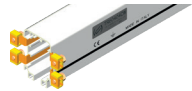
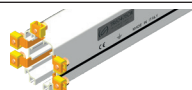




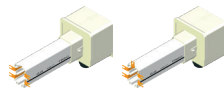
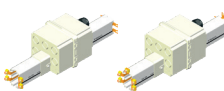
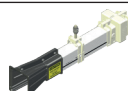
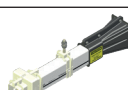

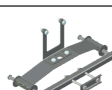




Energy transmission system fitted with 4 or 5 conductors with joints.  
Operating current: 40 or 60 A, depending on the busbar.  
Marking: CE, EAC.

# TR60 PRE-MOUNTED

## BUSBAR SYSTEM WITH 4 OR 5 PRE-MOUNTED CONDUCTORS (SIZES: 40 A, 60 A)

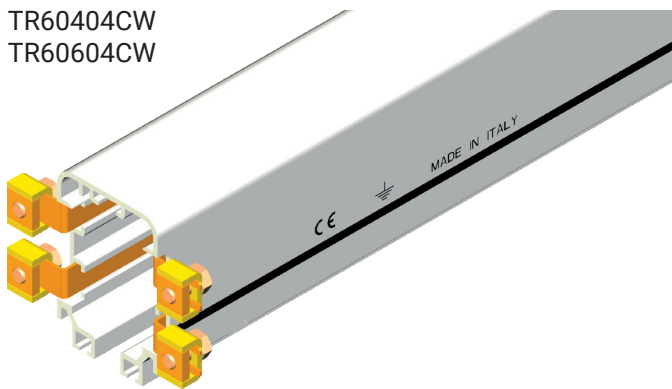
	TR60...4CW 4 conductors 40 / 60 A busbar
	TR60...5CW 5 conductors 40 / 60 A busbar
	TR6001W Joint unit
	TR6002W Plastic hanger clamp
	TR6020 Metallic hanger clamp
	TR6006W End cap
	TR6003A4W - TR6003A5W 4 or 5 conductors head feed
	TR6008A4W - TR6008A5W 4 or 5 conductors in-line feed
	TR6034A4W - TR6034A5W 4 or 5 conductors left end transfer guide
	TR6035A4W - TR6035A5W 4 or 5 conductors right end transfer guide
	TR6004 - TR6005 4 or 5 conductors trolley current collector
	TR8538 Spring loaded towing arm

	TR8557 Towing arm with chain
	TR6007 Towing arm bracket
	TR8510 Towing arm
	TR6013 Double trolley support
	TR6014W Fixed point
	TR6012 Gasket
	Accessories

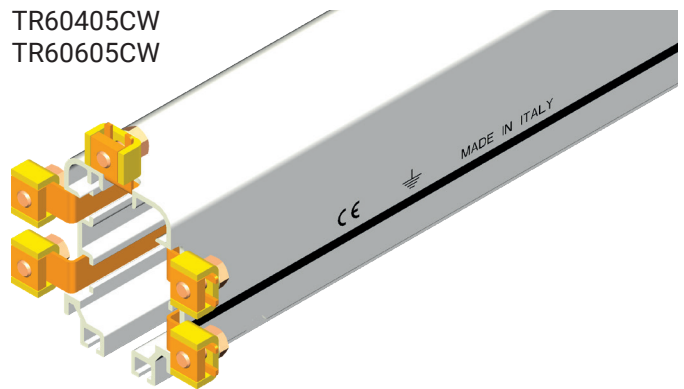
# TR60...4CW TR60...5CW

## BUSBAR

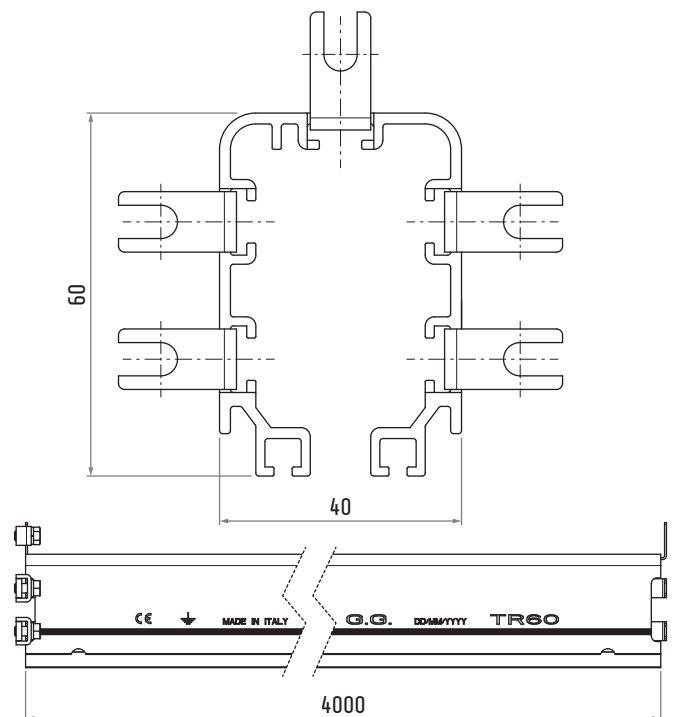
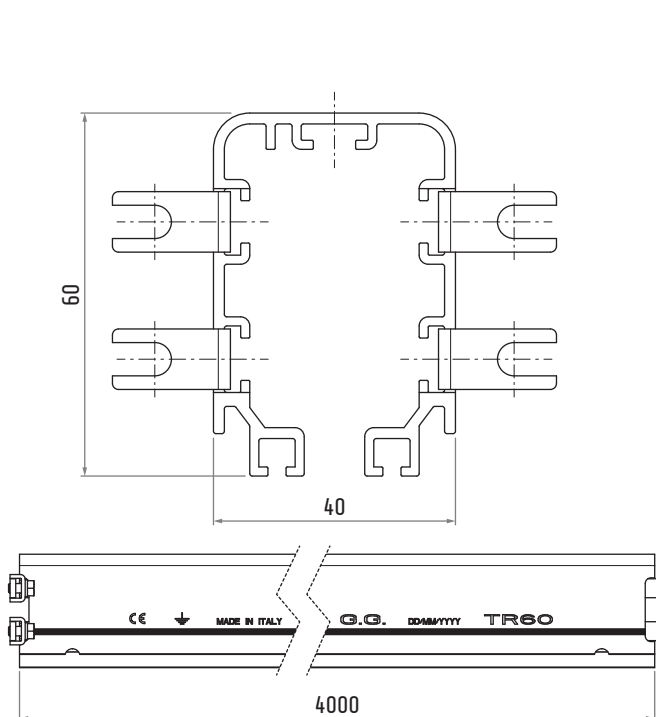
TR60404CW  
TR60604CW



TR60405CW  
TR60605CW



Custom curved bars available on request (with 4 conductors only and with a minimum radius of 1000 mm).



Dimensions in mm / illustrations NOT in scale

Conductors	4	TR60404CW	TR60604CW
	5	TR60405CW	TR60605CW
Conductors material		ETP copper	ETP copper
Rated current	23°C	40 A	60 A
Rated operating voltage	Ue	600 V AC	600 V AC
Frequency		50 Hz	50 Hz
Short circuit current		10 kA	10 kA
Class gG fuse rating		40 A	60 A
Resistance		$17 \cdot 10^{-4} \Omega/\text{m}$	$11.33 \cdot 10^{-4} \Omega/\text{m}$
Impedance		$17.09 \cdot 10^{-4} \Omega/\text{m}$	$11.38 \cdot 10^{-4} \Omega/\text{m}$
Conductors section		10 mm <sup>2</sup>	15 mm <sup>2</sup>
		10 × 1 mm	10 × 1.5 mm
Weight of busbar complete of conductors	4	1.05 kg/m	1.22 kg/m
	5	1.13 kg/m	1.25 kg/m

### Possible configurations



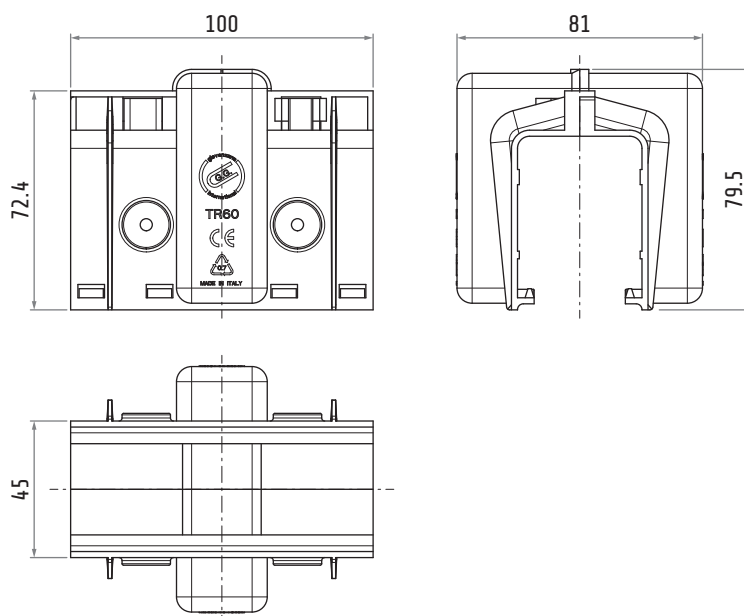
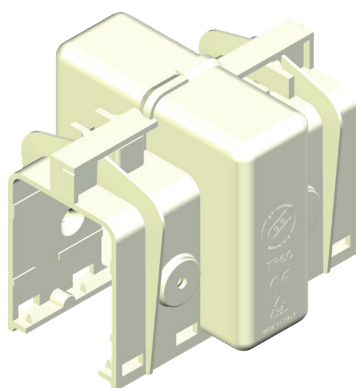
### Busbar

Material	rigid PVC		
Self-extinguish	UL94		V0
	DIN 4102		B2
	D.M. 6/7/83		CI
Ultimate tensile strenght	ISO R527	@ 23°C	430 kg/cm <sup>3</sup>
Yield point	ISO R527	@ 23°C	460 kg/cm <sup>3</sup>
Modulus of elasticity	ISO R178	@ 23°C	30000 kg/cm <sup>3</sup>
Impact resistance	DIN 53453		unbroken
Dielectric strenght	ASTM 149		25 kV/mm
Softening temperature - Vicat	ISO R306 49N		82°C
Protection class	CEI EN 60529		IP13
			IP44 with gasket
Flammability resistance	UL94		V0
	CEI EN 60695-2-1		960°C
Ambient temperature	operating		-30 ... +55°C
	storage		-30 ... +70°C
Admissible trolley speed	max		200 m/min



# TR6001W

## JOINT UNIT



Material	body	nylon
Weight		~90 g



**GIOVENZANA**  
INTERNATIONAL B.V.

Strawinskylaan 1105  
1077 XX Amsterdam, The Netherlands

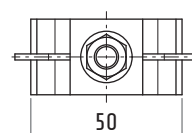
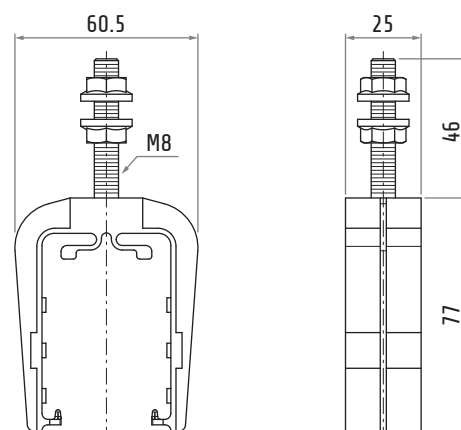
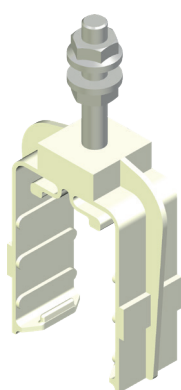


DS-TR6002W-EN / 07.04.2022

**EN**  
datasheet

# TR6002W

## PLASTIC HANGER CLAMP

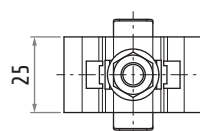
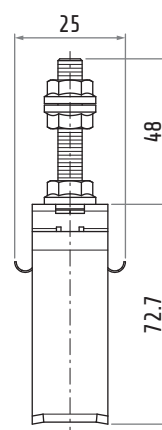
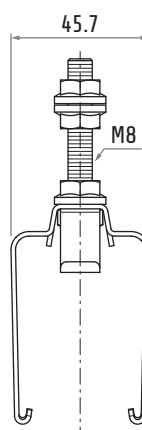
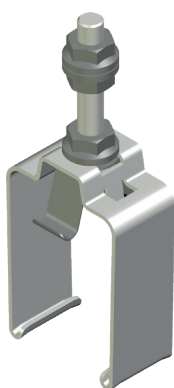


Material	body	nylon
	hardware	galvanized steel
Weight		~70 g



# TR6020

## METALLIC HANGER CLAMP

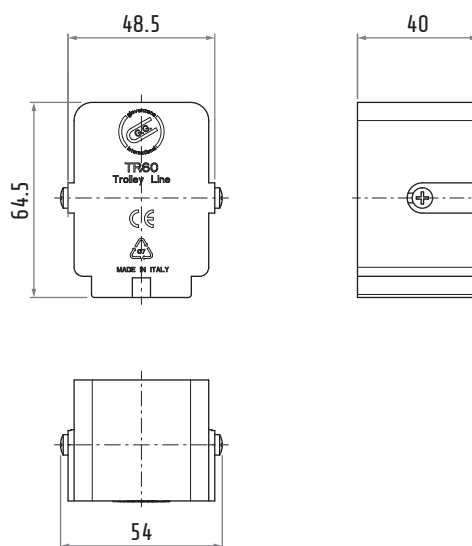
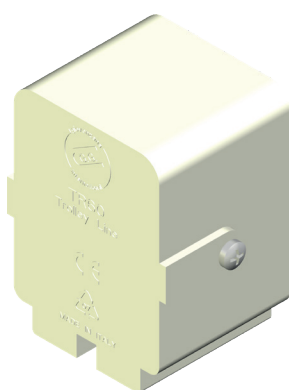


Material	body	galvanized steel
	hardware	galvanized steel
Weight		~100 g



# TR6006W

## END CAP



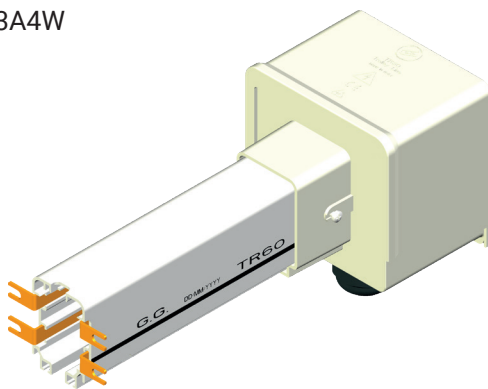
Material	body	nylon
Weight		~35 g



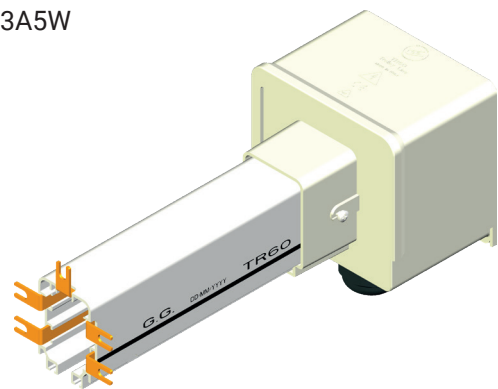
# TR6003A4W TR6003A5W

## HEAD FEED

TR6003A4W

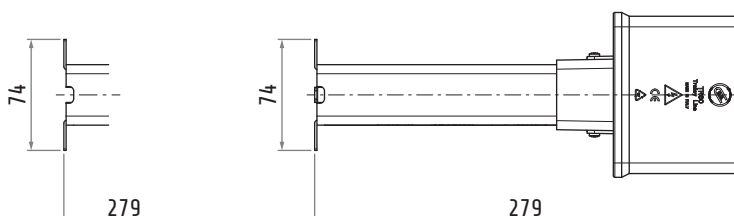
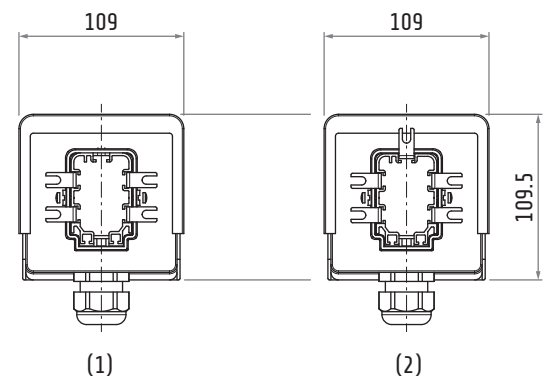
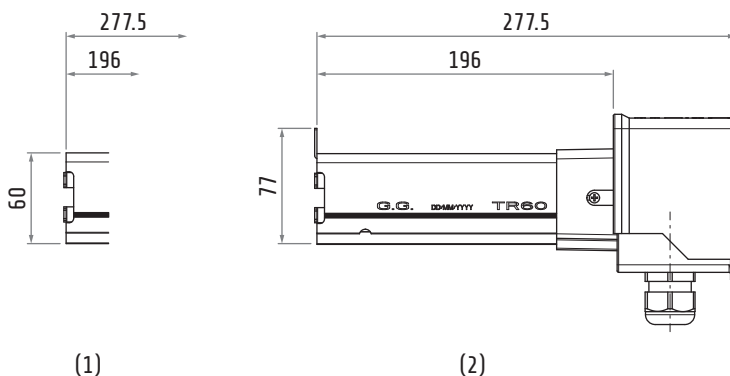


TR6003A5W



Material	body busbar conductors	nylon PVC copper
Weight		~470 g
Conductors		4
Conductors section		15 mm <sup>2</sup> 10 × 1.5 mm

Material	body busbar conductors	nylon PVC copper
Weight		~505 g
Conductors		5
Conductors section		15 mm <sup>2</sup> 10 × 1.5 mm



- |     |              |
|-----|--------------|
| (1) | 4 conductors |
| (2) | 5 conductors |

Dimensions in mm / illustrations NOT in scale

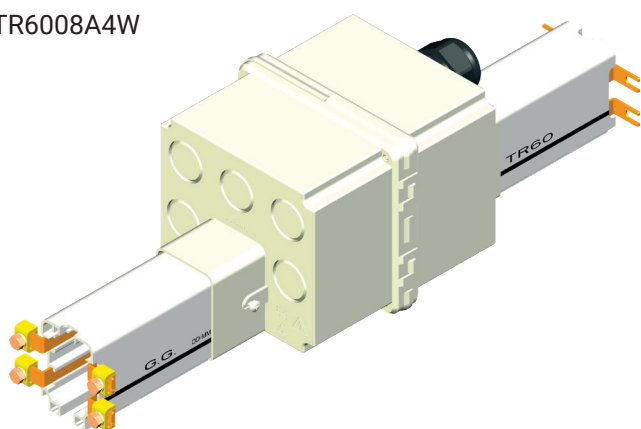


# TR6008A4W

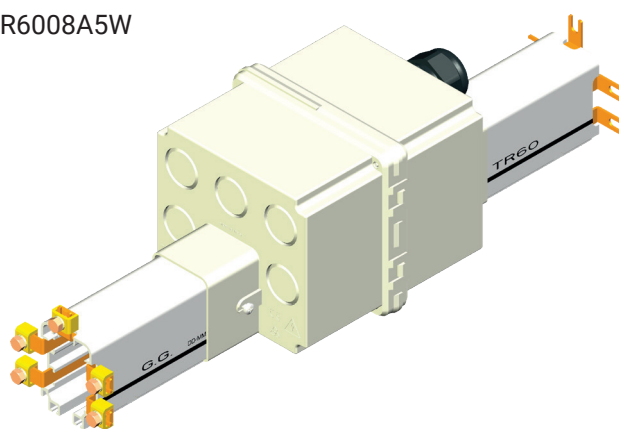
# TR6008A5W

## IN-LINE FEED

TR6008A4W

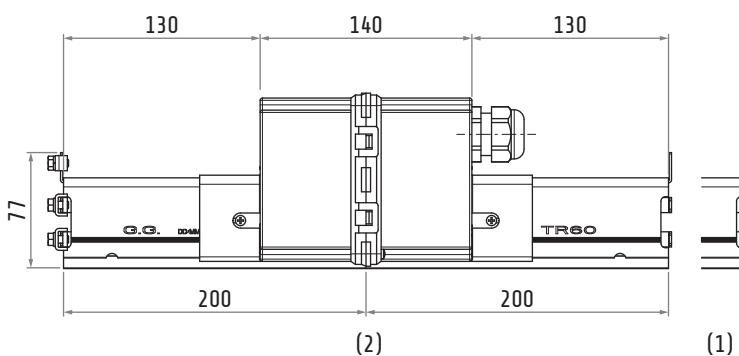
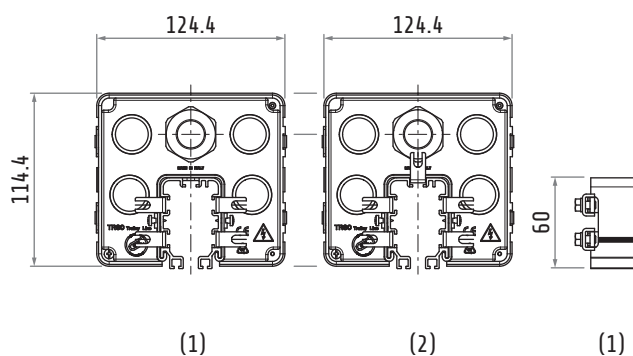


TR6008A5W

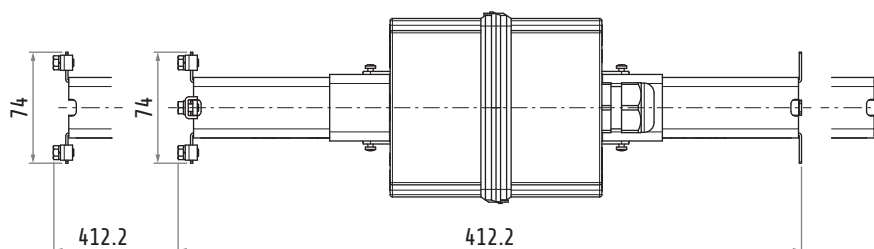


Material	body busbar conductors	nylon PVC copper
Weight		~805 g
Conductors		4
Conductors section		15 mm <sup>2</sup> 10 × 1.5 mm

Material	body busbar conductors	nylon PVC copper
Weight		~875 g
Conductors		5
Conductors section		15 mm <sup>2</sup> 10 × 1.5 mm



- |     |              |
|-----|--------------|
| (1) | 4 conductors |
| (2) | 5 conductors |



Dimensions in mm / illustrations NOT in scale



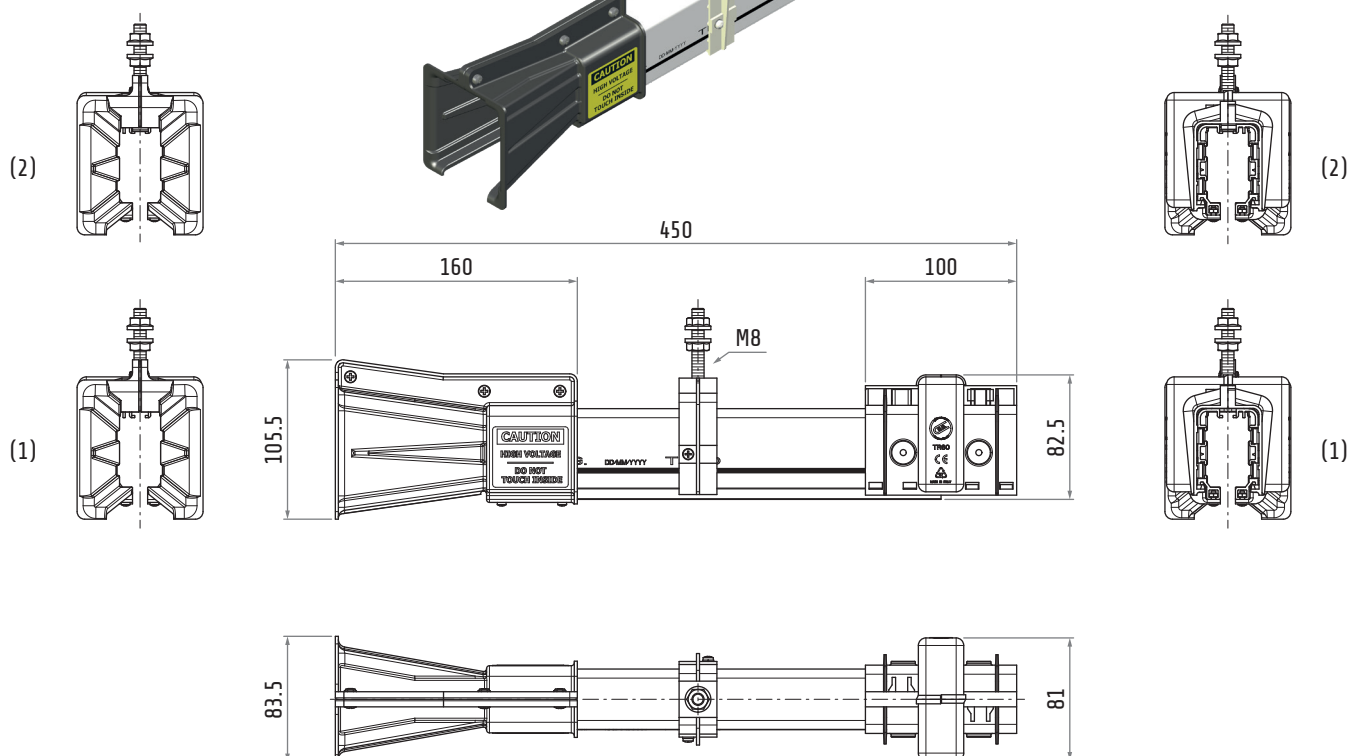
# TR6034A4W TR6034A5W

## LEFT END TRANSFER GUIDE

		TR6034A4W	TR6034A5W
Material	hanger, joint busbar guide conductors hardware	nylon PVC ABS copper galvanized steel	nylon PVC ABS copper galvanized steel
Weight		~ 630 g	~677 g
Conductors		4	5
Conductors section		15 mm <sup>2</sup> 10 × 1.5 mm	15 mm <sup>2</sup> 10 × 1.5 mm

(1) 4 conductors

(2) 5 conductors



Dimensions in mm / illustrations NOT in scale



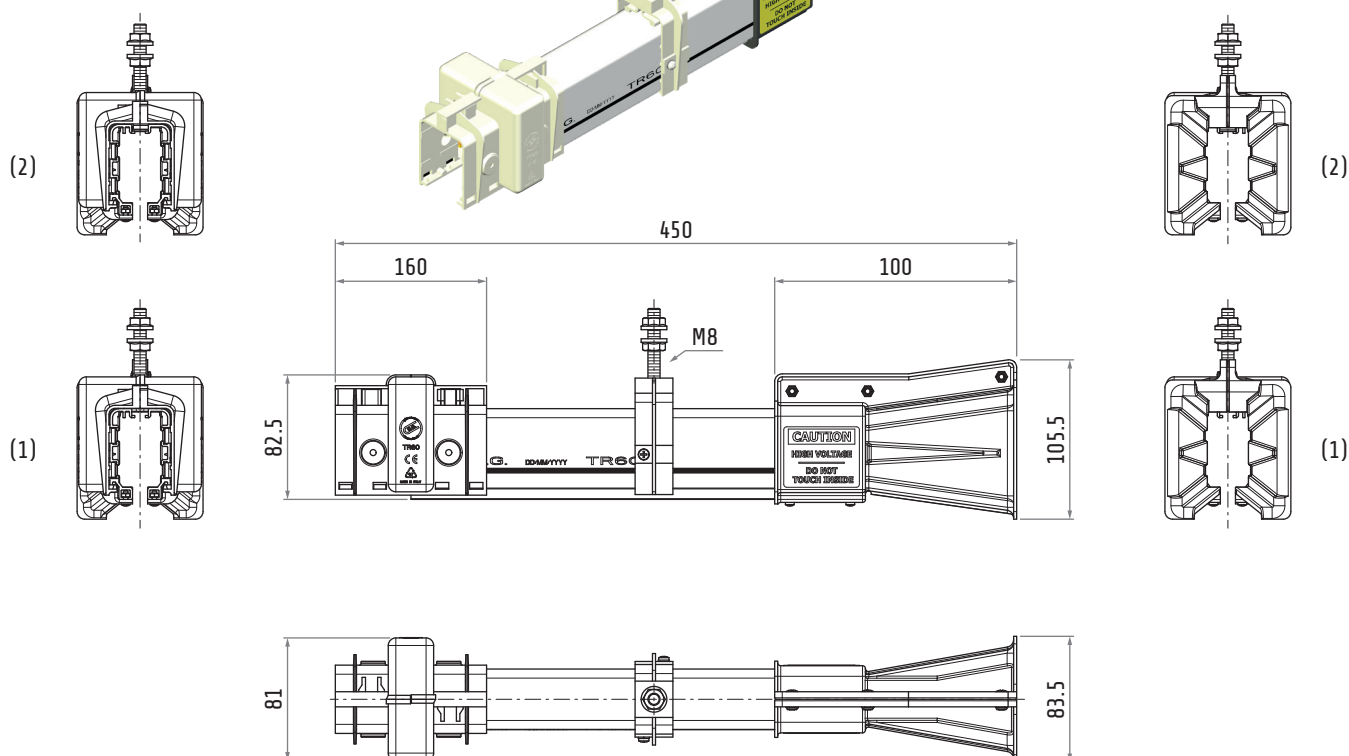
# TR6035A4W TR6035A5W

## RIGHT END TRANSFER GUIDE

		TR6035A4W	TR6035A5W
Material	hanger, joint busbar guide conductors hardware	nylon PVC ABS copper galvanized steel	nylon PVC ABS copper galvanized steel
Weight		~ 630 g	~677 g
Conductors		4	5
Conductors section		15 mm <sup>2</sup> 10 × 1.5 mm	15 mm <sup>2</sup> 10 × 1.5 mm

(1) 4 conductors

(2) 5 conductors



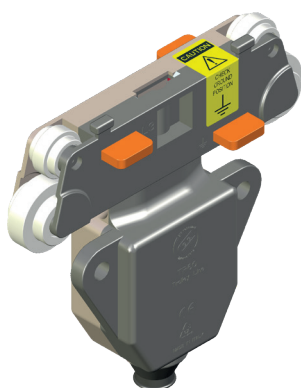
Dimensions in mm / illustrations NOT in scale



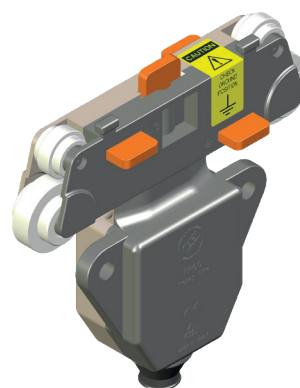
# TR6004 TR6005

## TROLLEY CURRENT COLLECTOR

TR6004

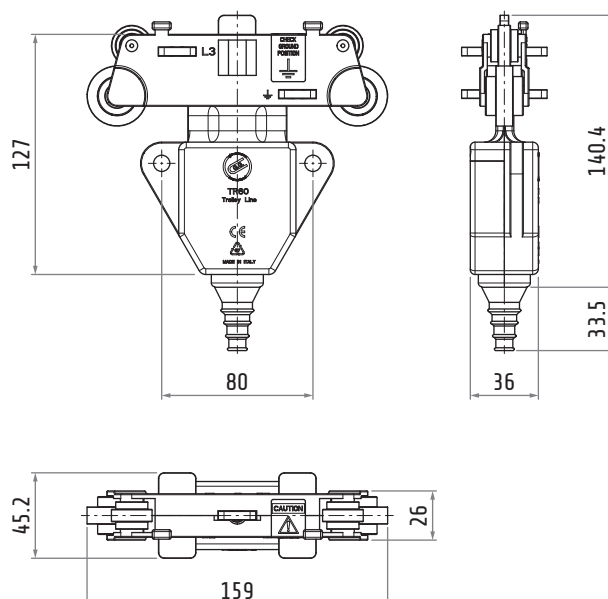
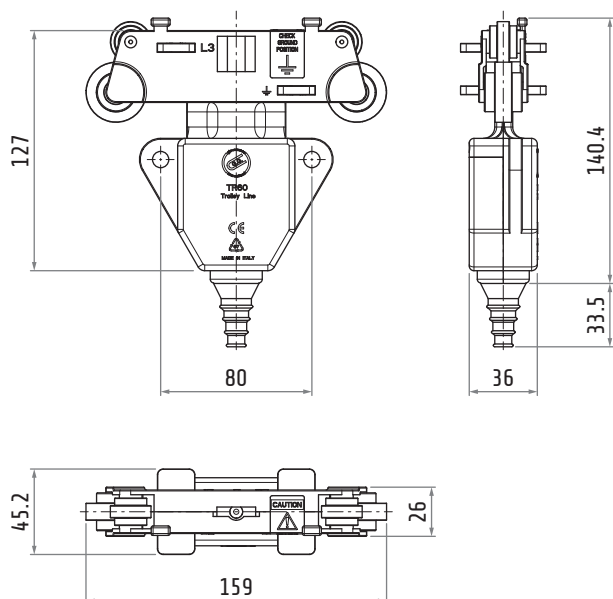


TR6005



Material	body conductors	nylon metal carbon
Weight		~255 g
Amperage		25 A
Conductors		4

Material	body conductors	nylon metal carbon
Weight		~270 g
Amperage		25 A
Conductors		5

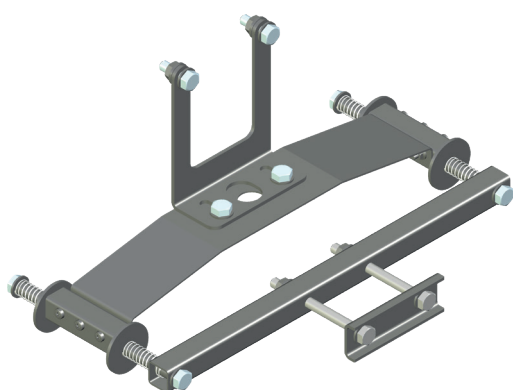


Dimensions in mm / illustrations NOT in scale

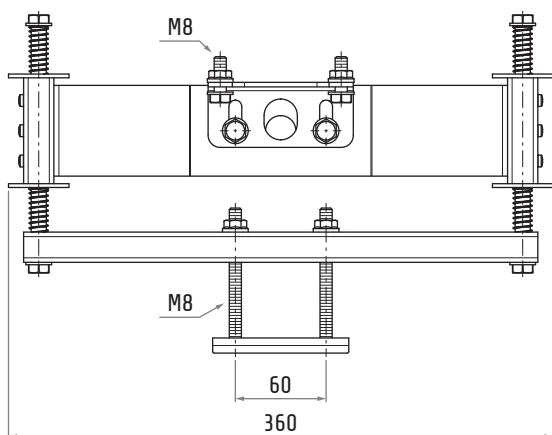
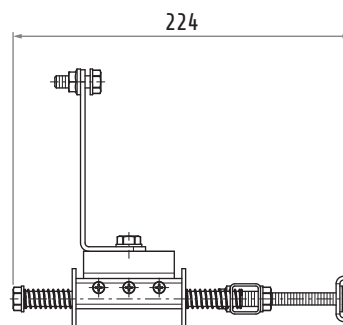
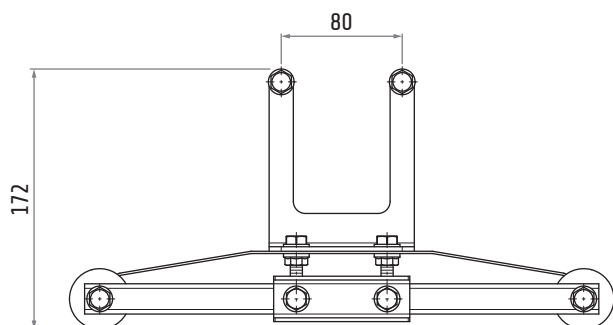


# TR8538

## SPRING LOADED TOWING ARM



Material	body hardware	galvanized steel galvanized steel
Weight		~1.27 kg

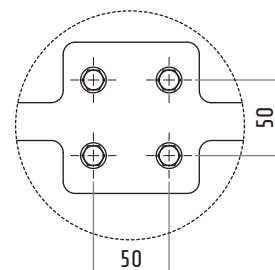
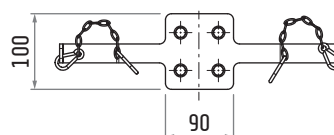
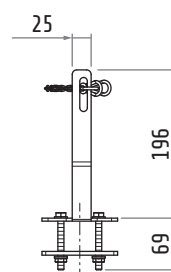
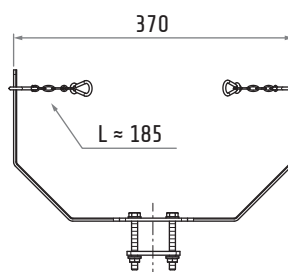
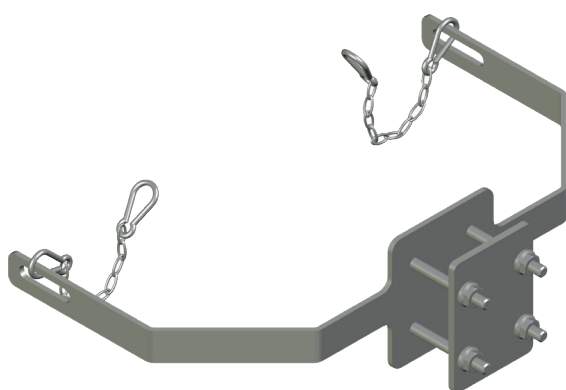


Dimensions in mm / illustrations NOT in scale



# TR8557

## TOWING ARM WITH CHAIN

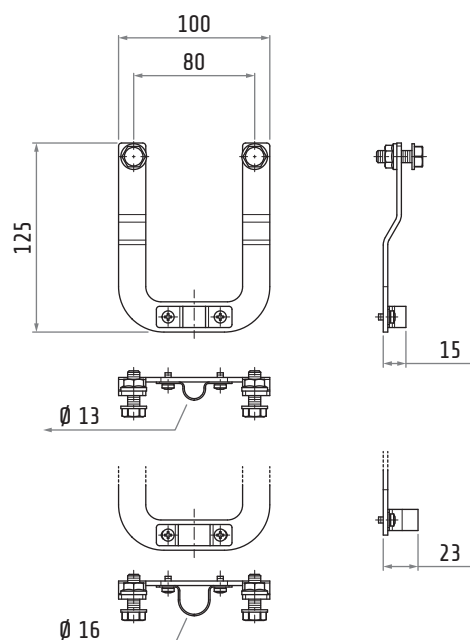
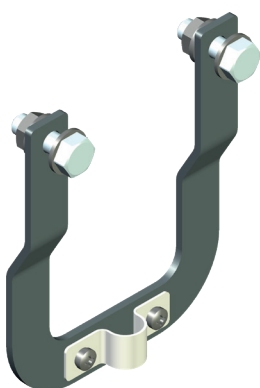


Material	body	galvanized steel
	hardware	galvanized steel
Weight		~1.4 kg



# TR6007

## TOWING ARM BRACKET

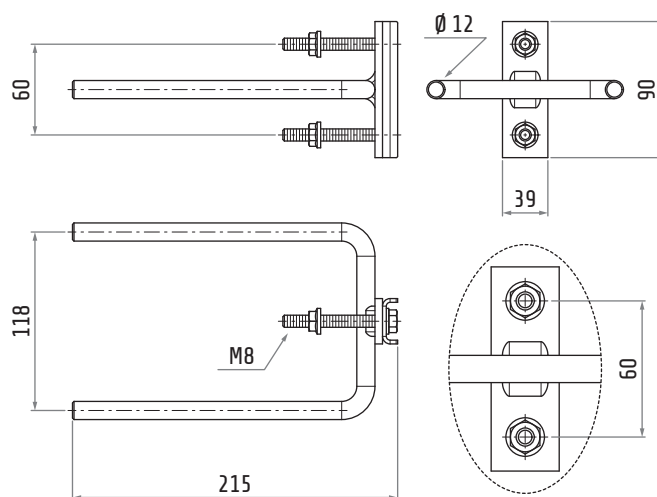
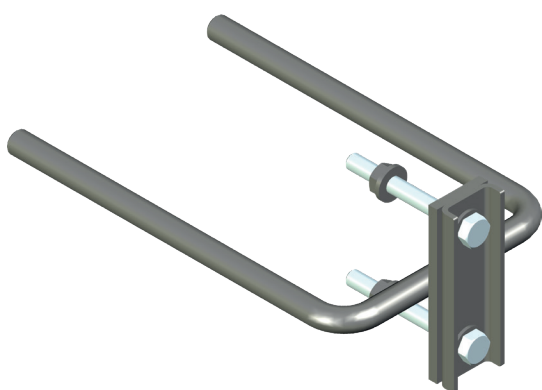


Material	body	galvanized steel
	hardware	galvanized steel
Weight	~185 g	



# TR8510

## TOWING ARM



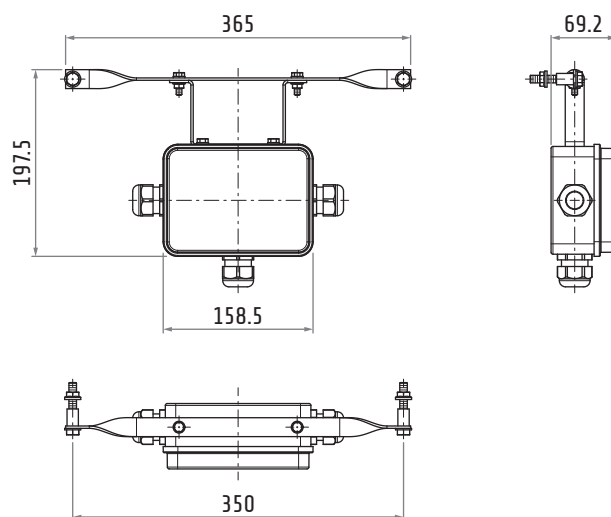
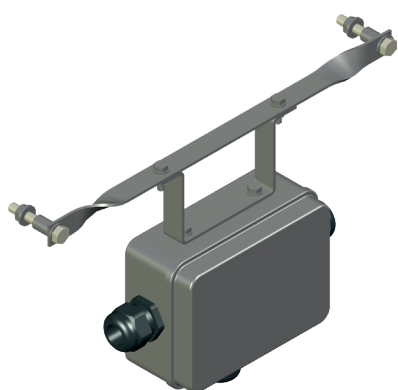
Material	body	galvanized steel
	hardware	galvanized steel
Weight		~725 g





# TR6013

## DOUBLE TROLLEY SUPPORT

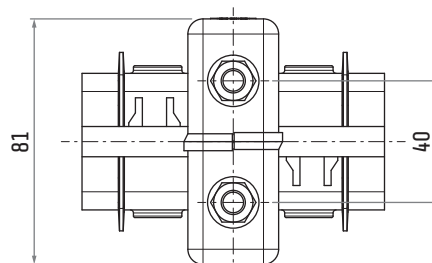
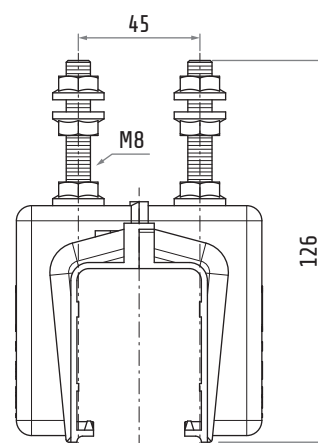
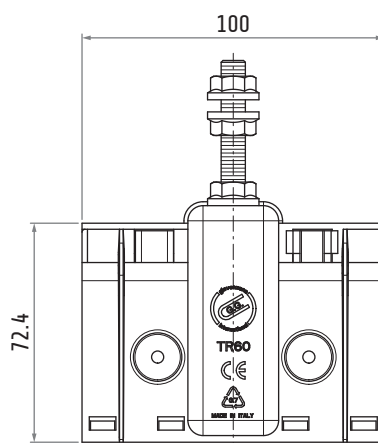
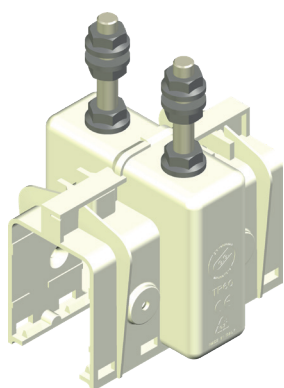


Material	box	plastic
	body	galvanized steel
	hardware	galvanized steel
Weight	~690 g	



# TR6014W

## FIXED POINT

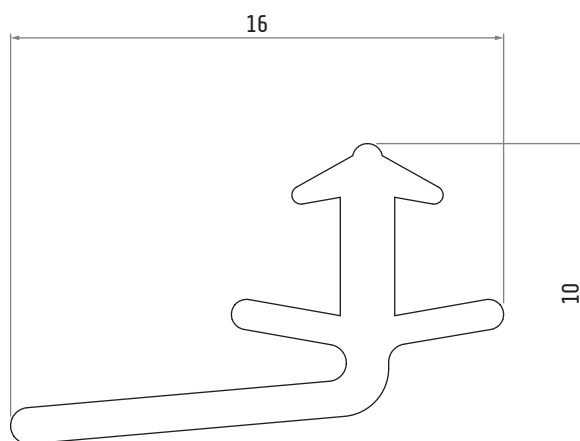
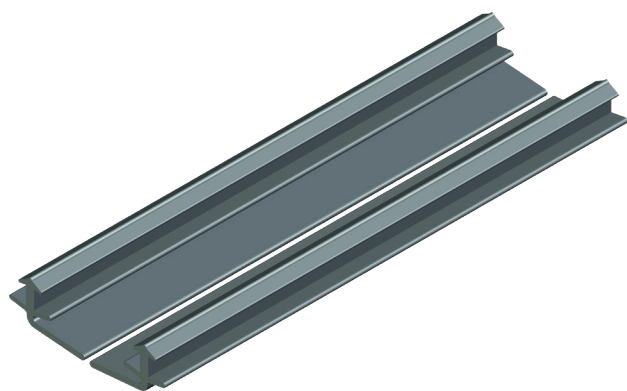


Material	body	nylon
	hardware	galvanized steel
Weight	~160 g	



# TR6012

## GASKET

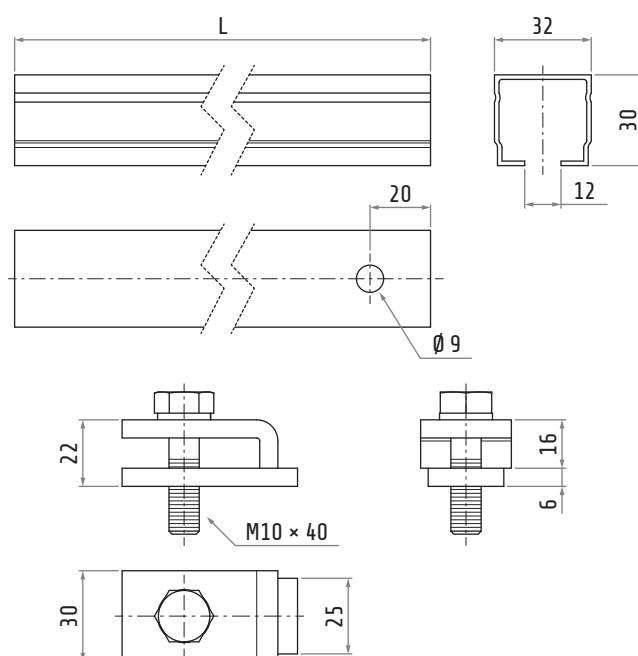
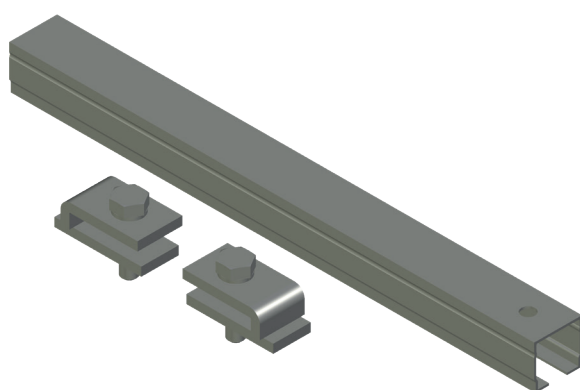


Material	PVC
Weight	~40 g/m



# TR8550 TR8551 TR8552

## SUPPORT BRACKET



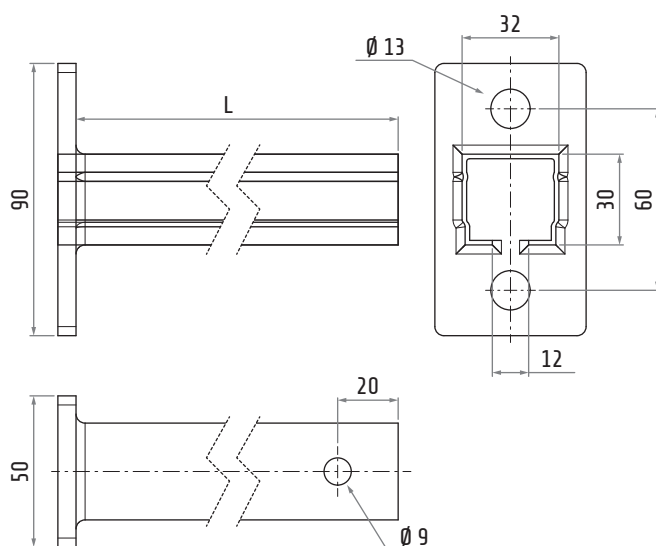
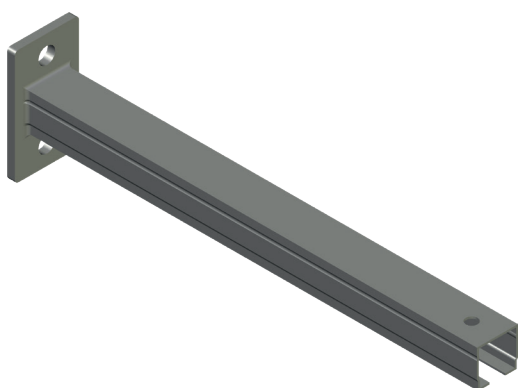
Material	galvanized steel	
	L	Weight
TR8550	350 mm	~780 g
TR8551	500 mm	~960 g
TR8552	700 mm	~1200 g



# TR8555

# TR8556

## WALL FIXING SUPPORT BRACKET



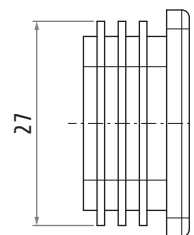
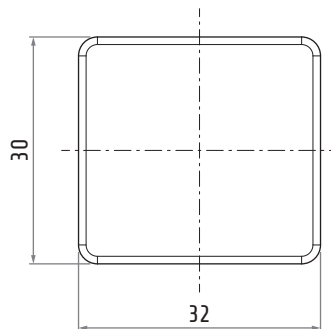
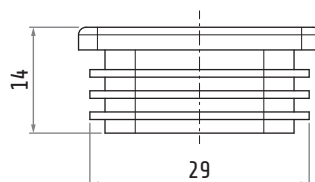
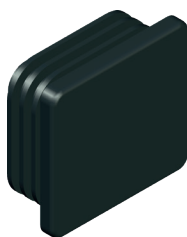
Material	galvanized steel	
----------	------------------	--

	L	Weight
TR8555	350 mm	~640 g
TR8556	500 mm	~820 g



# 30607015

## END CAP

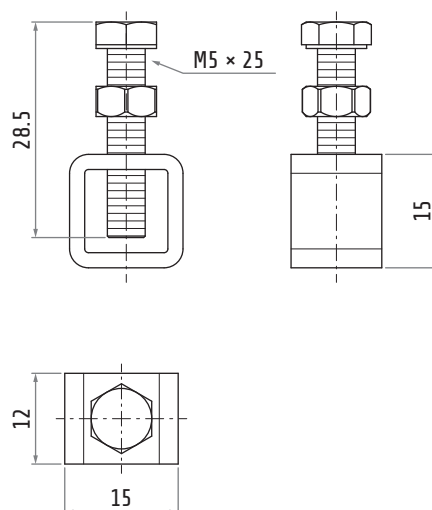
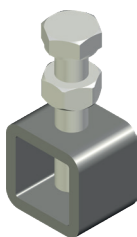


Material	nylon
Weight	~6 g



# TR6018

## CONDUCTORS CONNECTION CLAMP

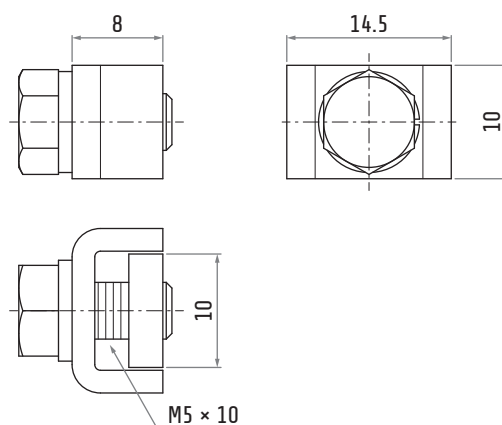
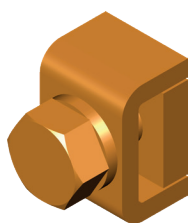


Material	galvanized steel
Weight	~15 g



# TR6015

## CONDUCTORS CONNECTION CLAMP



Material	brass
Weight	~10 g