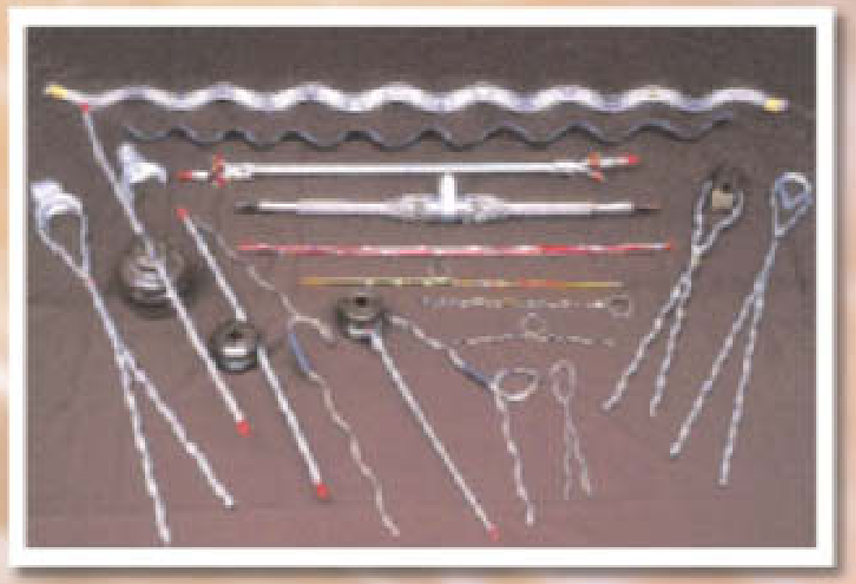
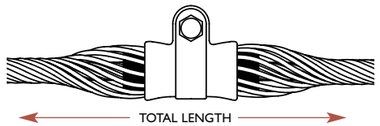
Helical Fittings
'MOFORMED'

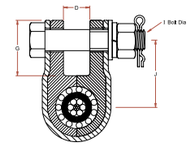


modern malleables

Armour grip suspension
Armour rods
Line guards
Distribution tie
Side tie
Spool tie
Distribution grip
Guy grip
Service grip
Conductor splice
Spiral vibration damper
Lashing rod
T -Connector

ARMOUR - GRIP Suspension
for use on ACSR, AAC, AAAC, ACAR, AACSR conductors



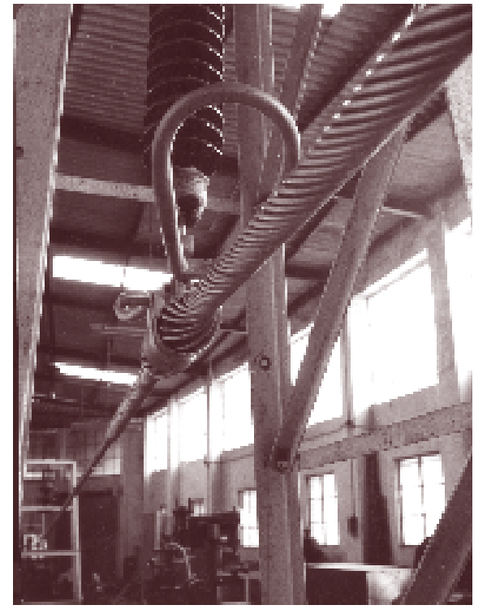


CONDUCTOR RANGE		D		G		J		I		UTS(Lbs)
INCH	CM	INCH	CM	INCH	CM	INCH	CM	INCH	CM	
0.482-0.542	1.224-1.378	21/32	1.667	$1^{13}/_{16}$	4.604	$1^{31}/_{32}$	5.001	5/8	1.588	10.000
0.543-0.645	1.379-1.639	23/32	1.826	$1^{27}/_{32}$	4.682	$1^{15}/_{16}$	4.921	5/8	1.588	10.000
0.646-0.750	1.640-1.906	3/4	1.905	$1^{7}/_{8}$	4.763	$2^{5}/_{32}$	5.477	5/8	1.588	15.000
0.751-0.907	1.907-2.305	7/8	2.223	2	5.080	$2^{11}/_{32}$	5.953	5/8	1.588	20.000
0.908-1.005	2.306-2.554	7/8	2.223	2	5.080	$2^{17}/_{32}$	6.429	5/8	1.588	20.000
1.006-1.208	2.555-3.069	$1^{3}/_{16}$	3.016	$2^{1}/_{8}$	5.398	$2^{45}/_{64}$	6.866	5/8	1.588	25.000
1.209-1.355	3.070-3.443	$1^{3}/_{16}$	3.016	$2^{3}/_{8}$	6.033	$3^{5}/_{32}$	8.017	3/4	1.905	25.000
1.356-1.557	3.444-3.955	$1^{3}/_{8}$	3.493	$2^{1}/_{4}$	5.715	$2^{31}/_{32}$	7.541	3/4	1.905	25.000

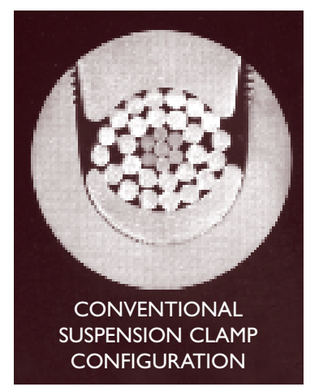
CATALOGUE NUMBER	DIAMETER RANGE				AGS RODS				RODS PER SET
	INCH		CM		LENGTH		ROD DIAMETER		
	MIN	MAX	MIN	MAX	INCH	CM	INCH	CM	NOS.
MAGS 500	0.482	0.512	1.22	1.30	40	102	0.167	0.424	10
MAGS 501	0.513	0.542	1.31	1.38	41	104	0.167	0.424	11
MAGS 502	0.543	0.555	1.39	1.40	44	112	0.182	0.462	10
MAGS 503	0.556	0.573	1.41	1.45	44	112	0.182	0.462	11
MAGS 504	0.574	0.594	1.46	1.50	45	114	0.182	0.462	11
MAGS 505	0.595	0.619	1.51	1.56	46	117	0.182	0.462	11
MAGS 506	0.620	0.645	1.57	1.63	50	127	0.182	0.462	12
MAGS 507	0.646	0.673	1.64	1.70	54	137	0.204	0.518	11
MAGS 508	0.674	0.690	1.71	1.75	54	137	0.204	0.518	11
MAGS 509	0.691	0.710	1.76	1.80	54	137	0.204	0.518	12
MAGS 510	0.711	0.731	1.81	1.86	55	140	0.204	0.518	12
MAGS 511	0.732	0.750	1.87	1.91	56	142	0.204	0.518	12
MAGS 512	0.751	0.768	1.92	1.95	60	152	0.250	0.635	10
MAGS 513	0.769	0.795	1.96	2.02	60	152	0.250	0.635	11
MAGS 514	0.796	0.824	2.03	2.09	61	155	0.250	0.635	11
MAGS 515	0.825	0.870	2.10	2.21	64	163	0.250	0.635	11
MAGS 516	0.871	0.907	2.22	2.30	65	165	0.250	0.635	12
MAGS 517	0.908	0.937	2.31	2.38	66	168	0.250	0.635	12
MAGS 518	0.938	0.962	2.39	2.44	67	170	0.250	0.635	12
MAGS 519	0.963	0.986	2.45	2.50	68	173	0.250	0.635	13
MAGS 520	0.987	1.005	2.51	2.55	69	175	0.250	0.635	13
MAGS 521	1.006	1.022	2.56	2.59	80	203	0.310	0.787	11
MAGS 522	1.023	1.074	2.60	2.72	82	208	0.310	0.787	11
MAGS 523	1.075	1.208	2.73	3.06	82	208	0.310	0.787	12
MAGS 524	1.209	1.259	3.07	3.19	88	224	0.365	0.927	11
MAGS 525	1.260	1.394	3.20	3.54	88	224	0.365	0.927	12
MAGS 526	1.395	1.557	3.55	3.95	88	224	0.365	0.927	13

ARMOUR-GRIP SUSPENSION UNIT is used as an alternative to suspension clamps, used alone or with Armour Rods, on support locations. These units are superior to its other alternatives owing to better protection from bending strains, compressive stress and abrasion.

These units can be used to repair fatigue damaged conductors also and can be applied over existing Armour Rod to extend life of conductors. They can be used normally upto 30° line angle and for upto 60° angles double units should be used. These units develop slip strength of 10% to 20% of UTS of conductor.

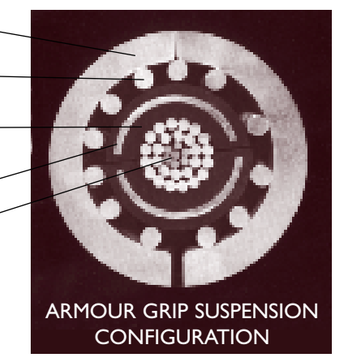


AGS unit under fatigue and conductor stress analysis test at our laboratory span which simulates line conditions.



CONVENTIONAL SUSPENSION CLAMP CONFIGURATION

In this case strands are clamped tightly, thereby leaving concentrated compressive forces that cause extremely high stresses, a leading factor in conductor fatigue.



ARMOUR GRIP SUSPENSION CONFIGURATION

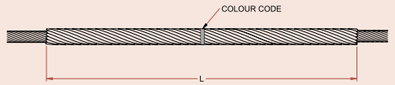
Advantages over conventional Suspension Clamps

Maximum bending stresses occur at suspension points where the super-position of other stresses makes the conductor especially vulnerable to fatigue. AGS provides benefits which aid the line performance as compared to conventional suspension clamp. These benefits are :

- *AGS with the reinforced neoprene cushion eliminates concentrated compressive stress that occurs in conventional clamps with bolt tightening. They eliminate metal-to-metal contact and also lower dynamic stresses from vibration and galloping conductor.*
- *Strut effects of bird cage cover of PA Rods over neoprene cushion, absorb alternating impacts of vibrating conductor motion.*
- *Better RIV & Corona values.*
- *No loose parts in assembly.*
- *Lower magnetic losses.*

ARMOUR RODS

for use on ACSR, AAC, AAAC, AWAC conductor

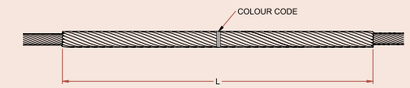


CAT. NO.	DIAMETER RANGE				ROD LENGTH		ROD DIAMETER		RODS PER SET	COLOUR CODE
	INCH		CM		INCH	CM	INCH	CM		
	MIN	MAX	MIN	MAX						
MPAR 400 MPAR 401	0.194	0.207	0.493	0.527	40(S) 52(D)	102 132	0.121	0.307	7	Blue
MPAR 402 MEAR 403	0.208	0.219	0.528	0.557	40(S) 52(D)	102 132	0.121	0.307	7	Black
MPAR 404 MPAR 405	0.220	0.228	0.558	0.580	40(S) 52(D)	102 132	0.121	0.307	8	White
MPAR 406 MPAR 407	0.229	0.243	0.581	0.618	40(S) 52(D)	102 132	0.121	0.307	8	Brown
MPAR 408 MPAR 409	0.244	0.259	0.619	0.659	40(S) 52(D)	102 132	0.146	0.371	7	Orange
MPAR 410 MPAR 411	0.260	0.273	0.660	0.694	42(S) 54(D)	107 137	0.146	0.371	7	Green
MPAR 412 MPAR 413	0.274	0.289	0.695	0.735	42(S) 54(D)	107 137	0.146	0.371	8	Yellow
MPAR 414 MPAR 415	0.290	0.308	0.736	0.783	42(S) 54(D)	107 137	0.146	0.371	8	Purple
MPAR 416 MPAR 417	0.309	0.326	0.784	0.829	449S) 56(D)	112 142	0.136	0.345	9	Red
MPAR 418 MPAR 419	0.327	0.346	0.830	0.880	46(S) 58(D)	117 147	0.146	0.371	9	Blue
MPAR 420 MPAR 421	0.347	0.366	0.881	0.931	48(S) 60(D)	122 152	0.146	0.371	9	Green
MPAR 422 MPAR 423	0.367	0.389	0.932	0.989	50(S) 62(D)	127 157	0.146	0.371	10	Black
MPAR 424 MPAR 425	0.390	0.413	0.990	1.050	52(S) 64(D)	132 162	0.167	0.424	9	Yellow
MPAR 426 MPAR 427	0.414	0.436	1.051	1.108	52(S) 64(D)	132 162	0.146	0.371	10	Brown
MPAR 428 MPAR 429	0.437	0.463	1.109	1.177	54(S) 66(D)	137 167	0.167	0.424	10	Blue
MPAR 430 MPAR 431	0.464	0.490	1.178	1.246	54(S) 66(D)	137 167	0.167	0.424	10	Green
MPAR 432 MPAR 433	0.491	0.521	1.247	1.324	56(S) 68(D)	142 173	0.167	0.424	11	Orange
MPAR 434 MPAR 435	0.522	0.551	1.325	1.401	58(S) 70(D)	147 178	0.167	0.424	11	Black
MPAR 436 MPAR 437	0.552	0.585	1.402	1.487	60(S) 72(D)	152 183	0.182	0.462	11	Red
MPAR 438 MPAR 439	0.586	0.606	1.488	1.540	62(S) 74(D)	157 188	0.182	0.462	12	Black
MPAR 440 MPAR 441	0.607	0.630	1.541	1.601	64(S) 76(D)	163 193	0.182	0.462	12	Purple
MPAR 442 MPAR 443	0.631	0.665	1.602	1.665	64(S) 76(D)	163 193	0.182	0.462	12	Yellow
MPAR 444 MPAR 445	0.656	0.679	1.666	1.726	66(S) 78(D)	168 198	0.182	0.462	13	Brown
MPAR 446 MPAR 447	0.680	0.703	1.727	1.787	68(S) 80(D)	173 203	0.204	0.518	12	Blue
MPAR 448 MPAR 449	0.704	0.740	1.788	1.881	72(S) 84(D)	183 213	0.204	0.518	12	Green
MPAR 450	0.741	0.782	1.882	1.987	72	183	0.204	0.518	13	Orange
MPAR 451	0.783	0.814	1.988	2.069	76	193	0.250	0.635	11	Purple
MPAR 452	0.815	0.845	2.070	2.147	76	193	0.250	0.635	11	Red
MPAR 453	0.846	0.907	2.148	2.305	78	198	0.250	0.635	12	Blue
MPAR 454	0.908	0.929	2.306	2.361	80	203	0.250	0.635	13	Green
MPAR 455	0.930	0.976	2.362	2.480	88	224	0.250	0.635	13	White
MPAR 456	0.977	1.016	2.481	2.582	92	234	0.310	0.787	11	Yellow
MPAR 457	1.017	1.035	2.583	2.630	94	239	0.310	0.787	12	Brown
MPAR 458	1.036	1.064	2.631	2.704	96	244	0.310	0.787	12	Blue
MPAR 459	1.065	1.098	2.705	2.790	96	244	0.310	0.787	12	Green
MPAR 460	1.099	1.139	2.791	2.894	100	254	0.310	0.787	12	Orange
MPAR 461	1.140	1.161	2.895	2.950	100	254	0.310	0.787	13	Purple
MPAR 462	1.162	1.208	2.951	3.069	100	254	0.310	0.787	13	Red
MPAR 463	1.209	1.269	3.070	3.224	100	254	0.365	0.927	12	Black
MPAR 464	1.270	1.327	3.225	3.372	100	254	0.365	0.927	12	White
MPAR 465	1.328	1.390	3.373	3.532	100	254	0.365	0.927	13	Yellow
MPAR 466	1.391	1.440	3.533	3.659	100	254	0.436	1.107	11	Brown
MPAR 467	1.441	1.508	3.660	3.831	100	254	0.436	1.107	12	Blue
MPAR 468	1.509	1.578	3.832	4.009	100	254	0.436	1.107	12	Green
MPAR 469	1.579	1.651	4.010	4.195	100	254	0.436	1.107	13	Orange
MPAR 470	1.652	1.728	4.196	4.390	100	254	0.436	1.107	13	Purple
MPAR 471	1.729	1.809	4.391	4.596	100	254	0.436	1.107	14	Red
MPAR 472	1.810	1.898	4.600	4.820	100	254	0.436	1.107	14	Black

HELICAL ARMOUR RODS are used to protect conductor against bending, compression, abrasion, and arc - over. They are also used to repair damages over conductor.
These armour rods are minimum needed protection for suspension locations. They are usually supplied ball ended but for EHV applications anti corona end treatment called "parrot bill ends" is used.
Armour Rods of specially treated aluminium alloy, are used over aluminium based conductors. For use on alumoweld, copper, copperweld, bronze and galvanised steel cables, armour rods of compatible materials are produced at our factory.

LINE GUARDS

for use on ACSR, AAC, AAAC, AWAC, ACAR conductor

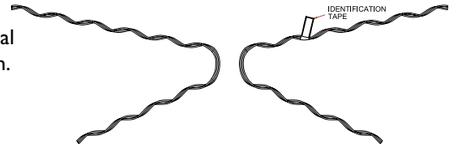


CAT. NO.	DIAMETER RANGE				ROD LENGTH		ROD DIAMETER		RODS PER SET	COLOUR CODE
	INCH		CM		INCH	CM	INCH	CM		
	MIN	MAX	MIN	MAX						
MLG 400 MLG 401	0.182	0.193	0.462	0.491	17(S) 29(D)	43 74	0.102	0.259	7	Purple
MLG 402 MLG 403	0.194	0.207	0.492	0.527	17(S) 29(D)	43 74	0.102	0.259	7	Blue
MLG 404 MLG 405	0.220	0.228	0.559	0.580	17(S) 29(D)	43 74	0.121	0.307	7	White
MLG 406 MLG 407	0.229	0.243	0.581	0.618	19(S) 31(D)	48 79	0.121	0.307	8	Brown
MLG 408 MLG 409	0.244	0.259	0.619	0.659	19(S) 31(D	48 79	0.121	0.307	8	Orange
MLG 410 MLG 411	0.260	0.273	0.660	0.694	19(S) 31(D	48 79	0.121	0.307	8	Green
MLG 412 MLG 413	0.274	0.289	0.695	0.735	21(S) 33(D)	53 84	0.121	0.307	9	Yellow
MLG 414 MLG 415	0.290	0.308	0.736	0.783	21(S) 33(D)	53 84	0.121	0.307	9	Purple
MLG 416 MLG 417	0.309	0.326	0.784	0.829	21(S) 33(D)	53 84	0.121	0.307	9	Red
MLG 418 MLG 419	0.327	0.346	0.830	0.880	21(S) 33(D)	53 84	0.121	0.307	10	Blue
MLG 420 MLG 421	0.347	0.366	0.881	0.931	23(S) 35(D)	58 89	0.121	0.307	10	Green
MLG 422 MLG 423	0.367	0.389	0.932	0.989	23(S) 35(S)	58 89	0.121	0.307	11	Black
MLG 424 MLG 425	0.390	0.413	0.990	1.050	25(S) 37(D)	64 94	0.121	0.307	11	Yellow
MLG 426 MLG 427	0.414	0.436	1.051	1.108	25(S) 37(D)	64 94	0.121	0.307	12	Brown
MLG 428 MLG 429	0.437	0.463	1.109	1.177	27(S) 39(D)	69 99	0.121	0.307	13	Blue
MLG 430 MLG 431	0.464	0.490	1.178	1.246	27(S) 39(D)	69 99	0.121	0.307	13	Green
MLG 432 MLG 433	0.491	0.521	1.247	1.324	29(S) 41(D)	74 104	0.121	0.307	14	Orange
MLG 434 MLG 435	0.522	0.551	1.325	1.401	29(S) 41(D)	74 104	0.121	0.307	14	Black
MLG 436 MLG 437	0.552	0.585	1.402	1.486	31(S) 43(D)	79 109	0.121	0.307	15	Red
MLG 438 MLG 439	0.586	0.606	1.487	1.540	31(S) 43(D)	79 109	0.146	0.371	14	Black
MLG 440 MLG 441	0.607	0.630	1.541	1.601	33(S) 45(D)	84 114	0.146	0.371	14	White
MLG 442 MLG 443	0.631	0.655	1.602	1.665	33(S) 45(D)	84 114	0.146	0.371	14	Yellow
MLG 444 MLG 445	0.656	0.679	1.666	1.726	35(S) 47(D)	89 119	0.146	0.371	15	Brown
MLG 446 MLG 447	0.680	0.703	1.727	1.787	35(S) 47(D)	89 119	0.146	0.371	15	Blue
MLG 448 MLG 449	0.704	0.740	1.788	1.881	37(S) 49(D)	94 124	0.146	0.371	16	Green
MLG 450 MLG 451	0.741	0.792	1.882	2.013	39(S) 51(D)	99 130	0.146	0.371	17	Orange
MLG 452 MLG 453	0.793	0.840	2.014	2.135	39(S) 51(D)	99 130	0.146	0.371	18	Purple
MLG 454 MLG 455	0.841	0.898	2.136	2.282	41(S) 53(D)	104 135	0.146	0.371	19	Blue
MLG 456 MLG 457	0.899	0.954	2.283	2.424	43(S) 55(D)	109 140	0.167	0.424	18	Green
MLG 458 MLG 459	0.955	` 0.986	2.425	2.505	45(S) 57(D)	114 145	0.182	0.452	17	White
MLG 460 MLG 461	0.987	1.016	2.506	2.582	45(S) 57(D)	114 145	0.182	0.462	18	Yellow
MLG 462 MLG 463	1.017	1.064	2.583	2.704	47(S) 59(D)	119 150	0.182	0.462	18	Brown
MLG 464 MLG 465	1.065	1.098	2.705	2.790	49(S) 61(D)	124 155	0.204	0.518	17	Green
MLG 466 MLG 467	1.099	1.153	2.791	2.930	49(S) 61(D)	124 155	0.250	0.635	15	Orange
MLG 468 MLG 469	1.154	1.208	2.931	3.069	51(S) 63(D)	130 160	0.250	0.635	15	Purple
MLG 470 MLG 471	1.209	1.268	3.070	3.222	53(S) 65(D)	135 165	0.250	0.635	16	Black
MLG 472 MLG 473	1.269	1.327	3.223	3.372	53(S) 65(D)	135 165	0.250	0.635	17	White
MLG 474 MLG 475	1.328	1.390	3.373	3.532	55(S) 67(D)	140 175	0.250	0.635	17	Yellow
MLG 476 MLG 477	1.391	1.440	3.533	3.659	57(S) 69(D)	145 175	0.310	0.787	15	Brown
MLG 478 MLG 479	1.441	1.508	3.660	3.830	59(S) 71(D)	150 180	0.310	0.787	16	Blue

LINE GUARDS are designed to protect against bending, compression, abrasion and arc-over as also to provide easy repair. Line Guards are recommended for hand tied spans of less than 300 feet and used with pin insulators for single or double structural support. Material for line guards is specially prepared with aluminium alloy wire of high electrical and mechanical properties. For alumoweld, copper, copperweld, bronze and galvanised steel cables, line guards of suitable & compatible material are factory produced. For further details on these contact us.

FAMILY OF TIES

MML offers line of ties to secure conductors to insulators under all conditions the distribution line is likely to face. Helical forming creates a uniform and permanent radial spring tension. An elastomeric pad protects the conductor against abrasion from insulators and the tie itself.



TWIN GRIP TIE

for use on ACSR, AACSR, AAAC, AWAC, Overhead Galvanised steel strands

CATALOGUE NUMBER	DIAMETER RANGE				APPLIED LENGTH		COLOUR CODE
	INCH		MM				
	MIN	MAX	MIN	MAX	INCH	MM	
MTDT 500	0.237	0.247	6.02	6.28	39	991	Yellow
MTDT 501	0.248	0.258	6.29	6.55	39	991	Brown
MTDT 502	0.259	0.269	6.56	6.83	39	991	White
MTDT 503	0.270	0.280	6.84	7.13	40	1016	Black
MTDT 504	0.281	0.291	7.14	7.39	40	1016	Red
MTDT 505	0.292	0.302	7.40	7.67	40	1016	Blue
MTDT 506	0.303	0.313	7.68	7.95	40	1016	Green
MTDT 507	0.314	0.325	7.97	8.25	41	1041	White
MTDT 508	0.326	0.336	8.26	8.53	41	1041	Brown
MTDT 509	0.337	0.349	8.54	8.86	41	1041	Purple
MTDT 510	0.350	0.364	8.87	9.24	52	1321	Red
MTDT 511	0.365	0.379	9.25	9.62	52	1321	Blue
MTDT 512	0.380	0.393	9.63	9.99	53	1346	Orange
MTDT 513	0.394	0.409	10.00	10.38	53	1346	Yellow
MTDT 514	0.410	0.426	10.39	10.82	53	1346	Black
MTDT 515	0.427	0.442	10.83	11.22	53	1346	Green
MTDT 516	0.443	0.459	11.23	11.65	54	1372	Black
MTDT 517	0.460	0.474	11.66	12.03	54	1372	Broen
MTDT 518	0.475	0.494	12.04	12.54	72	1829	Red
MTDT 519	0.495	0.515	12.55	13.08	72	1829	Blue
MTDT 520	0.516	0.536	13.09	13.61	72	1829	Green
MTDT 521	0.537	0.555	13.62	14.09	73	1854	White
MTDT 522	0.556	0.570	14.10	14.47	73	1854	Blue
MTDT 523	0.571	0.591	14.48	15.01	74	1880	Brown
MTDT 524	0.592	0.612	15.02	15.54	74	1880	Yellow
MTDT 525	0.613	0.635	15.55	16.13	74	1880	Red

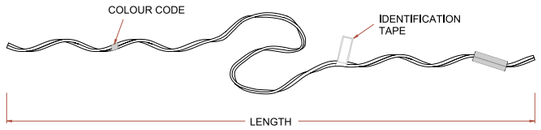
WRAPLOCK TIES

The WRAPLOCK Ties are improved ties with elastomer material adherence and achieve a degree of protection to conductors unmatched even today in rural areas, on long spans and where high stringing tensions and aeolian vibrations are faced.

DISTRIBUTION TIE

for use on ACSR, AAC, AAAC, AWAC, covered conductors

These ties secure the line conductor with the top groove of the pin insulator and provide an predetermined human error free tie application.



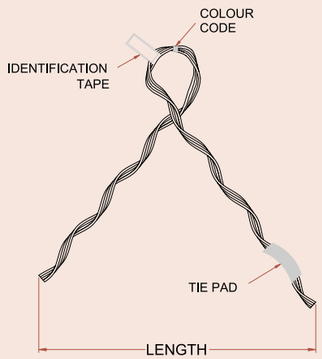
CATALOGUE NUMBER	DIAMETER RANGE				APPLIED LENGTH		COLOUR CODE
	INCH		CM				
	MIN	MAX	MIN	MAX	INCH	CM	
MDT 500	0.190	0.215	0.483	0.546	24	61	Blue
MDT 501	0.216	0.244	0.547	0.619	25	64	Brown
MDT 502	0.245	0.277	0.620	0.703	26	66	Orange
MDT 503	0.278	0.315	0.704	0.800	26	66	Purple
MDT 504	0.316	0.357	0.801	0.907	28	71	Red
MDT 505	0.358	0.405	0.908	1.028	30	76	Yellow
MDT 506	0.406	0.459	1.029	1.166	25	64	Blue
MDT 507	0.460	0.520	1.167	1.321	25	64	Orange
MDT 508	0.521	0.588	1.322	1.494	28	71	Red
MDT 509	0.589	0.667	1.495	1.694	30	76	Purple
MDT 510	0.668	0.755	1.695	1.917	31	79	Brown
MDT 511	0.756	0.855	1.918	2.172	32	81	Red
MDT 512	0.856	0.968	2.173	2.459	34	86	Blue
MDT 513	0.969	1.096	2.460	2.784	37	94	Green
MDT 514	1.097	1.240	2.785	3.150	40	102	Yellow

OTHER ADVANTAGES

- Installation without any special tools
- Use for line angle upto 10°
- Will relieve the load in broken wire conditions, providing protection to pole's structural components
- Ease of application
- Protection of insulator glaze
- Free from probable human error applications

SIDE TIE

for use on ACSR, AAC, AAAC, AWAC, covered conductors



SIDE TIEs are used in the side groove of the insulators and are an improved method to secure conductors on insulators. They are ideal replacement to hand made ties which are dependent on human factor and skills.

Side Ties with pad provide abrasion protection to the conductors under vibrations.

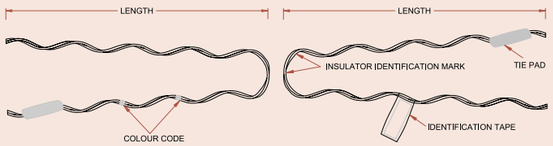
Side Ties are usually sufficient to contain broken-wire conditions to a single span and will relieve load before any damage is passed over to the poles-structure.

CAT. NO.	DIAMETER RANGE				APPLIED LENGTH		COLOUR CODE
	INCH		CM				
	MIN	MAX	MIN	MAX	INCH	CM	
MHST 500	0.190	0.215	0.483	0.546	16	41	Blue
MHST 501	0.216	0.244	0.547	0.619	17	43	Brown
MHST 502	0.245	0.277	0.620	0.703	19	48	Orange
MHST 503	0.278	0.315	0.704	0.800	21	53	Purple
MHST 504	0.316	0.357	0.801	0.907	24	61	Red
MHST 505	0.358	0.405	0.908	1.028	26	66	Yellow
MHST 506	0.406	0.459	1.027	1.166	28	71	Blue
MHST 507	0.460	0.520	1.167	1.321	31	78	Orange
MHST 508	0.521	0.588	1.322	1.494	32	81	Red
MHST 509	0.589	0.667	1.495	1.694	23	58	Purple
MHST 510	0.668	0.755	1.695	1.917	25	63	Brown
MHST 511	0.756	0.855	1.918	2.172	26	66	Red
MHST 512	0.856	0.968	2.173	2.459	28	71	Blue
MHST 513	0.969	1.096	2.460	2.784	29	74	Green
MHST 514	1.097	1.240	2.785	3.150	33	84	Yellow

Other sizes on request

DOUBLE SIDE TIE

for use on ACSR, AAC, AAAC, AWAC, covered conductors



DOUBLE SIDE TIEs provide superior abrasion protection to the conductor under sway oscillation and high frequency aeolian vibrations.

The tubular pads used with these ties provide a safety factor to the fatigue life of the conductor and protect also the core on the insulator glaze.

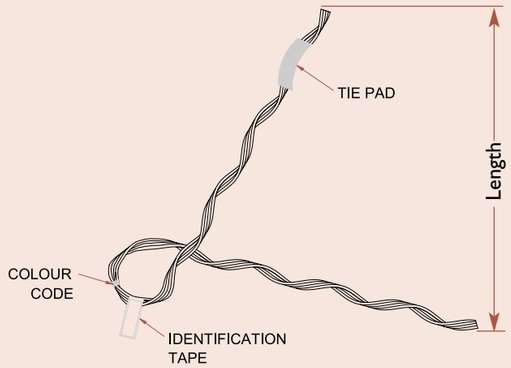
These Ties are used to secure conductor at the side grooves of double arm pin type insulators and are recommended for line angle upto 30°.

CAT. NO.	DIAMETER RANGE				APPLIED LENGTH		COLOUR CODE
	INCH		CM				
	MIN	MAX	MIN	MAX	INCH	CM	
MDST 500	0.245	0.277	0.62	0.70	16	41	Orange
MDST 501	0.278	0.315	0.70	0.80	16	41	Purple
MDST 502	0.316	0.357	0.80	0.90	17	43	Red
MDST 503	0.358	0.405	0.90	1.0	16	41	Yellow
MDST 504	0.406	0.459	1.0	1.1	18	46	Blue
MDST 505	0.466	0.520	1.1	1.3	19	48	Orange
MDST 506	0.521	0.588	1.3	1.4	19	48	Red
MDST 507	0.589	0.667	1.4	1.7	20	51	Purple
MDST 508	0.668	0.755	1.7	1.9	20	51	Brown
MDST 509	0.756	0.855	1.9	2.1	20	51	Red
MDST 510	0.856	0.968	2.1	2.4	22	56	Blue
MDST 511	0.969	1.096	2.4	2.7	24	61	Green
MDST 512	1.097	1.240	2.7	3.1	24	61	Yellow

Other sizes on request

SPOOL TIE

for use on ACSR, AAC, AAAC, AWAC
Plastic jacketed conductors



SPOOL TIEs provide an improved method of securing conductor compared to hand ties over armour rods and provide protection against abrasion.

Spool ties are supplied with or without pad and are recommended for line angles upto 20° on vertically mounted insulators or upto 15° on horizontally mounted insulators.

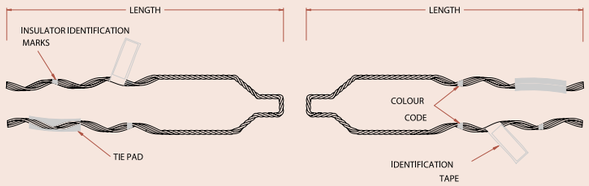
Spool ties are used with spool or shackle insulators and are resilient enough to protect structural components of poles under broken wire conditions.

CAT. NO.	DIAMETER RANGE						
	INCH		CM		APPLIED LENGTH		COLOUR CODE
	MIN	MAX	MIN	MAX	INCH	CM	
MSTP 500	0.190	0.198	0.48	0.50	14	35	Blue
MSTP 501	0.199	0.207	0.50	0.52	14	35	Green
MSTP 502	0.208	0.217	0.52	0.55	14	35	Black
MSTP 503	0.218	0.227	0.55	0.57	14	35	White
MSTP 504	0.228	0.237	0.58	0.60	14	35	Brown
MSTP 505	0.238	0.247	0.60	0.62	14	35	Red
MSTP 506	0.248	0.259	0.63	0.65	19	48	Orange
MSTP 507	0.260	0.269	0.66	0.68	19	48	Green
MSTP 508	0.270	0.280	0.68	0.71	19	48	Yellow
MSTP 509	0.281	0.291	0.71	0.73	19	48	White
MSTP 510	0.292	0.303	0.74	0.76	19	48	Purple
MSTP 511	0.304	0.314	0.77	0.79	19	48	Brown
MSTP 512	0.315	0.327	0.80	0.83	19	48	Red
MSTP 513	0.328	0.340	0.83	0.86	19	48	Blue
MSTP 514	0.341	0.353	0.86	0.89	19	48	Orange
MSTP 515	0.354	0.367	0.90	0.93	22	56	Green
MSTP 516	0.368	0.381	0.93	0.96	22	56	Black
MSTP 517	0.382	0.394	0.97	1.0	22	56	White
MSTP 518	0.395	0.411	1.03	1.04	22	56	Yellow
MSTP 519	0.412	0.437	1.04	1.11	22	56	Brown
MSTP 520	0.438	0.463	1.11	1.17	22	56	Blue
MSTP 521	0.464	0.492	1.17	1.25	22	56	Green
MSTP 522	0.493	0.522	1.25	1.32	22	56	Orange
MSTP 523	0.523	0.554	1.33	1.41	23	58	Black
MSTP 524	0.555	0.594	1.41	1.51	23	58	Red
MSTP 525	0.595	0.630	1.51	1.60	23	58	Purple
MSTP 526	0.631	0.666	1.60	1.69	23	58	Yellow
MSTP 527	0.667	0.705	1.69	1.79	22	56	Brown
MSTP 528	0.706	0.747	1.79	1.89	22	56	Green
MSTP 529	0.748	0.795	1.90	2.02	23	58	Orange
MSTP 530	0.796	0.841	2.02	2.13	23	58	Red
MSTP 531	0.842	0.890	2.14	2.26	24	61	Blue
MSTP 532	0.891	0.922	2.26	2.34	25	64	Green

Other sizes on request

DOUBLE SUPPORT TIE

for use on ACSR, AAC, AAAC, AWAC
Plastic jacketed conductors



DOUBLE SUPPORT TIEs provide superior abrasion protection to the conductor under sway oscillation and high frequency aeolian vibrations.

The tubular pads used with these ties provide a safety factor to the fatigue life of the conductor and protect also the core on the insulator glaze.

These Ties are used to secure conductor at the top grooves of double arm pin type insulators and are recommended for line angles upto 10°.

CAT. NO.	DIAMETER RANGE				APPLIED LENGTH		COLOUR CODE
	INCH		CM				
	MIN	MAX	MIN	MAX	INCH	CM	
MDSS 500	0.248	0.259	0.62	0.65	12½	32	Orange
MDSS 501	0.260	0.269	0.65	0.68	12½	32	Green
MDSS 502	0.270	0.280	0.68	0.71	12½	32	Yellow
MDSS 503	0.281	0.291	0.71	0.73	12½	32	White
MDSS 504	0.292	0.303	0.73	0.76	13	33	Purple
MDSS 505	0.304	0.314	0.76	0.79	13	33	Brown
MDSS 506	0.315	0.327	0.79	0.83	13	33	Red
MDSS 507	0.328	0.340	0.83	0.86	13½	34	Blue
MDSS 508	0.341	0.353	0.86	0.89	13½	34	Orange
MDSS 509	0.354	0.367	0.89	0.93	13½	34	Green
MDSS 510	0.368	0.381	0.93	0.96	13½	34	Black
MDSS 511	0.382	0.394	0.96	1.0	13½	34	White
MDSS 512	0.395	0.411	1.0	1.0	14	36	Yellow
MDSS 513	0.412	0.437	1.0	1.1	14	36	Brown
MDSS 514	0.438	0.463	1.1	1.2	14½	37	Blue
MDSS 515	0.464	0.492	1.2	1.2	15½	39	Green
MDSS 516	0.493	0.522	1.2	1.3	15½	39	Orange
MDSS 517	0.523	0.554	1.3	1.4	16	41	Black
MDSS 518	0.555	0.594	1.4	1.5	16½	42	Red
MDSS 519	0.595	0.630	1.5	1.6	17	43	Purple
MDSS 520	0.631	0.664	1.6	1.7	17½	44	Yellow
MDSS 521	0.665	0.705	1.7	1.8	18	46	Brown
MDSS 522	0.706	0.747	1.8	1.9	18½	47	Green
MDSS 523	0.748	0.795	1.9	2.0	19½	50	Orange
MDSS 524	0.796	0.846	2.0	2.1	20	51	Purple
MDSS 525	0.847	0.900	2.1	2.3	20½	52	Blue

Other sizes on request

FAMILY OF DEAD-ENDS

The dead end grips and guy grip dead ends form the main family of dead ends in addition to the service grips.

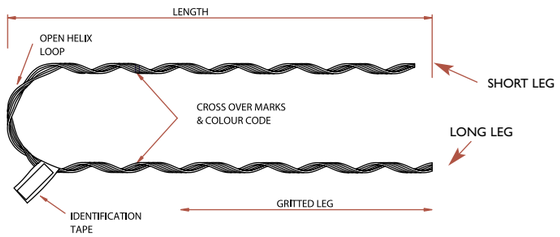
Distribution grip dead end is a replacement of bolted or compression type dead end clamps and is manufactured out of galvanised steel for PVC covered conductors and of Aluminium Alloy or Aluminium coated steel for Aluminium based Conductors.

They give following advantages :

- Very easy to apply
- No concentrated compressive stress as inherent in bolted clamps
- Radial pressure over large length and over complete circumference of the conductor
- Develop 95% of UTS of conductor for monometalic and most of ACSR's
- They require no special skill or tools for application

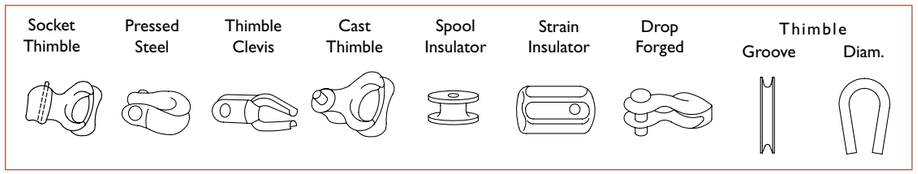
DISTRIBUTION GRIP - dead end

for use on ACSR, AAC, AAAC, ACAR, AACSR conductors



CAT. NO.	DIAMETER RANGE				LENGTH		COLOUR
	INCH		CM				CODE
	MIN.	MAX	MIN.	MAX.	INCH	CM	
MADE 500	0.213	0.263	0.541	0.668	16	41	Blue
MADE 501	0.264	0.288	0.670	0.732	17	43	Orange
MADE 502	0.289	0.316	0.734	0.804	24	61	Red
MADE 503	0.317	0.355	0.805	0.903	26	66	Green
MADE 504	0.356	0.398	0.904	1.012	26	66	Yellow
MADE 505	0.399	0.447	1.013	1.135	28	71	Blue
MADE 506	0.448	0.502	1.136	1.275	32	81	Orange
MADE 507	0.503	0.563	1.276	1.431	34	86	Red
MADE 508	0.564	0.653	1.432	1.659	35	89	Black
MADE 509	0.654	0.739	1.660	1.877	39	99	Green

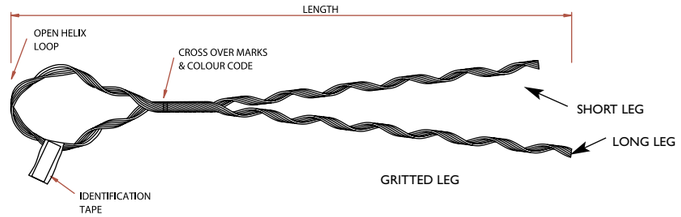
ACCEPTABLE FITTINGS



Dimensions to suit needs

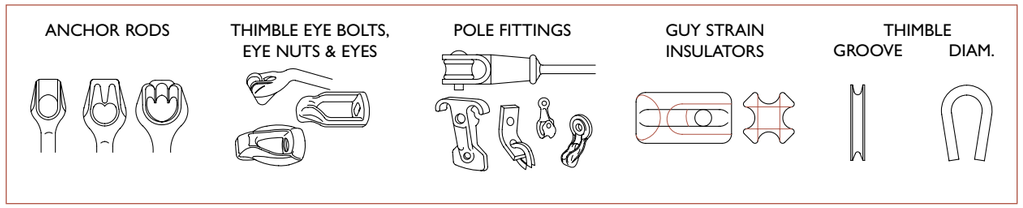
GUY GRIP - dead end

for use on galvanised steel, alumoweld, aluminised, copperweld. stainless steel wire strands



CATALOGUE NUMBER	SIZE	STRAND	MEAN DIA		LENGTH						COLOUR CODE
					GALVANISED		ALUMINISED		STAINLESS		
			INCH	CM	INCH	CM	INCH	CM	INCH	CM	
MGDE 500	3/16"	7W	0.195	0.495	20	51	18	46	-	-	Red
MGDE 501	7/32"	7W	0.216	0.549	24	61	-	-	22	56	Green
MGDE 502	1 / 4"	3-7w	0.259	0.658	25	64	23	58	26	66	Yellow
MGDE 503	9/32"	7W	0.285	0.724	28	71	24	61	27	69	Blue
MGDE 504	5/16"	3-7W	0.327	0.831	31	79	27	69	31	79	Black
MGDE 505	3 /8"	3-7W	0.360	0.914	35	89	32	81	37	94	Orange
MGDE 506	7/16"	7W	0.435	1.105	38	97	34	86	43	109	Green
MGDE 507	1 /2"	7-19W	0.495	1.257	45	114	-	-	-	-	Blue
MGDE 508	9/16"	7-19W	0.564	1.433	55	140	-	-	-	-	Yellow
MGDE 509	5 /8"	7-19W	0.621	1.577	64	163	-	-	-	-	Black

ACCEPTABLE FITTINGS

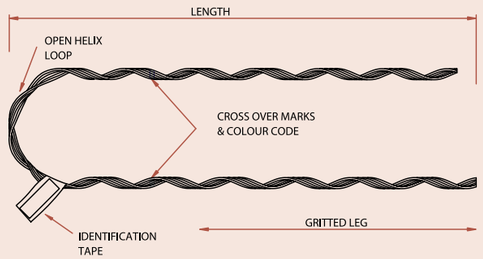


Dimensions to suit needs

Guy grips are used on poles associated with distribution network. They have the same lay as the strand on which they are fitted and accord following characteristics –

- They develop full tension of the strand
- They can be fitted to thimbles, thimble-eye rods and various other combinations
- They are made of same material as the strand to which they grip

SERVICE GRIP - dead end
for use on ACSR, AAC, AAAC, ACAR, AACSR conductors



CATALOGUE NUMBER.	NOMINAL CONDUCTOR SIZE			LENGTH		COLOUR CODE
	ACSR	ALL ALLUM	ALLUM ALLOY	INCH	CM	
MSD 500	# 6, 6/1	# 6, 7W	# 6, 7W	11	28	Blue
MSD 501	# 5, 6/1	# 4 SOLID	#5, 7W	12	30	White
MSD 502	# 4, 6/1, 7/1	# 4, 7W	# 4, 7W	13	33	Orange
MSD 503	# 3, 6/1	# 2 SOLID	#3, 7W	14	36	Black
MSD 504	# 2, 6/1, 7/1	# 2, 7W	# 2, 7W	15	38	Red
MSD 505	# 1, 6/1	# 1, 7W	# 1, 7W	17	43	Green
MSD 506	1/0, 6/1	1/0, 7W	1/0, 7W	19	48	Yellow
MSD 507	2/0, 6/1	2/0 7W	2/0, 7W	21	53	Blue
MSD 508	3/0, 6/1	3/0, 7W	3/0, 7W	23	58	Orange
MSD 509	4/0, 6/1, 18/1	4/0, 7W	4/0, 7W	26	66	Red

Service Grip dead end is used for service drops upto 150 feet and is used with bare neutral-messengers of self supporting cables. For longer spans, distribution Grip Dead Ends should be used.

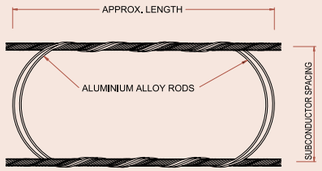
Service Grip dead ends are designed for use with spool or shackle insulators, wire holders, triplex separator and have suitably manufactured loops to suit the same.

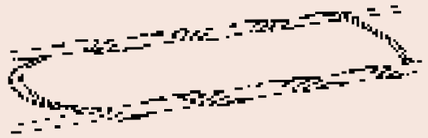
Rated holding strength of these Grips is usually in the range of 50% for ACSR, 80% for aluminium alloy and around 90% for all aluminium conductor.

Greatest advantage of these Grips lies in their economy, neatness and high holding strength.

They can be also used in multiple installations from a single support.

HELICAL ROD SPACER
for use on ACSR, AAC, AAAC conductors





CATALOGUE NUMBER	DIAMETER RANGE				TYPICAL CONDUCTOR SIZE	APPROX. APPLIED LENGTH		RODS PER SET
	INCH		CM					
	MIN	MAX	MIN	MAX	AWG or MCM	INCH	CM	
MHRS 500	0.800	0.835	2.03	2.11	397.5 MCM 30/7	35	89	4
MHRS 501	0.836	0.868	2.12	2.20	477, 26/7	35	89	4
MHRS 502	0.869	0.910	2.21	2.30	477 MCM 30/7	35	89	4
MHRS 503	0.911	0.950	2.31	2.41	556.5, 26/7	44	112	4
MHRS 504	0.951	0.994	2.42	2.52	715.5, 37-61 All Alum.	44	112	4
MHRS 505	0.995	1.038	2.53	2.63	666.6 MCM 24/7	45	114	4
MHRS 506	1.039	1.088	2.64	2.76	795,45/7	45	114	4
MHRS 507	1.089	1.140	2.77	2.89	795, 26/7	45	114	4
MHRS 508	1.141	1.196	2.90	3.03	954, 54/7	46	117	4
MHRS 509	1.197	1.250	3.04	3.17	1113, 61W All Alum.	46	117	4
MHRS 510	1.251	1.305	3.18	3.31	1272, 61W All Alum.	46	117	4
MHRS 511	1.306	1.365	3.32	3.46	1272, 45/7	48	122	4
MHRS 512	1.366	1.425	3.47	3.61	1272, 54/19	48	122	4
MHRS 513	1.426	1.492	3.62	3.78	1431, 54/19	49	124	4
MHRS 514	1.493	1.562	3.79	3.96	1590, 54/19	49	124	4
MHRS 515	1.563	1.619	3.97	4.10	1780, 84/19	50	127	4
MHRS 516	1.620	1.678	4.11	4.25	2000, 72/7	50	127	4
MHRS 517	1.679	1.731	4.26	4.39	2250, 91W All Alum.	50	127	4
MHRS 518	1.732	1.795	4.40	4.55	2156, 84/19	50	127	4
MHRS 519	1.796	1.855	4.56	4.70	2500, 91W All Alum.	50	127	4
MHRS 520	1.856	1.923	4.71	4.88	2750, 91W All Alum.	50	127	4

These spacers are used to provide uniform spacing of the subconductors to insure consistent electrical Characteristics & protection to wind induced aeolian vibrations or oscillations. These spacers are used of material which is compatible with the conductor.

CONDUCTOR SPLICE

for use on AAC, AAAC, ACAR conductor

CATALOGUE NUMBER	NOMINAL CONDUCTOR SIZE	LENGTH		ROD DIAMETERNO		NO OF SUB SET	COLOUR CODE
		INCH	CM	INCH	CM		
MCS 500	# 6, 7W ALL ALUM	21	53	0.086	0.218	2	Purple
MCS 501	# 6, 6/1, 7W AL ALLOY	22	56	0.086	0.218	2	Blue
MCS 502	# 4, 7W, ALL ALUM	24	61	0.086	0.218	2	Brown
MCS 503	# 4, 6/1, 7W AL ALLOY	26	66	0.094	0.239	3	Orange
MCS 504	#3, 7W ALL ALUM	26	66	0.094	0.239	3	Green
MCS 505	#3, 7W ALL ALUM	27	69	0.094	0.239	3	Yellow
MCS 506	#2, 7W ALL ALUM	28	71	0.094	0.239	3	Purple
MCS 507	#2, AWAC 6/1	30	76	0.102	0.259	3	Brown
MCS 508	# 2,6/1,7W AL ALLOY	31	79	0.102	0.259	3	Red
MCS 509	# 1, 7W ALL ALUM	31	79	0.102	0.259	3	Blue
MCS 510	#1, AWAC 6/1	33	84	0.102	0.259	3	Orange
MCS 511	#1, 6/1, 7W AL ALLOY	34	86	0.102	0.259	3	Green
MCS 512	# 1, AWAC 5/2, 1/0, 7W	38	97	0.121	0.307	3	Black
MCS 513	1/0, AWAC, 6/1, 7W AL ALUM	38	97	0.121	0.307	3	Yellow
MCS 514	2/0, 7W ALL ALUM	40	102	0.121	0.307	3	Brown
MCS 515	2/0, 6/1, 7W ALUM ALLOY	42	107	0.136	0.345	3	Blue
MCS 516	3/0, 7W ALL ALUM	46	117	0.136	0.345	3	Green
MCS 517	3/0, 6/1, 7W ALUM ALLOY	46	117	0.146	0.371	3	Orange
MCS 518	3/0, AWAC 5/2, 4/0 7W	51	130	0.167	0.424	3	Black
MCS 519	4/0, 6/1 7W ALUM ALLOY	52	132	0.167	0.424	3	Red
MCS 520	4/0, AWAC 15/4, 266.8 37W	61	155	0.182	0.462	3	Blue
MCS 521	266.8 18/1	63	160	0.182	0.462	3	Purple
MCS 522	266.8, 26/7, 300, 37W	67	170	0.182	0.462	3	Yellow
MCS 523	300, 18/1, 336.4, 37W	69	175	0.204	0.518	3	Brown
MCS 524	300,30/7,350, 37W	70	178	0.204	0.518	3	Orange
MCS 525	336.4, 26/7, 400, 37W	77	196	0.250	0.635	3	Green
MCS 526	336.4, 30/7, 397.5, 18/1	79	201	0.250	0.635	3	Black
MCS 527	397.5, 26/7,450, 37W	83	211	0.250	0.635	3	Purple
MCS 528	477, 36/1, 500, 37W	84	213	0.250	0.635	3	Red
MCS 529	477, 26/7, 556.5, 37W	99	251	0.250	0.635	4	Orange
MCS 530	605, 36/1, 636, 61W	105	267	0.310	0.787	3	Orange
MCS 531	636, 666.6, 36/1	108	274	0.310	0.787	4	Brown
MCS 532	666.6, 54/75, 715.5, 36/1	111	282	0.310	0.787	4	Yellow
MCS 533	795, 36/1, 61W ALL ALUM	121	307	0.310	0.787	4	Green
MCS 534	874.5, 36/1, 61W ALL ALUM	127	323	0.310	0.787	4	Black
MCS 535	795, 54/7, 954, 61W	137	348	0.365	0.927	4	Purple
MCS 536	954, 45/7, 1033.5, 61W	141	358	0.365	0.927	4	Red
MCS 537	1033.5, 45/7, 1113, 61W	143	363	0.365	0.927	4	Blue
MCS 538	1272, 45/7, 61W ALL ALUM	165	419	0.436	1.082	4	Yellow

Conductor splices on monotallic conductors are single component outer layer assembly with rated holding strength of 95% of UTS of all aluminium and aluminium alloy conductor.

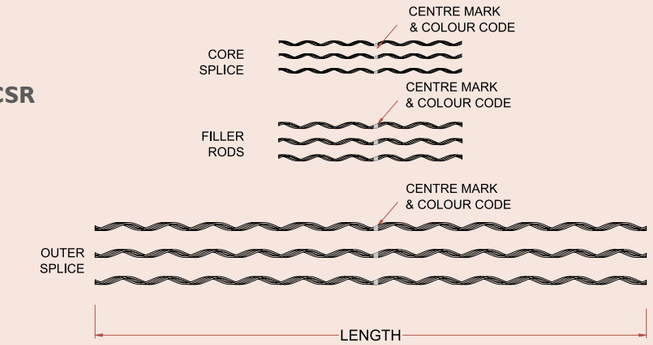
Splices restore full conductance and can also be used for conductor repair on damages confined to aluminium strands.

The advantages they offer are :-

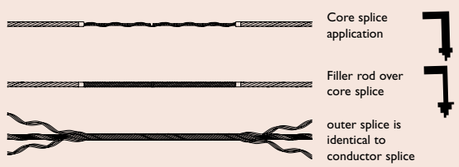
- Ease of application
- No need of compression tools
- No special skill is needed to apply
- Highly reliable in worst environmental conditions and have strong performance which prevent any fatigue failures of conductor strands at joints

SPLICE F.T.

for use on ACSR, AACSR full tension



CATALOGUE NUMBER	ACSR CONDUCTOR SIZE	OUTER SPLICE LENGTH		NO. OF SUB SETS	ROD DIAMETER		COLOUR CODES		
		INCH	CM		INCH	CM	CORE	FILLER	OUTER
MSFT 500	# 4, 6/1	35	89	3	0.094	0.238	Black	None	Orange
MSFT 501	#4, 7/1	35	89	3	0.094	0.238	Black	None	Orang
MSFT 502	#2, 6/1	44	112	3	0.102	0.259	Black	None	Red
MSFT 503	#2, 7/1	45	114	3	0.102	0.259	Black	None	Red
MSFT 504	1/0,6/1	52	132	3	0.121	0.307	Black	Black	Yellow
MSFT 505	2/0, 6/1	55	140	3	0.136	0.345	Black	Black	Blue
MSFT 506	3/0, 6/1	59	150	3	0.146	0.371	Black	Black	Orange
MSFT 507	4/0, 6/1	67	170	3	0.167	0.424	Black	Black	Red
MSFT 508	101.8, 12/7	65	165	3	0.136	0.345	Black	None	Blue
MSFT 509	110.8, 12/7	69	175	3	0.136	0.345	Black	None	Green
MSFT 510	134.6, 12/7	75	191	3	0.167	0.424	Black	None	Purple
MSFT 511	266.8, 26/7	91	231	3	0.182	0.462	Black	Black	Yellow
MSFT 512	336.4, 18/1	87	221	3	0.204	0.518	Black	Black	Blue
MSFT 513	336.4, 26/7	103	262	3	0.250	0.635	Black	Black	Green
MSFT 514	336.4, 30/7	108	274	3	0.250	0.635	Black	Black	Orange
MSFT 515	397.5, 26/7	110	279	3	0.250	0.635	Black	Black	Purple
MSFT 516	477, 24/7	113	287	3	0.250	0.635	Black	Black	Blue
MSFT 517	477, 26/7	120	305	4	0.250	0.635	Black	Black	Blue
MSFT 518	556.5, 26/7	129	328	3	0.310	0.787	Black	Black	Green
MSFT 519	636, 24/7	132	335	4	0.310	0.787	Black	Black	Yellow
MSFT 520	636, 26/7	134	340	4	0.310	0.787	Black	Black	Yellow
MSFT 521	795, 45/7	153	389	4	0.310	0.787	Black	Black	Blue
MSFT 522	795, 26/7	158	401	4	0.365	0.927	Black	Black	Orange
MSFT 523	1,272, 45/7	203	516	4	0.436	1.107	Black	Black	Yellow



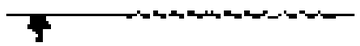
Full Tension Splice is a multi component product with core and filler applications on ACSR. It develops 100% of the breaking strength of ACSR and so also restores full conductance.

The advantages they offer are :-

- Ease of application
- No need of compression tools
- No special skill is needed to apply
- Highly reliable in worst environmental conditions and have strong performance which prevent any fatigue failures of conductor strands at joints

SPIRAL VIBRATION DAMPER

for use on all types of distribution line conductors, bare & covered including OFC, ADSS cables



CATALOGUE NUMBER	DIAMETER RANGE				NOMINAL CONDUCTOR SIZE	LENGTH	
	INCH		CM				
	MIN	MAX	MIN	MAX	AWG or MCM	INCH	CM
MPVD 501	0.174	0.249	0.441	0.634	# 6, 6/1 # 4, 7W ALL-ALUM # 4, 6/1 COMP # 4, 7W CU 8A, CW/CU	46	117
MPVD 502	0.250	0.326	0.635	0.829	# 4, 6/1, 7/1 # 4, 7W ALUM. ALLOY # 4, AWAC, 5/2 # 2, 6/1, 7/1 # 2, 7W ALL-ALUM # 2, 7W CU	49	124
MPVD 503	0.327	0.461	0.830	1.17	1, 6/1 1/0, 6/1 1/0, 7W - 19W ALL-ALUM 1/0, AWAC, 4/3 1/0, 7W - 19W CU 2/0, 6/1, 7/1 2/0, 7W - 19W ALL-ALUM 101.8 M, 12/7	51	130
MPVD 504	0.462	0.563	1.171	1.430	3/0, 6/1 3/0, 7W - 19W ALL-ALUM 3/0, 7W - 19W CU 4/0, 6/1 4/0, 7W - 19W ALL-ALUM 4/0, 7W - 19W CU 134.6 M, 12/7	53	135
MPVD 505	0.564	0.760	1.432	1.930	266.8 M, 18/1 266.8 M, 7W - 19W ALL-ALUM 336.4 M, 18/1, 36/1 336.4 M, 19W - 37W ALL-ALUM 397.5 M, 18/1, 36/1 397.5 M, 19W	61	155

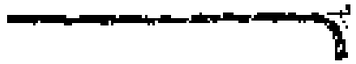
SPIRAL VIBRATION DAMPERS are used for conductor protection in areas where heavy vibration is experienced. These devices are considered only supplemented to distribution ties, side ties, spool ties, armour rods, line guards or any other hardware at tangent supports.

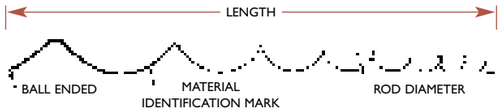
- For spans exceeding 800 feet two numbers should be placed approximately 18" apart.
- Gripping section has smaller helix.
- They are made from special ultraviolet and temperature resistant PVC of high surface hardness.

Spiral Vibration dampers have very specialised application for installation on Aerial Optical Fibre Cables and ADSS. They provide the best remedy for the protection of OFC under vibrating condition and prevent any fatigue damages on the cable itself or any decay in their attenuation levels

LASHING ROD

for use on galvanised steel, alumoweld, copperweld and stainless steel messengered cable





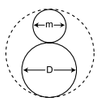
CAT. NO.	DIAMETER RANGE				LENGTH		ROD DIAMETER								COLOUR CODE
	INCH		CM				GALV.		ALUMO.		COPPER		STAIN		
	MIN	MAX	MIN	MAX	FT	M	INCH	CM	INCH	CM	INCH	CM	INCH	CM	
MRL 500	0.400	0.439	1.016	1.115	5	1.5	0.086	0.218	0.102	0.259	0.102	0.23	0.085	0.215	Red
MRL 501	0.440	0.489	1.116	1.242	5	1.5	0.086	0.218	0.102	0.259	0.102	0.23	0.085	0.215	White
MRL 502	0.490	0.539	1.243	1.369	5	1.5	0.086	0.218	0.102	0.259	0.102	0.23	0.085	0.215	Orange
MRL 503	0.540	0.599	1.370	1.521	5	1.5	0.086	0.218	0.102	0.259	0.102	0.23	0.085	0.215	Green
MRL 504	0.600	0.669	1.522	1.699	5	1.5	0.100	0.254	0. 114	0.289	0.114	0.29	0.101	0.256	Yellow
MRL 505	0.670	0.749	1.700	1.902	5	1.5	0.100	.254	0.114	0.289	0.114	0.29	0.101	0.256	White
MRL 506	0.750	0.839	1.903	2.131	5	1.5	0.100	0.254	0.114	0.289	0.114	0.29	0.101	0.256	Red
MRL 507	0.840	0.939	2.132	2.385	5	1.5	0.100	0.254	0.114	0.289	0.114	0.29	0.101	0.256	White
MRL 508	0.940	1.049	2.386	2.664	5	1.5	0.100	0.254	0.114	0.289	0.114	0.29	0.101	0.256	Orange
MRL 509	1.050	1.169	2.665	2.969	5	1.5	0.119	0.302	0.128	0.325	0.128	0.33	0.120	0.305	Green
MRL 510	1.170	1.309	2.970	3.324	5	1.5	0.119	0.302	0.128	0.325	0.128	0.33	0.120	0.305	Yellow
MRL 511	1.310	1.459	3.325	3.705	5	1.5	0.119	0.302	0.128	0.325	0.128	0.33	0.120	0.305	White
MRL 512	1.460	1.629	3.706	4.137	6	1.8	0.138	0.350	0.144	0.365	0.144	0.365	0.139	0.353	Red
MRL 513	1.630	1.819	4.138	4.620	6	1.8	0.138	0.350	0.144	0.365	0.144	0.365	0.139	0.353	White
MRL 514	1.820	2.039	4.621	5.179	6	1.8	0.138	0.350	0.144	0.365	0.144	0.365	0.139	0.353	Orange
MRL 515	2.040	2.279	5.180	5.788	6	1.8	0.159	0.403	0.162	0.411	0.162	0.411	0.161	0.409	Green
MRL 516	2.280	2.539	5.789	6.449	6	1.8	0.159	0.403	0.162	0.411	0.162	0.411	0.161	0.409	Yellow
MRL 517	2.540	2.839	6.450	7.211	6	1.8	0.159	0.403	0.162	0.411	0.162	0.411	0.161	0.409	White
MRL 518	2.840	3.179	7.212	8.074	6	1.8	0.159	0.403	0.162	0.411	0.162	0.411	0.161	0.409	Red
MRL 519	3.180	3.559	8.075	9.039	6	1.8	0.172	0.436	0.182	0.462	0.182	0.462	0.175	0.445	White
MRL 520	3.560	3.999	9.040	10.15	6	1.8	0.172	0.436	0.182	0.462	0.182	0.462	0.175	0.445	Orange
MRL 521	4.000	4.479	10.16	11.37	6	1.8	0.172	0.436	0.182	0.462	0.182	0.462	0.175	0.445	Green
MRL 522	4.480	4.999	11.37	12.69	6	1.8	0.172	0.436	0.182	0.462	0.182	0.462	0.175	0.445	Yellow
MRL 523	5.000	5.599	12.70	14.22	6	1.8	0.172	0.436	0.182	0.462	0.182	0.462	0.175	0.445	White
MRL 524	5.600	6.299	14.22	15.99	6	1.8	0.172	0.436	0.182	0.462	0.182	0.462	0.175	0.445	Red

LASHING RODS are used for lashing of the bearer wire with any sort of PVC covered cable. These are made with material compatible to the messenger. For cable messenger assembly weight in excess of 8 lbs per foot, two lashing rods 180° apart should be applied. Diameters shown in chart above should be arrived by totalling the diameters of the messenger and the cable.

They provide neat & tidy system & prevent any sagging or disengagement as always possible with manual cleating system.

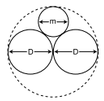
SIZE SELECTION : in selecting the proper size lashing rod it is necessary to determine the smallest circumscribing circle that will enclose the messenger and cables.
For grouping only one cable with a messenger, add the diameters and multiply by a factor of 0.850.

C = (D + m) x 0.850



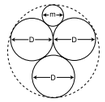
For grouping two equal diameter cables; multiply the diameter of one cable times 2.00. then find the diameter of the maximum messenger that will fit in the interstices of the cables multiply the diameter of one cable times 0.666.

C = D x 2.00



m = D x 0.666

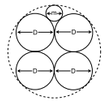
C = D x 2.155



m = D x 0.483

For grouping three equal diameter cables; multiply the diameter of one cable times 2.155. Then to find the diameter of the maximum messenger that will fit in the intersticies of the cables multiply the diameter of one cable times .483.

C = D x 2.414

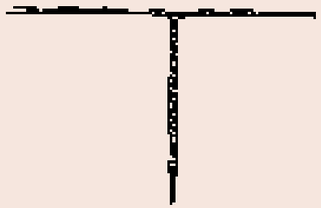


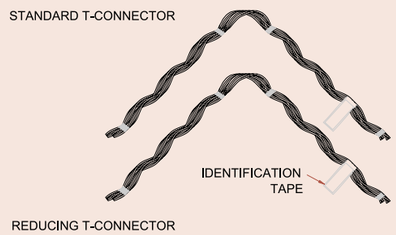
m = D x 0.414

For grouping four equal diameter cables; multiply the diameter of one cable times 2.414. Then to find the diameter of the maximum messenger that will fit in the intersticies of the cables multiply the diameter of one cable times 0.414.

T-CONNECTOR : REDUCER

for use on ACSR, AAC, AAAC conductors





CAT. NO.	DIAMETER RANGE				COLOUR CODE
	INCH		CM		
	MIN	MAX	MIN	MAX	
MTC 500	0.229	0.239	0.581	0.607	Brown
MTC 501	0.240	0.246	0.608	0.624	Red
MTC 502	0.247	0.257	0.625	0.652	Orange
MTC 503	0.258	0.270	0.653	0.685	Green
MTC 504	0.271	0.280	0.686	0.711	Yellow
MTC 505	0.281	0.289	0.712	0.734	White
MTC 506	0.290	0.298	0.735	0.756	Purple
MTC 507	0.299	0.310	0.757	0.787	Brown
MTC 508	0.311	0.325	0.788	0.825	Red
MTC 509	0.326	0.340	0.826	0.863	Blue
MTC 510	0.341	0.351	0.864	0.891	Orange
MTC 511	0.352	0.367	0.892	0.932	Green
MTC 512	0.368	0.380	0.933	0.965	Black
MTC 513	0.381	0.398	0.966	1.010	Yellow
MTC 514	0.399	0.413	1.011	1.049	Purple
MTC 515	0.414	0.425	1.050	1.079	Brown
MTC 516	0.426	0.443	1.080	1.125	Red
MTC 517	0.444	0.462	1.126	1.173	Blue
MTC 518	0.463	0.481	1.174	1.221	Green
MTC 519	0.482	0.503	1.222	1.277	Orange

CAT. NO.	DIAMETER RANGTE				COLOUR CODE
	INCH		CM		
	MIN	MAX	MIN	MAX	
MTC 520	0.504	0.521	1.278	1.323	Black
MTC 521	0.522	0.544	1.324	1.381	Yellow
MTC 522	0.545	0.567	1.382	1.440	Red
MTC 523	0.568	0.594	1.441	1.508	Blue
MTC 524	0.595	0.618	1.509	1.569	Purple
MTC 525	0.619	0.644	1.570	1.635	Yellow
MTC 526	0.645	0.671	1.636	1.704	Brown
MTC 527	0.672	0.700	1.705	1.778	Orange
MTC 528	0.701	0.729	1.779	1.851	Green
MTC 529	0.730	0.760	1.852	1.930	Black
MTC 530	0.761	0.792	1.931	2.011	Purple
MTC 531	0.793	0.825	2.012	2.095	Red
MTC 532	0.826	0.850	2.096	2.150	Blue
MTC 533	0.851	0.886	2.161	2.250	Orange
MTC 534	0.887	0.929	2.251	2.360	Black
MTC 535	0.930	0.968	2.361	2.460	Brown
MTC 536	0.969	1.008	2.461	2.560	Yellow
MTC 537	1.009	1.050	2.561	2.670	Green
MTC 538	1.051	1.091	2.671	2.771	Black
MTC 539	1.092	1.136	2.772	2.890	Purple

T-CONNECTORS are generally used to connect similar conductors at right angles. Reducing type T-Connectors are available for conductors of unequal diameters. Tap angle should not exceed 30° usually.

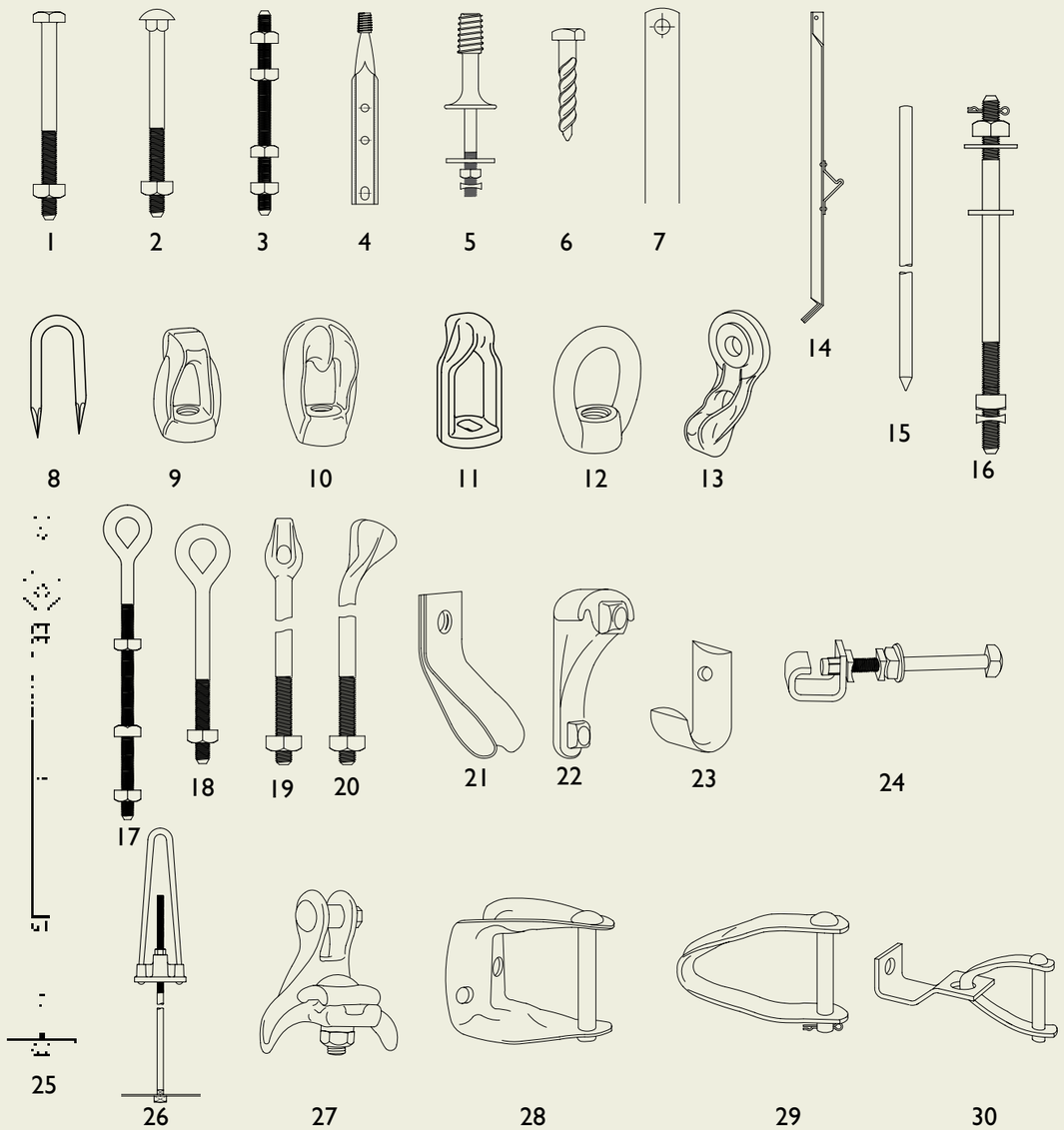
T-Connectors develop 25% of the rated breaking strength and 100% of conductance of the similar conductor.

Installation should proceed with scratch brushing until bright and clean surfaces are seen

Pole line Hardwares

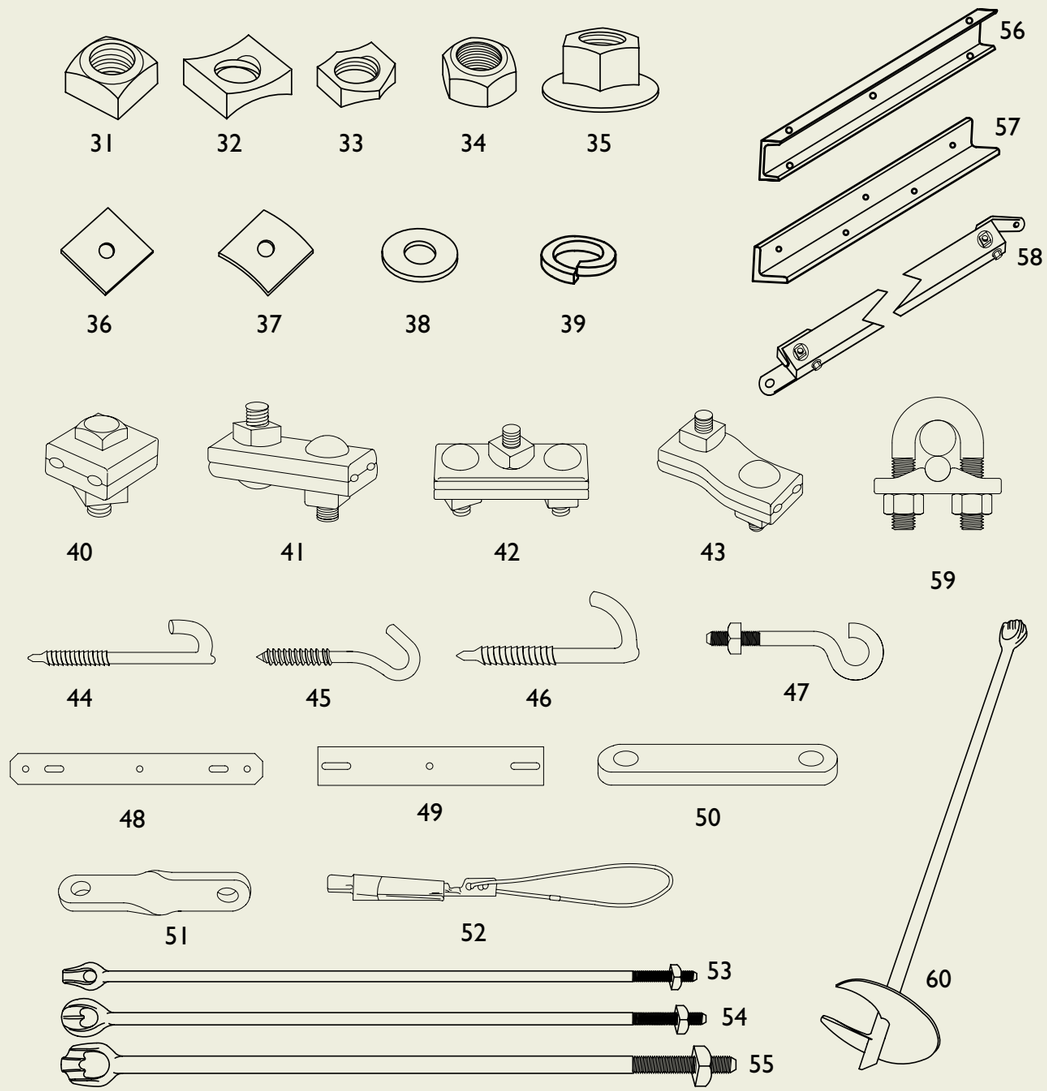
Machine bolts
Insulator pins
Eye nuts & Eyelets
Nuts & Washers
Guy clamps & Hooks
Turn buckle & Extension links
Plates & Clevises
Cross arms & Braces
Earth rods & Clamps
Oval & Thimble eye bolts
Anchor rods

POLE LINE HARDWARE



1. MACHINE BOLT
2. CARRIAGE BOLT
3. DOUBLE ARMING BOLT
4. POLE TOP PIN
5. INSULATOR PIN
6. LAG SCREW
7. CROSS ARM BRACE
8. STAPLE
9. THIMBLE EYENUT
10. TWIN EYENUT
11. STRAIGHT THIMBLEYELET
12. OVAL EYENUT
13. ANGLE THIMBLE-EYELET
14. ALLEY ARM BRACE
15. GROUND ROD
16. SPOOL BOLT
17. DOUBLE ARMING EYEBOLT
18. OVAL EYE BOLT
19. STRAIGHT THIMBLE-EYE BOLT
20. ANGLE THIMBLE-EYE BOLT
21. GUY ATTACHMENT
22. GUY ATTACHMENT
23. GUY HOOK
24. TRANSFORMER TRAINER BRACKET
25. STAY ROD TUBULAR TYPE
26. BOW TYPE STAY ROD & PLATE
27. ANGLE SUSPENSION CLAMP
28. INSULATED SECONDARY CLEVIS
29. INSULATED SWINGING CLEVIS
30. INSULATED SWINGING CLEVIS

POLE LINE HARDWARE

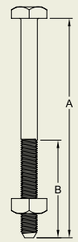


31. SQUARE NUT
32. LOCK NUT
33. LOCK NUT
34. LOCK NUT
35. FLANGE NUT
36. SQUARE WASHER
37. SQUARE CURVED WASHER
38. ROUND WASHER
39. SPRING WASHER
40. GUY CLAMPS
41. GUY CLAMP
42. GUY CLAMP
43. GUY CLAMP
44. HOOK
45. HOOK
46. HOOK
47. HOOK
48. EXTENSION LINK
49. EXTENSION LINK
50. EXTENSION LINK
51. EXTENSION LINK
52. SERVICE WEDGE CLAMP
53. ANCHOR ROD – Single
54. ANCHOR ROD – Twin
55. ANCHOR ROD – Triple
56. STEEL ANGLE CROSS ARM
57. STEEL CHANNEL CROSS ARM
58. CROSS ARM BRACE
59. GROUND ROD CLAMP
60. SCREW ANCHOR

modern malleables

POLE LINE HARDWARE

MACHINE BOLTS (SQ. HEAD)



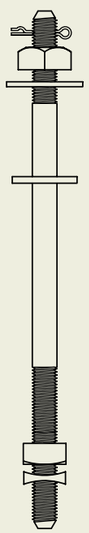
Cat. No.	A	B
3/8 Inch Dia U.T.S. 4250 lbs (1930 Kg.)		
M8601	1	29/32
M8601-1/2	1-1/2	1-1/4
M8602	2	1-3/4
M8603	3	2-3/4
M8604	4	3
M8604-1/2	4-1/2	3
M8605	5	3
M8605-1/2	5-1/2	3
M8606	6	3
M8607	7	4
M8608	8	4
M86010	10	4

Cat. No.	A	B
1/2 Inch Dia U.T.S. 7800 lbs (3540 Kg.)		
M8701	1	29/32
M8701-1/2	1-1/2	1-1/4
M8702	2	1-3/4
M8702-1/2	2-1/2	2-1/4
M8703	3	2-3/4
M8704	4	3
M8704-1/2	4-1/2	3
M8705	5	3
M8706	6	3
M8707	7	4
M8708	8	4
M8709	9	4
M8710	10	6
M8712	12	6
M8714	14	6
M8716	16	6

Cat. No.	A	B
5/8 Inch Dia U.T.S. 12,400lbs (5626 Kg.)		
M8801-1/2	1-1/2	1-1/4
M8802	2	1-3/4
M8802-1/2	2-1/2	2-1/4
M8803	3	2-3/4
M8804	4	3
M8805	5	3
M8806	6	3
M8807	7	4
M8808	8	4
M8809	9	4
M8810	10	6
M8812	12	6
M8814	14	6
M8816	16	6
M8818	18	6
M8820	20	6
M8822	22	6
M8824	24	6
M8826	26	6
M8828	28	6

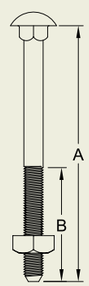
Cat. No.	A	B
3/4 Inch Dia U.T.S. 18,350lbs (8326 Kg.)		
M8906	6	4
M8908	8	4
M8910	10	6
M8912	12	6
M8914	14	6
M8916	16	6
M8918	18	6
M8920	20	6
M8922	22	6
M8924	24	6
M8926	26	6
M8928	28	6

Cat. No.	A	B
7/8 Inch Dia U.T.S. 25,400lbs (11,525 Kg.)		
M9062	12	6
M9064	14	6
M9066	16	6
M9068	18	6
M9070	20	6
M9072	22	6
M9074	24	6
M9076	26	6



SPOOL BOLTS

Cat. No.	Shank Length	Overall Length	Thread Length
Single Upset			
M 2342-1/2	8	12-1/2	4
M 2343-1/2	9	13-1/2	4
M 2344-1/2	10	14-1/2	4
M 2346-1/2	12	16-1/2	6
M M 2348-1/2	14	18-1/2	6
Double Upset			
M 2394	8	14	4
M 2395	9	15	4
M 2396	10	16	4
M 2398	12	18	6

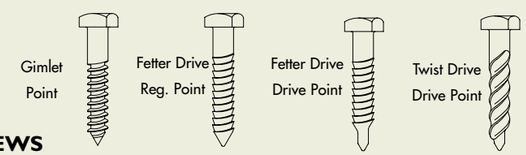


CARRIAGE BOLTS

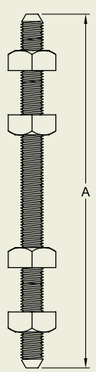
Cat. No.	A	B
1/2 Inch Dia U.T.S. 7,800 lbs (3540 Kg.)		
M8644-1/2	4-1/2	3
M8645	5	3
M8645-1/2	5-1/2	3
M8646	6	3
M8647	7	4
M8648	8	4

Cat. No.	A	B
5/8 Inch Dia U.T.S. 12,400 lbs (5626 Kg.)		
M8666	6	3

Cat. No.	A	B
3/8 Inch Dia U.T.S. 4250 lbs (1930 Kg.)		
M8633	3	2
M8634	4	3
M8634-1/2	4-1/2	3
M8635	5	3
M8635-1/2	5-1/2	3
M8636	6	3
M8637	7	2-1/2
M8638	8	3
M8639	9	2-1/2
M8640	10	2-1/2
M8642	12	2-1/2



DOUBLE ARMING BOLTS



Cat. No.	A	Cat. No.	A
5/8 Inch Dia U.T.S. 12,400 lbs (5626 Kg.)			
M8860	10	M8872	22
M8862	12	M8874	24
M8864	14	M8876	26
M8866	16	M8877	28
M8868	18	M8878	30
M8870	20	M8879	32

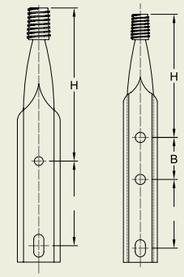
Cat. No.	A	Cat. No.	A
5/8 Inch Dia U.T.S. 18,350 lbs (8326 Kg.)			
M8882	12	M8894	24
M8884	14	M8896	26
M8886	16	M8897	28
M8888	18	M8898	30
M8890	20	M8899	32
M8892	22		

LAG SCREWS

Gimlet Point	Cat. No. Fetter Drive Reg. Point	Cat. No. Fetter Drive Drive Point	Cat. No. Twist Drive Drive Point	Size	Minimum Thread Length
M 8721-1/2				1/4x1-1/2	1-1/4
M 8722	M 8652			1/4x2	1-1/2
M 8722-1/2	M 8657-1/2			1/4x2-1/2	1-3/4
M 8723				1/4x3	2
M 8724				1/4x4	2
M 8732-1/2				5/16x2-1/2	1-3/4
M 8733				5/16x3	2
	M 8742-1/2			3/8x2-1/2	1-3/4
M 8773	M 8743	M 8743 P		3/8x3	2
	M 8744	M 8744 P		3/8 X 4	2-1/2
	M 8753	M 8753 P		1/2X3	2
	M 8753-1/2	M 8753-1/2P		1/2X3-1/2	2-1/4
M 8784	M 8754	M 8754 P	M 8754 TP	1/2X4	2-1/2
	M 8754-1/2	M 8754-1/2P		1/2X4-1/2	2-3/4
	M 8755	M 8755 P	M 8755 TP	1/2X5	3
	M 8765			5/8X5	3

All dimensions are in inches

POLE LINE HARDWARE

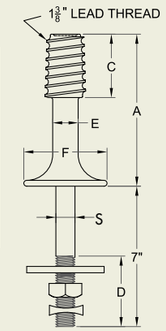


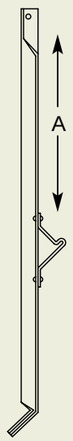
POLE TOP PINS

Cat. No.	Steel Gauge B.W.	Length	Dimensions S	Dimensions B	Dimensions H	Lead Thread	Hole Dia. for Bolt	Slot Hole
M 715	9	15	5	(2- holes)	9	1	5/8	11/16x1-1/4
M 1266	9	16	5	(2-holes)	10	1	5/8	11/16x1-1/4
M 1368	9	18	5	3	9	1	5/8	11/16x1-1/4
M 740	7	20	3	5	11	1	5/8	11/16x1-1/4
M 744	7	24	5	3	15	1	5/8	11/16x1-1/4
M 720	7	20	8	(2-holes)	11	1-3/8	5/8	11/16x1-1/4

INSULATOR PINS

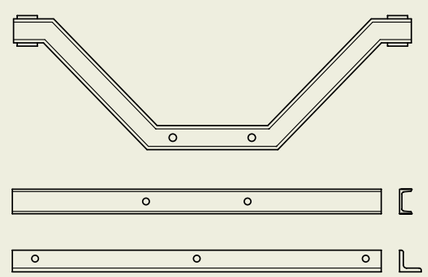
Cat. No.	S Shank Dia.	A Height Above Arm	C Height Of Thread	D Thread Length	E Stalk Dia.	F Base Dia.
For Insulators with Standard 1-3/8 Inch Threaded Pin Hole						
M 647	5/8	7	2-1/8	3-1/2	1	3
M 648	5/8	8	2-1/8	3-1/2	1	3
M 607 A	3/4	7	2-1/8	3-1/2	1	3
M 608	3/4	8	2-1/8	3-1/2	1	3





ALLEY ARM BRACES

Cat. No.	Angle Size	Length (Feet)	A Step Distance	B Brace Mfg. Hole Dia.
M 1521	1-1/2x1-1/2x3/16	5	30	9/16
M 1522	1-3/4x1-3/4x3/16	5	30	9/16
M 1523	1-1/2x1-1/2x3/16	6	30	9/16
M 1526	1-3/4x1-3/4x3/16	7	30	11/16
M 1526	2 x 2 x 1 /4	10	50	11/16



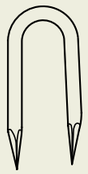
FLAT CROSSARM BRACES

Cat. No.	Length	M.H.C. Distance
1-1/4" x 1 /4" Size		
M 7126	26	24
M 7128	28	26
M 7130	30	28
M 7132	32	30
1-7/32" x 7/32" Size		
M 7014	14	12
M 7020	20	18
M 7022	22	20
M 7026	26	24
M 7028	28	26
M 7030	30	28

All dimensions are in inches

POLE LINE HARDWARE

STAPLES



Cat. No.	Length	Spread at Shoulder	Wire Diameter	Point Style
Ground Wire				
M 126	1	3/8	0.125	Rolled
M 1672	1-1/2	1/4	0.148	Slash
M 172	1-1/2	3/8	0.148	Rolled
M 1673	1-3/4	1/4	0.148	Slash
M 173	1-3/4	3/8	0.148	Rolled
M 156	2	1/2	0.162	Rolled
M 157	2	1/2	0.162	Slash

Cat. No.	Length	Spread at Shoulder	Wire Diameter	Point Style
Molding				
M 127	2	1-1/16	3/16	Rolled
M 128	3	1-1/16	1 /4	Rolled
M 142	3	1-1/2	1 /4	Rolled
M 143	3-1/2	1-3/4	1 /4	Rolled

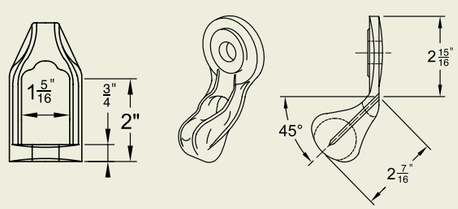
EYENUTS

Cat. No.	For Bolt Diameter	Maximum Strand Size
Thimble Eyenuts		
M 6509	1/2	1/2
M 6510	5/8	1/2
M 6511	3 /4	1/2
M 6512	1	5/8
Twin Eyenuts		
M 6515	5/8	5/8
M 6516	3/4	5/8
Oval Eyenuts		
M 1091	1/2	
M 1092	5/8	
M 1093	3/ 4	

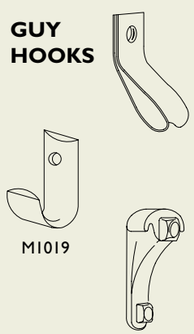
Thimble Eyenut Twin Eyenut Oval Eyenut

EYELETS

Cat. No.	For Bolt Diameter	Maximum Strand Size
Straight Thimble Eyelets		
M 6550 C	5/8	5/8
M 6551	3/4	5/8
Angle Thimble Eyelets		
M 6500	5/8	1/2
M 6501	3/4	1/ 2



GUY HOOKS



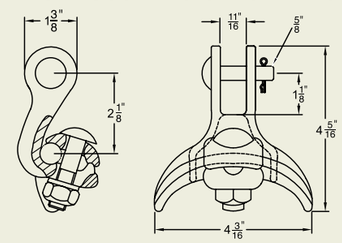
M1019

GUY ATTACHMENTS

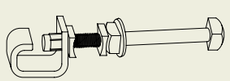
Cat. No.	Flat Size	Hole Diameter
One-Bolt Formed Steel Type		
M 6502	2 x 1/8	11/16
M 6506	2 x 1/4	13/16

Cat. No.	Bolt Hole Size	Maximum Diameter
M 6555	11/16	1 /2
M 6556	13/16	9/16

ANGLE SUSPENSION CLAMPS



TRANSFORMER TRAINER BRACKET



Cat. No.	Machine Bolt size
M 6765	1/2x5-1/2
M 6765A	1/2x4-1/2

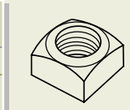
All dimensions are in inches

POLE LINE HARDWARE

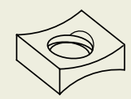
SQUARE NUTS

Cat. No.	Nominal Size and T.P.I.
Regular	
M 8561	3/8-16
M 8562	1 /2"-13
M 8563	5/8"-11
M 8564	3/4-10
M 8564-1/2	7/8"-9
M 8565	1"-8

Cat. No.	Nominal Size and T.P.I.
Heavy	
M 8562-1	1/2-13
M 8563-1	5/8"-11
M 8564-1	3 4"-10
M 8565-1	1" - 8
M 8566	1-1/4"-7

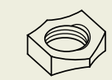


LOCK NUTS

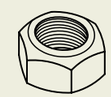


Cat. No.	For Bolt Diameter
Square Type	
M 8581	3/8
M 8582	1/ 2
M 8583	5/8
M 8584	3/4
M 8584-1/2	7/8
M 8585	1
M 8586	1-1/4

Cat. No.	For Bolt Diameter
Hex Type.	
M 8581 H	3/8
M 8582 H	1 /2
M 8583 H	5/8
M 8584 H	3/4
M 8584-1/2H	7/8
M 8585 H	1
M 8586H	1-1/4



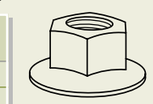
LOCK NUTS



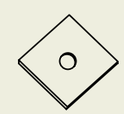
Cat. No.	For Bolt Diameter
Hex Type	
M 9561 H	3/8
M 9562 H	1 /2
M 9563 H	5/8
M 9564 H	3 /4
M 9564-1/2 H	7/8
M 9565 H	1
M 9566 H	1-1/4

FLANGE NUTS

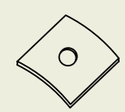
Cat. No.	For Bolt Diameter
Hex Type.	
M 9581 H	3/8
M 9582 H	1 /2
M 9583 H	5/8
M 9584 H	3 /4
M 9584-1/2 H	7/8
M 9585 H	1



WASHERS



Square Washers



Square Curved Washers

Cat. No.	Size	Hole Diameter	For Bolt Diameter
Square Washers			
M 1073	2x2x1/8	9/16	1 /2
M 1074	2x2x1/8	11/16	5/8
M 1075	2-1/4x2-1/4x3/16	11/16	5/8
M 1076	2-1/4x2-1/4x3/16	13/16	3 /4
M 1078	3x3x3/16	7/8	3 /4
M 1079	3x3x1/4	7/8	3/4
M 1080	4x4x3/16	7/8	3/4
M 1082	4x4x1/4	7/8	3/4
M 1473	4x4x1/2	7/8	3/4
M 1081	4x4x1/2	1-1/8	7/8 & 1
M 1083	6x6x3/8	1-1/8	7/8 & 1
Square Curved Washers			
M 6821	2-1/4x2-1/4x3/16	11/16	5/8
M 6822	2-1/2x2-1/2x3/16	11/16	5/8
M 113	3x3x1/4	11/16	5/8
M 6823	3x3x1/4	13/16	3/ 4
M 133	3-1/4x3-1/4x1/4	13/16	3/ 4
M 6828	3-1/2x3-1/2x3/8	7/8	3/ 4
M 6829	4x4x1/4	15/16	3/4 & 7/8

Round Washers

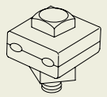
Cat. No.	Outside Diameter	Thickness Gauge BW	Hole Diameter	For Bolt Diameter
Round Washers				
M 1084	1	14	7/16	3/ 8
M 1085	1-1/4	14	9/16 sq.	3 /8
M 1086	1-3/8	12	9/16	1 /2
M 1088	1-3/4	10	11/16	5/8
M 1089	2	9	13/16	3 /4

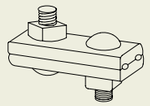
Spring Lock Washers

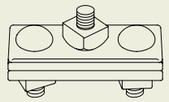
Cat. No.	Section	For Bolt Diameter
Spring Lock Washers		
M 134	0.141x0.094	3/ 8
M 138	0.171x0.125	1 /2
M 139	0.203 x 0.156	5/8
M 140	0.234x0.188	3 /4

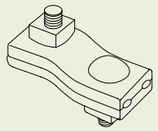
All dimensions are in inches

POLE LINE HARDWARE


1-Bolt


2-Bolt


3-Bolt

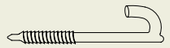

Offset

GUY CLAMPS

Cat. No.	Number of Bolts	Bolt Diameter	Clamp Length	Clamp Width	For Strand Diameter
Regular Style					
M 1061	1	1 /2	1-1/2	1-9/16	3/16 to 3/8
M 1030	2	1 /2	3-3/8	1-9/16	3/16 to 3/8
M 929	3	1 /2	4	1-9/16	3/16 to 7/16
M 930	3	1 /2	6	1-9/16	3/16 to 7/16
M 931	3	5/8	6	1-21/32	5/16 to 1/2
Offset Style					
M 926	2	1 /2	3-1/4	1-9/16	3/16 to 5/16
M 927	2	5/8	3-15/16	1-21/32	5/16 to 1/2

HOOKS

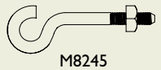
Cat. No.	Size
M 3316P	7/16x4-3/4 F.D.
M 3317	5/16x4 G.P.


M3316P

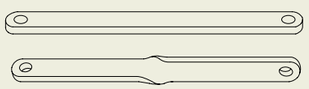
M3317

Cat.No.	Size
M3318	5/16x3-1/2 F.D
M8245	1/2 x 5-3/4

M3318


M8245

EXTENSION LINKS

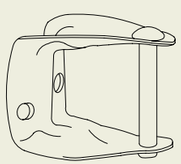


Cat. No.	Type	Hole Spacing	Hole Size
M 2520	Flat	6	13/16
M 2522	Flat	12	13/16
M2525	Twisted 90°	6	13/16

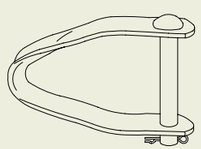
DOUBLE ARMING PLATES

Cat. No.	Flat Size
M 1600	4x1/2x24
M 1607	4x1/4x17

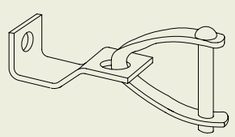
INSULATED SECONDARY & DEADEND CLEVIS


M1300

INSULATED SWINGING CLEVIS

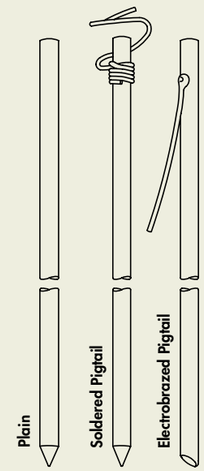

M0322

INSULATED SWINGING CLEVIS


M1626

All dimensions are in inches

POLE LINE HARDWARE



GROUND RODS

Cat. No.	Rod Size Diameter x Length (Ft.)
Plain	
M 5305	3/8 x 5
M 5315	1/ 2x 5
M 5316	1/ 2x 6
M 5318	1/ 2x 8
M 5326	5/8X 6
M 5328	5/8x 8
M 5330	5/8x10
M 5338	3/4x 8
M 5340	3/4x10
M 5350	1 x 10

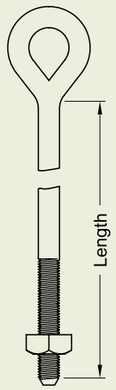
Cat. No.	Rod Size Diameter x Length(Ft.)	Free Wire Length
Soldered Pigtail		
M 5305 W	3/8 x 5	18
M 1098	1/2x5	5
M 1099	1/2x6	5
Electrobrazed Pigtail		
M 5228	5/8x8	48

Bolt Dia.	Eye I.D. Width x Length	UTS Pounds
1 /2	1-1/8x 1-5/8	7,700
5/8	1-1/2x2	12,400
3 /4	1-1/2x2	18,300

EYE DIMENSIONS

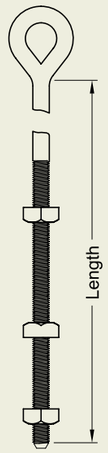
OVAL EYEBOLTS

Cat No.	Length	Thread. Length
1/2 Inch Diameter		
M 9305	5	4
M 9306	6	4
M 9308	8	4
M 9310	10	6
M 9312	12	6
M 9314	14	6
5/8 Inch Diameter		
M 9405	5	4
M 9406	6	4
M 9408	8	4
M 9409	9	4
M 9410	10	6
M 9412	12	6
M 9414	14	6
M 9416	16	6
M 9418	18	6
M 9420	20	6
M 9422	22	6
M 9424	24	6
3 /4" Inch Diameter		
M 9506	6	4
M 9508	8	4
M 9510	10	6
M 9512	12	6
M 9514	14	6
M 9516	16	6
M 9518	18	6



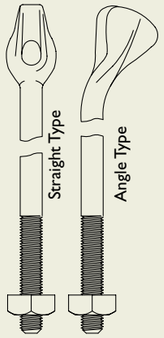
DOUBLE ARMING EYEBOLTS

Cat. No.	Length	Thread Length
5/8 Inch Diameter		
M 9614	14	12
M 9616	16	14
M 9618	18	16
M 9620	20	18
M 9622	22	20
M 9624	24	22
M 9626	26	24
3/4 Inch Diameter		
M 9636	16	14
M 9638	18	16
M 9640	20	18
M 9642	22	20
M 9644	24	22
M 9646	26	24



THIMBLE EYE BOLTS

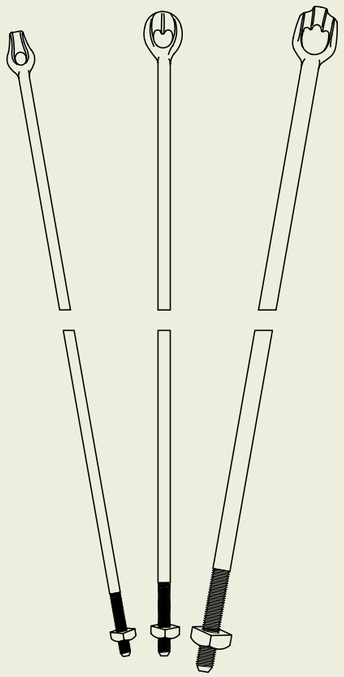
Straight Type Cat. No.	Angle Type Cat. No.	Bolt Dia	Bolt Length	Thread Length
M 8050	M 8150	5/8	8	4
M 8051	M 8151	5/8	10	4
M 8052	M 8152	5/8	12	6
M 8053	M 8153	5/8	14	6
M 8054	M 8154	5/8	16	6
	M 8161	3 /4	10	4
M 8062	M 8162	3 /4	12	6
M 8063	M 8163	3 /4	14	6



All dimensions are in inches

modern malleables

POLE LINE HARDWARE

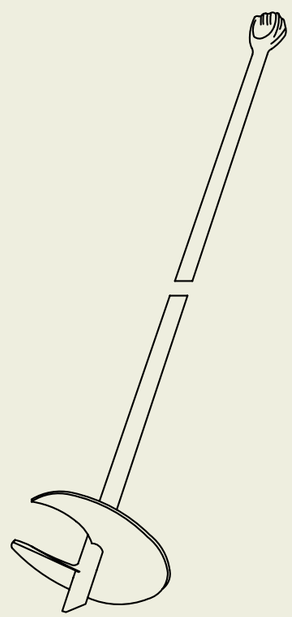


ANCHOR RODS

Rod Diameter	Ultimate Strength Rating Lbs.	Length in ft	Cat. No. Thimble Single Eye	Twin Eye	Triple Eye	Thread Length
1 /2	10,000	5	M 7405			
		6	M 7406			
		7	M7407			
5/8	16,000	5	M 7415			
		6	M7416	M 7516		
		7	M7417	M 7517		
		8	M7418	M7518		
3 /4	23,000	7	M 7427	M 7527	M7327	3-1/2
		8	M 7428	M 7528	M7328	
		9	M7429	M7529	M7329	
		10	M7430	M7530		
1	36,000	8	M 7438	M 7538	M7338	
		10	M 7440	M 7540	M7340	
1-1/4	58,000	10	M7450		M7350	

SCREW ANCHORS

Cat. Nol. Thimble eye	Triple eye	Helix Diameter	Rod Diameter	Rod Length
Forged Helix				
M 6524-1	M 6524	4	3/4	4-1/2
M6526-1	M6526	6	3/4	5-1/2
M6528-1	M6528	8	1	5-1/2
	M6530	10	1-1/4	5-1/2
	M6550	10	1-1/4	8
	M6585	15	1-1/4	8
Welded cam action helix				
M 6526W-1CA	M6526W-CA	6	3/4	5-1/2
M 6528W-1CA	M6528W-CA	8	1	5-1/2
	M6530W-CA	10	1-1/4	5-1/2
	M6550W-CA	10	1-1/4	8
	M6585W-CA	15	1-1/4	8



All dimensions are in inches

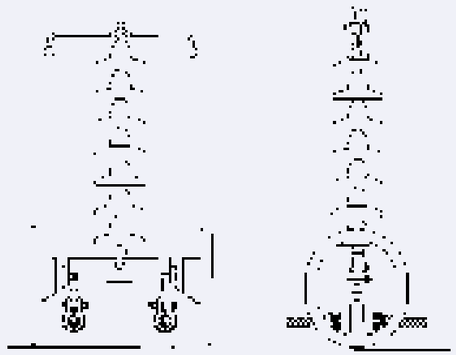
Insulator Fittings

Tension clamps
Suspension clamps
Grading rings
Arcing horns
Yoke & sag plates
Extension Links
Insulator fittings
Hooks & shackles
Clevises & eyes

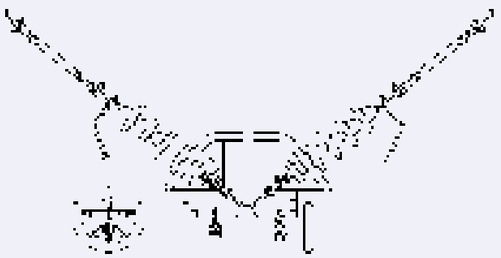
INSULATOR FITTINGS

SUSPENSION ASSEMBLIES – EHV LINE

SINGLE SUSPENSION ASSEMBLY upto 500 kv for twin bundle conductor with highly articulating all directional movement type clamps of permanent mould aluminium alloy. These clamps can be used with or without Armour Rods.



ALTERNATIVE SINGLE SUSPENSION ASSEMBLY FOR TWIN BUNDLE CONDUCTOR with neoprene cushioned Armour Grip which eliminates radial, compressive, flexural, torsional & longitudinal stresses over the conductor and also eliminates metal to metal contacts at high stress points. These clamps increase radius of curvature which reduces static bending over the support point and results in lower dynamic stresses from vibration and gallopping.

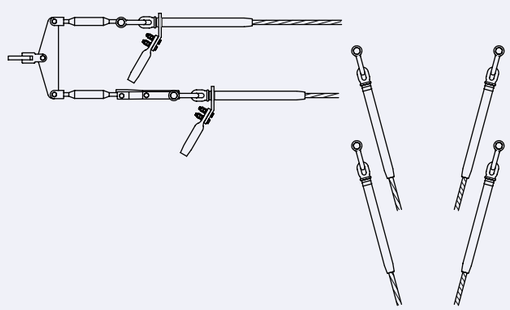


A typical 'V' suspension string for twin-bundle conductor.

A typical suspension string for quad-bundle conductor.

TENSION ASSEMBLIES – EHV LINE

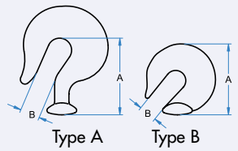
A DOUBLE TENSION ASSEMBLY for TWIN-BUNDLE CONDUCTOR with compression type deadend clamp and jumper, adjustable sag plates and with C.C. Rings.



A TYPICAL ARRANGEMENT OF TENSION ASSEMBLY for quad-bundle conductor with compression type dead-end clamp.

INSULATOR FITTINGS

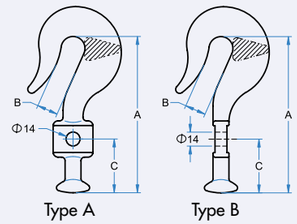
BALL HOOK

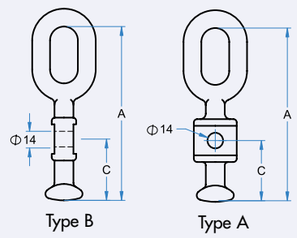


CAT. NO.	TYPE	A	B	BALL SIZE	UTS KG
H-3	B	86	22	16	7000/9000
H-6	A	100	22	20	9000/12000

HORN HOLDER BALL HOOK

CAT. NO.	TYPE	A	B	C	BALL SIZE	UTS KG
H-7	A	152	22	54	16	7000/9000
H-4	B	152	22	54	16	7000/9000



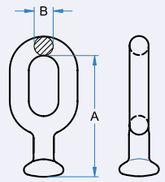


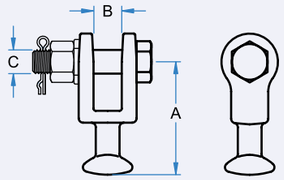
HORN HOLDER BALL LINK

CAT. NO.	TYPE	A	B	C	BALL SIZE	UTS KG
G-7	A	156	16	54	16	7000/9000
G-6	B	156	16	54	16	7000/9000
G-8	A	171	19	64	20	11500/16500
G-5	B	171	19	64	20	11500/16500
G-5A	Double Hole	171	19	64	20	11500/16500

BALL LINK

CAT. NO.	A	B	BALL SIZE	UTS KG
G-4	102	16	16	7000/9000
G-2	110	19	20	11500/16500



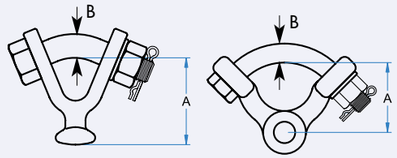


BALL CLEVIS

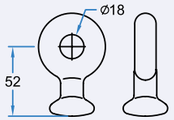
CAT. NO.	A	B	C	BALL SIZE	UTS KG
E-4	76	19	16	16	7000/9000
E-2	100	22	20	20	11500/16500
E-24	100	23	22	20	16500

'Y' CLEVIS EYE & 'Y' BALL CLEVIS

CAT. NO.	A	B	C	SIZE	UTS KG
Y-J3	52	22	32	-	11500
Y-E3	84	20	-	16	11500

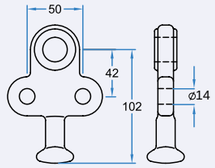


BALL EYE



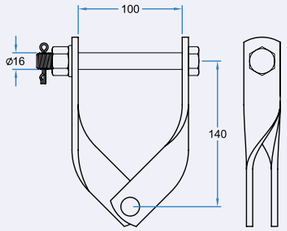
300

HORN HOLDER BALL EYE



G-54S (F)
16 & 20 mm

CROSS ARM STRAP



201
All dimensions are in mm

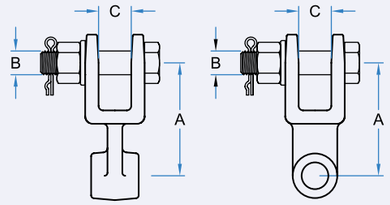
All items are of hot dip galvanised forged steel
Items also available as per customer's specification
Higher UTS on request.

modern malleables

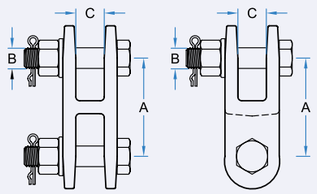
INSULATOR FITTINGS

CLEVIS EYE

CAT. NO.	TYPE	A	B	C	UTS KG
J-12	B	76	16	22	7000/9000
J-13A	A	76	16	22	7000/9000
J-13B	A	76	16	22	7000/9000
J-124F	B	135	20	23	11500
J-124T	B	90	22	23	16500
J-13C	A	90	20	22	11500



Type A Type B



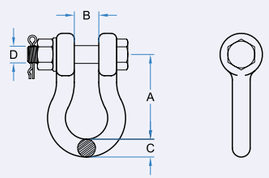
Type A Type B

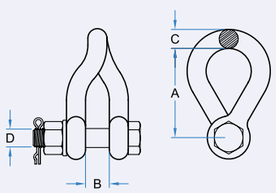
CLEVIS CLEVIS

CAT. NO.	TYPE	A	B	C	UTS KG
CC-9F	A	76	16	21	9000
CC-10F	A	76	20	23	11500
CC-11	B	76	16	21	9000
CC-12	B	76	20	23	11500
CC-13	B	90	22	23	18000
CC-14	A	100	22	23	24000

ANCHOR SHACKLE

CAT. NO.	A	B	C	D	UTS KG
Q-4	76	22	16	16	7000/9000
Q-5	89	22	19	20	11500/16500
Q-6	110	26	25	24	33000
Q-7	115	40	38	40	73000



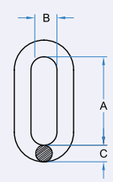


TWISTED SHACKLE

CAT. NO.	A	B	C	D	UTS KG
TS-4	82	22	19	20	11500
TS-5	76	22	16	16	9000

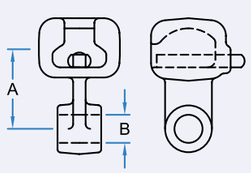
LINK

CAT. NO.	A	B	C	UTS KG
P-1	60	25	16	7000/9000
P-2	89	25	19	11500/16500
P-3	100	35	26	33000

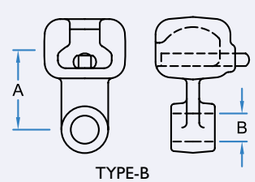


SOCKET EYE

CAT. NO.	TYPE	A	B	BALL	UTS KG
302	A	51	18	16	4500
302 F	B	51	18	16	7000
302 A	A	51	18	16	7000/9000
302 AF	B	51	18	16	9000/11500
302 B	A	51	18	16	7000/9000
302 BF	B	51	18	16	9000/11500



TYPE-A



TYPE-B

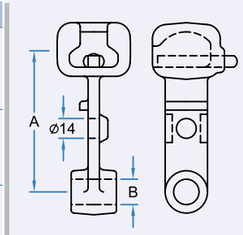
All items are of hot dip galvanised forged steel
Items also available as per customer's specification
Higher UTS on request.

All dimensions are in mm

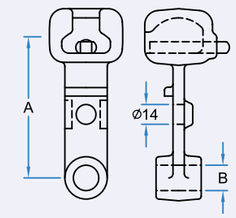
INSULATOR FITTINGS

HORN HOLDER SOCKET EYE

CAT. NO.	TYPE	A	B	BALL SIZE	UTS KG
5302	A	129	18	16	7000/9000
5303 A	A	78	18	16	7000/9000
5303 AF	B	78	18	16	9000/11500
5303 B	A	78	18	16	7000/9000
5303 BF	B	78	18	16	9000/11500
C-2	A	78	22	20	11500
C-2F	B	78	22	20	11500/16500
C-3	A	129	22	20	11500
5303	B	100	18	16	7000/9000



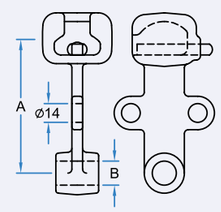
TYPE-A



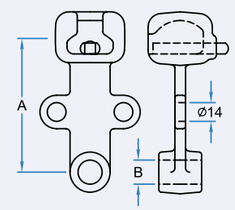
TYPE-B

HORN HOLDER SOCKET EYE

CAT. NO.	TYPE	A	B	BALL SIZE	UTS KG
C-5	A	129	18	16	7000/9000
C-5F	B	100	18	16	9000/11500
C-5A	A	129	18	16	7000/9000
C-5 AF	B	100	18	16	9000/11500
C-6	A	140/100	22	20	11500
C-6F	B	100	22	20	11500/16500
C-5(90°)	B	100	18	16	7000/9000
C-6(90°)	B	100	22	20	16500



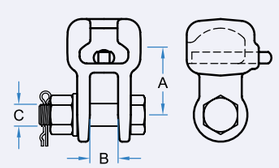
TYPE-A

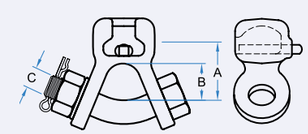


TYPE-B

SOCKET CLEVIS

CAT. NO.	A	B	C	BALL SIZE	UTS KG
D-4	49	19	16	16	7000/9000
D-4F	49	19	16	16	9000/11500
D-2	68	22	20	20	11500
D-24	68	23	22	20	16500
D-24F	68	23	22	20	16500
D-3YF	59	38	22	20	16500

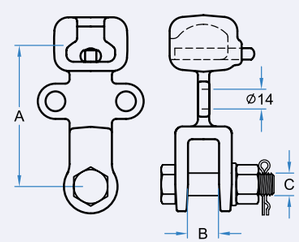




D-3YF – Y Type

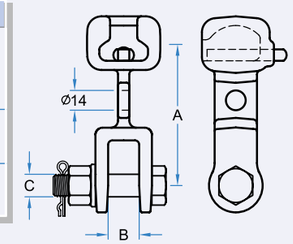
HORN HOLDER SOCKET CLEVIS

CAT. NO.	TYPE	A	B	C	BALL SIZE	UTS KG
5303C	A	95	20	16	16	7000/9000
5303CF	B	95	20	16	16	9000/11500
5303C	B	120	21	16	16	7000/9000
C-2A	A	100	21	20	20	11500
C-2AF	B	100	21	20	20	11500/16500
C-6A	A	100	22	20	20	11500/16500
C-6AF	B	100	22	22	20	16500



TYPE-B

TYPE-B are socket clevises with 90° rotated clevis configuration



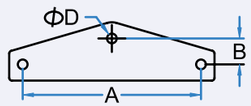
TYPE-A

All items are of hot dip galvanised forged steel/mci
Items also available as per customer's specification
Higher UTS on request.

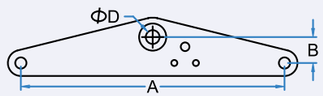
All dimensions are in mm

INSULATOR FITTINGS

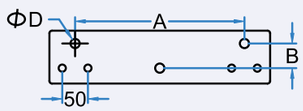
YOKE PLATES



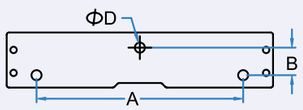
CAT. NO.	A	B	D	THICK	UTS KG
L-1	330	41	18	16	9000
L-1	330	48	22	16	11500
L-2	330	48	22	20	16500
L-2	330	76	22	20	16500
L-44TT	450	95	24	20	23000
L-45TT	450	127	26	20	33000



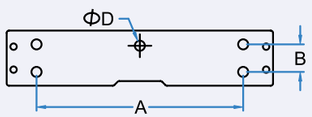
CAT. NO.	A	B	D	THICK	UTS KG
L-45TT	610	150	32(top) 24(bottom)	20	36500
L-55TT	610	150	42(top) 32(bottom)	32	73000



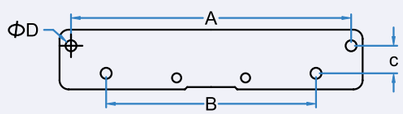
CAT. NO.	A	B	D	THICK	UTS KG
L - 1N	330	41	18	16	9000
L - 1N	330	48	22	16	11500
L - 2N	330	65	22	20	16500



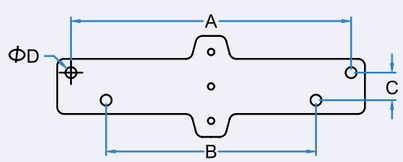
CAT. NO.	A	B	D	THICK	UTS KG
L 24SL	450	60	22	20	11500



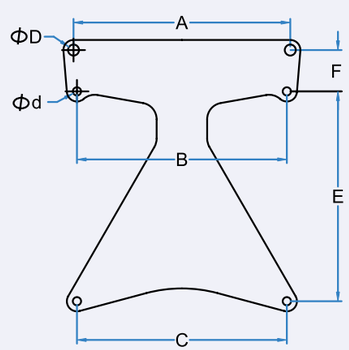
CAT. NO.	A	B	D	THICK	UTS KG
L - 54LT	450	50	22	20	23000
L- 46TT	450	60	24	20	33000



CAT. NO.	A	B	C	D	THICK	UTS KG
L -56LT	610	457	60	24	20	36500



CAT. NO.	A	B	C	D	THICK	UTS KG
L -54LT	610	457	60	24	20	36500



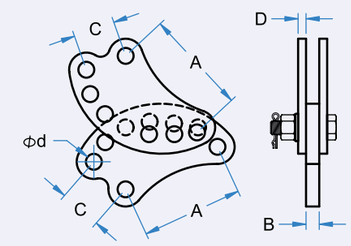
CAT. NO.	A	B	C	D	d	E	F	THICK	UTS KG
L -57	472	457	457	24	18	457	90	16	24000

All yoke plates are of hot dip galvanised steel
Speciality plates are designed for specific needs
Plates have arrangements for fixing Arcing-horns or Grading-rings.

All dimensions are in mm

INSULATOR FITTINGS

SAG ADJUSTMENT PLATES

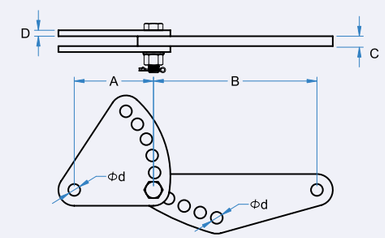


TYPE-A

ADJUSTMENT RANGE OF TYPE-A

306	291	276	261	246	231	216
291	276	261	246	231	216	201
276	261	246	231	216	201	186
261	246	231	216	201	186	171
246	231	216	201	186	171	156
231	216	201	186	171	156	141
216	201	186	171	156	141	126
153	138	123	108	93	78	63

CAT NO.	A	B	C	D	d	UTS KG
SAP-6	153	20	63	12	24	16500

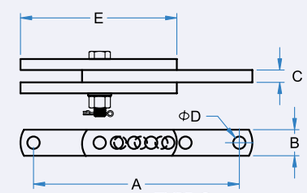


TYPE-B

ADJUSTMENT RANGE OF TYPE-B

472	442	410	377	343	310
466	436	404	371	337	304
460	430	398	365	331	298
454	424	392	359	325	292
448	418	386	353	319	286
442	412	380	347	313	280

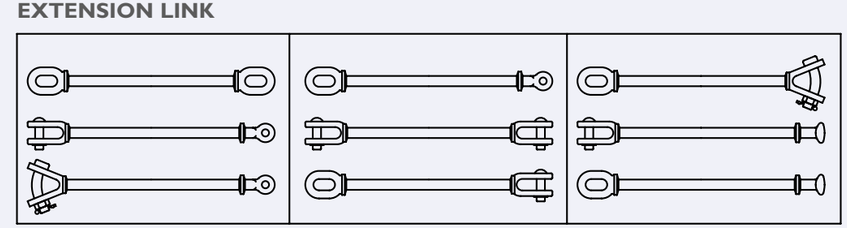
CAT. NO.	A	B	C	D	d	UTS KG
SAP-6B	142	300	20	12	24	16500



TYPE-C

CAT NO.	RANGE-A	B	C	D	E	UTS KG
ESL-1	155-227	38	16	18	152	11500
	228-300	38	16	18	152	11500
ESL-2	215-314	50	20	21	212	16500
	390-490	50	20	21	212	16500
ESL-3	295-445	60	20	24	294	16500
	445-495	60	20	24	294	Or higher

EXTENSION LINK



Various combination of Extension Links are available as per needs of the customers.

All plates in hot dip galvanised steel
Single plate arrangement can be provided if so desired
Sag adjustment range can also be provided as per speciality requirement of customer

All dimensions are in mm

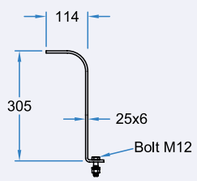
INSULATOR FITTINGS

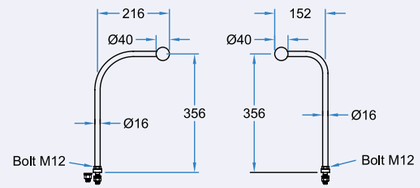
ARCING HORNS

For 69 KV Class

For 138 KV Class

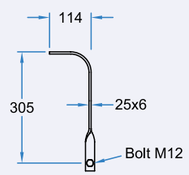
Double Tension



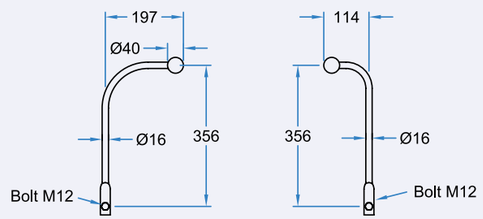


M-53B M-53A

Single Tension

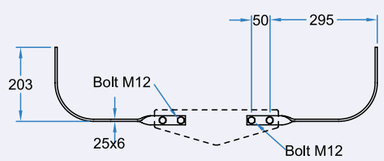


M-5100

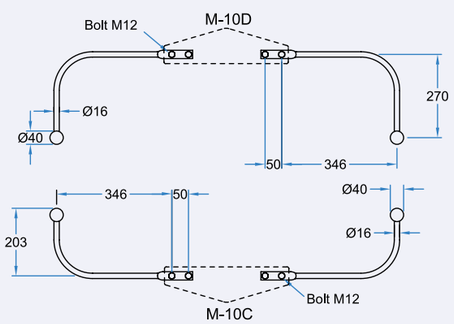


M-13M M-28

Double Suspension

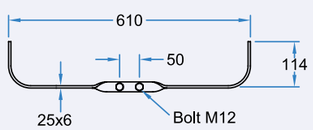


M-52A



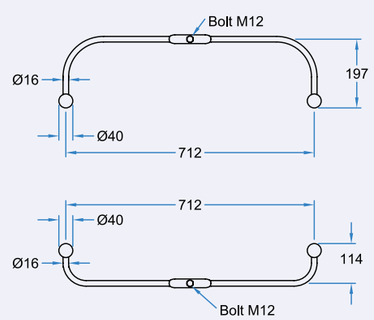
M-10C

Single Suspension



M-5400

M-12J



M-12H

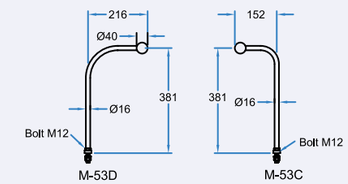
All dimensions are in mm

INSULATOR FITTINGS

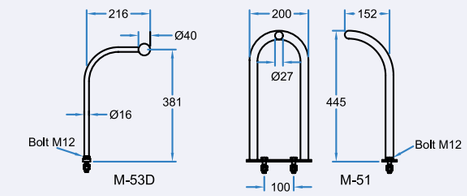
ARCING HORNS

For 161 KV Class

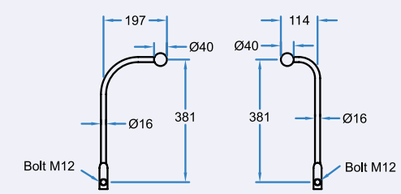
For 230 KV Class



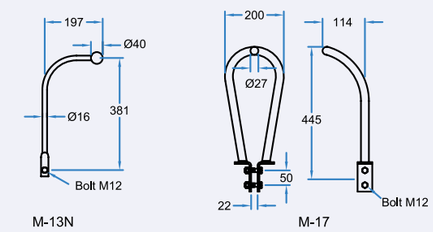
M-53D M-53C



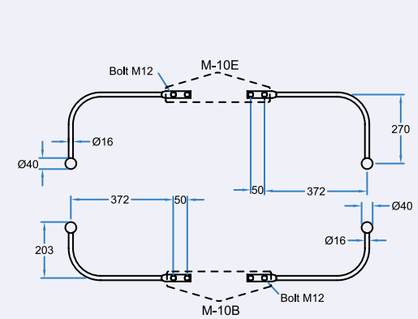
M-53D M-51



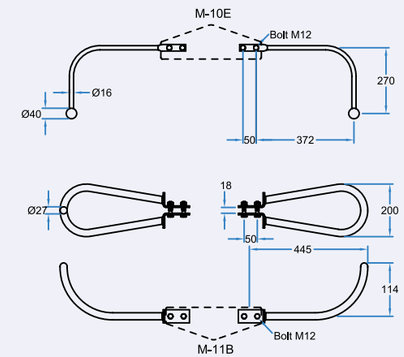
M-13N M-13B



M-13N M-17

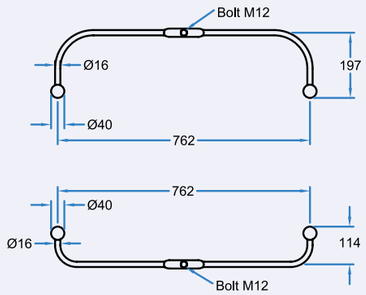


M-10B



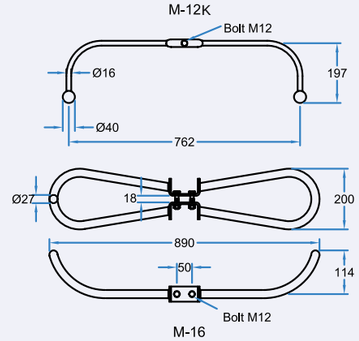
M-11B

M-12K



M-12L

M-12K



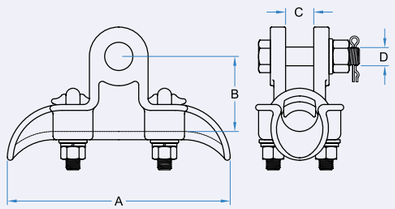
M-16

All dimensions are in mm

SUSPENSION CLAMPS

Suspension Clamps are made out of gravity die cast aluminium alloy to reduce hysteresis and eddy current losses. Types 3, 4, 5 are highly articulating type clamps with movements in all directions. Type 2 clamps are bottom bolted free centre types. Type 1 clamps are envelope type and the simplest type.. Slip strength upto 25% of rated conductor strength can be achieved at recommended torques.

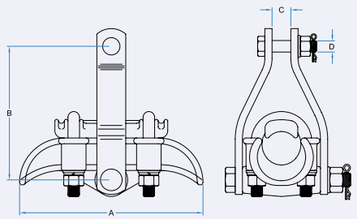
Type -1



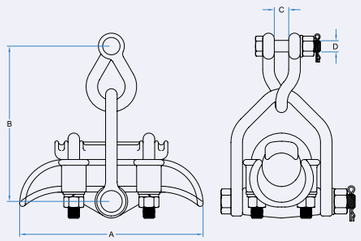
CAT. NO.	Cond. Range mm		Dimensions mm				UTS
	Min	max	A	B	C	D	kg
B-11*	3.0	15.0	146	54	19	16	4500
B-11	7.6	18.0	146	54	19	16	4500
B-12*	7.6	17.8	181	57	22	16	7000
B-12	10.2	21.6	190	64	23	16	7000
B-13	22.8	35.5	222	71	37	16	7000
B-14	35.5	51.8	270	92	54	16	8200

Type -2

CAT. NO.	Cond. Range mm		Dimensions mm				UTS
	Min	max	A	B	C	D	kg
B-18*	7.0	18.0	146	75	24	16	7000
B-18	7.0	18.0	146	75	24	16	7000
B-15	14.0	26.0	190	75	24	16	7000
B-16	26.1	35.0	222	100	34	16	7000
B-17	35.1	51.0	254	125	47	16	8200
B17A	35.1	46.0	350	125	47	16	8200



Type - 3



CAT. NO.	Cond. Range mm		Dimensions mm				UTS
	Min	max	A	B	C	D	kg
BTS-18*	7.0	18.0	146	215	24	16	7000
BTS-18	7.0	18.0	146	215	24	16	7000
BTS-15	14.0	26.0	190	215	24	16	7000
BTS-16	26.1	35.0	222	215	24	16	8200
BTS-18	35.1	51.0	254	215	24	16	8200

Notes:

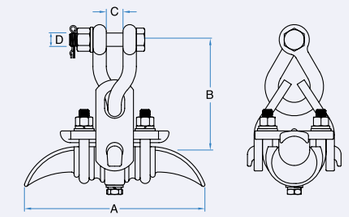
1. Asterisk (*) mark denotes items also available in malleable iron. Other items are in high strengths aluminium alloy, die cast.
2. Higher mechanical strength ratings are available on request.
3. Clamps for other sizes are also available on request.
4. Ferrous parts are hot dip galvanised.

All dimensions are in mm

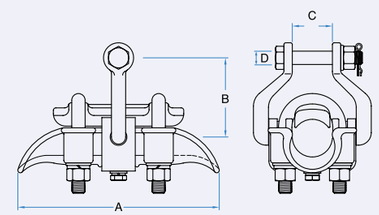
INSULATOR FITTINGS

Type - 4

CAT. NO.	Cond. Range mm		Dimensions mm				UTS
	Min	max	A	B	C	D	kg
B-60	7	18	146	145	24	16	7000
B-50	19	29	190	145	24	16	7000
B-40	19	35	216	145	24	16	8200
B-30	35	45	270	145	24	16	8200
B-20	46	52	320	195	24	19	11500



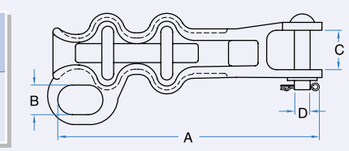
Type - 5

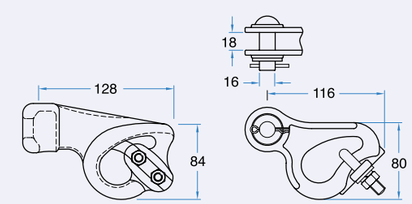


CAT. NO.	Cond. Range mm		Dimensions mm				UTS
	Min	max	A	B	C	D	kg
B-23	7	18	146	102	24	16	7000
B-22	19	29	190	102	33	16	7000
B-21	26	35	216	102	35	16	8200
B-19A	35	45	241	102	48	16	8200
B-19	46	52	254	114	54	19	11500

STRAIGHT LINE TENSION CLAMP

CAT. NO.	COND. DIA		Dimensions mm				UTS
	MIN	MAX	A	B	C	D	KG
SL-1	7	12	160	24	18	16	2000
SL-2	10	15	210	24	19	16	4200

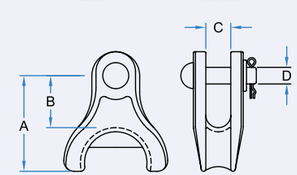




SNAIL TYPE TENSION CLAMP

CAT. NO.	COND. DIA		UTS KG
	MIN	MAX	
A-1	6.33	12.27	3000/4500
140	6.33	12.05	3000/4500

CLEVIS THIMBLE

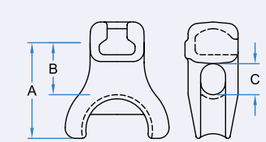


CT

CAT. NO.	A	B	C	D	UTS kg
CT - 1	100	42	17	16	3000
CT - 2	113	45	18	16	4500
SC - 2	65	33	19	16	3000
SC - 1	97	50	25	16	4500

Pressed steel clevis thimbles of higher UTS are supplied as per requirements

SOCKET THIMBLE



SC

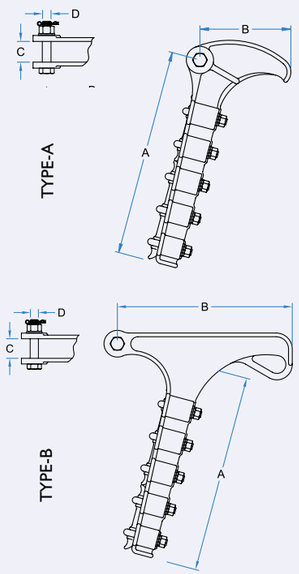
All dimensions are in mm

modern malleables

INSULATOR FITTINGS

TENSION CLAMPS

Bolted type tension clamps are made out of high strength aluminium alloy, permanent mould cast to reduce hysteresis & eddy current losses. They develop slip strength of 95% of the rated conductor strength at recommended torques.

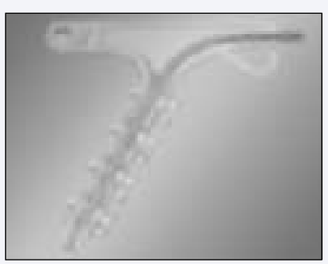


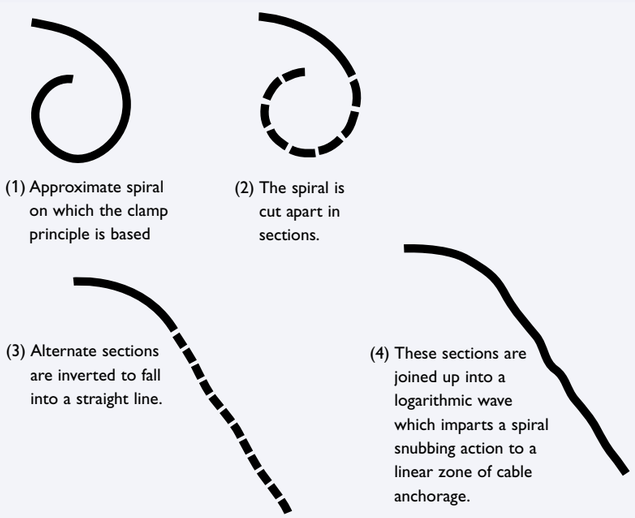
CAT. NO.	TYPE	CONDUCTOR MIN	CONDUCTOR MAX	A	B	C	D	No. of Bolts	UTS Kg.
105	A	7.6	15.2	145	100	19	16	2	7000
105	A	7.6	15.2	145	100	19	16	2	4500
105A	B	5.1	14.2	125	90	17	16	2	4500
A-43*	A	7.6	17.5	200	100	22	16	3	7000
A-43A	B	5.1	16.5	187	203	19	16	3	7000
A-43B	B	12.7	21.0	187	203	24	16	3	7000
A-43C	A	19.0	33.0	220	100	35	16	3	7000
A-6	A	14.2	22.0	330	152	25	16	4	7000
A-6A	B	9.1	21.8	275	292	25	16	4	7000
A-15	A	22.0	33.0	330	167	35	16	4	7000
A-15A	A	22.0	33.0	330	167	43	16	4	7000
A-16	A	22.0	33.0	380	167	35	16	5	7000
A-16	B	12.7	24.9	330	327	29	16	5	11500
A-17	A	25.0	33.0	540	225	35	16	6	12000
A6B	B	14.2	22.0	250	220	25	16	4	7000
A6C	B	14.2	22.0	275	275	25	16	4	7000

THE SEAT PRINCIPLE IN BOLTED TYPE TENSION CLAMPS

CONDUCTOR GRIP

Study of the cross section view of a tension clamp will reveal that the clamp seat consists of a series of waves whose progressive radii vary logarithmically. This seat of spiral shape effectively supplements the clamping action of the U-bolts and keeperpiece. It enhances the grip strength without damages to the clamped conductor.





(1) Approximate spiral on which the clamp principle is based

(2) The spiral is cut apart in sections.

(3) Alternate sections are inverted to fall into a straight line.

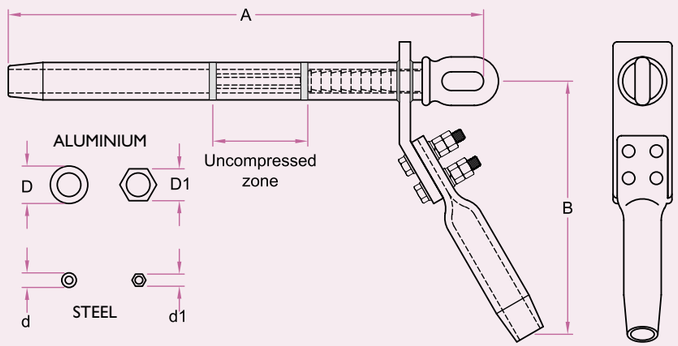
(4) These sections are joined up into a logarithmic wave which imparts a spiral snubbing action to a linear zone of cable anchorage.

All dimensions are in mm

Compression Fittings & all Connectors

Compression deadend
Compression joint
Repair sleeves
T-connectors
Parallel grove clamps
Service Connectors
Compression Connectors
Earthwire fittings

COMPRESSION DEADEND



- *Compression clamp, jumper are made of extruded aluminium and sleeves are in galvanised forged steel. These clamps have conductivity equivalent to that of the conductor. All dead end clamps develop slip strength usually upto 100% of the rated conductor strength*
- *Dead ends are also supplied without plugs but with sealed ends and compound filled scratch brushed inner aluminium surfaces*

BRITISH STANDARD ACSR

CATALOGUE NO.	CODE NAME	DIMENSIONS mm A	DIMENSIONS mm B	BEFORE COMP. Alum D	BEFORE COMP. Steel d	AFTER COMP Alum D1	AFTER COMP Steel d1	NO. OF BOLTS	BOLT SIZE
MMCP-500	DOG	394	241	30	12.1	25.0	10.1	2	12
501	HYENA	394	241	30	12.1	25.0	10.1	2	12
502	LEOPARD	394	241	30	12.1	25.0	10.1	2	12
503	COYOTE	394	241	30	12.1	25.0	10.1	2	12
504	TIGER	419	257	30	15.2	25.0	12.7	2	12
505	WOLF	419	257	30	15.2	25.0	12.7	2	12
506	LYNX	457	298	33	18.0	28.0	15.1	2	12
507	PANTHER	457	298	38	18.0	32.0	15.1	2	16
508	BEAR	508	298	38	19.2	32.0	16.1	2	16
509	LION	508	298	38	18.0	32.0	15.1	2	16
510	GOAT	508	316	43	19.2	36.0	16.1	3	16
511	ANTELOPE	508	316	43	19.2	36.0	16.1	3	16
512	SHEEP	559	332	48	20.8	40.0	17.5	3	16
513	ZEBRA	559	316	48	19.2	40.0	16.1	3	16
514	CAMEL	597	332	48	20.8	40.0	17.5	3	16
515	DEER	597	332	48	24.0	40.0	20.2	4	16
516	ELK	597	332	48	24.0	40.0	20.2	4	16
517	MOOSE	597	332	54	20.8	46.0	17.5	4	16
MMCP-518	BERSIMIS	748	350	58.4	20.8	48.5	17.5	4	16

All dimensions are in mm

CONNECTORS

COMPRESSION DEADEND

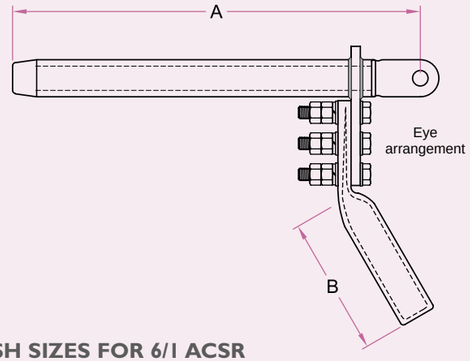
AMERICAN STANDARD ACSR

CATALOGUE NO.	CODE NAME	DIMENSIONS mm A	DIMENSIONS mm B	BEFORE COMP. Alum D	BEFORE COMP. Steel d	AFTER COMP Alum D1	AFTER COMP Steel d1	NO. OF BOLTS	BOLT SIZE
MMCP-601	PENGUIN	394	241	30	12.1	25.0	10.1	2	12
602	WAXWING	394	241	30	12.1	25.0	10.1	2	12
603	OWL	394	241	30	12.1	25.0	10.1	2	12
604	PARTRIDGE	394	241	30	12.1	25.0	10.1	2	12
605	OSTRICH	419	257	30	15.2	25.0	12.7	2	12
606	MERLIN	419	257	30	12.1	25.0	10.1	2	12
607	LINNET	419	257	30	15.2	25.0	12.7	2	12
608	ORIOLE	419	257	30	15.2	25.0	12.7	2	12
609	CHICKADEE	457	257	33	12.1	28.0	10.1	2	12
610	IBIS	457	257	33	15.2	28.0	12.7	2	16
611	LARK	457	257	38	18.0	32.0	15.1	2	16
612	PELICAN	457	257	38	12.1	32.0	10.1	2	16
613	FLICKER	457	257	38	15.2	32.0	12.7	2	16
614	HAWK	457	257	38	18.0	32.0	15.1	2	16
615	HEN	508	257	38	19.2	32.0	16.1	2	16
616	OSPREY	508	257	38	12.1	32.0	10.1	2	16
617	PARAKEET	508	298	38	18.0	32.0	15.1	2	16
618	DOVE	508	298	38	18.0	32.0	15.1	2	16
619	EAGLE	508	316	43	20.8	36.0	17.5	3	16
620	PEACOCK	508	316	43	18.0	36.0	15.1	3	16
621	SQUAB	508	316	43	18.0	36.0	15.1	3	16
622	DUCK	508	316	43	18.0	36.0	15.1	3	16
623	TEAL	508	316	43	20.8	36.0	17.5	3	16
624	SWIFT	508	316	43	12.1	36.0	10.1	3	16
625	ROOK	508	316	43	18.0	36.0	15.1	3	16
626	GROSBEAK	508	316	43	19.2	36.0	16.1	3	16
627	EGRET	559	316	43	20.8	36.0	17.5	3	16
628	FLAMINGO	559	316	43	18.0	36.0	15.1	3	16
629	CROW	559	316	43	18.0	36.0	15.1	3	16
630	STARLING	559	316	43	19.2	36.0	16.1	3	16
631	REDWING	559	316	48	24.0	40.0	20.2	3	16
632	COOT	559	316	48	12.1	40.0	10.1	3	16
633	TERN	559	316	48	15.2	40.0	12.7	3	16
634	CONDOR	559	316	48	19.2	40.0	16.1	3	16
635	DRAKE	559	316	48	20.8	40.0	17.5	3	16
636	MALLARD	559	316	48	24.0	40.0	20.2	3	16
637	CRANE	559	316	48	20.8	40.0	17.5	3	16
638	CANARY	559	316	48	20.8	40.0	17.5	3	16
639	RAIL	559	316	48	18.0	40.0	15.1	3	16
640	CARDINAL	597	316	54	20.8	46.0	17.5	4	16
641	ORTOLAN	597	332	54	18.0	46.0	15.1	4	16
642	CURLEW	597	332	54	20.8	46.0	17.5	4	16
643	BLUEJAY	597	332	54	18.0	46.0	15.1	4	16
MMCP-644	FINCH	597	332	54	24.0	46.0	20.2	4	16

All dimensions are in mm

modern malleables

CONNECTORS



COMPRESSION DEADEND

BRITISH SIZES FOR 6/1 ACSR

CAT. NO.	CODE NAME	STRANDING	DIMENSIONS mm		DIE NO.
			A	B	
MDNJ-3.04	SQUIRREL	6/1 X 2.10	241	76	MCDA-3
-4.03	GOPHER	6/1 X 2.36	241	76	MCDA-4
-4.05	WEASEL	6/1 X 2.59	241	83	MCDA-4
-5.03	FOX	6/1 X 2.79	254	83	MCDA-5
-5.04	FERRET	6/1 X 2.99	286	83	MCDA-5
-5.05	RABBIT	6/1 X 3.35	286	83	MCDA-5
-6.04	MINK	6/1 X 3.65	292	89	MCDA-6
-6.06	BEAVER	6/1 X 3.98	305	102	MCDA-6
-6.08	RACCOON	6/1 X 4.08	318	102	MCDA-6
-6.07	OTTER	6/1 X 4.21	318	102	MCDA-6
-7.03	CAT	6/1 X 4.49	333	102	MCDA-7
-7.02	HARE	6/1 X 4.72	333	102	MCDA-7
MDNJ-7.02	DOG	6/7 X 4.72	333	102	MCDA-7

FOR ALPAC ACSR AND CONDUCTOR SIZE 6/1 (CANADIAN SIZES)

CAT. NO.	CODE NAME	SIZE AWG or MCM	DIMENSIONS mm		DIE NO.
			A	B	
MDCJ-3.04	SWAN	4	241	76	MCDA-3
MDCJ-4.03	SWALLOW	3	241	83	MCDA-4
-4.05	SPARROW	2	241	83	MCDA-4
-5.05	ROBIN	1	286	89	MCDA-5
-5.06	RAVEN	1/0	292	89	MCDA-5
-6.05	QUAIL	2/0	298	102	MCDA-6
-6.07	PIGEON	3/0	318	102	MCDA-6
-7.02	PENGUIN	4/0	331	102	MCDA-7
-7.10	WAXWING	266.8	337	144	MCDA-7
-7.04	OWL	266.8	356	114	MCDA-7
-7.11	MERLIN	336.4	337	114	MCDA-7
-3.04	CHUB	3	241	76	MCDA-3
-4.03	CARP	2	241	83	MCDA-4
-5.03	SHAD	1	254	83	MCDA-5
-5.05	SOLE	1/0	286	89	MCDA-5
-6.03	HAKE	2/0	281	89	MCDA-6
-6.05	CUSK	3/0	298	102	MCDA-6
-7.01	SCUP	4/0	308	102	MCDA-7
-4.02	POLLOCK	4	241	76	MCDA-4
-5.01	WHITING	3	279	76	MCDA-5
-5.02	HADDOCK	2	305	83	MCDA-5
-6.02	LAMPREY	1	318	83	MCDA-6
-6.03	SCULPIN	1/0	289	89	MCDA-6
-4.02	GOLD EYE	5	241	76	MCDA-4
-5.01	FLOUNDER	4	279	76	MCDA-5
-5.02	GRAYLING	3	305	83	MCDA-5
MDCJ-6.02	PICKEREL	2	318	83	MCDA-6

All dimensions are in mm

CONNECTORS

COMPRESSION DEADEND

FOR ALUMINIUM STRANDED CONDUCTOR (BRITISH SIZES)

CAT. NO.	CODE NAME	CONDUCTOR		DIMENSIONS mm		DIE. NO.
		STRANDING	DIA	A	B	
MAAD-7.01	WASP	7	13.18	394	248	MDA-7
-7.01	BEETLE	19	13.33	394	248	MDA-7
-7.03	BEE	7	14.70	394	248	MDA-7
-7.05	CRICKET	7	16.07	394	248	MDA-7
-7.05	HORNET	19	16.25	394	248	MDA-7
-7.06	CATERPILLAR	19	17.65	394	248	MDA-7
-8.05	CHAFER	19	18.92	406	260	MDA-8
-8.06	SPIDER	19	19.93	406	260	MDA-8
-9.03	COCKROACH	19	21.08	438	305	MDA-9
-9.05	BUTTEREFLY	19	23.24	438	305	MDA-9
-10.03	MOTH	19	25.01	527	337	MDA-10
-11.02	LOCUST	19	26.79	572	349	MDA-11
-11.04	MAYBUG	37	28.62	572	349	MDA-11
-12.02	SCORPION	37	29.71	597	337	MDA-12
-12.05	CICADA	37	32.53	597	337	MDA-12
MAAD-13.05	TARANTULA	37	36.62	629	357	MDA-13

FOR ALUMINIUM STRANDED CONDUCTOR (CANADIAN SIZES)

CAT. NO.	CONDUCTOR		DIMENSIONS mm		DIE. NO.
	CIR. MILS	DIA	A	B	
MAAD-7.03	266.800	14.88	394	248	MDA-7
-7.04	300.000	15.97	394	248	MDA-7
-7.11	336.400	16.91	394	248	MDA-7
-8.04	397.500	18.36	406	260	MDA-8
-8.07	477.000	20.11	406	260	MDA-8
-9.02	500.000	20.59	438	305	MDA-9
-9.04	556.500	21.74	438	305	MDA-9
-9.05	636.000	23.31	438	305	MDA-9
-10.06	715.500	24.73	527	337	MDA-10
-10.03	750.500	25.32	527	337	MDA-10
-11.01	795.000	26.06	572	349	MDA-11
-11.03	874.500	27.33	572	349	MDA-11
-11.04	954.000	28.54	572	349	MDA-11
-12.02	1,033.500	29.71	597	337	MDA-12
-12.03	1,113.000	30.88	597	337	MDA-12
-12.04	1,192.500	31.95	597	337	MDA-12
-12.07	1,272.000	33.02	597	337	MDA-12
-13.02	1,351.500	34.01	622	357	MDA-13
-13.03	1,431.000	35.02	622	357	MDA-13
-13.05	1,510.500	35.99	622	357	MDA-13
MAAD-14.01	1,590.000	36.90	660	368	MDA-14

FOR ALUMINIUM ALLOY CONDUCTOR (CANADIAN SIZES OF ARVIDAL)

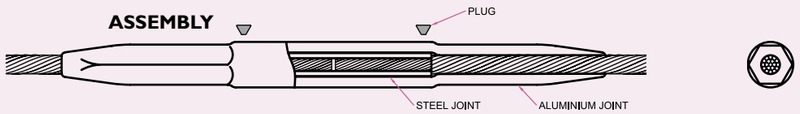
CAT. NO.	CONDUCTOR			DIMENSIONS mm		DIE. NO.
	AWG or MCM	STRANDING	DIA	A	B	
MCJAC-3.03	5	7 X 1.85	5.59	152	76	MCDA-3
-3.04	4	7 X 2.10	6.27	152	76	MCDA-3
-4.03	3	7 X 2.35	7.06	165	76	MCDA-4
-4.05	2	7 X 2.64	7.92	165	76	MCDA-4
-5.05	1	7 X 2.96	8.89	171	76	MCDA-5
-5.06	1/0	7 X 3.33	9.98	171	76	MCDA-5
-6.05	2/0	7 X 3.74	11.22	197	83	MCDA-6
-6.07	3/0	7 X 4.20	12.59	197	83	MCDA-6
-7.02	4/0	7 X 4.72	14.14	203	102	MCDA-7
-7.02	4/0	19 X 2.86	14.32	203	102	MCDA-7
-85.01	266.8	19 X 3.21	16.07	267	102	MCDA-85

All dimensions are in mm

modern malleables

CONNECTORS

MID-SPAN COMPRESSION JOINTS

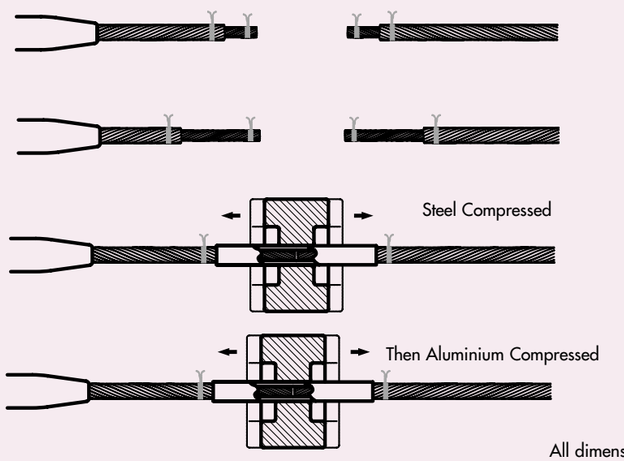


Compression Type Mid Span Joints for ACSR are supplied with extruded aluminium sleeve and galvanised steel joint. They develop full electrical conductivity and mechanical ratings of the conductor. They are also supplied without plugs but with sealed ends and compound filled, scratch brushed inner aluminium surfaces.

BRITISH STANDARD ACSR

CATALOGUE NO.	CODE NAME	DIMENSIONS mm				AFTER COMP. FLAT TO FLAT	
		Length	Outside dia	St.length	Steel dia	Alum.	Steel
MTCJ-200	DOG	508	30	159	12.1	25.0	10.1
MTCJ-201	HYENA	508	30	159	12.1	25.0	10.1
-202	LEOPARD	508	30	159	12.1	25.0	10.1
-203	COYOTE	508	30	159	12.1	25.0	10.1
-210	TIGER	559	30	178	15.2	25.0	12.7
-211	WOLF	559	30	178	15.2	25.0	12.7
-220	LYNX	610	33	203	18.0	26.7	15.1
-221	PANTHER	610	38	203	18.0	32.0	15.1
-222	LION	610	38	203	18.0	32.0	15.1
-230	BEAR	686	38	228	19.2	32.0	16.1
-231	GOAT	686	43	241	19.2	36.0	16.1
-232	ANTELOPE	686	43	228	19.2	36.0	16.1
-240	SHEEP	711	48	248	20.8	40.0	17.5
-241	ZEBRA	711	48	241	19.2	40.0	16.1
-242	CAMEL	711	48	248	20.8	40.0	17.5
-250	DEER	737	48	248	24.0	40.0	20.2
-251	ELK	737	48	248	24.0	40.0	20.2
MTCJ-252	MOOSE	737	54	248	20.8	46.0	17.5

APPLICATION



All dimensions are in mm

CONNECTORS

MID-SPAN COMPRESSION JOINTS

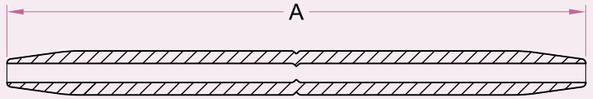
AMERICAN STANDARD ACSR

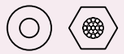
CATALOGUE NO.	CODE NAME	DIMENSIONS mm				AFTER COMP. FLAT TO FLAT	
		Length	Outside dia	St.length	Steel dia	Alum.	Steel
MTCJ-600	PENGUIN	508	30	159	12.1	25.0	10.1
MTCJ-601	WAXWING	508	30	159	12.1	25.0	10.1
602	OWL	508	30	159	12.1	25.0	10.1
603	PARTRIDGE	508	30	159	12.1	25.0	10.1
604	OSTRICH	559	30	178	15.2	25.0	12.7
605	MERLIN	559	30	178	12.1	25.0	10.1
606	LINNET	559	30	178	15.2	25.0	12.7
607	ORIOLE	559	30	178	15.2	25.0	12.7
608	CHICKADEE	559	33	178	12.1	26.7	10.1
609	IBIS	559	33	178	15.2	26.7	12.7
610	LARK	610	38	203	18.0	32.0	15.1
MTCJ-611	PELICAN	610	38	203	12.1	32.0	10.1
612	FLICKER	610	38	203	15.2	32.0	12.7
613	HAWK	610	38	203	18.0	32.0	15.1
614	HEN	610	38	203	19.2	32.0	16.1
615	OSPREY	610	38	203	12.1	32.0	10.1
616	PARAKEET	610	38	203	18.0	32.0	15.1
617	DOVE	610	38	203	18.0	32.0	15.1
618	EAGLE	686	43	241	20.8	36.0	17.5
619	PEACOCK	686	43	241	18.0	36.0	15.1
620	SQUAB	686	43	241	18.0	36.0	15.1
MTCJ-621	DUCK	686	43	241	18.0	36.0	15.1
622	TEAL	686	43	241	20.8	36.0	17.5
623	SWIFT	686	43	241	12.1	36.0	10.1
624	ROOK	686	43	241	18.0	36.0	15.1
625	GROSBEAK	686	43	241	19.2	36.0	16.1
626	EGRET	686	43	241	20.8	36.0	17.5
627	FLAMINGO	686	43	241	18.0	36.0	15.1
628	CROW	686	43	241	19.2	36.0	16.1
629	STARLING	686	43	241	19.2	36.0	16.1
630	REDWING	711	48	248	24.0	40.0	20.2
MTCJ-631	COOT	711	48	248	12.1	40.0	10.1
632	TERN	711	48	248	15.2	40.0	12.7
633	CONDOR	711	48	248	19.2	40.0	16.1
634	DRAKE	711	48	248	20.8	40.0	17.5
635	MALLARD	711	48	248	24.0	40.0	20.2
636	CRANE	711	48	248	20.8	40.0	17.5
637	CANARY	711	48	248	20.8	40.0	17.5
638	RAIL	711	48	248	18.0	40.0	15.1
639	CARDINAL	737	54	248	20.8	46.0	17.5
640	ORTOLAN	737	54	248	18.0	46.0	15.1
MTCJ-641	CURLEW	737	54	248	20.8	46.0	17.5
MTCJ-642	BLUEJAY	737	54	248	18.0	46.0	15.1
MTCJ-643	FINCH	737	54	248	24.0	46.0	20.2

All dimensions are in mm

modern malleables

CONNECTORS





COMPRESSION JOINT

FOR ALUMINIUM STRANDED CONDUCOR (CANADIAN SIZES)

CAT. NO.	CODE NAME	SIZE AWG or MCM	LENGTH A mm	DIE NO.
MAAJ-1.04	PEACHBELL	6	95	MCDA-1
-2.01	ROSE	4	95	MCDA-2
-3.05	LILY	3	114	MCDA-3
-3.01	IRIS	2	114	MCDA-3
-3.04	PANSY	1	114	MCDA-3
-4.01	POPPY	1/0	165	MCDA-4
-5.01	ASTER	2/0	190	MCDA-5
-5.04	PHLOX	3/0	216	MCDA-5
-6.09	OXLIP	4/0	241	MCDA-6
-6.01	VALERIAN	250.000	254	MCDA-6
-6.02	DAISY	266.800	254	MCDA-6
-7.04	PEONY	300.000	305	MCDA-7
-7.11	TULIP	336.400	305	MCDA-7
-7.07	CANNA	397.500	356	MCDA-7
MAAJ-85.09	COSMOS	477.000	406	MCDA-85

FOR ALUMINIUM STRANDED CONDUCTOR (BRITISH SIZES)

CAT. NO.	CODE NAME	STRANDING	LENGTH A mm	DIE NO.
MAAJ-2.01	MIDGE	7 X 2.0	89	MCDA-2
-2.03	GNAT	7 X 2.2	89	MCDA-2
-2.03	APHIS	3 X 3.3	114	MCDA-2
-3.03	WEEVIL	3 X 3.6	114	MCDA-3
-3.02	MOSQUITO	7 X 2.5	114	MCDA-3
-3.04	LADYBIRD	7 X 2.7	114	MCDA-3
-4.01	ANT	7 X 3.0	165	MCDA-4
-4.02	FLY	7 X 3.4	165	MCDA-4
-5.02	BLUEBOTTLE	7 X 3.6	190	MCDA-5
-5.03	EARWIG	7 X 3.7	216	MCDA-5
-5.04	GRASSHOPPER	7 X 3.9	216	MCDA-5
-5.05	CLEGG	7 X 4.1	241	MCDA-5
-6.07	WASP	7 X 4.3	254	MCDA-6
-6.07	BEETLE	19 X 2.6	254	MCDA-6
-6.01	BEE	7 X 4.9	254	MCDA-6
MAAJ-6.03	CRICKET	7 X 5.3	280	MCDA-6

FOR ACSR (BRITISH SIZES)

CAT. NO.	CONDUCTOR		LENGTH	DIE NOS.	
	CODE NAME	STRANDING	A mm		
MJ-1.03	MOLE	6/1 X 1.49	254	MCDA-1	MA-1
-3.04	SQUIRREL	6/1 X 2.10	356	MCDA-3	MA-3
-4.03	GOPHER	6/1 X 2.36	356	MCDA-4	MA-4
-4.05	WEASEL	6/1 X 2.59	356	MCDA-4	MA-4
-5.03	FOX	6/1 X 2.79	356	MCDA-5	MA-5
-5.04	FERRET	6/1 X 2.99	432	MCDA-5	MA-5
-5.06	RABBIT	6/1 X 3.35	445	MCDA-5	MA-5
-6.04	MINK	6/1 X 3.65	432	MCDA-6	-
-6.06	BEAVER	6/1 X 3.98	457	MCDA-6	-
-6.08	RACCOON	6/1 X 4.08	483	MCDA-6	-
-6.07	OTTER	6/1 X 4.21	483	MCDA-6	-
-7.03	CAT	6/1 X 4.49	508	MCDA-7	-
-7.02	HARE	6/1 X 4.72	508	MCDA-7	-
MJ-7.02	DOG	6/7 X 4.72	508	MCDA-7	-

All dimensions are in mm

CONNECTORS

COMPRESSION JOINT

FOR ALPAC ACSR & CANADIAN 6/1 SIZES

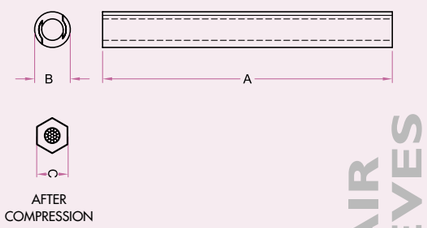
CAT. NO.	CONDUCTOR		STRANDING	LENGTH mm	DIE NO.
	CODE NAME	SIZE (AWG)			
MJ-1.02	WREN	8	6/1	229	MCDA-1
- 1.03	WARBLER	7	6/1	254	MCDA-1
-2.03	TURKEY	6	6/1	292	MCDA-2
-3.03	THRUSH	5	6/1	330	MCDA-3
-3.04	SWAN	4	6/1	356	MCDA-3
-4.03	SWALLOW	3	6/1	356	MCDA-4
-4.05	SPARROW	2	6/1	356	MCDA-4
-5.04	ROBIN	1	6/1	432	MCDA-5
-5.06	RAVEN	1/0	6/1	445	MCDA-5
-6.05	QUAIL	2/0	6/1	457	MCDA-6
-6.07	PIGEON	3/0	6/1	483	MCDA-6
-7.02	PENGUIN	4/0	6/1	508	MCDA-7
-1.01	COD	8	100 ALPAC	152	MCDA-1
-1.02	RAY	7	100 ALPAC	152	MCDA-1
-2.02	BASS	6	100 ALPAC	178	MCDA-2
-3.02	TUNA	5	100 ALPAC	216	MCDA-3
-3.03	PIKE	4	100 ALPAC	229	MCDA-3
-3.04	CHUB	3	100 ALPAC	267	MCDA-3
-4.04	CARP	2	100 ALPAC	305	MCDA-4
-5.03	SHAD	1	100 ALPAC	330	MCDA-5
-5.05	SOLE	1/0	100 ALPAC	381	MCDA-5
-6.03	HAKE	2/0	100 ALPAC	419	MCDA-6
-6.05	CUSK	3/0	100 ALPAC	445	MCDA-6
-7.01	SCUP	4/0	100 ALPAC	457	MCDA-7
-7.01	MINNOW	8	150 ALPAC	229	MCDA-2
-2.02	CISCO	7	150 ALPAC	254	MCDA-2
-3.02	MULLET	6	150 ALPAC	254	MCDA-3
-3.03	DARTER	5	150 ALPAC	305	MCDA-3
-4.02	POLLOCK	4	150 ALPAC	330	MCDA-4
-5.01	WHITTING	3	150 ALPAC	356	MCDA-5
-5.02	HADDOCK	2	150 ALPAC	368	MCDA-5
-6.01	LAMPREY	1	150 ALPAC	419	MCDA-6
-6.03	SCULPIN	1/0	150 ALPAC	419	MCDA-6
-3.01	SARDINE	8	200 ALPAC	267	MCDA-3
-3.02	HALIBUT	7	200 ALPAC	254	MCDA-3
-4.01	HERRING	6	200 ALPAC	305	MCDA-4
-4.02	GOLDEYE	5	200 ALPAC	330	MCDA-4
-5.01	FLOUNDER	4	200 ALPAC	432	MCDA-5
MJ-5-02	GRAYLING	3	200 ALPAC	457	MCDA-5
MJ-6.02	PICKEREL	2	200 ALPAC	483	MCDA-6

FOR ALUMINIUM ALLOY CONDUCTOR (CANADIAN SIZES OF ARVIDAL)

CAT. NO.	CONDUCTOR			Length	DIE NO.		
	AWG or MCM	Strading	Dia mm	A mm			
MJAC-1.02	8	7 × 1.31	3.9	114	MCDA-1	–	–
1.03	7	7 × 1.47	4.4	114	MCDA-1	–	–
2.03	6	7 × 1.66	4.9	127	MCDA-2	–	–
3.03	5	7 × 1.86	5.5	140	MCDA-3	–	–
3.04	4	7 × 2.10	6.2	140	MCDA-3	–	–
4.03	3	7 × 2.35	7.0	172	MCDA-4	–	–
4.05	2	7 × 2.64	7,9	172	MCDA-4	–	–
5.05	1	7 × 2.96	8.8	190	MCDA-5	–	–
5.06	1/0	7 × 3.32	9.9	190	MCDA-5	–	–
6.05	2/0	7 × 3.73	11.2	229	MCDA-6	MJDA-6	
6.07	3/0	7 × 4.20	12.5	229	MCDA-6	MJDA-6	
7.02	4/0	7 × 4.71	14.1	279	MCDA-7	MJDA-7	MDA-7
7.02	4/0	19 × 2.86	14.3	279	MCDA-7	MJDA-7	MDA-7
85.01	266.8	19 × 3.20	16.0	368	MCDA-85	MJDA-85	MDA-85
85.02	300	19 × 3.40	17.0	368	MCDA-85	MJDA- 85	MDA-85
85.03	336.4	19 × 3.60	18.0	368	MCDA-85	MJDA-85	MDA-85
10.01	397.5	19 × 3.92	19.6	400	–	MJDA-10	MDA-10
10.03	477	19 × 4.29	21.4	400	–	MJDA-10	MDA-10

All dimensions are in mm

CONNECTORS



REPAIR SLEEVES

CATALOGUE NO	COND. RANGE MIN	COND. RANGE MAX	DIMENSION mm A	B	C
MTRS 7.1	13.71	15.41	203	30	25.0
MTRS 7	15.42	17.65	216	30	25.0
MTRS 8.1	16.53	18.83	229	33	28.0
MTRS 8	18.84	20.14	229	33	28.0
MTRS 9.1	19.56	22.21	241	38	32.0
MTRS 9	22.22	23.5	241	38	32.0
MTRS 10.1	23.47	25.4	254	43	36.0
MTRS 10	25.15	26.75	254	43	36.0
MTRS 11.1	25.88	28.13	279	48	40.0
MTRS 11	28.14	30.17	279	48	40.0
MTRS 12.1	28.96	31.94	305	54	46.0
MTRS 12	31.95	34.05	305	54	46.0
MTRS 13	34.06	37.21	330	59	48.0
MTRS 14	36.93	39.24	330	64	54.0

Compression type aluminium repair sleeves develop full conductivity and mechanical rating of the conductor.

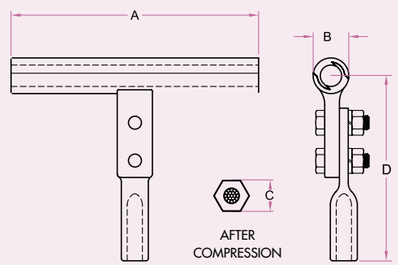
They are supplied also with sealed ends scratch brushed inner surfaces.

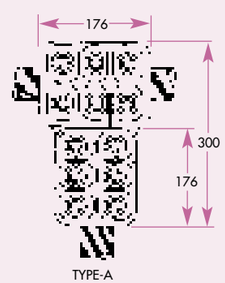
T-CONNECTOR

COMPRESSION TYPE

CAT. NO.	COND. RANGE MIN.	COND. RANGE MAX.	A	B	C	D
MTC 500	11.7	14.8	431	30	25.0	295
MTC 501	15.4	17.6	431	30	25.0	295
MTC 502	16.5	18.8	508	33	28.0	313
MTC 503	18.8	20.1	508	33	28.0	313
MTC 504	19.5	21.7	558	38	32.0	358
MTC 505	22.2	23.5	558	38	32.0	358
MTC 506	23.5	25.0	609	43	36.0	397
MTC 507	25.0	26.7	609	43	36.0	397
MTC 508	25.8	27.9	659	48	40.0	414
MTC 509	28.1	30.1	659	48	40.0	414
MTC 510	28.9	31.8	711	54	46.0	400
MTC 511	31.9	33.9	711	54	46.0	400
MTC 512	34.0	37.2	767	59	48.0	424
MTC 513	35.9	39.2	809	64	54.0	435

'T' connector for Aluminium conductors can be supplied with welded jumpers on request.

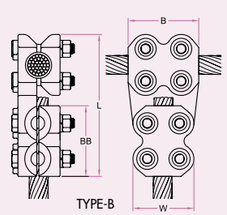




BOLTED TYPE

CAT No.	B	BB	L	W	No. OF BOLTS
TC-1	89	89	174	79	8
TC-2	82	82	150	68	8
TC-3	70	70	136	60	8
TC-4	47	47	119	58	4

Various other sizes can be supplied as per customer's specification. Type-A connectors are for use upto 800 kv and are for better corona and RIV performance

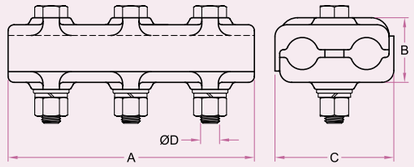


All dimensions are in mm

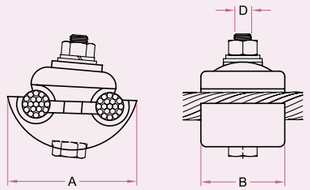
CONNECTORS

PARALLEL GROOVE CLAMPS

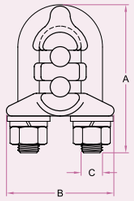
TYPE A CAT.NO.	COND. DIA. MAX.	A	B	C	D	BOLTS
MPG-79	9.00	65	16	45	10	2
MPG-80	10.11	79	22	48	12	2
MPG-81	14.45	95	30	57	12	2
MPG-82	17.60	127	36	65	12	3
MPG-83	20.78	140	42	76	16	3
MPG-84	23.95	152	47	86	16	3
MPG-85	27.13	171	52	92	16	3
MPG-86	30.38	197	59	105	16	3
MPG-87	34.23	225	66	114	16	4
MPG-88	38.25	240	73	117	18	4
MPG-89	42.87	286	82	133	18	5



TYPE B CAT.NO.	COND. DIA MIN.	COND. DIA MAX.	A	B	D	NO. OF BOLTS
MUPG-60	3.66	10.21	38	36	10	1
MUPG-60T	3.66	10.21	38	36	10	1
MUPG-62	6.35	14.30	48	46	10	1
MUPG-62T	6.35	14.30	48	46	10	1



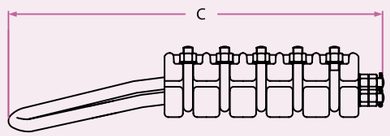
LOOP DEAD END



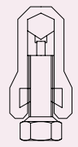
CAT. NO.	COND. RANGE MIN.	COND. RANGE MAX.	A	B	C
MLD-11	5.0	6.5	60	41	10
MLD-12	6.3	8.3	70	54	10
MLD-13	8.0	10.5	86	64	12

COME ALONG CLAMP

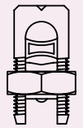
CAT. NO.	CONDUCTOR DIA. MIN.	CONDUCTOR DIA. MAX.	LENGTH C	NO. OF BOLTS
MCA 500	7.89	11.66	375	4
MCA 507	11.67	21.20	549	5
MCA 513	20.85	31.00	641	6
MCA 517	30.00	40.00	692	7



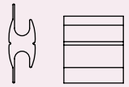
COMPRESSION CONNECTORS



SADDLE TYPE



SPLIT BOLT TYPE



H - TYPE

C - TYPES

E - TYPE

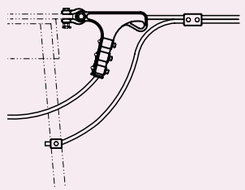
- *All clamp body are made of high strength aluminium alloy cast out of permanent mould or made out of extruded aluminium with bolts of galvanised steel/stainless steel*
- *P.G. clamps have grooves conforming to conductor sizes which ensure sufficient surface contact and low electrical resistance*
- *P G Clamps of bimetallic type are available as per requirements*

All dimensions are in mm

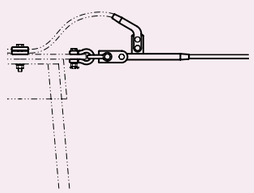
EARTHWIRE ACCESSORIES

CONNECTORS

TENSION ASSEMBLY



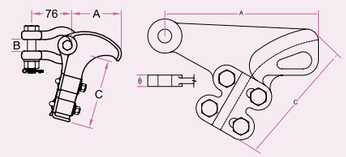
Typical tension assembly on tower with bolted clamp.



Typical tension assembly on tower with compression clamp.

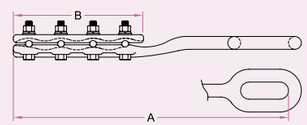
BOLTED TENSION CLAMP

CAT. NO.	A	B	C	WIRE DIA. MIN.	WIRE DIA. MAX.
105	100	22	145	5.0	12.0
A-43	100	22	220	12.0	18.0
Ty-A	215	15	180	5.6	8.0
Ty-B	260	15	200	10.6	12.0



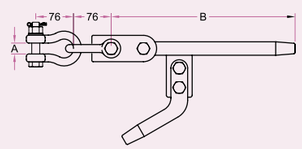
FORGED TENSION CLAMP

CAT. NO.	A	B	WIRE DIA. MIN.	WIRE DIA. MAX.
SCF-1	167	70	3.0	6.0
SCF-2	270	150	6.0	9.5
SCF-3	355	200	9.5	12.5
SCF-4	355	200	12.5	15.5

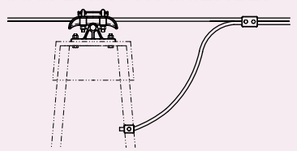


COMPRESSION DEADEND CLAMP

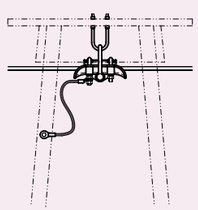
CAT. NO.	A	B	WIRE DIA. MIN.	WIRE DIA. MAX.
MGSS-8	22	285	12.0	14.5
MGSS-9	22	285	10.0	12.0
MGSS-10	22	260	8.0	10.0
MGSS-12	22	235	6.5	8.0
MGSS-14	22	175	3.5	6.5

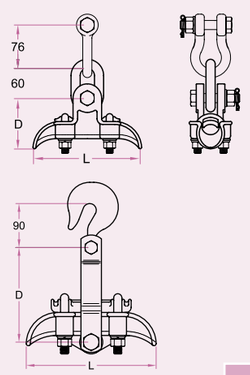


SUSPENSION ASSEMBLY



Typical suspension assembly on tower.





B-15 / B-18

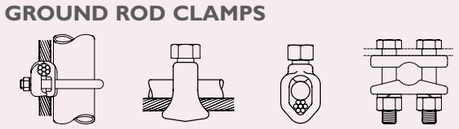
SUSPENSION FITTINGS

CAT. NO.	L	D	WIRE DIA. MIN.	WIRE DIA. MAX.
B-11S	146	54	3.0	15.0
B-12S	181	57	7.6	17.8
B-18S	146	75	3.0	15.0
B-15S	190	75	7.0	18.0

EARTH BOND

CAT. NO.	AREA SQ. MM.	LENGTH L	HOLE D	BOLT DIA.
EB-1	34	457	14	16
EB-2	64	508	14	16
EB-3	75	750	14	16

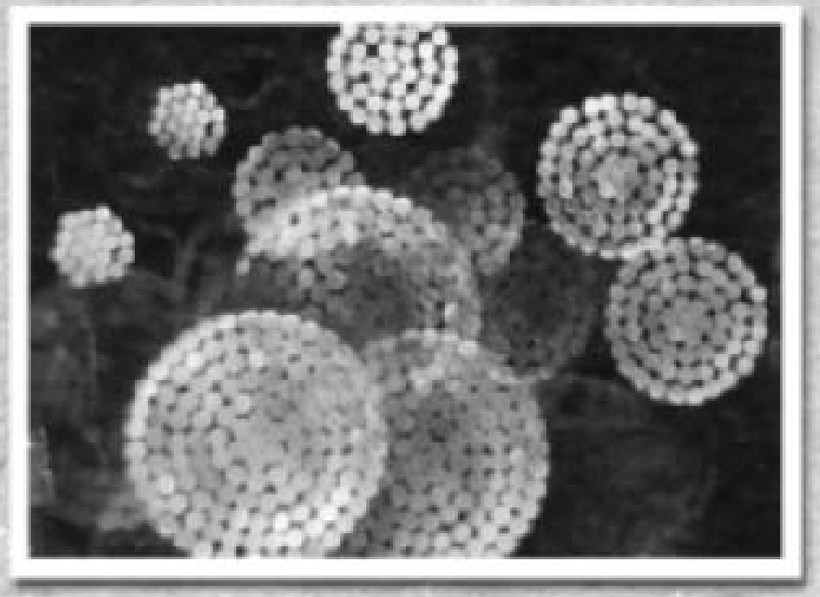
GROUND ROD CLAMPS



- Compression dead ends develop full strength and Conductivity of the conductor / earthwire. These are also available in non-magnetic stainless steel on request.
- Suspension and tension clamps are made of hot dip galvanised malleable iron
- Earth Bonds are usually made of stranded Tinned Copper Wires with crimped cable Sockets
- Other arrangements for suspension & tension assembly on request

All dimensions are in mm

CONDUCTOR REFERENCE DATA



Steel cored Aluminium Conductor - **ACSR/SCA**

Steel cored Aluminium Alloy Conductor - **AACSR**

All Aluminium Conductor - **AAC**

All Aluminium Alloy Conductor - **AAAC**

Galvanised Steel Stranded Conductor - **GW**

Copper Stranded Conductor - **COPPER**

ACSR/AACSR

CONDUCTOR DATA

ALUMINIUM AND ALUMINIUM ALLOY CONDUCTORS WITH STEEL REINFORCEMENT

Size circular mils or A.W.G.	codeword	diameter overall mm	diameter steel mm	stranding aluminium n	stranding aluminium mm	stranding steel n	stranding steel mm	Area aluminium mm²	Area steel mm²	Area total mm²	rated breaking strength Kg	Theoritical Weight Total Kg/Km	Theoritical Weight Aluminium Kg/Km	Theoritical Weight Steel Kg/Km
8	WREN	3.99	1.33	6	1.33	1	1.33	8.37	1.39	9.76	340	34	23	11
	MOLE	4.49	1.498	6	1.498	1	1.498	10.56	1.76	12.32	415	43	29	14
7	WARBLER	4.48	1.496	6	1.496	1	1.496	10.50	1.75	12.25	420	42	28	14
		4.80	1.60	6	1.60	1	1.60	12.06	2.10	14.07	435	49	32	17
6	TURKEY	5.04	1.68	6	1.68	1	1.68	13.30	2.22	15.52	530	54	37	17
		5.10	1.70	6	1.70	1	1.70	13.62	2.27	15.89	491	55	37	18
		5.40	1.80	6	1.80	1	1.80	15.24	2.54	17.78	550	61	41	20
	COLIBRI	5.52	1.84	6	1.84	1	1.84	15.95	2.66	18.61	630	64	43	21
5	THRIUSH	5.67	1.89	6	1.89	1	1.89	16.77	2.81	19.58	660	68	46	22
		5.70	1.90	6	1.90	1	1.90	16.98	2.83	19.81	605	69	47	22
		6.00	2.00	6	2.00	1	2.00	18.84	3.14	21.98	670	76	51	25
	SQUIRREL	6.30	2.10	6	2.10	1	2.10	20.97	3.50	24.47	739	85	58	27
		6.33	2.11	6	2.11	1	2.11	21.06	3.51	24.56	780	85	57	28
4	SWAN	6.36	2.12	6	2.12	1	2.12	22.15	3.53	24.68	830	85	57	28
		6.75	2.25	6	2.25	1	2.25	23.88	3.98	27.86	848	96	65	31
	RONDINE	6.96	2.32	6	2.32	1	2.32	25.36	4.23	29.59	965	102	69	33
		7.05	2.35	6	2.35	1	2.35	26.04	4.34	30.38	926	105	71	34
	GOPHER	7.08	2.36	6	2.36	1	2.36	26.32	4.37	30.69	980	106	72	34
3	SWALLOW	7.14	2.38	6	2.38	1	2.38	26.67	4.44	31.11	1015	108	73	35
		7.50	2.50	6	2.50	1	2.50	29.46	4.91	34.37	1048	119	80	39
	WEASEL	7.77	2.59	6	2.59	1	2.59	31.61	5.27	36.88	1154	127	86	41
2	SPARROW	8.01	2.67	6	2.67	1	2.67	33.63	5.60	39.23	1260	136	92	44
		8.10	2.70	6	2.70	1	2.70	34.26	5.71	39.97	1222	138	93	45
	FOX	8.38	2.79	6	2.79	1	2.79	36.77	6.11	42.88	1343	148	100	48
		8.40	2.80	6	2.80	1	2.80	36.96	6.16	43.12	1314	149	101	48
	FRINGUELLO	8.70	2.90	6	2.90	1	2.90	39.63	6.61	46.23	1470	160	108	52
	FERRET	8.99	2.997	6	2.997	1	2.997	42.30	7.05	49.35	1575	170	115	55
1	ROBIN	9.00	3.002	6	3.002	1	3.002	42.42	7.07	49.49	1575	171	116	55
		9.45	3.15	6	3.15	1	3.15	46.80	7.80	54.6	1600	189	128	61
		9.60	3.20	6	3.20	1	3.20	48.60	8.05	56.65	1624	196	133	63
		10.00	6.00	12	2.00	7	2.00	37.70	21.99	59.69	3250	278	105	173
	RABBIT	10.05	3.35	6	3.35	1	3.35	52.97	8.81	61.78	1862	214	145	69
		10.08	3.36	6	3.36	1	3.36	53.22	8.87	62.09	1890	215	145	70
1/0	RAVEN	10.11	3.37	6	3.37	1	3.37	53.48	8.92	62.40	1925	216	146	70
	CORVO	10.32	3.44	6	3.44	1	3.44	55.76	9.29	65.05	2005	225	152	73
	GUFO	10.44	3.84	26	1.65	7	1.28	55.60	9.03	64.72	2114	226	155	71
		10.50	4.50	30	1.50	7	1.50	53.01	12.37	65.38	2416	245	148	97
	SAVO	10.60	6.36	12	2.12	7	2.12	42.36	24.71	67.07	3770	311	117	194
		10.65	3.55	6	3.55	1	3.55	59.40	9.90	69.30	2040	240	162	78
		10.75	6.75	13	2.00	7	2.25	40.84	27.83	68.67	3700	335	117	218
	MERLO	10.78	4.62	30	1.54	7	1.54	55.74	13.01	68.75	2608	258	156	102
		10.95	3.65	6	3.65	1	3.65	62.82	10.47	73.29	2216	254	172	82
	MINK	10.98	3.66	6	3.66	1	3.66	63.03	10.52	73.55	2216	255	172	83
		11.20	4.80	30	1.60	7	1.60	60.32	14.07	74.39	2619	278	168	110
2/0	QUAIL	11.34	3.78	6	3.78	1	3.78	67.43	11.22	78.65	2400	272	184	88
		11.40	4.20	26	1.80	7	1.40	66.16	10.78	76.94	2456	269	184	85
		11.50	6.90	12	2.30	7	2.30	49.86	29.09	78.95	4290	367	139	228
		11.55	4.35	26	1.80	7	1.45	66.16	11.56	77.72	2578	277	186	91
		11.70	5.40	8	3.15	7	1.80	62.30	17.80	80.10	2880	314	174	140
101.800	PETREL	11.70	7.02	12	2.34	7	2.34	51.61	30.10	81.71	4472	380	144	236
		11.80	7.08	12	2.36	7	2.36	52.49	30.61	83.10	4750	386	146	240
		11.90	7.14	12	2.38	7	2.38	53.38	31.14	84.52	4535	392	148	244
		11.90	5.10	30	1.70	7	1.70	68.09	15.89	83.98	3104	314	189	125
	BEAVER	11.97	3.99	6	3.99	1	3.99	74.97	12.50	87.47	2601	303	205	98
		12.00	4.00	6	4.00	1	4.00	75.30	12.55	87.85	2530	304	205	99
		12.00	7.50	13	2.25	7	2.50	51.70	34.40	86.10	4550	419	149	270
110.800	MINORCA	12.2	7.32	12	2.44	7	2.44	56.14	32.76	88.90	4867	413	156	257
	RACCOON	12.27	4.09	6	4.09	1	4.09	78.77	13.14	91.91	2737	318	215	103
	QUAGLIA	12.33	4.11	6	4.11	1	4.11	79.60	13.27	92.86	2820	321	217	104
	FAGIANO	12.33	4.11	6	4.11	7	1.37	79.59	10.29	89.88	2503	300	219	81
	COLOMBO	12.47	4.59	26	1.97	7	1.53	79.17	12.87	92.04	2971	323	222	101
		12.60	6.30	9	3.15	7	2.10	70.10	24.2	94.30	3680	386	196	190
		12.60	5.40	30	1.80	7	1.80	76.34	17.81	94.15	3315	353	213	140

ACSR/AACSR

CONDUCTOR DATA

ALUMINIUM AND ALUMINIUM ALLOY CONDUCTORS WITH STEEL REINFORCEMENT

Size circular mils or A.W.G.	codeword	diameter overall mm	diameter steel mm	stranding aluminium n	stranding aluminium mm	stranding steel n	stranding steel mm	Area aluminium mm²	Area steel mm²	Area total mm²	rated breaking strength Kg	Theoritical Weight Total Kg/Km	Theoritical Weight Aluminium Kg/Km	Theoritical Weight Steel Kg/Km
110.800		12.60	7.56	12	2.52	7	2.52	59.85	34.91	94.76	5320	440	166	274
		12.60	8.40	15	2.10	19	1.68	51.90	42.1	94.00	5300	480	150	330
		12.65	7.59	12	2.53	7	2.53	60.32	35.19	95.51	6100	444	168	276
	OTTER	12.66	4.22	6	4.22	1	4.22	83.81	13.99	97.80	2910	339	229	110
		12.68	4.68	26	2.00	7	1.56	81.68	13.38	95.06	2879	333	228	105
		12.75	4.24	6	4.24	1	4.24	85.00	14.16	99.16	3000	343	232	111
3/0	PIGEON	12.75	4.25	6	4.25	1	4.25	85.03	14.19	99.22	3000	343	232	111
		12.81	5.49	30	1.83	7	1.83	78.91	18.41	97.32	3505	364	219	145
	CINCIA	12.88	5.52	30	1.84	7	1.84	79.74	18.61	98.35	3694	368	222	146
	SKUNK	12.95	7.77	12	2.59	7	2.59	63.12	36.82	99.94	5280	460	171	289
		13.00	7.80	12	2.60	7	2.60	63.71	37.16	100.87	5510	468	176	292
		13.30	5.70	30	1.90	7	1.90	85.06	19.85	104.91	3836	393	237	156
		13.32	4.92	26	2.10	7	1.64	90.05	14.79	104.84	3314	368	252	116
134.600	LEGHORN	13.45	8.07	12	2.69	7	2.69	68.20	39.80	108.00	5860	501	189	312
		13.50	9.00	15	2.25	19	1.80	59.60	48.30	107.90	6050	539	160	379
	CAT	13.50	4.50	6	4.50	1	4.50	95.40	15.90	111.30	3275	385	260	125
		13.60	5.01	26	2.15	7	1.67	94.39	15.33	109.72	3570	383	263	120
	HORSE	13.95	8.37	12	2.79	7	2.79	73.29	42.9	116.20	6100	539	202	337
		14.00	10.00	18	2.00	19	2.00	56.50	59.7	116.20	7300	634	165	469
		14.00	6.00	30	2.00	7	2.00	94.25	21.99	116.24	4046	435	262	173
	DOG	14.15	4.72	6	4.72	7	1.57	105.20	13.57	118.77	3311	392	285	107
	HARE	14.16	4.72	6	4.72	1	4.72	105.20	17.50	122.70	3815	424	287	137
		14.21	6.09	30	2.03	7	2.03	97.10	22.66	119.76	4265	448	270	178
4/0	PENGUIN	14.31	4.77	6	4.77	1	4.77	107.20	17.87	125.10	3760	433	293	140
		14.50	8.70	12	2.90	7	2.90	79.29	46.24	125.50	6820	482	119	363
		14.50	5.34	26	2.29	7	1.78	107.06	17.41	124.47	4250	435	298	137
	HEYNA	14.57	5.79	7	4.39	7	1.93	106.20	20.51	126.71	4152	452	291	161
		14.58	4.86	6	4.86	7	1.62	111.25	14.45	125.70	3504	418	305	113
	CANARIO	14.58	4.86	6	4.86	1	4.86	111.30	18.55	129.85	3550	448	302	146
159.000	GUINEA	14.60	8.76	12	2.92	7	2.92	80.56	46.98	127.54	6894	592	223	369
		14.60	5.40	26	2.30	7	1.80	107.90	17.78	125.68	3600	441	301	140
		14.70	6.30	30	2.10	7	2.10	103.90	24.25	128.15	4589	480	290	190
203.000	AUK	14.85	6.75	8	4.05	7	2.25	102.86	27.78	130.64	5035	508	290	218
		15.00	9.00	12	3.00	7	3.00	84.82	49.48	134.30	7090	624	236	388
	CIVETTA	15.19	6.51	30	2.17	7	2.17	110.90	25.88	136.78	4890	512	309	203
176.900	DOTTERREL	15.40	9.24	12	3.08	7	3.08	89.80	52.13	141.93	7457	658	249	409
266.800	WAXWING	15.46	3.09	18	3.09	1	3.09	135.20	7.44	142.64	3220	431	373	58
		15.65	5.85	26	2.45	7	1.95	122.60	20.9	143.50	4716	508	344	164
		15.75	11.25	18	2.25	19	2.25	71.60	75.54	147.10	9100	802	209	593
	PORJUS	15.75	6.75	30	2.25	7	2.25	119.20	27.82	147.02	5445	552	334	218
	LEOPARD	15.81	5.25	6	5.28	7	1.75	131.60	16.83	148.43	4144	494	362	132
		15.85	5.85	26	2.50	7	1.95	127.60	20.91	148.51	4630	520	356	164
	COYOTE	15.87	5.71	26	2.54	7	1.90	131.74	20.00	151.73	4835	522	365	157
		15.89	6.81	30	2.27	7	2.27	121.41	28.33	149.74	5335	560	338	222
90.800	DORKING	16.00	9.60	12	3.20	7	3.20	96.68	56.41	153.90	8042	715	272	443
266.800	OWL	16.08	5.36	6	5.36	7	1.79	135.20	17.50	152.70	4374	509	372	137
		16.10	6.90	30	2.30	7	2.30	124.60	29.10	153.70	5161	576	348	228
		16.10	11.50	18	2.30	19	2.30	74.78	78.94	153.72	10432	838	218	620
266.800	PARTRIDGE	16.28	6.00	26	2.57	7	2.00	135.20	22.00	157.20	5100	549	376	173
		16.40	6.00	26	2.60	7	2.00	138.00	21.99	159.99	4810	558	385	173
		16.45	7.05	30	2.35	7	2.35	130.11	30.36	160.47	5747	600	362	238
	TIGER	16.52	7.08	30	2.36	7	2.36	131.42	30.64	162.06	5761	607	366	241
		16.66	7.14	30	2.38	7	2.38	133.44	31.13	164.57	5920	616	372	244
		16.68	6.12	26	2.64	7	2.04	142.20	22.82	165.02	5140	577	398	179
		16.73	4.89	22	2.96	7	1.63	151.38	14.60	165.88	4270	555	440	115
266.800	JUNCO	16.80	7.20	30	2.40	7	2.40	135.70	31.66	167.36	5600	627	378	249
		16.80	12.00	18	2.40	19	2.40	81.43	85.95	167.38	12360	913	238	675
211.300	COCHIN	16.85	10.11	12	3.37	7	3.37	107.06	62.48	169.54	8908	787	297	490
		17.10	6.30	26	2.70	7	2.10	148.90	24.20	173.10	5700	605	415	190

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Size circular mils or A.W.G.	codeword	diameter overall mm	diameter steel mm	stranding aluminium n	stranding aluminium mm	stranding steel n	stranding steel mm	Area aluminium mm²	Area steel mm²	Area total mm²	rated breaking strength Kg	Theoritical Weight Total Kg/Km	Theoritical Weight Aluminium Kg/Km	Theoritical Weight Steel Kg/Km
211.300	STRUZZO	17.24	6.36	26	2.72	7	2.12	151.14	24.74	175.88	5348	615	421	194
		17.25	6.45	26	2.70	7	2.15	148.90	25.41	174.30	5580	617	418	199
300.000	OSTRICH	17.28	6.36	26	2.73	7	2.12	152.00	24.77	176.77	5737	619	425	194
336.400	MERLIN	17.37	3.47	18	3.47	1	3.47	170.50	9.43	179.93	4060	544	470	74
		17.50	7.50	30	2.50	7	2.50	147.25	34.35	181.60	5960	680	410	270
		17.50	7.50	30	2.50	7	2.50	147.25	35.35	181.60	9680	680	403	277
		17.50	10.50	12	3.50	7	3.50	115.50	67.35	182.85	5990	849	320	529
		17.54	12.00	16	2.77	19	2.40	96.50	86.30	182.80	12500	945	268	677
		17.60	6.60	26	2.75	7	2.20	154.42	26.60	181.03	5900	642	433	209
		17.60	10.56	12	3.52	7	3.52	116.77	68.12	184.89	8600	859	324	535
		17.64	7.56	30	2.52	7	2.52	149.63	34.91	184.54	6575	690	416	274
	GRU	17.71	7.59	30	2.53	7	2.53	150.77	35.18	185.95	6563	697	421	276
		17.74	6.54	26	2.80	7	2.18	160.10	26.13	186.23	5633	651	446	205
300.000	PIPER	17.78	7.62	30	2.54	7	2.54	152.00	35.50	187.50	6895	702	423	279
203.200	BRAHMA	18.12	12.40	16	2.86	19	2.48	102.96	91.87	194.83	12475	1008	287	721
	WOLF	18.13	7.77	30	2.59	7	2.59	158.13	36.90	195.03	6880	730	440	290
		18.20	7.80	30	2.60	7	2.60	159.28	37.16	196.44	6838	735	443	292
		18.27	13.05	18	2.61	19	2.61	96.30	101.65	197.95	15800	1080	282	798
336.400	LINNET	18.31	6.75	26	2.89	7	2.25	170.45	27.74	198.19	6373	695	447	218
		18.35	6.75	26	2.90	7	2.25	171.74	27.83	199.57	6020	697	479	218
		18.80	7.20	26	2.90	7	2.40	171.74	31.70	203.44	6500	732	483	249
336.400	ORIOLE	18.83	8.07	30	2.69	7	2.69	170.50	39.80	210.30	7729	788	476	312
		18.90	8.10	30	2.70	7	2.70	171.80	40.10	211.90	6959	793	478	315
		18.90	6.30	54	2.10	7	2.10	187.00	24.25	211.25	5842	708	518	190
		18.99	14.77	24	2.11	37	2.11	83.90	129.30	213.20	16000	1270	255	1015
		19.02	7.02	26	3.00	7	2.34	183.80	30.10	213.90	6460	748	512	236
		19.20	7.20	26	3.00	7	2.40	183.80	31.70	215.50	6926	762	513	249
		19.20	11.50	12	3.85	19	2.30	139.69	78.94	218.63	11300	1015	395	620
		19.24	10.35	10	4.44	7	3.45	154.83	65.44	220.27	10050	950	436	514
		19.35	10.75	42	2.15	19	2.15	152.46	68.97	221.43	11400	970	429	541
	ZIGOLO	19.38	7.14	26	3.06	7	2.38	191.23	31.16	222.39	6677	777	532	245
	LYNX	19.56	8.38	30	2.79	7	2.79	183.93	42.90	226.84	7951	850	513	337
		19.60	8.40	30	2.80	7	2.80	184.70	43.10	227.80	7360	854	516	338
		19.60	8.40	30	2.80	7	2.80	184.70	43.10	227.80	12170	854	516	338
		19.74	15.00	22	2.37	19	3.00	101.17	134.29	235.46	20500	1350	296	1054
397.500	IBIS	19.88	7.32	26	3.14	7	2.44	201.40	32.80	234.20	7343	811	555	256
	GHIANDAIA	19.95	8.55	30	2.85	7	2.85	191.42	44.66	236.08	8255	885	534	351
		20.02	8.58	30	2.86	7	2.86	192.72	44.97	237.69	7690	891	538	353
		20.09	8.61	30	2.87	7	2.87	194.08	45.28	239.36	8530	896	541	355
		20.09	8.61	30	2.87	7	2.87	194.08	45.28	239.36	11415	896	541	355
		20.25	6.75	54	2.25	7	2.25	214.71	27.83	242.54	6757	813	595	218
		20.27	7.47	26	3.20	7	2.49	209.10	34.09	243.19	7331	852	584	268
		20.30	7.50	26	3.20	7	2.50	209.10	34.36	243.46	7240	855	585	270
		20.30	8.70	30	2.90	7	2.90	198.20	46.24	244.44	8620	916	553	363
397.500	LARK	20.44	8.76	30	2.92	7	2.92	201.40	47.00	248.40	9063	928	559	369
		20.45	7.65	26	3.20	7	2.55	209.10	35.75	244.85	7845	865	584	281
		20.55	8.19	28	3.09	7	2.73	211.30	41.60	252.90	7200	895	568	327
		20.70	6.90	54	2.30	7	2.30	224.40	29.08	253.50	7008	850	622	228
		20.90	10.60	36	2.56	12	2.56	185.40	61.80	247.20	9520	1015	530	485
	PANTHER	21.00	9.00	30	3.00	7	3.00	211.74	49.42	261.16	9165	974	586	388
		21.00	15.00	18	3.00	19	3.00	127.20	134.20	261.40	17500	1425	372	1053
477.000	FLICKER	21.48	7.16	24	3.58	7	2.38	241.68	31.03	272.71	7801	915	671	244
		21.52	7.92	26	3.40	7	2.64	236.06	38.32	274.38	8051	960	659	301
		21.60	16.80	24	2.40	37	2.40	108.57	167.38	275.95	26000	1645	331	1314
	RIGOGOLO	21.66	7.98	26	3.42	7	2.66	238.70	38.88	277.58	8474	970	665	305
		21.70	8.10	26	3.40	7	2.70	236.06	40.08	276.14	8822	975	660	315
477.000	HAWK	21.80	8.04	26	3.44	7	2.68	241.68	39.35	281.03	8813	985	676	309
	GRONINGEN	21.80	6.12	48	2.62	7	2.04	258.76	22.87	281.65	7330	900	720	180
		22.05	9.45	30	3.15	7	3.15	233.80	54.55	288.35	9220	1078	650	428

ALUMINIUM AND ALUMINIUM ALLOY CONDUCTORS WITH STEEL REINFORCEMENT

ACSR/AACSR

CONDUCTOR DATA

Size circular mils or A.W.G.	codeword	diameter overall mm	diameter steel mm	stranding aluminium n	stranding aluminium mm	stranding steel n	stranding steel mm	Area aluminium mm²	Area steel mm²	Area total mm²	rated breaking strength Kg	Theoritical Weight Total Kg/Km	Theoritical Weight Aluminium Kg/Km	Theoritical Weight Steel Kg/Km
477.000		22.10	8.10	26	3.50	7	2.70	250.10	40.08	290.18	8590	1010	695	315
		22.20	11.30	36	2.72	12	2.72	209.20	69.70	278.90	10800	1194	647	547
	LION	22.22	9.52	30	3.17	7	3.17	237.42	55.93	293.35	10215	1095	656	439
	FANELLO	22.26	9.54	30	3.18	7	3.18	238.26	55.59	293.85	10206	1100	664	436
477.000	HEN	22.40	9.60	30	3.20	7	3.20	241.68	56.38	298.06	10570	1112	669	443
		22.45	11.25	36	2.80	19	2.25	222.00	75.00	297.00	13600	1211	622	589
		22.50	12.50	42	2.50	19	2.50	205.80	93.10	298.90	18200	1310	579	731
		22.50	7.50	54	2.50	7	2.50	265.07	34.36	299.43	8430	1005	735	270
		22.50	7.50	54	2.50	7	2.50	265.07	34.36	299.43	12195	1005	735	270
		22.54	9.66	30	3.22	7	3.22	244.30	57.00	301.30	10625	1130	683	447
		22.70	11.50	36	2.80	19	2.30	221.67	78.94	300.61	14000	1225	605	620
		22.80	8.40	26	3.60	7	2.80	264.60	43.10	307.70	9148	1075	737	338
500.000	HERON	22.96	9.84	30	3.28	7	3.28	253.30	59.10	312.40	11045	1172	708	464
		23.10	9.90	30	3.30	7	3.30	256.60	59.90	316.50	10000	1187	717	470
556.500	PARAKEET	23.21	7.73	24	3.87	7	2.58	282.00	36.58	318.58	9003	1068	781	287
		23.40	7.80	54	2.60	7	2.60	286.70	37.17	323.87	8826	1085	793	292
	BEAR	23.45	10.06	30	3.35	7	3.35	264.77	61.80	326.58	11326	1220	735	485
		23.54	10.10	30	3.36	19	2.02	266.01	60.89	326.90	11200	1230	752	478
556.500	DOVE	23.55	8.67	26	3.72	7	2.89	282.00	45.90	327.90	10160	1150	790	360
	PICCHIO	23.67	7.89	54	2.63	7	2.63	292.99	37.98	330.97	9267	1138	840	298
		23.70	12.03	36	2.90	12	2.90	237.66	79.22	316.88	12200	1297	675	622
		23.80	10.20	30	3.40	19	2.04	272.38	62.09	334.47	11265	1260	773	487
	RAWANG	23.91	5.19	42	3.12	7	1.73	321.10	16.45	337.55	7340	1100	971	129
	ALLODOLA	24.08	8.88	26	3.80	7	2.96	294.89	48.14	343.03	10170	1200	822	378
		24.13	6.75	48	2.90	7	2.25	315.97	27.92	343.89	8932	1100	881	219
		24.14	5.03	18	4.77	7	1.67	321.66	15.33	336.99	6986	1100	980	120
605.000	PEACOCK	24.20	8.07	24	4.03	7	2.69	306.58	39.74	346.32	9752	1161	849	312
		24.20	9.00	26	3.80	7	3.00	294.90	49.48	344.38	10950	1213	825	388
605.000	DUCK	24.21	8.07	54	2.69	7	2.69	306.58	39.74	346.32	10160	1160	848	312
		24.21	13.45	42	2.69	19	2.69	238.46	107.86	346.32	18000	1520	673	847
556.500	EAGLE	24.22	10.38	30	3.46	7	3.46	282.00	65.80	347.80	12338	1305	788	517
		24.30	8.10	54	2.70	7	2.70	309.18	40.08	349.26	9731	1170	855	315
		24.40	9.00	26	3.85	19	1.80	302.68	48.35	351.03	10088	1220	840	380
		24.50	10.50	30	3.50	7	3.50	288.60	67.35	355.95	12170	1332	803	529
605.000	SQUAB	24.53	9.04	26	3.87	7	3.01	305.81	49.80	355.61	10931	1248	857	391
	USIGNOLO	24.71	10.59	30	3.53	7	3.53	293.61	68.51	362.12	12501	1358	820	538
636.000	ROOK	24.80	8.27	24	4.13	7	2.75	322.25	41.81	364.06	10251	1221	893	328
636.000	GOOSE	24.84	8.28	54	2.76	7	2.76	322.23	41.81	364.00	10615	1219	891	328
		24.85	10.65	30	3.55	7	3.55	296.94	69.28	366.22	11700	1370	826	544
		25.04	9.24	26	3.95	7	3.08	318.60	52.15	370.75	10830	1297	888	409
		25.11	13.95	42	2.79	19	2.79	256.77	116.15	382.92	18600	1680	768	912
636.000	GROSBEAK	25.15	9.27	26	3.97	7	3.09	322.30	52.40	374.70	11340	1310	899	411
		25.20	10.80	30	3.60	19	2.16	305.36	69.62	374.98	12630	1377	830	547
		25.20	8.40	54	2.80	7	2.80	332.50	43.11	375.61	10290	1258	930	338
605.000	TEAL	25.24	10.82	30	3.60	19	2.16	305.34	69.61	374.95	13607	1377	831	546
		25.30	9.30	26	4.00	7	3.10	326.80	52.84	379.64	10930	1326	911	415
666.600	GULL	25.38	8.46	54	2.82	7	2.82	337.74	43.80	381.54	11110	1278	934	344
666.600	FLAMINGO	25.40	8.46	24	4.23	7	2.82	337.74	43.80	381.54	10750	1280	936	344
		25.40	14.10	42	2.82	19	2.82	264.70	118.80	381.50	18500	1675	742	933
		19.80	15.40	24	2.80	37	2.20	245.16	140.64	385.80	27000	1800	696	1104
		25.80	11.00	30	3.70	19	2.20	322.60	72.20	394.80	12750	1449	882	567
		25.90	11.10	30	3.70	7	3.70	322.56	75.26	397.82	12500	1490	899	591
636.000	EGRET	25.90	11.10	30	3.70	19	2.22	322.30	73.30	395.60	14288	1455	880	575
	GOAT	25.97	11.12	30	3.71	7	3.71	323.99	75.61	399.61	13780	1500	906	594
		26.01	5.61	42	3.40	7	1.87	380.94	19.18	400.12	8200	1308	1157	151
		26.10	8.70	54	2.90	7	2.90	356.68	46.24	402.92	10981	1350	987	363
		26.10	8.70	54	2.90	7	2.90	356.68	46.24	402.92	16410	1350	987	363
		26.20	14.55	42	2.91	19	2.91	279.30	126.35	405.65	20350	1780	788	992
715.500	CROW	26.28	8.76	54	2.92	7	2.92	362.50	47.00	409.50	11929	1371	1002	369
		26.40	12.00	32	3.60	19	2.40	325.72	85.95	411.67	15500	1585	910	675
		26.58	13.20	78	2.23	18	2.57	305.00	100.07	405.20	15789	1668	882	786
		26.60	9.80	26	4.20	19	1.96	360.21	57.33	417.54	11982	1450	1000	450
715.500	STARLING	26.68	9.84	26	4.21	7	3.28	362.50	59.10	421.60	12745	1472	1008	464

ALUMINIUM AND ALUMINIUM ALLOY CONDUCTORS WITH STEEL REINFORCEMENT

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ALUMINIUM AND ALUMINIUM ALLOY CONDUCTORS WITH STEEL REINFORCEMENT

Size circular mils or A.W.G.	codeword	diameter overall mm	diameter steel mm	stranding aluminium n	stranding aluminium mm	stranding steel n	stranding steel mm	Area aluminium mm²	Area steel mm²	Area total mm²	rated breaking strength Kg	Theoretical Weight Total Kg/Km	Theoretical Weight Aluminium Kg/Km	Theoretical Weight Steel Kg/Km
		26.70	7.47	48	3.20	7	2.49	386.00	34.10	420.10	10480	1345	1077	268
	ANTELOPE	26.74	8.91	54	2.97	7	2.97	374.84	48.45	423.29	12192	1418	1038	380
		26.79	5.82	42	3.49	7	1.94	401.50	20.65	422.10	9548	1380	1218	162
		26.90	11.50	30	3.85	19	2.30	349.25	78.94	428.19	14632	1575	955	620
	BISON	26.97	8.99	54	3.00	7	3.00	381.09	49.42	430.51	11800	1441	1053	388
795.000	TERN	27.00	6.75	45	3.37	7	2.25	401.35	27.83	429.18	10387	1335	1117	218
	GAZZA	27.00	9.00	54	3.00	7	3.00	381.48	49.45	430.93	11916	1442	1054	388
	FALCONE	27.36	10.08	26	4.32	7	3.36	381.11	62.10	443.21	13109	1550	1063	487
715.500	REDWING	27.43	11.75	30	3.92	19	2.35	362.50	82.41	445.10	15694	1638	991	647
795.000	CONDOR	27.72	9.24	54	3.08	7	3.08	402.80	52.30	455.10	12925	1490	1079	411
		27.82	11.90	30	3.98	19	2.38	373.20	84.36	457.56	16000	1680	1018	662
		27.90	9.30	54	3.10	7	3.10	407.60	52.84	460.44	12270	1541	1126	415
	SHEEP	27.91	11.96	30	3.99	7	3.99	374.84	87.48	462.32	15690	1730	1043	687
		27.94	7.82	48	3.35	7	2.60	422.88	37.16	460.04	11810	1470	1178	292
		28.00	12.00	30	4.00	19	2.40	377.00	86.30	463.30	15000	1704	1027	677
		28.06	13.90	78	2.36	18	2.70	341.20	110.60	451.80	17582	1862	994	868
795.000	DRAKE	28.11	10.35	26	4.44	7	3.45	402.80	65.60	468.40	14152	1638	1123	515
	AIRONE	28.13	12.05	30	4.02	19	2.41	380.90	86.67	467.57	15907	1720	1040	680
		28.50	10.50	26	4.50	7	3.50	413.40	67.35	480.75	13890	1680	1151	529
		28.50	10.50	26	4.50	19	2.10	413.50	65.81	479.31	13919	1668	1151	517
	ZEBRA	28.62	9.54	54	3.18	7	3.18	427.48	55.42	482.90	13267	1621	1186	435
		28.80	9.60	54	3.20	7	3.20	434.30	56.30	490.60	12950	1642	1200	442
795.000	MALLARD	28.96	12.40	30	4.14	19	2.48	402.80	91.90	494.70	17418	1820	1099	721
		28.98	8.10	38	3.48	7	2.70	456.55	40.07	496.62	12675	1590	1275	315
874.500	CRANE	29.07	9.69	54	3.23	7	3.23	443.10	57.50	500.60	14242	1678	1227	451
		29.30	12.50	30	4.20	19	2.50	415.60	93.26	508.87	17137	1870	1138	732
		29.40	12.30	66	2.85	19	2.46	421.04	90.30	511.34	17480	1872	1163	709
900.000	CANARY	29.52	9.84	54	3.28	7	3.28	456.00	59.10	515.10	14651	1727	1263	464
954.000	RAIL	29.58	7.40	45	3.70	7	2.47	483.41	33.42	516.84	12201	1605	1343	262
	DEER	29.89	12.81	30	4.27	7	4.27	429.09	100.13	529.22	18193	1980	1194	786
	STORNO	30.15	10.05	54	3.35	7	3.35	475.96	61.63	537.59	14724	1800	1316	484
	CAMEL	30.17	10.05	54	3.35	7	3.35	476.58	61.80	538.38	14764	1805	1320	485
		30.20	10.00	54	3.37	19	2.00	431.70	59.70	491.40	15400	1645	1176	469
954.000	CARDINAL	30.42	10.14	54	3.38	7	3.38	483.41	62.60	546.01	15512	1828	1337	491
		30.50	13.85	72	2.77	19	2.77	434.00	114.50	548.50	20000	2120	1221	899
		30.60	10.20	54	3.40	7	3.40	490.30	63.60	553.90	16000	1857	1358	499
1033.500	ORTOLAN	30.80	7.70	45	3.85	7	2.57	523.67	36.19	559.86	13108	1738	1454	284
	ELK	31.47	13.48	30	4.49	7	4.49	476.32	111.16	587.48	20193	2195	1322	873
		31.50	13.50	30	4.50	19	2.70	477.13	108.80	585.93	20160	2153	1299	854
		31.50	10.50	54	3.50	7	3.50	519.53	67.32	586.85	15600	1965	1437	528
		31.50	10.50	54	3.50	19	2.10	519.53	65.81	585.34	16570	1960	1443	517
		31.50	10.50	54	3.50	19	2.10	519.53	65.81	585.34	20090	1960	1443	517
		31.50	17.50	42	3.50	19	2.10	404.04	181.18	585.22	31250	2565	1143	1422
		31.54	13.44	42	2.70	37	1.92	480.82	106.93	587.75	24600	2186	1347	839
1033.500	CURLEW	31.68	10.56	54	3.52	7	3.52	523.67	67.87	591.54	16828	1980	1447	533
		31.70	13.30	42	2.70	37	1.90	489.72	104.90	594.62	22000	2185	1362	823
		31.70	13.30	64	2.50	37	1.90	487.33	104.90	592.23	22000	2170	1347	823
	MOOSE	31.77	10.59	54	3.53	7	3.53	528.38	68.45	596.83	16465	2000	1463	537
		31.80	6.96	42	4.14	7	2.32	565.37	28.59	594.96	12400	1945	1721	224
1113.000	BLUEJAY	31.96	7.99	45	3.99	7	2.66	563.93	39.03	602.96	14016	1878	1572	306
		32.10	13.30	50	2.10	37	1.90	487.33	104.90	592.23	22700	2170	1347	823
		32.13	17.85	42	3.57	37	2.55	420.41	188.96	609.37	29200	2670	1187	1483
		32.20	12.10	60	3.35	19	2.42	528.84	87.38	616.22	20000	2155	1469	686
		32.29	13.25	42	2.65	19	2.65	511.02	104.69	615.71	22590	2245	1423	822
		32.29	13.25	20	4.22	19	2.65	511.02	104.69	615.71	29850	2245	1423	822
1113.000	FINCH	32.85	10.95	54	3.65	19	2.19	563.93	71.48	635.41	18234	2130	1569	561
1192.500	BUNTING	33.07	8.27	45	4.13	7	2.75	604.25	41.55	645.80	15029	2010	1684	326
1272.000		33.90	7.37	42	4.42	7	2.46	644.44	33.26	677.70	14750	2215	1954	261
1192.500	GRACKLE	33.96	11.33	54	3.77	19	2.26	604.25	76.51	680.76	19549	2280	1679	601
1272.000	BITTERN	34.16	8.55	45	4.27	7	2.85	644.51	44.51	689.02	16057	2147	1798	349
		34.20	11.40	54	3.80	7	3.80	612.40	79.38	691.78	18150	2315	1692	623
		34.60	11.50	54	3.85	19	2.30	628.64	78.94	707.58	18492	2370	1750	620
	BECCACCIA	34.82	11.60	54	3.87	19	2.32	634.76	80.29	715.05	19241	2400	1770	630
1272.000	PHEASANT	35.10	11.70	54	3.90	19	2.34	644.51	81.68	726.19	20320	2435	1794	641
1351.500	DIPPER	35.20	8.78	45	4.40	7	2.93	685.15	47.10	732.25	17055	2280	1910	370
		35.56	9.96	48	4.27	7	3.32	686.40	60.50	746.90	18414	2370	1895	475
		36.00	12.00	54	4.00	19	2.40	678.80	85.96	764.76	20310	2565	1890	675
1351.500	MARTIN	36.17	12.05	54	4.02	19	2.41	684.83	86.71	771.54	21591	2583	1902	681
		36.18	12.06	54	4.02	7	4.02	684.83	89.39	774.22	21100	2593	1891	702

AAC

CONDUCTOR DATA

ALL ALUMINIUM CONDUCTORS

Size circular mils or A.W.G.	Code word	diameter mm	stranding n	stranding mm	area mm²	rated breaking strength kg	theo-ritical weight kg/km
		4.05	7	1.35	10.01	173	27
		4.50	3	2.10	10.39	180	29
		4.50	7	1.50	12.37	214	34
		4.80	7	1.60	14.07	243	39
		4.84	3	2.25	11.92	202	33
		4.95	3	2.30	12.44	215	34
		5.00	19	1.00	14.92	252	41
		5.05	3	2.35	13.01	225	36
		5.10	7	1.70	15.90	287	44
		5.37	3	2.50	14.72	250	40
		5.40	7	1.80	17.81	308	49
		5.60	3	2.60	15.93	268	44
		5.70	7	1.90	19.85	339	55
4	ROSE	5.88	7	1.96	21.15	410	58
		6.00	7	2.00	21.99	369	50
		6.00	19	1.20	21.48	364	59
		6.02	3	2.80	18.47	314	51
	MIDGE	6.17	7	2.06	23.22	428	64
		6.25	3	2.90	19.82	333	55
		6.30	7	2.10	24.25	415	67
	CONOPS	6.45	3	3.00	21.16	362	58
3	LILY	6.60	7	2.20	26.67	503	73
	GNAT	6.63	7	2.21	26.83	485	74
		6.75	7	2.25	27.82	467	77
		6.75	19	1.35	27.19	460	75
		6.90	3	2.20	24.13	394	66
		7.05	7	2.35	30.36	510	83
		7.20	7	2.40	31.67	542	87
	APHIS	7.21	3	3.35	26.48	444	73
2	IRIS	7.44	7	2.48	33.63	621	93
		7.50	7	2.50	34.40	576	95
	MOSQUITO	7.77	7	2.59	36.90	648	102
	WEEVIL	7.89	3	3.66	31.52	520	87
		8.00	19	1.60	38.20	646	105
		8.10	7	2.70	40.08	666	113
1	PANSY	8.34	7	2.78	42.41	760	117
	LABYBIRD	8.38	7	2.79	42.92	740	118
		9.00	7	3.00	49.48	799	136
		9.00	19	1.80	48.35	874	133
	ANT	9.30	7	3.10	52.79	890	146
1/0	POPPY	9.36	7	3.12	53.48	939	147
		9.45	7	3.15	54.60	863	150
		9.60	7	3.20	56.41	919	153
		10.00	19	2.00	56.69	982	153
	FLY	10.21	7	3.40	63.68	1050	175
		10.50	19	2.10	65.82	1102	181
2/0	ASTER	10.53	7	3.51	67.73	1157	187
		10.65	7	3.55	69.30	1100	191
	BLUEBOTTLE	10.97	7	3.66	73.55	1200	203
		11.20	37	1.60	74.39	1205	206
		11.25	19	2.25	75.54	1243	208
	EARWIG	11.35	7	3.78	78.74	1275	217
		11.50	19	2.30	78.94	1321	218
	GRASSHOPPER	11.73	7	3.91	84.12	1355	232
		11.75	19	2.35	82.41	1366	226
3/0	PHLOX	11.79	7	3.93	85.03	1429	234
		12.50	19	2.50	93.20	1577	256
		12.51	7	4.17	95.39	1520	262
		12.60	37	1.80	94.15	1525	260
		13.00	19	2.60	100.87	1642	275
	WASP	13.18	7	4.39	106.20	1680	292
4/0	OXLIP	13.26	7	4.42	107.20	1764	295
		13.30	37	1.90	104.90	1697	290
		13.32	7	4.44	103.36	1830	285
		13.50	19	2.70	108.78	1790	300

Size Circular mils or A.W.G	Code word	diameter mm	stranding n	stranding mm	area mm²	rated breaking strength kg	theo-ritical weight kg/km
		14.00	19	2.80	117.00	1995	322
		14.00	37	2.00	116.24	1831	320
		14.50	19	2.90	125.50	2042	346
	BEE	14.70	7	4.90	132.10	2060	364
		14.70	37	2.10	128.15	2018	353
266.800	DAISY	14.88	7	4.96	135.20	2195	372
		15.00	19	3.00	134.30	2120	370
		15.75	37	2.25	147.11	2317	405
		15.75	19	3.15	148.10	2270	408
300.000	PEONY	15.95	19	3.19	157.00	2658	433
		16.00	19	3.20	152.81	2442	428
		16.08	7	5.36	157.90	2450	434
	HORNET	16.25	19	3.25	157.74	2576	434
		16.45	37	2.35	160.50	2600	442
336.400	TULIP	16.90	19	3.38	170.50	2948	470
		17.50	19	3.50	182.80	2800	502
		17.50	37	2.50	181.60	3071	500
		17.65	19	3.53	186.00	2985	512
		18.20	37	2.60	196.40	3094	541
397.500	CANNA	18.40	19	3.68	201.40	3425	555
	CHAFER	18.90	19	3.78	213.70	3890	586
		18.90	37	2.70	211.84	3337	583
		18.90	61	2.10	211.28	3328	581
		19.60	37	2.80	227.83	3588	626
		19.95	19	3.99	237.30	3730	652
477.000	COSMOS	20.15	19	4.03	241.70	4023	665
		20.25	61	2.25	242.54	3820	670
		20.30	37	2.90	244.40	3849	672
500.000	ZINNIA	20.60	19	4.12	253.30	4218	698
		21.00	37	3.00	261.53	4000	720
	COCKROACH	21.10	19	4.22	265.30	4135	732
		21.15	61	2.35	264.58	4167	730
556.600	DAHLIA	21.75	19	4.35	282.00	4649	775
		22.05	37	3.15	288.00	4310	795
		22.40	37	3.20	297.57	4553	821
		22.50	61	2.50	299.43	5063	825
	BUTTERFLY	23.25	19	4.65	322.40	4945	887
636.000	ORCHID	23.31	37	3.33	322.30	5579	887
		23.40	61	2.60	323.90	5101	893
		24.30	61	2.70	349.26	5501	963
715.500	VIOLET	24.71	37	3.53	362.50	6192	1000
		24.85	37	3.55	366.00	5470	1010
		25.00	19	5.00	373.60	5700	1030
750.000	PETUNIA	25.34	37	3.62	380.00	6464	1050
795.000	ARBUTUS	26.04	37	3.72	402.80	6826	1110
		26.10	61	2.90	402.90	6346	1110
		26.80	19	5.36	428.60	6515	1180
		27.00	61	3.00	431.16	6791	1190
874.500	ANEMONE	27.37	37	3.91	443.10	7439	1220
		28.35	61	3.15	475.00	6860	1310
954.000	MANGNOLIA	28.56	37	4.08	483.40	8051	1335
	MAYBUG	28.63	37	4.09	485.90	7290	1340
		28.80	61	3.20	490.60	7506	1355
1,003.500	BLUEBELL	29.75	37	4.25	523.70	8686	1442
	SCORPION	29.89	37	4.27	529.10	7870	1460
1,113.000	MARIGOLD	30.87	61	3.43	564.00	9707	1527
1,192.500	HAWTHORN	31.95	61	3.55	604.20	10319	1670
	CICADA	32.55	37	4.65	627.80	9215	1730
1,272.000	NARCISSUS	33.03	61	3.67	644.50	10954	1780
1,351.500	COLUMBINE	34.02	61	3.78	684.80	11544	1890
		34.60	91	3.15	709.00	10245	1955
1,431.00	CARNATION	35.01	61	3.89	725.10	12179	2000
1,590.00	GLADIOLUS	36.00	61	4.00	765.40	12791	2110
		36.61	37	5.23	795.60	11575	2190
1,590.00	COREOPSIS	36.90	61	4.10	805.70	13426	2220

CONDUCTOR DATA

AAAC

ALL ALUMINIUM ALLOY CONDUCTORS

Codeword	diameter	stranding		area	rated breaking strength	theoretical weight
	mm	n	mm	mm²	kg	kg/km
	3.22	3	1.50	5.30	159	14
	3.44	3	1.60	6.03	181	17
	3.45	7	1.15	7.27	218	20
	3.60	7	1.20	7.92	237	22
	3.65	3	1.70	6.81	209	19
	3.87	3	1.80	7.63	229	21
	4.05	7	1.35	10.02	301	28
	4.30	3	2.00	9.42	282	26
	4.50	3	2.10	10.39	319	29
	4.50	7	1.50	12.37	371	34
	4.80	7	1.60	14.07	422	39
	4.84	3	2.25	11.93	358	33
	4.95	3	2.30	12.46	383	34
	5.00	19	1.00	14.92	448	41
	5.05	3	2.35	13.01	400	36
	5.10	7	1.70	15.89	505	44
	5.37	3	2.50	14.73	442	40
	5.40	7	1.80	17.81	534	49
	5.60	3	2.60	15.93	489	44
	5.70	7	1.90	19.85	603	55
	6.00	7	2.00	21.99	660	60
	6.00	19	1.20	21.49	645	59
	6.02	3	2.80	18.47	554	51
LILAC	6.07	3	2.82	18.77	548	52
	6.25	3	2.90	19.82	609	55
ACACIA	6.25	7	2.08	23.87	694	66
	6.30	7	2.10	24.25	737	67
	6.45	3	3.00	21.21	636	58
	6.75	7	2.25	27.83	835	77
	6.75	19	1.35	27.20	816	75
	6.90	3	3.20	24.13	741	66
ALMOND	7.01	7	2.34	30.00	870	82
	7.20	7	2.40	31.67	963	87
	7.50	7	2.50	34.36	1031	95
CEDAR	7.62	7	2.54	35.48	1029	98
CHESTNUT	7.72	3	3.58	30.19	884	83
	8.00	19	1.60	38.20	1146	105
	8.10	7	2.70	40.08	1218	110
DEODAR	8.22	7	2.74	41.35	1202	113
BIRCH	8.38	3	3.88	35.61	1043	98
	8.40	7	2.80	43.10	1293	118
FIR	8.84	7	2.95	47.74	1383	131
	9.00	7	3.00	49.48	1504	136
	9.00	19	1.80	48.35	1450	133
	9.60	7	3.20	56.30	1689	155
BEECH	9.75	3	4.52	48.19	1411	132
HAZEL	9.90	7	3.30	59.93	1741	165
	10.00	19	2.00	56.69	1791	156
	10.50	19	2.10	65.82	1959	181
PINE	10.82	7	3.61	71.61	2077	197
	11.20	37	1.60	74.39	2232	205
	11.25	19	2.25	75.55	2266	208
	11.50	19	2.30	78.94	2349	217
HOLLY	11.73	7	3.91	83.87	2440	230
	11.75	19	2.35	82.41	2472	227

Codeword	diameter	stranding		area	rated breaking strength	theoretical weight
	mm	n	mm	mm²	kg	kg/km
WILLOW	12.11	7	4.04	89.67	2603	247
	12.50	19	2.50	93.27	2798	257
JACARNDA	12.57	7	4.19	96.77	2803	266
	12.60	37	1.80	94.15	2825	259
	13.00	19	2.60	100.90	3002	275
	13.30	37	1.90	104.91	3232	288
LABURNUM	13.33	7	4.44	108.38	3152	298
	13.50	19	2.70	108.78	3264	299
OAK	13.94	7	4.65	118.71	3447	327
	14.00	37	2.00	116.24	3487	320
MAPLE	14.10	19	2.82	118.71	3370	327
	14.50	19	2.90	125.50	3735	345
	14.70	37	2.10	128.15	3845	352
	15.75	37	2.25	147.11	4413	404
MULBERRY	15.87	19	3.17	150.32	4272	414
	16.00	19	3.20	152.81	4584	420
	16.45	37	2.35	160.50	4622	442
ASH	17.40	19	3.48	180.64	5125	497
	17.50	37	2.50	181.62	5449	500
	18.20	37	2.60	196.40	5658	540
ELM	18.80	19	3.76	210.96	5987	580
PALM	18.84	37	2.69	210.96	5715	580
	18.90	37	2.70	211.85	6355	583
	18.90	61	2.10	211.28	6022	580
	19.60	37	2.80	227.83	6835	625
POPLAR	20.09	37	2.87	239.35	6531	658
	20.25	61	2.25	242.51	6912	667
	20.30	37	2.90	244.40	7038	673
	21.15	61	2.35	264.58	7541	728
ROWAN	21.34	37	3.05	269.67	7348	742
	21.80	19	4.36	283.67	8260	780
	22.40	37	3.20	297.57	8927	818
	22.50	61	2.50	299.43	8534	825
SYCAMORE	22.58	37	3.22	302.58	8210	832
	23.40	61	2.60	323.90	9327	890
	24.30	61	2.70	349.26	9954	960
UPAS	24.71	37	3.53	361.93	9842	995
	24.85	37	3.55	366.22	10600	1005
	26.10	61	2.90	402.90	11604	1110
WALNUT	26.67	37	3.81	421.93	11475	1160
	27.00	61	3.00	431.18	12889	1185
	27.36	61	3.04	442.73	12700	1218
	28.14	37	4.02	469.61	13000	1290
YEW	28.44	37	4.06	480.00	13063	1320
	28.80	61	3.20	490.60	14128	1349
	30.47	91	2.77	548.40	15630	1510
	31.05	61	3.45	570.24	16930	1570
	32.31	61	3.59	617.30	17500	1700
	33.00	91	3.00	643.20	18330	1770
	35.73	61	3.97	763.00	22300	2100
	39.24	61	4.36	912.00	27000	2508

CONDUCTOR DATA

GS/GW

GALVANISED STEEL GROUND WIRES-STAY WIRES

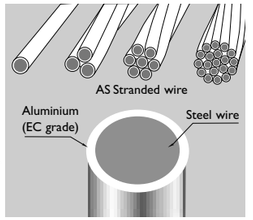
diameter	stranding		area	rated breaking strength	theoretical weight
mm	n	mm	mm²	kg	kg/km
4.19	1	4.19	13.78	1.920	108
4.87	7	1.62	14.42	1.980	115
5.10	7	1.70	15.88	2.280	127
5.40	7	1.80	17.78	2.490	142
5.58	3	2.60	15.92	2.220	127
6.00	7	2.00	22.00	3.065	176
6.09	7	2.03	22.61	3.150	181
6.30	7	2.10	24.22	3.378	194
6.36	7	2.12	24.70	3.310	197
6.50	7	2.17	25.83	3.600	206
7.00	7	2.33	29.82	4.150	249
7.08	7	2.36	30.62	4.260	245
7.50	7	2.50	34.35	4.791	275
7.77	7	2.59	36.87	5.120	295
7.80	7	2.60	37.20	5.185	299
7.92	7	2.64	38.29	5.341	306
8.00	19	1.60	38.20	5.272	305
8.04	7	2.68	39.50	5.290	316
8.07	7	2.69	39.76	5.546	318
8.40	7	2.80	43.10	6.013	344
8.76	7	2.92	46.87	6.650	375
8.84	7	2.95	47.84	6.800	383
9.00	19	1.80	48.30	6.672	387
9.00	7	3.00	49.48	6.902	395
9.15	7	3.05	51.14	7.100	409
9.24	7	3.08	52.20	6.990	417
9.30	7	3.10	52.83	7.150	422
9.51	7	3.17	55.23	7.704	442
9.54	7	3.18	55.58	7.753	445
9.60	7	3.20	56.28	7.851	450
9.69	7	3.23	57.35	8.000	459
9.75	7	3.25	58.07	8.100	465
10.00	19	2.00	59.70	8.237	477

diameter	stranding		area	rated breaking strength	theoretical weight
mm	n	mm	mm²	kg	kg/km
10.50	19	2.10	65.14	9.072	521
10.56	7	3.52	68.10	9.130	544
10.80	7	3.60	71.19	10.310	570
10.97	7	3.66	73.64	9.850	589
11.00	19	2.20	72.20	9.967	577
11.04	7	3.68	74.41	10.380	595
11.50	19	2.30	78.94	10.893	631
11.68	19	2.34	81.70	11.300	654
11.81	19	2.36	83.11	11.450	665
12.00	19	2.40	85.88	11.862	686
12.18	7	4.06	90.62	12.650	725
12.34	7	4.13	93.77	12.700	750
12.50	19	2.50	93.27	12.871	745
12.57	7	4.19	96.46	13.320	771
12.70	19	2.54	96.27	13.300	770
13.00	19	2.60	100.00	14.730	800
13.20	19	2.64	104.00	14.350	832
13.40	19	2.68	107.00	14.360	856
13.53	27	2.20	102.60	14.158	820
14.00	19	2.80	116.85	15.400	934
14.25	19	2.85	120.00	17.670	960
14.36	19	2.87	122.91	18.080	984
14.40	37	2.05	122.10	17.920	978
14.50					
14.75	19	2.95	130.00	19.140	1039
15.00	19	3.00	134.29	18.532	1073
15.57	7	5.19	148.08	20.700	1185
15.75	19	3.15	148.10	21.810	1185
16.30	19	3.26	158.59	22.200	1270
16.80	19	3.36	168.80	23.500	1350
18.32	19	3.66	199.89	28.000	1600
19.05	19	3.81	216.61	30.200	1732
20.57	19	4.11	250.07	35.000	2003

ALUMINIUM CLAD STEEL APPLICATION - AS

Use of AS is gainning momentum for its better corrosion resistance & higher electrical properties.

AS can be used as an ulternative to Galvanised Steel strands core of Aluminium based Conductors ACSR & AACSR and so also for all galvanised Ground wires/Earthwire applications.



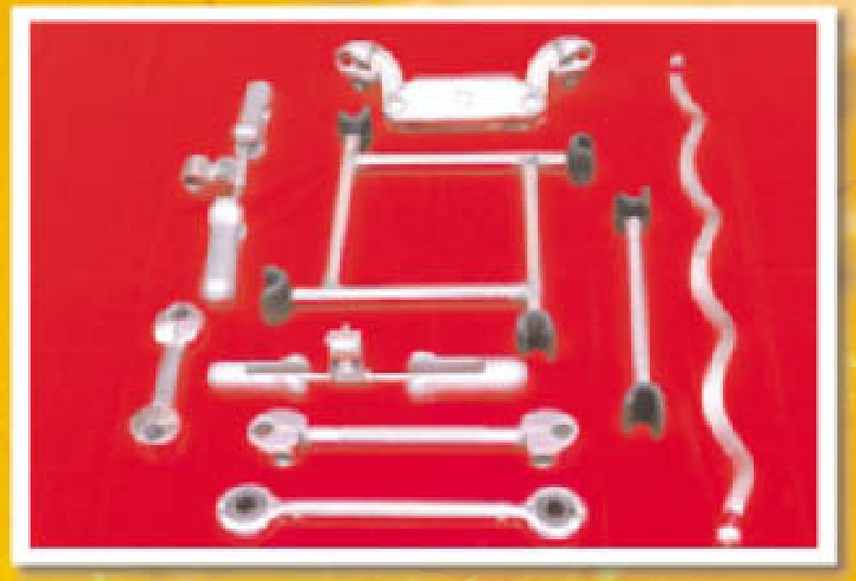
CONDUCTOR DATA

COPPER CONDUCTORS

diameter	stranding		area	rated breaking strength	theoretical weight
mm	n	mm	mm²	kg	kg/km
3.30	7	1.10	6.65	266	61
3.60	7	1.20	7.91	316	72
3.70	7	1.23	8.36	375	76
4.05	7	1.35	10.02	362	91
4.50	7	1.50	12.37	447	103
4.65	7	1.55	13.30	558	121
5.00	19	1.00	14.92	570	136
5.10	7	1.70	15.89	574	145
5.25	7	1.75	16.77	699	153
5.37	3	2.50	14.73	477	135
5.50	19	1.10	18.05	580	164
5.70	7	1.90	19.85	716	181
5.88	7	1.96	21.15	880	193
6.00	19	1.20	21.50	690	197
6.30	7	2.10	24.25	875	221
6.50	19	1.30	25.21	820	230
6.60	7	2.20	26.67	1104	244
7.00	19	1.40	29.24	945	267
7.20	7	2.40	31.67	1143	290
7.41	7	2.47	33.63	1381	307
7.50	19	1.50	33.57	1085	306
7.50	7	2.50	34.40	1372	314
7.70	37	1.10	35.15	1140	321
7.80	7	2.60	37.16	1205	339
8.00	19	1.60	38.20	1240	349
8.10	7	2.70	40.08	1447	365
8.34	7	2.78	42.41	1726	387
8.40	37	1.20	41.81	1355	382
8.40	7	2.80	43.10	1395	393
8.50	19	1.70	43.13	1395	395
8.70	7	2.90	41.23	1335	376
9.00	19	1.80	48.35	1709	441
9.00	7	3.00	49.48	1786	451
9.10	37	1.30	49.10	1590	448
9.36	7	3.12	53.48	2155	488
9.50	19	1.90	53.86	1745	491
9.80	37	1.40	56.94	1845	520
10.00	19	2.00	59.69	1930	545
10.20	7	3.40	63.55	2294	580
10.50	37	1.50	65.38	2610	597
10.50	7	3.50	67.43	2688	615
10.50	19	2.10	65.81	2326	601
10.50	37	1.50	65.38	2105	597
11.00	19	2.20	72.20	2340	658
11.20	37	1.60	74.39	2405	678
11.50	19	2.30	78.94	2790	720
11.79	7	3.93	85.03	3341	775
11.90	37	1.70	83.99	2710	767
12.00	19	2.40	85.94	2785	784
12.50	19	2.50	93.20	3724	850
12.60	37	1.80	94.15	3025	860
13.00	19	2.60	100.90	3565	913
13.26	7	4.42	107.22	4150	978
13.30	37	1.90	104.91	3400	960
13.50	19	2.70	108.78	3515	995
14.00	19	2.80	117.00	4135	1068
14.00	37	2.00	116.24	3780	1060
14.50	19	2.90	125.50	4050	1145
14.55	19	2.91	126.70	5103	1155
14.70	37	2.10	128.20	4383	1170

diameter	stranding		area	rated breaking strength	theoretical weight
mm	n	mm	mm²	kg	kg/km
14.75	19	2.95	129.77	5170	1185
15.00	19	3.00	134.31	4335	1225
15.24	12	3.66	126.70	5048	1155
15.40	37	2.20	140.60	4555	1282
15.75	37	2.25	147.10	5031	1340
15.95	19	3.19	152.00	6123	1385
16.00	19	3.20	152.76	5000	1392
16.10	37	2.30	153.70	4975	1402
16.45	37	2.35	160.50	5488	1463
16.50	19	3.30	162.45	8500	1485
16.68	12	4.01	151.99	5974	1388
16.80	37	2.40	167.35	5430	1525
17.25	19	3.45	177.30	7076	1618
17.50	37	2.50	181.60	6212	1655
18.03	12	4.33	177.35	6867	1620
18.20	37	2.60	196.40	6718	1790
18.45	19	3.69	202.70	7960	1845
18.90	37	2.70	211.85	6860	1930
19.55	19	3.91	227.99	8958	2080
19.60	37	2.80	228.00	9276	2080
20.25	61	2.25	243.00	6696	2219
20.30	37	2.90	244.40	8358	2225
20.60	19	4.12	253.35	9956	2310
20.65	37	2.95	253.40	10206	2310
20.70	49	2.30	203.59	6600	1860
21.00	37	3.00	261.52	8460	2385
21.60	49	2.40	221.67	7190	2020
21.70	37	3.10	278.70	11249	2540
22.40	37	3.20	297.60	10177	2710
22.50	61	2.50	299.00	11956	2725
22.61	37	3.23	304.00	12247	2775
22.68	61	2.52	303.99	12487	2775
23.58	61	2.62	329.40	13517	3000
24.46	37	3.50	354.70	14138	3235
24.48	61	2.72	354.70	14424	3235
25.20	61	2.80	375.60	15000	3420
25.32	37	3.62	379.99	15150	3470
25.38	61	2.82	380.00	15467	3470
25.65	61	2.85	389.14	15550	3550
26.13	37	3.73	405.35	15930	3700
26.19	61	2.91	405.40	16329	3700
27.00	61	3.00	430.70	17372	3930
27.73	37	3.96	456.06	17921	4160
27.81	61	3.09	456.00	18370	4160
28.53	61	3.17	481.40	19414	4395
29.23	37	4.17	506.70	19880	4620
29.25	61	3.25	506.70	20412	4620
32.71	61	3.63	633.35	25251	5775
32.74	91	2.98	633.35	25528	5775
35.83	61	3.98	759.99	29864	6940
35.86	91	3.26	759.99	30635	6940
38.76	91	3.52	886.44	35348	8090
38.76	127	2.98	886.44	35743	8090
41.40	91	3.76	1013.54	39820	9250
41.45	127	3.19	1013.54	40845	9250

Dampers, Spacers OFC, OPGW & ABC Fittings

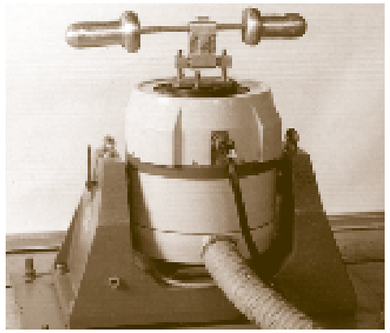


Dampers
Rigid spacers
Flexible spacers
Helical spacers
Spacers dampers
Aerial OFC fittings
OPGW fittings
ABC cable fittings

modern malleables

VIBRATION DAMPERS *are used to reduce dynamic stresses on a vibrating conductor, which contribute to conductor and structural damages arising out of the phenomenon of aeolian vibration and galloping encountered on almost all tranmission lines. The chosen two eccentric weights of the dampers allow maximum dissipation of mechanical energy of the vibrating conductor through the specially configured messenger wire which attaches the damper weights.*

Damper clamps are made out of aluminium alloy and the weights out of cast iron masses galvanised. The messenger wire is made of high tensile galvanised steel strands specially configured and preformed.



ELECTRO DYNAMIC SHAKER USED AT MML FOR DAMPER ANALYSIS AND FATIGUE TEST

Vibration dampers manufactured at MML are analysed for its damping efficiency in reducing the micro strains on the strands of a vibrating conductor. MML vibration laboratory can analyse line data and provide the choice of most effective damper and also predict its behaviour on a vibrating conductor with and without dampers.

FOR SPAN UP TO 370M

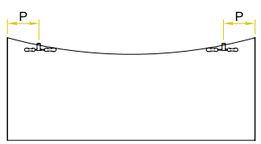


Fig-1

FOR SPANS OVER 370 M UPTO 670 M

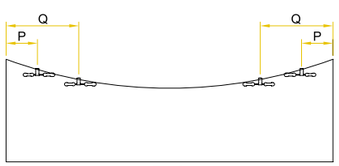


Fig-2

CONDUCTOR DIA mm		DAMPER SPACING METRES	
MIN	MAX	P	Q
11.05	12.22	0.68	1.37
12.24	13.38	0.76	1.52
13.41	14.55	0.84	1.68
14.58	16.15	0.91	1.83
16.18	17.78	0.99	1.98
17.80	19.30	1.07	2.13
19.33	21.08	1.14	2.29
21.11	22.83	1.22	2.44
22.86	24.64	1.29	2.59
24.66	26.80	1.37	2.74
26.82	28.96	1.45	2.89
28.96	31.09	1.52	3.05
31.11	33.10	1.60	3.20

CALCULATION FOR DAMPER PLACEMENT POSITION

Select the damper size according to the table and then fix the mounting position of the damper. Spans up to 370 m require one damper at each end of the span at a distance P from the point of support. Spans from 370 m to 670 m require two dampers at each end of the span, at distances P and Q=2P from the point of support.

The dimension P is measured from the point of support, which is calculated as :

a) for suspension strings – the mouth of the clamp.
b) for tension strings – the mouth of the conductor clamp.
c) for support strings – the edge of the cap.

when armour rods are used, dimension P to the first damper only should be reduced by 10%. The second damper, when required, should be placed at dimension P from the first damper.

If the first damper position is on the armour rod, please consult us.

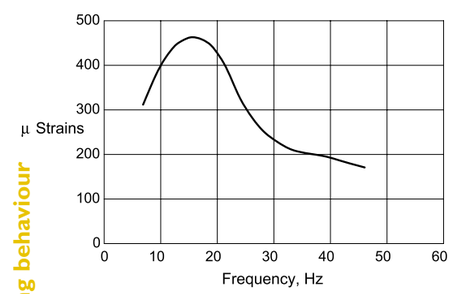
DAMPERS & SPACERS

VIBRATION DAMPERS

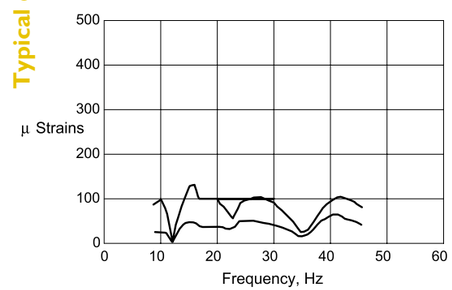
MML make Dampers are tested for fatigue life of 10 million cycles at the imparted frequencies and amplitude.

CAT. NO.	COND. DIA mm MIN	MAX	A	B	ASSEMBLY WEIGHT Kg
4R-2M	7.00	22.00	411	64	2.4
4R-3M	18.00	28.00	510	78	4.5
4R-5M	23.00	30.00	560	87	6.6
4R-5M	30.00	36.00	580	87	6.7

Typical damping behaviour

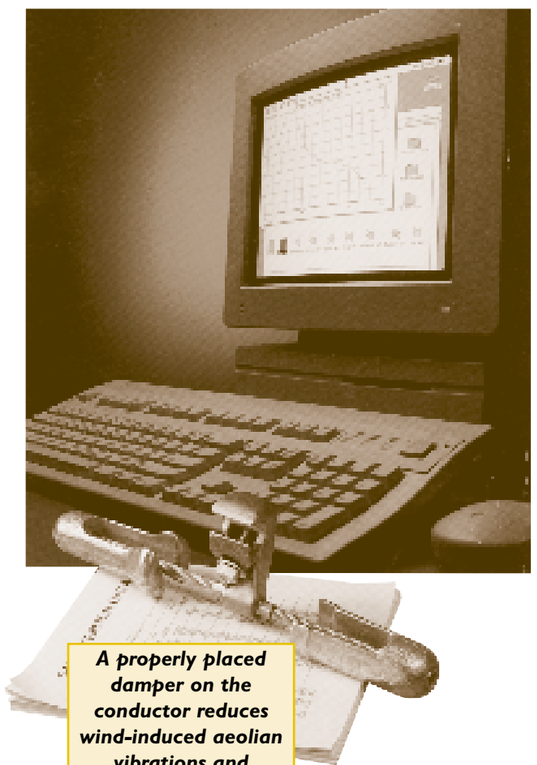


Single Conductor Without Damper



Single Conductor With Damper

Damper analysis on computer programmes



A properly placed damper on the conductor reduces wind-induced aeolian vibrations and significantly increases conductor life.

SPACERS & SPACER DAMPERS

MML make spacer is under short circuit test at CESI laboratory in Italy

MML laboratories provide all facilities to carry out necessary fatigue life tests under the multidirectional movements. The 40 metre span at MML is used to analyse conductor behaviours under vibrating conditions.

Spacer Dampers are meant to maintain the spacing between bundle conductors under all normal operating conditions and to effectively control aeolian vibrations as well as subspan oscillations. They restore conductor spacing after release of external extraordinary load due to wind or electrostatic forces including the specified short circuit ratings, without permanent deformation or damage either to bundle conductos or to the spacer damper itself. They are available in both helical and non-helical configurations

Type - A

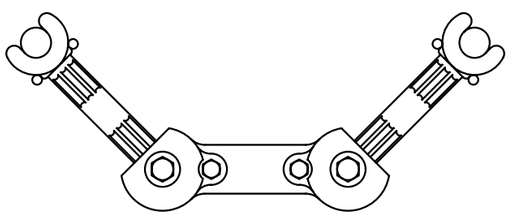
Spacer dampers of non-helical configuration as shown in Type-A are constructed with robust centre framebody of high strength aluminium alloy body which offer excellent corrosion resistance and impact strength. These spacer dampers have galvanised iron counter weight which add to the damping efficiency of the equipment.

The elastomer bushings are used for high fatigue life and are moulded on metal inserts. The compounded rubber elastomer provides good damping, fatigue, mechanical, electrical and environmental properties.

Helical mode configuration of spacer dampers as shown in Type-B have conductor holding arms made out of compounded speciality rubber, which are fitted to the line conductor with the support of formed aluminium alloy helical retaining rods and provide boltless attachment.

Centre frames are attached to the arms with the aid of specially designed metal cushion compounded with special rubber.

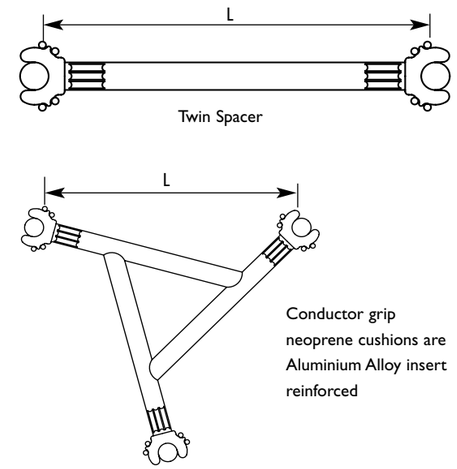
Complete spacer flexilibities are achieved in this design and they provide needed fatigue life, damping efficiency and abilities to withstand required mechanical and electrical loads.

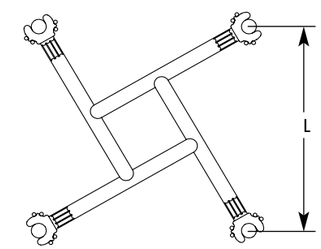


Type - B

HELICAL SPACERS

Helical Spacers are fully flexible type and designed to maintain and restore conductor spacing between the bundle of conductors under all operating conditions. Formed retaining rods are used on all arms of MOFORMED Spacers in twin, triple, quad or higher bundle configuration.





Helical Quad Spacer

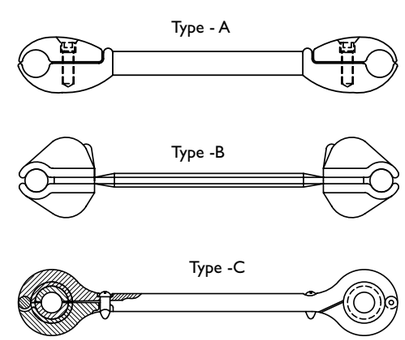
"L" is the Conductor Spacing maintainable as per customers' specification

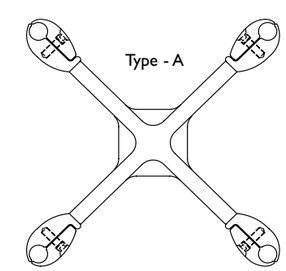
Retaining rod sizes will also differ depending upon conductor sizes

All types of spacer with helical retaining rods provide excellent cushion to line conductors and avoid metal to metal contract. They also have no loose parts in the assembly and offer no power loss due to absence of any ferrous components.

RIGID & FLEXIBLE SPACERS

- Type - A are rigid type spacers
- Type - B are semi flexible type spacers
- Type - C are cushioned fully flexible spacers which can be also used as rigid spacers





Quad bundle spacer

Please contact us with particulars of line parameters for specific quotes.

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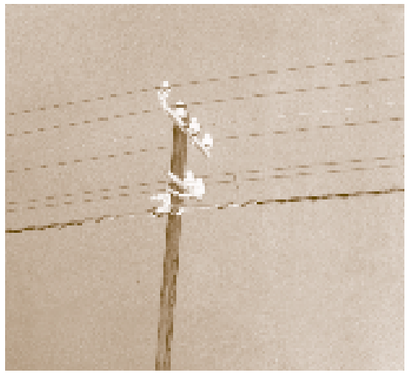
OFC CABLE FITTINGS FOR AERIAL APPLICATION

The application of optical Fibres housed in cable and anchored to power line towers and poles line network, street light poles and telephone poles, is becoming significantly popular replacing conventional telecommunication system of copper wires/cables. In order to maintain intrinsic characteristics of optical Fibre for voice and data transmission through light waves, the OFC is required to be supported with highly reliable accessories made of Helical designs.

Accessories for OFC will utilise the great advantages of the helical designs to reduce static & dynamic stresses & provide protections to the vibrating cable.

The common fittings used for OFC applications are :

- *Helical suspension fittings, AGS type*
- *Thimble supported helical grip deadends*
- *Spiral Vibration dampers*
- *Other line hardwares viz. Turn buckles, Extension links, Pole clamps, Twisted link etc., as required under governing conditions*

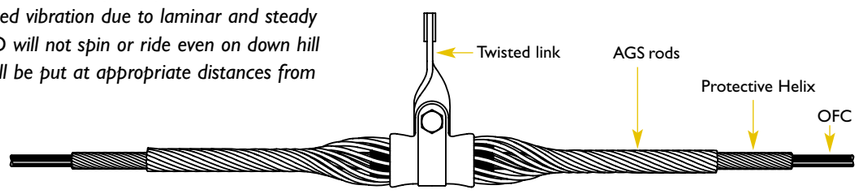


AERIAL OFC INSTALLED WITH MML SUPENSION ACCESSORIES

FAMILY OF SUSPENSION ACCESSORIES

Aerial OFC is installed to the pole with the help of an armour grip suspension spiral unit. A twisted eye or clevis is used to mount the AGS fitting on the pole
AGS fittings relieve bending stress on OFC and eliminate any chance of localised stress concentration at the support locations of the OFC.
Spiral damper is also used at support point to eliminate effects of any induced vibration due to laminar and steady flow of air. The SVD will not spin or ride even on down hill construction and will be put at appropriate distances from the support.

CAT. No.	OFC dia.±1.6	Length Clamp	Insert	AGS Helix	AGS rod dia	Colour Code
MOFC-01	14.4	115	200	800	4.25±0.1	Brown
MOFC-02	11.1	89	130	800	4.25±0.1	Orange



Armour Grip Suspension Assembly over Protective Helix wrapped on OFC

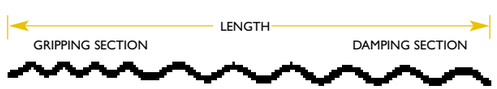
PROTECTIVE HELIX

Protective Helix are made out of high strength heat treated aluminium alloy wires and are used as a first protective cover layer over OFC. The AGS and the deadend grip is installed over them only, so that any tension of the grip will first pass over the circumference of the protective helix cover and then only grip the OFC. These helixes are with rounded ball ends to avoid sharp edges.

CAT. No.	OFC dia.±1.6	Helix Length	No. of Sets	Wires Per set	Wire dia
MOFC-09	14.4	1400	3	5	3.2±0.1
MOFC-10	11.1	1400	4	4	2.36±0.1

SPIRAL VIBRATION DAMPER

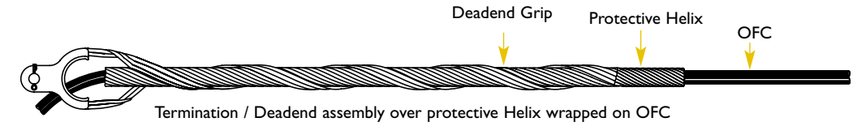
CAT. No.	OFC dia.±1.6	Total Length	GL	DL	Wire dia
MOFC-15	14.4	1346	446	900	12±1
MOFC-16	11.1	1295	446	849	12±1



Spiral Vibration Damper for OFC

OFC ACCESSORIES

FAMILY OF TERMINATION/DEADEND ACCESSORIES



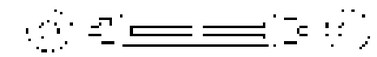
Termination / Deadend assembly over protective Helix wrapped on OFC

Anchored location consists of various accessories comprising of helically formed Deadend grip, also called Terminating helix; Protective helix, Clevis Thimble needed to hold the Deadend grip. Turn-buckle, Pole clamps or Hooks are needed to attach the fittings to the pole. Extension links and jumper clamps are used to hold the OFC in a pre-designated location. The helix design of the accessories protects the OFC from any potential damages to its surface and/or the attenuation levels.

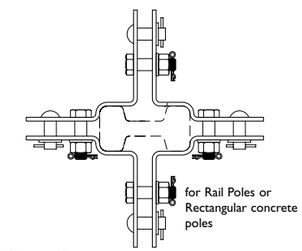
PROTECTIVE HELIX

CAT. No.	OFC dia.±1.6	Helix Length	No. of Sets	Wires Per set	Wire dia
MOFC-11	14.4	1000	3	5	3.2±0.1
MOFC-12	11.1	1000	4	4	2.36±0.1

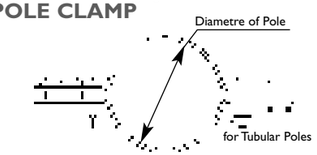
TURN-BUCKLE



EXTENSION LINK



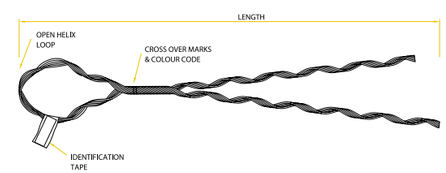
POLE CLAMP



TERMINATION HELIX

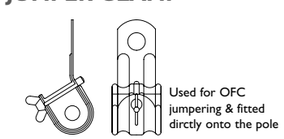
Termination Helix / Deadends are made out of aluminium alloy or special coated steels. They are used to grip the OFC to full tensile strength. They are only applied over the protective helix to avoid direct contact with OFC.

These grips are used along with clevis thimble which allow the loop of the helical grip to set in its contour.

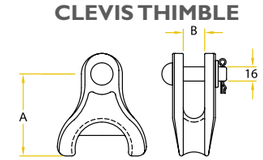


CAT. No.	OFC dia.±1.6	Length (L)	Wires Per set	Wire dia	Colour Code
MOFC-13	14.4	1000	5	2.20±0.1	Brown
MOFC-14	11.1	1000	4	2.11±0.1	Orange

JUMPER CLAMP



CLEVIS THIMBLE



CAT. NO.	A	B	UTS kg
MOFC-08	102	18	3000

AERIAL OFC INSTALLED WITH MML HELICAL DEADEND ACCESSORIES

MML is also ISO 9002 accredited for all its OFC accessories

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OPGW ACCESSORIES

OPGW FITTINGS

The application of OPGW, optical fibre composite overhead ground wire is gaining momentum in power transmission system as it replaces overhead ground wire and serves dual purposes :

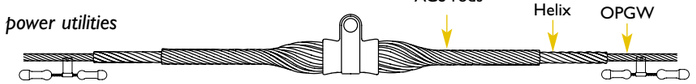
- For protection to phase conductor from lightning damages and short circuit conditions on the transmisson lines

- For communication applications

The configuration of OPGW houses the optical fibres in a cavity which exists within the central core of the OPGW. This core provides the protection to the delicate optical fibres. The outer surface of OPGW is built of strands of aluminium alloy and/or aluminium coverd steel wires.

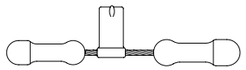
Major advantages derived while using OPGW on electrical power lines are :

- *OPGW is a replacement of conventional earth wire on transmision line and is easily planned with new TL lines*
- *Towers do not require special reinforcements for OPGW installations, since the diameter and weight of OPGW is almost equal to the conventional earth wire*
- *OPGW is compact in size and light in weight*
- *OPGW provides high quality long distance, high speed transmission*
- *OPGW provides large volume data communication with least losses*
- *OPGW is a line engineer's dream, since the application does not require fresh plans on corridors*
- *OPGW is a high revenue earning model for power utilities*

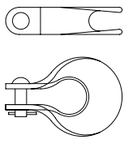


Typical OPGW configuration

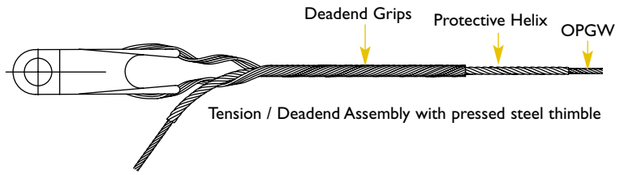
Protective Helix/ Rods



Stock bridge vibration damper



Thimble (pressed steel)



Tension / Deadend Assembly with pressed steel thimble

Protective Helix/Rods

Accessories used for OPGW

- *Armour Grip Suspension helix unit*
- *Terminating/Deadend helix unit*
- *Protective helix*
- *Clevis Thimbles*
- *Stock bridge vibration dampers*

Offers on request with detail of configuration of OPGW used

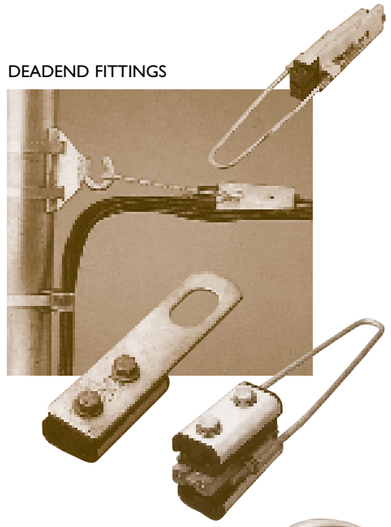
ABC CABLE ACCESSORIES

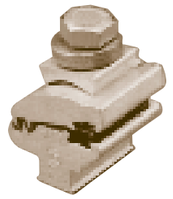
AERIAL BUNCH CABLE / INSULATED CABLE FITTINGS

Insulated cables more preferably the Aerial Bunch Cables, referred to as ABC, find its increasing usage in power distribution especially in urban dwelling areas thereby replacing the conventional overhead Copper / Aluminium stranded conductor for low voltage distribution network on pole lines. ABC Cable is also vandalism protected ensuring unauthorised tapping of electric supply.

A range of ABC cable fittings manufactured at MML are shown below :

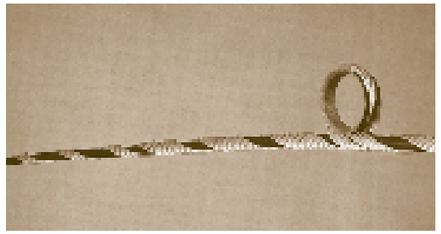
DEADEND FITTINGS





PIERCING CONNECTOR

TENSION HOOKS ASSEMBLY



SUPPORT LOCATION APPLICATION WITH HELICAL FITTING

SUSPENSION FITTINGS

Refer to us with conductor sizes and line parameters for detailed quotes on items referred on page No. 78,79,80 & 81