GLOBAL QUALITY for Australian powerlines

Helical Overhead Line Fittings
for Australian Conductors

GRAPH
MOSDORFER
KNILL GRUPPE

Introduction

Mosdorfer Graph Pty Ltd specializes in overhead line components for electricity networks and electric rail systems. We sell Insulators, Line Hardware, Helical Fittings, Conductor Accessories and Substation Fittings.

Mosdorfer Graph is the Australian-based operation of MOSDORFER GmbH, based in Weiz, Austria. A part of the Knill Gruppe (Austria), MOSDORFER is a family-owned business in its 12th generation which has been manufacturing metal products in Weiz since the company was established in the year 1712. This rich heritage is at the heart of the company's deep expertise in cast, forged and fabricated metal products.

For the past seven decades, MOSDORFER has focused on the electric power sector, specializing in fittings for overhead Transmission and Distribution networks and Substations. MOSDORFER is now Europe's leading supplier of these products and one of the top four companies in this sector worldwide, being active in more than 70 countries.

MOSDORFER is a leading developer of high-tech fittings, specializing in Extra-High Voltage Transmission Fittings up to 1200kV, High-Temperature Conductor Fittings, and Damping Systems.

This catalogue describes the range of Helical Fittings made by MOSDORFER at its factory in Samutprakarn, Thailand, to suit Australian powerlines. These Fittings are designed to match the metric-dimension conductors listed in the following Standards;

- AS1222.1: Steel Conductors and Stays – Bare Overhead. Part 1 Galvanized (SC/GZ)
- AS1222.2: Steel Conductors and Stays – Bare Overhead. Part 2 Aluminium Clad (SC/AC)
- AS1531: Conductors, Bare Overhead. Aluminium and Aluminium Alloy
- AS1746: Conductors, Bare Overhead, Hard Drawn Copper
- AS3607: Conductors, Bare Overhead, Aluminium and Aluminium Alloy, Steel Reinforced

There are many Helical Fittings made by MOSDORFER that are not listed in this catalogue. We invite your enquiry if your requirement is not met by any of the products that follow.

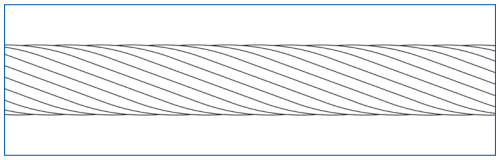
Further details about our products can be found at;

www.mosdorfergraph.com.au
www.mosdorfer.com
www.mosdorferccl.co.uk
www.loruenser-substations.com
www.knillgruppe.com

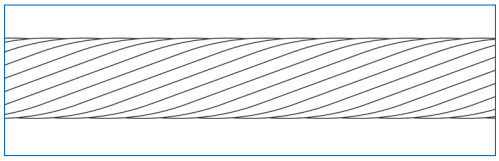
Contents

TECHNICAL GUIDE

Helical products have many applications in Distribution and Transmission overhead networks, for securing bare conductors, covered conductors, and earth-wires with & without internal glass fibres. They serve for protecting, reinforcing and repairing conductors, and also to secure the conductors to rigid structures, either directly or through intermediate hardware.



right hand lay



left hand lay

Helical Fittings are made of formed round wire rods, with the ends shaped depending on the materials and diameters. The formed internal diameter of the helical wires is always smaller than the outside diameter of the conductor on which it is applied. This creates a uniform radial compression, which imparts to the conductor the desirable characteristics of the fitting without causing damage or permanent distortion.

The combination of a fitting's internal diameter, rod diameter, pitch length and applied length are critical to its performance. Modsorfer has a team of engineering experts who decide on the best combination of these attributes, to ensure the fitting will perform as required.

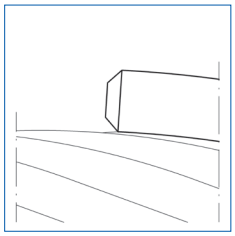
The fittings are delivered as sets of loose rods or sub-sets of groups of rods and are marked with colour codes to aid identification and conductor matching.

The lay direction of the helical rods is normally the same as that of the outermost layer of the conductor. Right-Hand-Lay conductors are most common, although it should be remembered that SC/AC fittings are Left-Hand-Lay unless specified otherwise.

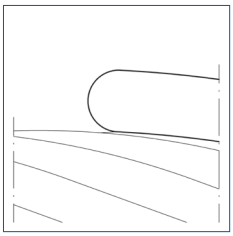
Overview

All helical fittings that are described in this catalogue are designed for conformance with *AS1154.3:2009 – Insulator and conductor fittings for overhead power lines, Part 3: Performance and general requirements for helical fittings*. This standard imposes Type and Batch Test regimes for helical fittings to verify Dimensions, Material specifications, Mechanical Strength and Electrical performance where applicable.

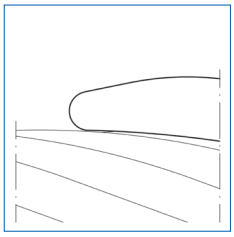
Design Principles



Chamfered



Ball-End



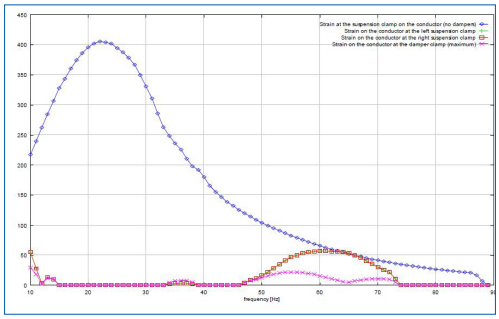
Parrot-Beak

The number of rods per fitting is determined by the conductor characteristics for which the fitting is designed. Helical Deadends, Splices, Top Ties and Side Ties are supplied as sub-sets. A sub-set is where multiple rods are glued together, which means they can be applied simultaneously to make installation faster and easier. The number of rods per sub-set is limited in order to make the fitting easy to install.

In some instances, the fitting is supplied as a group of loose rods, to be installed individually – this is most often the case with Armour Rods and Repair Rods, although these can be supplied as sub-sets if required.

All metallic helical products are designed to provide small spaces between the rods to avoid a closed ring around the conductor.

There are three types of end finish that can be supplied, mainly dependent on the voltage of the line upon which the fitting will be installed; Chamfered, Ball-end and Parrot-Beak.



Vibration study

Helical high tension overhead lines fittings are tested and qualified according to international standards include mechanical tests such as breaking and slipping load tests as well as corona tests and corrosion resistant tests, whilst vibration and fatigue tests are performed in cooperation with accredited International test and development institutions.

The aeolion vibration tests of helical fittings for high tensions overhead lines are carried out on a 40m long test span in our vibration test laboratory. Mosdorfer also provides vibration studies for new or existing lines.

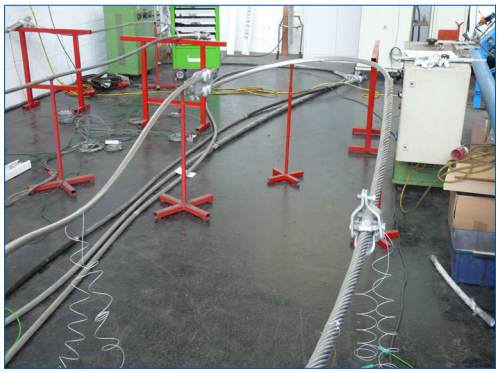
The vibration studies consider line route terrain, climatic conditions, conductor line tension, configuration, span length, system voltage and self damping characteristic of the conductor if known.

Vibration measurement with recorders at an HSU

Field measurement on existing overhead lines

For existing lines vibration measurements provide valuable data for vibration studies. Mosdorfer can make field measurements, which assists with system life expectancy calculations. By using these measurements, (each taking approximately 3 months) combined with conductor self damping tests, our recommendation can be optimised.

Helical fittings for High Temperature conductors
As power requirements increase, high temperture conductors with a capacity of up 235 °C will be more common. However the conductor fittings must not be affected by high temperatures and must maintain strength and mechanical performance. It may therefore be necessary to increase the mass of the unit to reduce thermal stresses. This can be done by using an extra set of rods. Long term tests prove the efficacy of this method.



Heat cycle test with suspension clamps for high temperature conductors

Materials

The material used in metallic fittings is the same as that in the outer lay of the conductor, to ensure that electrolytic corrosion is not an issue.

Non-metallic fittings such as Spiral Vibration Dampers (SVDs) are made from extruded PVC with UV Stabilizers to ensure longevity of the fittings in a fully-exposed outdoor environment.

Holding Strengths for Splices & Deadends

AS1154.3 at Clause 2.3 stipulates that conductor fittings subject to tensile loads (Anchor and Tension fittings) must be able to withstand a tensile force of 90% of the Nominated Breaking Load of the conductor for 1 minute.

Mosdorfer's Splices and Deadends are designed to satisfy this requirement, although there are some exceptions.

For example, 'ADE' Deadends and 'ALS' Splices can be applied to ACSR conductors, however they should be treated as "Limited Tension" fittings.

Note also that compliance with Clause 2.3 is not guaranteed when Mosdorfer Splices and Deadends are used on Greased Conductors.

For detailed information relating to the holding strengths of Splices and Deadends, please refer to the relevant product sections of this catalogue.

Colour Codes for Insulator Neck Diameters	
Insulator Neck Diameter (mm)	Colour
54	Red
76	Yellow
112	Blue

Colour Codes for Conductors	
Conductor Wire Diameter (mm)	Colour
1.00	Black
1.25	Green
1.75	Purple
2.00	Yellow
2.25	Brown
2.50	Blue
2.75	White
3.00	Red
3.25	Orange
3.50	Purple
3.75	Black
4.25	Brown
4.50	Green
4.75	Blue

Colour Codes

Colour Codes are included on all Helical Fittings as required by AS1154.3-2009, to aid identification and to minimize the likelihood that a fitting will be applied to a conductor for which it is not designed. The designated Colour Code is printed on the carton label and also on the individual product label.

Helical Fittings that are designed to be fitted directly on the neck of Pin or Post-Type insulators have a coloured paint band on one leg to identify the neck diameter for which the fitting is designed.

Deadends have a coloured paint band at the crossover point.

Other conductor fittings have the Colour Code applied at the centre of the fitting.

Fittings for SC/AC conductors have an additional Green band placed midway along one leg of the fitting.

Product Numbering System

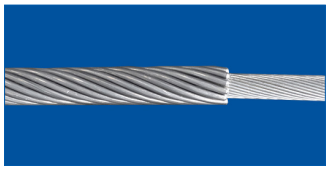
All Mosdorfer Helical Fittings have a Part Number that contains some information about the type and size of fitting. The product tables in this catalogue include Part Numbers alongside the product Drawing Number.

Part Numbers follow the conventions listed below. Fitting sizes are given in numerals, shown here as a hash (#).

AAR-###	Armour Rod for Aluminium & ACSR conductor
ACAR-####L	Armour Rod for SC/AC conductor (LHL)
ACLS-####	Line Splice for ACSR conductor
ACLS-####L	Line Splice for SC/AC conductor (LHL)
ADE-####	Deadend for Aluminium & ACSR* conductor
ALS-####	Line Splice for Aluminium and ACSR* conductor
AWDT-###-##	Distribution Tie for Aluminium & ACSR conductor
AWST-###-##	Side Tie for Aluminium & ACSR conductor
CAR-###	Armour Rod for Copper conductor
CDE-####	Deadend for Copper conductor
CLS-####	Line Splice for Copper conductor
FSE-####	Deadend for Aluminium & ACSR conductor
FSE-####L	Deadend for SC/AC conductor (LHL)
GAR-###	Armour Rod for Galvanized Steel conductor
GDT-###-##	Distribution Tie for Galvanized Steel conductor
GLS-####	Line Splice for Galvanized Steel conductor
GST-###-##	Side Tie for Galvanized Steel conductor
SGG-####	Deadend for Galvanized Steel conductor
SVD-####	Spiral Vibration Damper

*Limited Tension

SPLICES



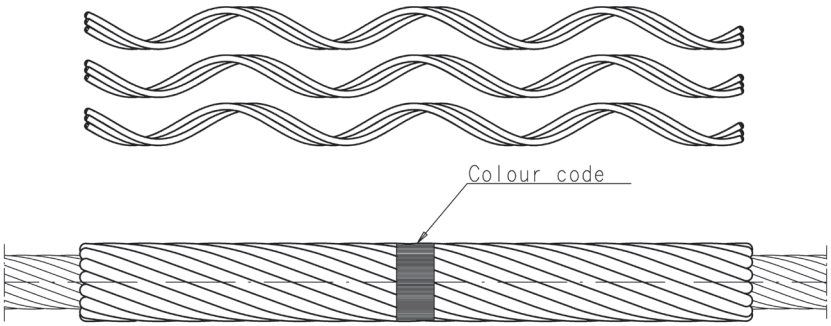
Splices are used to repair conductors where some or all strands are broken. They will restore Mechanical Strength to a level that is 90% of the Nominated Breaking Load of all homogenous Aluminium, Steel or Copper conductors.

Importantly, they will restore full conductivity, such that the resistance of the Splice will be no greater than that of an equivalent length of the conductor.

Splices are always supplied in Sub-sets so that mineral grit necessary to grip the conductor can be applied to the inner surface.

The number of Sub-sets is dictated by the need to make the fitting easily applied to the conductor.

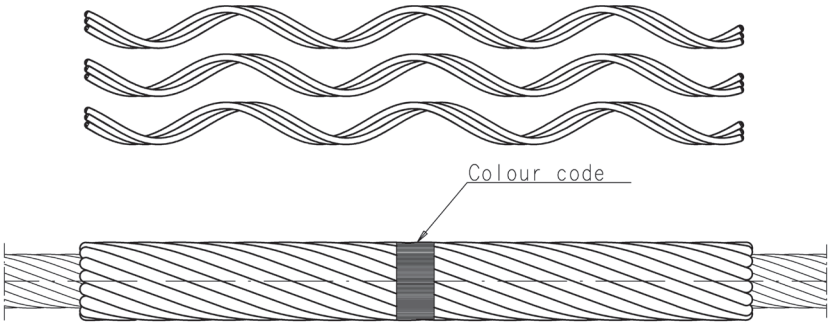
Splices for Aluminium conductors to AS1531



material: aluminium alloy							
Part No.	Drawing No.	Sub-Sets	Stranding AAC, AAAC	Outside Diam.	Fitting Range	Colour Code	Std. Pack
ALS-0514	KMF041957	4-4	7/1.75	5.25	5.14 - 6.26	Purple	70
ALS-0655	KMF041836	3-3-3	7/2.25	6.75	6.55 - 6.89	Brown	50
ALS-0750	KMF040678	3-3-3	7/2.50	7.50	7.36 - 7.57	Blue	35
ALS-0758	KMF041837	3-4-4	7/2.75	8.25	7.58 - 8.29	White	20
ALS-0895	KMF040636	3-3-4	7/3.00	9.00	8.95 - 9.34	Red	20
ALS-1122	KMF040659	3-3-3	7/3.75	11.25	11.22 -11.73	Black	25
ALS-1330	KMF040643	3-3-3	7/4.50	13.50	13.30 - 13.83	Green	15
ALS-1384	KMF040642	3-3-4	7/4.75	14.25	13.84 - 14.34	Blue	10
ALS-1625	KMF040646	3-4-4	19/3.25	16.25	16.25 - 16.75	Orange	10
ALS-1676	KMF041838	3-4-4	19/3.50	17.50	16.76 - 17.79	Purple	10
ALS-1780	KMF040647	3-3-4	19/3.75	18.75	17.80 - 18.90	Black	5
ALS-2100	KMF041011	3-3-3	37/3.00	21.00	21.00 - 21.59	Red	5
ALS-2160	KMF041839	4-4-4	37/3.25	22.75	21.60 - 22.88	Orange	5
ALS-2289	KMF041840	3-3-4	19/4.75	23.75	22.89 - 23.84	Blue	5
ALS-2479	KMF041841	3-4-4	37/3.75	26.25	24.79 - 26.69	Black	5
ALS-2854	KMF041842	3-4-4	61/3.25	29.25	28.54 - 30.00	Orange	5
ALS-3001	KMF041843	3-4-4	61/3.50	31.50	30.00 - 31.95	Purple	5
ALS-3198	KMF041844	3-4-4	61/3.75	33.75	31.96 – 33.97	Black	5

These can be used as Limited Tension fittings on ACSR conductors with the same outer stranding.

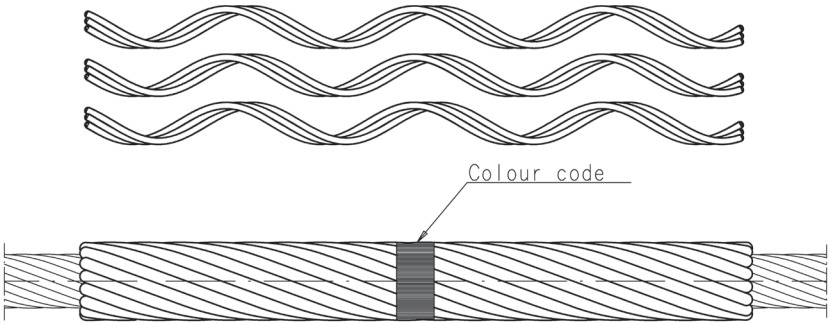
Splices for ACSR conductor to AS3607



material: aluminium clad steel							
Part No.	Drawing No.	Sub-Sets	Stranding AAC, AAAC	Outside Diam.	Fitting Range	Colour Code	Std. Pack
ACLS-0525	KMF040631	3-3-2	3/4/1.75	5.25	5.00 - 5.29	Purple	10
ACLS-0750	KMF040633	3-3-3	6/1/2.50, 3/4/2.50	7.50	7.36 - 7.57	Blue	10
ACLS-0934	KMF041886	3-3-4	6/1/3.00, 4/3/3.00	9.00	8.95 - 9.34	Red	10
ACLS-1148	KMF041958	3-3-3	6/1/3.75, 4/3/3.75	11.25	11.22 - 11.73	Black	10
ACLS-1384	KMF040644	3-3-4	6/4.75 + 7/1.60	14.25	13.84 - 14.34	Blue	10
ACLS-1728	KMF041932	3-3-4	30/7/2.50	17.50	16.76 - 17.79	Blue	10
ACLS-2100	KMF040648	3-3-3	30/7/3.00	21.00	21.00 - 21.59	Red	5
ACLS-2462	KMF041959	4-4-4-3	30/7/3.50	24.50	23.60 - 25.63	Purple	5

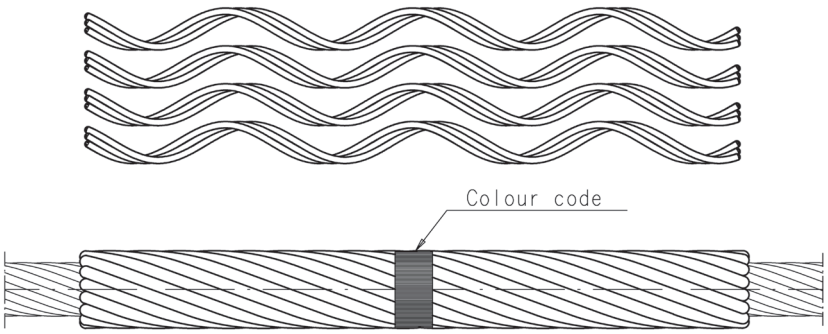
These can be used to restore Mechanical Strength to Aluminium-based conductors with the same outer stranding.

Splices for Hard-Drawn Copper conductors AS1746



material: copper							
Part No.	Drawing No.	Sub-Sets	Stranding (Cu)	Outside Diam.	Fitting Range	Colour Code	Std. Pack
CLS-0290	KMF041872	3-3	7/1.00	3.00	2.90 - 3.69	Black	50
CLS-0370	KMF041175	4-4	7/1.25	3.75	3.70 - 4.79	Green	50
CLS-0480	KMF040611	3-3-3	7/1.75	5.25	4.80 - 5.25	Purple	50
CLS-0580	KMF040612	3-3-3	7/2.00	6.00	5.80 - 6.45	Yellow	50
CLS-0800	KMF040613	4-4-3	7/2.75, 19/1.75	8.25, 8.75	8.00 - 8.75	White / Purple	20
CLS-1000	KMF040615	3-3-3	19/2.00, 7/3.50	10.00, 10.50	10.00 - 10.54	Yellow / Purple	10
CLS-1108	KMF041866	3-3-3	7/3.75	11.25	11.08 - 11.69	Black	10
CLS-1205	KMF041867	3-3-4	37/1.75	12.25	12.05 - 12.54	Purple	10
CLS-1310	KMF041868	4-4-4	19/2.75	13.75	13.10 - 14.05	White	10
CLS-1500	KMF041049	4-4-4	19/3.00	15.00	15.00 - 15.50	Red	5
CLS-1639	KMF041869	4-4-4	37/2.50	17.50	16.39 - 17.66	Blue	5
CLS-1868	KMF041870	4-4-4	37/2.75	19.25	18.68 - 19.64	White	5
CLS-2018	KMF041871	3-4-4-4	37/3.00	21.00	20.49 - 21.54	Red	5
CLS-2395	KMF041873	4-4-4-4	61/2.75	24.75	23.95 - 24.97	White	5

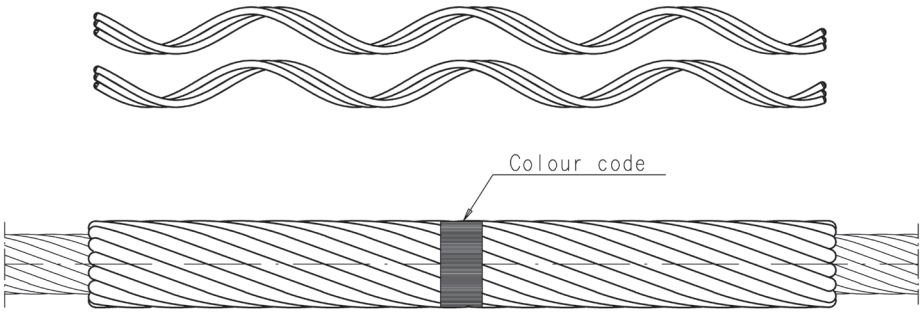
Splices for Galvanized Steel (SC/GZ) conductors to AS1222.1



material: galvanized steel							
Part No.	Drawing No.	Sub-Sets	Stranding AAC, AAAC	Outside Diam.	Fitting Range	Colour Code	Std. Pack
GLS-0415	KMF040655	3-4	3/2.00	4.31	3.85 - 4.49	Yellow	30
GLS-0550	KMF040618	3-3-3	3/2.75	5.93	5.50 - 5.94	White	30
GLS-0595	KMF041746	3-3-4	7/2.00	6.00	5.95 - 6.19	Yellow	20
GLS-0790	KMF040620	3-3-4	7/2.75	8.25	7.90 - 8.25	White	40
GLS-0970	KMF041835	3-3-4	7/3.25	9.75	9.70 - 10.20	Orange	25
GLS-1000	KMF040621	3-3-4	19/2.00	10.00	9.70 - 10.20	Yellow	25
GLS-1130	KMF041754	3-3-4	7/3.75	11.25	11.10 - 11.79	Black	20
GLS-1300	KMF040622	3-3-4	19/2.75	13.75	13.00 - 13.99	White	10
GLS-1600	KMF041008	3-3-3-3	19/3.25	16.25	16.00 - 16.44	Orange	10

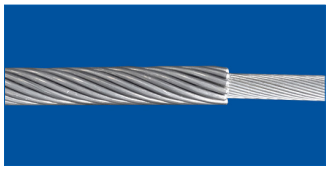
Can be used as Limited Tension fittings on ACSR conductors with the same outer stranding.

Splices for Aluminium-Clad Steel (SC/AC) conductors to AS1222.2



material: aluminium-clad steel							
Part No.	Drawing No.	Sub-Sets	Stranding AAC, AAAC	Outside Diam.	Fitting Range	Colour Code	Std. Pack
ACLS-0550L	KMF040225	4-4	3/2.75	5.93	5.50 - 5.94	White	40
ACLS-0595L	KMF041852	4-4	3/3.00	6.47	5.95 - 6.74	Red	25
ACLS-0675L	KMF040156	3-3-3	3/3.25	7.00	6.75 - 7.27	Orange	15
ACLS-0800L	KMF041853	3-4-4	3/3.75, 7/2.75	8.08, 8.25	8.00 - 8.29	Black / White	25
ACLS-0830L	KMF041854	3-3-4	7/3.00	9.00	8.30 - 9.25	Red	20
ACLS-0926L	KMF041619	3-4-4	7/3.25	9.75	9.26 - 10.15	Orange	20
ACLS-1016L	KMF041855	3-4-4	7/3.75	11.30	10.16 - 11.45	Black	20
ACLS-1146L	KMF041856	3-4-4	7/4.25	12.80	11.46 - 12.98	Brown	20
ACLS-1299L	KMF041857	3-4-4	19/2.75	13.80	12.99 - 13.95	White	10
ACLS-1488L	KMF041858	3-4-4	19/3.00	15.00	14.88 - 15.74	Red	10
ACLS-1575L	KMF041618	3-4-4	19/3.25	16.30	15.75 - 16.51	Orange	10
ACLS-1787L	KMF041859	3-3-4	19/3.75	18.80	17.87 - 18.97	Black	5
ACLS-2060L	KMF041860	3-4-4	19/4.25	21.30	20.60 - 21.76	Brown	5

ARMOUR RODS

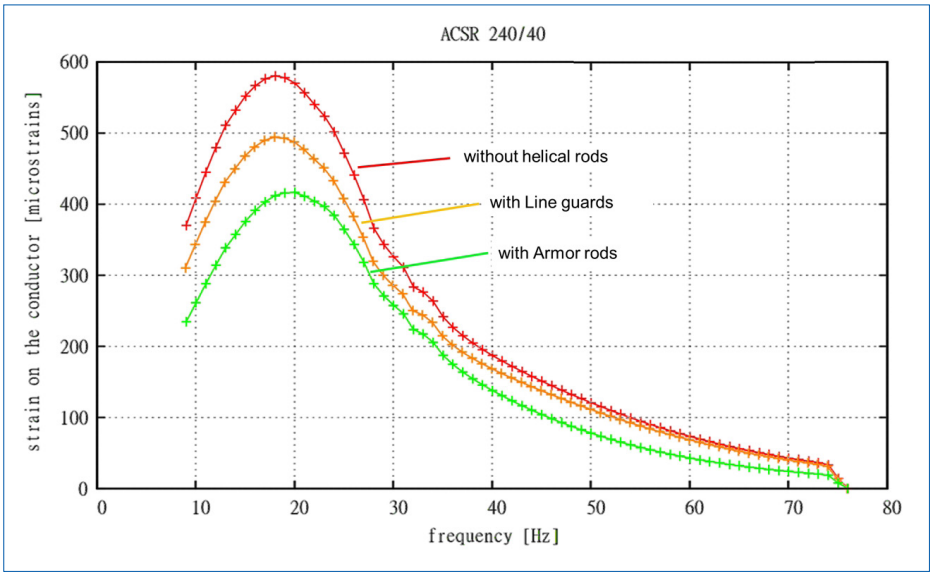


Armour Rods are listed as a Protective Fitting in AS1154.3. They are designed to reduce mechanical damage due to bending or compression, particularly at support points. Armour Rods provide a degree of protection from electrical arcing.

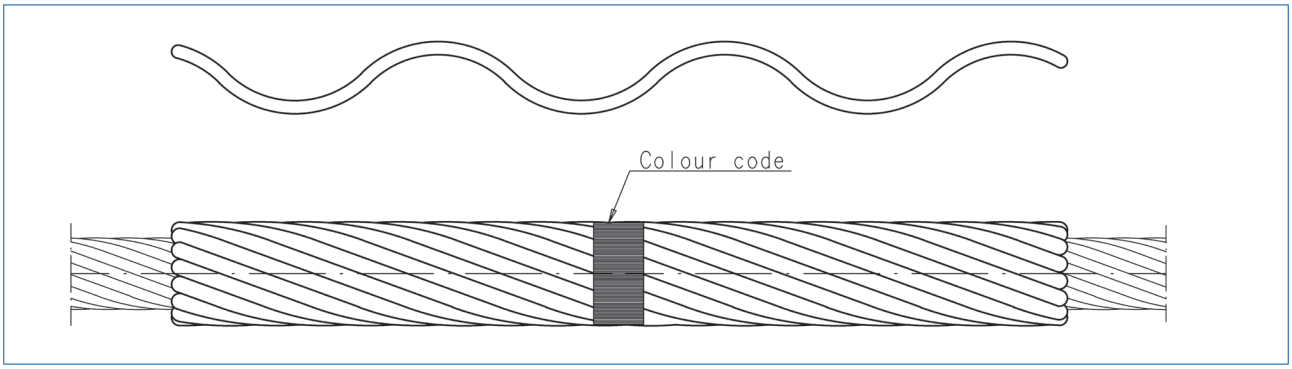
Armour Rods also have a limited repair function because they will improve mechanical strength and electrical conductivity to a damaged conductor.

Normal industry practice is to avoid usage of Armour Rods for repair purposes where more than 20% of outer strands are broken.

Armour Rods are usually supplied as sets of individual rods, although they can be Sub-setted up to a rod diameter of 6mm- if preferred, just add "–SS" to the part number.

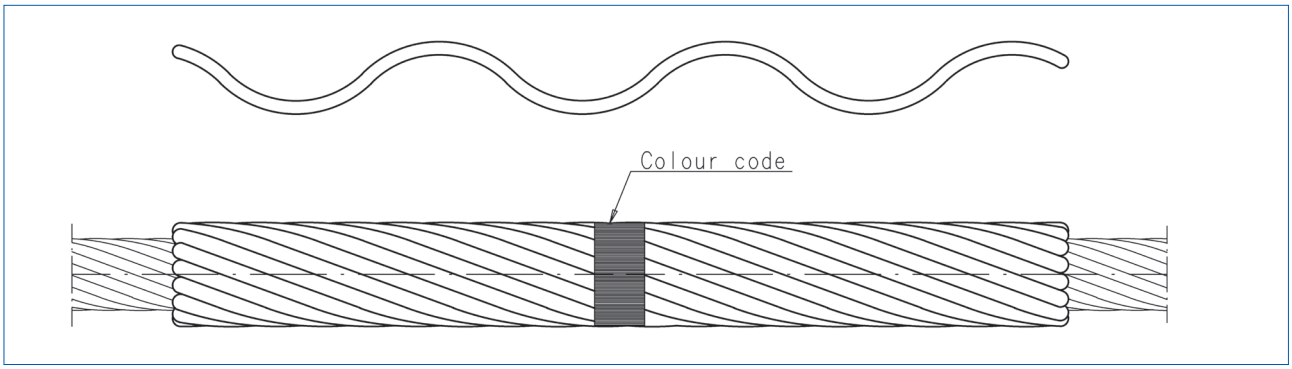


Armour Rods for Aluminium-based conductors to AS1531 and ACSR conductors to AS3607



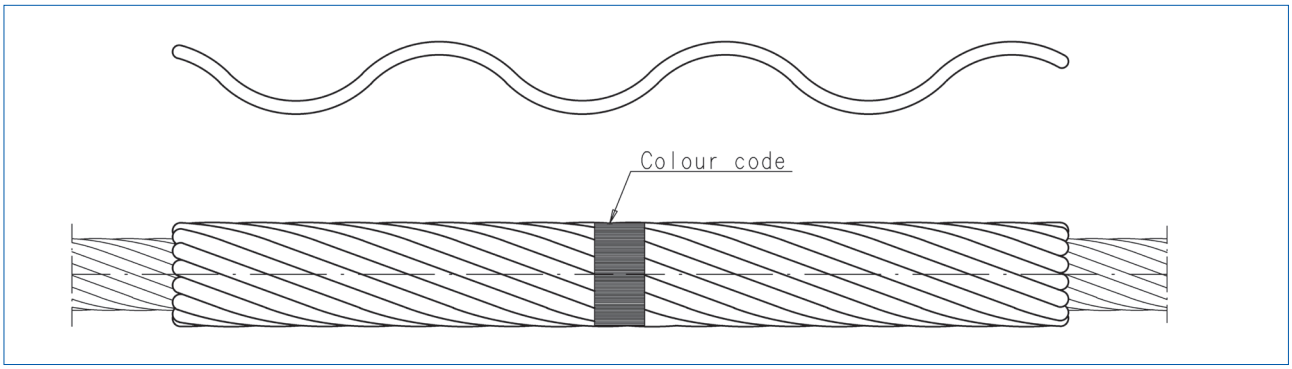
material: aluminium alloy							
Part No.	Drawing No.	Stranding AAC/AAAC	Stranding ACSR	Outside Diam.	Fitting Range	Colour Code	Std. Pack
AAR-053	KMF040591	7/1.75	6/1/1.75, 3/4/1.75	5.25	5.10 - 5.49	Purple	100
AAR-068	KMF041696	7/2.25	-	6.75	6.60 - 6.94	Brown	100
AAR-075	KMF040592	7/2.50	6/1/2.50, 3/4/2.50	7.50	7.00 - 7.59	Blue	75
AAR-083	KMF041695	7/2.75	-	8.25	7.85 - 8.29	White	50
AAR-090	KMF040472	7/3.00	6/1/3.00, 4/3/3.00	9.00	8.85 - 9.39	Red	50
AAR-113	KMF040599	7/3.75	6/1/3.75, 4/3/3.75	11.25	10.90 - 11.59	Black	40
AAR-135	KMF040607	7/4.50	-	13.50	13.20 -13.99	Green	30
AAR-143	KMF040603	7/4.75	6/4.75+7/1.60	14.25	14.00 - 14.99	Blue	30
AAR-163	KMF040610	19/3.25	-	16.25	16.05 - 16.64	Orange	25
AAR-175	KMF041694	19/3.50	30/7/2.50	17.50	17.25 - 17.89	Blue / Purple	25
AAR-188	KMF040605	19/3.75	-	18.75	18.30 - 18.89	Black	20
AAR-210	KMF040608	37/3.00	30/7/3.00	21.00	20.90 - 21.79	Red	10
AAR-228	KMF041693	37/3.25	-	22.75	21.50 - 23.04	Orange	10
AAR-238	KMF041016	19/4.75	-	23.75	23.62 - 24.79	Blue	10
AAR-245	KMF041692	37/3.50	30/7/3.50	24.50	23.60 - 24.80	Purple	10
AAR-263	KMF041691	37/3.75	-	26.25	25.85 - 26.30	Black	10
AAR-258	KMF042042	-	54/7/3.00	27.00	25.80 - 27.30	Red	10
AAR-293	KMF041690	61/3.25	54/7/3.25	29.25	28.95 - 29.48	Orange	10
AAR-315	KMF041424	61/3.50	54/7/3.50	31.50	30.70 - 32.23	Purple	10
AAR-338	KMF041689	61/3.75	54/3.75+19/2.25	33.75	33.75 - 35.34	Black	10
AAR-495	KMF041688	91/4.5	-	49.50	48.23 - 50.57	Green	10

Armour Rods for Galvanized Steel (SC/GZ) conductors to AS1222.1



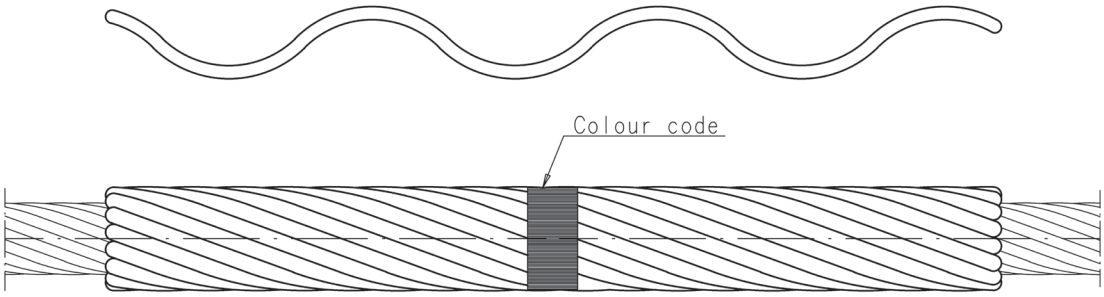
material: galvanized steel						
Part No.	Drawing No.	Stranding (SC/GZ)	Outside Diam.	Fitting Range	Colour Code	Std. Pack
GAR-043	KMF040656	3/2.00	4.31	4.10 - 4.39	Yellow	75
GAR-048	KMF040475	3/2.75	5.93	4.80 - 6.00	White	50
GAR-060	KMF041395	7/2.00	6.00	6.00 - 6.34	Yellow	50
GAR-083	KMF041697	7/2.75	8.25	7.85 - 8.29	White	40
GAR-098	KMF041698	7/3.25	9.75	9.50 - 10.24	Orange	30
GAR-100	KMF041423	19/2.00	10.00	9.90 - 10.49	Yellow	30
GAR-113	KMF041042	7/3.75	11.25	11.10 - 11.79	Black	20
GAR-138	KMF041493	19/2.75	13.75	13.59 - 14.35	White	10
GAR-163	KMF041494	19/3.25	16.25	15.12 - 16.36	Orange	10

Armour Rods for Copper-based conductors to AS1746



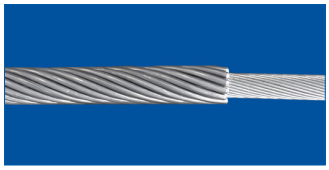
material: copper						
Part No.	Drawing No.	Stranding (Cu)	Outside Diam.	Fitting Range	Colour Code	Std. Pack
CAR-030	KMF041727	7/1.00, 7/1.25	3.00, 3.75	2.83 - 3.82	Black / Green	50
CAR-048	KMF041386	7/1.75	5.25	4.80 - 5.25	Purple	30
CAR-060	KMF040483	7/2.00	6.00	6.00 - 6.34	Yellow	35
CAR-080	KMF040627	7/2.75	8.25	8.00 - 8.49	White	30
CAR-088	KMF041719	19/1.75	8.75	8.50 - 8.97	Purple	25
CAR-100	KMF040629	19/2.00	10.00	9.44 - 10.39	Yellow	25
CAR-105	KMF041388	7/3.50	10.50	10.36 - 10.80	Purple	25
CAR-113	KMF041720	7/3.75	11.25	10.81 - 11.82	Black	25
CAR-123	KMF041721	37/1.75	12.25	11.83 - 12.82	Purple	20
CAR-138	KMF041722	19/2.75	13.75	12.83 - 13.82	Whtie	20
CAR-150	KMF041723	19/3.00	15.00	14.83 - 15.82	Red	20
CAR-175	KMF041724	37/2.50	17.50	16.83 - 17.82	Blue	10
CAR-193	KMF041725	37/2.75	19.25	18.83 - 19.82	White	10
CAR-210	KMF041391	37/3.00	21.00	20.90 - 21.79	Red	10
CAR-248	KMF041726	61/2.75	24.75	23.82 - 24.82	White	10

Armour Rods for Aluminium-Clad Steel (SC/AC) conductors to AS1222.2



material: aluminium-clad steel						
Part No.	Drawing No.	Stranding SC/AC	Outside Diam.	Fitting Range	Colour Code	Std. Pack
ACAR-0592L	KMF040154	3/2.75	5.93	5.70 - 6.20	White	50
ACAR-0648L	KMF041718	3/3.00	6.46	6.12 - 6.74	Red	50
ACAR-0700L	KMF041709	3/3.25	7.00	6.75 - 7.27	Orange	50
ACAR-0825L	KMF041710	3/3.75, 7/2.75	8.08, 8.25	7.85 - 8.29	Black / White	50
ACAR-0900L	KMF041711	7/3.00	9.00	8.78 - 9.23	Red	40
ACAR-0975L	KMF041712	7/3.25	9.75	9.50 - 10.24	Orange	25
ACAR-1125L	KMF041708	7/3.75	11.25	10.82 - 11.43	Black	25
ACAR-1275L	KMF041707	7/4.25	12.75	12.11 - 12.80	Brown	15
ACAR-1375L	KMF041706	19/2.75	13.75	13.58 - 14.35	White	15
ACAR-1500L	KMF041705	19//3.00	15.00	14.95 - 15.87	Red	10
ACAR-1625L	KMF041704	19/3.25	16.25	15.75 - 16.51	Orange	10
ACAR-1875L	KMF041703	19/3.75	18.75	17.88 - 19.15	Black	10
ACAR-2125L	KMF041702	19/4.25	21.25	20.70 - 21.46	Brown	10

Line Guards and Protective Rods



Line Guards and Protective Rods are an economic alternative to Armour Rods, providing a means of protecting conductors from wear and abrasion at support points, and at locations where Live-Line Clamps are installed.

Mosdorfer makes Line Guards and Protective Rods for all conductors listed in the Armour Rod section of this catalogue.

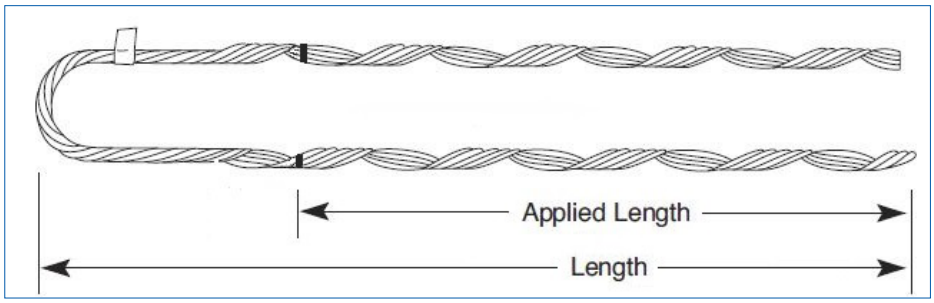
To specify a Line Guard, replace “AR” in the Armour Rod part number with “LG”. To specify a Protective Rod, replace “AR” with “PR”.

Line Guards and Protective Rods are normally supplied as sets of individual rods. If Sub-sets, up to a rod dieamter of 6mm, are required, add “-SS” to the Part Number.

DEADENDS

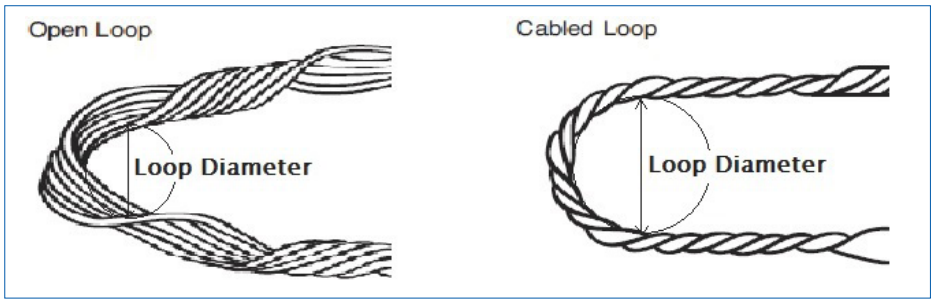
Helical Deadends made by Mosdorfer are a simple and highly-effective means of terminating overhead conductors. They are designed to apply a distributed radial pressure on the conductor, to avoid stress and damage that can be caused by Wedge or Bolted clamps.

Deadends have two lengths that are important to the performance of the fitting – the overall length and the applied length. The applied length is the zone from the cross-over marks to the ends, where the fitting "grips" the conductor.



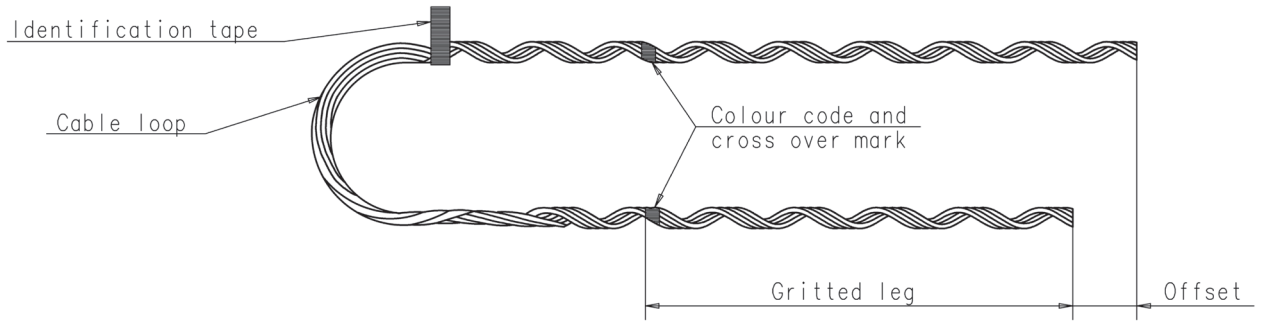
The way a Deadend grips the conductor is determined by the rod diameter, the pitch, the pitch length, the applied length, the diameter of the conductor and the material from which the conductor and the fitting are made.

Deadends can be supplied as open-loop or cabled loop, as shown below. Note that the choice of open or cabled loop does not have any effect on the rated holding strength of the fitting.



An important characteristic of a Deadend is its Loop Diameter. This is the inside diameter of the loop, and it determines the hardware that can be used with the fitting.

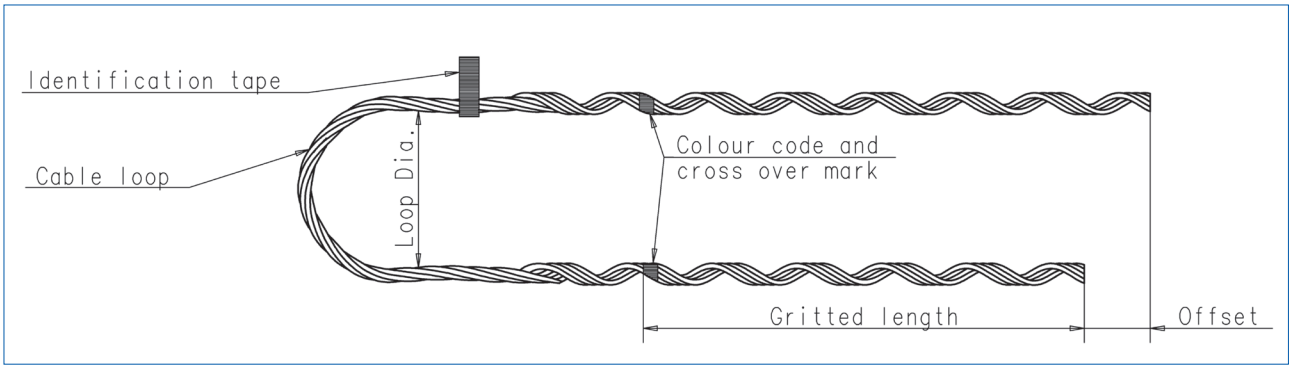
Deadend Terminations for Aluminium based conductors to AS1531*



material: aluminium alloy							
Part No.	Drawing No.	Stranding AAC, AAAC	Outside Diam.	Loop Diam	Fitting Range	Colour Code	Std. Pack
ADE-0480	KMF041038	7/1.75	5.25	67	4.80 - 5.25	Purple	50
ADE-0655	KMF040996	7/2.25	6.75	67	6.55 - 7.09	Brown	50
ADE-0735	KMF040473	7/2.50	7.50	67	7.35 - 7.60	Blue	40
ADE-0761	KMF041768	7/2.75	8.25	67	7.61 - 8.64	White	40
ADE-0865	KMF040637	7/3.00	9.00	67	8.65 -9.35	Red	40
ADE-1080	KMF040623	7/3.75	11.25	67	10.82 - 11.30	Black	25
ADE-1306	KMF040626	7/4.50	13.50	67	13.06 - 14.06	Green	15
ADE-1385	KMF040997	7/4.75	14.25	67	13.85 - 14.44	Blue	10
ADE-1565	KMF040820	19/3.25	16.25	76	15.65 - 16.89	Orange	10
ADE-1671	KMF041769	19/3.50	17.50	76	16.71 - 18.54	Blue	10
ADE-1855	KMF040998	19/3.75	18.75	76	18.55 - 19.34	Black	15
ADE-1880	KMF041367	37/3.00	21.00	76	18.80 - 21.26	Red	10
ADE-2185	KMF041770	37/3.25	22.75	76	21.85 - 23.74	Orange	10
ADE-2375	KMF040999	19/4.75	23.75	76	23.75 - 26.18	Blue	10
ADE-2530	KMF041000	37/3.75	26.25	76	25.30 - 27.27	Black	10
ADE-2860	KMF041001	61/3.25	29.25	76	28.60 - 30.83	Orange	10
ADE-3083	KMF041771	61/3.50	31.50	76	30.83 - 32.74	Purple	10
ADE-3275	KMF041566	61/3.75	33.75	76	32.75 - 34.85	Black	10

*These can be used as Limited Tension fittings on ACSR conductors with the same outer stranding.

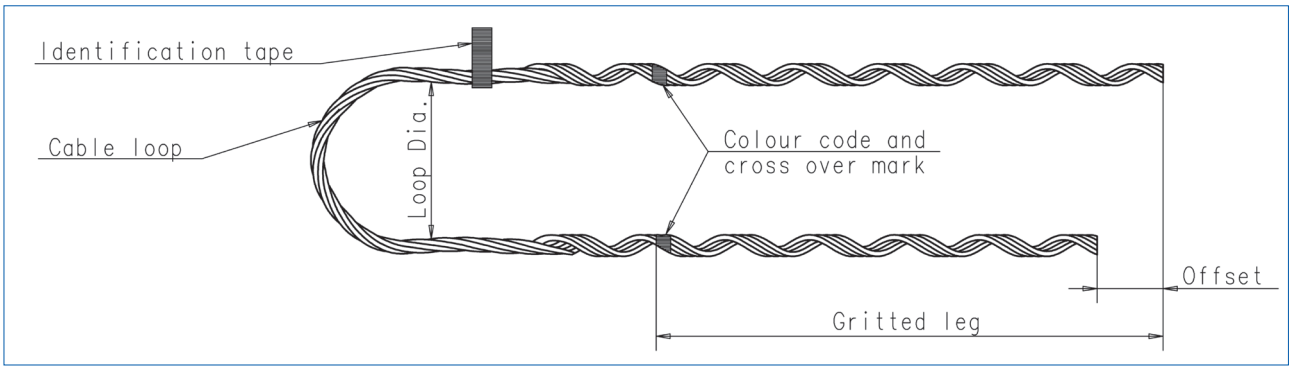
Deadend Terminations for ACSR conductors to AS3607*



material: aluminium clad steel							
Part No.	Drawing No.	Stranding ACSR	Outside Diam.	Loop Diam	Fitting Range	Colour Code	Std. Pack
FSE-0530	KMF040828	3/4/1.75	5.25	67	5.15 - 5.39	Purple	75
FSE-0750	KMF041766	6/1/2.50, 3/4/2.50	7.50	67	6.20 - 7.89	Blue	30
FSE-0827	KMF041767	6/1/3.00, 4/3/3.00	9.00	67	8.30 - 9.26	Red	30
FSE-1090	KMF041765	6/1/3.75, 4/3/3.75	11.25	67	10.89 - 11.35	Black	20
FSE-1430	KMF040830	6/4.75+7/1.60	14.25	67	13.85 - 14.44	Blue	10
FSE-1725	KMF041542	30/7/2.50	17.50	76	17.28 - 18.75	Blue	10
FSE-1935	KMF041565	30/7/3.00	21.00	76	19.35 - 21.34	Red	10
FSE-2408	KMF041883	30/7/3.50	24.50	76	24.08 - 26.32	Purple	10
FSE-2633	KMF041884	54/7/3.50	27.00	76	26.33 - 28.56	Red	10
FSE-2857	KMF041885	54/7/3.25	29.25	76	28.57 - 30.79	Orange	10
FSE-3080	KMF041901	54/7/3.50	31.50	76	30.80 - 32.70	Purple	10
FSE-3271	KMF041902	54/3.75+19/2.25	33.75	76	32.71 - 34.85	Black	10
FSE-4250	KMF041903	54/4.75+19/2.85	42.75	76	42.50 - 44.45	Blue	10

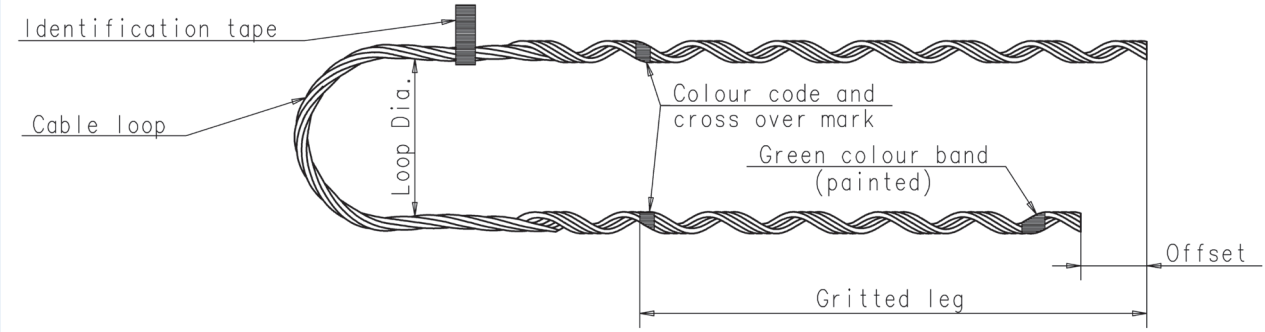
*These can be used on AAC and AAAC conductors with the some outer stranding.

Deadend Terminations for Galvanized Steel (SC/GZ) conductors to AS1222.1



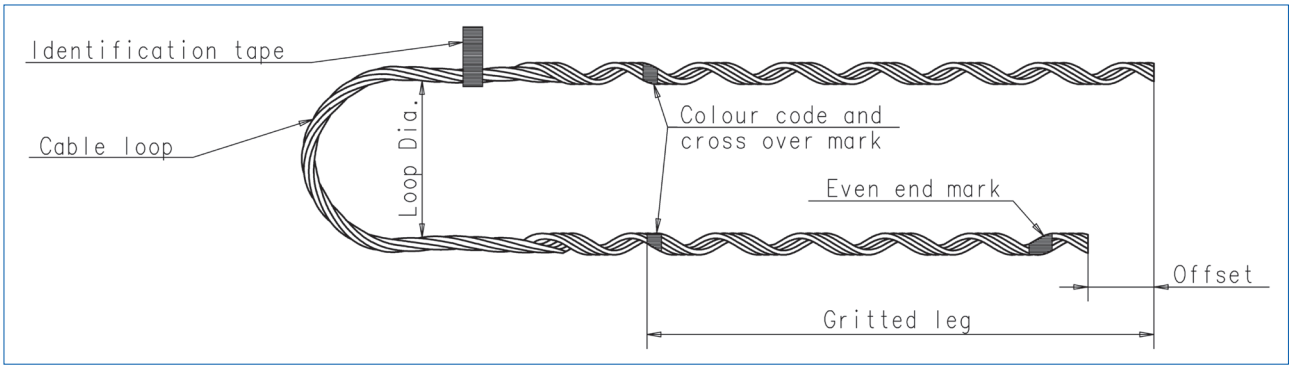
material: galvanized steel							
Part No.	Drawing No.	Stranding SC/GZ	Outside Diam.	Loop Diam	Fitting Range	Colour Code	Std. Pack
SGG-040	KMF040825	3/2.00	4.31	45	3.62 - 4.72	Yellow	50
SGG-048	KMF040833	7/1.60	4.80	57	4.36 - 4.99	Purple	50
SGG-055	KMF040803	3/2.75	5.93	57	5.50 - 5.94	White	50
SGG-060	KMF040827	7/2.00	6.00	57	5.95 - 6.19	Yellow	50
SGG-083	KMF040834	7/2.75	8.25	57	7.90 - 8.29	White	20
SGG-092	KMF041004	7/3.25	9.75	76	9.27 - 10.40	Orange	20
SGG-100	KMF040798	19/2.00	10.00	76	9.70 - 10.20	Yellow	20
SGG-104	KMF041033	7/3.75	11.25	76	10.45 - 11.70	Black	15
SGG-138	KMF040799	19/2.75	13.75	76	13.05 - 13.97	White	10
SGG-160	KMF041730	19/3.25	16.25	90	16.00 - 16.40	Orange	10

Deadend Terminations for Aluminium-Clad Steel (SC/AC) conductors to AS1222.2.



material: aluminium-clad steel							
Part No.	Drawing No.	Stranding SC/AC	Outside Diam.	Loop Diam	Fitting Range	Colour Code	Std. Pack
FSE-0582L	KMF041005	3/2.75, 3/3.00	5.93, 6.47	67	5.82 - 6.54	White / Red	50
FSE-0655L	KMF041888	3/3.25	7.00	67	6.55 - 7.38	Orange	35
FSE-0737L	KMF041889	3/3.75, 7/2.75	8.08, 8.25	67	7.37 - 8.26	Black / White	30
FSE-0827L	KMF041890	7/3.00	9.00	67	8.27 - 9.26	Red	10
FSE-0927L	KMF041891	7/3.25	9.75	67	9.27 - 10.40	Orange	10
FSE-1041L	KMF041892	7/3.75	11.25	67	10.41 - 11.70	Black	10
FSE-1220L	KMF041893	7/4.25	12.75	67	12.20 - 13.44	Brown	10
FSE-1345L	KMF041894	19/2.75	13.75	67	13.45 - 14.67	White	10
FSE-1468L	KMF041895	19/3.00, 19/3.25	15.00, 16.25	76	14.68 - 16.60	Red / Orange	10
FSE-1740L	KMF041896	19/3.75	18.75	76	17.40 - 19.00	Black	10
FSE-2021L	KMF041897	19/4.25	21.25	76	20.31 - 21.49	Brown	10

Deadend Terminations for Copper-based conductors to AS1746



material: copper

Part No.	Drawing No.	Stranding Cu	Outside Diam.	Loop Diam	Fitting Range	Colour Code	Std. Pack
CDE-0280	KMF041919	7/1.00	3.00	57	2.80 - 3.15	Black	50
CDE-0357	KMF041911	7/1.25	3.75	57	3.57 - 3.75	Green	50
CDE-0480	KMF040823	7/1.75	5.25	57	4.80 - 5.25	Purple	75
CDE-0600	KMF041549	7/2.00	6.00	57	6.00 - 6.29	Yellow	50
CDE-0737	KMF041541	7/2.75	8.25	57	7.37 - 8.27	White	40
CDE-0793	KMF040815	19/1.75	8.75	57	7.93 - 8.75	Purple	40
CDE-0988	KMF040817	19/2.00	10.00	76	9.88 - 10.65	Yellow	25
CDE-1045	KMF041176	7/3.50	10.50	76	10.41 - 11.70	Purple	25
CDE-1125	KMF041912	7/3.75	11.25	76	11.25 - 12.09	Black	15
CDE-1210	KMF041543	37/1.75	12.25	76	12.10 - 12.95	Purple	15
CDE-1320	KMF040818	19/2.75	13.75	76	13.20 - 13.75	White	10
CDE-1450	KMF040819	19/3.00	15.00	76	14.50 - 15.03	Red	10
CDE-1750	KMF041913	37/2.50	17.50	76	17.50 - 18.08	Blue	10
CDE-1901	KMF041914	37/2.75	19.25	76	19.01 - 20.20	White	5
CDE-2021	KMF041920	37/3.00	21.00	76	20.21 - 21.60	Red	5
CDE-2421	KMF041921	61/2.75	24.75	76	24.21 - 26.00	White	5

Deadend Terminations for other applications

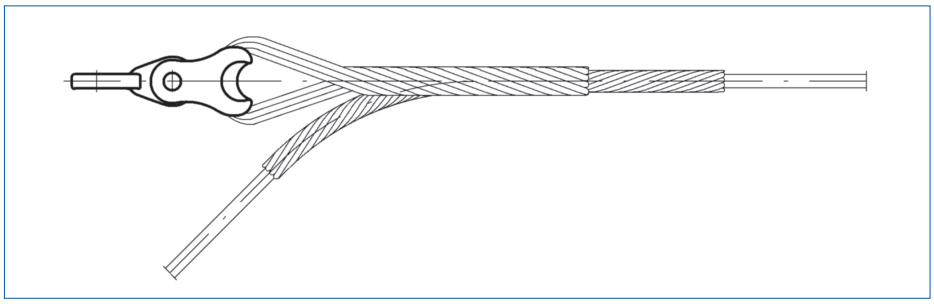
Mosdorfer's expertise in designing and manufacturing helical fittings has been applied to develop Deadends for Stay Wires, Covered Conductors, Aerial Service Cables, OPGW and ADSS Cables, and for the Agricultural sector.

Guy Grips and Guy Locks are helical Deadends designed for terminating Galvanized Steel stay wires on power poles. Galvanized Steel and Stainless Steel ropes are also used in Agricultural and Architectural applications, to support netting systems, fences and barriers. Mosdorfer can provide Deadends that economically meet these requirements.

Many HV-ABC systems utilize a catenary cable to support the conductor bundle. Mosdorfer provides Deadend terminations of suitable size and type to secure these catenary wires at a strain point.

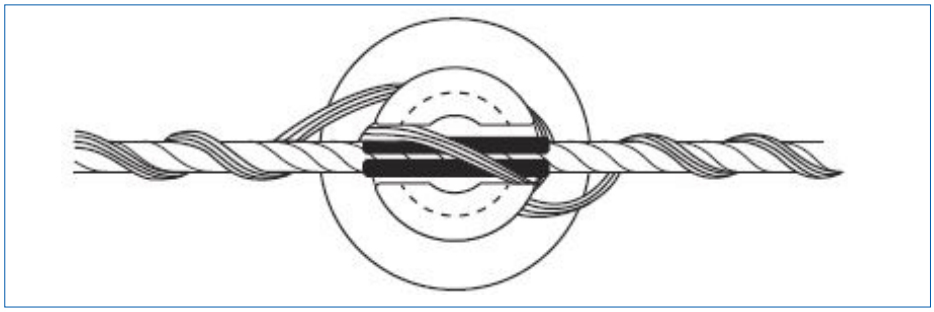
Neoprene Deadends are made from Galvanized Steel wire with a polymer coating. The fittings are cleverly designed to exert low-radial pressure to the Service Cable insulation, to make sure the external coating of the cable is not stressed or ruptured.

For OPGW and ADSS Terminations, it is preferable to use intermediate helical rods (reinforcing rods) under the Deadend to minimize the pressure on the glass fibres, as shown below.



DISTRIBUTION TIES

Distribution Ties are Helical Fittings that fasten conductors to the Top Groove of Tie-Top insulators.



A Distribution Tie is an engineered product that provides a standardized, repeatable way to secure the conductor.

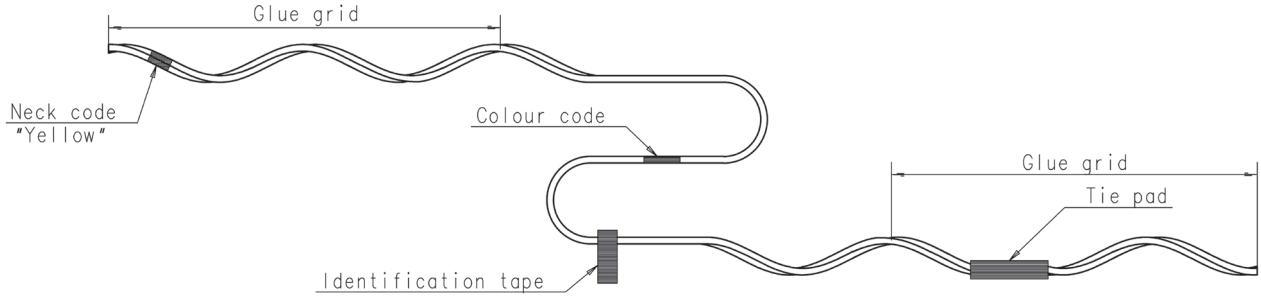
It will not loosen over time and will not create friction or abrade the conductor strands as Hand Ties are known to do.

A split Neoprene tie tube is supplied with each Distribution Tie – this cushions the conductor within the groove and helps prevent the porcelain glaze being damaged by friction from the conductor.

Note that Distribution Ties are not designed for installations subject to uplift forces, or where the line angle exceeds 10°.

Mosdorfer makes Distribution Ties to suit the tops of Line Pin and Line Post insulators, dimensions of which are specified in *AS4899-2007: Pin Insulators,* as Type 1 – 76mm diameter, or Type 2 – 112mm diameter.

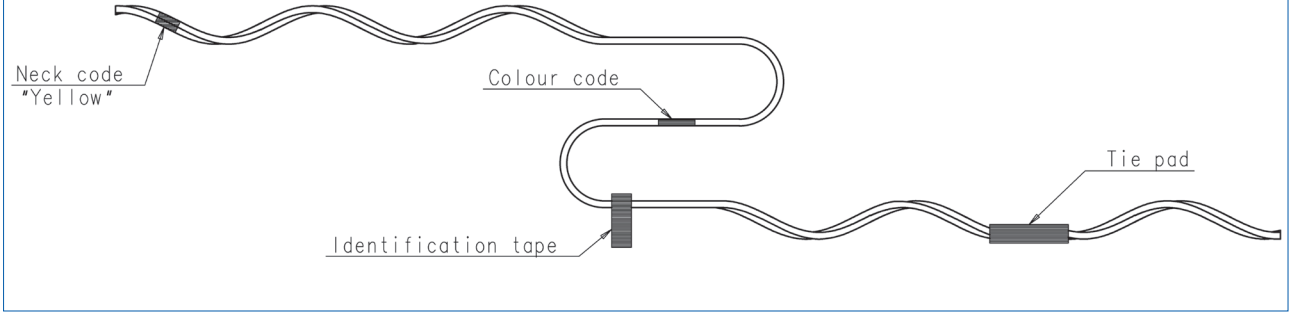
Distribution Ties, 76mm* neck diameter, for Aluminium and ACSR conductors



material: aluminium alloy							
Part No.	Drawing No.	Stranding AAC, AAAC	Stranding ACSR	Outside Diam	Fitting Range	Colour Code	Std. Pack
AWDT-050-76	KMF041941	7/1.75		5.25	5.00 - 5.99	Purple	75
AWDT-060-76	KMF041942	7/2.25		6.75	6.00 - 6.99	Brown	100
AWDT-070-76	KMF040670	7/2.50	3/4/2.50, 6/1/2.50	7.50	7.00 - 7.99	Blue	100
AWDT-080-76	KMF041980	7/2.75		8.25	8.00 - 8.99	White	50
AWDT-090-76	KMF040078	7/3.00	6/1/3.00, 4/3/3.00	9.00	9.00 - 9.99	Red	50
AWDT-110-76	KMF040487	7/3.75	6/1/3.75	11.25	11.00 - 11.99	Black	50
AWDT-130-76	KMF041026	7/4.50		13.50	13.00 - 13.99	Green	50
AWDT-140-76	KMF041068	7/4.75	6/4.75+7/1.60	14.25	14.00 - 14.99	Blue	50
AWDT-160-76	KMF040597	19/3.25		16.25	16.00 - 16.99	Orange	50
AWDT-170-76	KMF041981	19/3.50	30/7/2.50	17.50	17.00 - 17.99	Purple/Blue	50
AWDT-180-76	KMF040671	19/3.75		18.75	18.00 - 18.99	Black	50
AWDT-210-76	KMF041943	37/3.00	30/7/3.00	21.00	21.00 - 21.99	Red	50
AWDT-220-76	KMF041982	37/3.25		22.75	22.00 - 22.99	Orange	50
AWDT-230-76	KMF041111	19/4.75		23.75	23.00 - 23.99	Blue	50
AWDT-240-76	KMF041069		30/7/3.50	24.50	24.00 - 24.99	Purple	50
AWDT-260-76	KMF041944	37/3.75		26.25	26.00 - 26.99	Black	50
AWDT-290-76	KMF041945	61/3.25		29.25	29.00 - 29.99	Orange	50

*Fittings for 112mm Insulator neck diameter are available. Contact Mosdorfer Graph for details.

Distribution Ties, 76mm* neck diameter, for Galvanized Steel conductors

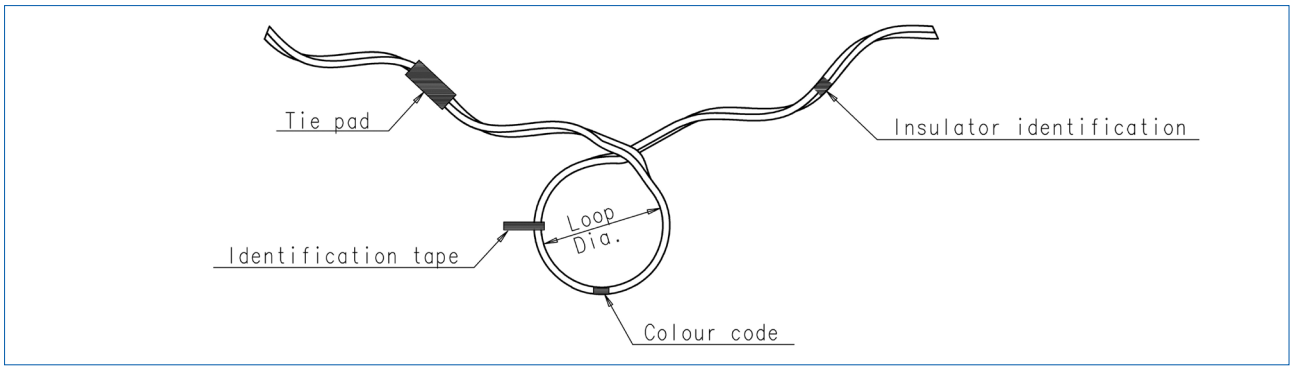


material: galvanized steel						
Part No.	Drawing No.	Stranding SC/GZ	Outside Diam	Fitting Range	Colour Code	Std. Pack
GDT-040-76	KMF041947	3/2.00	4.31	4.00 - 4.99	Yellow	75
GDT-050-76	KMF040797	3/2.75	5.93	5.00 - 5.99	White	75
GDT-060-76	KMF041948	7/2.00	6.00	6.00 - 6.99	Yellow	75
GDT-080-76	KMF041949	7/2.75	8.25	8.00 - 8.99	White	75
GDT-080-76	KMF041946	7/3.25	9.75	9.00 - 9.99	Orange	50
GDT-100-76	KMF041950	19/2.00	10.00	10.00 - 10.99	Yellow	50
GDT-110-76	KMF041951	7/3.75	11.25	11.00 - 11.99	Black	50
GDT-130-76	KMF041953	19/2.75	13.75	13.00 - 13.99	White	50
GDT-153-76	KMF041954	19/3.25	16.25	15.30 - 16.50	Orange	50

*Fittings for 112mm Insulator neck diameter are available. Contact Mosdorfer Graph for details.

SIDE TIES

Side Ties are Helical Fittings designed to fasten the conductor to the Side Groove of a Tie-Top Insulator.



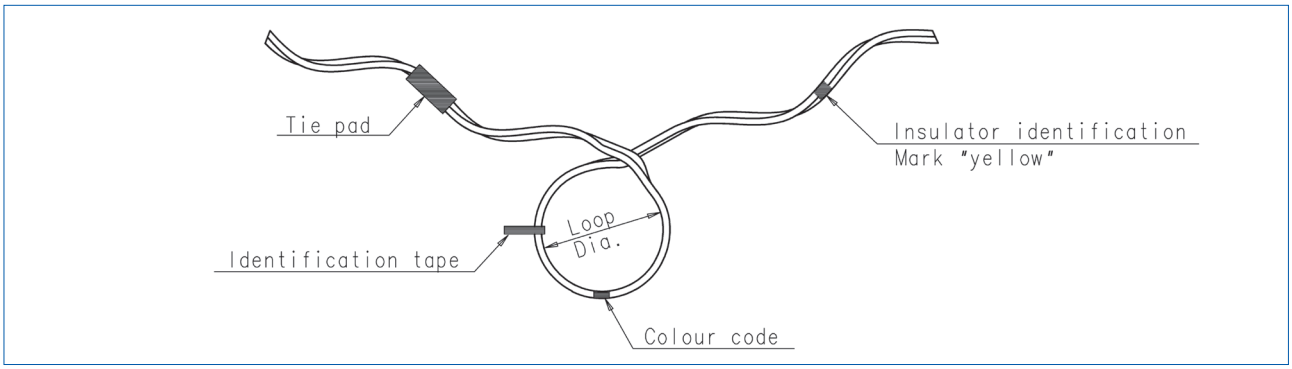
These fittings are useful in securing conductors to Pin or Post-Type insulators that are mounted horizontally, as it firmly holds the conductor on the upper surface of the insulator head.

They can also be used on vertically-mounted insulators with a line angle of up to 30 degrees. In this application, the conductor should be placed on the outside radius of the insulator head.

A split Neoprene tie tube is supplied with each Side Tie to prevent abrasion between the fitting and the porcelain glaze.

Side Ties are available for 76mm and 112mm Insulator neck diameters as specified in *AS4899-2007: Pin Insulators.*

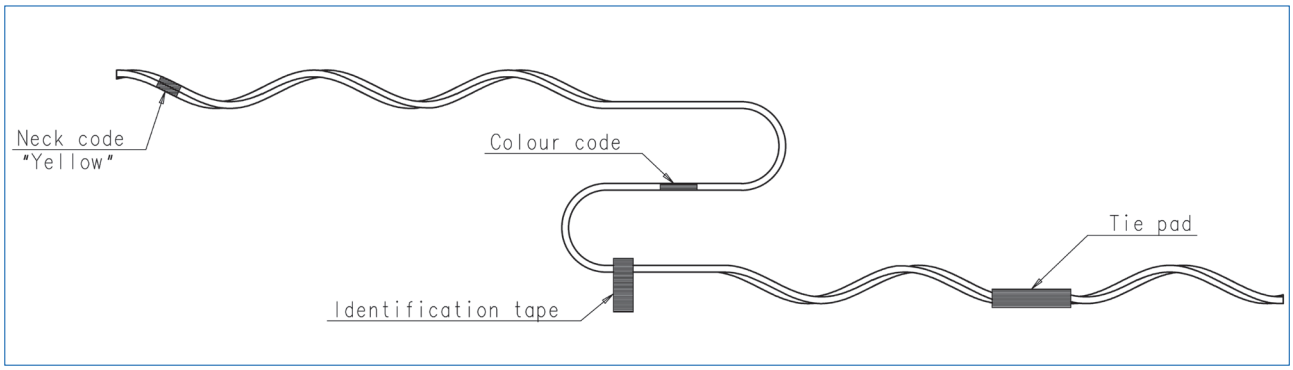
Side Ties, 76mm* neck diameter, for Aluminium and ACSR conductors



material: aluminium alloy							
Part No.	Drawing No.	Stranding AAC, AAAC	Stranding ACSR	Outside Diam	Fitting Range	Colour Code	Std Pack
AWST-050-76	KMF041983	7/1.75		5.25	5.00 - 5.99	Purple	75
AWST-060-76	KMF041984	7/2.25		6.75	6.00 - 6.99	Brown	100
AWST-070-76	KMF041985	7/2.50	3/4/2.50, 6/1/2.50	7.50	7.00 - 7.99	Blue	75
AWST-080-76	KMF041986	7/2.75		8.25	8.00 - 8.99	White	50
AWST-090-76	KMF042005	7/3.00	6/1/3.00, 4/3/3.00	9.00	9.00 - 9.99	Red	50
AWST-110-76	KMF042006	7/3.75	6/1/3.75	11.25	11.00 - 11.99	Black	50
AWST-130-76	KMF041987	7/4.50		13.50	13.00 - 13.99	Green	50
AWST-140-76	KMF042007	7/4.75	6/4.75+7/1.60	14.25	14.00 - 14.99	Blue	50
AWST-160-76	KMF042008	19/3.25		16.25	16.00 - 16.99	Orange	40
AWST-170-76	KMF041988	19/3.50	30/7/2.50	17.50	17.00 - 17.99	Purple/Blue	50
AWST-180-76	KMF042012	19/3.75		18.75	18.00 - 18.99	Black	50
AWST-210-76	KMF041989	37/3.00	30/7/3.00	21.00	21.00 - 21.99	Red	50
AWST-220-76	KMF041990	37/3.25		22.75	22.00 - 22.99	Orange	50
AWST-230-76	KMF041991	19/4.75		23.75	23.00 - 23.99	Blue	50
AWST-240-76	KMF041992		30/7/3.50	24.50	24.00 - 24.99	Purple	50
AWST-260-76	KMF041993	37/3.75		26.25	26.00 - 26.99	Black	25
AWST-290-76	KMF041994	61/3.25		29.25	29.00 - 29.99	Orange	25

*Fittings for 112mm Insulator neck diameter are available. Contact Mosdorfer Graph for details.

Side Ties, 76mm* neck diameter, for Galvanized Steel conductors



material: galvanized steel						
Part No.	Drawing No.	Stranding SC/GZ	Outside Diam	Fitting Range	Colour Code	Std Pack
GST-040-76	KMF041995	3/2.00	4.31	4.00 - 4.99	Yellow	75
GST-050-76	KMF041996	3/2.75	5.93	5.00 - 5.99	White	75
GST-060-76	KMF041997	7/2.00	6.00	6.00 - 6.99	Yellow	75
GST-080-76	KMF041998	7/2.75	8.25	8.00 - 8.99	White	50
GST-090-76	KMF041999	7/3.25	9.75	9.00 - 9.99	Orange	50
GST-100-76	KMF042000	19/2.00	10.00	10.00 - 10.99	Yellow	50
GST-110-76	KMF042001	7/3.75	11.25	11.00 - 11.99	Black	50
GST-130-76	KMF042003	19/2.75	13.75	13.00 - 13.99	White	50
GST-153-76	KMF042004	19/3.25	16.25	15.50 - 16.50	Orange	40

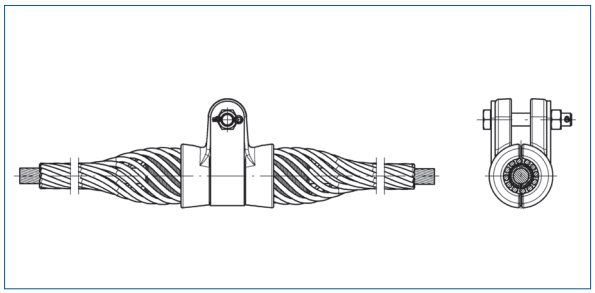
*Fittings for 112mm Insulator neck diameter are available. Contact Mosdorfer Graph for details.

HELICAL SUSPENSION UNITS FOR ALUMINIUM CONDUCTORS AND OPGW

Helical Suspension Units (HSUs) are an alternative to bolted suspension clamps. They provide a means of distributing dynamic and static forces to the conductor over an extended area, which helps to prolong conductor life.

A HSU comprises a cast aluminium housing that is secured and connected together by a high-strength aluminium strap, together with a neoprene insert and a set of Armour Rods that are matched to the composition and size of the conductor.

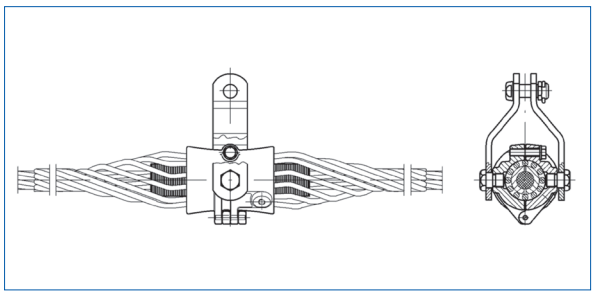
The helically formed Armour Rods are fitted around the neoprene insert and are gripped externally by the clamp body. The neoprene insert has a concave shape that is held within the clamp body to prevent the conductor slipping under longitudinal tension.



HSU clamp with an aluminium belt

The whole assembly is secured and suspended from the main structure with a Clevis Bolt with Nut and Split Pin.

These HSUs will accommodate line angles up to 30°.



HSU clamp with a connection to the centre

An **alternative type** consists of a forged aluminium main body type, with steel axle pivots screwed and pressed into the body at the conductor centre line, easing installation.

The main bodies are hinged and clamped by a conventional bolt, attached by steel straps between the pivots and the insualtor string.

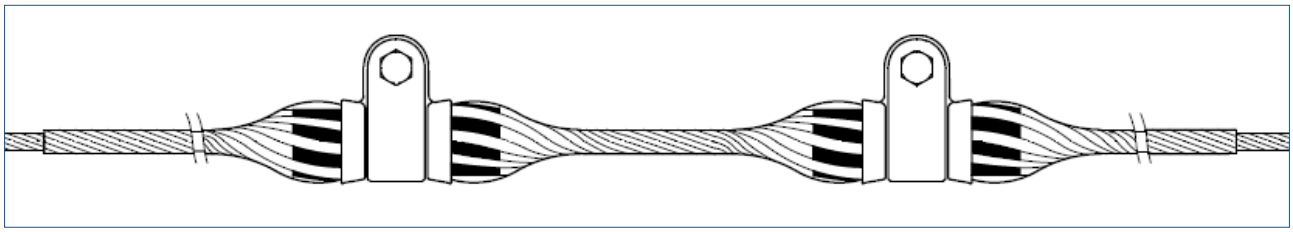
Mosdorfer has a complete range of HSUs for Aluminium-based conductors (AAC, AAAC and ACSR) with Outside Diameters ranging between 11.05mm and 34.99mm.

Vertical Load Ratings are 70kN, 120kN and 160kN.

When the HSU is to be installed at a jumper assembly, short Armour Rods are preferable. Please confirm with Mosdorfer Graph at time of ordering if this is the case.

The standard configuration for HSUs is Right Hand Lay.

Helical Suspension Units for Aluminium-based conductors – Double Units



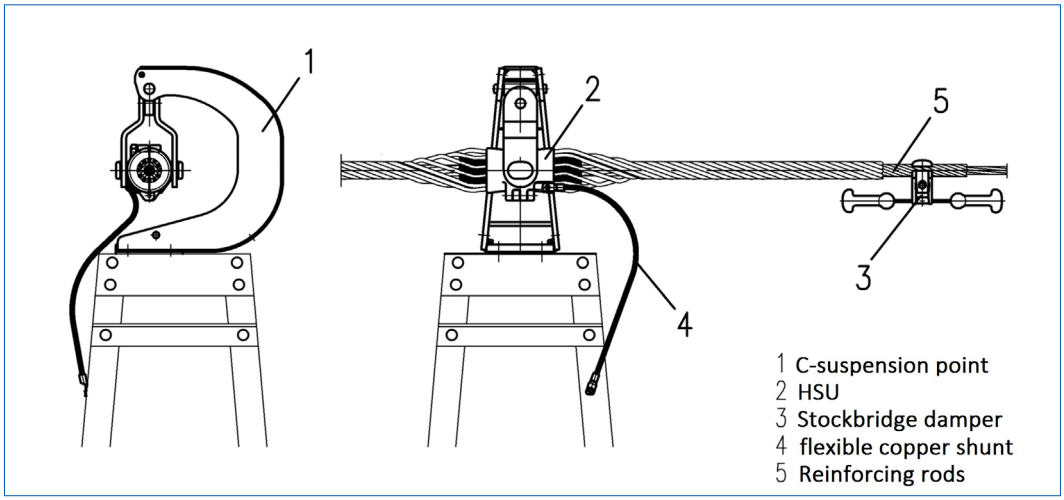
Double HSUs are suspended from the structure via a Yoke Plate and two (2) Clevis-Tongues, which can be purchased from Mosdorfer as a complete assembly.

Typical spacing between the Double HSU suspension points are 380mm, 420mm and 460mm. Other configurations are possible – please contact Mosdorfer Graph for further information.

Helical Suspension Units for OPGW

Optical Ground Wire (OPGW) is comprised of metallic strands functioning as an overhead earth wire, surrounding a core of glass fibres used for communications.

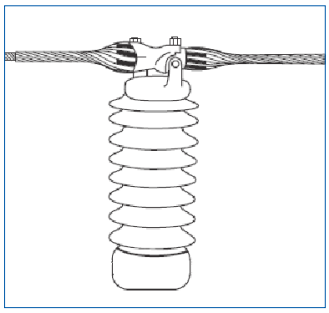
These fibres are susceptible to damage from crushing or bending, so fittings used for suspension or support must be carefully designed to disperse the static and dynamic forces that occur at the interface between the OPGW and a rigid structure.



Mosdorfer has a range of HSU kits designed for use with OPGW. Kits normally comprise a HSU assembly as used with Aluminium conductors, plus an Earth Lead, PG Clamps, Reinforcing Rods and Shackles or brackets as shown.

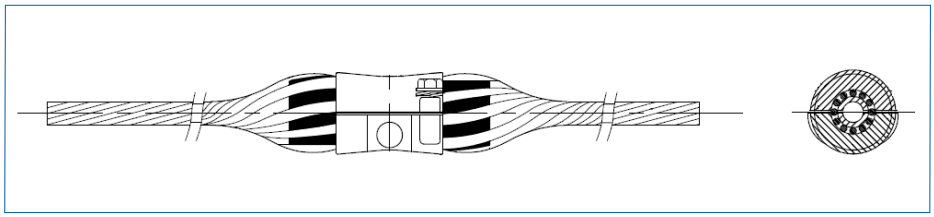
Other variations to these kits are available. Please contact Mosdorfer Graph for details.

HELICAL SUPPORT UNITS FOR ALUMINIUM CONDUCTORS AND OPGW



Helical Support Units are designed for installation in a standard 102mm Trunnion-Top insulator. This enables the assembly to pivot within the trunnion assembly, and reduces stress on the conductor at a rigid support point.
Mosdorfer has Helical Support Units for Aluminium (AAC, AAAC and ACSR) and OPGW conductors.

The clamp body has a top and bottom section which are bolted together.



Many variatons of Helical Support Unit are available, to match a range of conductors and OPGW. Please contact Mosdorfer Graph for details.

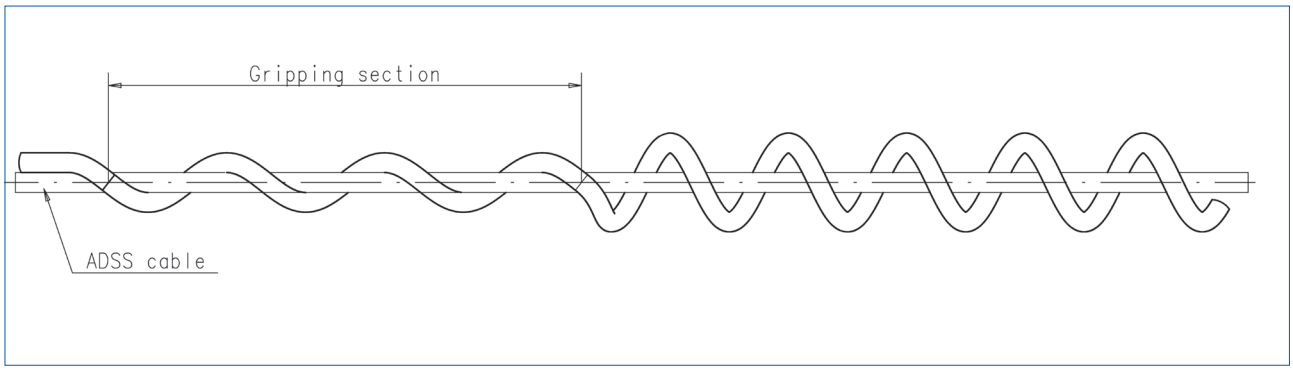
SPIRAL VIBRATION DAMPERS

These devices are designed to subdue high-frequency vibrations by imparting percussive impulses to the conductor in response to Aeolian vibration. These impulses reduce the intensity and amplitude of conductor movement, thereby reducing metal fatigue and increasing conductor service life.

SVDs are recommended for use on long spans subject to laminar wind flow. Due to their non-metallic composition, they can be fitted to all types of metallic conductors as well as ADSS lines.

Mosdorfer SVDs are manufactured from UV-Stabilized PVC which is light, corrosion resistant and does not produce a localized pressure on the conductor.

Mosdorfer SVDs are supplied with spherical ends, which means the fitting does not have a sharp edge that could damage ADSS cables or Covered Conductors.



material: PVL				
Part No.	Drawing No.	Fitting Range	Colour Code	Std Pack
SVD-0174	KMF100011	4.42 - 6.34	Red	30
SVD-0250	KMF100012	6.35 - 8.30	Blue	60
SVD-0327	KMF100013	8.31 - 11.73	Black	60
SVD-0462	KMF100014	11.74 - 14.32	Yellow	60
SVD-0564	KMF100015	14.33 - 19.30	Green	25

Application & Placement

The degree of protection required for a particular line depends on a series of factors such as the design of the line itself, the extremes of temperature and wind expected, and the vibration history of other similar lines in the area.

A general Mosdorfer recommendation for SVDs is that they should be used on spans exceeding 115 metres, with 15% tension at 16 °C.

SVDs should not be applied over Armour Rods or other line fittings. They should be placed directly onto conductor approximately 100mm from any Armour Rods or support hardware. The gripping section should be situated adjacent to the suspension or support point, and the damping section oriented in the direction of mid-span.

For spans longer than 245m, two SVDs are recommended, one at each end of the span.

Mosdorfer makes the following recommendations, based on the condition where conductors are tensioned at 15% CBL at nominal temperature 16 °C.

- Use 1 SVD for spans up to 115 metres
- Use 2 SVDs for spans 115 metres to 245 metres, one at each end
- Use 4 SVDs for spans above 245 metres, 2 at each end.

In situations where conductor tension is more than 15% CBL at 16 °C, additional damping may be required.

AUSTRALIAN STANDARD CONDUCTORS - REFERENCE TABLES

AAC, AAAC and AAAC1120 conductors, to AS1531

Metric					Imperial		
Code Name			Stranding	Conductor O.D.	CODE NAME	Stranding	O.D. Inches
AAAC	AAAC	AAC					
6201	1120			mm			
Agate	Argon	Gemini	7/1.75	5.25	Bug	7/064	0.192
Amethyst	Boron	Jupiter	7/2.25	6.75	Locust	7//093	0.279
Diamond	Chlorine	Leo	7/2.25	7.5			
Dolomite	Chromium	Leonids	7/2.75	8.25			0.325
Emerald	Fluorine	Libra	7/3.00	9	Grub	7/118	0.354
Garnet	Helium	Mars	7/3.75	11.3	Blue Bottle	7/144	0.432
Jade	Hydrogen	Mercury	7/4.50	13.5	Wasp	7/173	0.519
Asper	Iodine	Moon	7/4.75	14.3		7/186	0.558
Opal	Krypton	Neptune	19/3.25	16.3	Hornet	19/128	0.640
Patronite	Lutetium	Orion	19/3.50	17.5			0.689
Pearl	Neon	Pluto	19/3.75	18.8	Chafer	19/149	0.745
Ruby	Nitrogen	Saturn	37/3.00	21	Cockroach	19/166	0.830
Ruthenium	Nobelium	Sirius	37/3.25	22.8			0.898
Rutile	Oxygen	Taurus	19/4.75	23.8	Butterfly	19/183	0.915
Sapphire	Phosphorus	Triton	37/3.75	26.3	Centipede	37/149	1.043
Spinel	Selenium	Uranus	61/3.25	29.3	Scorpion	37/168	1.176
Tantalum	Silicon	Ursula	61/3.50	31.5			1.240
Topaz	Sulphur	Venus	61/3.75	33.8	Cicada	37/183	1.281
Zircon	Xenon	Virgo	91/4.50	49.5			

ACSR/GZ conductors, to AS3607

Metric						
Code Name	Strands/Wire Diameter/mm	Overall Diameter (approx) mm	Calculated Equivalent Aluminium Area mm2	Sectional Area mm2	Calculated Minium Breaking Load kN	Approximate Mass per Km kg
Almond	6/1/2.50	7.5	29.0	34.36	10.5	119
Apple	6/1/3.00	9.00	41.8	49.48	14.9	171
Banana	6/1/3.75	11.3	65.2	77.31	22.8	268
Cherry	6/4.75 + 7/1.60	14.3	105	120.4	33.2	404
Grape	30/7/2.50	17.5	144	181.6	63.7	675
Lemon	30/7/3.00	21.0	207	261.5	90.1	973
Lime	30/7/3.50	24.5	282	356.0	121	1320
Mango	54/7/3.00	27.0	373	431.2	118	1440
Orange	54/7/3.25	29.3	438	506.0	137	1690
Olive	30/7/3.50	31.5	508	586.0	159	1960
Paw Paw	54/7/3.75+19/2.25	33.8	583	671.7	179	2250
Peach	54/4.75+19/2.85	42.8	936	1078	284	3600
Extra High Strength						
Quince	3/4/1.75	5.25	8.77	16.84	12.7	95.9
Raisin	3/4/2.50	7.50	17.9	34.36	24.4	193
Sultana	4/3/3.00	9.00	31.6	49.48	28.3	242
Walnut	4/3/3.75	11.3	49.4	77.31	43.9	379

ACSR/AZ conductors, to AS3607

Metric						
Code Name	Strands/Wire Diameter/mm	Overall Diameter (approx) mm	Calculated Equivalent Aluminium Area mm2	Sectional Area mm2	Calculated Minium Breaking Load kN	Approximate Mass per Km kg
Barley	6/1/2.50	7.50	29.0	34.36	10.3	119
Bean	6/1/3.00	9.00	41.8	49.48	14.5	171
Cabbage	6/1/3.75	11.3	65.2	77.31	21.5	268
Carrot	6/4.75 + 7/1.60	14.3	105	120.4	31.9	404
Corn	30/7/2.50	17.5	144	181.6	61.6	675
Garlic	30/7/3.00	21.0	207	261.5	87.2	973
Millet	30/7/3.50	24.5	282	356.0	116	1320
Oats	54/7/3.00	27.0	373	431.2	115	1140
Onion	54/7/3.50	29.3	438	506.0	132	1690
Parsnip	54/7/3.50	31.5	508	586.9	153	1960
Potato	54/3.75 + 19/2.25	33.8	583	671.7	177	2250
Rice	54/4.75 + 19/2.85	42.8	1078	1078	277	3600

ACSR/AC conductors, to AS3607

Metric						
Code Name	Strands/Wire Diameter/mm	Overall Diameter (approx) mm	Calculated Equivalent Aluminium Area mm2	Sectional Area mm2	Calculated Minium Breaking Load kN	Approximate Mass per Km kg
Angling	6/1/2.50	7.50	30.7	34.36	10.7	113
Archery	6/1/3.00	9.00	44.1	49.48	15.0	163
Baseball	6/1/3.75	11.3	68.9	77.31	22.4	255
Bowls	6/4.75 + 7/1.60	14.3	109	120.4	32.6	385
Cricket	30/7/2.50	17.5	155	181.6	64.6	635
Darts	30/7/3.00	21.0	224	261.5	91.3	913
Diving	30/7/3.50	24.5	305	356.0	121	1240
Golf	54/7/3.00	27.0	390	431.2	119	1380
Gymnastics	54/7/3.25	29.3	457	506.0	138	1620
Hurdles	54/7/3.50	31.5	530	586.9	159	1880
Lacrosse	54/3.75 + 19/2.25	33.8	608	671.7	181	2150
Rugby	54/4.75 + 19/2.85	42.8	976	1078	287	3450
Extra High Strength						
Skating	3/4/1.75	5.25	10.4	16.84	12.3	83.5
Soccer	3/4/2.50	7.50	21.2	34.36	24.9	170
Swimming	4/3/3.00	9.00	35.2	49.48	28.8	217
Tennis	4/3/3.75	11.3	54.9	77.31	42.8	339

SC/GZ conductors, to AS1222 - Part 1

Metric					
Strands/Wire Diameter/mm	Overall Diameter (approx) mm	Calculated Equivalent Aluminium Area mm2	Sectional Area mm2	Calculated Minium Breaking Load kN	Approximate Mass per Km kg
3/2.00	4.31	1.56	9.425	11.7	75.5
3/2.75	5.93	2.95	17.82	22.2	139
7/2.00	6	3.62	21.99	27.4	177
7/2.75	8.25	6.85	41.58	51.8	326
7/3.25	9.75	9.56	58.07	72.3	460
7/3.75	11.3	12.7	77.31	96.2	609
19/2.00	10	9.79	59.69	74.4	483
19/2.75	13.8	18.5	112.9	141	888
19/3.25	16.3	25.8	157.6	196	1250

SC/AC conductors, to AS1222 – Part 2

Metric					
Strands/Wire Diameter/mm	Overall Diameter (approx) mm	Calculated Equivalent Aluminium Area mm2	Sectional Area mm2	Calculated Minium Breaking Load kN	Approximate Mass per Km kg
3/2.75	0	5.91	17.82	22.7	118
3/3.00	6.47	7.03	21.21	27.0	141
3/3.25	7	8.26	24.89	31.6	165
3/3.75	8.08	11	33.13	40.0	220
7/2.25	8.25	13.7	41.58	50.1	277
7/3.00	9	16.3	49.48	59.7	330
7/3.25	9.75	19.2	58.07	69.8	387
7/3.75	11.3	25.5	77.31	88.3	515
7/4.25	12.8	32.8	99.3	106	662
19/2.75	13.8	37.1	112.9	136	755
19/3.00	15	44.1	134.3	162	899
19/3.25	16.3	51.8	157.6	189	1060
19/3.75	18.8	68.9	209.8	240	140
19/4.25	21.3	88.6	269.5	289	1800

Hard Drawn Copper conductors, to AS1746

Metric					
Strands/Wire Diameter/mm	Overall Diameter (approx) mm	Calculated Equivalent Aluminium Area mm2	Sectional Area mm2	Calculated Minium Breaking Load kN	Approximate Mass per Km kg
7/1.00	3.00	8.68	5.498	2.31	49.3
7/1.25	3.75	13.6	8.589	3.61	76.9
7/1.75	5.25	26.6	16.84	6.89	151
7/2.00	6.00	34.7	21.99	9.02	197
7/2.75	8.25	65.3	41.58	16.7	675
7/3.50	10.5	106	67.35	26.6	607
7/3.75	11.3	121	77.28	28.8	696
19/1.75	8.75	71.7	45.70	18.3	413
19/2.00	10.0	93.7	59.69	23.9	538
19/2.75	13.8	177	112.9	44.5	1020
19/3.00	15.0	211	134.3	52.8	1210
37/1.75	12.3	139	89.00	35.6	806
37/2.50	17.5	284	181.6	72.9	1640
37/2.75	19.3	344	219.8	86.6	1990
37/3.00	21	409	261.5	103	2370
61/2.75	24.8	566	362.3	143	3280

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