

CATENARIA RIGIDA

RIGID CATENARY







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LA CATENARIA RIGIDA RIGID CATENARY

	Ingombro ridotto	<i>Reduced encumbrance</i>
	Sezione elevata (equivalente a più di 1300 mm ² di rame)	<i>High electric section (equivalent to more than 1300 mm² copper section)</i>
	Assenza di tensione meccanica nel filo di contatto	<i>Unloaded contact wire</i>
	Assenza di dispositivi di tensionamento	<i>No tensioning device</i>
	Ridotto numero di componenti	<i>Reduced number of components</i>
	Semplicità di montaggio e manutenzione	<i>Easy installation and maintenance</i>



Type CE Examination Certificate

Identification Number: 0474 / 1 / CB / 2024 / ENE / ITEN / P0039530 / V02

In accordance with Directive (EU) 2016/797 of 11 May 2016 (as amended)
Assessment according to the Technical Document of ERA 000MRA1044 version 2.0 of December 2022

Object of Assessment (Annex V of Regulation (EU) 2019/250)	[Interoperability Constituent] Rigid Overhead Contact Line
Applicant and Manufacturer (Annex V of Regulation (EU) 2019/250)	Bonomi Eugenio SpA – Via A. Mercanti 17 – 25018 – Montichiari (BS) - Italy
Notified Body	RINA Services S.p.A., Via Corsica, 12 - 16128 Genova - Italia, Notified Body
Assessment Requirements (Annex V of Regulation (EU) 2019/250)	TSI ENE 1301/2014 as amended by EU Regulations 2018/868 of 14/06/2018, 2019/776 of 27/05/2019 and 2023/1694 of 08/09/2023 Directive (UE) 2016/797 Legislative Decree 14 May 2019, n. 57 Directive (UE) 2016/798 Legislative Decree 14 May 2019, n. 50
Exclusions	See annex 1
Module applied (Annex V of Regulation (EU) 2019/250)	Module CB as define Decision 2010/713/UE
Assessment Results (Annex V of Regulation (EU) 2019/250)	The rigid overhead contact line as identified above was shown to comply with the Assessment Requirements as “interoperability constituent”, subject to any Conditions and Limits of use as listed below. The Assessment Results are provided in detail within the accompanying Annex and document. The Essential Requirements have been assessed as being met through compliance with the requirements of the relevant TSI only.
Conditions and Limits of use (Annex V of Regulation (EU) 2019/250)	This certificate is valid for the project, the characteristic data and the operating parameters described in Annex 1.
Annex (Annex V of Regulation (EU) 2019/250)	Annex 1 to certificate 0474/1/CB/2024/ENE /ITEN/P0039530/V02
Document annexed to this certificate (Annex V of Regulation (EU) 2019/250)	The list of documents is indicated in the Technical Dossier reported in Annex 1. These documents are part of the certificate. The list of documents is indicated in the Technical Dossier reported in Annex 1.
Validity (Annex V of Regulation (EU) 2019/250)	Start: 10/10/2024 End: 9/10/2031 This certificate is valid for the object of assessment as mentioned above and as long as the Object of Assessment and the relevant technical documentation are not modified. The Notified Body must be promptly informed of any changes. This certificate amends certificate number 0474/1/CB/2023/ENE/ITEN/P0039530/V01 (dated 10/10/2024)

Place of Issue and Date of Emission: **GENOA (ITALY) - 18/10/2024**

Identification Number of Notified Body: **RINA Services**

0474 - Via Corsica 12, Genoa

Signature:

On behalf of RINA Services S.p.A.

Beniamino Faragona

Transport & Infrastructure Certification
Director



Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements
RINA Services S.p.A.

Signature:

On behalf of RINA Services S.p.A.

Vincenzo Manni

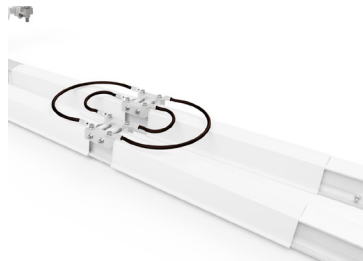
Railway Certification Senior Technical Manager

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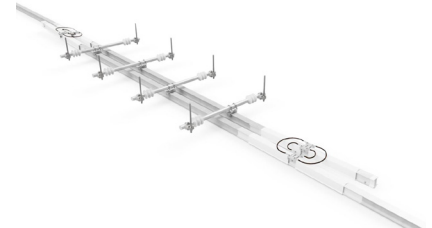
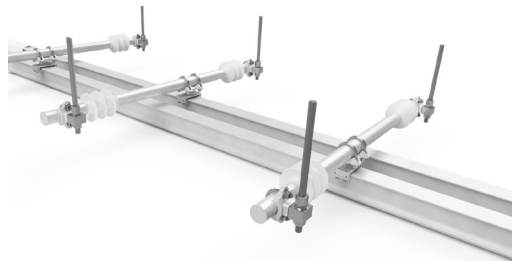
CONFIGURAZIONE DEGLI ASSIEMI ASSEMBLY CONFIGURATION

SOVRAPPOSIZIONE NON ISOLATA 3 kV

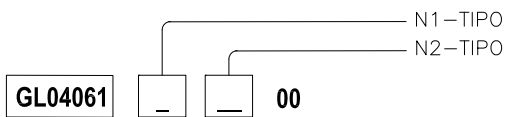


Cod. GL04061__00

OVERLAP ARRANGEMENT 3 kV



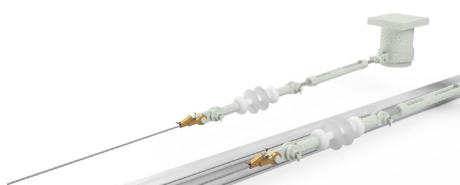
DEFINIZIONE CODICE DI ASSIEME (NOTA 1):



N1 - TABELLA SOSPESIONI	
TIPO	CODICE REF. 1
0	GL0406400000
A	GL04064A0000
B	GL04064B0000

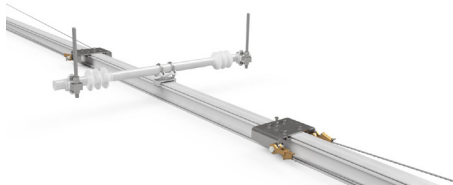
N2 - TABELLA BARRA RAMPA			
TIPO	L (mm)	L1 (mm)	CODICE REF. 2
08	8000	3000	GLT3522L0800
10	10000	5000	GLT3522L1000
12	12000	7000	GLT3522L1200

PUNTO FISSO 3 kV



Cod. GL0406200000

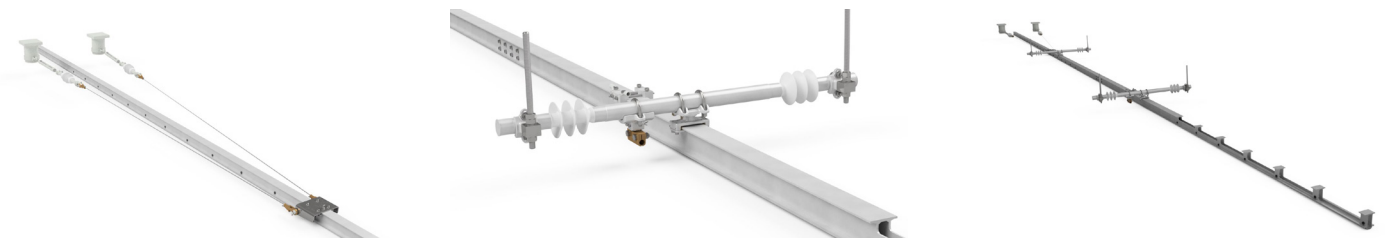
MIDPOINT ARRANGEMENT 3 kV





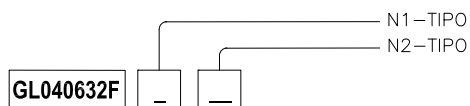
TRANSIZIONE FLESSIBILE - RIGIDA 3 kV

TRANSITION ZONE 3 kV



Cod. GL040632FB10

DEFINIZIONE CODICE DI ASSIEME (NOTA 1):



N1 - TABELLA SOSPESIONI	
TIPO	CODICE REF. 1
0	GL0406400000
A	GL04064A0000
B	GL04064B0000

N2 - TABELLA BARRA DI ANCORAGGIO				
TIPO	L (mm)	L1 (mm)	L2 (mm)	CODICE REF. 2
08	8000	3000	1700	GLT3525L0800
10	10000	5000	2100	GLT3525L1000
12	12000	7000	2500	GLT3525L1200

**IL PROFILO
BAR SECTION**

Dimensioni / <i>Dimensions</i>	110 mm x 85 mm
Sezione / <i>Section</i>	2223 mm ²
Materiale / <i>Material</i>	Lega di alluminio 6060 T6 / <i>Aluminum alloy 6060 T6</i>
Peso / <i>Weight</i>	6,1 kg/m



LE SOSPENSIONI ISOLATE INSULATED SUPPORTS

Sospensione standard 3 kV con foro per scanalatura
3 kV standard support with slot bore



Type 0 - With galvanized steel and fittings. Cod. GI0176200000



Type AL – with aluminium end fittings. Cod. GI01762AL000

Sospensione per sovrapposizione isolata 3 kV con foro per scanalatura

3 kV insulated overlap support with slot bore



Type 0 - With galvanized steel and fittings. Cod. GI0176300000



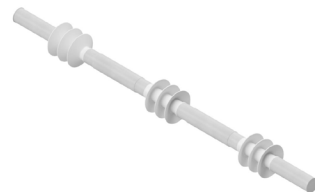
Type AL – with aluminium end fittings. Cod. GI01763AL000

Sospensione standard 3 kV con terminali cilindrici
3 kV standard support with cylindrical end fittings



Sospensione per sovrapposizione isolata 3 kV con terminali cilindrici

3 kV insulated overlap support with cylindrical end fittings



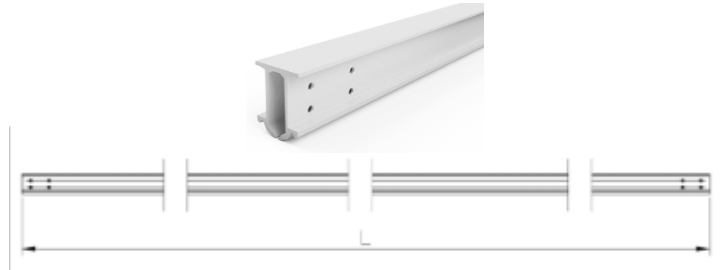


LE BARRE BARS

BARRA DRITTA / STRAIGHT BAR

Available lengths:

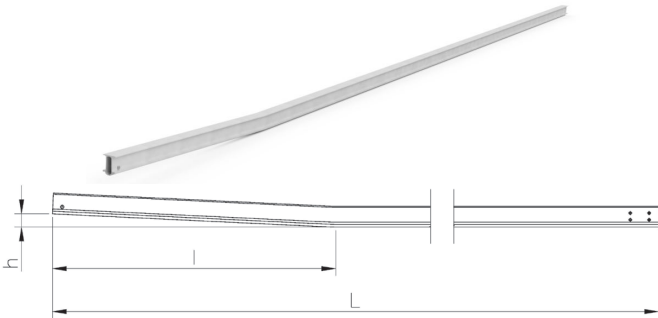
- L = 8000 mm (cod. GS03473L0800)
- L = 10000 mm (cod. GS03473L1000)
- L = 12000 mm (cod. GS03473L1200)



BARRA RAMP / RAMP BAR

Available dimensions Lxhx:

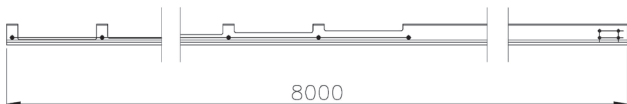
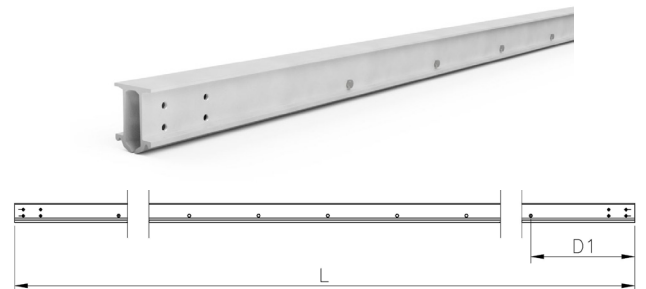
- L = 1000x1500x70 mm (cod. GLT3522L0400)
- L = 6000x1500x70 mm (cod. GLT3522L0600)
- L = 8000x1500x70 mm (cod. GLT3522L0800)
- L = 10000x1500x70 mm (cod. GLT3522L01000)
- L = 12000x1500x70 mm (cod. GLT3522L01200)



BARRA DI ANCORAGGIO / ANCHORING BAR

Available dimensions LxD1:

- L = 8000x600 mm (cod. GLT3525L0800)
- L = 10000x1600 mm (cod. GLT3525L01000)
- L = 12000x2600 mm (cod. GLT3525L01200)



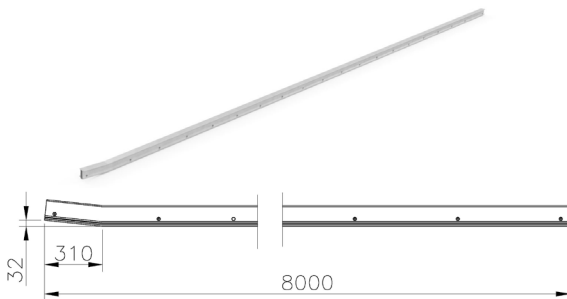
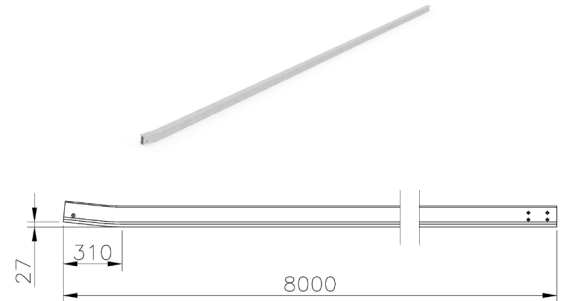
BARRA DI TRANSIZIONE / TRANSITION BAR

- Cod. GLT351300000



BARRA CON RAMPA RIDOTTA / SHORT RAMP BAR

- Cod. GLT4048L8000



BARRA DI ANCORAGGIO CON RAMPA PER LA PORTA DEL DEPOSITO

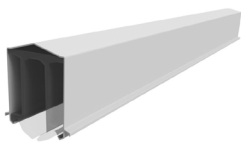
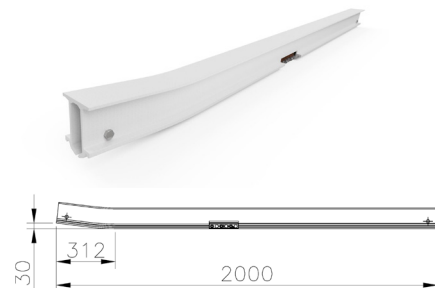
ANCHORING BAR WITH RAMP FOR DEPOT FACILITY DOOR

- Cod. GLT4049L8000

BARRA CORTA DI ANCORAGGIO CON RAMPA PER LA PORTA DEL DEPOSITO

SHORT ANCHORING BAR WITH RAMP FOR DEPOT FACILITY DOOR

- Cod. GLT4090L2000 - GM0316100000



COPERTURA PER LA BARRA / COVER FOR BARS

Available lengths:

- L = 5000 mm
- L = 6000 mm
- L = 3100 mm
- L = 600 mm

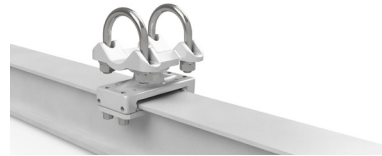


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COMPONENTS



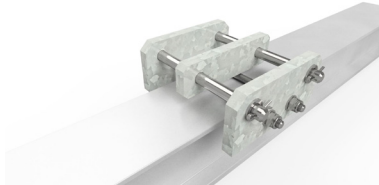
CONNECTION PLATES

Cod. GLT352300000



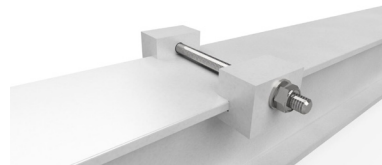
INSULATED SUSPENSION CONNECTION CLAMP

Codes: GLT352000000 / GLT3520A0000 / GLT3520B0000



**MID POINT ANCHOR CLAMP ROC SECTION WITH
LENGHT >100 m**

Cod. GLT352100000



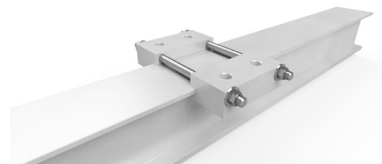
**MID POINT ANCHOR CLAMP FOR ROC SECTION WITH
LENGHT <100 m**

Cod. GLT352400000



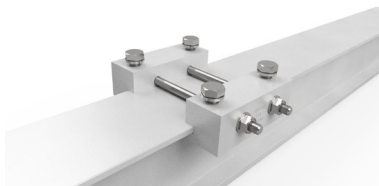
ANCHORING CLAMP

Cod. GLT362600000



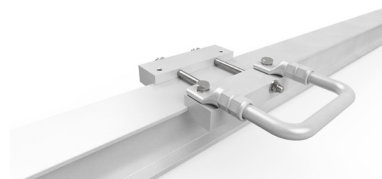
FEEDING CLAMP

Cod. GLT351800000



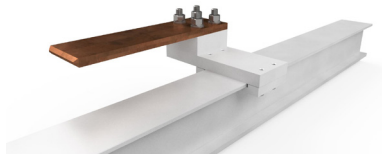
FEEDING CLAMP WITH SCREWS

Cod. GLT403400000



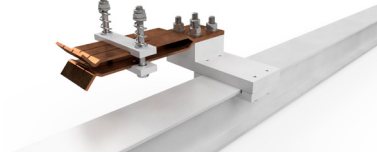
EARTHING CLAMP

Cod. GLT351900000



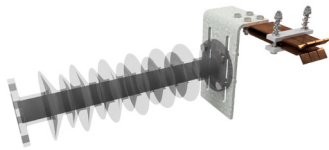
MALE ELECTRICAL CONNECTION FOR RETRACTABLE RIGID CATENARY

Cod. GLT403300000



FEMALE ELECTRICAL CONNECTION FOR RETRACTABLE RIGID CATENARY

Cod. GLT403200000



FEMALE EARTH ELECTRICAL CONNECTION FOR RETRACTABLE RIGID CATENARY

Cod. GLT411300000



ELECTRICAL CONNECTION LOOP 85 mm² WITH TINNED CABLE LUGS

Codes GLT4035A0000 / GLT4035B0000



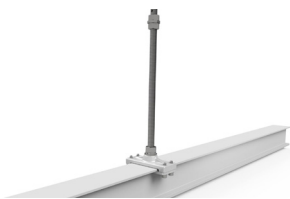
JOINTED SUPPORT FOR THREADED RODS

Codes GLT375900000 / GLT3759A0000



SUPPORT FOR THREADED RODS

Cod. GLT406200000



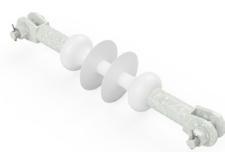
CONNECTION CLAMP WITH THREADED RODS

Cod. GLT406300000



DOUBLE CONNECTION PLATE

Cod. GLT372600000



3 kV ANCHORING INSULATOR

Cod. ZFSE66008000



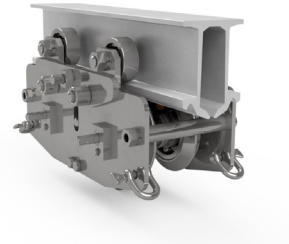
ACCESSORI
ACCESSORIES



MASCHERA DI FORATURA PER BARRE DI CATENARIA RIGIDA

DRILLING TOOL FOR RIGID CATENARY BARS

Cod. GLT412200000



STRUMENTO DI INSERIMENTO DEL FILO DI CONTATTO

CONTACT WIRE INSERTION TOOL

Cod. 15199009



INGRASSATORE

GREASER

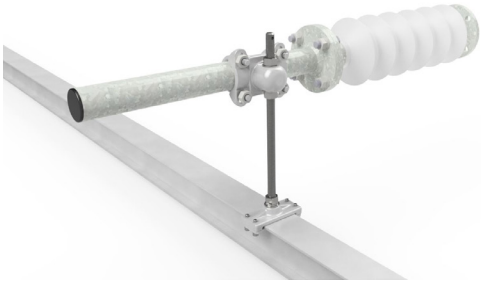


DIMA DI TAGLIO

CUTTING TOOL



CATENARIA RIGIDA RETRATTILE
RETRACTABLE RIGID CATENARY



SUPPORT FOR RETRACTABLE RIGID CATENARY 25 kV
INSULATED SUPPORT FOR RETRACTABLE RIGID
CATENARY

Cod. GL0422100000





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