# TRANSMISSION LINE CONDUCTOR STRINGING, TOWER ERECTION TOOLS AND EQUIPMENTS



# INTEGRITY SAFETY QUALITY PRODUCTIVITY INNOVATION



HIND GOLD AUTOMOTIVE COMPONENTS







# About Us Since 1968





Group Company Founder Late Mr. Darshan Lal Sethi During Technology Transfer Training in Germany in the late 1960s.

We M/S Hind Gold Automotive Components HGAC Stringing Tools, Tower Erection and Equipment's manufacturing Company. The parent company was established in 1968 by Mr. Darshan Lal Sethi, an engineer who was trained with M/S Karl Schmidt GMBH, Neckarsulm, Germany and SIM Inter SA, Switzerland, where he got his experience in gravity/ chill casting of Aluminium and other ferrous and non-ferrous alloys. Activities of the company were manufacturing of automobile and other engineering components including Aerial rollers for SAE (India) now taken over by M/S KEC International Ltd. since 1970's. Now the group companies are managed by his heirs.

We are an ISO 9001:2015 & CE Compliance certified manufacturing firm having our own in-house casting, machining, testing and manufacturing facilities. We are catering to customers like M/S KEC International Ltd.(Domestic and International Division), M/S L & T, M/S Bajaj Electricals, M/S Tata Projects, M/S Sterlite Power and Transmission Limited, Power Grid Corporation of India, M/S Transrail, M/S Unitech, M/S Kalpataru Power Transmission Limited and all leading players in stringing operations in India. Internationally, we have supplied for Projects at UAE, Senegal, Ivory Coast, Tanzania, Mozambique, Ghana Projects, Bangladesh, Nepal, Sri Lanka, Afghanistan and many more countries. We are also catering to exporters and manufacturers who are in turn giving to other companies.

We have tool room and production facilities at two locations in Faridabad, near New Delhi, INDIA having state of art tool room and production machines like VMC's and CNC's and also conventional machines for making dies and for production of components. We have our own heat treatment plant to optimize the mechanical & physical properties of the steel and aluminium results in increase of tensile strength and wear resistance of the components as per the requirement of the product. We are having our in-house testing facility both Destructive & N.D.T. facilities such as Ultrasonic testing machine, universal testing machine, magnetic particle inspection, rubber tensile testing, hardness testers & special purpose testing machines as per product design. We are having designing facility, which works on Solid Works and Siemens NX platforms for part, product designing and their simulation.







## **VISION**

Our Mission is SAFETY FIRST. Safety of Workmen, Conductors, OPGW and to enhance excellence in Product design as per Application and attain Cost Competitiveness through continual improvements in Production methods, Design and Quality Systems.

Continuous improvement and Compliance with revised safety and other Guidelines by conductor manufactures and other quality guidelines like IEEE, etc. may result in change in product specifications for Longevity and Performance.

### \*\* PROJECTS EXECUTED -

HGAC has been solution provider and tool supplier to many important projects .

Sterlite Power Transmission Limited CTC Global ACCC ULS Ganga conductor Project, CTC Global ACCC Jhamkhambhalia Conductor Project and many more.

Apar Industries Limited CTC Global ACCC Hyderabad conductor Project
KPTL Bangladesh Project for CTC Global ACCC Dhaka Conductor
KEC International Limited Wagoora Project And Many more



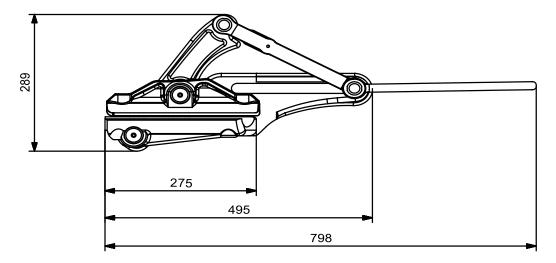
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The self gripping clamps are made up of high tensile special alloy steel and are hot forged, heat treated, precision machined and zinc plated. They have a balanced ratio between weight and working load. A complete range of interchangeable liners suitable for ACSR, AAAC, HTLS, ACCC anti-twisting rope, earth wire, copper conductors are available for all types of gripping applications. For ACCC ACSS/TW we provide round jaws for maximum contact with the conductors. The liners are available in aluminium for aluminium/steel conductors and in bronze for copper conductors, pilot wire rope and steel earth wire from Ø 23 mm- 46 mm. Our range of self-gripping clamps promise high quality and comply with all international standards.



### HG.01.2346

Maximum safety load 120 kN Minimum breaking load 360 kN Weight 17 kg

<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.



# INTERCHANGEABLE Liner for Clamps



The Liners are available in aluminium and in bronze for Aluminium, copper, steel antitwisting rope and steel earth wire conductors as per application.

	Interchangable Liner Range HG.01.2346											
Conductors Range	LR.A.46  Aluminium Liners Range	LR.B.46 Bronze Liners Range	LR.O.46  Liners for steel round wires	LR.S.46 Liners for steel square wires								
23.5 - 25	LR.46.A 250	LR.46.B 250										
25 - 26.5	LR.46.A 265	LR.46.B 265										
26.5 - 28	LR.46.A 280	LR.46.B 280										
28 - 29.5	LR.46.A 295	LR.46.B 295										
29.5 - 31	LR.46.A 310	R.46.A 310 LR.46.B 310										
31 - 32.5	LR.46.A 325	LR.46.B 325		Supplied on								
32.5 - 34	LR.46.A 340	LR.46.B 340	Supplied on									
34 - 35.5	LR.46.A 355	LR.46.B 355	request with exact diameter	request as per application								
35.5 - 37	LR.46.A 370	LR.46.B 370	from 23 mm to 46 mm.									
37 - 38.5	LR.46.A 385	LR.46.B 385										
38.5 - 40	LR.46.A 400	LR.46.B 400										
40 - 41.5	LR.46.A 415	LR.46.B 415										
41.5 - 43	LR.46.A 430	LR.46.B 430										
43 - 44.5	LR.46.A 445	LR.46.B 445										
44.5 - 46	LR.46.A 460	LR.46.B 460										

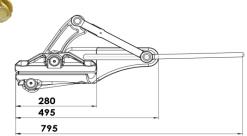
<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.



# AUTOMATIC CLAMP 1041

### HG.01.1041

Maximum safety load 120 kN Minimum breaking load 360 kN Weight 17.kg



	Interchange	able Liner Range I	HG 01 1041	
Conductors Range	LR.A.41  Aluminium Liners Range	LR.B.41	LR.O.41	LR.S.41  nd Liners for steel square wires
10 - 11.5	LR.41.A 115	LR.41.B 115		
11.5 - 13	LR.41.A 130	LR.41.B 130		
13 - 14.5	LR.41.A 145	LR.41.B 145		
14.5 - 16	LR.41.A 160	LR.41.B 160		
16 - 17.5	LR.41.A 175	LR.41.B 175		
17.5 - 19	LR.41.A 190	LR.41.B 190		
19 - 20.5	LR.41.A 205	LR.41.B 205		
20.5 - 22	LR.41.A 220	LR.41.B 220		
22 - 23.5	LR.41.A 235	LR.41.B 235		
23.5 - 25	LR.41.A 250	LR.41.B 250	Liner profile	Liner profile
25 - 26.5	LR.41.A 265	LR.41.B 265	Saw tooth, Round, Oval,	Saw tooth, Round, Oval,
26.5 - 28	LR.41.A 280	LR.41.B 280	V Shaped or	V Shaped or
28 - 29.5	LR.41.A 295	LR.41.B 295	combination as	combination as
29.5 - 31	LR.41.A 310	LR.41.B 310	per application	per application
31 - 32.5	LR.41.A 325	LR.41.B 325	Bronze and	Bronze and
32.5 - 34	LR.41.A 340	LR.41.B 340	Special Steel Liners provided	Special Steel
34 - 35.5	LR.41.A 355	LR.41.B 355	as per	Liners provided as per
35.5 - 37	LR.41.A 370	LR.41.B 370	Application	Application
37 - 38.5	LR.41.A 385	LR.41.B 385		
38.5 - 40	LR.41.A 400	LR.41.B 400		
40 - 41.5	LR.41.A 415	LR.41.B 415		

<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.

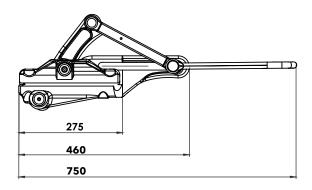


# AUTOMATIC CLAMP 0836



# HG.01.0836

Safe Working load 50 kN
Maximum Working load 100 kN
Minimum breaking load 300 kN
Weight 15.2 kg



Interd	Interchangable Liner Range HG.01.0836										
Conductors Range	LR.A.36 Aluminium Liners Range	LR.B.36  Bronze Liners Range									
21 - 22.5	LR.36.A 225	LR.36.B 225									
22.5 - 24	LR.36.A 240	LR.36.B 240									
24 - 25.5	LR.36.A 255	LR.36.B 255									
25.5 - 27	LR.36.A 270	LR.36.B 270									
27 - 28.5	LR.36.A 285	LR.36.B 285									
28.5 - 30	LR.36.A 300	LR.36.B 300									
30 - 31.5	LR.36.A 315	LR.36.B 315									
31.5 - 33	LR.36.A 330	LR.36.B 330									
33 - 34.5	LR.36.A 345	LR.36.B 345									
34.5 - 36	LR.36.A 360	LR.36.B 360									

<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.

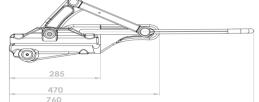


# AUTOMATIC CLAMP 0832



### HG.01.0832

Safe Working load Maximum Working load Minimum breaking load Total Weight 50 kN 100 kN 300 kN 14 kg



	Interchangable Liner Range HG.01.0832										
Conductors Range	LR.A.32  Aluminium Liners Range	LR.B.32  Bronze Liners Range	LR.O.32 Liners for steel round wires	LR.S.32 Liners for steel square wires							
08 - 9.5	LR.32.A 95	LR.32.B 95									
9.5 - 11	LR.32.A 110	LR.32.B 110									
11 - 12.5	LR.32.A 125	LR.32.B 125									
12.5 - 14	LR.32.A 140	LR.32.B 140									
14 - 15.5	LR.32.A 155	LR.32.B 155		Supplied on							
15.5 - 17	LR.32.A 170	LR.32.B 170									
17 - 18.5	LR.32.A 185	LR.32.B 185	Supplied on								
21 - 22.5	LR.32.A 225	LR.32.B 225	request with exact diameter	request with exact diameter from							
22.5 - 24	LR.32.A 240	LR.32.B 240	from 8 mm to 22 mm	8mm to 33 mm							
24 - 25.5	LR.32.A 255	LR.32.B 255									
25.5 - 27	LR.32.A 270	LR.32.B 270									
27 - 28.5	LR.32.A 285	LR.32.B 285									
28.5 - 30	LR.32.A 300	LR.32.B 300									
30 - 31.5	LR.32.A 315	LR.32.B 315									
31.5 - 33	LR.32.A 330	LR.32.B 330									

<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.



# AUTOMATIC CLAMP 0623



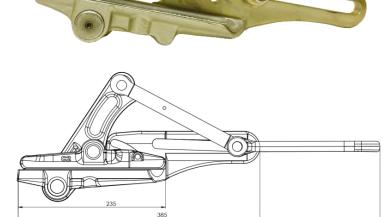


Safe Working load 25 kN

Maximum Working load 55 kN

Minimum breaking load 165kN

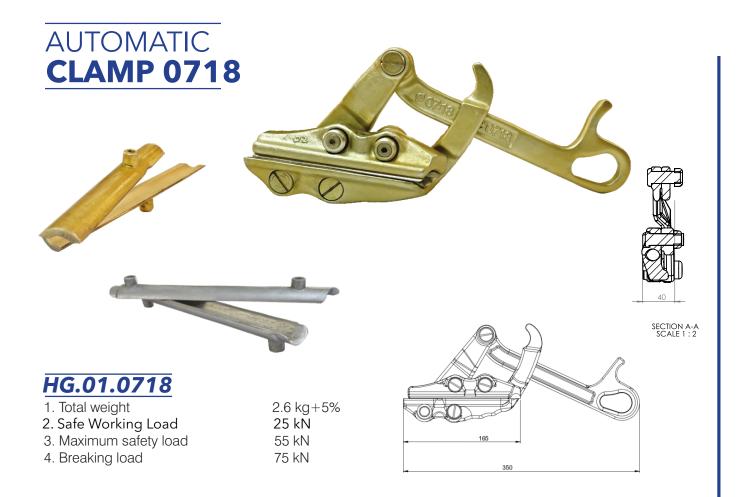
Weight 7.5 kg+5%



Interchangable Liner Range HG.01.0623										
	LR.A.23	LR.B.23	LR.O.23	LR.S.23						
Conductors Range										
	Aluminium Liners Range	Bronze Liners Range	Liners for steel round wires	Liners for steel square wires						
6	LR.23.A 60	LR.23.B 60								
6.5 - 8	LR.23.A 80	LR.23.B 80								
8 - 9.5	LR.23.A 95	LR.23.B 95								
9.5 - 11	LR.23.A 110	LR.23.B 110		Supplied on						
11 - 12.5	LR.23.A 125	LR.23.B 125	Supplied on							
12.5 - 14	LR.23.A 140	LR.23.B 140	request with	request with						
14 - 15.5	LR.23.A 165	LR.23.B 165	exact diameter from 6 mm to	exact diameter from 6 mm to						
15.5 - 17	LR.23.A 170	LR.23.B 170	16 mm.	16 mm.						
17 - 18.5	LR.23.A 185	LR.23.B 185								
18.5 - 20	LR.23.A 200	LR.23.B 200								
20 - 21.5	LR.23.A 215	LR.23.B 215								
21.5 - 23	LR.23.A 230	LR.23.B 230								

<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.





	Interchangable Liner Range HG.01.0718											
Conductors Range	LR.A.18  Aluminium Liners Range	LR.B.18  Bronze Liners Range	LR.O.18  Liners for steel round wires	LR.S.18  Liners for steel square wires								
07 - 08.5	LR.18.A 85	LR.18.B 85										
08.5 - 10	LR.18.A 100	LR.18.B 100	Liner profile	Liner profile								
10 - 11.5	LR.18.A 115	LR.18.B 115	Saw tooth,	Saw tooth,								
11.5 - 13	LR.18.A 130	LR.18.B 130	Round, Oval, V Shaped or	Round, Oval, V Shaped or								
13 - 14.5	LR.18.A 145	LR.18.B 145	combination as per application	combination as per application								
14.5 - 16	LR.18.A 160	LR.18.B 160										
16 - 17.5	LR.18.A 175	LR.18.B 175										
16.5 - 18	LR.18.A 190	LR.18.B 190										

<sup>\*</sup> Maximum working load is subjective to Diameter and strength of the conductor.



# AUTOMATIC CLAMP USAGE PROCEDURES

# **Dead-Ending**

- 1. Set up the ratchet hoist and automatic clamp as shown in the next page.
- 2. Ratchet the hoist until the cable is lined up with the dead-end fixture.
- 3. After the tension is approximately where it will need to be after termination, ratchet the hoist a couple more times to accommodate for tension loss after hoist removal. Consult conductor specifications to ensure the maximum conductor tension is not exceeded.
- 4. When finished, break the tension using the hoisthandle, then use either the handle or drum knob to continue releasing the tension.

# Sagging

- 1. Set up ratchet hoist, automatic clamp and dynamometer as shown in the next page.
- 2. Ratchet the hoist until the dynamometer displays the desired tension. Consult conductor specifications or company procedures to determine the appropriate tension.
- 3. When finished, break the tension using the hoist handle, then use either the handle or drum knob to continue releasing the tension.

# **Splicing**

- 1. Set up ratchet hoist and automatic clamps as shown here.
- Connect the Web Strap Ratchet Hoist to each clamp, and ratchet to the desired tension to make the splice. The conductor can now be spliced according to standard work procedures and material guidelines.
- 3. When finished with the splice, break the tension using the hoist handle, then use either the handle or drum knob to continue releasing the tension



# LOAD **DISTRIBUTION**

For applications where the maximum load exceeds the safe load of an individual automatic clamps, or the cable is at risk of deformation, it is recommended to use two automatic clamps in tandem. Using two clamps in tandem divides the weight load between both the clamps, allowing for an effective work load increase of 1.5 times the safe load of each individual clamps.

For example: Two Automatic Clamp HG 0832, each with a maximum safe load of 19,980 lbs. (9,990 kg) individually, have a combined working safe load of 29,970 lbs. (14,985 kg).

In some transmission applications there is a risk of cable deformation under high tensions. To avoid this risk, using two clamps in tandem is recommended if:

- ACSR or AAAC conductors the load is expected to exceed the lesser of 12,500 lbs. (5,670 kg) or 40% of the conductor tensile strength.
- •ACSS conductors—the load is expected to exceed the lesser of 10,000 lbs. (4,536 kg) or 40% of the conductor tensile strength.



- 1. Place each automatic clamp on the same conductor, approximately five feet apart.
- 2. Connect a pulley block (levelling block) to the eye or U-Bend of each clamp. This will maintain equal distribution of the weight load between both clamps.
- 3. Connect an anchored chain hoist of appropriate capacity to the block as shown in the image above.
- 4. Ratchet the chain hoist to the desired tension, as shown in the image below.

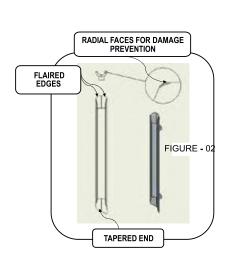


Material Used: Two automatic clamps, ratchet hoist, dynamometer, chain hoist & pulley block.

Disclaimer: This is not intended to be a definitive instructional manual for completing the applications. Always consult company procedures and conductor guidelines before attempting any application.

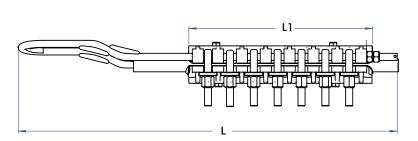


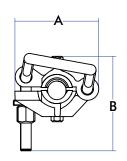
# BOLTED COME-ALONG CLAMPS





The bolted come-along clamps are fit for pulling and anchoring overhead conductor, earthwire and steel wire ropes. The clamps are assembled by various cast and forged alloy steel parts. The grooves are fitted with gravity die casted aluminium alloy liner which are interchangeable according to the actual diameter of the conductor. A 2-3 mm side radius on liners is given to allow conductor expansion while tightening to avoid damage of conductor.



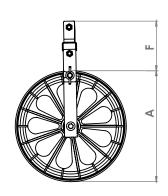


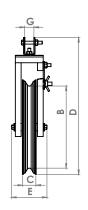
Model No.	Eye Bolt	Dimensions AXBXL (mm)	L1	For steel / earth wire rope upto upto Diameter*(mm) Diameter*t(mm)		Working load (kN)	Breaking Load (kN)	Weight (kg)
HG.02.03	03	130X120X500	205	10 -14	-	15	45	8
HG.02.04	04	130X130X580	315	10 -14	-	17	50	9
HG.02.07	07	130X146X861	420	-	23-33	27	60	17
HG.02.08	08	140X149X910	480	-	31-36	33	80	20
HG.02.09	09	150X130X870	531	-	35-41	40	80	23



# **AERIAL ROLLERS**

# Single Sheaves Aerial Rollers







The Single sheave aerial roller is a gravity die caste aluminium alloy sheave, Which is mouted on sealed ball bearing and groove lines with the neoprene / natural rubber compound flap for conductor protection. It is mounted on a fixed steel frame with standard plate attachment. It is fit for stringing overhead conductors.

Mardal Na			Dime	nsions	(mm)			Working	Breaking	Weight
Model No.	A	В	С	D	E	F	G	load (kN)	Load (kN)	(kg)
HG.S.1.300	300	226	46	565	125	230	54	27	60	7
HG.S.1.400	400	300	65	710	149	310	64	30	60	11
HG.S.1.450	450	350	70	760	150	310	64	30	100	15
HG.S.1.612	612	512	68	927	240	355	64	40	120	21.5
HG.S.1.620	620	520	77	935	194	355	64	60	180	34
HG.S.1.660	660	573	77	1015	246	355	64	40	120	34
HG.S.1.700	700	614	90	1012	230	315	64	40	120	31
HG.S.1.760	760	650	95	1115	246	355	64	40	120	39
HG.S.1.775	775	650	82.5	1125	246	355	64	40	120	42
HG.S.1.800	800	657	98	1150	250	355	64	40	120	44
HG.S.1.820	820	710	90	1150	250	355	64	40	120	48
HG.S.1.915	915	800	95	1265	260	350	64	50	150	47
HG.S.1.110	1110	1000	100	1460	300	350	64	90	180	51
HG.S.1.1350	1350	1200	130	1700	330	350	64	90	180	110

<sup>\*</sup> Working loads may differ as per country or utility safety factors.

**Attachment Type:** On Request:

Fix clevis Swivelling hook attachment.

Turn-able clevis Interchangeable Aluminium/ Nylon lining sectors for bottom groove.

Turn-able hook Protective case for transport and stocking. Special frame like stand mounted sheave.

Note Drawing and specification can be changed without notice for enhancement of product performance. Normal industries tolerences apply

<sup>\*</sup> Customized high safety factor product can be made. As per IEEE 2017/ Conductor manufctures paying out guideline and sheave designed for adverse climate condition can also be supplied

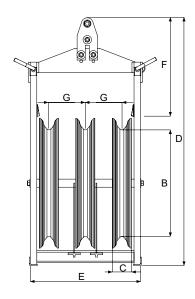
<sup>\*</sup> Safety factor will also depend upon the hardware fitting.

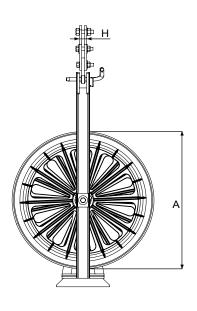
\* Sheaves can be PU coated/ Nylontron sector/ Aluminium sector/ cast iron sector/forged steel sector as per project/ application requirement

<sup>\*</sup> Upto the lip Rubberized sheave can also be supplied.



# THREE SHEAVE AERIAL ROLLERS







The three sheave aerial rollers are gravity die casted aluminium alloy sheaves, which are mounted on sealed ball be aring and groove lined with neoprene/natural rubber flaps for conductor protection. They are mounted on fixed steel frames with standard plate attachment.

Model No.			D	imensi	ons(mr		Working load (kN)	Breaking Load (kN)	Weight		
	A	В	С	D	E	F	G	Н	ioad (Kiv)	Load (KN)	(kg)
HG.S.3.612	612	512	68	1330	500	625	175	30	60	180	112
HG.S.3.660	660	573	77	1400	580	625	175	30	70	180	112
HG.S.3.700	700	610	68	1430	580	625	175	30	70	180	122
HG.S.3.760	760	650	95	1430	580	625	175	30	70	180	122
HG.S.3.775	775	650	82.5	1430	580	625	175	30	70	180	122
HG.S.3.800	800	657	98	1450	580	625	175	30	70	180	135
HG.S.3.820	820	710	90	1430	580	625	175	30	70	180	155
HG.S.3.915	915	800	95	1540	580	625	175	30	70	180	165
HG.S.3.1110	1110	1000	100	1740	580	625	175	30	70	180	198
HG.S.3.1350	1350	1200	130	1830	620	625	175	30	70	180	220

<sup>\*</sup> Working loads may differ as per country or utility safety factors.

### **Attachment Type:**

### On Request:

Fix clevis

Swivelling hook attachment.

Turn-able clevis

Interchangeable Aluminium/ Nylon lining sectors for bottom groove. Protective case for transport and stocking.

Note: Drawing and specification can be changed without notice for enhancement of product performance. Normal industries tolerences apply

<sup>\*</sup> Customized high safety factor product can be made. As per IEEE 2017/ Conductor manufctures paying out guideline and sheave designed for adverse climate condition can also be supplied

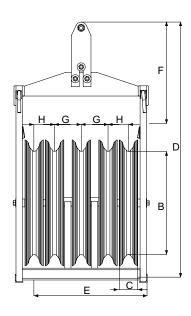
<sup>\*</sup> Safety factor will also depend upon the hardware fitting.

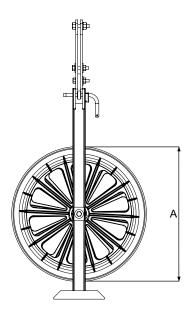
<sup>\*</sup> Sheaves can be PU coated/ Nylontron sector/ Aluminium sector/ cast iron sector/forged steel sector as per project/ application requirement

<sup>\*</sup> Upto the lip Rubberized sheave can also be supplied.



# FIVE SHEAVE AERIAL ROLLERS







The five sheave aerial rollers are gravity die casted aluminium alloy sheaves, which are mounted on sheaves, which are mounted on sealed ball bearing and groove lined with neoprene/natural rubber flaps for conductor protection. They are mounted on fixed steel frames with standard plate attachment.

Model No.			D	imensi		Working	Breaking	Weight			
	A	В	С	D	E	F	G	Н	load (kN)	Load (kN)	(kg)
HG.S.5.612	612	512	68	1330	720	645	140	100	60	180	155
HG.S.5.660	660	573	77	1400	720	645	140	100	70	180	160
HG.S.5.710	710	610	68	1430	800	645	145	130	70	180	165
HG.S.5.760	760	650	95	1430	800	645	145	130	70	180	170
HG.S.5.775	775	650	82.5	1430	800	645	145	130	70	180	190
HG.S.5.800	800	657	98	1450	800	645	170	130	70	180	225
HG.S.5.915	915	800	95	1540	878	645	175	130	70	180	250
HG.S.5.1110	1110	1000	100	1740	878	645	180	130	70	180	300
HG.S.3.1350	1350	1200	130	1830	890	645	180	130	70	180	350

<sup>\*</sup> Working loads may differ as per country or utility safety factors.

### **Attachment Type:**

### **On Request:**

Fix clevis

Swivelling hook attachment.

Turn-able clevis

Interchangeable Aluminium/ Nylon lining sectors for bottom groove. Protective case for transport and stocking.

Note: Drawing and specification can be changed without notice for enhancement of product performance. Normal industries tolerences apply

<sup>\*</sup> Customized high safety factor product can be made. As per IEEE 2017/ Conductor manufctures paying out guideline and sheave designed for adverse climate condition can also be supplied

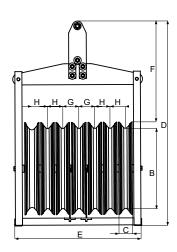
<sup>\*</sup> Safety factor will also depend upon the hardware fitting.

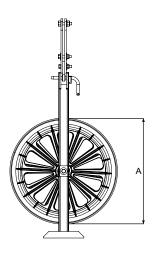
<sup>\*</sup> Sheaves can be PU coated/ Nylontron sector/ Aluminium sector/ cast iron sector/forged steel sector as per project/ application requirement

<sup>\*</sup> Upto the lip Rubberized sheave can also be supplied.



# SEVEN SHEAVE AERIAL **ROLLERS**







The seven sheaves aerial rollers are gravity die casted aluminium alloy sheaves, which are mounted on sealed ball bearing and groove lined with neoprene/natural rubber flaps for conductor protection. They are mounted on fixed steel frames with standard plate attachment. They are fit for stringing 6 bundled conductors, having a central roller made of re inforced aluminium with 12 ribs, to increase the strength of the roller for carrying the load of the conductors and pilot wire.

Model No.			D	imensi		Working load (kN)	Breaking Load (kN)	Weight			
	A	В	С	D	E	F	G	Н	ioad (Kin)	Load (KIV)	(kg)
HG.S.7.612	612	512	68	1330	895	645	114	100	60	180	170
HG.S.7.660	660	573	77	1400	895	645	114	108	70	180	170
HG.S.7.710	710	610	68	1430	1060	645	145	130	70	180	165
HG.S.7.760	760	650	95	1430	1060	645	145	130	70	180	170
HG.S.7.775	775	650	82.5	1430	1060	645	145	130	70	180	190
HG.S.7.800	800	657	98	1450	1100	645	170	130	70	180	250
HG.S.7.915	915	800	95	1540	1100	645	175	130	70	180	260
HG.S.7.1110	1110	1000	100	1740	1100	645	180	130	70	180	330
HG.S.7.1350	1350	1200	130	1830	1200	645	180	130	70	180	400

<sup>\*</sup> Working loads may differ as per country or utility safety factors.

### **Attachment Type:**

### **On Request:**

Fix clevis

Swivelling hook attachment.

Turn-able clevis

Interchangeable Aluminium/ Nylon lining sectors for bottom groove.

<sup>\*</sup> Customized high safety factor product can be made. As per IEEE 2017/ Conductor manufctures paying out guideline and sheave designed for adverse climate condition can also be supplied

<sup>\*</sup> Safety factor will also depend upon the hardware fitting.
\* Sheaves can be PU coated/ Nylontron sector/ Aluminium sector/ cast iron sector/forged steel sector as per project/ application requirement

<sup>\*</sup> Upto the lip Rubberized sheave can also be supplied.







Special tandem rollers are built with a steel frame, connecting two standard sheaves. Tandem placement of sheaves increases the working load of the frame and bending arc of conductors, distributing the weight on both the sheaves.

Model No.	Refer Model	Sheave Dia (mm)A ∑	Sheave Groove(mm)C	Working load (kN)	Breaking Load (kN)	Weight (kg)
HG.S.1.T.15	HG.S.1.15	150	49	12	36	16
HG.S. 1. T.30	HG.S.1.30	300	46	36	108	21
HG.S. 1. T.30.B	HG.S.1.30.B	300	62	36	108	22
HG.S. 1. T.45	HG.S.1.45	450	70	52	156	33
HG.S. 1. T.66	HG.S.1.66	660	77	60	180	98
HG.S. 1. T.70	HG.S.1.70	700	95	60	180	102
HG.S. 1. T.76	HG.S.1.76	760	95	60	180	102
HG.S. 1. T.80	HG.S.1.80	800	98	60	180	114
HG.S. 1. T.89	HG.S.1.89	890	98	60	180	120
HG.S. 1. T.91	HG.S.1.91	915	98	60	180	120

<sup>\*</sup> Working loads may differ as per country or utility safety factors.

### Attachment Type :

### On Request:

Fix clevis Swivelling hook attachment.

Turn-able clevis Interchangeable Aluminium/ Nylon lining sectors for bottom groove.

Protective case for transport and stocking.

Note:Drawing and specification can be changed without notice for enhancement of product performance. Normal industries tolerences apply

<sup>\*</sup> Customized high safety factor product can be made. As per IEEE 2017/ Conductor manufctures paying out guideline and sheave designed for adverse climate condition can also be supplied

<sup>\*</sup> Safety factor will also depend upon the hardware fitting.

<sup>\*</sup> Sheaves can be PU coated/ Nylontron sector/ Aluminium sector/ cast iron sector/forged steel sector as per project/ application requirement

<sup>\*</sup> Upto the lip Rubberized sheave can also be supplied.



# AERIAL ROLLERS FOR HELICOPTER AND DRONE APPLICATION

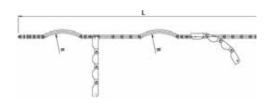


- \* Working loads may differ as per country or utility safety factors.
- \* Customized high safety factor product can be made. As per IEEE 2017/ Conductor manufctures paying out guideline and sheave designed for adverse climate condition can also be supplied
- \* Safety factor will also depend upon the hardware fitting.
- \* Sheaves can be PU coated/ Nylontron sector/ Aluminium sector/ cast iron sector/forged steel sector as per project/ application requirement
- \* Upto the lip Rubberized sheave can also be supplied.





# Optical Ground-Wire(OPGW) Anti- Twisting Device





This device is spe cially designed to connect the pulling rope with an OPGW. It is composed of several jointed rods and two arched rods (to facilitate the passage on pulley) with counter weight in order to prevent torsion of OPGW.

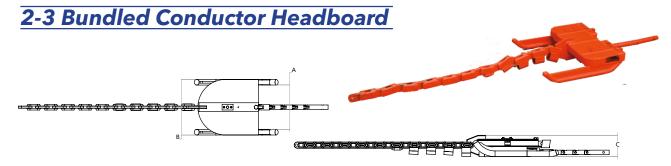
Model No.	Dimensions (mm) A (Length)	Working load (kN)	Breaking Load (kN)	Weight (kg)	OPGW DIA (MM)
HG.HB.OPGW.D17	3900	10	30	60	9-17
HG.HB.OPGW.D24	4300	10	30	63	17-24

<sup>\*</sup>R = radius requires to be changed as per the roller dia.

NOTE: Please specify the dia. of OPGW, groove diameter and the width of pulley bolck to be used, while placing on order.

### **Headboard For Sheaves**

The headboard are designed in such a way that they can self- adjust to a correct position while passing over aerial rollers, enabling the conductors to pass through the grooves of the sheaves. The hinged tail assembly, made up of forged links(UT tested),st abilizes the headboard against lateral lifting due to wind pressure. The load carrying members like balancing pulley, having roller bearing for high load bearing capacity, are made of heart treated alloy steel,which makes

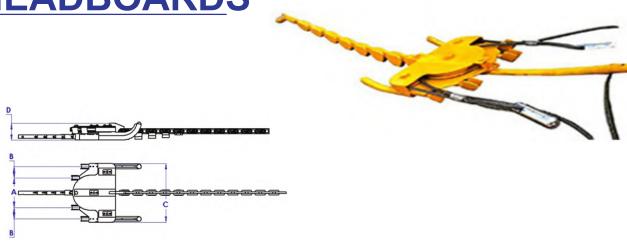


It is specially designed to connect the pulling with 2 or 3 bundled conductors

Model No.	Dir	mensions (mn	1)	Working	Breaking	Weight	
wodel No.	A	В	С	load (kN)	Load (kN)	(kg)	
HG.HB.03	216	261	193	100	300	89	

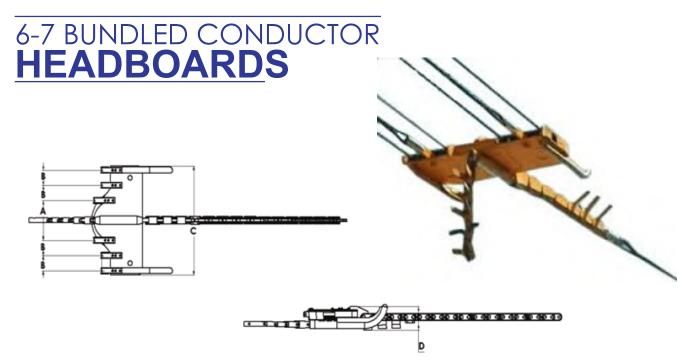






It is specially designed to connect the pulling rope with 4 or 5 bundled conductors.

MadalNa		Dimensio	ns (mm)		Working	Breaking	Weight	
Model No.	Α	В	С	D	load (kN)	Load (kN)	(kg)	
HG.HB.05	340	130	675	194	93	279	118	



It is specially designed to connect the pulling rope with 6 or 7 bundled conductors.

Model No.		Dimensio	ns (mm)		Working	Breaking	Weight
	Α	В	С	D	load (kN)	Load (kN)	(kg)
HG.HB.07	340	130	930	200	150	450	156



# OPGW TOOLS OPTICAL GROUND WIRE



### AERIAL ROLLERS FOR OPGW

Tools designed as per OPGW configuration covering IEEE 2017 Guidelines & OPGW manufacturers guidelines. These items are rubberized up to the lip & special groove radius is provided to protect OPGW fibers & outer aluminum layers.

### **AUTOMATIC CLAMPS FOR OPGW**

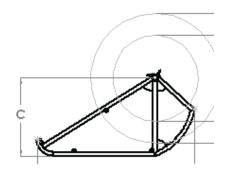
Automatic clamps with Extra long Jaw, one PU (Polyurethane) sleeve for protection/cushioning to avoid fibre damage.



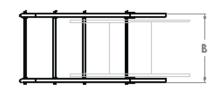


# PILOT WIRE REEL **STAND & BOBBIN**

**Pilot Wire Reel Stand** 







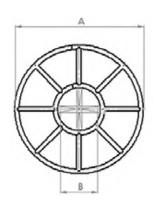
It is made of welded steel with a protective coating.

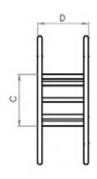
### Options:

- Detachable frameDisc brakes

	D	Pimensi	ons (mr	n)				107 - 1 - 1 - 1
Model No.				D		Working load (kN)	Breaking Load (kN)	Weight
	A	В	C	Min.	Max.	ioau (kiv)	Load (KN)	(kg)
HG.RS	1980	950	980	700	1400	20	60	72

### **Pilot Wire Bobbin**







The reels are made of welded steel with a protective coating. Each reel is provided with two cross supports and connecting bolts.

Model No.		Weight			
Model No.	A	В	С	D	(kg)
HG.WR.11	1100	420	570	550	60
HG.WR.14	1400	420	570	550	80

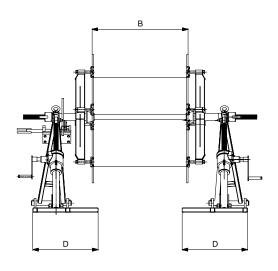


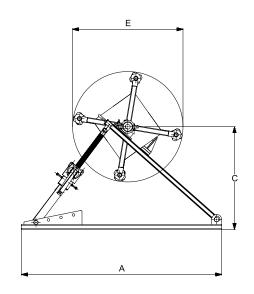


They are suitable for paying out conductor/earth wire/OPGW cables. They are made up of welded steel with a protective coating. Each reel elevator is provided with supports like fixed wedges for clamping the wooden/steel conductor drum and me chanical disk braking system for cont rolling the rotational speed of the drum while paying out the conductor. The frame is completely detachable, enabling easy transportation.

### Optional devices:

- Additional disc brake (2 brakes in total)
- Hydraulic Jack could be provided in lieu of

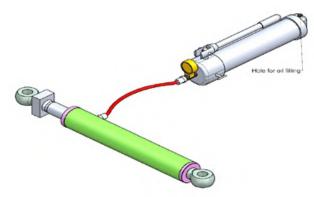




Madel Ne			Dimensio	ns (mm)			Working	Breaking	Weight	
Model No.	A	В	C(min.)	C(max.)	D	E	load (kN)	Load (kN)	(kg)	
HG.RE.05T	1800	1186	677	1087	647	1194	49	147	340	
HG.RE.07T	1800	1350	720	1180	716	1200	79	237	410	
HG.RE.10T	2000	1029.2	725	1025	700	1100	98	294	483	
HG.RE.15T	2000	1350	720	1180	716	2200	98	294	483	







Single-acting with spring return, capacity max. 5 T – 51T

Pull cylinders are able to produce extremely high pulling forces and can be controlled precisely by the use of hand pumps or power packs in neutral position pull cylinders are fully extended. As soon as the cylinders are pressurized the forged links are drawn together. A built-in rum spring extends the piston again as soon as the pressure is released.

Shipbuilding, heavy-vessel construction, steel construction, civil engineering, Transmission line as well as general repair and maintenance applications.

### Features:-

- · Operating pressure max 700 bar.
- · Single-acting with spring return.
- Can be operated in all positions.
- · Cylinder body and piston are made from solid chromium-molybdenum steel and heat- treated. Cylinder also made from seamless burnished high tensile tubes.
- · Hard-chromium plated piston with replaceable, heat-treated saddle.
- · Stop ring can bear full capacity (pressure) and is fitted with dirt wiper.
- Forged, replaceable links.
- · With carrying handle and piston protection cover.
- · Oil port thread 3/8 NPT/customized.
- · Incl. female coupler customized.
- · Special features can be incorporated/ custom built as per application.

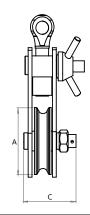
Model No.	Force	Stroke	Remarks
	ton/ (KN)	mm	Remarks

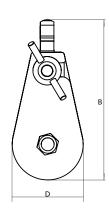


# SNATCH **BLOCKS**

# **Open Type**

The service snatch block is made of a galvanized steel sheave mounted on double ball bearings. The sheave is mounted on a galvanized steel frame with an openable side and a standard eye hook attachment.



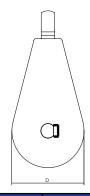


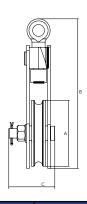


Model No.		Dimensi	ons (mm	)	Working	Breaking	Weight
Model No.	A	В	C	D	load (kN)	Load (kN)	(kg)
HG.P.O.2T	100	250	78	112	19.6	78.4	4
HG.P.O.2.5T	102	240.5	822	112	24.5	98	4
HG.P.O.3T	120	375	78	130	29.4	117.6	5
HG.P.O.5T	150	340	95	162	49	196	8.2
HG.P.O.8T	150	340	95	160	78.45	235.36	8.3
HG.P.O.10T	165	375	105	175	98	392	11.6

# **Close Type**

The service snatch block is made of a galvanized steel sheave mounted on double ball bearings. The sheave is mounted on a galvanized steel frame with a standard eye hook attachment.





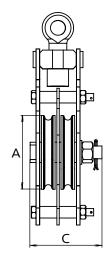


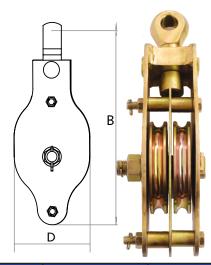
Model No.		Dimensi	ons (mm	)	Working	Breaking	Weight
wiodei No.	A	В	С	D	load (kN)	Load (kN)	(kg)
HG.P.C.2T	100	250	78	112	19.6	78.4	4
HG.P.C.2.5T	102	240	82	112	24.5	98	4
HG.P.C.3T	120	275	78	130	29.4	117.6	4.5
HG.P.C.5T	150	339	105	162	49	196	8.2
HG.P.C.8T	150	340	95	160	78.45	313.8	8
HG.P.C.10T	165	365	105	175	98	392	11



# DOUBLE SHEAVE

The service snatch blocks are made of galvanized steel sheaves mounted on double ball bearings. The sheaves are mounted on a galvanized steel frame with a standard eye hook attachment.

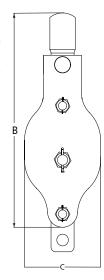


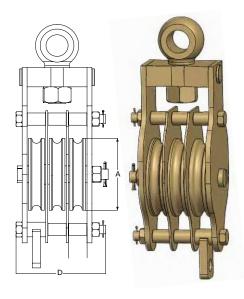


Model No.	D	) Jimensio	ns (mm)		Working load	Breaking	Weight
woder No.	A	В	С	D (kN)		Load (kN)	(kg)
HG.P.D.5T	124	360	125	135	49	196	09
HG.P.D.8T	150	424	125	165	98	313	18.5
HG.P.D.10T	150	424	145	165	98	313	19

# THREE SHEAVE

The service snatch blocks are made of galvanized steel sheaves mounted on double ball bearings. The sheaves are mounted on a galvanized steel frame with a standard eye hook attachment.



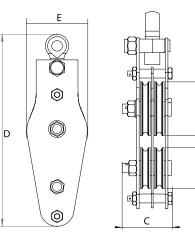


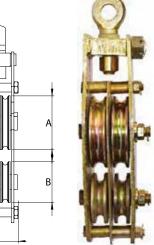
Model No.		Dimensi	ons (mm	1)	Working load		Weight (kg)	
	A	В	С	D	(kN)	Load (kN)		
HG.P.F.L.W.15T	150	450	165	187	149.5	373.6	23.7	



# FOUR **SHEAVE**

The service snatch blocks are made of galvanized steel sheaves mounted on double ball bearings. The sheaves are mounted on a galvanized steel frame with a standard eye hook attachment.

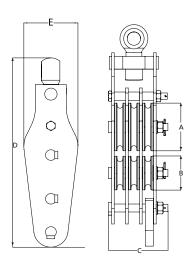




Model No.		Dim	ensions	(mm)	Working	Breaking	Weight	
Model Ho.	A	В	С	D	E	load (kN)	Load (kN)	(kg)
HG.P.F.5T	127	96	125	480	150	49.8	199.2	13.5
HG.P.F.8T	150	106	125	520	177	78.4	313.6	20
HG.P.F.10T	150	106	145	520	177	99.6	398.4	22

# SIX SHEAVE

The service snatch blocks are made of galvanized steel sheaves mounted on double ball be arings. The sheaves are mounted on a galvanized steel frame with a st andard eye hook attachment.



Model No.		Dime	ensions (	mm)		Working	Breaking	Weight	
Model No.	A	В	C	D	E	load (kN)	Load (kN)	(kg)	
HG.P.S.15T	150	106	185	620	177	98	392	40	

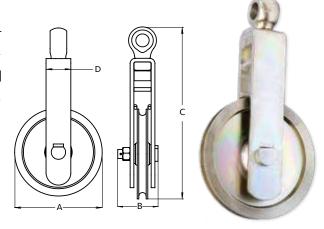
NOTE: Application of eye attachmnet with D Shackle av ailable for all snatch blocks mentioned above.





# EQUILIZER PULLEY

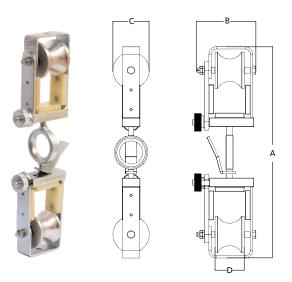
The service e quilizer pulley is made of a galvanized steel sheave mounted on double ball bearings. The sheave is mounted on a galvanized steel frame with an ope nable side and a standard eye hook attachment.



Madel No		Dimensi	ons (mm)		Working load	Breaking	Weight (kg)	
Model No.	A	В	С	D	(kN)	Load (kN)		
HG.P.O.5T	250	130	576	32	49	98	12	
HG.P.O.10T	300	130	582	85	98	196	22	
HG.P.O.15T	300	130	590	85	147	294	22	

# HANGING PULLEY

The cradle block is specially designed for replacing the exist ing ground wire (GW) with optical grounding wire (OPGW) cables. It is made of two galvanized steel half-frames linked by a ring with a swivel plate. Each half frame consist of one grooved aluminium wheel mounted on ball bearings, three nylon plates to protect the OPGW cables, and easy to open sides.

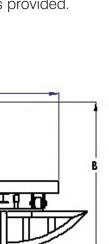


Model No.	Dim	nensions (r	nm)	Working load	Breaking	Weight	
Wiodei No.	A	В	С	(kN)	Load (kN)	(kg)	
HG.HP.B.AL	446	130	75	02	15.8	4.4	
HG.HP.AL	378	113	58	02	10	2.38	

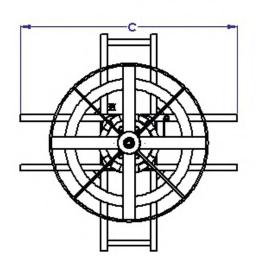


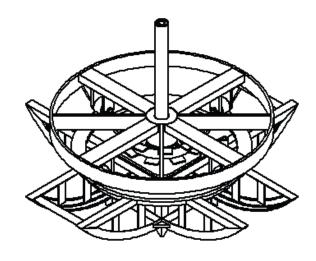
# TURN TABLE

Turn Tables are made up of welded steel with a protective coating. They are suitable for placing the conductor drum in an upright position for a smooth release of the conductor, while paying out. Turn Table braking arrangement is provided.









Model No.	Di	mensions (m	nm)	Working load	Breaking	Weight (kg)	
model No.	A	В	C	(kN)	Load (kN)		
HG.TT.05T	990	982	193	49	147	190	
HG.TT.07T	1011	261	193	74	222	260	
HG.TT.10T	1046	261	193	98	294	410	



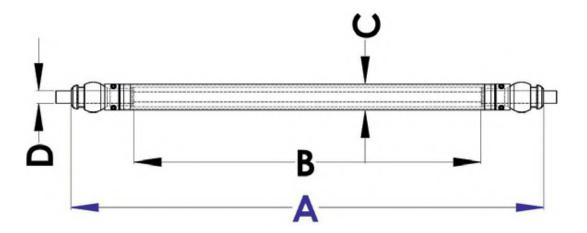
# COVER JOINTS/ JOINT PROTECTOR

They are spe cifically designed to protect the mid span joint made at the "Tensioner Station", during conductor stringing operations.

The cover joints consist of two shells made of special seamless pipe with shaped ends to house rubber hoses, as per the conductor requirement, centre free space as per conductor hex agonal crimp, and mid span joint lengths (after compression).







Model No.	A (mm)	B (mm)	C (mm)	D (mm)	Working load (kN)	Breaking Load (kN)	Weight (kg)
HG.JP.Z	1095	805	61	28	7	20	7
HG.JP.M	1204	864	72	32	7	20	12
HG.JP.B/L	1321	974	84	39	7	20	18

<sup>\*</sup>Special customized Joint protector as per mid span joint also provided.

### Wherein,

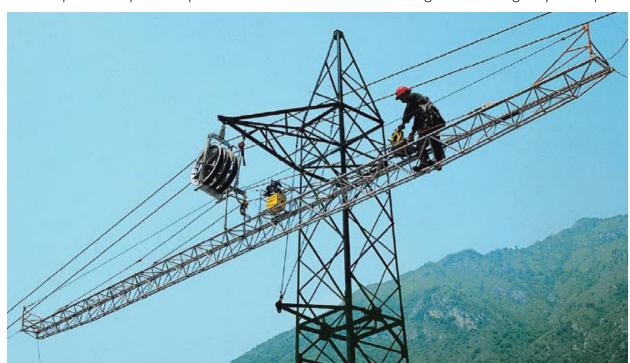
- 1. L = joint length after compression.
- 2. D = conductor Diameter.
- 3. Hex= the hexagon dimension of mid spanjoint after compression.

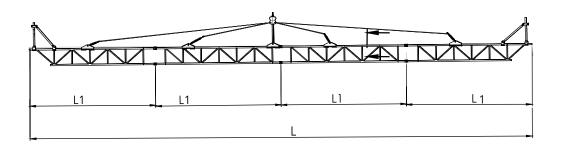


# SUSPENSION **PLATFORM**

Suspension platforms are made of light aluminium alloy in triangular and trapezoidal section, welded by TIG system. All the platforms are provided with the provision for anti-fall barrier.

NOTE: Special suspension platforms can be built with extra length and strength upon request.







Model No.	Total length(L)	Leteral Section length(L1)	Working load(kg)	A (mm)	B (mm)	C (mm)	Weight (kg)
HG.SP.05M	5		300	320	80	350	60
HG.SP.07M	7	4 + 3	300	320	80	350	65
HG.SP.10M	10	5 + 5	300	350	80	450	105
HG.SP.12M	12	4 + 4 + 4	600	350	80	450	120
HG.SP.16M	16	4 + 4 + 4 + 4	600	350	80	450	155
HG.SP.18M	18	6 + 6 + 6	600	350	80	450	250
HG.SP.24M	24	6+6+6+6	600	450	85	550	300
HG.SP.26M	28	5+5+6+5+5	600	450	85	550	320



# ALUMINIUM LADDER

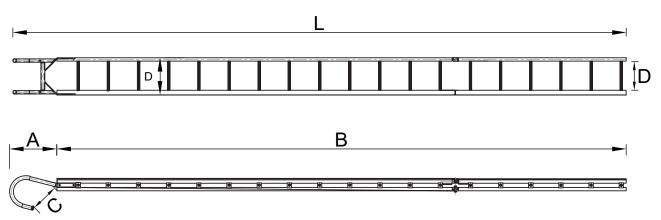
# **Suspension Ladders**

These ladders are designed to be used in hanging position at the tower-cross arms for performing works, for instance at the insulator chains. They can be used also as anchoring ladders if supplied with the optional foldable conductor hook.

The tower hook is made of galvanized steel and equipped with a sfety chain to prevent accidentsal fall down of the ladder. The ladder itself is a welded structure of first grade extruded

The ladder itself is a welded structure of first grade extruded aluminium pipesthe rungs are corrugated for slip production.





Different lengths and sections are available upon request.

Optional Equipment:

- 1. Swivel Tower Hook
- 2. Elastomer Lined Sheave in conductor Twisting Hook

Model No. length (L)		Central	Working load (kN)		A (mm)	В	C (****)	D (2000)	Weight
	Sections	Horizontal	Vertical	(mm)		(mm)	(mm)	(kg)	
HG.SL.03M	3	1	1	3	500	900	245	300	29
HG.SL.3.5M	3.5	1	1	3	500	900	245	300	33
HG.SL.04M	4	1	1	3	500	900	245	300	37
HG.SL.05M	5	2	1	3	500	900	245	400	39
HG.SL.06*M	6	2	1	3	500	900	245	400	42
HG.SL.06M	6(4+2)	2	1	3	500	900	245	400	46
HG.SL.08M	8(4+4)	2	1	3	500	900	245	400	48
HG.SL.10M	10(5+5)	2	1	3	500	900	245	400	52
HG.SL.12M	12(4+4+4)	3	1	3	500	900	245	400	60



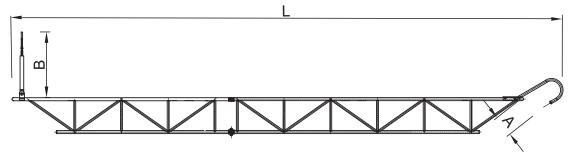
# ALUMINIUM LADDER

# **Anchoring Ladders**

These ladder are used as working platform along the insulator chains of Tensions Towers. If required they can be also used vertically as suspension ladders. Optionally we can quip these anchoring ladders with a foldable tower hook and different sheaves/ pulleys in the conductor hook for easier movement.







Different lengths and sections are available upon request.

### Optional Equipment:

- 1. Swivel Tower Hook
- 2. Elastomer Lined Sheave in conductor Twisting Hook

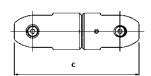
Model No.   Total   length (m)		Central Sections	Working load (kN)		A (mm)	B (mm)	C (mm)	D (mm)	Weight
	(m)		Horizontal	Vertical	(111111)	()	()	(111111)	(kg)
HG.AL.04M	4.0	1	3	3	245	900	320	350	29
HG.AL.05M	5.0	1	3	3	245	900	320	350	33
HG.AL.06M	6.0	1	3	3	245	900	320	350	37
HG.AL.06*M	6(4+2)	2	3	3	245	900	320	350	39
HG.AL.07M	7(4+3)	2	3	3	245	900	320	350	42
HG.AL.08M	8(4+4)	2	3	3	245	900	320	350	46

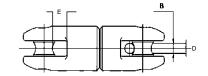


## SWIVEL JOINTS

The swivel joints are suitable for connecting the pulling rope to the mesh sock joint mounted on the conductor. They are mounted on thrust bearings and are designed to avoid torsion strain accumulation. They are made of highly tensile galvanized steel. The special design can bear the high radial loads which occur during stringing.



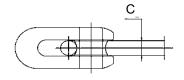


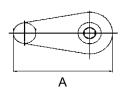




Model No.	А	В	С	D	Е	Working Load (kN)	Breaking Load (kN)	Weight (kg)
HG.SJ.3T	31	12	124	16	14	10	30	0.5
HG.SJ.12T	36	14	155	17	16	37	120	0.75
HG.SJ.22T	45	18	192	22	20	74	220	1.65
HG.SJ.24T	50	22	188	25	24	100	240	1.9
HG.SJ.36T	60	25	253	28	29	120	360	3.6

## PILOT WIRE CONNECTORS











The connectors are specifically designed to connect the pilot rope lengths/pulling rope lengths and to pass over the puller/puller-tensioner bull wheel groove. They are made of high tensile galvanized steel.

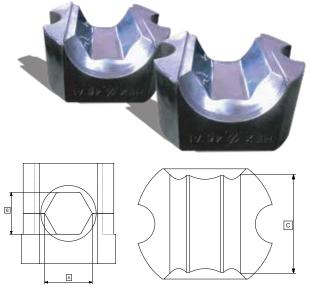
Model No.	Dir	nensions (mm	<b>Breaking Load</b>	Weight	
Model No.	A	В	C	(kN)	(kg)
HG.PC.7T	59	28.2	10	7	0.13
HG.PC.11T	72.5	41	13	11	0.33
HG.PC.16T	90.5	48.5	16	16	0.53
HG.PC.22T	100.5	56	18	22	0.75
HG.PC.36T	119.5	60	24	36	1.03
HG.PC.75T	174	76.5	28	75	3.03



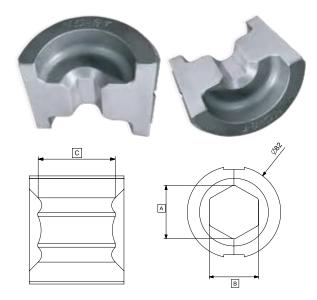
## CRIMPING DIE SET

Crimping dies are m anufactured using high-grade steel with high precision and accuracy on CNC machines and are further heat treated to a hardness of 60 HRC. CNC Grinders are used for super finishing.

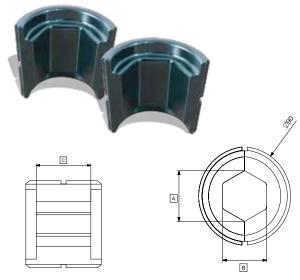
We offer dies for all conductor sizes and v arious types of power joint compre ssion machines, with a 12 months' manufacturer's warranty.



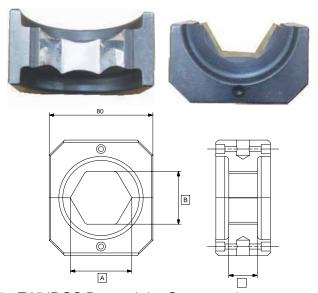
100 / 200 T ZECK / SANWA TEKKI like Power Joint Compression machine.



100/110/160 T POWER COM like Power Joint Compression machine



100/120/184 T TESMEC like Power Joint Compression machine



35 T KUDOS Power Joint Compression machine

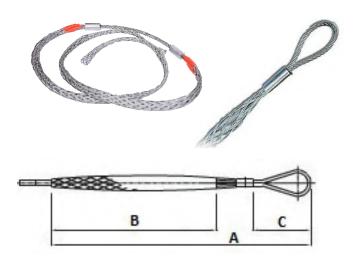
<sup>\*</sup> DIE SET ALSO AVAILABLE AS PER CUSTOMER JOINT COMPRESSION MACHINES



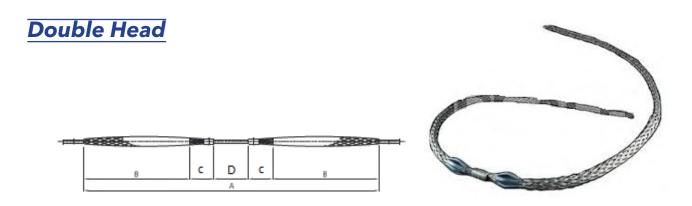
# PULLING GRIPS (SOCKS)

### **Single Head**

The pulling grips are specifically designed in SINGLE HEAD TYPE to temporarily connect aluminum / steel / copper conductors to the pulling rope. They consist of variable pitch steel wire, which effectively distribute the gripping effect on the conductors.



Model No.	Conductor	Dim	ensions (	mm)	Working	Breaking	Weight
Model No.	Dia (mm)	A	В	C	load (kN)	Load (kN)	(kg)
HG.S1.2T	8-17	1500	1200	160	12	36	0.7
HG.S2.8T	17-29	1900	1470	230	28	84	1.3
HG.S4.3T	29-38	1900	1470	230	43	129	2.1
HG.S6T	38-50	2270	1820	250	60	180	2.7



The pulling grips are specifically designed in DOUBLE HEAD TYPE to temporarily connect aluminum / steel / copper conductors to the pulling rope. They consist of variable pitch steel wire, which effectively distribute the gripping effect on the conductors.

Model No.	Conductor	Dim	ensions (	mm)		Working	Breaking	Weight
Model No.	Dia (mm)	A	В	C	D	load (kN)	Load (kN)	(kg)
HG.S1.2T	8-17	2680	1110	140	200	12	36	1.2
HG.S2.8T	17-29	3240	1360	160	200	28	84	2.3
HG.S4.3T	29-38	3540	1470	200	200	43	129	3.6
HG.S6T	38-50	4240	1820	200	200	60	180	4.8

<sup>\*</sup> Customised grips can be made as per application.



### TURN BUCKLE



Turn Buckle comes in a seamless tube body, having modified square threads on end fittings for improved fatigue properties. Turnbuckle eyes are forged e longated by design to maximize easy attachment in system and minimize stress in the eye.

Model No.	Capacity	Dimensions (mm)			Working	Breaking	Weight
	(ton)	Body	Open	Close	load (kN)	Load (kN)	(kg)
HG.TB.3T	3	860	1733	1077	3	9	6.5
HG.TB.5T	5	860	1799	1123	5	15	9.2
HG.TB.10T	10	860	1839	1183	10	30	16
HG.TB.12T	12	860	1845	1189	10	30	19

# FLAT CLAMP/ PATTA CLAMP

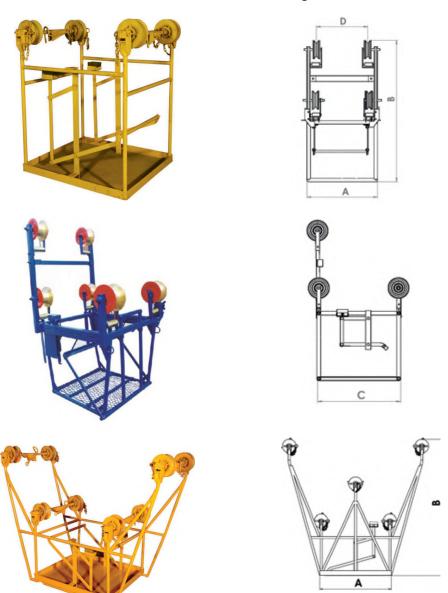
These clamps are used for clamping the earth wire. The bodies of these clamps are made up of alloy steel. The dimensions of the grooves of the clamps are kept according to the diameter of the earth wire. The bolts are made up of high tensile steel.





# SPACER TROLLEY

Inspection line trolley fit for 2-4-6 bundle conductor lines is made of MS/Aluminium structure with Rubber lined aluminium sheaves mounted on ball bearing.



Model No.	Line Type	Length(A)	Height(B)	Width (C)	Weight (ALU./Ms)
HG.ST.2.	TWIN	610	710	630	20/38Kg
HG.ST.4.	QUAD	610	1228	630	24/44Kg
HG.ST.6.	HEXA	766	1444	1080	55/100Kg

 $<sup>\</sup>mbox{\ensuremath{^{\star}}}\mbox{\ensuremath{D}}$  (Spacer Width) will be manufactured as per requirement.

#### Optional devices:

- Distance meter
- Conductor clamp.



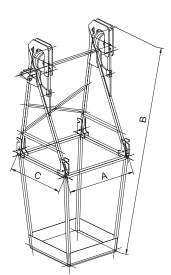
# SPACER TROLLEY

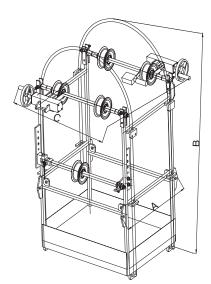
Inspection line trolley fit for 2-4-6 bundle conductor lines is made of MS/Aluminium structure with Rubber lined aluminium sheaves mounted on ball bearing.

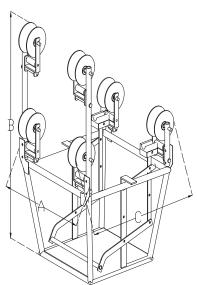












Model No.	Line Type	Length(A)	Height(B)	Width (C)	Weight
HG.ST.AL.2.	TWIN	480	1700	480	28Kg
HG.ST.AL.4.	QUAD	815	1548	650	24Kg
HG.ST.AL.6.	HEXA	473	1166	642	45Kg

<sup>\*</sup> D (Spacer Width) will be manufactured as per requirement.

#### Optional devices:

- Distance meter
- Conductor clamp.

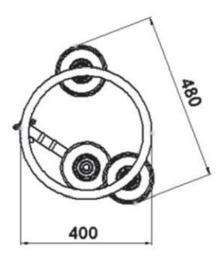


# RUNNING **EARTHS**

This Grounding device is used during Stringing operations and is designed for conductors and Ropes. Copper grounding wire (35 & 50 Sq. mm) provided for connection to the ground. Can provide special groove and diameter as per conductor or rope as per applicable guide lines.

### **HGAC RE 001**

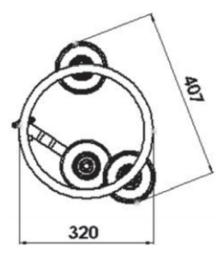




# HGAC RE 001 Characteristics Mass 6Kg Groove width 55mm

### **HGAC RE 002**





HGAC RE 002 Characteristics

Mass 16 Kg
Groove width 70 mm
Suitable for anti-twisting device model RFF001



## DISCHARGE ROD COMPONENTS



These components made from high strength high purity aluminium alloy gravity/chill cast components, fitted with SS, Copper and Bronze components for best performance in the field. These items are provided with 35 Sq. mm to 50 Sq. m copper wire as per customer requirement



# TESTING FACILITY

We are having in house facility and our testing lab is equipped with:







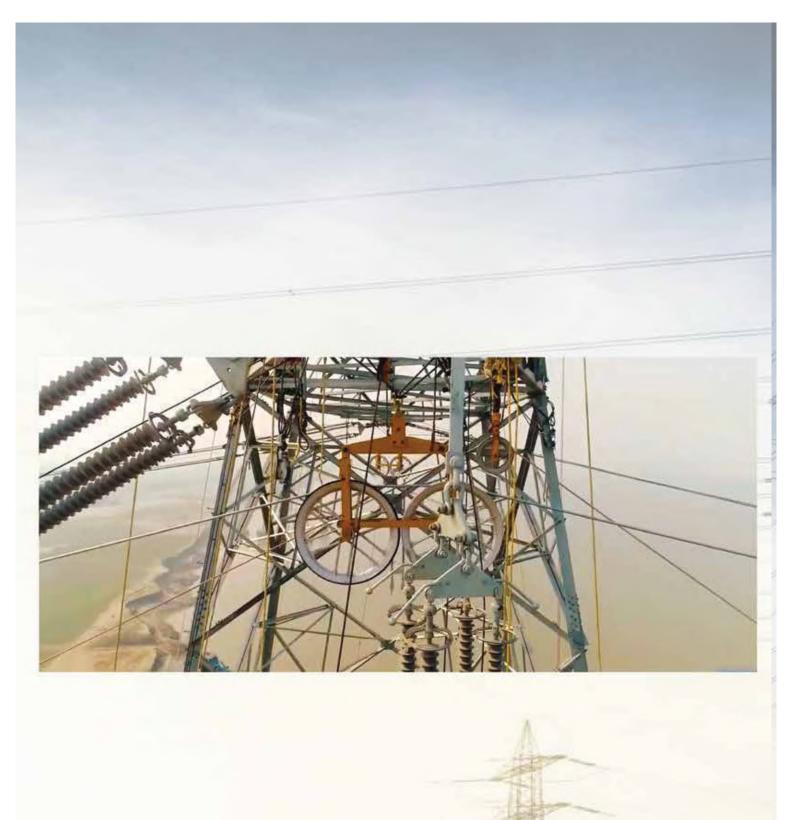
#### **SPECTROMETER**





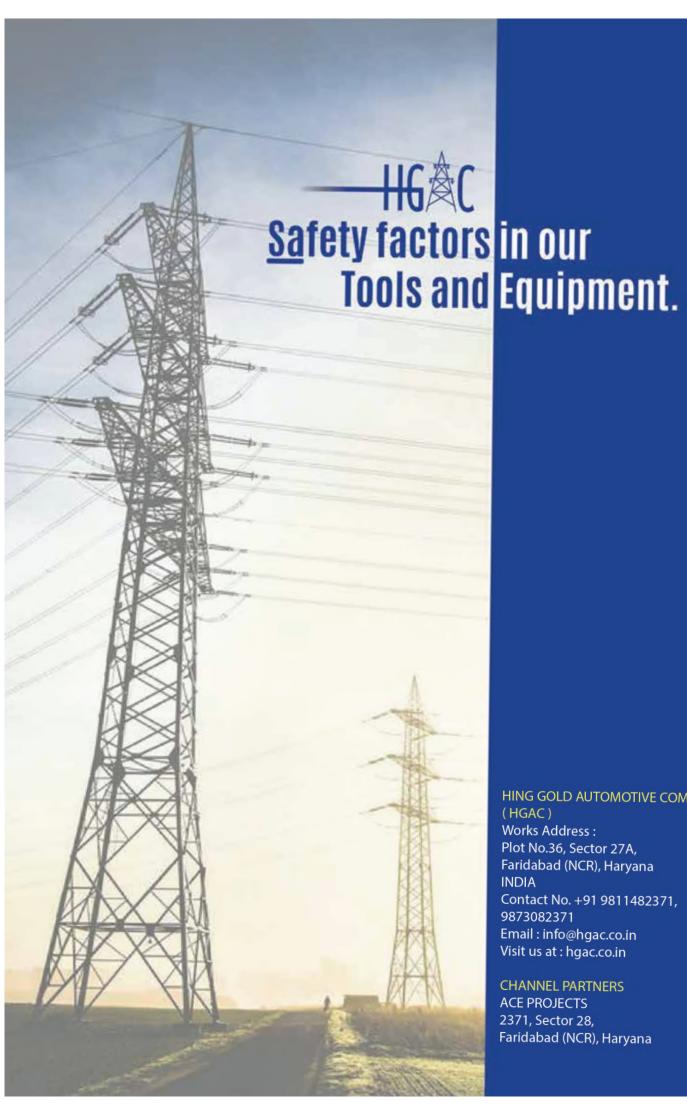






HIND GOLD AUTOMOTIVE COMPONENTS





#### HING GOLD AUTOMOTIVE COMPONENTS (HGAC)

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