Railway Insulators

CABLE SYSTEMS | COMPONENTS | OVERHEAD LINES | RAILWAY Catenary Systems

www.pfisterer.co.za | info@pfisterer.co.za
25kV AC Local
11.06

Stand - Off Insulator Assembly
25kV AC, Variations

Refer To Dwg.
Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>One minute power frequency withstand voltage, 50Hz, wet</td>
<td>205 kV</td>
</tr>
<tr>
<td>Lightning impulse withstand voltage, 1,2/50, pos.</td>
<td>384 kV</td>
</tr>
<tr>
<td>Arcing distance</td>
<td>580 mm</td>
</tr>
<tr>
<td>Minimum creepage distance</td>
<td>1476 mm</td>
</tr>
<tr>
<td>Specified mechanical load (SML)</td>
<td>54 kN</td>
</tr>
<tr>
<td>Number of sheds</td>
<td>13</td>
</tr>
<tr>
<td>Material of fittings</td>
<td>Steel, h.d.g.</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>5.7 kg</td>
</tr>
</tbody>
</table>

Tongue / Tongue in acc. to Drawing No. Oos London

SML in acc. to IEC 61109

Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 5.7 kg

Hook / Pipe End Fitting in acc. to Drawing No. Oos London
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461

Description

Stand - Off Insulator Assembly
25kV AC, Hook end, Pipe end (54033408)
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 5.7 kg

Square Tongue / Square Tongue in acc. to Drawing No. CEE-TNC-24
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461

Stand - Off Insulator Assembly
25kV AC, Square tongue/tongue (54032617)
Technical Data
One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 5.7 kg

Clevis in acc. to Drawing No. BBB0430
Square Tongue in acc. to Drawing No. CEE-TNC-24
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 8.0 kg

Spade and Tongue in acc. to Drawing No. BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet  =  205 kV
Lightning impulse withstand voltage, 1,2/50, pos.  =  384 kV
Arcing distance  =  580 mm
Minimum creepage distance  =  1476 mm
Specified mechanical load (SML)  =  54 kN
Number of sheds  =  13
Material of fittings  =  Steel, h.d.g.
Weight (approx.)  =  8.0 kg

Spade and Tongue in acc. to Drawing No. BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
This drawing and its contents are confidential and exclusive property of PFISTERER (PTY) LTD. No publications, copies or distribution may be made without written consent by PFISTERER (PTY) LTD.

Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 8.0 kg

Square Tongue in acc. to Drawing No.CEE-TNC-24
Spade in acc. to Drawing No.BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461

Stand - Off Insulator Assembly
25kV AC, Square Tongue / Spade Fitting
(54032528)
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 8.0 kg

Spade and Clevis in acc. to Drawing No.BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13 kN
Material of fittings = Steel, h.d.g.
Weight (approx.) = 5.7 kg

Tongue / Clevis in acc. to Drawing No. BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 146 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 285 kV
Arcing distance = 430 mm
Minimum creepage distance = 1200 mm
Specified mechanical load (SML) = 70 kN
Number of sheds = 55
Material of fittings = Steel, h.d.g.
Weight (approx.) = 1.6 kg

Square Tongue in acc. to BBO 0281
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461

Silicone Insulator HASDI 300/1200 c/w Railway square tongue & square tongue - Straight. (54/32605)

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
<th>Weight</th>
<th>Substitute for</th>
</tr>
</thead>
<tbody>
<tr>
<td>One minute power frequency</td>
<td></td>
<td>146 kV</td>
<td></td>
</tr>
<tr>
<td>Lightning impulse voltage</td>
<td></td>
<td>285 kV</td>
<td></td>
</tr>
<tr>
<td>Arcing distance</td>
<td></td>
<td>430 mm</td>
<td></td>
</tr>
<tr>
<td>Minimum creepage distance</td>
<td></td>
<td>1200 mm</td>
<td></td>
</tr>
<tr>
<td>Specified mechanical load (SML)</td>
<td>SML in acc. to IEC 61109</td>
<td>70 kN</td>
<td></td>
</tr>
<tr>
<td>Number of sheds</td>
<td>Steel, h.d.g.</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Material of fittings</td>
<td></td>
<td>1.6 kg</td>
<td></td>
</tr>
<tr>
<td>Square Tongue in acc. to BBO 0281</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SML in acc. to IEC 61109</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galvanizing (h.d.g.) acc. to EN ISO 1461</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
50kV AC
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 380kV
Lightning impulse withstand voltage, 1,2/50, pos. = 744kV
Arcing distance = 1080 mm
Minimum creepage distance = 2784 mm
Specified mechanical load (SML) = 22.3 kN
Number of sheds = 22
Material of fittings = Steel, h.d.g.
Weight (approx.) = 13.2 kg

Tongue / Spade Fitting in acc. to Drawing No. CEE-TNC-24

SML in acc. to IEC 61109

Galvanizing (h.d.g.) acc. to EN ISO 1461
Spanish Railway
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 95 kV
Lightning impulse withstand voltage, 1.2/50, pos. = 250 kV
Arcing distance = 461 mm
Minimum creepage distance = 1238 mm
Specified mechanical load (SML) = 135 kN
Routine test load (RTL) in acc. to IEC 61109
Number of sheds = 10
Weight (approx.) = 3.1 kg

Product manufactured in accordance to UNE 21909 (IEC 61109)

Material

Insulator : E-CR-Glassfibre rod with HTV-Silicone rubber housing
End fittings : Steel, Hot Dip Galvanizing (h.d.g.) acc. to EN ISO 1461

25kV Silicone insulator with tongue / tongue connection
GT-TE-COM-0085

Description

One minute power frequency withstand voltage, 50Hz, wet = 95 kV
Lightning impulse withstand voltage, 1.2/50, pos. = 250 kV
Arcing distance = 461 mm
Minimum creepage distance = 1238 mm
Specified mechanical load (SML) = 135 kN
Routine test load (RTL) in acc. to IEC 61109
Number of sheds = 10
Weight (approx.) = 3.1 kg

Product manufactured in accordance to UNE 21909 (IEC 61109)

Material

Insulator : E-CR-Glassfibre rod with HTV-Silicone rubber housing
End fittings : Steel, Hot Dip Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 95kV
Lightning impulse withstand voltage, 1/2/50, pos. = 250kV
Arcing distance = 454 mm
Minimum creepage distance = 1241 mm
Specified Cantilever load (SCL) = 6kN
Maximum design cantilever load (MDCL) = 1.5kN
Specified tensile load (STL) = 60kN
Routine test load (RTL) in acc. to IEC 61952 = 6/5
Number of sheds (Large/Small) = 6/5
Material of fittings = Steel, HDG
Weight (approx.) = 6 kg

Product manufactured in accordance to CEI 61952 (IEC 61952)

Material:

- Insulator = E-CR-Glassfibre rod with HTV Silicone rubber housing
- End Fittings = SG 42 Hot Dip Galvanised
- U-Bolts = Stainless Steel

25kV Silicone insulator with tube / tube connection

AM-25-1-1200 (S)
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 95kV
Lightning impulse withstand voltage, 1.2/50, pos. = 250kV
Arcing distance = 454 mm
Minimum creepage distance = 1241 mm
Specified Cantilever load (SCL) = 8kN
Maximum design cantilever load (MDCL) = 2.5kN
Specified tensile load (STL) = 60kN
Number of sheds (large/Small) = 6/5
Weight (approx.) = 6 kg

Product manufactured in accordance to CEI 61952 (IEC61952)

Material:
Insulator = E-CR-Glassfibre rod with HTV Silicone rubber housing
Base Fitting = Steel, Hot Dip Galvanised acc. to EN ISO 1461
Head Fitting = Aluminium Alloy with rubber inserts

Description
25kV Silicone insulator with Flat / BLX Head
C8-200-III (S)
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 95 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 250 kV
Arcing distance = 454 mm
Minimum creepage distance = 1241 mm
Specified Cantilever load (SCL) = 6 kN
Maximum design cantilever load (MDCL) = 1.9 kN
Specified tensile load (STL) = 60 kN
Routine test load (RTL) in acc. to IEC 61952 = 5/6
Number of sheds (Small/Large) = 6
Material of fittings = Steel, HDG
Weight (approx.) = 5.6 kg

Product manufactured in accordance to CEI61952(IEC61952)

Material:

Insulator = E-CR-Glassfibre rod with HTV Silicone rubber housing
End Fittings = SG 42 Hot Dip Galvanised
U-Bolts = Stainless Steel

25kV Silicone insulator with tube / clevis connection

AM-25-2-1200 (S)
Gautrain Insulators
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 95 kV
Lighting impulse withstand voltage, 1,2/50, pos. = 250 kV
Arcing distance = 454 mm
Minimum creepage distance = 1241 mm
Specified Cantilever load (SCL) = 6 kN
Maximum design cantilever load (MDCL) = 2 kN
Specified tensil load (STL) = 40 kN
Number of Sheds (Small/Large) = 5/6
Material of fittings = Steel, HDG
Weight (approx) = 8.0 kg

Material

Insulator = E-CR-Glassfibre rod with HTV Silicone rubber housing
End Fittings = SG42 Hot Dip Galvanised

25kV Silicone Post Insulator c/w Steel Flange Fittings
GT-TE-COM-0109
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 8.0 kg

SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 114 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 255 kV
Arcing distance = 350 mm
Minimum creepage distance = 1118 mm
Specified cantilever load (SCL) = 3 kN
Maximum design cantilever load (MDCL) = 1.5 kN
Number of small/large sheds = 5/5

SCL and MDCL are in acc. to IEC 61952
Galvanizing (h.d.g.) acc. to EN ISO 1461

36kV Side Mount Post Insulator
c/w Gain Base (154)
GT-TE-COM-0021

Lightning impulse withstand voltage, 1,2/50, pos.
Arcing distance
Minimum creepage distance
Specified cantilever load (SCL)
Maximum design cantilever load (MDCL)
Number of small/large sheds

Description

Material

Scale

N.T.S.

144 034-013
Technical Data

One minute power frequency withstand voltage, 50Hz, wet  = 114 kV
Lightning impulse withstand voltage, 1,2/50, pos.      = 255 kV
Arcing distance                                     = 350 mm
Minimum creepage distance                           = 1118 mm
Specified cantilever load (SCL)                     = 3 kN
Maximum design cantilever load (MDCL)               = 1.5 kN
Number of small/large sheds                         = 5/5

SCL and MDCL are in acc. to IEC 61952

Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 205 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 384 kV
Arcing distance = 580 mm
Minimum creepage distance = 1476 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 13
Material of fittings = Steel, h.d.g.
Weight (approx.) = 8.0 kg

Maximum deflection @ 2000mm with 50kg = 30mm
(Assuming zero deflection in interconnection)

Spade in acc. to Drawing No.BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461

---

**Stand - Off Insulator Assembly**
25kV AC, 4 Hole Flange Base (PCD 110) / Spade Fitting
(GT-TE-COM-0147)
3kV DC Insulators
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 65 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 175 kV
Arcing distance = 248 mm
Minimum creepage distance = 406 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 4
Material of fittings = Steel, h.d.g.
Weight (approx.) = 5.5 kg

Small Round Tongue / Clevis End Fitting in acc. to Drawing BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 65 kV
Lightning impulse withstand voltage, 1,2/50, pos. = 175 kV
Arcing distance = 248 mm
Minimum creepage distance = 406 mm
Specified mechanical load (SML) = 54 kN
Number of sheds = 4
Material of fittings = Steel, h.d.g
Weight (approx.) = 5.5 kg

Tongue / Spade Fitting in acc. to Drawing No. CEE-TNC-24
SML are in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 65kV
Lightning impulse withstand voltage, 1.2/50, pos. = 175kV
Arcing distance = 248mm
Minimum creepage distance = 406mm
Specified mechanical load (SML) = 54kN
Number of sheds = 4
Material of fittings = Steel, h.d.g.
Weight (approx.) = 5.5kg

Square Tongue / Clevis End Fitting in acc. to Drawing BBB0430
SML in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461
Technical Data

One minute power frequency withstand voltage, 50Hz, wet = 55 kV
Lightning impulse withstand voltage, 1.2/50, pos. = 143 kV
Arcing distance = 170 mm
Minimum creepage distance = 400 mm
Specified mechanical load (SML) = 70 kN
Routine test load (RTL) = 55 kN
Number of sheds = 4
Material of fittings = Steel, h.d.g.
Weight (approx.) = 1.3 kg

Clevis / Square Tongue in acc. to BBO 0281
SML and RTL are in acc. to IEC 61109
Galvanizing (h.d.g.) acc. to EN ISO 1461

Silicone Insulator HASDI 140/400 c/w clevis & Railway square tongue - straight.
(54/16897)