

OVERHEAD LINE FITTINGS (U.K.) LIMITED



EDITION A08



WOOD LANE WORKS, NORTON-JUXTA-TWYCROSS, ATHERSTONE,
WARWICKSHIRE. CV9 3QB





OVERHEAD LINE FITTINGS (U.K.) LIMITED

CONTACTS

GENERAL MANAGER:

Tel: (01827) 880210

Ext. 304



ENGINEERING MANAGER:

Tel: (01827) 880210

Ext. 204



SALES MANAGER:

Tel: (01827) 880210

Ext. 203



QUALITY MANAGER:

Tel: (01827) 880210

Ext. 305



Fax: (01827) 880811



OVERHEAD LINE FITTINGS (U.K.) LTD.
WOOD LANE WORKS
NORTON-JUXTA-TWYCROSS
ATHERSTONE
WARWICKSHIRE
CV9 3QB

E-mail: sales@overheadlinefittings.co.uk



QUALITY ASSURANCE

Quality Assurance

Overhead Line Fittings (UK) Limited has full accreditation to ISO 9001/2000 and a copy of the certification is displayed below.



CERTIFICATE OF REGISTRATION

This is to certify that the
Quality Management System of

Overhead Line Fittings (UK) Ltd

Wood Lane Works
Norton-Juxta-Twycross
Atherstone
Warwickshire
CV9 3QB
UK

For

The Design and Supply of Material for Overhead Electrical Transmission Lines

Has been assessed by AFAQ-EAQA and complies with the
Quality Management System requirements of

ISO 9001:2000

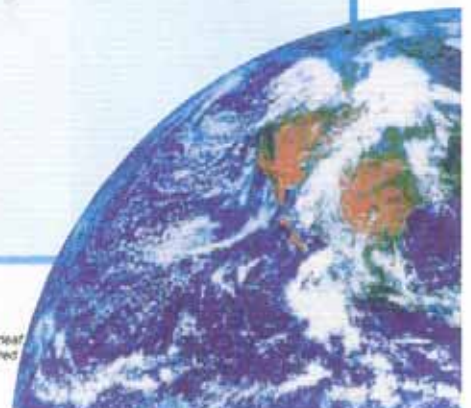
CERTIFICATE NO.	ORIGINAL DATE OF CERTIFICATION	DATE OF ISSUE	DATE OF EXPIRY
A21 110	01 September 1994	18 January 2007	17 January 2010



APPROVED BY

B. H. H. H. H.
ON BEHALF OF
AFAQ-EAQA LTD

AFAQ-EAQA Ltd 185 Park Street LONDON SE1 8DY
Part of the AFNOR Group of Companies
This certificate is the property of AFAQ-EAQA Ltd and issued subject to the conditions overleaf
The use of the Accreditation Mark indicates accreditation in respect of those activities covered
by the Certificate Number 022.



EAQA CERTIFICATION



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INSULATORS

Section A



PIN INSULATORS



CAP & PIN DISC INSULATORS



STAYWIRE INSULATORS



LOW VOLTAGE INSULATORS



RAILWAY INSULATORS



TOUGHENED GLASS INSULATORS



PORCELAIN INSULATORS



*Overhead
Line Fittings (U.K.)
Limited (OLF) supply
porcelain insulators suitable
for all overhead line applications
ranging from low voltage, using one
piece service insulators, to pin
insulators and cap and pin type disc
insulators for medium and high voltage
usages.*



*All insulators are manufactured to the highest
standard from high grade wet process porcelain
and are usually glazed brown. Insulators with grey
glaze can also be supplied upon request.*

*Our insulators are designed to meet the onerous test
requirements of all National and International test
specifications.*

*Pin insulators are supplied complete with Zinc
Thimbles cemented in and threaded to receive
pins having Ref. No.16 large steel heads to
BS 3288. All pin insulators are normally
supplied with heads having a semi-conducting
glaze which is very effective in reducing
radio noise.*



*A comprehensive stock of insulators is
maintained to enable OLF to respond
quickly and effectively to
customers' requirements.*





PORCELAIN INSULATORS

This section illustrates standard porcelain pin insulators suitable for nominal systems voltages up to and including 33kV.



The dimensions given are nominal and are subject to the tolerances permitted in BS EN 60383-1.

The head of the insulator is glazed with a semi-conducting glaze which is very effective in reducing radio noise.

The insulators are supplied with a zinc thimble cemented in the pin hole. The thimbles are threaded to receive pins having Ref. No.16 steel heads to BS 3288.

Prices for suitable galvanised steel insulator pins are available upon request, details of which can be found immediately after the pin insulators section.

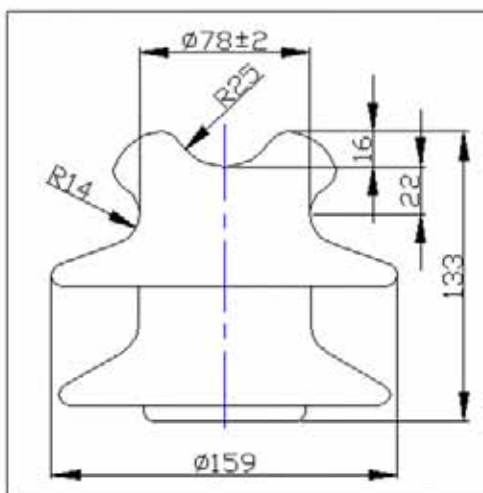




PORCELAIN INSULATORS



11kV PIN INSULATOR



TECHNICAL DETAILS

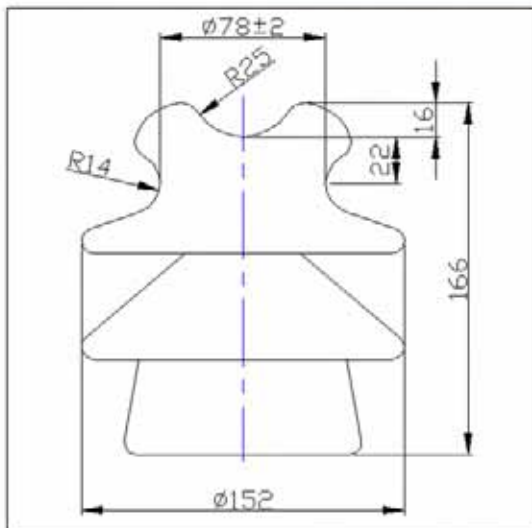
OLF REFERENCE		38EY12	
DIMENSIONS	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	240
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	10
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 80
		WET	kV (rms) 50
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 110
		NEGATIVE	kV (pk) 150
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 75
		WET	kV (rms) 45
	IMPULSE WITHSTAND VOLTAGE	kV (pk) 95	
	POWER FREQUENCY PUNCTURE VOLTAGE	kV (rms) 130	
WEIGHT	WEIGHT OF UNIT	kg	2.1

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS

11 kV PIN INSULATOR



TECHNICAL DETAILS

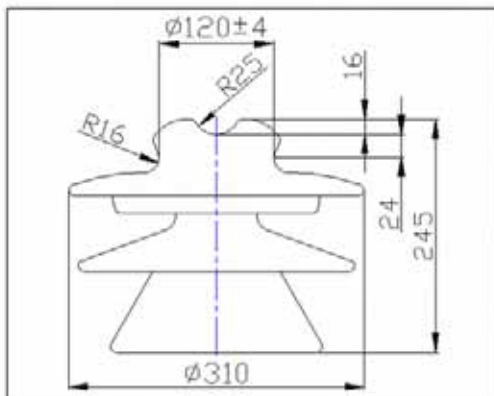
OLF REFERENCE		38EY13	
DIMENSIONS	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	320
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	10
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 80
		WET	kV (rms) 55
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 120
		NEGATIVE	kV (pk) 150
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 75
		WET	kV (rms) 50
	IMPULSE WITHSTAND VOLTAGE		kV (pk) 110
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 130	
WEIGHT	WEIGHT OF UNIT	kg	2.5

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS

33kV PIN INSULATOR



TECHNICAL DETAILS

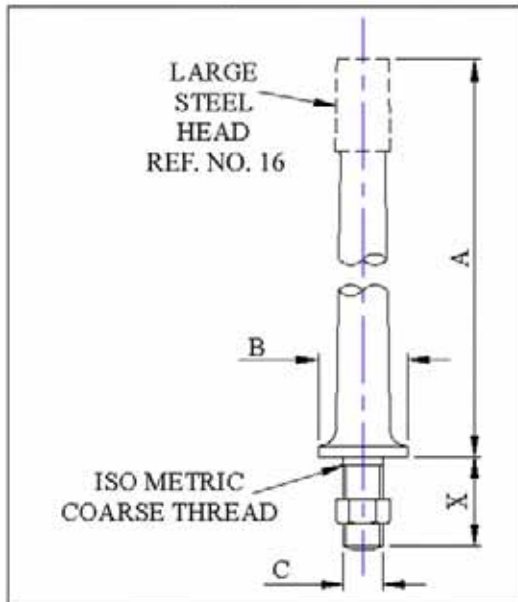
OLF REFERENCE			38EY14	
DIMENSIONS	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	740	
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	10	
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 145	
		WET	kV (rms) 100	
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk)	220
		NEGATIVE	kV (pk)	270
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms)	135
		WET	kV (rms)	90
	IMPULSE WITHSTAND VOLTAGE	kV (pk)	200	
	POWER FREQUENCY PUNCTURE VOLTAGE	kV (rms)	210	
WEIGHT	WEIGHT OF UNIT	kg	9.8	

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS

LINE PINS



NOTE:
 Dimension "X" is 130mm screwed for 75mm or 50mm
 screwed for 45mm.
 Other lengths may be available upon request.

TECHNICAL DETAILS

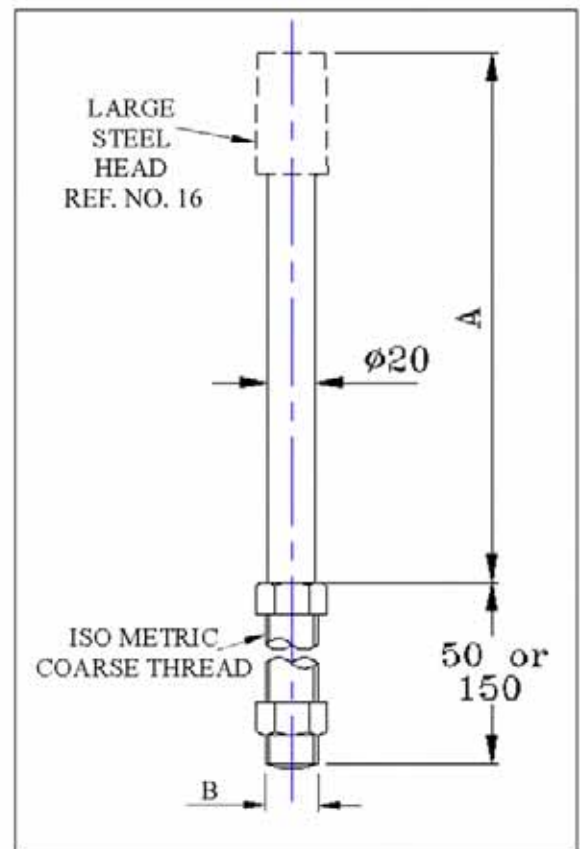
OLF REFERENCE			22BJ28	22BJ29	22BJ30	22BJ31
B.S. REFERENCE			R28	R29	R30	R31
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	5	10	5	10
DIMENSIONS	A	mm	230	230	305	305
	B	mm	42	52	44	64
	C	mm	22	22	22	22
WEIGHT	WEIGHT PER 100					
	SHANK 50mm	kg	135	170	180	295
	SHANK 130mm	kg	160	190	205	320

THE DIMENSIONS ARE IN ACCORDANCE WITH BS 3288-2



PORCELAIN INSULATORS

PILOT PINS



TECHNICAL DETAILS

OLF REFERENCE			22BJ45	22BJ50
B.S. REFERENCE			R45	R50
MINIMUM FAILING LOAD	MECHANICAL TEST	N	650	650
DIMENSIONS	A	mm	400	500
	B	mm	20	20
WEIGHT	WEIGHT PER 100			
	SHANK 50mm	kg	160	180
	SHANK 130mm	kg	195	220

THE STALK AND SHANK LENGTHS CAN BE AMENDED TO MEET PARTICULAR REQUIREMENTS
THE DIMENSIONS ARE IN ACCORDANCE WITH BS 3288-2



PORCELAIN INSULATORS



In the following section a range of porcelain cap and pin insulator units are illustrated.

These insulators comply in all respects with BS EN-60305 and BS EN 60383-1.

The dimensions of the porcelain components and the spacing are nominal and are subject to the tolerances permitted in BS EN 60383-1.

All insulators have standard ball and socket couplings in accordance with BS 3288-3 and BS EN 60120.

Alternatively, insulators with clevis and tongue fittings can be supplied.





PORCELAIN INSULATORS

80kN PLAIN DISC INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			40EY02
DIMENSIONS	DIAMETER	mm	254
	SPACING	mm	140
	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	300
	BALL AND SOCKET COUPLING SIZE		16B
MINIMUM FAILING LOAD	ELECTRO-MECHANICAL TEST	kN	80
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 80
		WET	kV (rms) 50
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 125
		NEGATIVE	kV (pk) 130
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 70
		WET	kV (rms) 45
IMPULSE WITHSTAND VOLTAGE		kV (pk) 100	
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 110	
WEIGHT	WEIGHT OF UNIT	kg	5.2

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



125kN PLAIN DISC INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			41EY00
DIMENSIONS	DIAMETER		mm 280
	SPACING		mm 178
	TOTAL CREEPAGE DISTANCE - MINIMUM		mm 340
	BALL AND SOCKET COUPLING SIZE		mm 20
MINIMUM FAILING LOAD	ELECTRO-MECHANICAL TEST		kN 125
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 80
		WET	kV (rms) 50
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 125
		NEGATIVE	kV (pk) 130
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 70
		WET	kV (rms) 45
IMPULSE WITHSTAND VOLTAGE		kV (pk) 110	
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 130	
WEIGHT	WEIGHT OF UNIT		kg 8.5

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



80kN ANTI-FOG DISC INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			40EY12
DIMENSIONS	DIAMETER	mm	254
	SPACING	mm	140
	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	432
	BALL AND SOCKET COUPLING SIZE		16B
MINIMUM FAILING LOAD	(ELECTRO-MECHANICAL TEST)	kN	80
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 100
		WET	kV (rms) 60
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 150
		NEGATIVE	kV (pk) 150
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 90
		WET	kV (rms) 50
IMPULSE WITHSTAND VOLTAGE		kV (pk) 125	
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 130	
WEIGHT	WEIGHT OF UNIT	kg	7.0

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



The porcelain staywire insulators illustrated are suitable for the majority of standard insulated staywire systems including those specified in ESI 43-91.





PORCELAIN INSULATORS



11 kV STAYWIRE INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			39EH08
DIMENSIONS	OVERALL WIDTH	mm	75
	OVERALL LENGTH	mm	120
	DIAMETER OF HOLE	mm	21
	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	70
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	110
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	WET	kV (rms) 17
	IMPULSE WITHSTAND VOLTAGE		kV (pk) 50
WEIGHT	WEIGHT OF UNIT	kg	1.2

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



20kV STAYWIRE INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			39EH11
DIMENSIONS	OVERALL WIDTH	mm	100
	OVERALL LENGTH	mm	210
	DIAMETER OF HOLE	mm	22
	TOTAL CREEPAGE DISTANCE - MINIMUM	mm	110
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	70
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 26
		WET	kV (rms) 25
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 25
		WET	kV (rms) 24
WEIGHT	WEIGHT OF UNIT	kg	2.6

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



33kV STAYWIRE INSULATOR



TECHNICAL DETAILS

OLF REFERENCE				39EH09
DIMENSIONS	OVERALL WIDTH		mm	120
	OVERALL LENGTH		mm	220
	DIAMETER OF HOLE		mm	28
	TOTAL CREEPAGE DISTANCE - MINIMUM		mm	95
MINIMUM FAILING LOAD	MECHANICAL TEST		kN	140
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE			
	SINGLE UNIT	WET	kV (rms)	26
	2 UNITS IN SERIES	WET	kV (rms)	48
	IMPULSE WITHSTAND VOLTAGE - SINGLE UNIT		kV (pk)	75
	2 UNITS IN SERIES		kV (pk)	150
WEIGHT	WEIGHT OF UNIT		kg	5.4

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



Porcelain insulators included in this section are suitable for most low voltage applications and comply with the requirements specified in ESI 43-93.

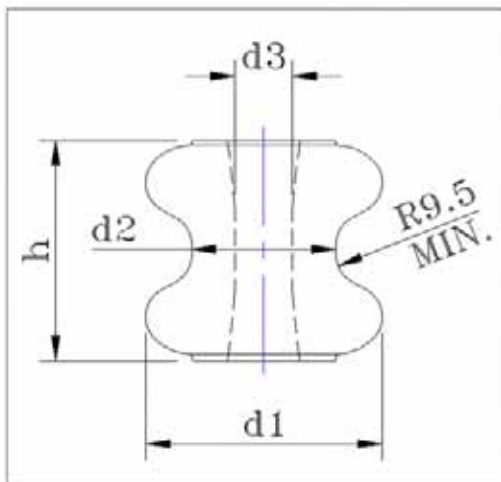




PORCELAIN INSULATORS



REEL INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			39EH06
DIMENSIONS	HEIGHT, h		mm 65
	DIAMETER, d1		mm 76
	DIAMETER, d2		mm 44
	DIAMETER, d3 - MINIMUM		mm 17.5
MINIMUM FAILING LOAD	MECHANICAL TEST		kN 15
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 20
		WET	kV (rms) 10
WEIGHT	WEIGHT OF UNIT		kg 0.4

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



PORCELAIN INSULATORS



COACHSCREW INSULATOR



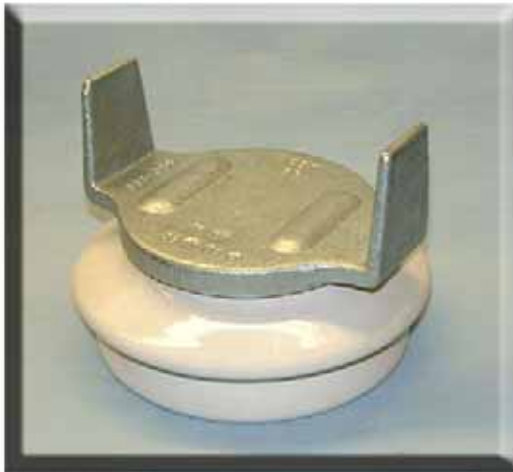
TECHNICAL DETAILS

OLF REFERENCE		39EH07	
DIMENSIONS	OVERALL HEIGHT OF PORCELAIN	mm	70
	OVERALL DIAMETER OF PORCELAIN	mm	57
	DIAMETER OF HOLE - MINIMUM	mm	16
	LENGTH OF COACHSCREW	mm	60
MINIMUM FAILING LOAD	(TENSILE TEST)	kN	4
	(BENDING TEST)	kN	2.5
WEIGHT	WEIGHT OF UNIT	kg	0.4

THE FAILING LOAD VALUES RELATE TO TESTS CARRIED OUT IN ACCORDANCE WITH ESI 43-93



PORCELAIN INSULATORS



Overhead Line Fittings (UK) Limited have available a range of porcelain pedestal type rail insulators.

The insulators are used for the support of top running conductor rail current collection systems up to 1000V.

Insulators are available for both Railtrack and London Underground systems and have been approved for use by both companies.





PORCELAIN INSULATORS



CONDUCTOR RAIL INSULATORS



TECHNICAL DETAILS

OLF REFERENCE			42EY00	42EY01	42EY02
DIMENSIONS	HEIGHT - TOP OF PAD TO BASE OF INSULATOR	mm	100	120	140
	DIAMETER OF PORCELAIN	mm	170	170	160
MINIMUM FAILING LOAD	COMPRESSION FAILING LOAD	kN	120	120	120
	LATERAL BENDING LOAD (at 25mm above top of pads)	kN	6	6	6
	IMPACT LOAD	kgm	1	1	1
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY	DRY	kV (rms) 25	25	25
	WITHSTAND VOLTAGE	WET	kV (rms) 3.5	3.5	3.5
WEIGHT	WEIGHT OF UNIT	kg	5.5	6.6	7.7

THE ELECTRICAL CHARACTERISTICS RELATE TO TESTS CARRIED OUT WITH INSULATORS STANDING IN 13mm OF WATER
 THE CHARACTERISTICS RELATE TO TESTS CARRIED OUT IN ACCORDANCE WITH RT/E/C/27020



PORCELAIN INSULATORS



CONDUCTOR RAIL INSULATORS



TECHNICAL DETAILS

LUL REFERENCE		317P21
OLF REFERENCE		42EY03
DIMENSIONS	HEIGHT - TOP OF PAD TO BASE OF INSULATOR	mm 75
	DIAMETER OF PORCELAIN	(mm) 170
	TOTAL CREEPAGE DISTANCE-MIN.	mm 50
ELECTRICAL CHARACTERISTICS	NOMINAL VOLTAGE	kV (dc) 0.75
	CONTINUOUS WITHSTAND VOLTAGE	kV (dc) 1.00
	SURGE WITHSTAND FOR 100μs	kV (dep) 5.00
WEIGHT	WEIGHT OF UNIT	kg 3.5

TESTED IN ACCORDANCE WITH TE-DS-0104-A3 AND TE-DS-0327-A2



TOUGHENED GLASS INSULATORS



In the following section a range of toughened glass cap and pin insulator units are illustrated.

These insulators comply in all respects with BS EN 60305 and BS EN 60383-1.

The dimensions of the toughened glass components and the spacing are nominal and are subject to the tolerances permitted in BS EN 60383-1.

All insulators have standard ball and socket couplings in accordance with BS 3288-3 and BS EN 60120.

Alternatively, insulators with clevis and tongue fittings can be supplied.





TOUGHENED GLASS INSULATORS



80kN PLAIN DISC INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			60SG00
DIMENSIONS	DIAMETER	mm	255
	SPACING	mm	140
	TOTAL CREEPAGE DISTANCE	mm	320
	BALL AND SOCKET COUPLING SIZE	mm	16B
MINIMUM FAILING LOAD	(MECHANICAL TEST)	kN	80
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 78
		WET	kV (rms) 45
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 105
		NEGATIVE	kV (pk) 110
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 70
		WET	kV (rms) 40
IMPULSE WITHSTAND VOLTAGE		kV (pk) 100	
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 130	
WEIGHT	WEIGHT OF UNIT	kg	3.45

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



TOUGHENED GLASS INSULATORS



80kN ANTI-FOG DISC INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			60SG10
DIMENSIONS	DIAMETER	mm	255
	SPACING	mm	140
	TOTAL CREEPAGE DISTANCE	mm	390
	BALL AND SOCKET COUPLING SIZE	mm	16B
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	80
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 100
		WET	kV (rms) 60
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 150
		NEGATIVE	kV (pk) 150
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 90
		WET	kV (rms) 50
IMPULSE WITHSTAND VOLTAGE		kV (pk) 125	
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 130	
WEIGHT	WEIGHT OF UNIT	kg	4.7

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



TOUGHENED GLASS INSULATORS



125kN PLAIN DISC INSULATOR



TECHNICAL DETAILS

OLF REFERENCE			60SG20
DIMENSIONS	DIAMETER	mm	280
	SPACING	mm	178
	TOTAL CREEPAGE DISTANCE	mm	380
	BALL AND SOCKET COUPLING SIZE	mm	20
MINIMUM FAILING LOAD	MECHANICAL TEST	kN	125
ELECTRICAL CHARACTERISTICS	POWER FREQUENCY FLASHOVER VOLTAGE	DRY	kV (rms) 80
		WET	kV (rms) 50
	IMPULSE FLASHOVER VOLTAGE	POSITIVE	kV (pk) 110
		NEGATIVE	kV (pk) 115
	POWER FREQUENCY WITHSTAND VOLTAGE (ONE MINUTE)	DRY	kV (rms) 75
		WET	kV (rms) 45
IMPULSE WITHSTAND VOLTAGE		kV (pk) 100	
POWER FREQUENCY PUNCTURE VOLTAGE		kV (rms) 130	
WEIGHT	WEIGHT OF UNIT	kg	6.35

THE ELECTRICAL CHARACTERISTICS HAVE BEEN OBTAINED FROM TESTS CARRIED OUT IN ACCORDANCE WITH BS EN 60383-1



INSULATOR FITTINGS

Section B



BALL ENDED FITTINGS



SOCKET ENDED FITTINGS



SHACKLES



YOKE PLATES



SAG ADJUSTER SETS
AND MAINTENANCE LINKS



LINKS AND PLATES



ARCING HORNS, CORONA
SHIELDS AND RINGS



MISCELLANEOUS



INSULATOR FITTINGS

*Overhead
Line Fittings (UK)
Limited offers a
comprehensive range of
insulator fittings to suit all types
of line constructions and voltages
ranging from distribution up to
500kV and above.*



Insulator Fittings

*Standard fittings to BS 3288 Part 2 are embraced
within the available range together with the newer
and more specialised items now required
(particularly in the UK) for Twin, Triple and Quad
conductor configurations using the larger AAC
conductors (Araucaria and Redwood).*

*Fittings with ball and socket couplings are in
accordance with BS 3288 Part 3 and BS EN 60120
with, where appropriate, locking devices in
accordance with BS 3288 Part 4 and BS EN 60372.*

*Ball and socket and clevis and tongue fittings
to other National/International Standards such
as ANSI can similarly be provided upon
receipt of detailed enquiry.*





INSULATOR FITTINGS



Arc horns and corona rings for all voltages and applications are available from the comparatively basic 12mm. and 16mm. rod type through to the complex tubular designs as used on 400kV sets. All arc horns are (Sample and Routine) mechanically tested as appropriate.

A range of miscellaneous fittings used in a variety of applications is available including turnbuckles, eye bolts, dropper plates and many other specialised items.

Corrosion Protection

All ferrous fittings, with the exception of those manufactured in stainless steel, are hot dip galvanised to BS EN ISO 1461.

Testing

All insulator fittings are subjected to Type, Sample and Routine tests as applicable to the appropriate specification. In house mechanical test facilities using specialised calibrated and certified equipment allowing for tensile testing up to 500kN.





INSULATOR FITTINGS



A range of ball ended fittings is available encompassing ball hooks, ball eye links, ball clevis and ball tongues. Ball and shank sizes range from 11mm. up to and including 28mm. with failing loads of between 20kN and 400kN.

Sockets are available with either the 'W' shaped locking device or the split pin type locking device- all in accordance with BS 3288-4 and BS EN 60372.



INSULATOR FITTINGS



Socket ended fittings include socket tongues and socket clevis types with socket sizes ranging from 16mm. up to and including 28mm. with failing loads of between 70kN and 400kN.

Sockets are available with either the 'W' shaped locking device or the split pin type locking device- all in accordance with BS 3288-4 and BS EN 60372.



INSULATOR FITTINGS

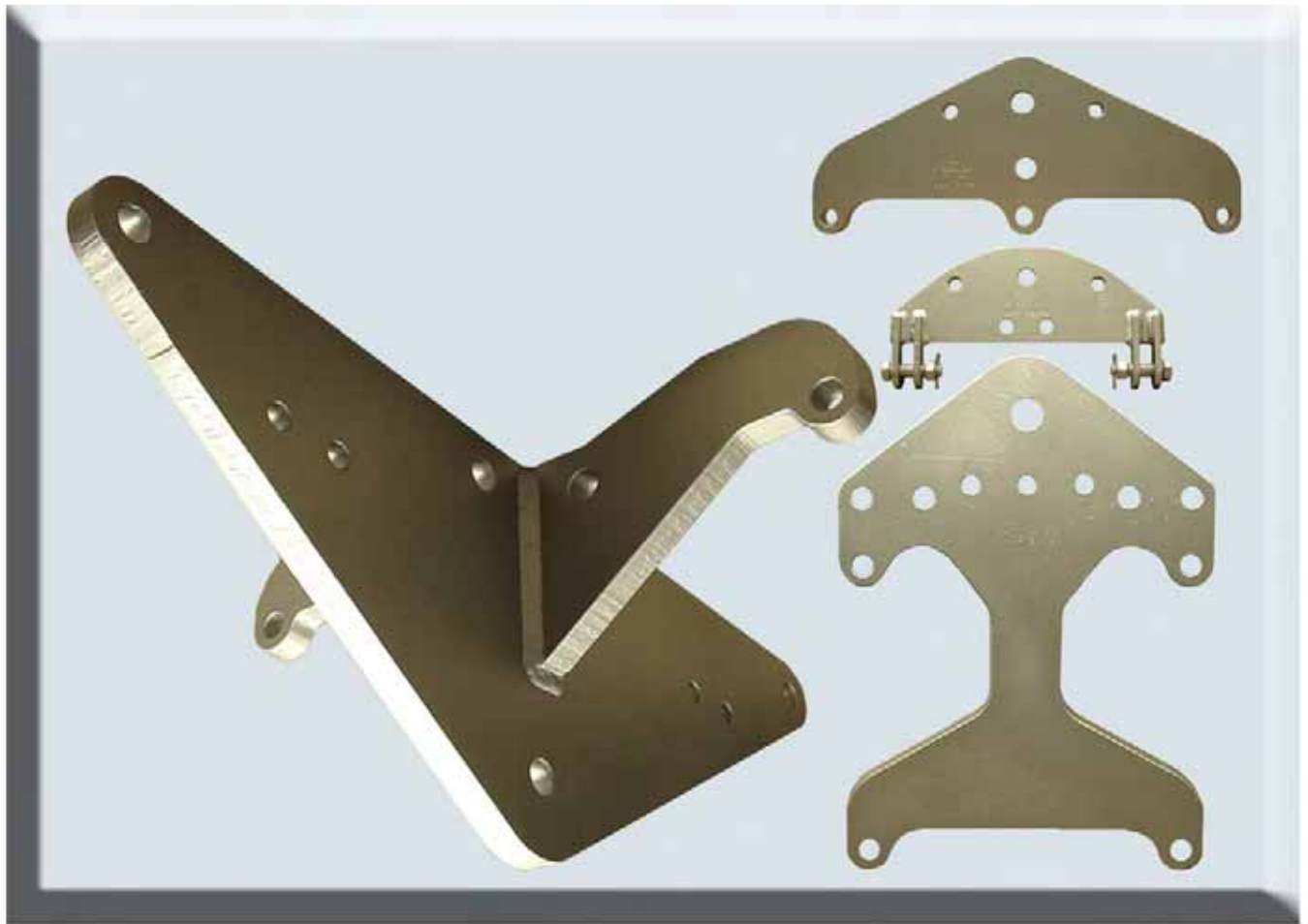


A comprehensive range of traditional round and square section shackles is available with failing loads of between 70kN and 300kN.

More specialised shackles for tower connection can also be provided upon receipt of full technical requirements.



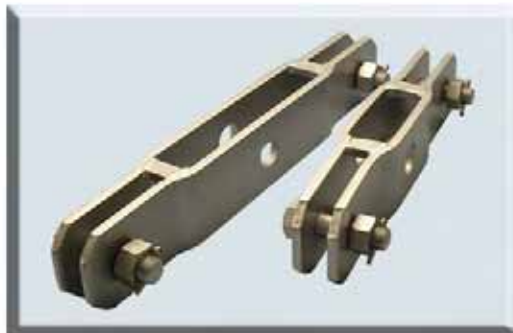
INSULATOR FITTINGS



Yoke plates for all types of constructions and conductor configurations are available. These range from the simplistic 15/22 design rated at 70kN to the more complex designs for triple insulator strings and quad conductors rated at 800kN.



INSULATOR FITTINGS



Conventional 400kN, 300kN, 190kN and 125kN Sag Adjuster Sets, Plates and Maintenance Links required to provide adjustment to insulator/conductor sags and the necessary interface between the tension set, tower and maintenance equipment are contained within the range of fittings available from Overhead Line Fittings (UK) Limited.

The majority of types and designs available are based on current UK maintenance procedures and practices. However, non standard designs can similarly be provided on receipt of full technical details.

**SAG ADJUSTER SETS AND
MAINTENANCE LINKS**

B32



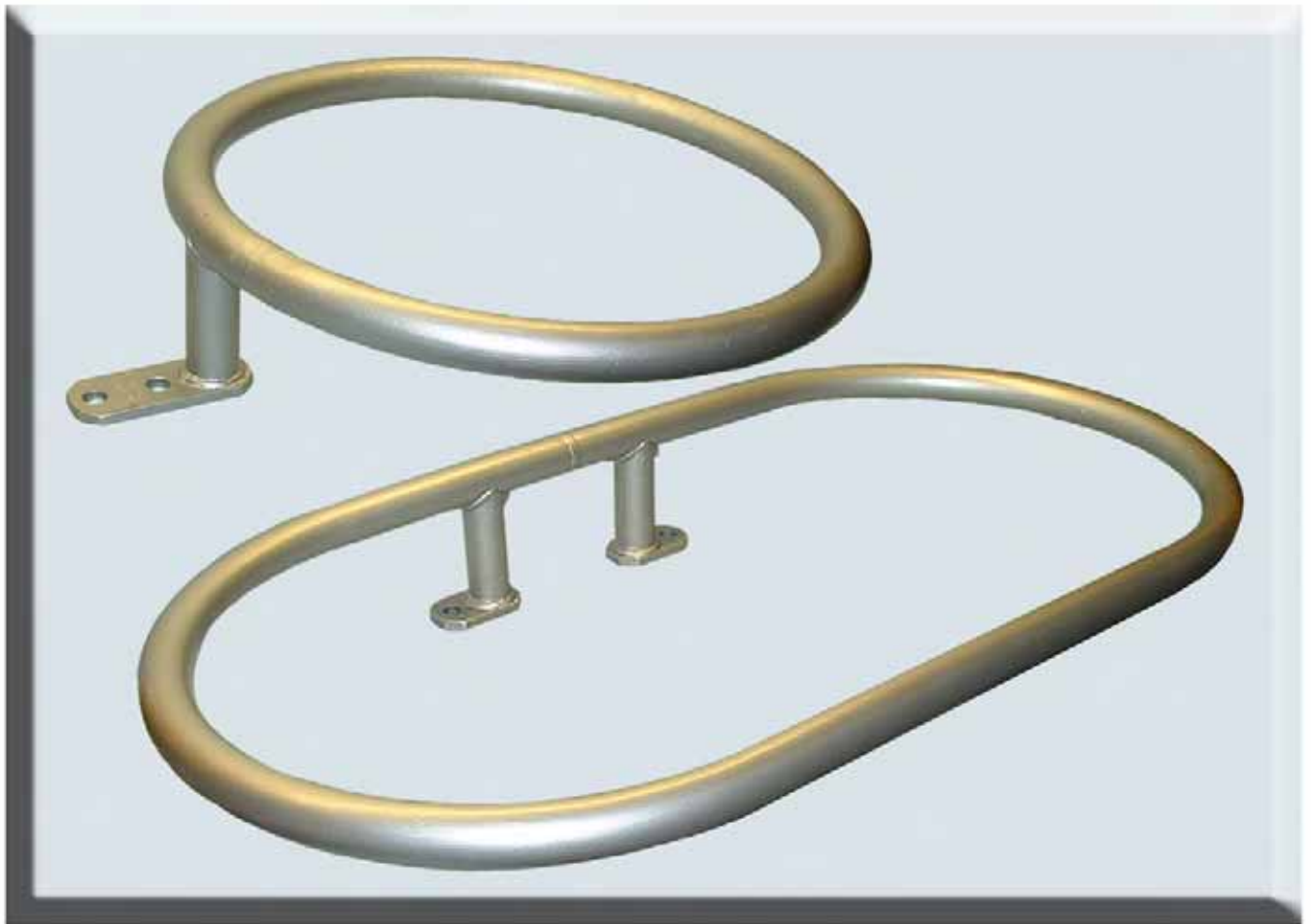
INSULATOR FITTINGS



A variety of steel plates and link arrangements including landing plates, single straight links, cranked link assemblies, parallel link assemblies, and crossarm link assemblies are available. Where special link arrangements are required, our engineering staff will be pleased to advise on all aspects of design and testing.



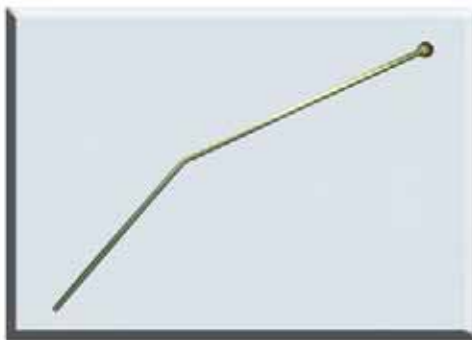
INSULATOR FITTINGS



Corona shields and rings for all transmission applications are available together with corona rings for use on 275kV/400kV sub station post insulators.



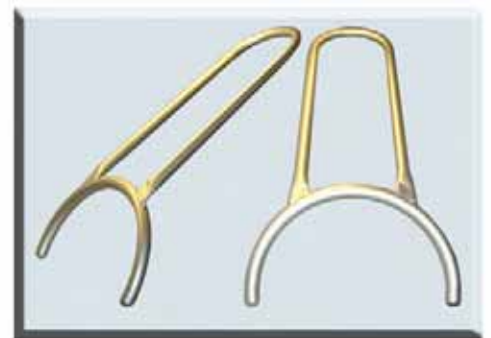
INSULATOR FITTINGS



The arc horns shown above are typical designs for use on voltages up to and including 132kV.



INSULATOR FITTINGS



The arc horns illustrated here are typical tube type suitable for voltages up to and including 400kV.



INSULATOR FITTINGS



Overhead Line Fittings (UK) Limited provide a range of miscellaneous fittings which are used in a variety of applications. These include turnbuckles, eye bolts, dropper plates, tower swivels, anchor attachments and many other specialised items.



CONDUCTOR ACCESSORIES

Section C



SUSPENSION CLAMPS



WEDGE CLAMPS



COMPRESSION DEAD END CLAMPS



JUMPER CONNECTORS/ PALMS



MID-SPAN & NON-TENSION JOINTS



NON-TENSION JOINT SPACERS



BI-METALLIC CONNECTORS



LINE TERMINATION FITTINGS



REPAIR SLEEVES



JUMPER WEIGHTS



CONDUCTOR ACCESSORIES

*Overhead Line
Fittings (UK) Limited
has available a comprehensive
range of conductor fittings and
accessories to suit the majority of
conductors in common use and also
some of the more specialised conductors
e.g. Matthew, Sycamore, etc.*



*The range of conductor accessories and fittings
includes suspension clamps, bolted and integral
compression anchor clamps, wedge clamps,
mid-span joints, repair sleeves, non tension
joints spacers, tee connectors, etc.*

*Also available is a range of the more specialised
conductor accessories such as bi-metallic
connectors, both pin and palm type, earthbonds,
parallel groove clamps, angled and straight
jumper terminals suitable for bi-metallic
connections.*

*Within the available range of conductor fittings
are the galvanised jumper weights and combined
clamp weights suitable for the majority of
conductors and conductor configurations.*

*All fittings and accessories are designed
and manufactured to meet the
requirements of applicable standards
and specifications including
BS EN 61284 and
NGTS 3.4.6.*





CONDUCTOR ACCESSORIES



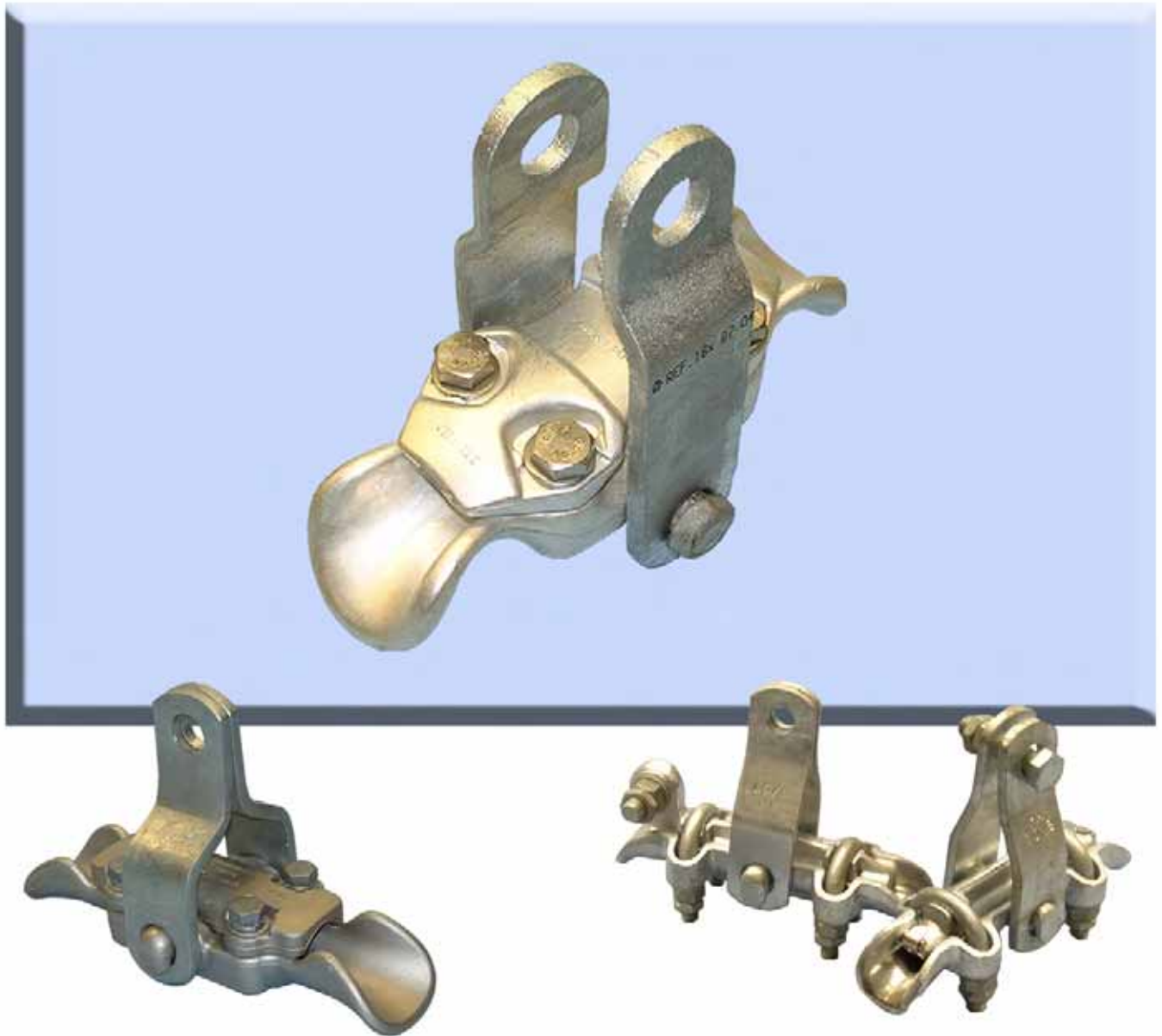
In the event that "non-standard" or special fittings are required, Overhead Line Fittings (UK) Limited's dedicated engineering staff with its unparalleled depth of knowledge, experience and expertise will be pleased to discuss all aspects of design and testing to your complete satisfaction.

The following pages depict the range of conductor fittings available in an illustrative manner. It is impractical to show each and every one of the large range of fittings available.





CONDUCTOR ACCESSORIES



Suspension Clamps are available for the majority of conductors in common use.

This range includes clamps of forged aluminium and clamps of galvanised malleable cast iron which are supplied complete with aluminium liners for use with aluminium based conductors.

Suspension Clamps for earth wire applications are similarly available. These clamps are provided with suitable lugs for the connection of earth bonds.

Suspension clamps are designed to meet requirements of BS EN 61284 and NGTS 3.4.6. as and where applicable.



CONDUCTOR ACCESSORIES

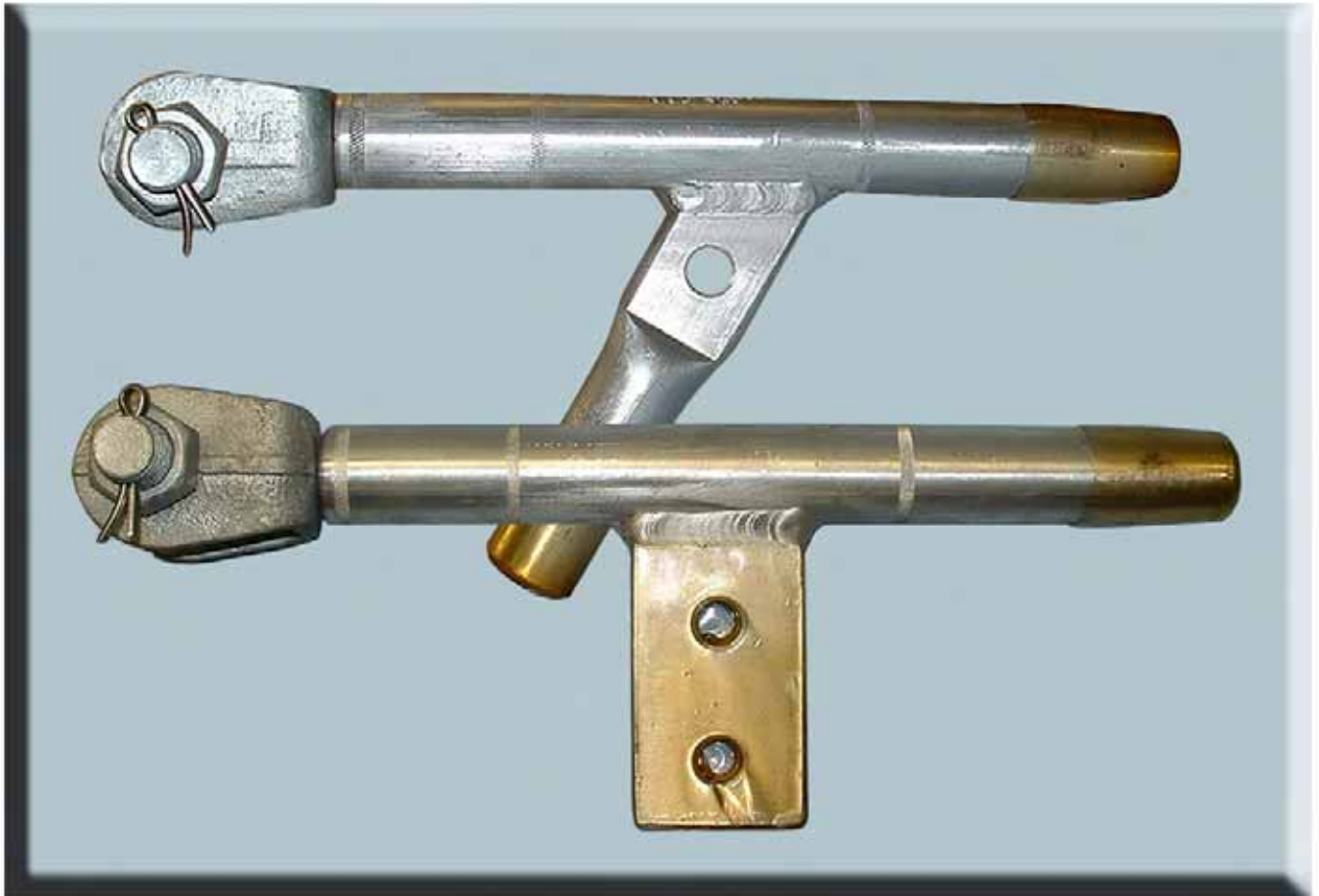


A selection of wedge clamps is available to suit the majority of commonly used AAC conductors.

The range includes clamps suitable for 200mm. Sq. Poplar conductor and up to and including 850mm. Sq. Redwood conductor.



CONDUCTOR ACCESSORIES



A comprehensive range of compression anchor clamps is available suitable for majority of AAC, AAAC and ACSR conductors. This range includes the special GZT ACSR conductor (Matthew) for which Overhead Line Fittings (UK) Limited was at the forefront of the design of the relevant fittings in collaboration with National Grid.

Compression anchor clamps are available either as bolted type suitable for detachable jumper palms or the integral types having angled or straight jumper facility.



CONDUCTOR ACCESSORIES

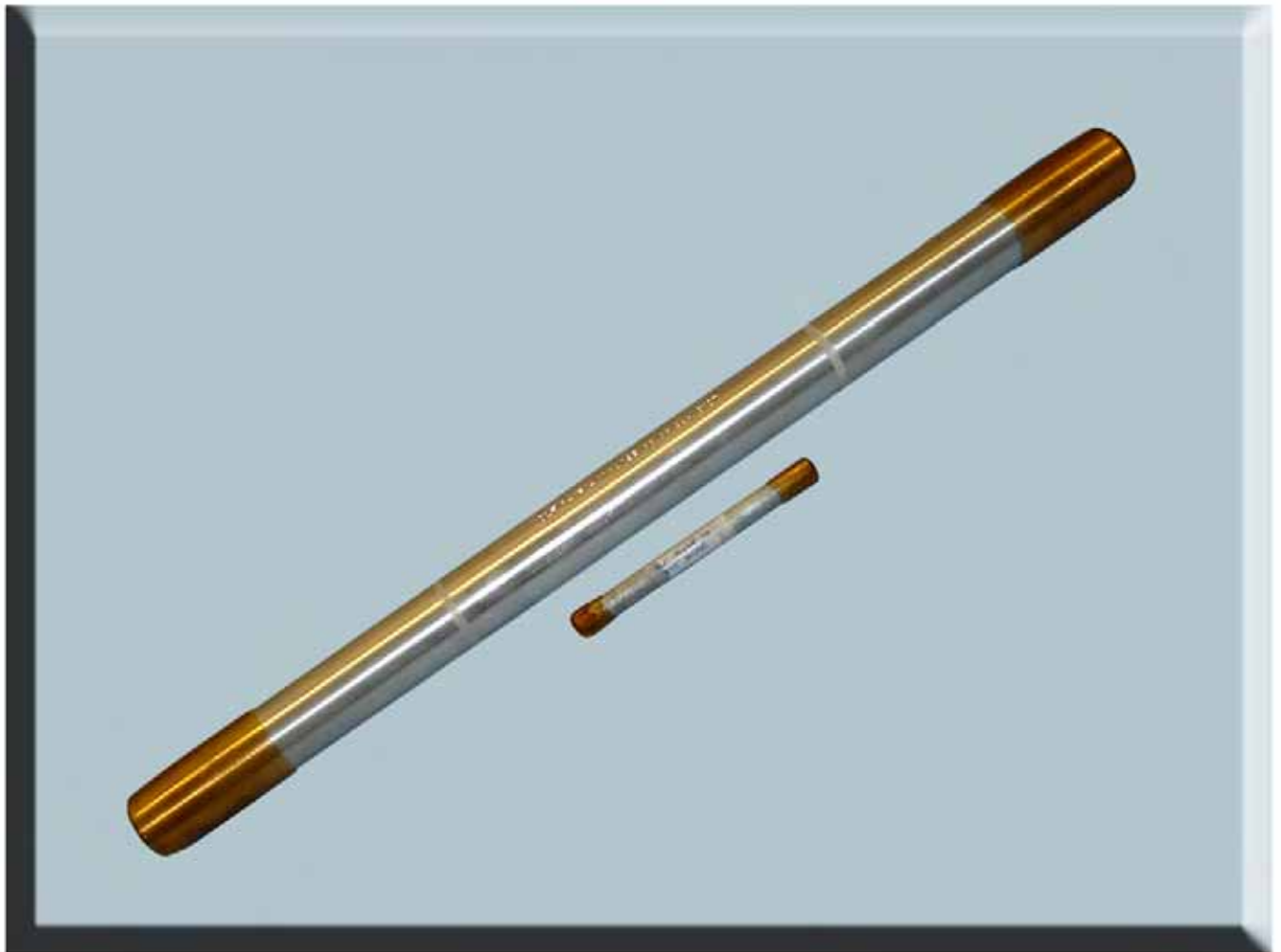


A range of angled and straight jumper palms to compliment the bolted compression clamps is similarly available for AAC, AAAC and ACSR conductors.

Also available is a range of jumper palms suitable for bi-metallic connections.



CONDUCTOR ACCESSORIES

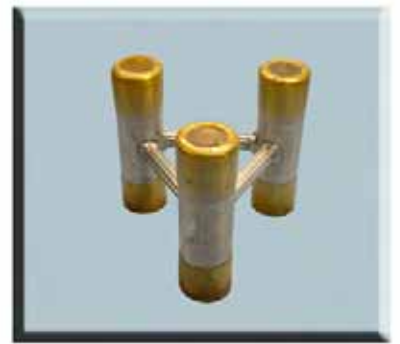
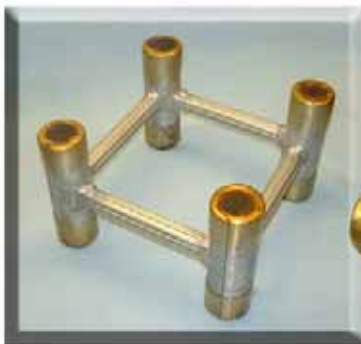
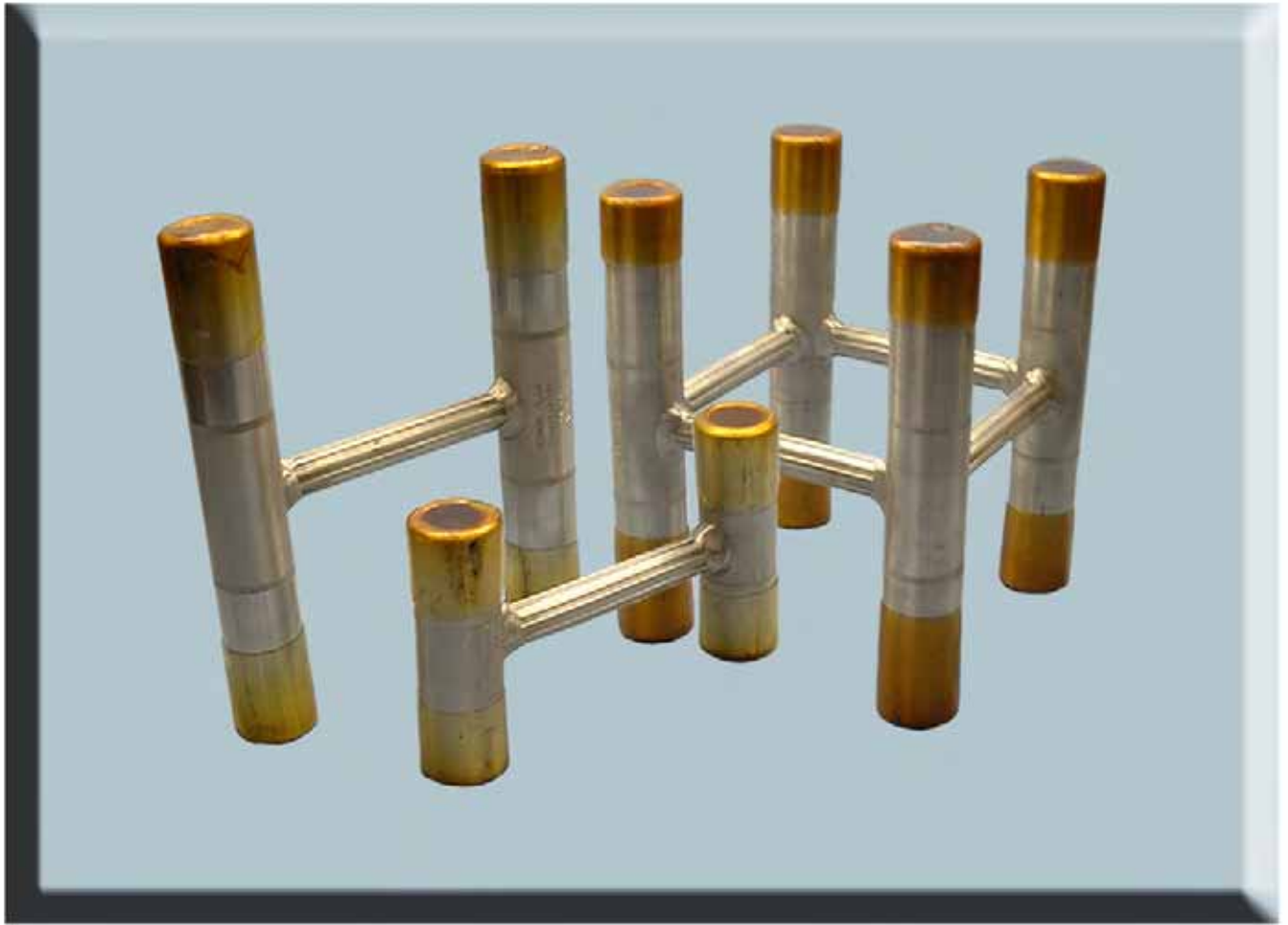


Mid span joints are used to connect two lengths of conductor together between the towers and are classed as tension joints. These are available for the majority of commonly used conductors.

Non-tension Joints are used in an identical manner to mid-span joints but where the conductor is not at line tension i.e. jumper loops, down leads, etc.



CONDUCTOR ACCESSORIES



A range of non-tension joint spacers is available for twin, triple and quad constructions. These items are used to maintain the spacing of the conductors in Jumper Loops and also, as required, for conductor bonding or jointing. Spacers are available for a variety of conductors.



CONDUCTOR ACCESSORIES



A range of Bi-metallic connectors is available in angled palm, straight palm or pin type format.



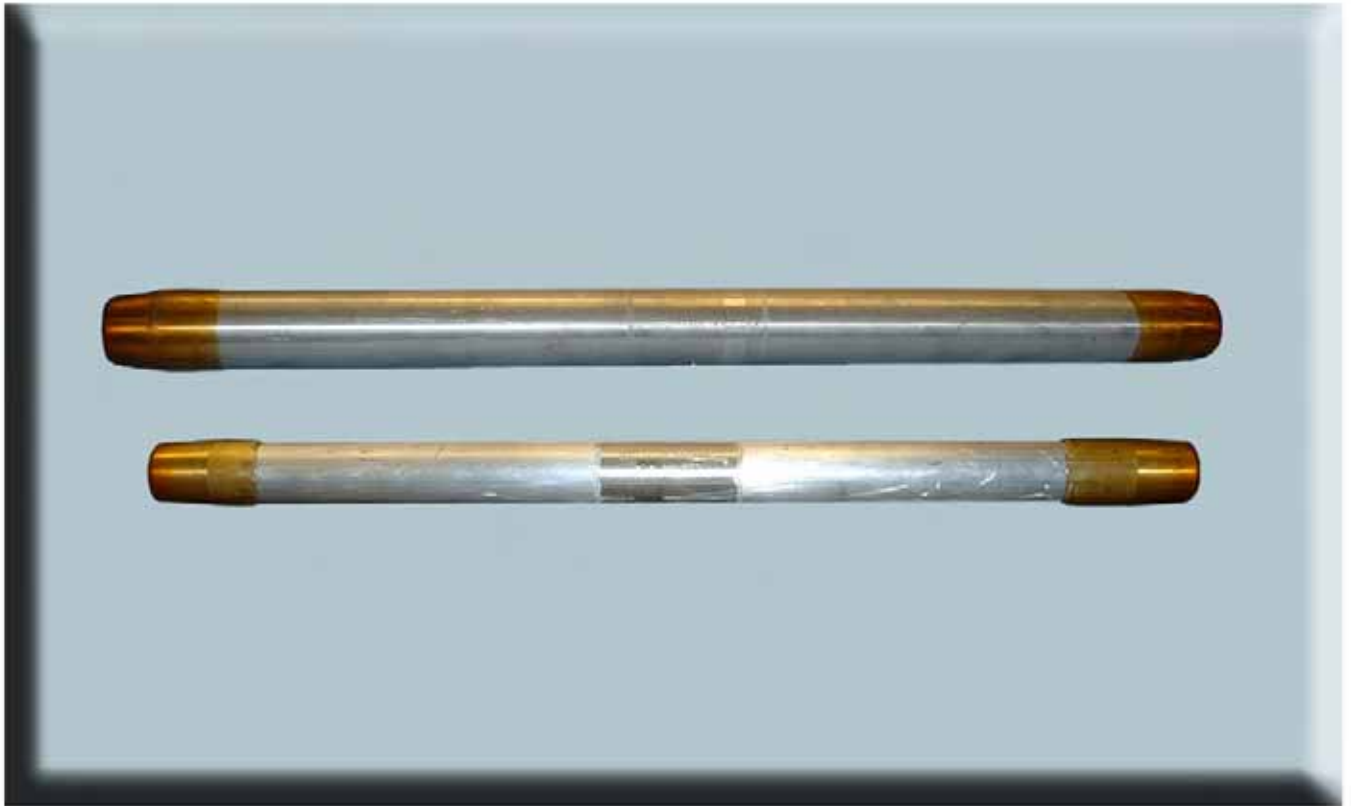
CONDUCTOR ACCESSORIES



A range of Line Termination fittings is available suitable for the majority of conductors in common use.



CONDUCTOR ACCESSORIES



Repair sleeves are used where the strands of the conductor are broken. The sleeve is simply compressed over the damaged section of the conductor. The diameter and the length vary in order to suit the applicable conductor.



CONDUCTOR ACCESSORIES



Jumper weights are available for single, twin, triple and quad conductor configurations. These weights range from 6.5kg to 50kg. Combined 85kg clamp weights for twin, triple and quad conductor bundles are similarly available. These clamp weights are supplied complete with aluminium liners where applicable.

For the more common pilot/dolly suspension sets used on 132kV systems, weights for connection directly to the suspension clamp via extended "U" bolts are available. These weights range from 22.5kg. upwards in multiples of 25kg.

Where required, a system of weights and accessories, is available for connection to twin yoke plates (28/22 and 42/22).

All weights are galvanised in accordance with BS EN ISO 1461 and NGTS 3.4.6. as and where applicable.



SAFETY AND MAINTENANCE

Section D



WOOD POLE ANTI-CLIMBING DEVICES



132kV TOWER ANTI-CLIMBING DEVICES



275kV AND 400kV NGC TOWER
ANTI-CLIMBING DEVICES



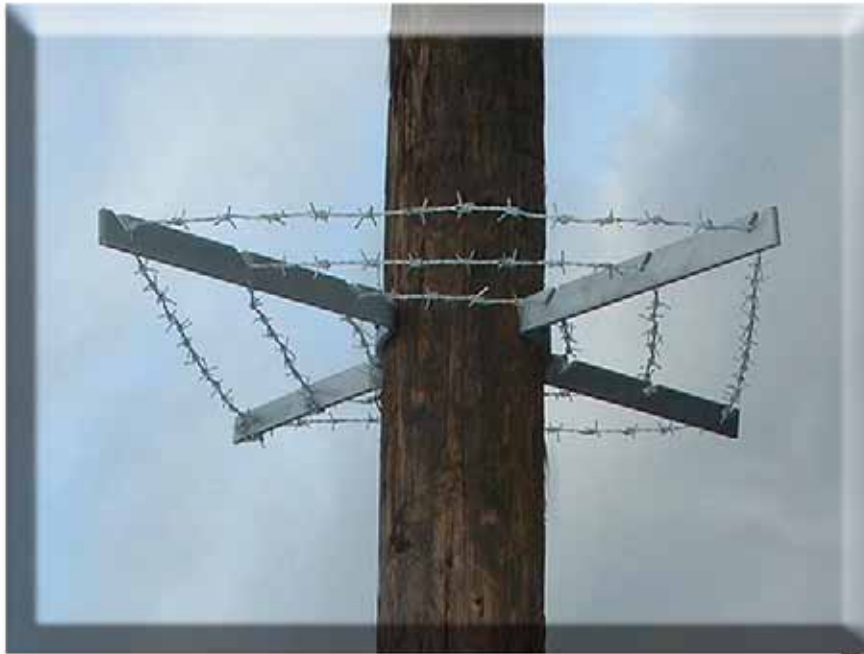
NOTIFICATION PLATES AND
ACCESSORIES



BARBED WIRE AND ACCESSORIES



ANTI-CLIMBING DEVICES



WOOD POLE ACD's



INFORMATION

Anti-Climbing Devices (ACD's) for Wood Poles are supplied compliant with the latest EA Standards and to individual Authority or DNO Standards. These are typically applicable to 11kV, 33kV and 132kV Trident construction. They normally comprise the "W" type fitting attached diametrically opposed on single poles and at opposite ends on "H" pole arrangements. Similar equipment is supplied for use on concrete structures.

OLF also offer a unique opening wood pole ACD allowing climbing without the removal of the barbed wire and subsequent re-wiring. For barbed wire and accessories see page D54.



Opening Wood Pole ACD



ANTI-CLIMBING DEVICES



132kV TOWER ACD's



INFORMATION

Many different designs of tower exist for 132kV lines with standardisation becoming more focused in recent years. Notwithstanding this fact, Anti-Climbing Devices (ACD's) for replacement and new build now comply with EA Technical Specification 43/90.

Overhead Line Fittings (UK) Limited offer products fully compliant with this specification and designed to accommodate varying leg angle sizes. The corner gates are now normally supplied pre-wired. This ensures consistently neat wrapping and is the first step in accomplishing effective tower protection. The ACD's are normally supplied in tower sets of four corner gates with two opening and two non-opening with the Spacer Bars being ordered separately depending on numbers required per tower.



ANTI-CLIMBING DEVICES



275kV AND 400kV NGC TOWER ACD's



INFORMATION

For 275kV and 400kV towers the comprehensive NGC specification for Anti-Climbing Devices introduced in 2002 is now universal. Essentially there are two formats. The All-Round type and the Single-Leg design for wide based towers.

Overhead Line Fittings (UK) Limited are the approved manufacturer of this equipment which is of substantial build to ensure the highest level of security. Items are normally available ex-stock. The designs embrace every variation of tower found on 275kV and 400kV construction and are installed using high specification stainless steel barbed wire. The standard specification employs nine strands of wire, which changes to ten strands when dressing towers with particularly large leg angles.

Barbed wire spacer bars are supplied to suit both configurations. See pages D53 and D54 for Notification Plates, Stainless Steel Barbed Wire, Wire Ties, Hook Bolts and Step Bolts.



ANTI-CLIMBING DEVICES



NOTIFICATION PLATES AND ACCESSORIES



INFORMATION

Overhead Line Fittings (UK) Limited offer the full range of notification plates for wood pole and tower lines compliant with the latest Health and Safety requirements. They are supplied in permanent hard colours, either hard plastic or vitreous enamel on steel and in English and other languages to order. The various plate types come complete with mounting straps or bracketry and fasteners as necessary.

Typical types include:

- Tower and Pole Number Plates,
- Circuit I.D. Plates,
- Danger of Death Plates,
- Helicopter Plates,
- Phase Colour Plates,
- Safe Climbing Height Plates.





ANTI-CLIMBING DEVICES



BARBED WIRE AND ACCESSORIES



INFORMATION

Overhead Line Fittings (UK) Limited supply:

BARBED WIRE - all grades including standard galvanised, galfan quadruple life and stainless steel - all normally available ex-stock.

WIRE TIES - in stainless steel for fixing barbed wire in place.

FASTENERS - for securing ACD's to wood poles and towers.

HOOK BOLTS - for securing opening gates on ACD's .

STEP BOLTS - for climbing purposes on tower corner legs.





OVERHEAD LINE FITTINGS (U.K.) LIMITED

MISCELLANEOUS

Section E



UNIAL



MISCELLANEOUS



Universal electrical jointing paste is a unique electrical jointing compound, formulated to prevent galvanic corrosion and enhance connections in electrical joints.

Unial is especially effective when used on Aluminium to Aluminium and Copper to Aluminium connections. Unial is a neutral grease which inhibits corrosion and is especially recommended for use in compression joints.

Unial, once known as Densal, is a creamy textured yellow paste based on a Calcium, Lithium, Petroleum grease, with the addition of Titanium Dioxide which enhances the electrical performance of the joint, and Zinc Tetraoxy Chromate to prevent oxidation and promote long term stability.

Unial is used in a wide range of applications where permanent low-resistance joints are vital. These include overhead line conductor connections, cable jointing, transformer and switchgear connections, lightning conductors and many more.

Unial is supplied in packs of 250 gram cans or packs of 1kg cans and 25kg kegs.

Unial is available from stock and can be supplied on a next day delivery as required. Please call for further information on Health & Safety and instructions for use.

