CHARDON GROUP

CSR

Overhead Cable Support Safety Device

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APPLICATION

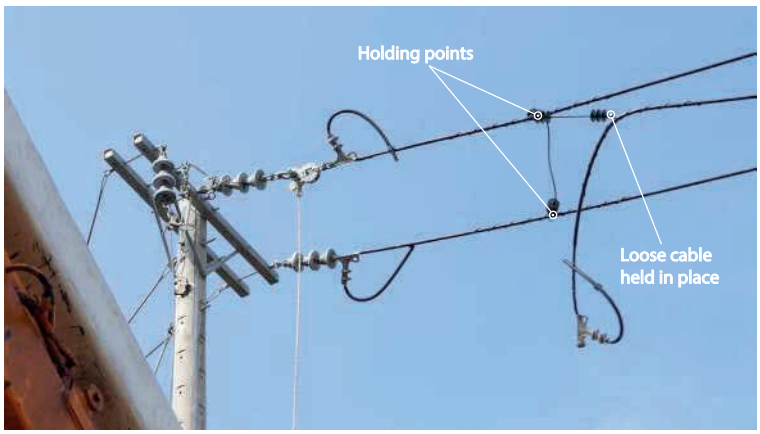
Downed power lines are one of the leading causes of electrical related accidents. Downed lines are common after storms and high winds, which can carry enough force to snap cables out of power poles, leading to power outages and potentially endangering people nearby the downed wires. The Chardon Cable Support Rope is designed to hold overhead power distribution lines from hanging low in the event of line breakage. Chardon also offers the UCSR, an alternative design carrying better technical properties.

Three-phase power lines with Cable Support Safety Device installed.

HOW TO INSTALL

The installation of the cable support safety device is simple and requires no special tools or training.

The wire grip is inserted into the wire-holding component, and the wire grip is then looped around the power line. This process is repeated for each power line to ensure a secure fit.



Demonstration of power line breakage and the device's operation.

HOW IT WORKS

If a power line breaks or falls, the cable support safety device activates to prevent the line from falling to the ground. The wire grip holds the wire-holding components and acts as a safety net, preventing the power line from sliding or falling.

The device keeps the power line suspended in the air, reducing the risk of further damage t or injury to nearby pedestrians and animals.

PRODUCTION TESTS

Tests conducted in accordance with Standards JIS C 3005, JIS K 6911, JEC 0102.

- Voltage Withstand - 65 kV (Wet, 1 min); 75 kV (Dry, 1 min)
- Lightining Impulse Withstand (BIL) - 174 kV
- Failure Load - 3.6 kN
- Size/Distance Between Rope Eyes - 700&1000

COMPONENTS OF THE CHARDON CABLE SUPPORT SAFETY DEVICE

Power Cable

Three-phase power cables where the wire grip is attached to.

Wire Grip

Pre-molded weather and wear resistant stainless steel wire.

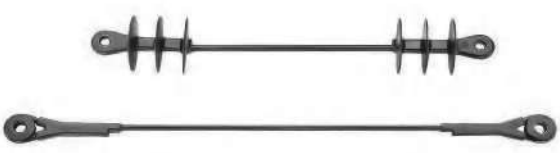
Wire-Holding Component

Made of polypropylene with good weather resistance and flame retardance.

Individual Components

Wire Grip

Wire-Holding Component



CABLE SUPPORT ROPE TYPES & PERFORMANCE PARAMETERES

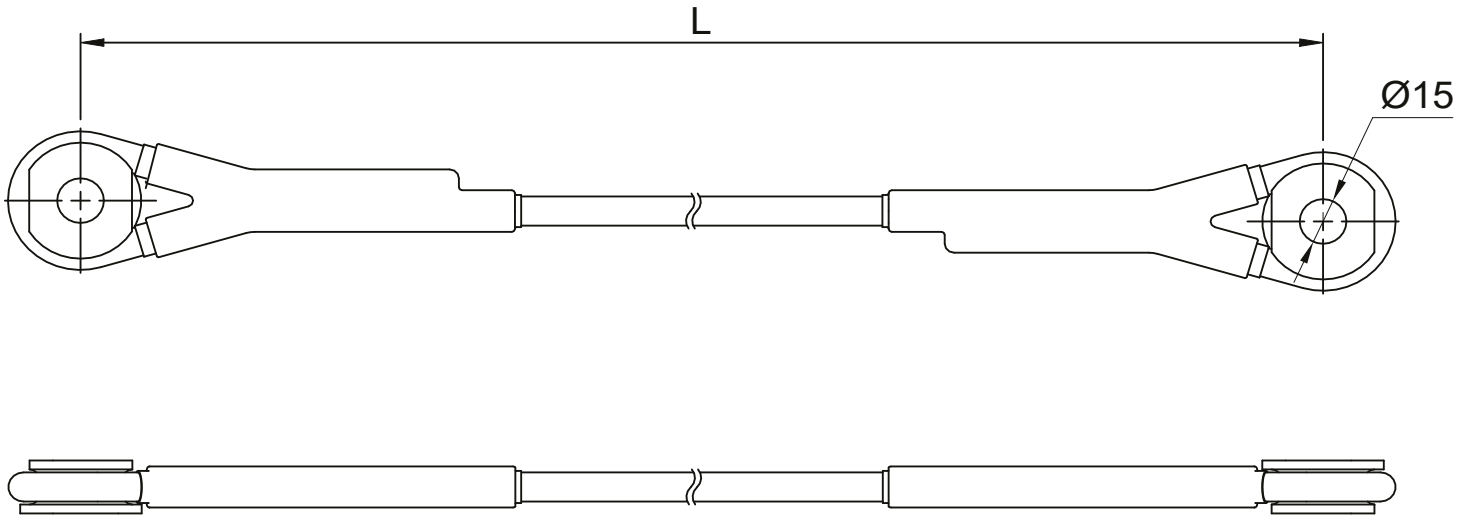
Performance Parameters	UCSR Series	CSR Series
Low Frequency Dry Flashover Voltage	130kV	75kV
Low Frequency Wet Flashover Voltage	100kV	65kV
Front-of-wave Impulse Sparover Voltage	190kV	174kV
Radio Interference Voltage	20kV Max.RIV@1000kHz: 10uV	N/A
Salt Spray Accelerated Aging Test	Compliant with IEEE Std C62.11 salt spray accelerated aging test, MCOV 15.3kV	N/A
Light Exposure and Electrical Stress Accelerated Aging Test	Compliant with IEEE Std C62.11 light exposure and electrical stress accelerated aging test, MCOV 15.3 kV	After 2000 hours of UV light exposure, the product still retains mechanical and electrical integrity
Insulation Test	After the salt water is boiled for 8H, the resistance at both ends reach 2000MΩ under 1000V	
Cable Tensile Strength	600kgf	367 kgf

Applicable Environment Conditions:

- Temperature: 20-40 °C
- Altitude: no higher than 1000 meters

ORDERING AND DIMENSIONAL INFORMATION

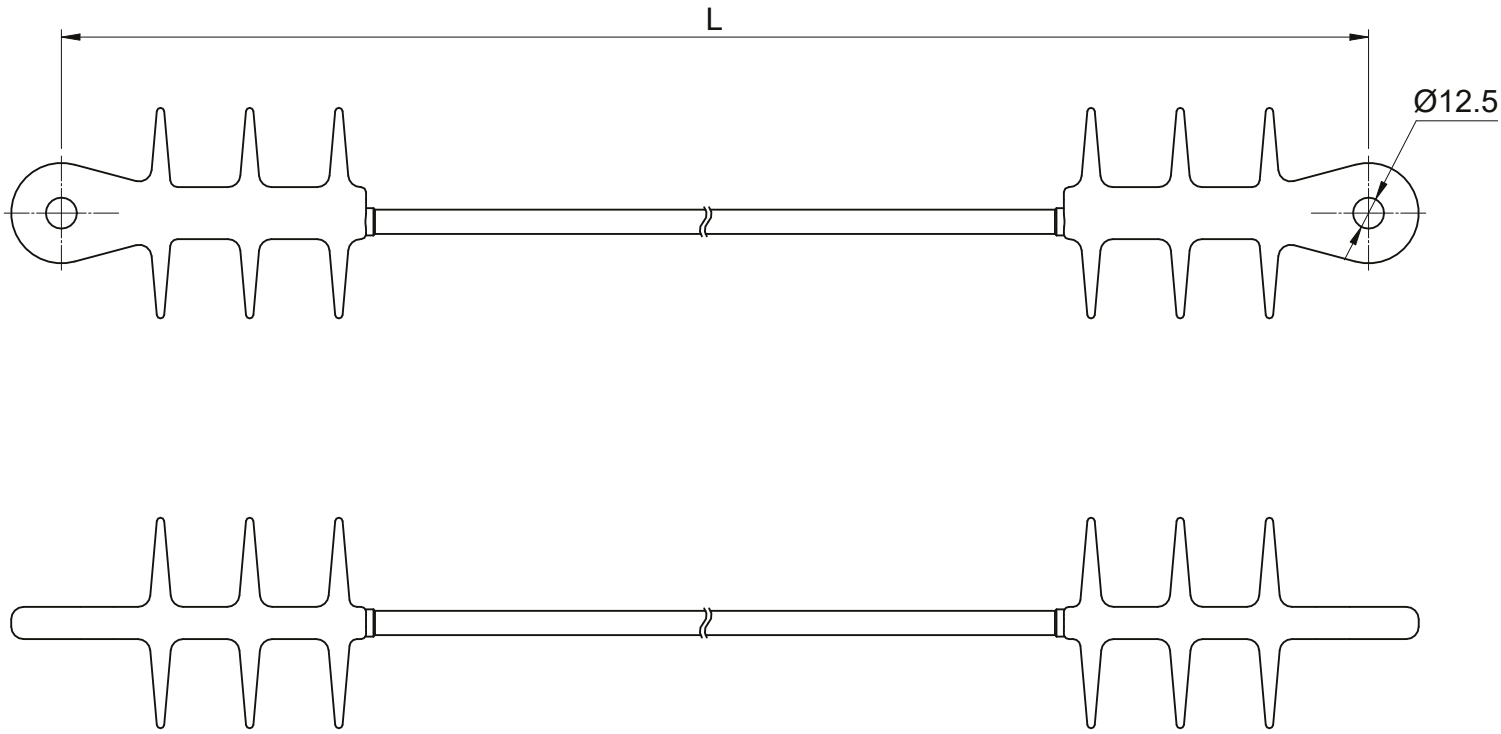
CSR Series



Chardon Part Number	"L" (mm)
CSR-700	715
CSR-1000	1015

ORDERING AND DIMENSIONAL INFORMATION

U-CSR Series



Chardon Part Number	"L" (mm)
U-CSR-500	520
U-CSR-1100	1120

WIRE GRIP APPLICATION

To prevent downed power lines from touching the ground and endangering nearby structures and pedestrians, the grip component of the supporting rope must have sufficient strength to support the weight of the power lines when it breaks off. With its durable coating, Chardon's Wire Grip is resistant to adverse weather and has been tested to withstand up to 2000 hours of sunshine without negative effects to its pull-off strength.

PERFORMANCE PARAMETERS

Performance Parameters	CSG-B	CSG-C	U-CSG B	U-CSG C
L(mm)	850	850	820	1200
P(mm)	109	173	132	132
Material	GS	GS	SUS	SUS
Coating	Nylon	Nylon	Nylon	Nylon
Core diameter (mm)	4.2	4.2	5	5
Cable Range (mm)	23.30-25.70	36.65-38.15	14.50-16.50	25.50-27.50
Vertical Load Test(N)	1735	1950	1305	1800
Horizontal Load Test(N)-10mm slide	785	785	985	2942

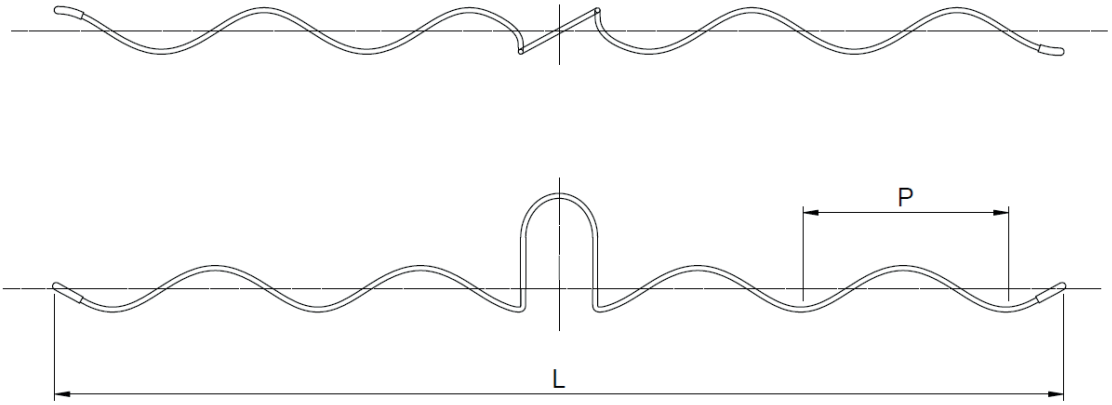
PRODUCTION TESTS

Tests conducted in accordance with Standards JIS C 3005, JIS K 6911, JEC 0102.

- Vertical Load Tests
- Horizontal Load Tests
- Size Measurement Inspection

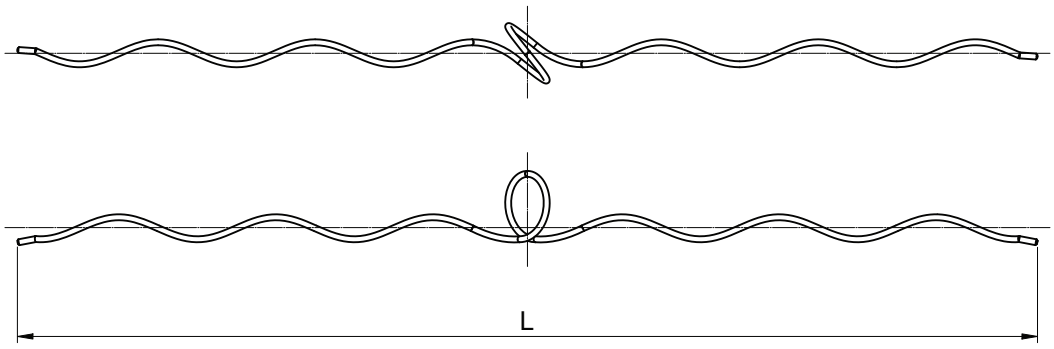
ORDERING AND DIMENSIONAL INFORMATION OF WIRE GRIP

Wire Grip Series



Chardon Part Number	"L" (mm)	"P" (mm)	Cable Range (mm)
CSG-B	850	109	23.30-25.70
CSG-C	850	103	36.65-38.15

"P" (Pitch): the distance between each loop or coil in the cable support device.



Chardon Part Number	"L" (mm)	"P" (mm)	Cable Range (mm)
U-CSG-B	820	132	23.30-25.70
U-CSG C	1200	132	36.65-38.15

"P" (Pitch): the distance between each loop or coil in the cable support device.

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