# N niczuk | LERTA

# We focus on **DURABILITY.**

Heavy duty construction for industry.

NEW

niczuk.eu

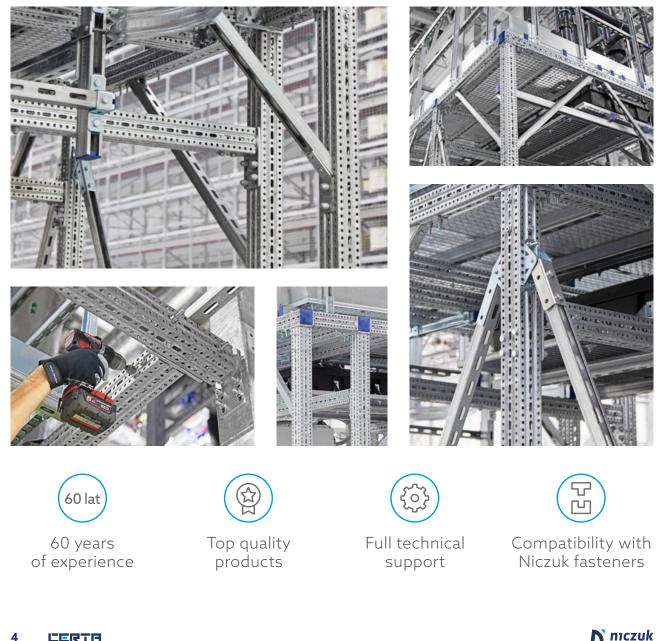
# Reliable, durable and secure system for heavy industry.

S355 structural steel			0		2
Hole layout, allowing full adjustment	000			eve L	2 2 2
Slotted holes for through-hole mounting	6 6 5	i		® N	EW
Ribbing increasing resistance to buckling, deformation and eccentric torsion Anti-corrosion coating - hot-dip galvanizing with coating thickness ≥ 55 µm	0 0 0 0 0				es es es es
CRRTA heavy channels CRRTA channels are available in two sizes: 82x82x3 mm (KE) and 100x100x4 mm (KJ) and a length of 6 meters. Their closed structure makes it possible to create horizontal beams, columns and a variety of spatial struc- tures with relatively low dead weight.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
	•		6	8	50 SA



THALE sp. z o.o. sp.k., owner of the Niczuk brand, has been operating in the installation and construction market for several decades. One of its specialties is the design, production and sale of fastening systems for the installation industry. The company has been offering complete systems of popular C-shaped steel mounting channels for many years.

As part of the development of the product range, the CERTA line was created, allowing the assembly of large, spatial support structures thanks to the closed channels and accessories. The new system was developed for the construction of elaborate steel and large-scale installations, which until recently consisted mainly of welded components which required additional post work anticorrosion protection.



#### **CERTA.** Restriction liquidator.

The CERTA system is a response to the dynamically changing needs of the construction market and the growing need to complement the product range with heavy-duty structures. It is an attractive alternative to welded systems, which present



numerous difficulties due mainly to the irreversibility of the welding process and the associated high energy costs. Assembly of the components that make up the CERTA system takes little time and is intuitive. This translates into greater convenience for the installer and contributes to lower investment costs.



#### **Comprehensive investment service.**

In the course of construction projects, THALE provides full technical support at all stages of the project — from the development of technical drawings showing the proper use of products, to training, to advice during installation work. This cooperation is

based on proven solutions and the company's years of experience in the HVAC industry.

## Largest design office for HVAC fastening systems.

Encouraged by its success in foreign markets, the company has established design offices in selected countries, including Hungary and Romania. This solution allows to draw inspiration and implement good practices also in Poland.



## **LERTF** | THE MAIN ADVANTAGES

**High strength and stability.** CERTA channels have a closed, symmetrical cross-section and are made of S355 structural steel. Their shape guarantees uniform load-bearing capacity, high strength and torsion-resistant structural rigidity. Additional double ribbing on each wall reduces deformation and eccentric torsion, guaranteeing the stability of the supports, even under huge loads.

#### Multifunctional system for wide structural span.

CERTA system gives the possibility to cover large spans (heights): it allows to easily overcome the distance of load-bearing structures at lengths of 6 meters and more. It makes the installation of horizontal and vertical structures simple and efficient.

**Quick and easy installation.** Thanks to CERTA's modular connection technique and channel perforation system, the assembly of the components is simple and intuitive. The single type of self-threading bolt used gives unlimited possibilities for assembling structures.

#### A desirable alternative to welded sys-

**tems.** The CERTA system removes the limitations associated with the irreversibility of joining parts in the welding process and excludes fire hazards. A few hours of staff training and a small number of tools are all that is needed to assemble a structure from CERTA components.



**Compatible with the classic Niczuk brand fastening system.** The CERTA system completes the THALE portfolio with a new product category. It was designed to allow combining with other Niczuk brand fasteners. It provides a wide range of possibilities for creating support structures that meet the highest safety standards.



**High corrosion protection.** The CERTA line, by prefabricating the components, enables them to be hot-dip galvanized and guarantees incomparable corrosion resistance. Hot-dip galvanizing with a coating thickness of  $\geq$  55 µm works well both indoors (factory and industrial spaces) and outdoors. The CERTA channel system requires no corrosion maintenance, which significantly reduces the depreciation cost of the structure.

#### Key categories of CERTA channels applications:

- Structures for heavy indoor and outdoor installations
- Fastening systems with long spans and heights above 6 meters
- Substructures for heavy, massive equipment
- Construction of supports with complex geometry for fixed points with high forces
- Solutions for service platforms
- Spatial lattice structures



# **SELF-THREADING BOLT** for all joints.

M10 self-threading bolt is used to connect CERTA channels and accessories when assembling steel structures. The great advantage of the whole system is that only one type of bolt can be used to do all the related work. It is an easy-to-use hexagonal-head bolt with a TORX-type socket that, when bolted into the steel surface of the channel, cuts and bores it, creating a load-bearing connection along its entire length. This makes it possible to form threads without the formation of chips, which translates into a solid connection. Using bolts of this type does

not require washers. To bolt them in, tools commonly used and popular among installers are used.

#### **Technical parameters:**

Material: surface hardened steel Protective coating: lamellar zinc galvanizing

#### Example application:

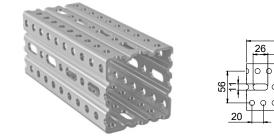


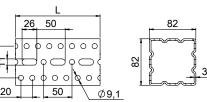




## **LERTF** | CERTA SYSTEM COMPONENTS

#### KE heavy channel





(O) Material: S355MC steel

Protective coating: hot-dip galvanizing

CE-marked product

#### **Application:**

- Construction of (horizontal) beams
- Construction of columns
- Construction of a variety of frames and spatial structures using other system elements (connectors, supports, brackets, clamps)

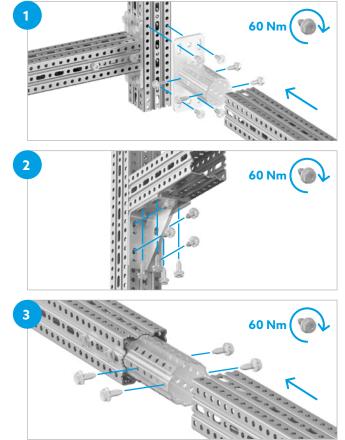
Dimensions L [mm]	Weight [kg]	Designation order	Catalogue number
6000	40.800	OGCKE	40782823061

#### Installation method:

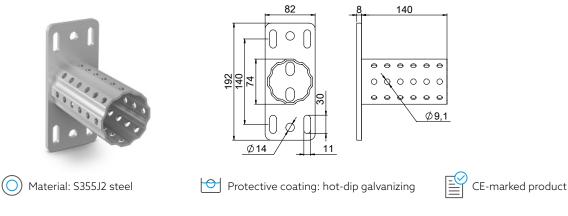
#### Installation of CERTA system components to the KE channel:

- Through slotted holes for elements mounted inside the channel
- Through Ø 9.1 mm round holes for elements mounted externally

One hole is intended for only one self-threading bolt. Number of bolts used for installation depends on the type of product being installed. Tighten the XPCSP-M10X21 bolt with a torque of 60 Nm.



#### S support for KE channel



#### Application:

- Assembly with KE heavy channel to the structure (wall, floor, ceiling)
- Installation with KE heavy channel do channel structure
- Construction of a variety of structures (gate type) or spatial, installed to the structure (wall, floor, ceiling) or to other structures from KE channels

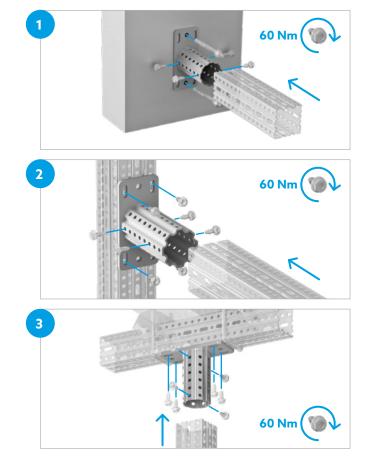
For channel	Weight [kg]	Designation order	Catalogue number	
KE	1.500	OGCSKE	41122082821	

#### Installation method:

The CERTA system element installed on the outside of the KE channel is bolted through slotted holes (in the support for the element) using XPCSPM10X21 self-threading bolts fastened into Ø 9.1 mm round holes in the channel.

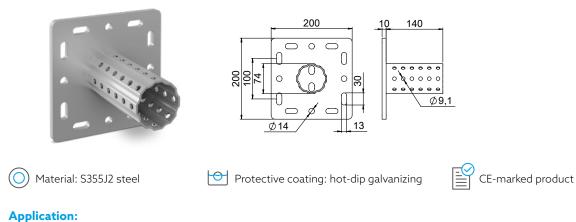
One hole is intended for only one self-threading bolt. Products installed on the outside of the channel should be fastened with four bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Use two bolts opposite each other for the fastener mounted inside the channel.

#### Tightening torque of anchors as per their installation instructions.



N niczuk

#### S200 support for KE channel



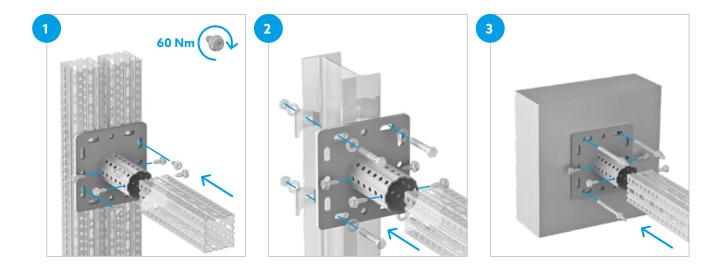
- Assembly with KE heavy channel to the structure (wall, floor, ceiling)
- Installation with KE heavy channel do channel structure
- Construction of a variety of structures (gate type) or spatial, installed to the structure (wall, floor, ceiling) or to other structures from KE channels

For channel	Weight [kg]	Designation order	Catalogue number	
KE	3.500	OGCS200KE	41122382821	

#### Installation method:

The CERTA system element installed on the outside of the KE channel is bolted through slotted holes (in the support for the element) using XPCSPM10X21 self-threading bolts fastened into Ø 9.1 mm round holes in the channel.

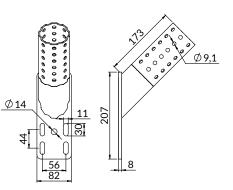
One hole is intended for only one self-threading bolt. The number of bolts used for installation depends on the type of product being installed. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Use two bolts opposite each other for the fastener mounted inside the channel.





#### SK45 support for KE channel





O Material: S355J2 steel

Protective coating: hot-dip galvanizing



#### **Application:**

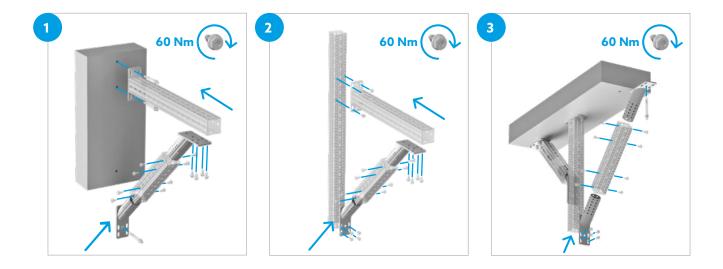
- Installation with heavy channel to the structure (wall, floor, ceiling), at an angle of 45 degrees
- Installation with heavy channel to channel structure, at an angle of 45 degrees

For channel	Weight [kg]	Designation order	Catalogue number	
KE	2.000	OGCSK45KE	41122582821	

#### Installation method:

The CERTA system element installed on the outside of the channel is bolted through slotted holes (in the support for the element) with XPCSPM10X21 self-threading bolts fastened into Ø 9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Products installed on the outside of the channel should be fastened with four bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Use two bolts opposite each other for the fastener mounted inside the channel.

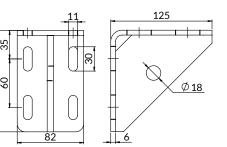


**N** niczuk

#### LKZ corner connector for KE channel

L25





O Material: S355J2 steel

Protective coating: hot-dip galvanizing



#### Application:

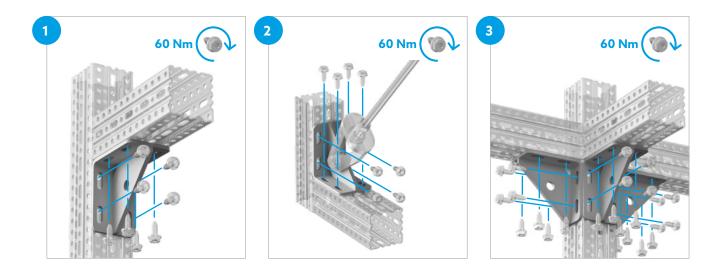
- For perpendicular joining of KE heavy channels
- Additional hole allows to add strut to stiffen the support
- For perpendicular connection of brackets to KE heavy channels

For channel	Weight [kg]	Designation order	Catalogue number	
KE	1.300	OGCLKZKE	41142482821	

#### Installation method:

The CERTA system element installed on the outside of the KE channel is bolted through slotted holes (in the support for the element) using XPCSPM10X21 self-threading bolts fastened into Ø 9.1 mm round holes in the channel.

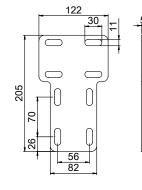
One hole is intended for only one self-threading bolt. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm.

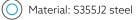




#### LT connector for KE channel







Protective coating: hot-dip galvanizing



#### Application:

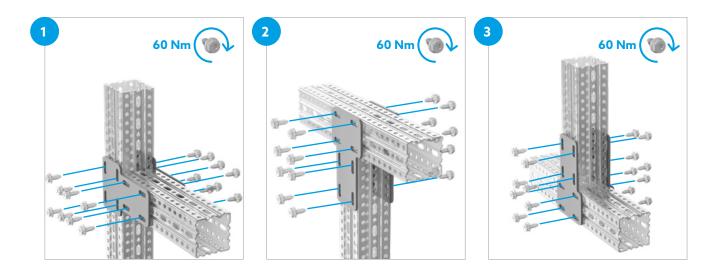
• For perpendicular joining of KE heavy channels

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KE	0.690	2.000	OGCLTKE	41142582821

#### Installation method:

The CERTA system element installed on the outside of the channel is bolted through slotted holes with XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Fasten the fitting to the outside of the channels with eight bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm.



**N** niczuk

# **EERTA STRONG SUPPORT**for your industry.

0 0 0

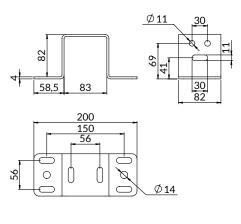
0

00

0

#### LK connector for KE channel





(O) Material: S355J2 steel

Protective coating: hot-dip galvanizing



#### Application:

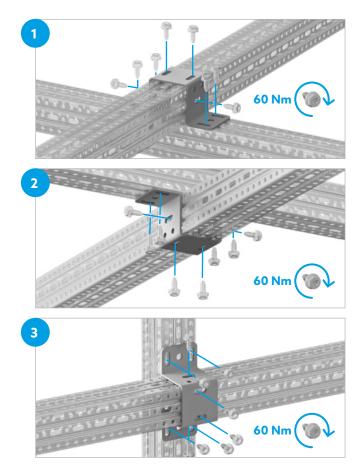
- For perpendicular joining of KE heavy channels in two planes
- For perpendicular connection of brackets to KE heavy channels

For channel	Weight [kg]	Designation order	Catalogue number	
KE	0.250	OGCLKKE	41182820001	

#### Installation method:

The CERTA system element installed on the outside of the channel is bolted through slotted holes with XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the channel.

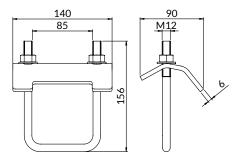
One hole is intended for only one self-threading bolt. Fasten the bracket with a minimum of six self-threading bolts using the slotted holes. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm.



#### Beam clamp KLM for KE channel







Protective coating: hot-dip galvanizing



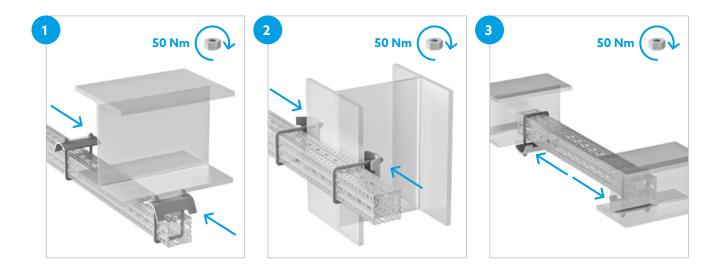
#### Application:

- Assembly with KE heavy channel to the structure (wall, floor, ceiling)
- Installation with KE heavy channel to steel structure

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KE	1.000	2	OGCKLMKE	41310828201

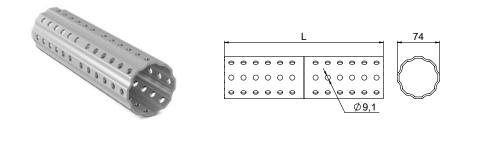
#### Installation method:

Place an u-bolt around the KE channel and secure it to the structural profile with a clamp by tightening two nuts.





#### LW connector for KE channel



(O) Material: S355J2 steel

Protective coating: hot-dip galvanizing



#### Application:

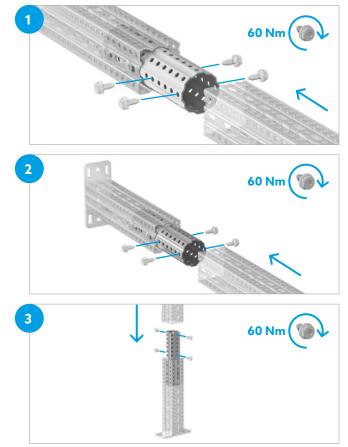
- Butt connecting of KE heavy channels.
- Butt connecting of brackets to KE heavy channels

For channel	Dimensions L [mm]	Weight [kg]	Designation order	Catalogue number
KE	280	1.310	OGCLWKE	41142082821

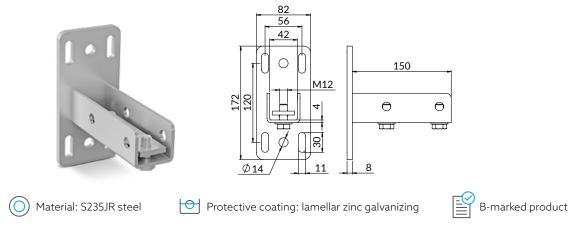
#### Installation method:

Installed inside the KE channel, it is fastened through slotted holes in the channel to round holes in the connector.

The connector should be evenly distributed within the channel – both channels connected should have the same number of holes with the same length. Bolt each channel with four bolts, two opposite each other.



#### STS support for KE channel



#### Application:

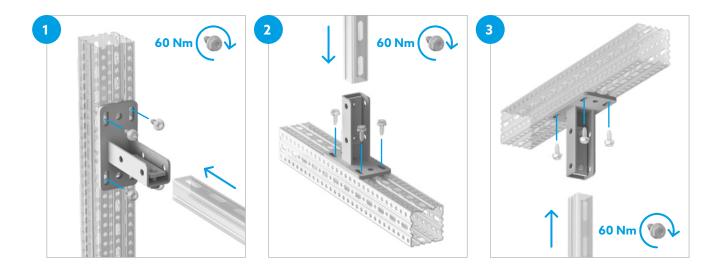
• For connecting 41 mm wide mounting channels to CERTA channels. Allows for self-assembly of mounting channels with supports (brackets) and construction of fastening systems

For channel	Weight [kg]	Designation order	Catalogue number	
KE	1.600	XPCSTSKE4	4041000008	

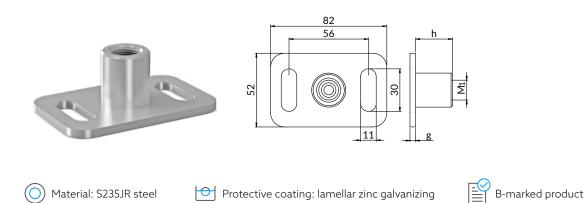
#### Installation method:

The CERTA system element installed on the outside of the channel is bolted through slotted holes (in the support for the element) with XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Products installed on the outside of the channel should be fastened with four bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Slide the NICZUK system channel into the saddle section and tighten the fastening bolts.



#### PM threaded rod base plate - M8/10 and M12/16



#### **Application:**

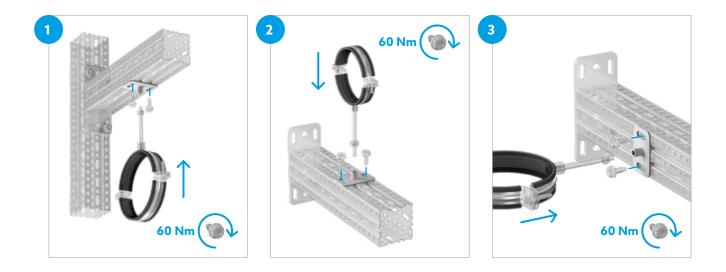
• For mounting on CERTA channels and universal use with threaded rods

For channel	Connection size M1	Connection height h [mm]	Dimensions g [mm]	Weight [kg]	Designation order	Catalogue number
KE	8/10	15.5	3	0.100	XPCPMKEM8/10	40582810008
KE	12/16	26	4	0.200	XPCPMKEM12/16	40582121608

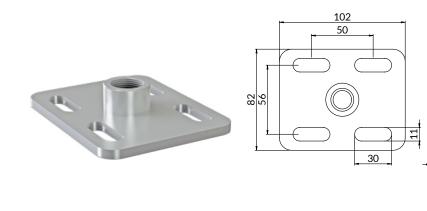
#### Installation method:

Installed on the outside of the channel, the CERTA system component is bolted through slotted holes (in the component's support) with XPCSPM10X21 self-threading bolts into Ø 9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Two bolts should be used.



#### PM threaded rod base plate - M20 G1/2 and M20



O Material: S235JR steel Protective coating: lamellar zinc galvanizing



ξ

5

#### **Application:**

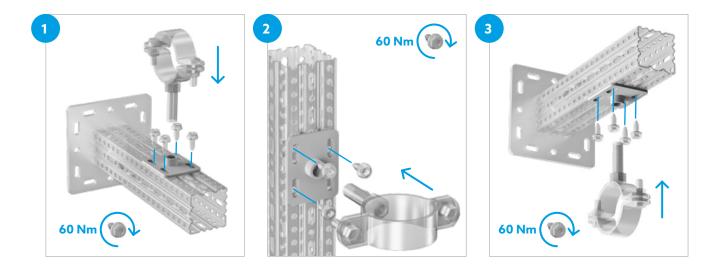
• For installation of fixed points on Certa channel constructions

For channel	Connection size M1	Connection height h [mm]	Weight [kg]	Designation order	Catalogue number
KE	1/2''	15	0.300	XPCPMKEG1/2	40582102008
KE	20	18	0.300	XPCPMKEM20	40582200008

#### Installation method:

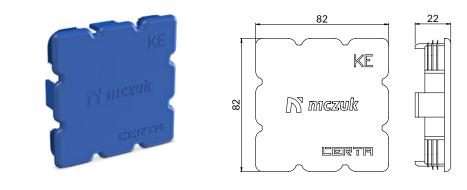
Installed on the outside of the channel, the CERTA system component is bolted through slotted holes (in the component's support) with XPCSPM10X21 self-threading bolts into Ø 9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm.





#### ZP end cap for KE channel





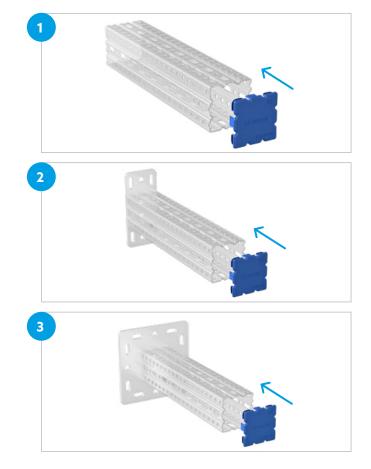
#### **Application:**

• For protecting the ends of mounting channels

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KE	0.040	10	CZPKE	41101828205

#### Installation method:

Place the end cap on the end of the CERTA channel, and then drive the end cap in using a rubber mallet for example.

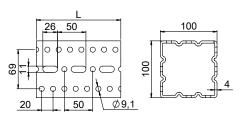


# LERTA

# LIGHTING-FAST structure assembly.

#### KJ heavy channel





(O) Material: S355MC steel

Protective coating: hot-dip galvanizing



#### Application:

- Construction of (horizontal) beams
- Construction of poles
- Construction of a variety of frames and spatial structures using other system elements (connectors, supports, brackets, clamps)

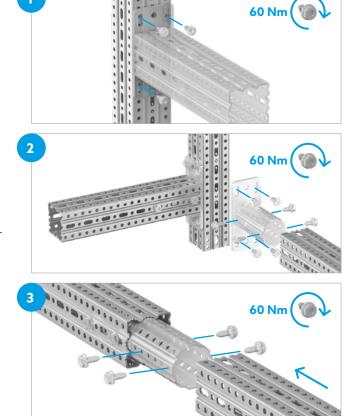
Dimensions L [mm]	Weight [kg]	Designation order	Catalogue number
6000	70.5	OGCKJ	40710104061

#### Installation method:

#### Installation of CERTA system components to the KJ channel:

- Through slotted holes for elements mounted inside the channel
- Through Ø 9.1 mm round holes for elements mounted externally

One hole is intended for only one self-threading bolt. The number of bolts used for installation depends on the type of product being installed. Tighten the XPCSP-M10X21 bolt with a torque of 60 Nm.



#### S support for KJ channel



O Material: S355J2 steel

Protective coating: hot-dip galvanizing



#### Application:

- Assembly with KJ heavy channel to the structure (wall, floor, ceiling)
- Installation with KJ heavy channel do channel structure
- Construction of a variety of structures (gate type) or spatial, installed to the structure (wall, floor, ceiling) or to other structures from channels

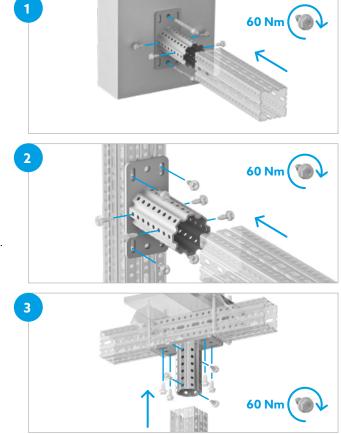
For channel [mm]	Weight [kg]	Designation order	Catalogue number
KJ	2.800	OGCSKJ	41122010101

#### Installation method:

The CERTA system element installed on the outside of the KJ channel is bolted through slotted holes (in the support for the element) using XPCSPM10X21 self-threading bolts fastened into Ø 9.1 mm round holes in the channel.

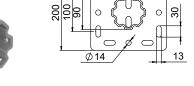
One hole is intended for only one self-threading bolt. Products installed on the outside of the channel should be fastened with four bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Use two bolts opposite each other for the fastener mounted inside the channel.

#### Tightening torque of anchors as per their installation instructions.



#### S200 support for KJ channel





Material: S355J2 steel

Protective coating: hot-dip galvanizing

200

 $\cap \circ$ 

180

. . .

0000000 000000 09,1



#### Application:

- Assembly with KJ heavy channel to the structure (wall, floor, ceiling)
- Installation with KJ heavy channel do channel structure
- Construction of a variety of structures (gate type) or spatial, installed to the structure (wall, floor, ceiling) or to other structures from channels

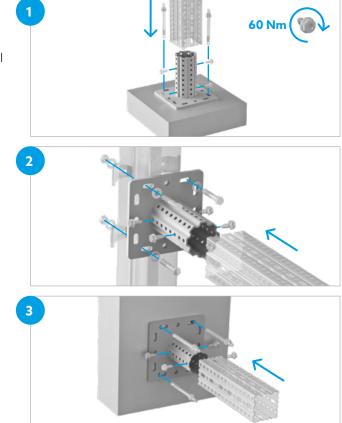
For channel	Weight [kg]	Designation order	Catalogue number
KJ	4.400	OGCS200KJ	41122310101

#### Installation method:

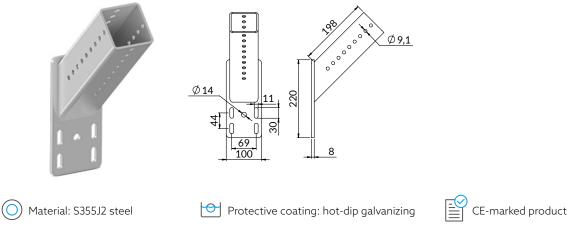
The CERTA system element installed inside the channel is bolted through slotted holes (in the channel) with XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the element being installed.

One hole is intended for only one self-threading bolt. Number of bolts used for installation depends on the type of product being installed. Tighten the XPCSP-M10X21 bolt with a torque of 60 Nm. Use two bolts opposite each other for the fastener mounted inside the channel.

#### Tightening torque of anchors as per their installation instructions.



#### SKK45 support for KJ channel



#### **Application:**

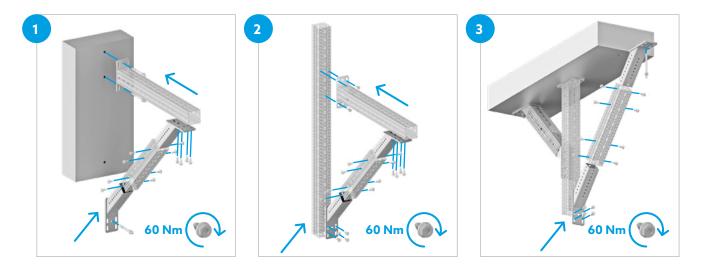
- Installation with heavy channel to the structure (wall, floor, ceiling), at an angle of 45 degrees
- Installation with heavy channel to channel structure, at an angle of 45 degrees

For channel	Weight [kg]	Designation order	Catalogue number
KJ	3.400	OGCSKK45KJ	41125082821

#### Installation method:

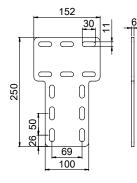
The CERTA system element installed on the outside of the KJ channel is bolted through slotted holes (in the support for the element) using XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Products installed on the outside of the channel should be fastened with four bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm. Use two bolts opposite each other for the fastener mounted inside the channel.



#### LT connector for KJ channel





(O) Material: S355J2 steel

Protective coating: hot-dip galvanizing



#### **Application:**

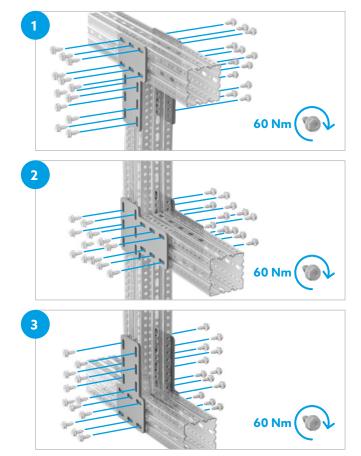
• For perpendicular joining of KJ heavy channels

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KJ	1.250	2.000	OGCLTKJ	41142610101

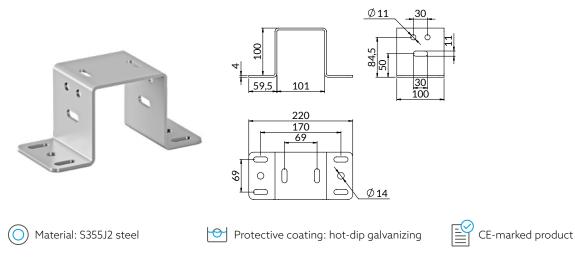
#### Installation method:

The CERTA system element installed on the outside of the channel is bolted through slotted holes with XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the KJ channel.

One hole is intended for only one self-threading bolt. Fasten the fitting to the outside of the channels with twelve bolts. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm.



#### LK connector for KJ channel



#### **Application:**

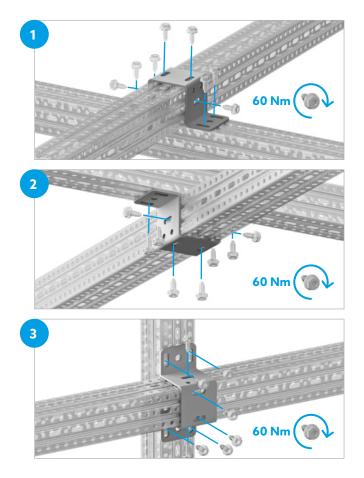
- For perpendicular joining of KJ heavy channels
- For perpendicular connection of brackets to KJ heavy channels

For channel	Weight [kg]	Designation order	Catalogue number
KJ	1.190	OGCLKKJ	41110100001

#### Installation method:

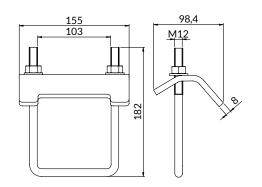
The CERTA system element installed on the outside of the channel is bolted through slotted holes with XPCSPM10X21 self-threading bolts fastened into  $\emptyset$  9.1 mm round holes in the channel.

One hole is intended for only one self-threading bolt. Fasten the bracket with a minimum of six self-threading bolts using the slotted holes. Tighten the XPCSPM10X21 bolt with a torque of 60 Nm.



#### Beam clamp KLM for KJ channel





Material: S355J2 steel

Protective coating: hot-dip galvanizing



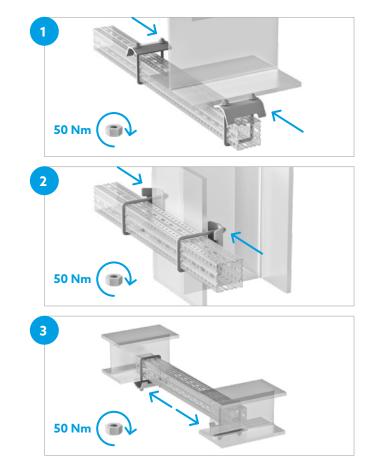
#### Application:

- Assembly with heavy channel to the structure (wall, floor, ceiling)
- Installation with heavy channel to steel structure

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KJ	0.250	2	OGCKLMKJ	41310101001

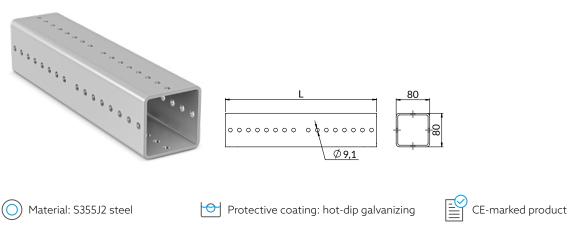
#### Installation method:

Place an u-bolt around the KJ channel and secure it to the structural profile with a clamp by tightening two nuts.



**N** nıczuk

#### LWK connector for KJ channel



#### **Application:**

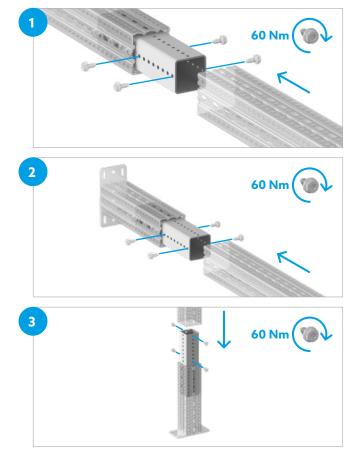
- Butt connecting of KJ heavy channels.
- Butt connecting of brackets to KJ heavy channels

For channel	Length	Weight	Designation	Catalogue
	[mm]	[kg]	order	number
KJ	360	3.200	OGCLWKKJ	41140010101

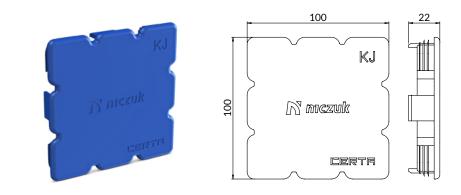
#### Installation method:

Installed inside the KJ channel, it is fastened through slotted holes in the channel to round holes in the connector.

The connector should be evenly distributed within the channel — both channels connected should have the same number of holes with the same length. Bolt each channel with four bolts, two opposite each other.



#### ZP end cap for KJ channel





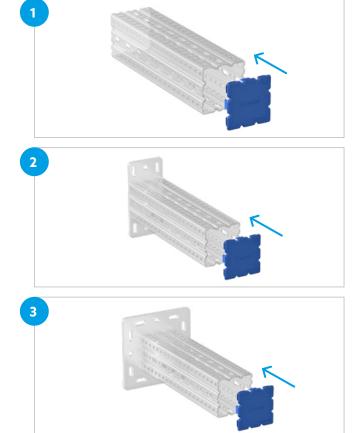
#### **Application:**

• For protecting the ends of mounting channels

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KJ	0.057	10	CZPKJ	41101001005

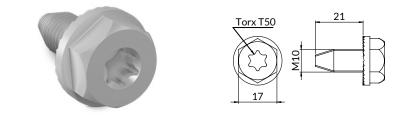
#### Installation method:

Place the end cap on the end of the CERTA channel, and then drive the end cap in using a rubber mallet for example.



**N** nıczuk

#### SP self-threading bolt M10x21



O Material: 10B21/17B2(1.5502) steel

Protective coating: lamellar zinc galvanizing

#### Application:

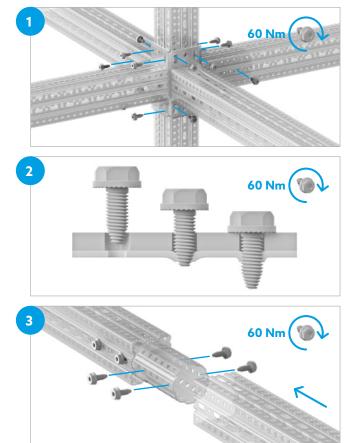
• For joining CERTA channels and accessories to create steel structures. The bolting process allows the thread to be formed without the formation of chips, resulting in a solid connection. In addition, it is not necessary to use washers

For channel	Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
KE, KJ	0.027	50	XPCSPM10X21	4061000008

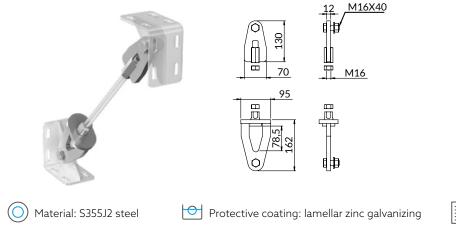
#### Installation method:

Using a hexagon socket wrench or TORX type bit. Tighten to a torque of 60 Nm.

Installation according to the instructions of the XPCSPM10X21 bolt and the component to be installed.



#### SE strut M16





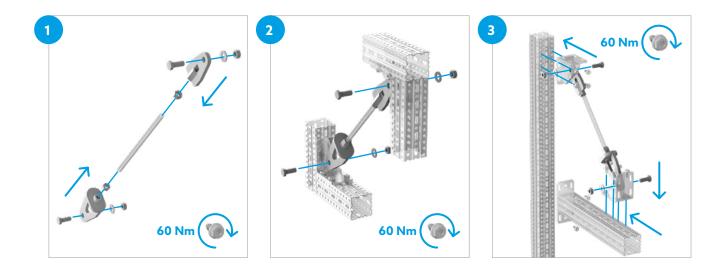
#### Application:

- For making lashings between heavy channels
- For making lashings between heavy channels and the structure (wall, steel structure)
- For making lashings between OGCLKZKE and OGCLKZKJ fittings

Weight [kg]	Quantity [pcs/pack.]	Designation order	Catalogue number
2.700	1	XPCSEM16	41182821601

#### Installation method:

Attach both sides of the SE strut to the LKZ corner connectors using M16x40 bolts. Tighten the tension nut until it feels tight and lock it with the M16 lock nut.



# LERTA

# **DURABILIT** above of all.



#### Certificates.

Elements of the CERTA system bear the CE marking, which indicates that the products comply with European regulation CPR 305/2011 – the rules for the marketing of construction products.

CERTA also complies with the harmonized standard EN 1090, which specifies detailed requirements, for the construction of steel and aluminum structures. Compliance with this standard allows the sale of products from this line in the European Union and the European Economic Area.

CERTA is synonymous with construction products of the highest quality that comply with current standards. With the CE marking, investors and contractors can be sure that by using these Niczuk products, they are choosing solutions that comply with the latest safety and quality standards.

#### **Comprehensive Customer Service.**

#### As part of our comprehensive customer service, we offer:

- Development of project documentation
- Product training
- Custom orders
- Possibility of preassembly of selected elements
- Delivery directly to the project site
- Technical assistance



N niczuk



•••••••••••••••••••••••••••••••••••••••
·····

**N** nıczuk



,
,
,
,
,
,
,
,
,



#### THALE sp. z o.o. sp.k.

Headquarters: Wilimowo 2, 11-041 Olsztyn, Poland

Direct contact: Tel. +48 538 238 866 E-mail: export@niczuk.pl

