



CATENARY COMPONENTS **ARTHUR FLURY**

OVERHEAD CONTACT LINE MATERIAL





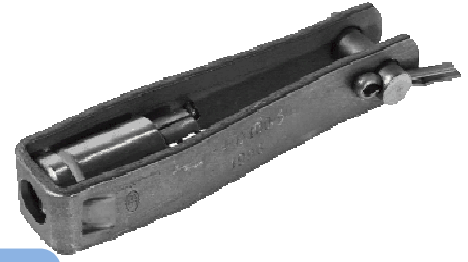
CATENARY COMPONENTS **ARTHUR FLURY**

SELECTION GUIDE

Wire Size		Component Type		
Size	Wire Type	Component Type	TT PN	Mark
300 MCM	Silver Copper Trolley Wire	Collar Socket	102005	CS300T
336.4 MCM	Trolley Wire	Forked Collar Socket	102215	CS336T
		Double Forked Collar Socket - Two Wire Sizes (4/0 & 336.4 MCM)	102230	CS403464
400 MCM	Feeder Wire	Forked Collar Socket	102216	CS400
		Conical Coupler	102212	CC400
1/0	7 Strand Copper Wire	Conical Coupler	102210	CC1/0
4/0	Bronze Trolley Wire	Forked Collar Socket	102014	CS4/0T
		Double Forked Collar Socket	102229	CS4040
		Conical Coupler	102219	CC4/0T
4/0	Copper Trolley Wire	Forked Collar Socket	102014	CS4/0T
4/0	7 Strand Copper Wire	Forked Collar Socket	102214	CS4/0S
		Conical Coupler	102218	CC4/0S
4/0	Copper Aux Wire	Double Forked Collar Socket	102229	CS4040
		Double Forked Collar Socket - Two Wire Sizes (4/0 & 336.4 MCM)	102230	CS403464
4/0	19 Strand Copperweld Wire	Forked Collar Socket	102213	CS9/16
		Conical Coupler	102231	
7/16"	7 Strand Copperweld Wire	Forked Collar Socket	102029	CS7/16
		Conical Coupler	102200	CC7/16
		Eye Collar Socket	102077	ES7/16
5/8"	Catenary Messenger Wire	Forked Collar Socket	102016	CS5/8
		Conical Coupler	102221	CC5/8

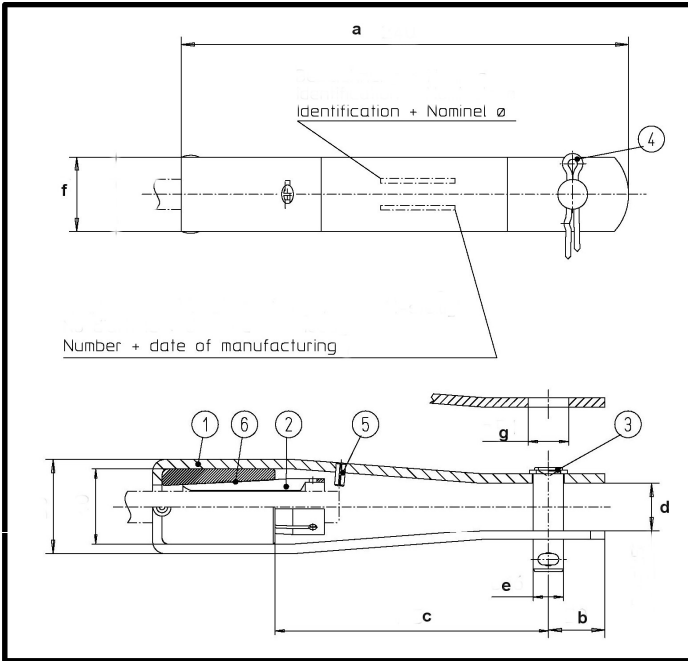
Stocked TransTech Part





CATENARY COMPONENTS **ARTHUR FLURY**

FORKED COLLAR SOCKET



Material:

Stainless Steel / Collet AlBz / Bolt galvanized steel

Application:

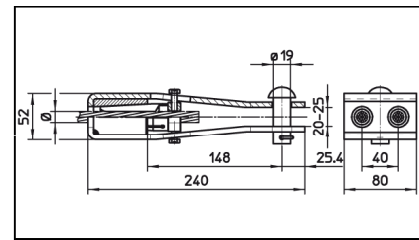
For tensioned Cu, Cu-Steel or Bz Cables

Service Load:

Min. 674lbf. / Max. 5,620lbf.

Min. Breaking Load of Steel:

Min. 13,488lbf.



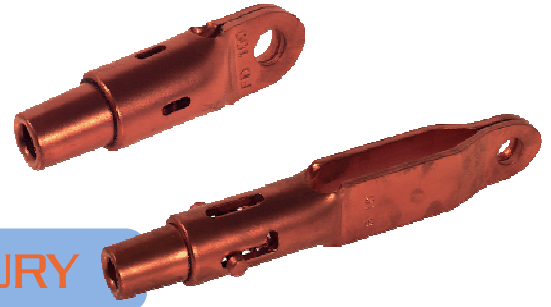
Double Collar Socket also available

TransTech PN	DESCRIPTION WIRE TYPE & SIZE	MATERIAL		AMTRAK IDENTIFIERS		Dimensions (Inches)							Weight (lbs.)
		BODY	FLANGE	MATERIAL NUMBER	MARKING	a	b	c	d	e	f	g	
102029	FORKED COLLAR SOCKET, FOR 7/16" DIA. 7 STRAND COPPERWELD WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 075 05106	CS7/16	7.087	0.787	4.133	min. .669 max. .827	0.63	1.18	0.65	1.81
102214	FORKED COLLAR SOCKET, FOR 4/0 7 STRAND COPPER WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 015 00416	CS4/0S	7.087	0.787	4.133	min. .669 max. .828	0.63	1.18	0.65	1.81
102014	FORKED COLLAR SOCKET, FOR 4/0 BRONZE OR COPPER TROLLEY WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 015 00419	CS4/0T	7.087	0.787	4.133	min. .669 max. .829	0.63	1.18	0.65	1.81
102005	FORKED COLLAR SOCKET, FOR 300,000 CM SILVER COPPER TROLLEY WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 444 21083	CS300T	7.087	0.787	4.133	min. .669 max. .830	0.63	1.18	0.65	1.81
102215	FORKED COLLAR SOCKET, FOR 336,400 CM TROLLEY WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 015 00417	CS336T	9.45	1.18	5.71	min. .787 max. .984	0.63	1.57	0.65	3.33
102016	FORKED COLLAR SOCKET, FOR 5/8" DIA. CATENARY MESSENGER WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 015 20222	CS5/8	9.45	1.18	5.71	min. .787 max. .985	0.63	1.57	0.65	3.33
102216	FORKED COLLAR SOCKET, FOR 400,000 CM FEEDER WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 015 00418	CS400	9.45	1.18	5.71	min. .787 max. .986	0.63	1.57	0.65	3.33
102213	FORKED COLLAR SOCKET, FOR 9/16" DIA. 19 STRAND COPPERWELD WIRE	316 Stainless Steel	ALUMINUM BRONZE	44 015 00415	CS9/16	9.45	1.18	5.71	min. .787 max. .987	0.63	1.57	0.65	3.33

Notes:

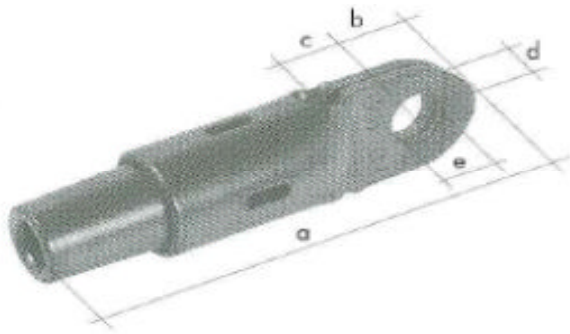
- 1.) Specify .63" (16 mm) pin when ordering.
- 2.) A minimum working load of 11 lbs. is required to seat collet.





CATENARY COMPONENTS **ARTHUR FLURY**

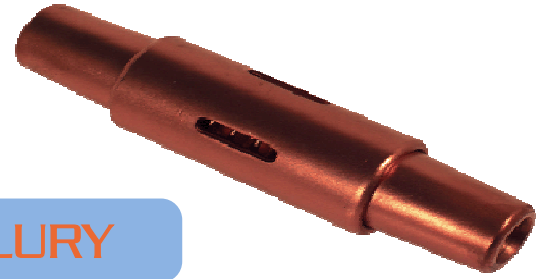
EYELET COLLAR SOCKET



Material:
CuNiSi / Collet AlBz
Application:
Cu, Cu-Steel or Bz Tensioned Cables
Service Load:
Min. 674lbf. / Max. 5,620lbf.
Min. Breaking Load CuNiSi:
Min. 17,984lbf.

TransTech PN	DESCRIPTION WIRE TYPE & SIZE	MATERIAL		AMTRAK IDENTIFIER		Dimensions (Inches)					Weight (lbs.)
		BODY	COLLET	MATERIAL NUMBER	MARKING	a	b	c	d	e	
102077 Drawing No. 6.3636	EYELET COLLAR SOCKET, FOR 7/16" DIA. 7 STRAND COPPERWELD WIRE	CuNiSi	ALUMINUM BRONZE	44 075 05107	ES7/16	5.71	0.787	0.728	0.433	0.659	1.19





CATENARY COMPONENTS **ARTHUR FLURY**

CONICAL COUPLER



Material:

CuNiSi / Collet AlBz

Application:

Tensioned Cu, Cu-Steel or Bz Cables

Service Load:

Min. 674lbf. / Max. 5,620lbf.

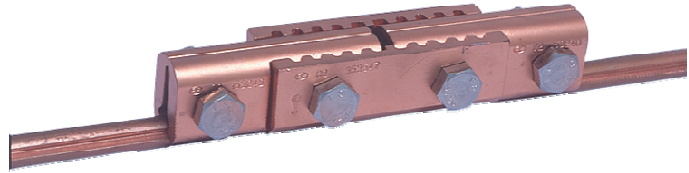
Min. Breaking Load:

Min. 17,984lbf.

Remark:

1.) Color Code

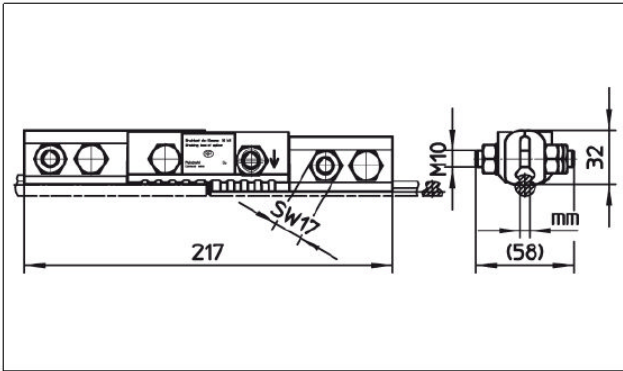
TransTech PN	DESCRIPTION WIRE TYPE & SIZE	MATERIAL		AMTRAK IDENTIFIERS		Dimensions (Inches)		Weight (lbs.)
		BODY	FLANGE	MATERIAL NUMBER	MARKING	a	b	
102210	CONICAL SPLICE, FOR 1/0 7 STRAND COPPER WIRE	CuNiSi	ALUMINUM BRONZE	44 015 00420	CC1/0	6.1	1.38	1.54
102200	CONICAL SPLICE, FOR 7/16" DIA. 7 STRAND COPPERWELD WIRE	CuNiSi	ALUMINUM BRONZE	44 015 00421	CC7/16	6.1	1.38	1.54
102219	CONICAL SPLICE, FOR 4/0 BRONZE OR COPPER TROLLEY WIRE	CuNiSi	ALUMINUM BRONZE	44 015 00422	CC4/0T	6.1	1.38	1.54
102218	CONICAL SPLICE, FOR 4/0 7 STRAND COPPER WIRE	CuNiSi	ALUMINUM BRONZE	44 015 00423	CC4/0S	6.93	1.38	1.76
102221	CONICAL SPLICE, FOR 5/8" DIA. CATENARY MESSENGER WIRE	CuNiSi	ALUMINUM BRONZE	44 300 44344	CC5/8	7.32	1.38	1.85
102212	CONICAL SPLICE, FOR 400,000 CM FEEDER WIRE	CuNiSi	ALUMINUM BRONZE	44 015 00424	CC400	8.19	1.73	3.1
102231	CONICAL SPLICE FOR 4/0 19 STRAND COPPERWELD WIRE S126mm ²	CuNiSi	ALUMINUM BRONZE	-	-	8.19	1.73	3.7



CATENARY COMPONENTS **ARTHUR FLURY**

ADJUSTABLE WIRE SPLICE

Type: SKR217



Material:

Clamping Plates CuNiSi

Application:







Contact Wire Splice Adjustable for Copper or Alloy
Contact Wire

Starting Torque:

36lb.*ft.

Remark:

1.) with Suspension Lug

Item-no.						
635.043.000	-107			3.75	1.35	
635.025.000	-107	-107	-107	5.6-6.9	1.35	
635.349.000	-120	-120	-120	5.6-6.9	1.4	1

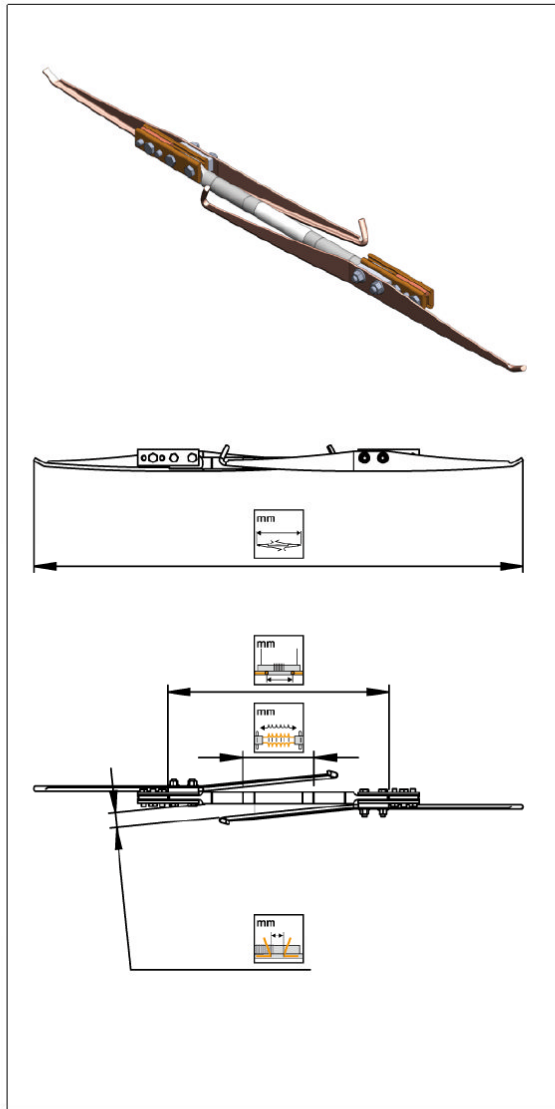




CATENARY COMPONENTS **ARTHUR FLURY**

SECTION INSULATORS

Type: LT1



Material:

GRP/PTFE, CuNiSi, Cu, Stainless Steel

Application:










1kV DC Section Insulator for Tramline and Depot without Suspension, for 1 Contact Wire System

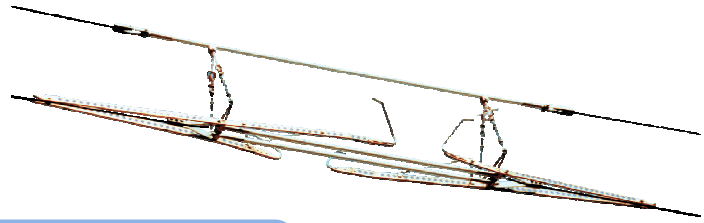
For Speed up to 37 mph

Minimum Breaking Load of the Insulator Beam:
13,488 lbf.

Remark:

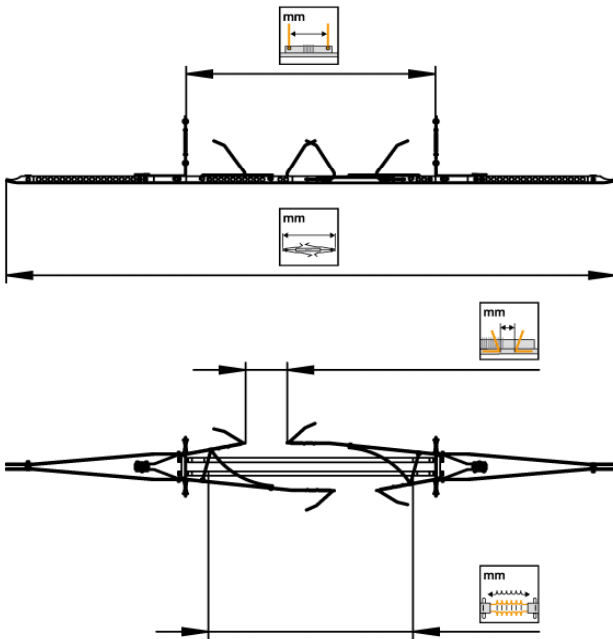
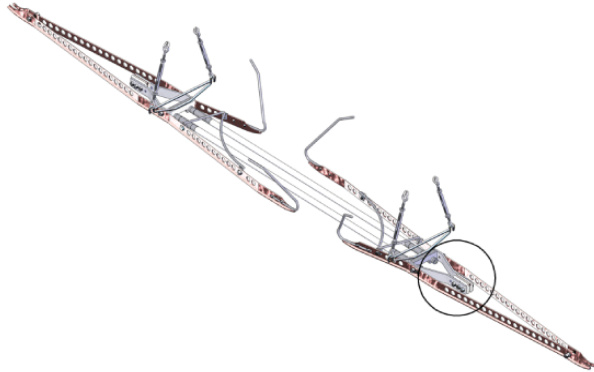
Suspension Kit Available on Request

Item-no.	 mm ²	 mm	 kN	 mm	 mm	 mm	 mm	 Kg	
655.266.000	80-150	5.6	max. 15	100	450	20	1000	3.5	
655.266.010	80-120	6.9	max. 15	100	450	20	1000	3.6	
655.266.020	< 120	6.9	max. 15	100	450	20	1000	3.8	



CATENARY COMPONENTS **ARTHUR FLURY**

SECTION INSULATORS



Material:

GRP/PTFE, CuNiSi, Cu, Stainless Steel

Application:

25kV AC Section Insulator with 2 Insulator Rods, Revolvable in Case of Wear

For Maximum Speed up to 124 mph

Breaking Load of the Section Insulator:

26,977 lbf.

Breaking Load of Each Insulator Rod:

17,984 lbf.










Remark:

- A.) Standard Application
- B.) for 2 Contact Wire System
- C.) For High Service Load System with Contact Wires out off CuMg 0.5

- 1.) Standard Runner
- 2.) Reinforced Runner



Time saving installation tools available

Item-no.									
655.137.665	80-150	5.6-6.9	8-30	1100	1350	220	3280	17	A,1
655.154.665	100-170	5.6-6.9	8-30	1100	1350	220	3280	18.5	A,2
655.215.000	120-150	5.6-6.9	10-50	1100	1350	220	3280	20.5	C,2
655.142.665	80-150	5.6-6.9	8-30	1100	1350	220	3280	19	B,1

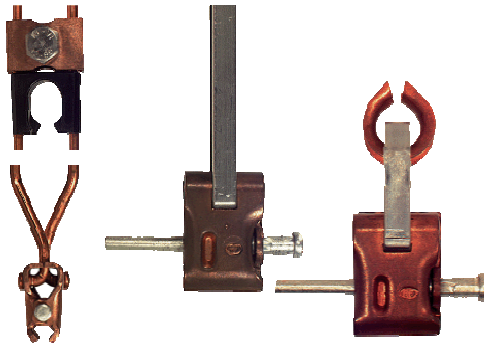
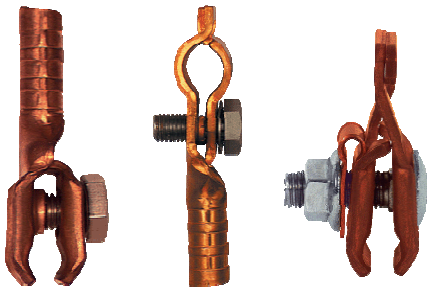


CATENARY COMPONENTS **ARTHUR FLURY**

CATENARY SUSPENSION HANGERS

Wire and strap hangers

Dropper clamps

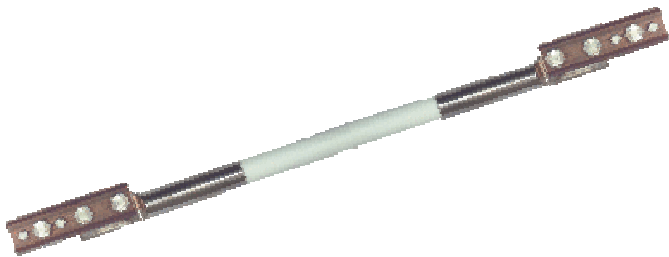


Cable hangers

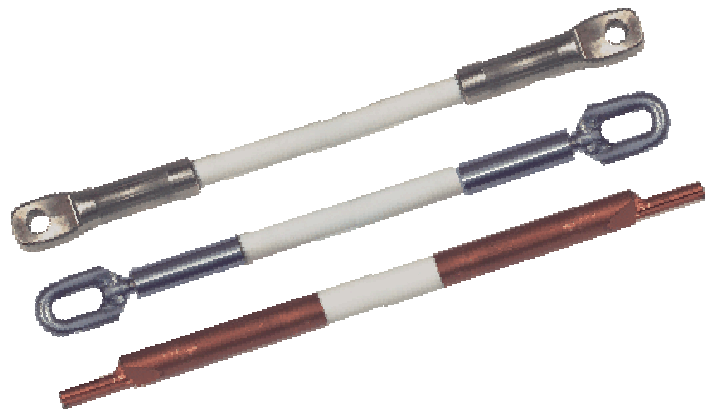


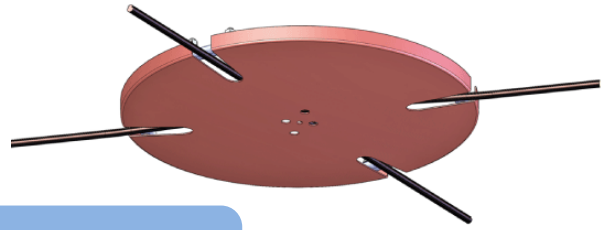
CONTACT & MESSANGER INSULATORS

Contact Wire Insulators



Messenger Wire Insulators





CATENARY COMPONENTS **ARTHUR FLURY**

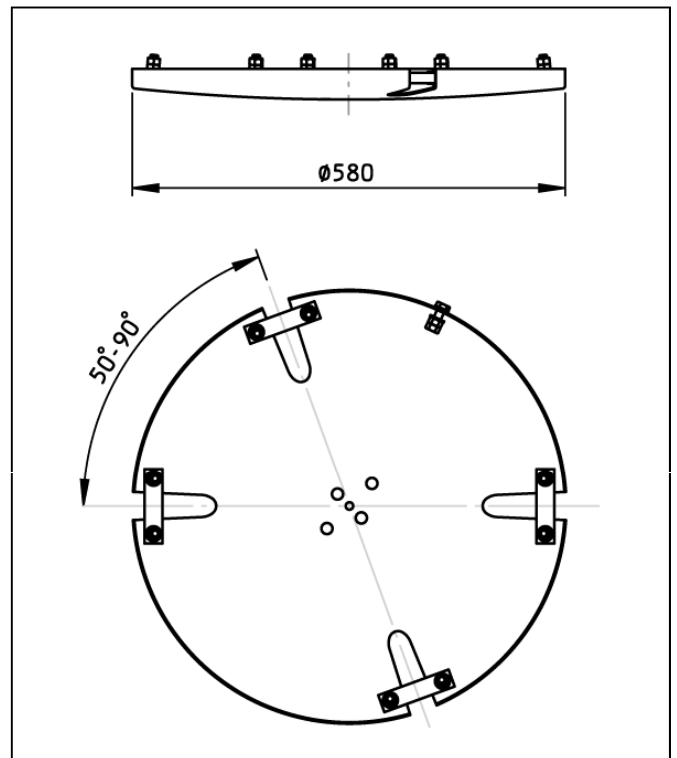
CONTACT WIRE CROSSING

Application:

Enables the passage of the pantograph under crossing of contact wires guaranteeing perfect equipotentiality

Benefits:

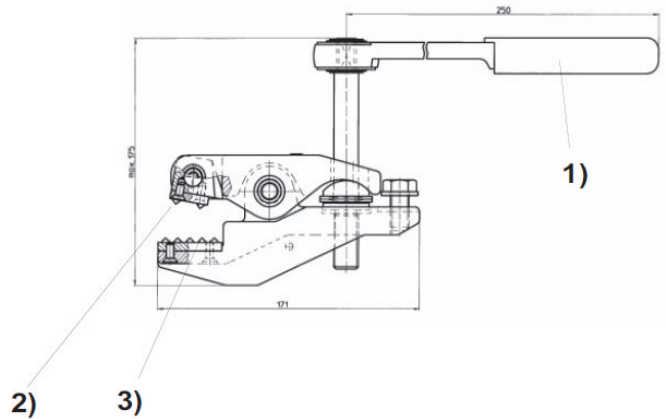
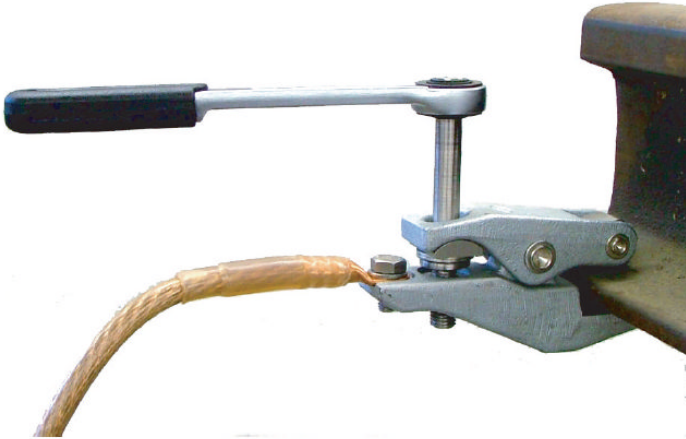
- Low Life Cycle Costs (LCC)
- Suitable for all kind of tramway voltage
- No suspension
- Easy and quick installation
- No special tools necessary
- Free crossing point, wires can move
- For all type of contact wire
- For all type of pantographs
- Available for $90^\circ \pm 5^\circ$, $80^\circ \pm 5^\circ$, $70^\circ \pm 5^\circ$, $60^\circ \pm 5^\circ$ and $50^\circ \pm 5^\circ$



Technical Specifications:

Diameter:	580 mm
Weight:	6.6 kg
Recommended passage speed:	≤ 18 mph
Time for installation :	5-10 min

PROFILE FREE RAIL CLAMP



Advantages:

- all components corrosion-resistant
- small in dimensions
- easy handling with ratchet
- wear parts exchangeable
- electrical and mechanical connection separated
- earthing wire exchangeable (connection bolt M12)

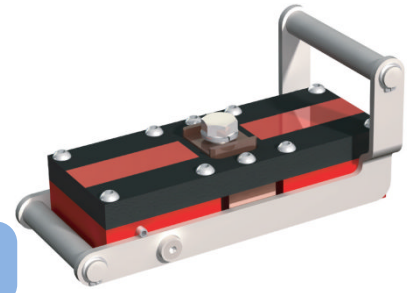
Data:

Short circuit current I_{eff} :	25 kA/100ms, 35kA/50ms
Earthing wire section:	up to 50 mm ²
Weight:	~ 2.4 kg
Rail Profile:	all profile

Spares:

- | | |
|-------------------------|------------------|
| 1) Ratchet: | Art. 640.066.000 |
| 2) upper contact plate: | Art. 649.001.097 |
| 3) lower contact plate: | Art. 649.001.096 |





CATENARY COMPONENTS **ARTHUR FLURY**

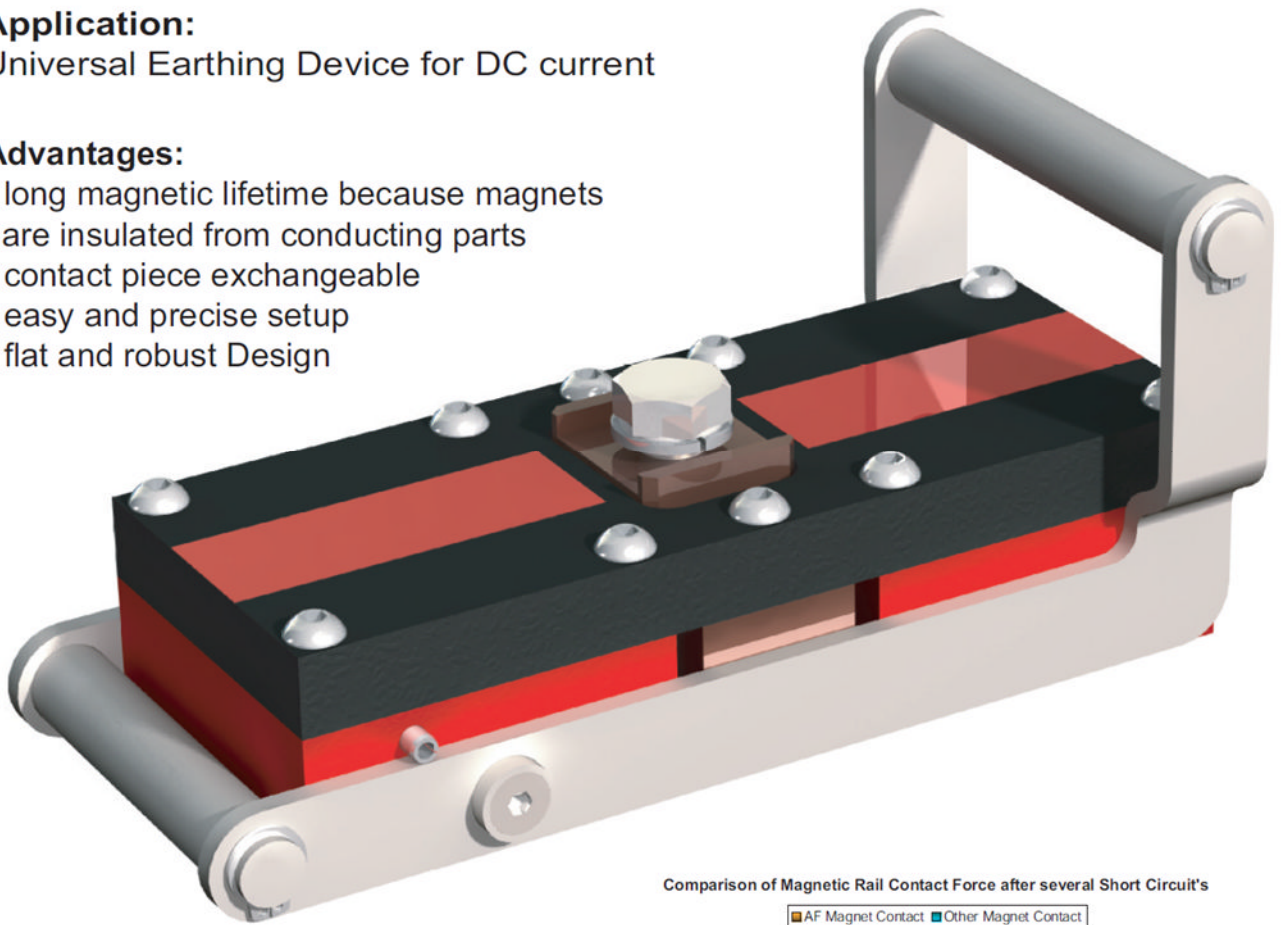
MAGNETIC RAIL CLAMP

Magnetic Earthing Contact Typ M160 Art. Nr. 640.100.000

Application:
Universal Earthing Device for DC current

Advantages:

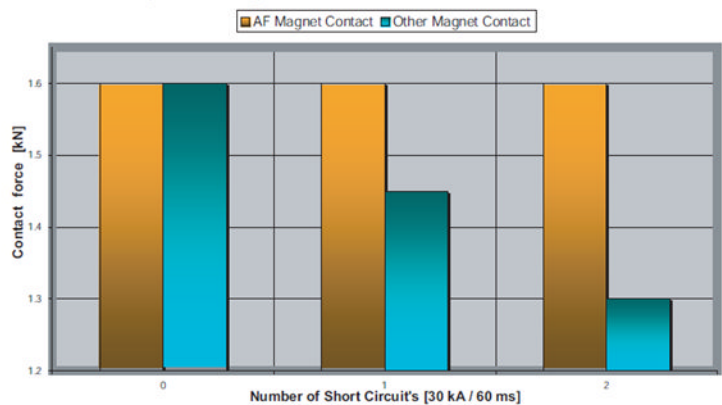
- long magnetic lifetime because magnets are insulated from conducting parts
- contact piece exchangeable
- easy and precise setup
- flat and robust Design



Data:

Weight:	2.8 kg
Contact force	359 lbf
Short circuit current:	30 kA DC / 60 ms
Earthing connection :	Bolt M12

Comparison of Magnetic Rail Contact Force after several Short Circuit's





FM 1.4

Applications:

- Determination of the catenary position (height/stagger)
- Cable heights, bridge and tunnel heights

Features:

- illuminated display, optical target visor for measurement at darkness for static, punctual measurements
- contactless measurement of the catenary (optic/laser);
- integrated optical target (to the optical perpendicular adjusted laser)
- visible red laser point/accessories laser goggles
- laser measurement mode single- or continuous measurement
- battery operation/accessories power supply and automobile battery plug



CATENARY MEASURING INSTRUMENT



Technical Details

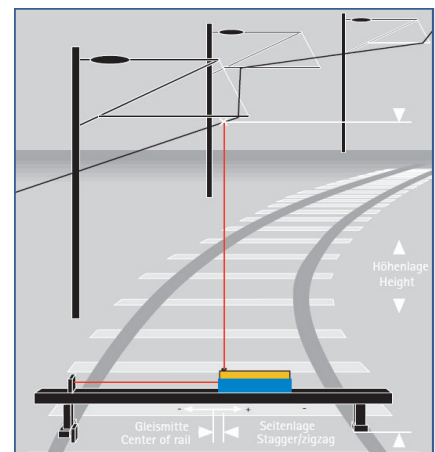
Dimensions of the optical instrument	230 x 108 x 94 mm/2kg (L x W x H)
Measuring bar length/height/weight	172x14cm/5kg
Packaging (FM1.4 complete)	180x35x37cm/16kg
Al-carrying case for optical instrument	540x160x240mm/6,5kg
Operating- and storage temperature laser	-15°C...+50°C/-30°C...+70°C
Operating time (at 25°C)	upto 10000 measurements
Night measurement	Display lightning/reflector
Power supply	3V DC, 2 batteries
IP-Protection class	IP54
Laser class/performance	2/<1mW
for track gauge	1 435 mm (other ranges on request)
lateral deviation (zigzag)/deviation to track perpendicular	
Measuring range to the left	70 cm
Measuring range to the right	70 cm
Scale reading/measuring bar	5 mm
Measuring accuracy (system)	± 5mm
determination of the catenary height above top of the rail	
Measuring range of the laser module	app. 50 m
Measured value resolution	1 mm
Accuracy (Laser/System)	±2/±5mm

Advantages:

- easy to use
- robustness/for usage on railroad sites
- measurement and data acquisition on track section by one person

Options:

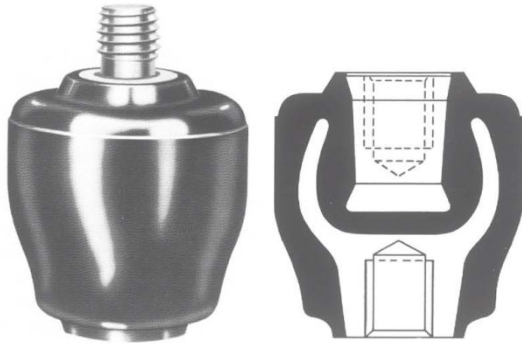
- two-part measuring bar for easy transportation
- customized measuring bars on request (e. g. inch)
- measuring bar for track superelevation/incline in curves
- optional Carrying case





TRANSIT INSULATORS **TransTech**

GIANT STRAIN INSULATORS



This small, high strength which it suitable for catenary applications. When equipped with suitable hardware they are used for numerous strain applications such as dead ending trolley conductor wires.

Giant Strain Insulators consist of two metal inserts molded in fiberglass reinforced polyester compound of high mechanical and electrical strength. When assembled, they provide an interlocking high strength design with the compound under compression rather than tensile loading.

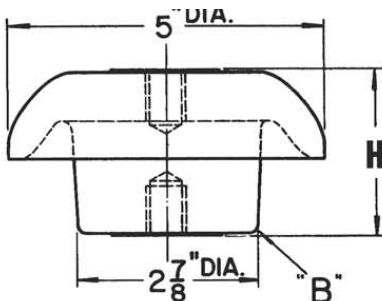
Thread Size	Flashover Wet	Dielectric Strength Dry	Diameter	Length	Max Weight
1/2"-13	10kV	20kV	2-1/4"	2-13/16"	1.41 lbs
5/8"-11	10kV	25kV	2-1/4"	2-13/16"	2.06 lbs

PETTICOAT INSULATORS



The Petticoat insulator provides a "Leakage Current Barrier" by effectively increasing the leakage distance, and is desirable in applications under conditions of excessive moisture and/or air contamination exist. Typical applications are catenary arm supports and as pantograph mounting insulators. Petticoat Insulators consist of two metal inserts molded in fiberglass reinforced polyester compound of high mechanical and electrical strength. When assembled the material is under tension

This insulator is provided in a variety of heights from 2-5/8" to 3-1/2" (in 1/8" increments) and three thread sized (1/2"-13, 5/8"-11, and 3/4"-10)



Technical Details

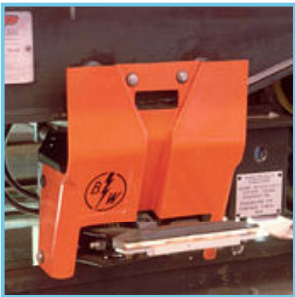
Tensile Strength	7000 lbs
Cantilever Strength	12,000 in-lbs
Compression Strength	65,000 lbs
Torsional Strength	150 ft-lbs
Tracking Resistance	190 sec
Creep Distance	5.625" (for H=3.5")
Dielectric Stregnth - Dry	55kV (for H=3.5")
Dew Flashover Strenght	38kV (for H=3.5)
Weight	3.0 lbs (for H=3.5")



TranStech™
POWER TRANSFER SYSTEMS

About Us

TranStech specializes in electrical power transfer systems in the transit and industrial markets. For over 55 years our emphasis has been on superior product performance with a priority on delivering the most reliable solutions to meet each customer's electrical power transfer requirements. Our United States based, ISO 9001:2008 certified manufacturing facility supports the highest level of quality and the shortest lead times possible. We have a full staff of engineers capable of providing any application engineering services necessary to custom configure our products and systems to meet the needs of our customers, and, as a member of the Fandstan Electric Group, we have the ability to leverage the expertise and resources of our sister companies: Stemmann-Technik, Stemmann-Akapp, Brecknell Willis, and Austbreck. TranStech is a leading supplier and servicer of transit pantographs and overhead catenary system components for high speed and light rail transportation; we provide replacement parts, overhaul services, and overhaul kits; and we specialize in third rail conductor systems for transit electrification, including our proprietary stainless steel capped aluminum rail, which offers better conductivity and durability, while reducing weight and system installation costs.



 **STEMMANN TECHNIK**
Germany, Poland, and the Netherlands

 **BRECKNELL WILLIS**
England, Taiwan, and China

MEMBERS OF
FANDSTAN
ELECTRIC GROUP

 **AKAPP-STEMMANN**
Netherlands

 **AUSTBRECK**
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