MV dry cleaning

- to couple the suction tube \varnothing 40 mm with small brush
- tube diameter 25 mm
- new: with permanent laser marking



 36 kV

Description	Material number
adapter for small brush 36 kV	7480089

suction-hose adapter, MV dry cleaning

- to couple with suction hoses with connector 35 mm at the handle area of the suction tube
- rotatable
- with suction air adjustment



Description	Material number
adapter suction hose MV dry cleaning	7480041

reducing adapter, MV dry cleaning

- connection piece between suction hose adapter and suction hose with straight connection part



Description	Material number
reducing adapter \varnothing 35 to \varnothing 32	7480071
reducing adapter \varnothing 35 to \varnothing 34	7480072
reducing adapter \varnothing 35 to \varnothing 35	7480070
reducing adapter \varnothing 35 to \varnothing 38	7480073
reducing adapter \varnothing 35 to \varnothing 45	7480074
reducing adapter \varnothing 35 to \varnothing 51	7480075

MV suction lifter 80 mm up to 36 kV

- to suction of fallen down small parts during the dry and wet cleaning
- easy to attach to the dry cleaning set
- for using via 40/25 adapter for small brushes

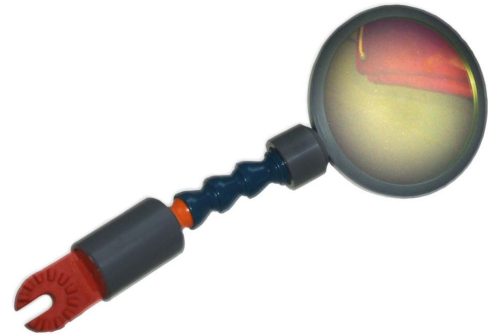


 36 kV

Description	Material number
MV suction lifter 80 mm up to 36 kV	7481020

insulated mirror for indoor systems up to 36 kV

- made out of insulating material with mirror glass ø 135 mm
- mirror glass insulating, even when the glass is damaged
- with coupling to connect extensions and handle
- mirror can be adjusted to all directions
- fit on insulating tubes ø 40 mm
- can be adapted to dry and wet cleaning sets
- ø 135 mm
- to control hidden components
- up to 36 kV
- new: with permanent laser marking



 36 kV

Description	Material number
insulated mirror, indoor installations with gear coupling up to 36 kV	7480225

cleaning sponge set-components, MV, 40 mm

- to clean inside of dirty suction tubes, bristle and nozzles, diameter 40 mm
- sponge changeable
- DO NOT USE FOR LIVE WORKING!



Description	Material number
cleaning sponge for cleaning set 40, not for live working!	7480060

cleaning sponge set-components, MV, 25 mm

- to clean inside of dirty suction tubes, bristle and nozzles, diameter 25 mm
- sponge changeable
- DO NOT USE FOR LIVE WORKING!



Description	Material number
cleaning sponge for MV set components, 25 mm, not for live working !!!	7480500

hygro-thermometer, monitoring

- monitored automatically the relative humidity and warns with acoustic and visual signals
- acoustic signal sounds louder than the noise of the vacuum cleaner
- 110 dB at a distance of 1 m
- selfsupervision of the battery
- conditions: - 20°... + 60°C
10 ... 95% r. h.
tolerance 2,0% r.h and 0,5 °C
- delivery inclusive battery charger



Description	Material number
monitoring hygro-thermometer, with humidity control, acoustic alarm	7480035

hygro-thermometer

- for checking climatic requirements
- conditions: - 20°... + 70°C
10 ... 95% r. h.
- without acoustic signal



Description	Material number
digitalital-hygro-thermometer	7480029

all-purpose vacuum GAS 25

- to vacuum and absorb of all dusts and not health-endangering materials
- filter volume of 25 l
- with electrical outlet and remote-controll-automatic for electric power tools
- for wet- and dry vacuum
- max. air flow: 57 l/s
- max. vacuum: 230 mbar
- paper filter bag (5 pieces/pack) for one time use
- cellulose folded filter for repeated use, dry vacuum
- polyester folded filter for repeated use, wet vacuum
- machine weight: 10 kg



Description	Material number
all-purpose vacuum GAS 25 1200 W	7450050
filter bag (paper) (5 pieces) for GAS 25	7450005
folded filter, cellulose for GAS 25	7450001
folded filter, polyester for GAS 25	7450002

bag for suction hoses

- to transport and storage suction hoses of vacuum cleaner
- made out of synthetic leather, red



Description	Material number
bag for suction hoses, with cord 550 x 300 x 240 mm	7480031

adapter dry cleaning/ wet cleaning

- to connect working heads of the wet cleaning set to the dry cleaning set
- one side fits on 40 mm suction hoses of the dry cleaning set
- new: with permanent laser marking



Description	Material number
adapter dry cleaning/ wet cleaning 36 kV	7480036

wet cleaning set up to 36 kV

- following the DIN VDE 0681 part 1 DIN VDE 0682 part 621
- suitable for indoor- and outdoor installations
- equipment for live wet cleaning with special cleaning liquid
- use the right cleaning liquid depending on rated voltage
- specially adjusted work heads (flat-, semicircular sponge admission for intensive cleaning)
- simple and fast sponge changing
- universal coupling to change and bending of the work heads
- delivery in special synthetic leather bag
- other content are available on request
- do not use during rainfall
- storage bag for MV wet cleaning components



01. 1x 7492101 storage bag wet cleaning 800 x 300 x 100 mm
02. 1x 7492002 insulating stick with handhold, 36 kV length: 1300 mm
03. 1x 7492003 extension wet cleaning length: 200 mm, 36 kV
04. 1x 7492005 extension wet cleaning length: 400 mm, 36kV
05. 1x 7492082 extension wet cleaning length: 800 mm, 36kV
06. 1x 7493014 retainer including brush size : 200 mm, 36 kV
07. 1x 7492056 working head, single, rigid 36 kV
08. 1x 7492050 working head, single, flexible 36 kV
09. 1x 7492063 working head, double, rigid 36 kV
10. 1x 7492051 working head, double flexible, 36 kV
11. 1x 7493026 retainer including work plate 36 kV, size : 70mm x 30mm
12. 1x 7493016 retainer sponge, half-round 115 x 30 mm, 36 kV
13. 1x 7493019 retainer gear coupling 90° displaced, 36 kV
14. 1x 7493021 retainer sponge, flexible 80 x 30 mm, 36 kV
15. 2x 7492052 cleaning sponge cuboid 150 x 50 x 50 mm
16. 2x 7492053 cleaning sponge cuboid 150 x 70 x 40 mm
17. 2x 7492054 cleaning sponge saw 150 x 105 x 40 mm
18. 2x 7492055 cleaning sponge fir tree 150 x 105 x 40 mm
19. 2x 7492023 sponge with hook and loop size : 150 x 30 x 20 mm, 36 kV
20. 1x 7480036 adapter dry cleaning/ wet cleaning 36 kV
21. 1x 7492062 working head, single bended rigid, 36 kV

36 kV

Description	Material number
wet cleaning set up to 36 kV complete in bag	7492100
storage bag wet cleaning 800 x 300 x 100 mm	7492101

MV wet cleaning set, in bag

- compilation can be used in connection with the dry cleaning set to do without additional handling.
- equipment for wet cleaning under voltage with special cleaning liquid
- suitable for wet cleaning or waxing e.g. insulator surface
- suitable for indoor- and outdoor installations, do not use during rainfall!
- specially adjusted work heads
- hook and loop fastener and pinning technic of the sponges for quick changing cleaning sponges
- torsion resistant, coupling as connection unit for extension, angle and work heads
- delivery in special synthetic leather bag with supply according to the following list
- in combination with dry cleaning set Art. 7480 000 usable to see on the pages before
- other equipping are available on request



01. 1x 7480043 storage bag for wet cleaning working-heads 800 x 300 x 100 mm
02. 1x 7480036 adapter dry cleaning/wet cleaning 36 kV
03. 1x 7492056 working head, single, rigid 36 kV
04. 1x 7492050 working head, single, flexible 36 kV
05. 1x 7492062 working head, single bended rigid, 36 kV
06. 1x 7492063 working head, double, rigid 36 kV
07. 1x 7492051 working head, double flexible, 36 kV
08. 1x 7493014 retainer including brush size : 200 mm, 36 kV
09. 1x 7493016 retainer sponge, half-round 115 x 30 mm, 36 kV
10. 1x 7493019 retainer gear coupling 90° displaced, 36 kV
11. 1x 7493026 retainer including work plate 36 kV, size : 70mm x 30mm
12. 2x 7492052 cleaning sponge cuboid 150 x 50 x 50 mm
13. 2x 7492053 cleaning sponge cuboid 150 x 70 x 40 mm
14. 2x 7492054 cleaning sponge saw 150 x 105 x 40 mm
15. 2x 7492055 cleaning sponge fir tree 150 x 105 x 40 mm

 36 kV

Description	Material number
working-heads wet cleaning set in bag, up to 36 kV	7480042
storage bag for wet cleaning working-heads 800 x 300 x 100 mm	7480043

combined cleaning set with monitoring hygro-thermometer

- for cleaning of indoor and outdoor installations up to 36 kV
 - for dry and wet cleaning
 - plug-in coupling for quick re-equipping working heads of the dry cleaning
 - gear coupling for quick re-equipping and bending of the wet cleaning heads
 - storage case to transport and proper storage of the equipment parts
 - use the right cleaning liquid depending on rated voltage
 - specially adjusted work heads(for intensive cleaning)
 - delivery in special plastic case with supply according to the following list
 - other equipping are avialable on request
 - do not use during precipitation!
 - hygro-thermometer with monitoring
- 1 1,0 Stck. 7492103 : storage bag for combi set
 - 2 1,0 Stck. 7480012 : suction tube with handling zone 36 kV
 - 3 2,0 Stck. 7480013 : extension 200 mm 36 kV
 - 4 2,0 Stck. 7480014 : extension 400 mm 36 kV
 - 5 1,0 Stck. 7480015 : extension 800 mm 36 kV
 - 6 1,0 Stck. 7480018 : suction tube angles 45° 36 kV
 - 7 1,0 Stck. 7480017 : suction tube angles 90° 36 kV
 - 8 1,0 Stck. 7480024 : nozzle 60 mm 36 kV
 - 9 1,0 Stck. 7480091 : nozzle 60mm, extra long 36 kV
 - 10 1,0 Stck. 7480023 : nozzle 110 mm 36 kV
 - 11 1,0 Stck. 7480026 : nozzle 210 mm 36 kV
 - 12 1,0 Stck. 7480038 : brush, cylindrical, small 36 kV
 - 13 1,0 Stck. 7480039 : brush, conical 36 kV
 - 14 1,0 Stck. 7480089 : adapter for small brush 36 kV
 - 15 1,0 Stck. 7480022 : brush, cylindrical 36 kV
 - 16 1,0 Stck. 7480300 : brush up to 36 kV without bristles bound head
 - 17 1,0 Stck. 7480037 : brush bended, length: 390 mm 36 kV
 - 18 1,0 Stck. 7480225 : insulated mirror, indoor installations with gear coupling up to 36
 - 19 1,0 Stck. 7480041 : adapter suction hose MV dry cleaning
 - 20 1,0 Stck. 7480035 : monitoring hygro-thermometer, with humidity control, acoustic
 - 21 1,0 Stck. 7480060 : cleaning sponge for cleaning set 40, not for live working!
 - 22 1,0 Stck. 7480500 : cleaning sponge for MV set components, 25 mm, not for live
 - 23 1,0 Stck. 7480036 : adapter dry cleaning/ wet cleaning 36 kV
 - 24 1,0 Stck. 7492056 : working head, single, rigid, 36 kV
 - 25 1,0 Stck. 7492050 : working head, single, flexible, 36 kV
 - 26 1,0 Stck. 7492062 : working head, single, bended, rigid, 36 kV
 - 27 1,0 Stck. 7492063 : working head, double, rigid, 36 kV
 - 28 1,0 Stck. 7492051 : working head, double, flexible, 36 kV
 - 29 1,0 Stck. 7493021 : retainer sponge, flexible 80 x 30 mm, 36 kV
 - 30 1,0 Stck. 7493016 : retainer sponge, half-round 115 x 30 mm, 36 kV
 - 31 1,0 Stck. 7493019 : retainer gear coupling 90° displaced, 36 kV
 - 32 1,0 Stck. 7493026 : retainer including work plate 36 kV, size : 70 mm x 30 mm
 - 33 1,0 Stck. 7493014 : retainer including brush size : 200 mm, 36 kV
 - 34 1,0 Stck. 050008 : null null
 - 35 1,0 Stck. 050009 : null null

 **36 kV**



Description	Material number
combined cleaning set up to 36 kV with monitoring hygro-thermometer	7492104

combined cleaning set, dry/wet cleaning

- for cleaning of indoor and outdoor installations up to 36 kV
- for dry and wet cleaning
- plug-in coupling for quick re-equipping the working heads of the dry cleaning
- gear coupling for quick re-equipping and bending of the wet cleaning heads
- storage case to transport and storage of the equipment components
- use the right cleaning liquid depending on rated voltage
- specially adjusted work heads(for intensive cleaning)
- delivery in special plastic case with supply according to the following list
- other equipping are avialable on request
- do not use during precipitation!



01. 1x 7492103 storage bag for combi set
02. 1x 7480012 suction tube with handhold 36 kV
03. 1x 7480013 extension 200 mm 36 kV
04. 1x 7480014 extension 400 mm 36 kV
05. 1x 7480015 extension 800 mm 36 kV
06. 1x 7480018 suction tube angles 45° 36 kV
07. 1x 7480017 suction tube angles 90° 36 kV
08. 1x 7480024 nozzle 60 mm 36 kV
09. 1x 7480091 nozzle 60mm, extra long 36 kV
10. 1x 7480023 nozzle 110 mm 36 kV
11. 1x 7480026 nozzle 210 mm 36 kV
12. 1x 7480038 brush, cylindrical, small 36 kV
13. 1x 7480039 brush, conical 36 kV
14. 1x 7480089 adapter for small brush 36 kV
15. 1x 7480022 brush, cylindrical 36 kV
16. 1x 7480300 brush up to 36 kV without bristles bound head
17. 1x 7480037 brush bended, length: 390 mm 36 kV
18. 1x 7480225 insulated mirror, indoor installations with gear coupling up to 36 kV
19. 1x 7480041 adapter suction hose MV dry cleaning
20. 1x 7480029 digital-hygro-thermometer
21. 1x 7480060 cleaning sponge for cleaning set 40, not for live working!
22. 1x 7480500 cleaning sponge for MV set components, 25 mm, not for live working !!!
23. 1x 7480036 adapter dry cleaning/ wet cleaning 36 kV
24. 1x 7492056 working head, single, rigid 36 kV
25. 1x 7492050 working head, single, flexible 36 kV
26. 1x 7492062 working head, single bended rigid, 36 kV
27. 1x 7492063 working head, double, rigid 36 kV
28. 1x 7492051 working head, double flexible, 36 kV
29. 1x 7493021 retainer sponge, flexible 80 x 30 mm, 36 kV
30. 1x 7493016 retainer sponge, half-round 115 x 30 mm, 36 kV
31. 1x 7493019 retainer gear coupling 90° displaced, 36 kV
32. 1x 7493026 retainer including work plate 36 kV, size : 70mm x 30mm
33. 1x 7493014 retainer including brush size : 200 mm, 36 kV

 **36 kV**

Description	Material number
combined set 36 kV dry and wet cleaning	7492102
storage bag for combi set	7492103

handling zone for wet cleaning, up to 36 kV

- for wet cleaning
- as operating tube with handle, can be unscrewed
- limiting disc, insulating component, red ring and extension part
- divisible, with handle
- ø 30 mm, length 1300 mm

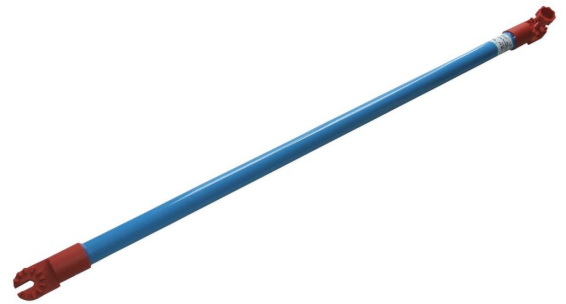


36 kV

Description	Material number
insulating stick with handling zone 36 kV length: 1300 mm	7492002

extension wet cleaning, up to 36 kV

- GRP insulating stick, on both sides universal gear coupling
- diameter 25 mm



36 kV

Description	Material number
extension wet cleaning length: 200 mm, 36 kV	7492003
extension wet cleaning length: 300 mm, 36 kV	7492004
extension wet cleaning length: 400 mm, 36kV	7492005
extension wet cleaning length: 800 mm, 36kV	7492082

working-heads wet cleaning for sponges

- to uptake cleaning sponges
- diameter: 20 mm
- sponges will be put on the working heads



 36 kV

Description	Material number
working head, single, rigid, 36 kV	7492056
working head, single, flexible, 36 kV	7492050
working head, single, bended, rigid, 36 kV	7492062
working head, double, rigid, 36 kV	7492063
working head, double, flexible, 36 kV	7492051

sponge retainer, hook and loop fastener 80 x 30 mm, flexible

- rectangular version
- uptake via coupling
- easy handle
- very stabil version
- sponges will be fixed via hook and loop fastener
- to uptake sponges 150 x 30 mm



 36 kV

Description	Material number
retainer sponge, flexible 80 x 30 mm, 36 kV	7493021

retainer half-round 150 x 30 mm, hook and loop fastener

- half-round uptake with gear coupling
- easy to handle
- very stabil version
- will be favoured for cleaning of horizontal ordered insulators



 36 kV

Description	Material number
retainer sponge, half-round 115 x 30 mm, 36 kV	7493016

retainer for work plate, with hook and loop fastener

- uptake with gear coupling
- uptakeincl. working plate 70 x 50 mm oder 70 x 30mm
- working plate changeable
- working plate out of tough, springy plastic, because of that a breaking is almost impossible
- length 150 mm
- for sponges 150 x 30/60 mm, or plastic rub fleece for switching revision
- sponges will be fixed via hook and loop fastener



 36 kV

Description	Material number
retainer including work plate 36 kV, size : 70 mm x 30 mm	7493026
retainer for work plate for maintenance of circuit break up to 36 kV	7493060
work plate, 36 kV size : 70 mm x 30 mm	7493030

retainer with brush, MV

- uptake with gear coupling
- brush changeable

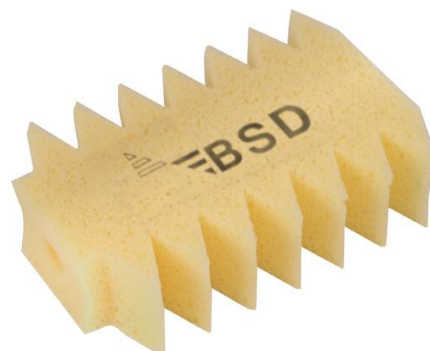


 36 kV

Description	Material number
retainer including brush size : 200 mm, 36 kV	7493014
retainer without brush 36 kV	7494005
brush P4	7494010
brush P8	7494008

sponge, put on, MV wet cleaning

- for admission to working heads 20 mm
- delivery of 5 piece



 36 kV

Description	Material number
cleaning sponge (5 piece) cuboid 150 x 50 x 50 mm	7492052
cleaning sponge (5 piece) cuboid 150 x 70 x 40 mm	7492053
cleaning sponge (5 piece) saw 150 x 105 x 40 mm	7492054
cleaning sponge (5 piece) fir tree 150 x 105 x 40 mm	7492055

sponge hook and loop fastener, MV

- soft
- with sponge, hook and loop fastener for use to half-round retainer, moveable and work plate
- packaging unit = 5 pieces



 36 kV

Description	Material number
sponge with hook and loop (5 piece) size : 150 x 30 x 20 mm, 36 kV	7492023
sponge with hook and loop (5 piece) size : 150 x 60 x 20 mm, 36 kV	7492022

storage bag for sponges, MV

- to transport or storage of clean or dirty sponges
- made out of synthetic leather



Description	Material number
storage bag for sponges	7480250

adapter gear/screw coupling

- enables the connection of work heads with gear coupling to operation rods with screw connection
- up to 36 kV



 36 kV

Description	Material number
adapter 36 kV screw coupling to to gear coupling	7493022

universal adapter gear coupling, MV indoor installations

- universal adapter to uptake working heads
eg. retainer half-round 749 3016 to operating rods with gear coupling
- allows to adjust different angles
- couplings are arranged 90° offset



 36 kV

Description	Material number
retainer gear coupling 90° displaced, 36 kV	7493019

cleaning liquid for wet cleaning up to 36 kV

- for apply on cleaning sponges of the wet cleaning sets
- for use with spraying lance for switch revision
- voltage strength 25 kV/cm
- Florin 2000, canister
- evaporate residueless



Description	Material number
liquid for wet cleaning up to 36 kV, 10 l canister	7490026

cleaning liquid for wet cleaning up to 36 kV

- for apply on cleaning sponges of the wet cleaning sets
- for use with spraying lance for switch revision
- voltage strength 100 kV/cm
- Rivolta S.L.X.-Top, canister
- evaporate residueless



Description	Material number
liquid for wet cleaning SLX-Top, 10 l canister	7490027

cleaning liquid for wet cleaning up to 36 kV

- for apply on cleaning sponges of the wet cleaning sets
- for use with spraying lance for switch revision
- voltage strength 100 kV/cm
- not flammable, not explosive, no burning point
- Rivolta S.L.X.-500, canister
- evaporate residueless



Description	Material number
liquid for wet cleaning up to 36 kV SLX-500, 4 l canister	7490028

Jumpering system

single-phase by-pass system (24 kV)

The single phase BSD-Mobile by-pass system serves to bypassing of MV switchgears, e.g. load breaker, to do a maintenance of circuit breaker with a function control. Low equipment requirement and short assembly time.

It is not rated for typ tested 20 kV switchgear and operating current up to 250 A. The short-circuit current strength was proven for a short-circuit current of 16 kA over 300 ms.

Every jumper set consist al least out of 4 mobile insulation barriers / dividing plates und 3 jumpering insets. Jumpering insets consist each of lower and upper terminal and a bypass cable.

The choise of the connection point above or under of the bridging switchgear determined the terminal type of the jumpering insets.

Two assembly rod are needed for live working assembly of the jumpering system.

single phase - by-pass system basic package:

- 4 mobile phase insulation barriers
- 3 bypass cable
- 3 upper terminals
- 3 lower terminals
- 2 operating rods

The expansion of the field of application is easily possible by prchase additional terminals and bypass cable length.

description:

single phase - jumper system (SP-JS)

busbar terminal for SP-JS, top 40°

busbar terminal for SP-JS, bottom 40°

busbar terminal for SP-JS, top, straight

busbar terminal for SP-JS, bottom, straight

screw head terminal for SP-JS, top

screw head terminal for SP-JS, bottom

toothed terminal for SP-JS, bottom



Description	Material number
singel-phase by-pass system, universal 24 kV	7497180
busbar terminal for single-phase by-pass system, top 40°, 24 kV	7497122
busbar terminal for single-phase by-pass system, bottom 40°, 24 kV	7497123

by-pass system 12 kV

The BSD-Mobile by-pass system is a development of an operator (RWE), Dresden University of Technology and us (BSD).
The system serves to bypass of 12 kV indoor switchgear devices.
The bypass system can be used for rated current up to 400 A.
Circuit-breaker, load breaker and transformer - switchgears can be jumpered.
It can be chosen between a switchgear for 200 A or a switchgear for 400 A rated current.
The whole system was tested by a short-circuit current 25 kA over a period of 0.3 seconds.
Furthermore more extensive tests were performed.
The system can only be operated by qualified and authorized electrician.

scope of delivery :

- 1 x Sf6 switchgear
- 1 x holding and transport system for the switchgear and the cables
- 6 x high flexible cables 12 kV, 120 mm², incl. seal ends and ball head cover with a length of 12 m, installed on the system
- 6 x grommet seal ends of the cables

depending on switchgear:

height ca. 1400 mm, length ca. 1360 mm, width ca. 750 mm



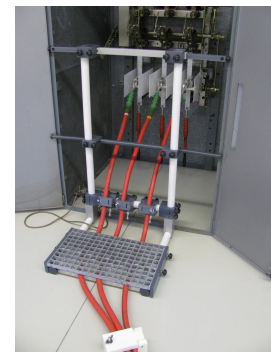
12 kV

Description	Material number
cables for BSD-Mobile by-pass System, 120 mm ² 12 kV, 12 m	7497425

crossbar for by-pass System - 12 kV

- made out of GRP and PVC
- 2 crossbar necessary to use the 12 kV by-pass system
- serves to uptake cables in parking position
- serves to fixation of the cables
- crossbars will be earthed
- the uptake of different hot sticks are possible through a retrofittable universal bracket for the crossbar 7 660 001
- crossbar has 2 cross bracings (protective strip)
- in a height of ca. 600 bzw 1200 mm
- the minimum work distance can be set individually while live working by crossbar
- crossbar serves as visual and physical barrier
- crossbar removable
- minimal risk of stumbling by cables through grating

The crossbars were tested in composite with special terminals, cables, cable securing device by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.

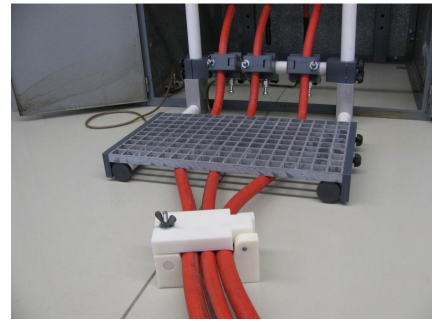


Description	Material number
crossbar for Mobile by-pass system 12 kV / 24 kV up to 1300 mm	7497420

cable securing device for by-pass system 12 kV / 24 kV

- made out of PA, to open
- with wing nut for fast mounting and demounting
- 20 cable securing devices are necessary to use the by-pass system
- for cables 24 kV, 120 mm²
- to retain and bundling of the cables

The crossbar were tested in composite with special terminals, cables and crossbars by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.



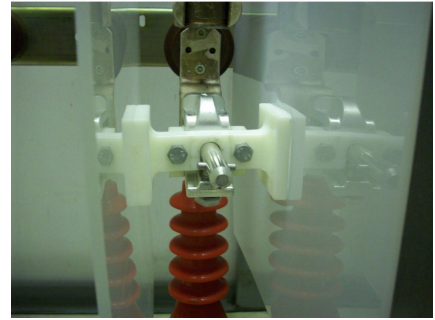
Description	Material number
cable securing device BSD-Mobile by-pass system 12 kV / 24 kV	7497300

universal-terminal, by-pass system 12 kV / 24 kV

The universal terminal serves to connect to ball fixed points up to 25 mm and T-bolts up to 20 mm diameter. Serves as adaptations terminal.

The continuous current-carrying-capacity is 400 A.

The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.



Description	Material number
universal terminal BSD-Mobile by-pass system adaptation terminal 12 kV / 24 kV	7497750

toothed-terminal for by-pass system 12 kV / 24 kV

To connect to cable lugs up to 240 mm².

The continuous current carrying capacity is 400 A.

The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.

The die in the terminal breaks even corroded surfaces of the cable lugs und guarantee a corresponding current carrying capacity.

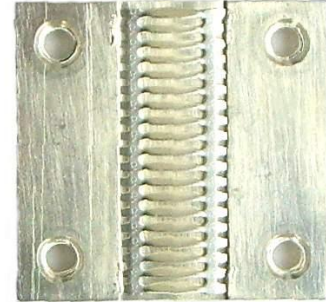
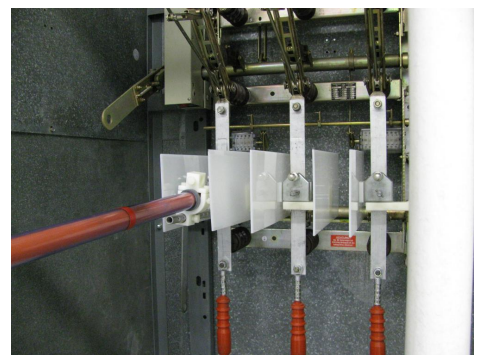
Terminal is steel chromated.



Description	Material number
toothed terminal for BSD-Mobile by-pass system 12 kV / 24 kV	7497610
die for toothed terminal 12 kV / 24 kV	7497111

busbar-terminal for by-pass system 12 kV / 24 kV

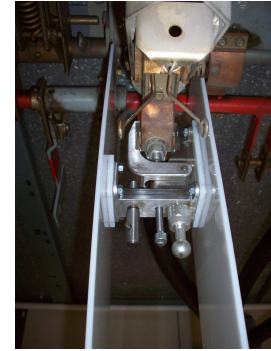
To connect to busbars up to 10 x 50 mm to MV-systems
The continuous current carrying capacity is 400 A.
The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds.
Test successful passed.
Terminal is steel chromated.



Description	Material number
busbar terminal BSD-Mobile by-pass system 12 kV / 24 kV	7497620
die for busbar terminal 12 kV / 24 kV	7497121

plier-terminal for by-pass system 12 kV / 24 kV

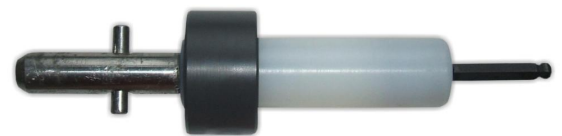
To connect to busbars and flat-connections of 40 mm width.
The continuous current carrying capacity is 400 A.
The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds.
Test passed successful.
The die breaks even corroded surfaces of the cable lugs und guarantee a corresponding current carrying capacity. Test successful passed.
Terminal is steel chromated.



Description	Material number
plier terminal 40 mm BSD-Mobile by-pass system 12 kV / 24 kV	7497640

hex adapter AF 5 by-pass system 12 /24 kV

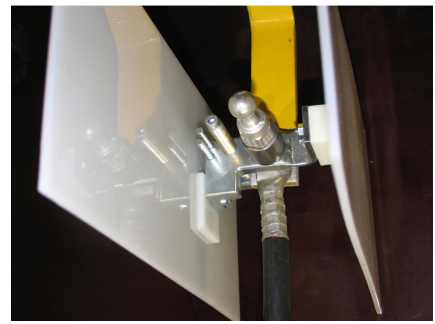
- to assemble the striking contact terminal
- with uptake pin-spindle to assemble via hot stick
- for BSD-Mobile by-pass system 12 kV and 24 kV
- suitable to 12 kV toothed terminal and 24 kV striking contact terminal



Description	Material number
hex adapter AF 5 for BSD-Mobile by-pass system 12 kV / 24 kV	7497350

screw head-terminal for by-pass system 12 kV / 24 kV

To connect to bolted connection in medium voltage systems.
 The continuous current carrying capacity is 400 A.
 The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds.
 Test passed successful.
 Terminal is steel chromated.



Description	Material number
screw head terminal BSD-Mobile by-pass system 12 kV / 24 kV	7497740

gauging head up to 36 kV

- to measure distances in medium voltage systems
- incl. folding meter 36 kV
- additional 12 kV measuring rod required for the by-pass system 12 kV



36 kV

Description	Material number
gauging head up to 36 kV including folding meter 36 kV	7480150
folding meter up to 36 kV	7480057
measuring rod for gauging head by-pass system 12 kV	7497070

assembly stick for by-pass system, bayonet 12 kV / 24 kV

- to assemble the special terminals
- working head is designed as a bayonet
- the end of the operating rod is designed as 3/8"-square
- to assemble the special terminals via torque wrench
- 30 mm fibreglass-reinforced tube
- outer tube out of PVC-clear
- incl. locking mechanism of the terminals on the rod
- for no unintentional drop-out of the terminals
- colour blue



12 kV

Description	Material number
assembly stick bayonet 1,5 m, by-pass system 12 kV / 24 kV	7497430
assembly stick bayonet 2,5 m, by-pass system 12 kV / 24 kV	7497431

assembly stick AF 24 for by-pass system 12 kV / 24 kV

- to assemble of screw head terminals
- hexagon AF 24 working head
- end of the operating rod is designed as 3/8"-square
- to assemble the screw head terminals via torque wrench
- 30 mm fibreglass-reinforced tube
- outer tube out of PVC - clear
- incl. locking mechanism of the terminals on the rod
- for no unintentional dropout of the terminals
- color blue
- to use with hexagon adapter nr.: 7 497 350



12 kV

Description	Material number
assembly stick AF 24 1,5 m by-pass system 12 kV / 24 kV	7497435

assembly stick cables for by-pass system 12 kV / 24 kV

- to assemble cables to the special terminals
- working head is designed as a bayonet
- the end of the operating rod is designed as 1/2"-square
- to assemble the special terminals via torque wrench
- 30 mm fibreglass-reinforced tube
- outer tube out of PVC-clear
- incl. locking mechanism of the cable terminals on the stick
- for no unintentional drop-out of the terminals
- color blue



12 kV

Description	Material number
assembly stick for cable, by-pass system 12 kV / 24 kV	7497440

BSD-Mobile by-pass system 24 kV

The BSD-Mobile by-pass system is a development of an operator (RWE), Dresden University of Technology and BSD.
 The system serves to bypass of 24kV indoor switchgear devices.
 The bypass system can be used for rated current up to 200 A.
 Circuit-breaker, switch disconnector and transformer - load breaker can be bypassed.
 The switchgear is designed as Sf6 load breaker with cutouts.
 The whole system was tested by a short-circuit current 16 kA over a period of 0.3 seconds.
 Furthermore more extensive tests were performed.
 The system can only be operated by qualified and authorized electrician.

scope of delivery :

- 1 x Sf6 load breaker
- 1 x holding device and transport system for the switchgear and the cables
- 3 x high flexible hawsers 70 qmm, incl. sealing end and ball head cap with a length of 10 m, installed on the system
- 3 x high flexible hawsers 70 qmm, incl. sealing end and ball head cap with a length of 12 m, installed on the device
- 6 x grommet for sealing ends of the haswers

height ca. 1400 mm, length ca. 1360 mm, width ca. 750 mm

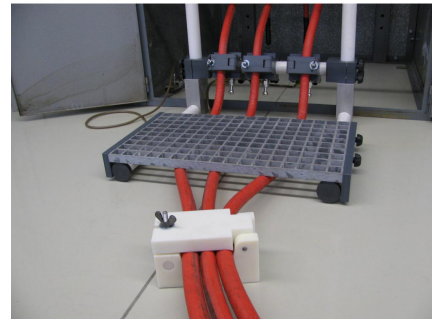


Description	Material number
cables by-pass system 10 m, 24 kV	7497010
cables by-pass system 70 mm², 12 m, 24 kV	7497012
cables by-pass system 70 mm², 25 m, 24 kV	7497480
protection cover for sealing ends and cables, by-pass system	7497050

cable securing device for by-pass system 12 kV / 24 kV

- made out of PA, to open
- with wing nut for fast mounting and demounting
- 20 cable securing devices are necessary to use the by-pass system
- for cables 24 kV, 120 mm²
- to retain and bundling of the cables

The crossbar were tested in composite with special terminals, cables and crossbars by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.



Description	Material number
cable securing device BSD-Mobile by-pass system 12 kV / 24 kV	7497300
cable securing device BSD-Mobile by-pass system 24 kV	7497310

universal-terminal cables by-pass system 12 kV / 24 kV

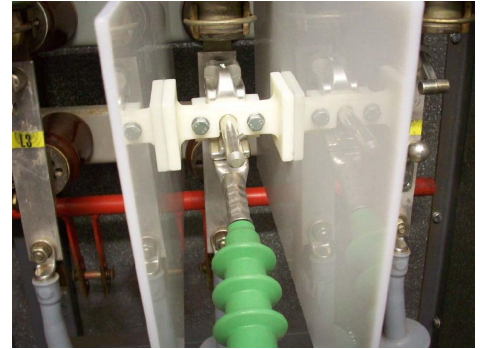
The universal terminal serves to connect (without adaptation terminals) the cables of the by-pass system to ball fixed points up to 25 mm and T-bolts up to 20 mm diameter.

Suitable for assembly from top on ball fixed points and T-bolts.

If the assembly have to do from below, the universal terminal (adaptation) has to use first.

The continuous current capacity is 400 A.

The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.



Description	Material number
universal terminal by-pass system with potential partition 12 kV / 24 kV	7497755

ball head-terminal by-pass system 12 kv / 24 kv

The ball head terminals will be connected directly to the cables of the by-pass system. Cables can be assembled to the universal terminals (adaptation).

If the cables shall be directly assembled to active parts of the system, the ball head terminals has to be replaced by universal terminals (cables).

The continuous current capacity is 400 A.

The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 25 kA over 0,3 seconds. Test successful passed.



Description	Material number
ball head terminal for by-pass system without potential partition 12 kV /24 kV	7497760

screw head-terminal for by-pass system 24 kV

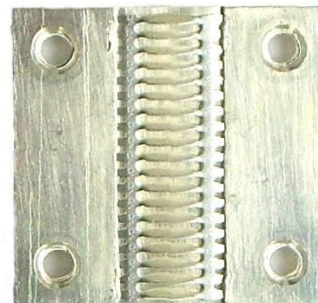
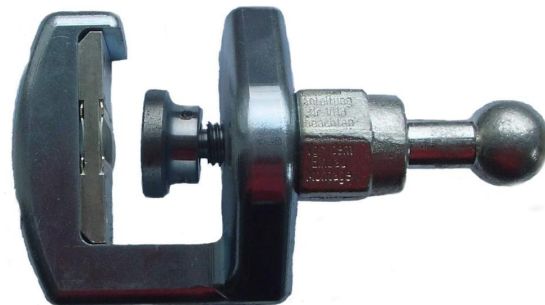
To connect to bolted connection in medium voltage systems.
The continuous current capacity is 250 A.
The terminals were tested in comPOSITE with cables and the
by-pass system by a short-circuit current test of 16 kA over 0,3 seconds.
Test passed successful.
Terminal is steel chromated.



Description	Material number
screw head terminal for BSD-Mobile by-pass system, 24 kV	7497140
storage bag for terminal	7497115

busbar-terminal for by-pass system 24 kV

To connect to busbars up to 10 x 50 mm to medium voltage-systems
The continuous current capacity is 250 A.
The terminals were tested in composite with cables and the
by-pass system by a short-circuit current test of 16 kA over 0,3 seconds.
Test successful passed.
Terminal is steel chromated.



Description	Material number
busbar terminal for BSD-Mobile by-pass system, 24 kV	7497120
die for busbar terminal 12 kV / 24 kV	7497121
storage bag for busbar terminal	7497116

toothed-terminal for by-pass system 24 kV

To connect to cable lugs up to 150 mm².

The continuous current capacity is 250 A.

The terminals were tested in comPOSITE with cables and the by-pass system by a short-circuit current test of 16 kA over 0,3 seconds.

Test successful passed.

The die in the terminal breaks even corroded surfaces of the cable lugs und guarantee a corresponding current carrying capacity.

Terminal is steel chromated.



Description	Material number
toothed terminal for BSD-Mobile by-pass system 24 kV	7497110
die for toothed terminal 12 kV / 24 kV	7497111
storage bag for terminal	7497115

striking contact terminal small, by-pass system 24 kV

For striking-contacts up to a width of 30 mm of earthing break in MV - systems.

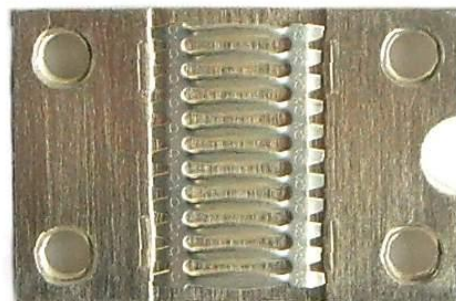
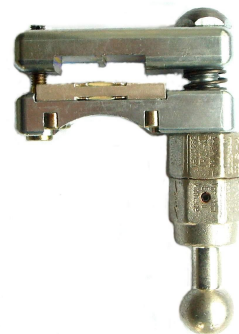
Opening width for 5 mm strong striking contacts.

The continuous current capacity is 250 A.

The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 16 kA over 0,3 seconds.

Test successful passed.

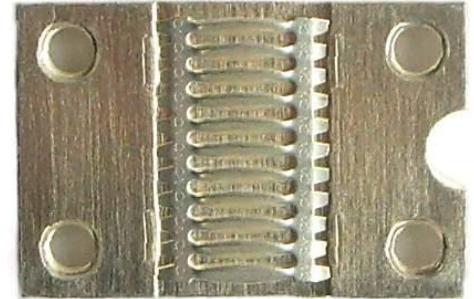
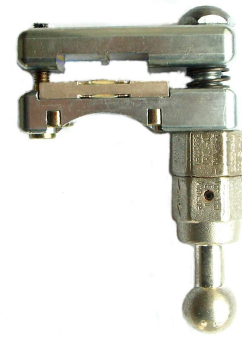
Terminal is steel chromated.



Description	Material number
striking contact terminal small BSD-Mobile by-pass system, 24 kV	7497130
die for striking contact terminal small and big	7497161
storage bag for terminal	7497115

striking contact terminal big, by-pass system 24 kV

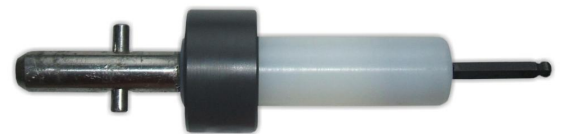
For striking-contacts up to a width of 30 mm of earthing break in MV - systems.
 Opening width for 7 mm strong striking contacts.
 The continuous current capacity is 250 A.
 The terminals were tested in composite with cables and the by-pass system by a short-circuit current test of 16 kA over 0,3 seconds.
 Test successful passed.
 Terminal is steel chromated.



Description	Material number
striking contact terminal big BSD-Mobile by-pass system 24 kV	7497160
die for striking contact terminal small and big	7497161
storage bag for terminal	7497115

hex adapter AF 5 by-pass system 12 kV / 24 kV

- to assemble of the striking contact terminal
- with pin-spindle uptake to assemble via hot stick bayonet
- for BSD-Mobile by-pass system 12 kV and 24 kV
- suitable to 12 kV toothed terminal and 24 kV striking contact terminal



Description	Material number
hex adapter AF 5 for BSD-Mobile by-pass system 12 kV / 24 kV	7497350

magnet with gear coupling, 24 kV

- for by-pass system terminals
- dropped terminals can lifted via magnet
- mounted to hot sticks with gear coupling



Description	Material number
magnet with gear coupling for by-pass system terminals, 24 kV	7497060

color coat remover

- to remove color coats on busbar before assembly of the busbar terminals
- working head for screw on and screw off
- with 12 V accumulator
- 30 mm fibreglass-reinforced tube
- length 1,7 m
- color blue
- delivery includes color coat remover, working head and accumulator



Description	Material number
color coat remover by-pass system 12 kV / 24 kV	7497500
working head color coat remover by-pass system 12 / 24 kV	7497550

blowing-out-set up to 36 kV

- to loosen stiff mechanical switch- or transmission mechanism
 - it enables the spraying out of mechanical switch- and transmission- mechanism via the spraying lance and voltage strenght cleaning liquid
 - cleaning liquid loosens oils and fats and resin
 - after that the set enables to blow out the switching angle with a pressure of 0 - 10 bar
 - with the spraying lance the switching angle will be threated again with voltage strength lubricant
 - in connection with insulating work heads of the wet cleaning set, all dirty parts can be cleaned wet.
 - nitrogen will be used as propellant, bottles up to 20 l/ 300 bar
- 1 1,0 Stck. 7600000 : supply station
 - 2 1,0 Stck. 7610300 : pressure manometer nitrogen for 300 bar-bottles
 - 3 1,0 Stck. 7602000 : blow out lance up to 36 kV 1,7 m
 - 4 1,0 Stck. 7602500 : lance attachment adjustable blow out lance up to 36 kV
 - 5 1,0 Stck. 7601000 : spray lance up to 36 kV 1,7 m
 - 6 1,0 Stck. 7480032 : lubricator to grease switch angles 1,7 m, 36 kV
 - 7 1,0 Stck. 7650000 : mud flap up to 36 kV
 - 8 1,0 Stck. 7480052 : hot stick working heads 1,5 m locking 36 kV
 - 9 1,0 Stck. 7650500 : extension 0,5 m for hot stick 36 kV
 - 10 2,0 Stck. 7480090 : storage bag 1,6 m



 **36 kV**

Description	Material number
blow-out-set up to 36 kV	7603000

supply station

- mobile device out of PVC
- for gas bottles up to 20 l/ 300 bar
- connections for 3 different lances, pressure 0 - 10 bar adjustable
- delivery incl. 3 x 5 m spiral hoses
- without pressure manometer and nitrogen-bottle



Description	Material number
supply station	7600000

pressure manometer

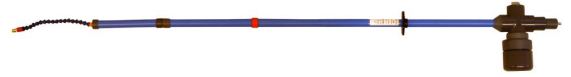
- for nitrogen
- fitting to all common gas bottles
- outlet 0 - 16 bar



Description	Material number
pressure manometer nitrogen for 200 bar-bottles	7610200
pressure manometer nitrogen for 300 bar-bottles	7610300

spray lance switch maintenance up to 36 kV

- to spray and lubricate of mechanical switching- or transmission mechanism with corresponding cleaning liquid
- fits to the supply station
- extendable up to 2,0 m via 300 mm extension
- tested up to 36 kV
- delivery incl. lance attachment 300 mm, receptacles and lid



 36 kV

Description	Material number
spray lance up to 36 kV 1,7 m	7601000

extension spray lance

- spray lance extension 300 mm



Description	Material number
extension spray lance 300 mm up to 36 kV	7601010

lance attachment for spray lance

- movable to all directions
- integrated hose and nozzle
- fogging of the cleaning liquid via nozzle
- tested up to 36 kV



 36 kV

Description	Material number
lance attachment, adjustable for spray lance up to 36 kV	7601500

nozzle for spray lance

- adapted to lance attachment



Description	Material number
nozzle for spray lance	7601600

receptacles for spray lance

- made out of PVC
- to retain the cleaning liquid
- to spray switching angles
- delivery without lid
- lid serves to close the receptacles during transport



Description	Material number
receptacles for spray lance 36 kV	7601700
lid for receptacles spray lance	7601701

blow out lance for switch maintenance, up to 36 kV

- to blow out mechanical switching or transmission mechanism
- fits to the supply station
- tested up to 36 kV
- extendable up to 2,0 m via 300 mm extension
- delivery incl. lance attachment



 36 kV

Description	Material number
blow out lance up to 36 kV 1,7 m	7602000

extension blow out lance

- blow out lance extension 300 mm



Description	Material number
extension blow out lance 300 mm, up to 36 kV	7602010

lance attachment for blow out lance

- movable to all direction
- tested up to 36 kV



 36 kV

Description	Material number
lance attachment adjustable blow out lance up to 36 kV	7602500

lubricator for maintenance of circuit breaker, up to 36 kV

- tested up to 36 kV
- in connection with the switch maintenance it's possible to lubricate the switch angles
- in connection with voltage strength lubriant e.g. Rivolta SKD16
- extendable up to 2,0 m via 300 mm extension

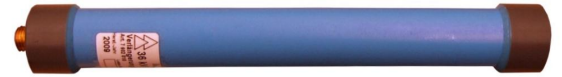


 36 kV

Description	Material number
lubricator to grease switch angles 1,7 m, 36 kV	7480032

extension lubricator up to 36 kV

- lubricator extension up to 2,0 m



Description	Material number
extension lubricator 300 mm, up to 36 kV	7603010

lance-attachment lubricator, MV maintenance up to 36 kV

- movable to all directions
- the inner hose prevents drip of the lubricant
- tested up to 36 kV

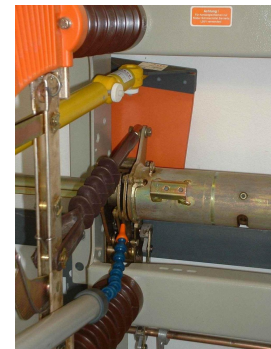


 36 kV

Description	Material number
lance attachment the for lubricator up to 36 kV	7480233

mud flap for maintenance up to 36 kV

- for positioning during blowing out of switching or transmission mechanism
- to not pollute close installation components
- mountable to hot stick or extension
- tested up to 36 kV



 36 kV

Description	Material number
mud flap up to 36 kV	7650000

hot stick working-heads, MV indoor

- with universal coupling
- therefore is a use of all common locking devices in connection with a hex slot possible Art-Nr. 7 480 050



 36 kV

Description	Material number
hot stick working heads 1,5 m locking 36 kV	7480052
hot stick working heads 2,0 m locking 36 kV	7480056
extension 0,5 m for hot stick 36 kV	7650500
extension 1,0 m for hot stick 36 kV	7480054

storage bag, MV handholds, MV indoor

- fits to blowing out lance, sprayer, lubricator, operating rod and extension
- adapted for 2 devices e.g. blowing out lance and sprayer



Description	Material number
storage bag 1,6 m	7480090
storage bag 2,2 m	7480095

locking device for secondary contacts

- in connection with the stand crossbar and universal holding
- to locking of opened secondary contacts during the maintenance
- tested up to 36 kV



 36 kV

Description	Material number
locking device for secondary contacts up to 36 kV	7660003

retainer for work plate, extra thin

- uptake with gear coupling
- work plate inklusive 7 mm fleece
- for striking contacts with a minimum opening of 6 mm
- uptake incl. work plate 70 x 30 mm and abrasive fleece
- work plate with plastic abrasive fleece changeable
- work plate out of tough, springy plastic
- break off nearly impossible
- length 160 mm



 36 kV

Description	Material number
retainer incl. work plate extra thin, 70 x 30 mm, 36 kV	7493040
retainer for work plate for maintenance of circuit break up to 36 kV	7493060
work plate with abrasive fleece special thin, up to 36 kV	7493050

abrasive fleece, hook and loop fastener

- abrasive fleece
- hook and loop fastener to use for work plate retainer



 36 kV

Description	Material number
abrasive fleece (PU 5 piece)	7492123

lubricant, maintenance of switches, up to 36 kV

- fully synthetic performance lubricant
- servers for lubricating of switch- and transmission mechanism of medium voltage switching devices
- brought in dropwise to the relevant places
- very good crawling effect, viscosity like honey
- voltage strength 44 kV/ 2,5 mm
- Rivolta S.K.D.170



Description	Material number
lubricant SKD170 10l	7490031

lubricant, maintenance of switches, up to 36 kV

- fully synthetic performance lubricant
- serves for lubricating of switch- and transmission mechanism of medium voltage switching devices
- brought in dropwise to the relevant places
- very good crawling effect, viscosity like honey
- voltage strength 43 kV/ 2,5 mm
- Rivolta S.K.D.16



Description	Material number
lubricant SKD16 10 l	7490029

fat to grease striking contacts up to 36 kV

- serves for lubricating of striking contacts of medium voltage switching devices
- will be applied by a sponge to the striking contacts
- through the high temperature range almost universal usable
- Rivolta S.K.D.5002
- tube content: 800g



Description	Material number
fat for lube SKD 5002 800 g	7490030

locking stick LHTCI

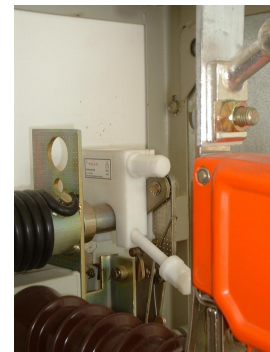
- locking device of switch disconnecter LHTCI in BSIG-cells during the cleaning, up to 36 kV
- in connection with hot stick 7 480 052 to reset the spring auxiliary store of the switch disconnecter
- for cleaning from 10 to 20 kV



Description	Material number
locking stick 10-20 kV LHTCI	7480001
return fork up to 36 KV LHTCI	7480002
storage bag 1,6 m	7480090

locking device for switch-disconnector H 22

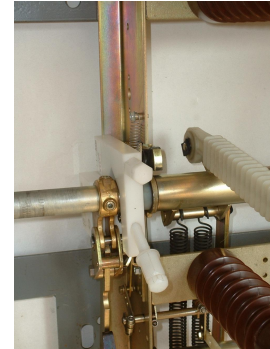
- to locking the load breaker / transformer switch of the company Driescher-Moosburg H22
- for switches 10 kV or 20 kV
- in connection with hot stick order nr. 7 480 052 and adapter with hex socket order nr. 7 480 050 applicable
- delivery without adapter



Description	Material number
locking device switch-disconnector up to 24 kV H22	7480003

locking device for switch-disconnector L-TRI

- to locking the load breaker/ transformer switch of the company Alstrom
- for switches 10 kV or 20 kV
- in connection with hot stick order nr. 7 480 052 and adapter with hex socket order nr. 7 480 050 applicable
- up to 24 kV



Description	Material number
locking device up to 24 kV ALSTOM L-TRI	7480034

locking device for switch-disconnector LDTC

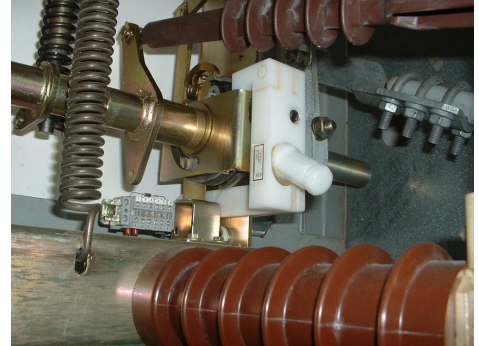
- to locking the load breaker / transformer switch of the company Driescher-Wegberg
- for 20 kV switches
- in connection with hot stick order nr. 7 480 052 and adapter with hex socket order nr. 7 480 050 or a corresponding switching rod with hex coupling applicable
- up to 24 kV



Description	Material number
locking device 24 kV LDTC	7480033

locking device for switch-disconnector LDTM

- to locking the load breaker / transformer switch of the company Driescher-Wegberg
- using the locking device by hot stick in connection with adapter with hex socket order nr. 7 480 050



Description	Material number
locking device 24 kV LDTM	7480053

locking device for switch-disconnector Sachsenwerk

- for switches AL 404/ 24 kV
- BGV A3, VDE 0105/100
- designed and tested up to 24 kV rated voltage
- can only be used with handhold order nr. 7 480 052, hex socket order nr. 7 480 050



Description	Material number
locking device Sachsenwerk 24 kV AL 404	7480061

cover Sachsenwerk

- to locking the Sachsenwerk transformer load breaker AL 404/ 24 kV
- designed and tested up to 24 kV rated voltage
- can only be used with handhold order nr. 7 480 052, hex socket order nr. 7 480 050
- only trained electrician may attach the locking device



Description	Material number
cover Sachsenwerk 24 kV	7480062

hex adapter SW 5

- to lock the locking device of the load breaker / transformer switch LDTC of the company Driescher- Wegberg



 36 kV

Description	Material number
hexagon adapter SW 5 up to 24 kV	7480051

adapter with hex socket

- to use different equipments with hex sockets
e.g. Locking device H22, LDTC, LDTM, L-TRI, cover L-TRI and hexagon adapter AF 5
- hexagon socket AF 20 for using the equipment
- coupling to attach to the hot stick or extension

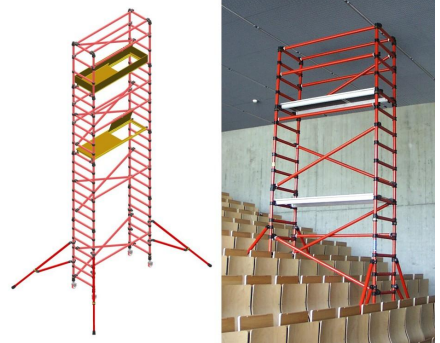


 36 kV

Description	Material number
adapter with hexagon socket 12-36 kV	7480050

insulating roll-scaffold, up to 220 kV

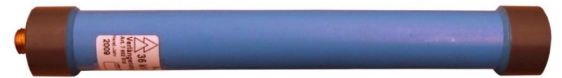
- fully made out of GRP
- insulating up to 220 kV
- preferred during cleaning up to 36 kV in switchgear building
- different heights and widths on request



Description	Material number
insulating roll-scaffold up to 220 kV	7433050

BSD re-filling device MV up to 36 kV

- easy re-filling of wet cable sealing box
- easy to clean, no drip
- no boil-up necessary because of using special insulating oil
- for rated voltage up to 36 kV
- 1 liter capacity of the oil container
- flexible use through 12 V accumulator
- total length 140 cm



36 kV

Description	Material number
BSD re-filling device MV 1400 mm, up to 36 kV	7495050
extension 300 mm for BSD re-filling device	7495055
storage bag for BSD re-filling device	7495060

screwdriver set for re-fill device

- to screw on/ff of locking screws on cable sealing boxes
- according to DIN VDE 0681 part 1
- for a rated voltage up to 36 kV

- 1,0 Stck. 7495002 : operating rod with rotating handhold diameter: 30 mm, 36 kV
- 1,0 Stck. 7495020 : extension straight 350 mm screwdriver-set 36 kV
- 1,0 Stck. 7495003 : working head straight diameter: 30 mm, 36 kV
- 1,0 Stck. 7495004 : working head angled 30° diameter: 30 mm, 36 kV
- 1,0 Stck. 7495005 : working head angled 70° diameter: 30 mm, 36 kV
- 1,0 Stck. 7495007 : special-Bit 8 mm for working heads
- 1,0 Stck. 7495006 : special-Bit 13 mm for working heads
- 1,0 Stck. 7495008 : plastic case 1130 x 200 x 120 mm



36 kV

Description	Material number
screwdriver-set up to 36 kV	7495001

operating rod for screwdriver set

- hot stick with rotary handle, diameter : 30 mm



 36 kV

Description	Material number
operating rod with rotating handhold diameter: 30 mm, 36 kV	7495002

extension straight for the screwdriver set

- diameter 30 mm, length 350 mm



 36 kV

Description	Material number
extension straight 350 mm screwdriver-set 36 kV	7495020

working head straight for the screwdriver set

- diameter 30 mm, straight



 36 kV

Description	Material number
working head straight diameter: 30 mm, 36 kV	7495003

working head 30° for the screwdriver set

- working head 30° angled, diameter 30 mm



 36 kV

Description	Material number
working head angled 30° diameter: 30 mm, 36 kV	7495004

working head 70° for the screwdriver set

- working head 70° angled, diameter 30 mm



 36 kV

Description	Material number
working head angled 70° diameter: 30 mm, 36 kV	7495005

angle extension



 36 kV

Description	Material number
angles extension 70 ° 36 kV	7495010

special-bits for the screwdriver set

- special-bit 8 mm suitable for working heads straight, 30° and 70°
- special-bit 13 mm suitable for working heads straight, 30° and 70°



 36 kV

Description	Material number
special-Bit 13 mm for working heads	7495006
special-Bit 8 mm for working heads	7495007

plastic case (empty) for the screwdriver set

- size: 1130 x 200 x 120 mm



Description	Material number
plastic case 1130 x 200 x 120 mm	7495008

special - locking screws, 36 kV

- to retrofit during fill up of wet sealing ends
- screws can always be used again in connection with the screw driver set
- with seal ring
- for 10 kV and 20 kV sealing ends
- for other sealing ends deliverable on request
- up to 36 kV



36 kV

Description	Material number
special locking screw F&G M22 for screwdriver-set	7495009
special locking screw Köttgen M10 for screwdriver-set	7495016
special locking screw Raychem M14 for screwdriver-set	7495017
special locking screw GOW M12 for screwdriver-set	7495018
special locking screw Kabelrhydt M8 for screwdriver-set	7495019

drill device to retrofit of locking screws

- drill device serves for drilling into plastic pistons of the wet sealing ends by special ground drills, drilling in one run
- changeable work heads
- continuously variable adjustable drill- and mill depth
- driven by cordless drill device
- handle out of fibre-glass reinforced tube with internal shaft
- suitable for 10 and 20 kV sealing ends
- delivery incl. drill device, drill, piloted counterbore, without thread-forming bar and tap drill
- M10 thread will be brought in by hand and relevant thread-forming bar
- thread cutter bar incl. screw tap
- thread-forming bar out of fibre-glass reinforced insulation tube up to 36 kV
- cutting depth continuously variable adjustable



36 kV

Description	Material number
drill, to 36 kV	7492057
drill 8,5 mm	7492058
counterbore 15 mm	7492059
thread forming rod 1,5 m	7492060
tap drill M10	7492061