peikko group

CONCRETE CONNECTIONS

PRODUCT CATALOGUE

www.peikko.com

peikko group

Peikko Group - Concrete Connections since 1965

PEIKKO GROUP

Peikko Group, a Finnish family-owned company, is a pioneer in connection and fastening technology in concrete structures.

The company was founded in 1965 by the name of “Teräspeikko”, which translates into “Steel troll”. Peikko’s first product, diagonal tie for sandwich panel, was the first industrial product of that category at the time. The company has ever since remained forward-looking and innovative. It has been able to continuously launch new products together with its customers and successfully implement modern and cost-efficient production technologies.

We are one of the leading companies in Europe – with a goal to continue to be local.

Peikko Group operates in 32 countries across Europe Asia-Pacific, the Middle East, and North America, with manufacturing operations in 9 countries. With more than 1500 employees and with invoicing of 173 million EUR in 2016, the company is well-positioned to serve its customers. Peikko Group serves its customers locally via vast network of subsidiaries.

CONTACT INFORMATION

Romania
www.peikko.ro

Peter Kiss, dipl. ing.
Sales Manager – Romania Nord-Vest
Tel. +40 753 021 666
peter.kiss@peikko.com

Laurentiu Dumitrescu
Sales Manager – Romania Sud-Est
Tel. +40 752 239 070
laurentiu.dumitrescu@peikko.com

Peikko Group

- SALES, DISTRIBUTION AND PRODUCTION
- SALES AND DISTRIBUTION

CONTENTS

peikko® group
CONCRETE CONNECTIONS

Approvals

Our products have approvals in various countries including Slovakia, Hungary, Czech Republic, Finland, Germany, Poland, Russia, Great Britain and Sweden. See details in product sections.

Quality and environment

The results of the work in quality and environment are inspected regularly by external audits carried out by Inspecta Certification, VTT Technical Research Centre, SITAC Swedish Institute for Technical Approval in Construction, Schweißtechnische Lehr- und Versuchsanstalt SLV Hannover and Ministry Of Construction Russia Federal Centre Of Certification / OS Svzapstroisertifikatsiya St. Petersburg.

Technical information

Detailed technical information and limitations for application, requirements for the concrete and correction factors for capacities can be found in product’s technical manual. The technical information is available on our websites or as printed manuals on request.

PYR

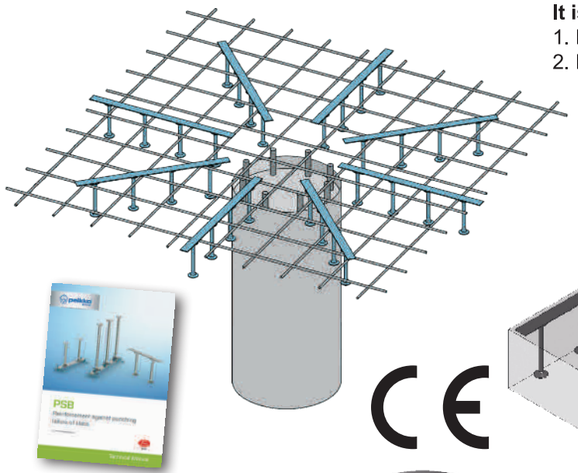
ISO 9001
ISO 14001

441 089
Painotuote

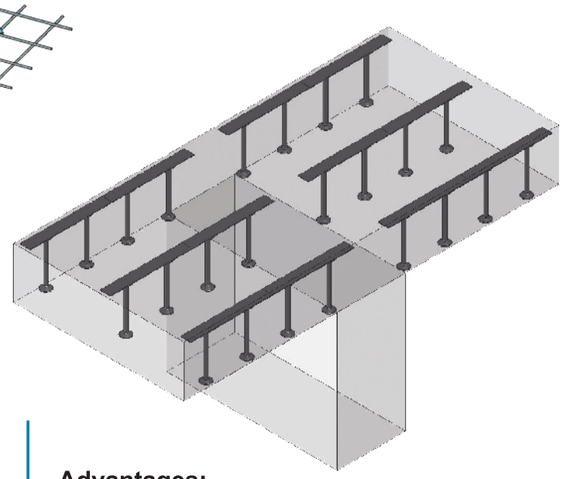
ISO 3834-2

PSB shear reinforcement

PSB is a building product mainly used as vertical reinforcement to increase the punching resistance of concrete flat slabs or foundation slabs. The elements consists of double headed ribbed bar studs welded to a spacer bar. Elements are preferably put in from the top after laying the flat slab reinforcement. PSB elements are supplied as standard elements, which are available off stock or in short delay, and as complete elements, which are manufactured to measure on demand. The type, geometry and dimensions PSB may be designed and the resistances of concrete members reinforced by PSB elements may be verified using **Peikko Designer®**, which is freely available on **www.peikko.com**. The properties of PSB as well as the resistances of slabs reinforced by PSB are approved within the **European Technical Approval ETA-13/0151**.



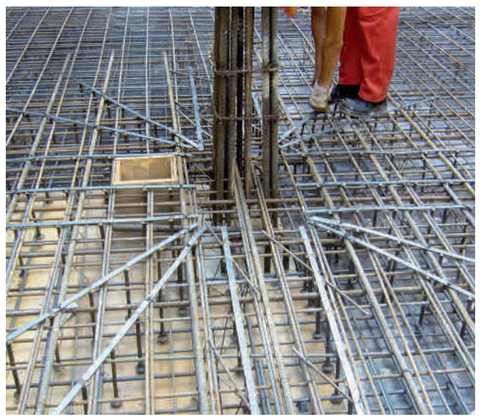
It is manufactured in two versions:
1. PSB installation from top and bottom
2. PSB-F installation from bottom in filigree slabs



PSB

PSB is made of B500 B
APPROVALS:
ETA-13/0151

Slovakia: TO-09/0114
Czech Republic: 060-025271
Germany: Z-15.1-201
Austria: WR-Z-070705
Hungary: A-744/1/2007



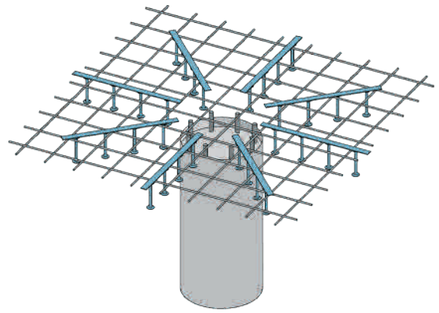
Advantages:

- flat slab
- low slab thickness
- applicable from 180 mm slab thickness
- simple and efficient installation
- reduced mould consumption
- increase of the bearing capacity up to 40%
- short delivery time
- custom made demands
- easy design with free **Peikko Designer®**

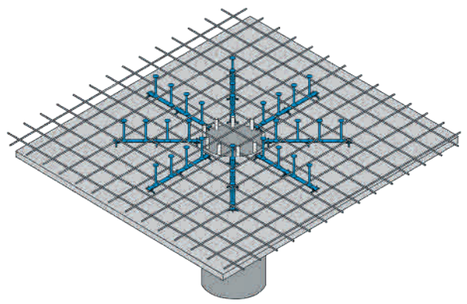
For more information please contact our technical support.

Double headeds studs, assembled by a flat profile as spacing bar. Available as 2 and 3 studs elements or long 2-10 studs on flat profile. Flat profile has no load bearing function, it only guarantees the correct spacing and positioning of the studs during installation. Available in diameters 10, 12, 14, 16, 20, 25, 28 and 32 mm.

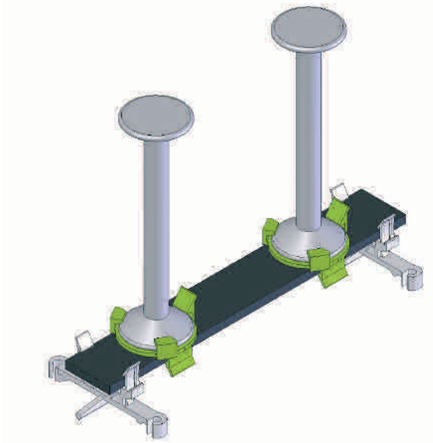
Installation in cast in-situ monolithic slabs
1. Top installation: The PSB elements are hanged to the main reinforcement of the slab. The whole bending reinforcement is installed to the mould prior to PSB.



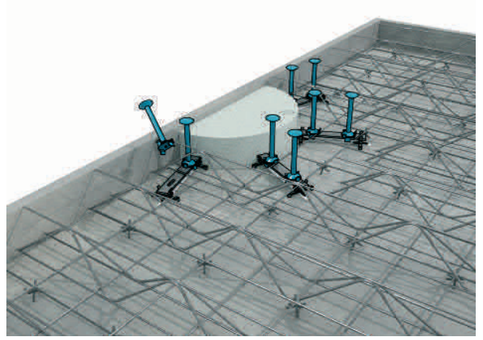
2. Bottom installation: PSB elements are place to the mould of the slab from bottom prior to the installation of the bending reinforcement. In order to achieve sufficient concrete cover of the headed studs, PSB plastic spacers are mounted to the assembly profi le of the PSB elements.



Installation in precast factory
A special type of PSB elements (PSB-F) is available for the use within filigree slabs. The assembly profile of the PSB-F elements is installed to the formwork from bottom on plastic spacers prior to the reinforcement of the filigree slab.

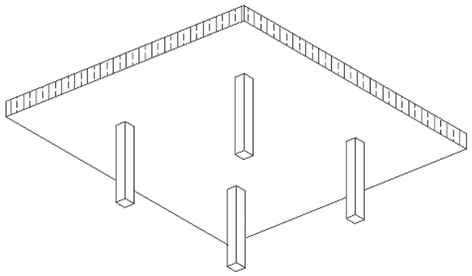


The studs are installed on the assembly profile only once the reinforcement process of the filigree slab is finished. They are simply clicked on the assembly profiles. The slotted holes on the assembly profiles offer mounting tolerances to ensure the proper installation of the studs.



Concrete slabs directly supported by columns without drop panel or mushroom shaped column capital

Reinforced concrete flat slabs without beams and without enlarged column heads are regarded as economical construction and provide good conditions for an optimum use of space and an easy installation of HVAC devices.

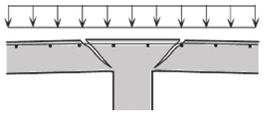


The problem:

Load distribution around the columns

The load concentration around the columns generally leads to high shear loads which are not allowed according to DIN 1045-1.

Punching of the column head

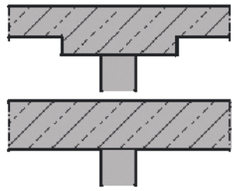


Uneconomic

To avoid punching the choice is often uneconomic and inconvenient solutions such as for example.

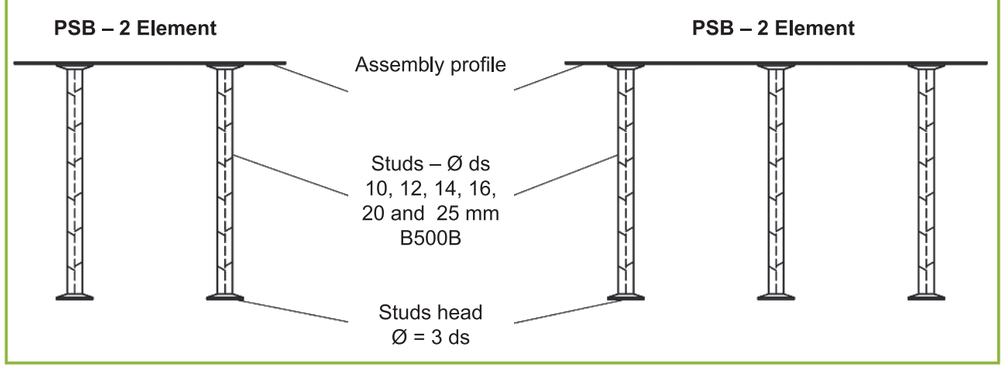
Enlargement of the column heads (above) and increase of the slab thickness (below).

These measures reduce the usable floor heights and thus the use of the construction is restricted.



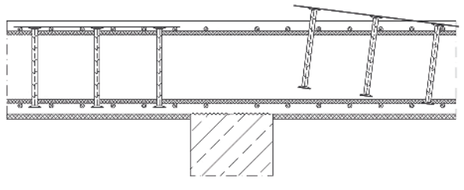
The solution: PSB PUNCHING REINFORCEMENT

The PSB punching reinforcement consists of double head studs (B500B) with forged heads.
An assembly bar on which the stud heads are welded combines the single studs to form punching elements.



Inserted from the top

The PSB punching reinforcement elements are preferably inserted from the top after laying the reinforcement. Adjustments of the position can be made without any problems.

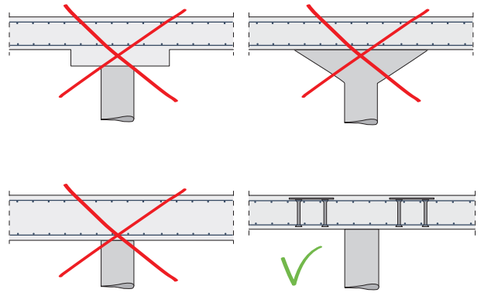


Meaning of the PSB designation at order

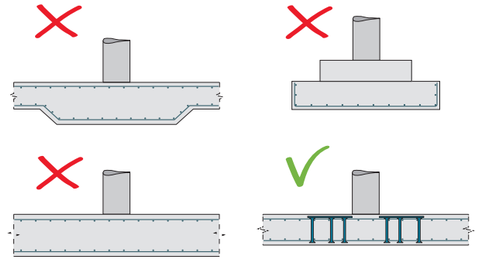
PSB - 14 / 265 - 3 / 470 (65 / 130 / 190 / 85)

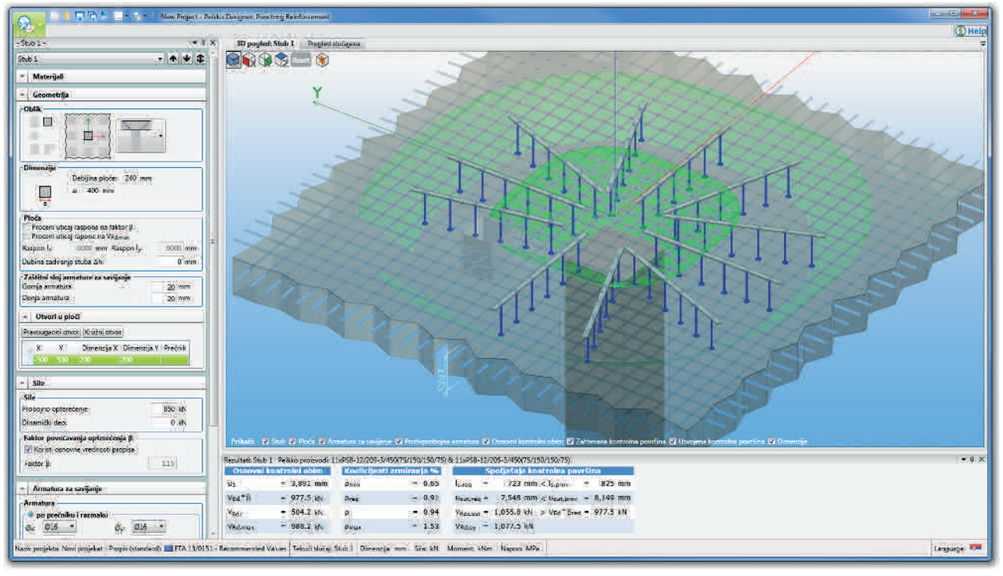
- Type
- Stud Ø [mm]
- Stud height [mm]
- Studs number per rail
- Total lenght of the rail [mm]
- First stud position from rail start [mm]
- Distance between 1. and 2. stud [mm]
- Distance between 2. and 3. stud [mm]
- Distance from last stud to rail end [mm]

Floor slab solutions comparison:



Foundation slab solution comparison:





DELTABEAM

Deltabeam is a hollow steel-concrete composite beam made from welded steel plates with holes in the sides. It is completely concreted after installation on site. After the concrete has hardened, Deltabeam acts as a composite beam with the hollow-core, composite and thin shell slabs, as well as for in-situ casting. Deltabeam can have a fire class rating as high as R120 without additional fire protection.

Multifunctional beams

Deltabeam is low height and self weight composite members with high load bearing capacity. Beams are ideal for use with either in-sity or precast floor elements. Examples of floor elements to be used with Deltabeam:

- prestressed hollow core units,
- semi precasted filigran slabs,
- composite steel decking - trapezoidal sheets,
- ribbed floor system with ceramic flooring blocks,
- monolithic reinforced concrete slab.

The height of the Deltabeam can be 200 - 500 mm. Maximum length is 12,9 - 13,4 m depending on used plate material. It is more economical to use as continuous beam line which consists of number of Deltabeams connected with gerber-joint.

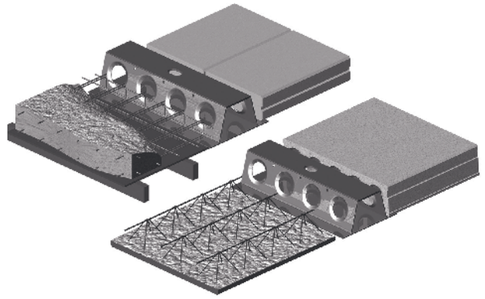
Load-bearing capacity of Deltabeam

Preselection of the DeltaBeam cross-section and checking the bending resistance of standard cross sections can be done by **Deltabeam Preselection Software**, freely available on **www.peikko.com.**

D-Type Deltabeam - middle beam

The D-type DELTABEAM has ledges on both side of the beam. This beam type is able to carry floor units on both sides of the beam. Curved floor edges can be made by combining D-type beams with curved formwork.

It is more economical to use Deltabeam for short spans and slabs in the direction of long spans with ratio 1:1.5-2.0.

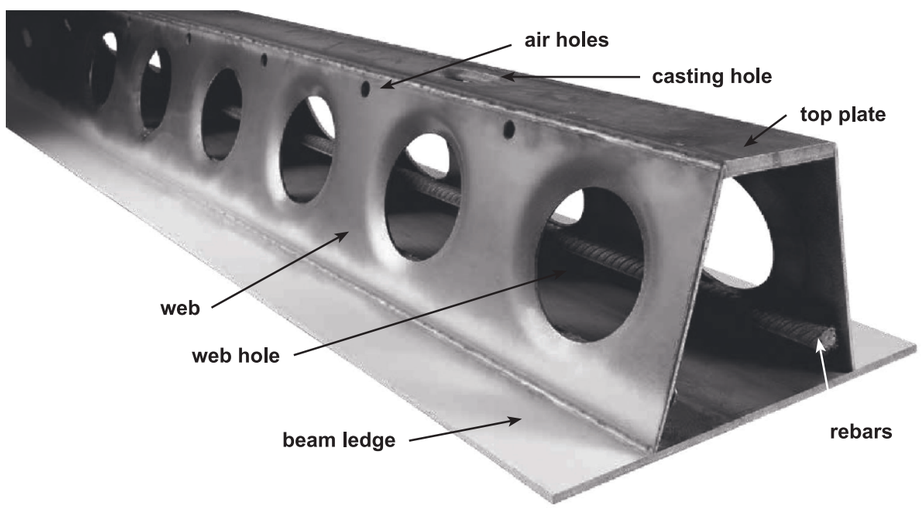


DR-Type Deltabeam for edges and openings

The DR-type Deltabeam is designed to serve as a slab edge beam when a narrower Deltabeam is needed and the vertical side is protected from fire by other structures. The edge beam can also be used on opening's edges. The need for fire protection must be determined on a case-by-case basis.

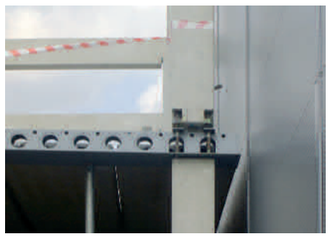
Materials

Plate S355J2+N, rebar B500 B

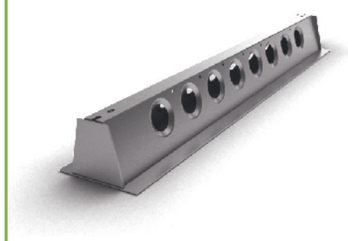


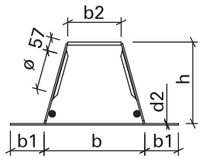
Benefits of Deltabeam

- **EVEN CEILINGS:** allows flexible layouts through the whole life cycle of the building and easy HVAC installations below or inside the floor. (Useful also for projects of new buildings, when in the time of design of load bearing structure is far from clear how the distribution will be conducted under the ceiling)
- **COMPOSITE ACTION:** no additional work at site, achieved by the infill concrete
- **FIRE RESISTANCE:** no additional work at site, achieved by the infill concrete. Fire resistance of R120 can be achieved (in special case up to R180) without additional fire protecting painting or gipsum board covering.
- **MAJOR SAVINGS IN MULTI STOREY BUILDINGS:** due to shallow structure, the total height of the building can be reduced or extra floor can be built: savings in facade material costs and maintenance (air-condition, heating)
- **TECHNICAL APPROVALS:** Finland, UK, Russia, Czech Republic, Hungary, Poland, Slovakia, Sweden and Germany
- **INTENSIVE RESEARCH:** ongoing research program with University of Oulu, dozens of loading test, including fire tests
- **TECHNICAL SUPPORT:** with short response time at every stage of the project
- **DESIGN CALCULATIONS:** design calculations and fabrication drawings for each beam will be delivered to the client
- **EXPERIENCED TEAM:** impressive reference list starting from 1989, more than 4000 projects
- **HIGH PRODUCTION CAPACITY:** high quality from multiple factories around the Europe
- **EASY AND FAST INSTALLATION:** light and easy hoisting, simple to assemble
- **SHORT TOTAL ASSEMBLY TIME:** hollow core - Deltabeam construction reduces total assembly time compared to traditional methods
- **FREE FLOOR BELOW:** no obstacles to work on floor below, minimum amount of propping if any
- **FLEXIBLE PRODUCT RANGE:** flexible beam types and details, composite columns, erection work and auxiliary tools for erection groups
- **COMMON MATERIALS:** basic structural steel, reinforcement and concrete used
- **MODERN PRODUCTION TECHNOLOGY:** robots weld and paint, modern plasma cutting
- **QUALITY AND ENVIROMENT SERTIFICATES:** ISO9001, ISO14001 and ISO 3834-2.
- **ENABLES TO GET LEED AND BREEAM CERTIFICATION POINTS**



D-Type Deltabeam - Middle Beam





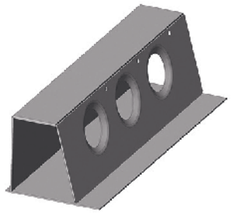
APPROVALS:
Czech: 204/C5/2006/060-025293
Finland VTT-RTH-03040-07
Germany: Z-26.2-49
Hungary: ATB-15/2015
Poland: AT-15-8053/2014
Russia: РОСС FI.Ar93.н00522
Slovakia: TO - 08/0021
Sweden: SBS D/002
UAE: TAC-No-145-2015
UK: BBA No 05/4204

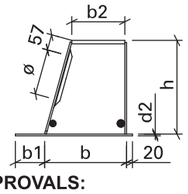
	b	b1*	b2	d2	h	Ø
	[mm]					
D20-200	200	97,5	100	5 - 25	200	80
D20-300	300	97,5	180	5 - 25	200	80
D20-400	400	130	278	5 - 25	200	80
D22-300	300	97,5	170	5 - 25	220	80
D22-400	400	130	270	5 - 25	220	80
D25-300	300	97,5	155	5 - 25	250	150
D25-400	400	130	255	5 - 25	250	150
D26-300	300	97,5	148	5 - 25	265	150
D26-400	400	130	245	5 - 25	265	150
D30-300	300	97,5	130	5 - 25	300	150
D30-400	400	130	230	5 - 25	300	150
D32-300	300	97,5	110	5 - 25	320	150
D32-400	400	130	210	5 - 25	320	150
D37-400	400	130	180	5 - 25	370	150
D37-500	500	130	278	5 - 25	370	150
D40-400	400	130	180	5 - 25	400	150
D40-500	500	130	278	5 - 25	400	150
D50-500	500	130	230	5 - 25	500	150
D50-600	600	130	330	5 - 25	500	150

* Standard size unless the customer otherwise defines (minimum 20 mm)

Beam's height and width can also be defined by customer.

DR-Type Deltabeam - Edge Beam





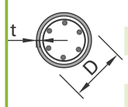
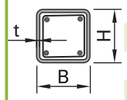
APPROVALS:
Czech: 204/C5/2006/060-025293
Finland VTT-RTH-03040-07
Germany: Z-26.2-49
Hungary: ATB-15/2015
Poland: AT-15-8053/2014
Slovakia: TO - 08/0021
Sweden: SBS D/002
UAE: TAC-No-145-2015
UK: BBA No 05/4204

	b	b1*	b2	d2	h	Ø
	[mm]					
DR20-215	215	100	148	5 - 25	200	80
DR20-245	245	100	180	5 - 25	200	80
DR22-250	250	100	180	5 - 25	220	80
DR25-260	260	100	180	5 - 25	250	150
DR26-230	230	100	148	5 - 25	265	150
DR26-260	260	100	180	5 - 25	265	150
DR26-290	290	100	210	5 - 25	265	150
DR26-325	325	100	245	5 - 25	265	150
DR30-270	270	100	180	5 - 25	300	150
DR32-250	250	100	148	5 - 25	320	150
DR32-285	285	100	180	5 - 25	320	150
DR32-310	310	100	210	5 - 25	320	150
DR32-365	365	100	245	5 - 25	320	150
DR37-325	325	130	210	5 - 25	370	150
DR40-295	295	130	180	5 - 25	400	150
DR50-350	350	130	210	5 - 25	500	150

* Standard size unless the customer otherwise defines (minimum 20 mm)

Beam's height and width can also be defined by customer.

COMPOSITE COLUMNS

		type	D	t	reinforcement n x Ø	As/Ac	L=3.0m R0	L=3.0m R60	L=3.3m R0	L=3.3m R60	L=3.6m R0	L=3.6m R60	L=3.9m R0	L=3.9m R60	L=4.2m R0	L=4.2m R60
			[mm]				[kN]									
	Circular tube	DCC1	219.1	6.0	6 x 20	5,60 %	2432	832	2377	722	2309	617	2228	527	2134	452
		DCC2	273.0	6.0	6 x 25	5,50 %	3672	1965	3635	1881	3587	1770	3533	1643	3466	1506
		DCC3	323.9	6.0	6 x 25	3,90 %	4540	2609	4516	2571	4483	2522	4445	2458	4400	2374
			B/H	t												
	Square tube	DCC4	200	6.0	4 x 25	5,60 %	2639	783	2581	699	2514	612	2436	530	2346	458
		DCC5	250	6.0	8 x 20	4,40 %	3759	1638	3717	1567	3668	1480	3612	1380	3546	1271
		DCC6	300	6.0	8 x 25	4,70 %	5290	2834	5251	2789	5207	2733	5159	2662	5104	2574

Capacity calculation data:

Norm: Eurocode

Material information:
Reinforcement: B500B
Tube profile: S355
Concrete: C35/45
Concrete cover: 15 mm

Geometry:
Stirrups: Ø 6 mm
Columns fixation: hinged joint at both ends

Load:
Axial force plus static bending moment M_k = 10 kNm

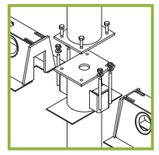
Basic eccentricity according to norm.

Peikko Group offers a range of Deltabeam Composite Columns mainly for the Scandinavian markets. With six standard column types and four column-beam joint types Peikko can offer fast delivery time with competitive cost. Read more at **www.peikko.com.**

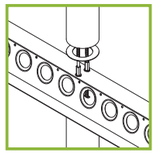
For more information, please contact you local sales.

Four standard connection types - beam to column

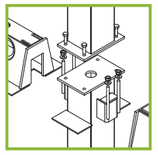
Delta-round



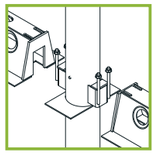
Delta-continuous

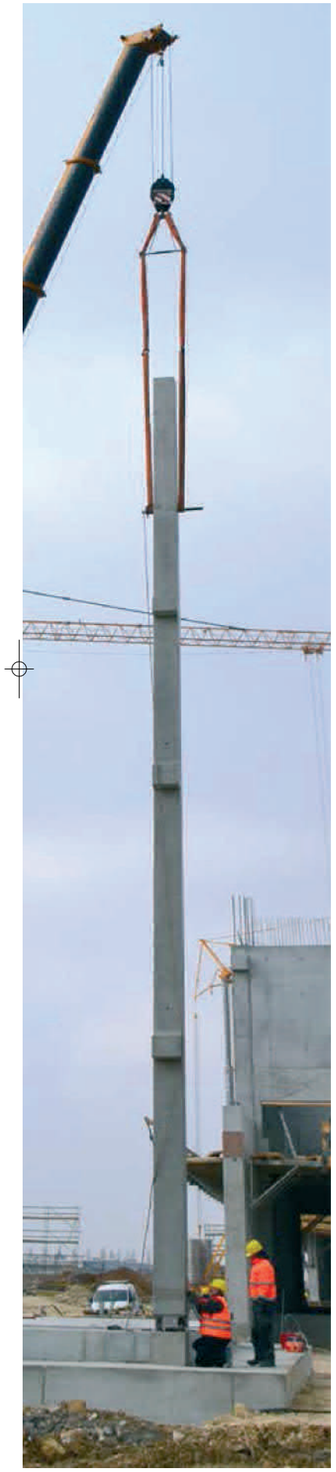


Delta-square



Delta-corbel





RC COLUMN BOLTED JOINT

Column shoes are fastening items which allow moment stiff extensions and connections between prefabricated columns and or example foundations.

All forces on the column are transferred with column shoes andbolts to the bearing structure, for example to the foundation.

Component column is possible to set at the correct height level and vertical position. The joint between column base and structure below should be grout as soon as possible after installation. After that the connection parts and grouting will work as reinforced concrete structure. The above structures may not be installed before the connection joints are cast and hardened.

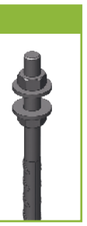
The number of column shoes in the column depends on the dimensions of the column, forces on the column, concrete grade and type of column shoe used. Usually four column shoes are enough to create a moment stiff connection.

Number and size of anchor bolts and column shoes necessary to use has to be determined by software **Peikko Designer**, which is freely available on **www.peikko.com.**

HPM anchor bolts

HPM/P the long type ribbed bar bolts are used as overlapping bolts in precast columns and as foundation bolts.

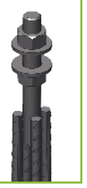
HPM/L the short type ribbed bar bolts with forged head are also used as anchor bolts in foundations, and they are suitable for bolt joints at the top of concrete beams or on sides of columns.



PPM anchor bolts

PPM/P long type bolts are used as overlapping bolts in columns and as basic bolts. The main reinforcement of the basic bolt is attached to reinforcement of the column with an overlap.

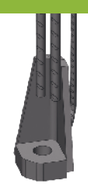
PPM/L short type bolts are used as a basic bolts and anchor bolts in foundations.



HPKM column shoes

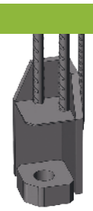
With the help of HPKM column shoes, moment stiff joints can be made.

The light weight of the HPKM makes the handling and installation easy and fast.



PEC column shoes

Easy handling, lightness and high capacities are combined in PEC column shoes.



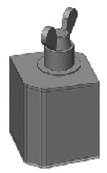
Capacities of column connection elements

Column shoe and bolt (P or L) used		ETA C 30/37 N_{Rd} [kN]
HPKM 16	HPM 16	61,7
HPKM 20	HPM 20	96,3
HPKM 24	HPM 24	138,7
HPKM 30	HPM 30	220,4
HPKM 39	HPM 39	383,4
PEC 30	PPM 30	299,2
PEC 36	PPM 36	435,7
PEC 39	PPM 39	520,5
PEC 45	PPM 45	696,5
PEC 52	PPM 52	937,6

Wrench size

Thread	M16	M20	M22	M24	M27	M30	M36	M39	M45	M52
Wrench	24	30	34	36	41	46	55	60	70	80

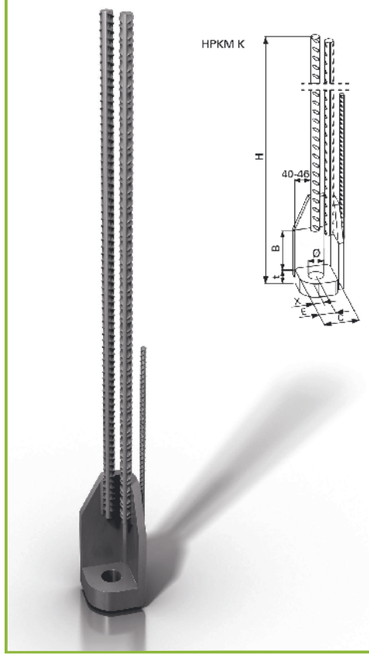
Casting box



Casting box Corner /CBOX/ and Middle /MBOX/

HPKM 16 CBOX MBOX	HPKM 20 CBOX MBOX	HPKM 24 CBOX MBOX	HPKM 30 CBOX MBOX	HPKM 39 CBOX MBOX	PEC 30 CBOX MBOX	PEC 36 CBOX MBOX	PEC 39 CBOX MBOX	PEC 45 CBOX MBOX	PEC 52 CBOX MBOX
M16	M16	M16	M16	M16	M16	M16	M16	M16	M16
yellow	blue	grey	green	orange	black	red	brown	violet	white

HPKM column shoes



	B	C	E	H	t	Ø	X	weight	colour
				[mm]				[kg]	
HPKM 16	85	75	50	725	15	28	30	2,1	yellow
HPKM 20	95	80	50	875	20	31	30	3,7	blue
HPKM 24	105	85	50	1105	30	35	30	6,5	grey
HPKM 30	120	90	50	1430	45	40	30	13,4	green
HPKM 39	150	110	60	1885	50	55	37	26,4	orange

Capacities on page 15.

HPKM column shoes are also available welded in circular bottom plate. Four column shoes / bottom plate. Sizes Ø280, Ø380 and Ø480.

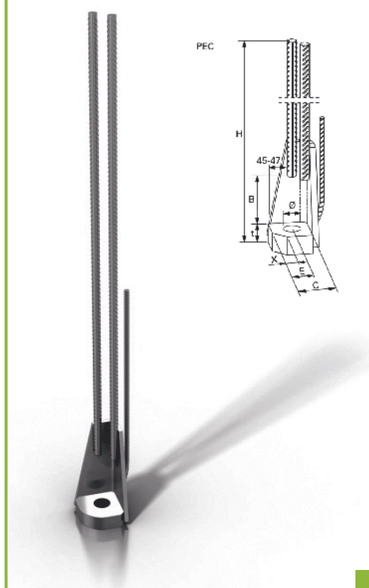
CE

APPROVALS:

ETA-13/0603

Finland: BY 5 B-EC 2 N:o 39,
Romania: 007-01/163-2009,
Turkey: No. 802,
Slovakia: TO-09/0150,
Germany: S-N/160053,
Hungary: A-744/2/2007,
Poland: AT-15-5061/2013,
Russia: POCC FI.AB24.H08046
Ukraina: UA1.058.0190082-08,
Ukraina: UA1.058.0190088-08,

PEC column shoes



	B	C	E	H	t	Ø	X	weight	colour
				[mm]				[kg]	
PEC 30	130	105	50	1455	45	45	30	19,1	black
PEC 36	170	115	60	1845	50	55	37	30,3	red
PEC 39	195	130	60	1975	60	55	37	38,2	brown
PEC 45	190	145	60	2340	60	65	37	63,1	violet
PEC 52	175	155	60	2690	70	70	37	96,9	white
PEC 60									

Capacities on page 15.

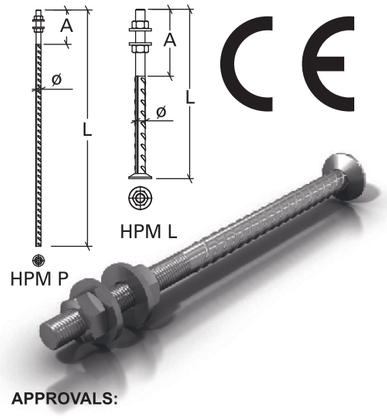
APPROVALS:

Finland: BY 5 B-EC 2 n:o 38 (EC 2 NA)
Finland: BY 5 B-EC 2 N:o 39 (PEC-X)
Hungary: A-744/2/2007
Poland: AT-15-5061/2013
Russia: POCC FI.AB24.H08046
Slovakia: TO-09/0150
Turkey: No. 802
Romania: 007-01/163-2009,
Ukraina: UA1.058.0190082-08,
Ukraina: UA1.058.0190088-08

Materials HPKM and PEC

plates	ribbed bars
S355J2+N	B500B

HPM anchor bolts



CE

	L	A	Ø	washer	N_{Rd}	weight
			[mm]		[kN]	[kg]
HPM 16L	280	140	16	ø 38-6	61,7	0,9
HPM 16P	810	140	16	ø 38-6	61,7	1,7
HPM 20L	350	140	20	ø 46-6	96,3	1,4
HPM 20P	1000	140	20	ø 46-6	96,3	2,9
HPM 24L	430	170	25	ø 56-6	138,7	2,2
HPM 24P	1160	170	25	ø 56-6	138,7	4,9
HPM 30L	500	190	32	ø 65-8	220,4	4,1
HPM 30P	1420	190	32	ø 65-8	220,4	9,8
HPM 39L	700	200	40	ø 90-10	383,4	9,2
HPM 39P	2000	200	40	ø 90-10	383,4	21,8

HPM bolts also available as hot-dip galvanized.

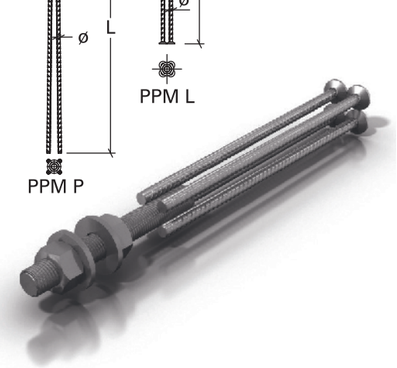
APPROVALS:

ETA (HPM L): ETA-02/0006
Finland: BY 5 B N:o 359 M1
Germany: Z-30.6-39
Hungary: A-744/2/2007
Netherlands: K65974/01
Poland (HPM P): AT-15-5060/2016
Russia: POCC FI.AB28.H15900
Slovakia: TO-09/0150 (HPM P)
Turkey: No. 802
Ukraina: UA1.058.0190082-08
Ukraina: UA1.058.0190088-08

Materials of HPM

ribbed bars	B500B
washers	S355J2+N
nuts	property class 8

PPM anchor bolts



	L	A	Ø	washer	N_{Rd}	weight
			[mm]		[kN]	[kg]
PPM 30L	670	190	2ø25	ø 65-8	299,2	6,2
PPM 30P	1705	190	2ø25	ø 65-8	299,2	14,1
PPM 36L	740	190	4ø20	ø 80-8	435,7	9,4
PPM 36P	1450	190	4ø20	ø 80-8	435,7	16,0
PPM 39L	880	190	3ø25	ø 90-10	520,5	12,7
PPM 39P	1815	190	3ø25	ø 90-10	520,5	23,5
PPM 45L	980	220	4ø25	ø 100-10	696,5	18,6
PPM 45P	1825	220	4ø25	ø 100-10	696,5	31,4
PPM 52L	1140	250	4ø32	ø 100-12	937,6	32,6
PPM 52P	1930	250	4ø32	ø 100-12	937,6	52,1
PPM 60L	1330	310	4ø32	ø 115-15	1259,7	42,0
PPM 60P	2490	310	4ø32	ø 115-15	1259,7	71,0

APPROVALS:
Finland: BY 5 B N:o 359 M1
Germany: Z-30.6-39 (PPM P)
Germany: Z-21.5-1706 (PPM L)
Hungary: A-744/2/2007
Poland: AT-15-5060/2016
Russia: POCC FI.AB28.H15900
Slovakia: TO-09/0150
Turkey: No. 802
Romaina: 007-01/163-2009
Ukraina: UA1.058.0190082-08
Ukraina: UA1.058.0190088-08

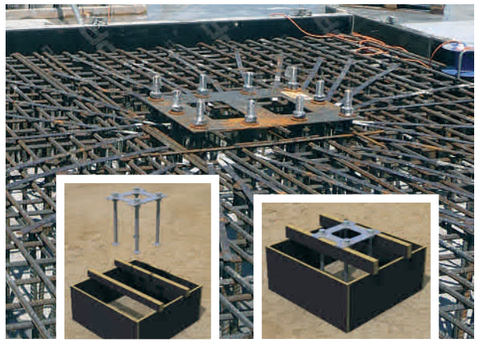
PPM bolts also available as hot-dip galvanized.

Materials of PPM

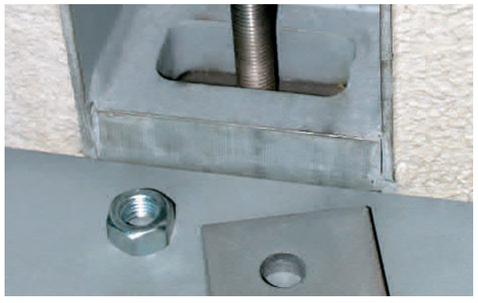
thread bar	B500B	EN 10080
ribbed bars	high-strength steel	f_{yk}≥640MPa(d≤35mm) / f_{yk}≥800MPa(d>35mm)
washers	S355J2+N	EN 10025-2
nuts	property class 10	EN ISO 4032

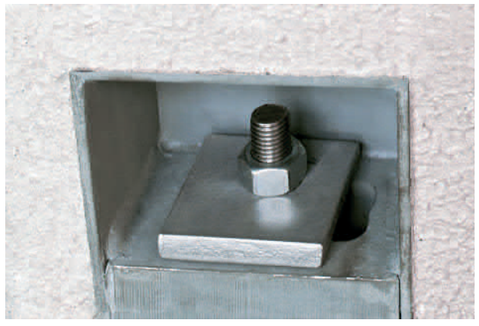
INSTALLATION FRAME

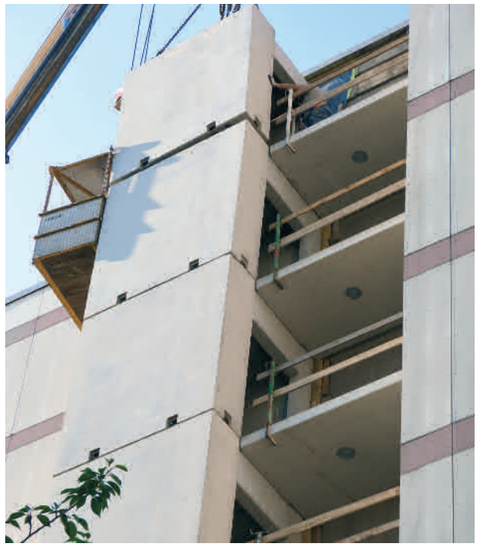
Peikko PPL Bolt Installation Template is a steel plate for installing bolts accurately into castings. Bolts are accurately positioned and fixed into the mould with PPL Bolt Installation Template. Anchor bolts are fixed through the holes on the template with bolt's nuts and washers. PPL Bolt Installation Template can be secured with nails to the supporting base by its nailing recesses at the sides. PPL Bolt Installation Template has alignment marks for accurate positioning of the anchor bolt group to the module line. Bolts can be adjusted and tightened to the correct level.



Wall shoes usage



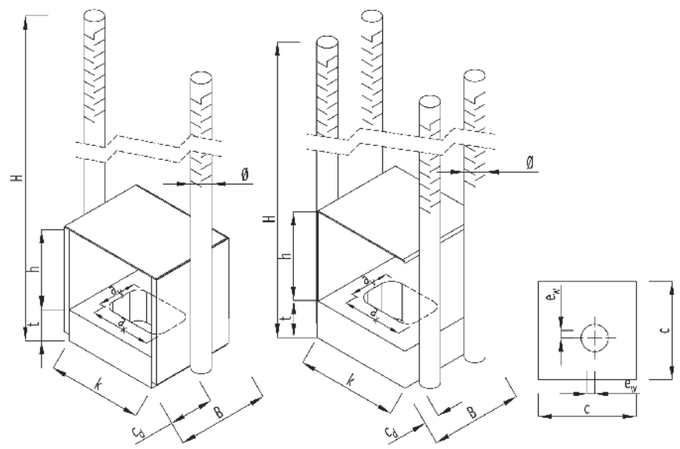




BOLTED WALL CONNECTIONS

SUMO wall shoes

SUMO Wall Shoes are used with Peikko Anchor Bolts to create precast concrete wall connections. Wall shoes are cast into the bottom part of the wall together with main and supplementary reinforcement. HPM and PPM Anchor Bolts (with AL - washers) are either cast into the foundations (wall-foundation connection) or in the top part of the lower wall (wall-wall connection).
SUMO Wall Shoes are designed to offer sufficient resistance to withstand the maximal design values for tensile forces from the corresponding HPM and PPM Anchor Bolts.



SUMO wall shoes

	B	k	t	h	H	a_y	a_x	Ø	N_{RD} [kN]	weight [kg]	color
	[mm]										
SUMO 16H	80	115	30	80	580	36	76	14	62	3,9	yellow
SUMO 20H	90	120	35	90	850	40	80	16	96	6,0	blue
SUMO 24H	110	135	35	100	960	49	84	20	139	9,6	gray
SUMO 30H	120	140	40	115	1170	55	90	25	220	15,2	green
SUMO 39H	145	155	50	130	1590	64	99	28	383	26,7	orange
SUMO 30P	130	145	45	120	1350	55	90	28	299	21,3	black
SUMO 36P	150	160	55	130	1755	61	96	32	436	35,1	red
SUMO 39P	150	165	60	145	1820	64	99	28	521	46,2	brown
SUMO 45P	180	175	70	160	2015	75	105	32	697	66,9	purple
SUMO 52P	230	250	80	185	2590	82	112	32	938	100,4	white

APPROVALS:
Finland: BY 5 B-EC 2 N:o 10
Russia: POCC FI.AB28.H16302

Material of SUMO

plate	box	ribbed bars
S355J2+N EN 10025-2	S235JR EN 10025-2	B500B EN 10080

COPRA Anchoring Coupler

The COPRA Anchoring Coupler is a rebar anchor with female threads for bolted connections in precast concrete structures. COPRA is mainly used in foundation-to-column and column-to-beam connections in combination with HPKM® / PEC Column Shoes or BECO Beam Shoes.

COPRA Anchoring Couplers transfer tensile, compression, and shear forces through the connection during erection and in the final stage. COPRA can be adapted to all types of concrete structure.

Hidden COPRA Anchoring Couplers with removable threaded bars avoid the risk of protruding parts being damaged during construction. The joint between the two precast concrete parts is grouted to finalize the connection.

Types

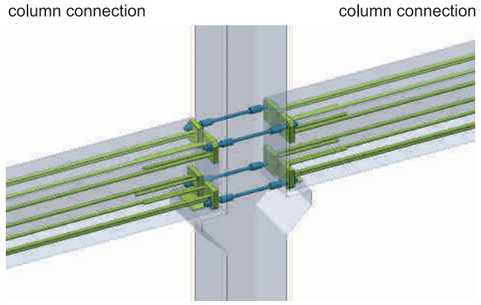
- **COPRA P** Anchoring Coupler with straight anchor bar(s),
- **COPRA L** Anchoring Coupler with headed anchor bar(s),
- **COPRA D** Anchoring Coupler with double-sided arrangement

Advantages

- Multi-purpose anchoring system for all bolted connections
- Simplifi es the process of installing bolted connections
- Prevents bars from protruding from the formwork
- Quick and easy installation into concrete with the help of standard accessories
- Transfers forces after precast elements are erected and nuts are tightened

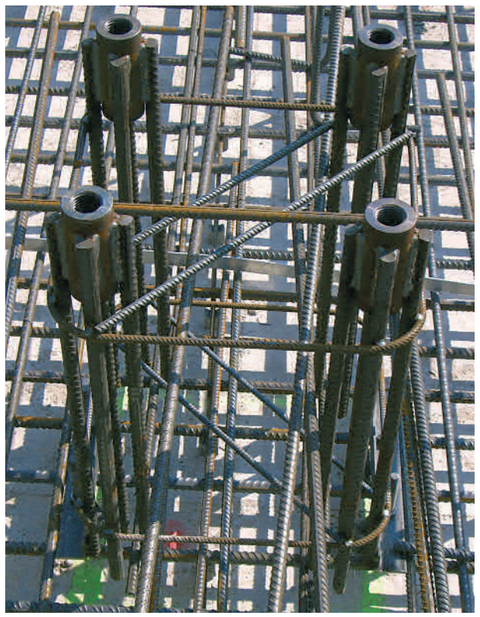
COPRA Anchoring couplers in a single-sided beam-to-column connection

COPRA Anchoring Couplers in a double-sided beam-to-column connection



COPRA Anchoring Coupler

Anchoring coupler type	N_{Rd} [kN]
COPRA 16H	62
COPRA 20H	96
COPRA 24H	139
COPRA 30H	220
COPRA 39H	383
COPRA 30P	299
COPRA 36P	436
COPRA 39P	521
COPRA 45P	697
COPRA 52P	938



BECO Beam Shoe

For bolted beam-to-column connections

BECO Beam Shoes are construction products used to create cost-eff ective, moment-resisting connections between precast concrete columns and precast concrete beams.

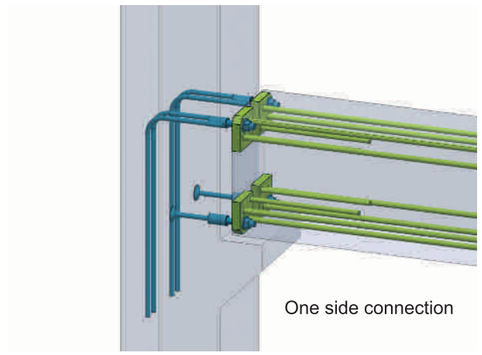
The Beam-to-column Connection is made by Beam Shoes and Coupler Systems. The Beam Shoes are casted into precast concrete beams, while Anchoring Couplers are casted into columns. On the construction site the beams are erected on corbels, adjusted to the correct positions and fixed to the Anchoring Couplers with the help of threaded bars. The joint between beam and column should be grouted before loading the beam. After grout is hardened, the joint works as reinforced concrete structure.

BECO Beam Shoes are used together with COPRA Anchoring Couplers.

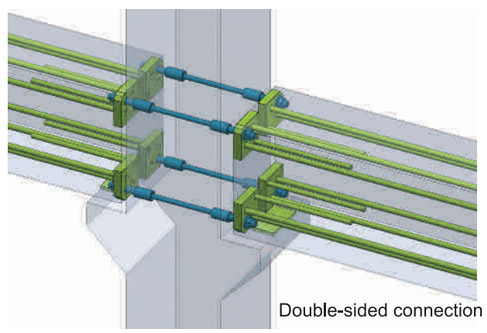
The BECO Beam Shoe is designed according to Eurocode 2 and Eurocode 3.

System benefits:

- For bolted beam-to-column connections
- Enables to create continuous precast beam system
- Quick, easy and cost-effi cient erection of the beam
- No welding during assembly stage



One side connection



Double-sided connection

BECO beam shoe

Beam Shoe	Anchoring Coupler	N_{Rd} [kN]
BECO 16H	COPRA 16H	62
BECO 20H	COPRA 20H	96
BECO 24H	COPRA 24H	139
BECO 30H	COPRA 30H	220
BECO 39H	COPRA 39H	383
BECO 30P	COPRA 30P	299
BECO 36P	COPRA 36P	436
BECO 39P	COPRA 39P	521
BECO 45P	COPRA 45P	697
BECO 52P	COPRA 52P	938

ECO GALVANIZING®

Peikko HPM, PPM and 10.9 anchoring bolts can be delivered with partial zinc coating.

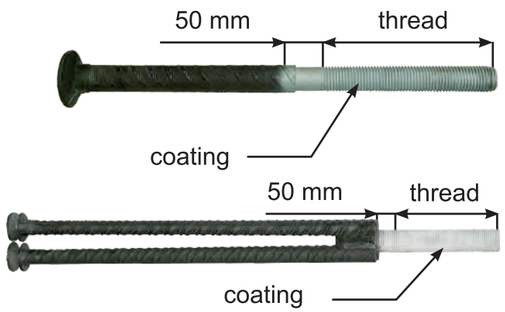
Peikko ECO Galvanizing® is designed to protect bolt against corrosion when the threaded part is exposed to the weather, which is the case with steel columns for example. Peikko ECO Galvanizing® is formed to the upper part of the bolt to cover the surface where the concrete is not protecting the bolt. The coating extends 50 mm below threaded section.

Peikko ECO Galvanizing® is done according to EN 15311 (technical supply conditions) and EN 2063 (coating standard).

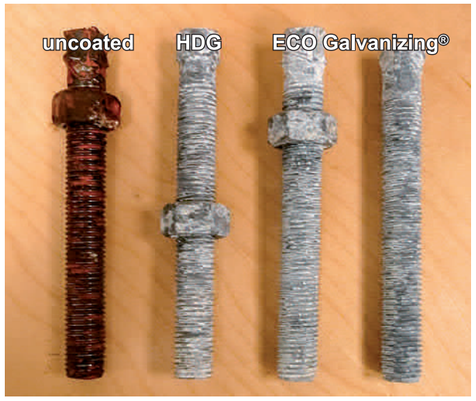
Peikko ECO Galvanizing® is fulfilling the requirement of EN 9223-1002 class C3 (50 Years' lifecycle in urban environment.) suitable for bolts exposed to corrosion in environmental categories from C1 to C3.

Add-values:

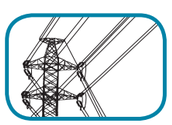
- No negative impact to high strength materials eg. pre-tension bolts in 10.9-class)
- Avoids the Stress Corrosion Cracking (SCC) in high strength bolts (e.g. class10.9 bolts) due to low heat transfer to the material)
- Partial protection is possible (enables weldings on non-coated surfaces. Good feature eg. for bolt cages)
- Short lead time
- No bending or other problem caused by the heat transfer in the processing
- Improved bonding to the concrete due to partial zinc coating
- Lower CO2-emissions in the entire supply chain

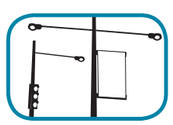


Test parts after a 117 hour salt spray test. There is no visible failure compared to traditional HDG.




Wind Energy


Energy Grid


Masts and poles

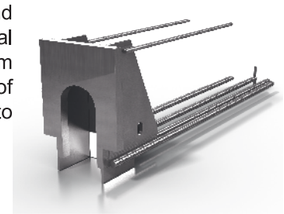

Infrastructure

PC Beam Shoes

Corbel system to support beams

PC Beam Shoe is a building product used with PCs Corbel as vertical support between reinforced or prestressed concrete beams and reinforced concrete columns or walls. It consists of steel plates that form a pocket for corbel and reinforcing bars which anchor forces into the beam. PC Beam Shoe is cast to the beam, where all parts of the beam shoe are hidden.

PC Beam Shoe is dimensioned to be used with PCs Corbel so that the final position of the beam installed on the corbel can be adjusted. After the corbel plate of PCs Corbel is bolted to the column plate, PCs Corbel system may be used without any other additional actions in factory or on site (wedging, welding etc…). The standard models of PC Beam Shoes are designed to withstand vertical and horizontal loads with maximum design value of vertical load up to 1500kN.



PC CORBEL SYSTEM

PCs corbel

There are several types of corbels:
- PCs basic type
- PCs UP for column's upper end
- integrated PCs corbels 2, 3 or 4 corbels in requested angles for small column cross sections
- LOCK-models for all above mentioned for anchorage of negative reaction forces at support

PCs corbel

PCs UP (left)
and PCs (right).

PCs corbels also
available double sided.

APPROVALS:

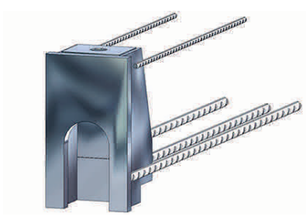
Finland: BY 5 B-EC 2 n:o 35
Germany: Z-21.8.-2076
Netherlands: KOMO®
K90198/01
Poland: AT-15-7911/2015
Russia: POCC FI.AB24.
H08046

PC beam shoe

PC Beam Shoes are used as the counterpart for PCs Corbels for easy installation of both prestressed and non-prestressed precast concrete beams to columns. There are two different models: Low for beam flange heights < 60 mm and High for > 60 mm.

PC Beam Shoe is casted into beam together with the main reinforcement of the beam. The joint of PCs Corbel and PC Beam Shoe is not visible in the final construction.

PC beam shoe



PC beam shoe

APPROVALS:

Finland: BY 5 B N:o 334 (national)
Finland: BY 5 B-EC 2 n:o 15 (EC2-NA)
Netherlands: KOMO® K90198/01
Poland: AT-15-7911/2015
Russia POCC FI.СП19.H00289
Slovakia: TO - 12/0038

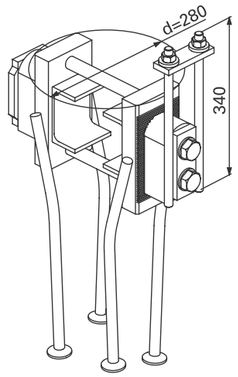
HOW TO FORM THE PRODUCT CODE FOR THE PCs CORBEL

corbel's load class
two-sided corbel (-2)
column with square (H) or circular (d) cross section
diameter / side length of column

PCs 5-2 / d=380 UP ← model for column's end (UP)
LOCK 290 + LOCK 350

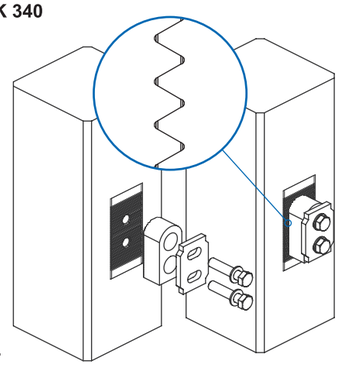
model for negative support reaction (LOCK) and length of the vertical bar (see page 26)

Parts of product code marked with green, blue and grey are independent from one another. Double-sided corbel is indicated with "-2" followed by the diameter or width of the column. The letter in front of the dimension is "H" for column with square cross section and "d" for column with circular cross section. If more than one LOCK-corbel part is needed (double-sided corbel), each is marked separately.



For example. pictured on right is PCs 3-2 / d=280 UP LOCK 340

Installing PCs Corbel



Column part is installed in the mould according to design plans of the column together with reinforcement of the column.

The corbel parts (a corbel plate, washers and bolts) are attached to the column after the element has been cast.

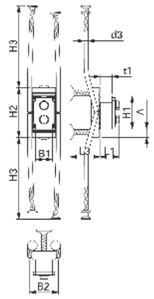
A link has to be made to the end plate of steel or composite beam for the corbel.

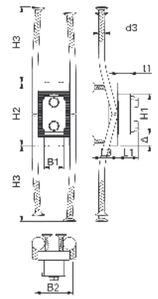
The beam is installed on the corbel by lowering the beam so that the corbel goes into the link in the beam's end plate.

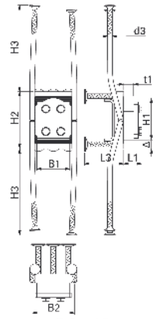
When using LOCK-corbel, the vertical thread bars should fit through holes made for the LOCK-corbel in the beam's top plate. Thread bars have to be long enough so that washers and nuts can be tightened properly after the beam is installed.

The whole height of the joint between the column, the beam and the space around the corbel parts has to be grouted to achieve required fire resistance.

PCs corbel

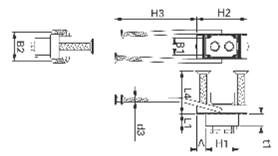


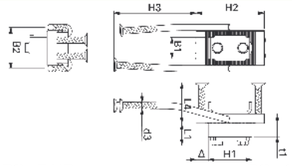




	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
H1	155	155	205	225	280	280
L1	76	92	112	112	117	122
B1	60	80	90	110	145	220
t1	45	55	65	65	65	65
screw	M16x100	M24x120	M30x145	M30x145	M30x150	M30x155
Δ	27,5	40	55	62,5	50	58
H2	210	235	315	350	380	380
H3	397	386	430	423	578	578
L3	125	140	150	145	160	260
B2	116	135	150	212	222	282
d3	16	20	25	32	32	32
weight	12,8	21,9	38,0	58,4	85,0	127,5
colour	red	grey	yellow	green	blue	black

PCs UP corbel



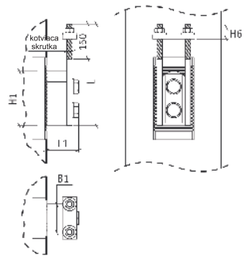


	PCs 2 UP	PCs 3 UP	PCs 5 UP	PCs 7 UP	PCs 10 UP
H1	155	155	205	225	280
L1	76	92	112	112	117
B1	60	80	90	110	145
t1	45	55	65	65	65
screw	M16x100	M24x120	M30x145	M30x145	M30x150
Δ	27,5	40	55	62,5	50
H2	210	235	315	350	380
H3	397	386	430	423	578
L4	125	200	250	210	260
B2	116	135	150	212	222
d3	16	20	25	32	32
weight	12,2	21,5	37,3	57,3	84,5
colour	red	grey	yellow	breen	blue

Materials of PCs and PCs UP

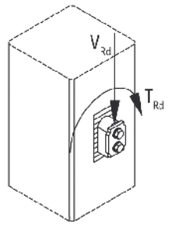
plates (> 25 mm)	plates (≤ 25 mm)	ribbed bars	screws	washers
S355J2+N	S355J0	B500B	property class 10.9	property class10.9

LOCK type PCs corbel



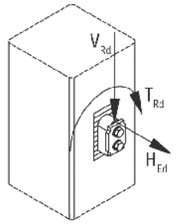
	PCs 2 LOCK	PCs 3 LOCK	PCs 5 LOCK	PCs 7 LOCK	PCs 10 LOCK	PCs 15 LOCK
H1	155	155	205	225	280	280
L1	76	92	112	112	117	122
B1	60	80	90	110	145	220
anchor screw	M16	M22	M22	M22	M27	M30
H6	31	39	39	39	50	50
colour	red	grey	yellow	green	blue	black

Design values of resistances of PCs Corbel (without horizontal tensile load, H_{Ed}=0)



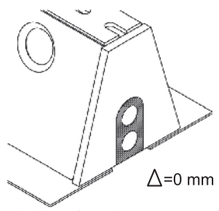
Load		Unit	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
Vertical load	V_{Rd}	kN	230	355	575	785	1010	1500
Horizontal load	H_{Ed}	kN	0	0	0	0	0	0
Torsional moment	T_{Rd}	kNm	7	15	25	50	75	170

Design values of resistances of PCs Corbel (with horizontal tensile load H_{Ed}=0,2xV_{Rd})



Load		Unit	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
Vertical load	V_{Rd}	kN	230	355	520	710	960	1500
Horizontal load	H_{Ed}	kN	46	71	104	142	192	300
Torsional moment	T_{Rd}	kNm	7	15	25	50	75	170

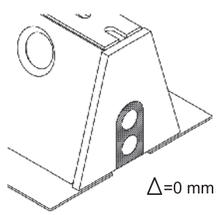
Design values of resistances of PCs corbel exposed to fire (H_{Ed}=0)



PCs Corbel position in beam

	Load	Units	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
R60	V_{Ed}	kN	230	355	575	785	1010	1500
	H_{Ed}	kN	0	0	0	0	0	0
R90	V_{Ed}	kN	230	355	575	785	1010	1500
	H_{Ed}	kN	0	0	0	0	0	0
R120	V_{Ed}	kN	145	220	410	775	710	1490
	H_{Ed}	kN	0	0	0	0	0	0
R180	V_{Ed}	kN	40	95	160	205	240	950
	H_{Ed}	kN	0	0	0	0	0	0

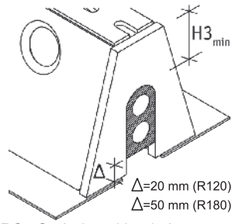
Design values of resistances of PCs corbel exposed to fire (H_{Ed}=0,2xV_{Ed})



PCs Corbel position in beam

	Load	Units	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
R60	V_{Ed}	kN	230	355	520	710	960	1500
	H_{Ed}	kN	46	71	104	142	192	300
R90	V_{Ed}	kN	230	355	520	710	805	1500
	H_{Ed}	kN	46	71	104	142	161	300
R120	V_{Ed}	kN	95	220	410	520	540	1490
	H_{Ed}	kN	19	44	85	104	108	298
R180	V_{Ed}	kN	40	95	160	175	180	950
	H_{Ed}	kN	8	19	32	35	36	190

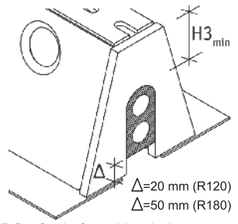
Design values of resistances of integrated PCs Corbel exposed to fire (H_{Ed}=0)



Δ=20 mm (R120)
Δ=50 mm (R180)
PCs Corbel position in beam

	Load	Units	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
R60	V_{Ed}	kN	1)	1)	1)	1)	1)	1)
	H_{Ed}	kN	1)	1)	1)	1)	1)	1)
R90	V_{Ed}	kN	1)	1)	1)	1)	1)	1)
	H_{Ed}	kN	1)	1)	1)	1)	1)	1)
R120 Δ=20 mm	V_{Ed}	kN	230	355	575	785	1010	1500
	H_{Ed}	kN	0	0	0	0	0	0
R180 Δ=50 mm	V_{Ed}	kN	185	255	575	785	1010	1500
	H_{Ed}	kN	0	0	0	0	0	0

Design values of resistances of integrated PCs Corbel exposed to fire (H_{Ed}=0,2xV_{Ed})

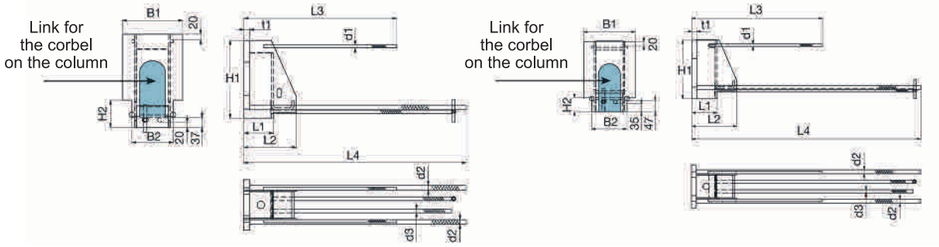


Δ=20 mm (R120)
Δ=50 mm (R180)
PCs Corbel position in beam

	Load	Units	PCs 2	PCs 3	PCs 5	PCs 7	PCs 10	PCs 15
R60	V_{Ed}	kN	1)	1)	1)	1)	1)	1)
	H_{Ed}	kN	1)	1)	1)	1)	1)	1)
R90	V_{Ed}	kN	1)	1)	1)	1)	960	1)
	H_{Ed}	kN	1)	1)	1)	1)	192	1)
R120 Δ=20 mm	V_{Ed}	kN	230	355	520	710	960	1500
	H_{Ed}	kN	46	71	104	142	192	300
R180 Δ=50 mm	V_{Ed}	kN	185	255	520	710	960	1500
	H_{Ed}	kN	37	51	104	142	192	300

1) max. resistance is achieved with Δ = 0 mm (see Table on page 26)

PC H and PC L beam shoe



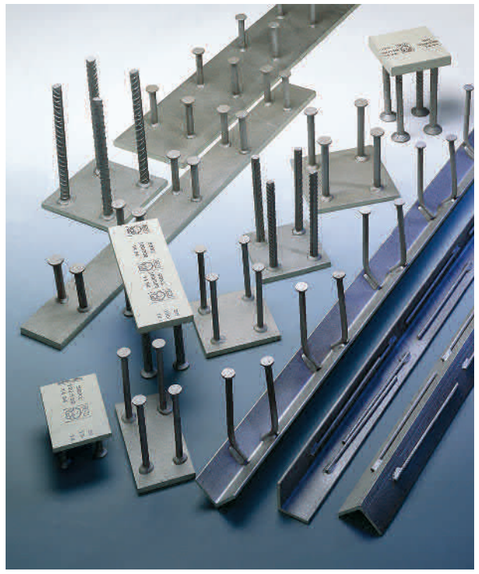
	PC 2		PC 3		PC 5		PC 7		PC 10		PC 15	
	H	L	H	L	H	L	H	L	H	L	H	L
H1	280	240	310	270	340	300	380	340	450	410	450	410
H2	100	60	100	60	100	60	100	60	100	60	100	60
B1	180	180	190	190	220	220	240	240	270	270	389	389
B2	150	150	150	150	150	150	154	154	220	220	343	343
L1	95	95	110	110	130	130	130	130	135	135	135	135
L2	155	155	170	170	230	230	235	235	315	315	315	315
L3	530	530	555	535	670	670	670	670	915	915	835	835
L4	675	770	960	1135	975	1175	1140	1290	1145	1290	1630	1830
t1	15	15	20	20	25	25	25	25	25	25	25	25
d1	10	10	10	10	12	12	12	12	16	16	16	16
d2	16	16	16	16	20	20	20	20	25	25	25	25
d3	16	16	16	16	16	16	20	20	25	25	25	25
weight	12,3	12,6	16,5	17,4	26,8	28,3	34,3	35,5	59,0	58,5	91,8	89,3
colour	red	red	grey	grey	yellow	yellow	green	green	blue	blue	black	black

Materials of PC L beam shoe and PC H beam shoe

plates - S355J2+N, S355J0 ribed bars - B500B

ANCHOR PLATES

Standard anchor plates have protective painting 40 µm. Also available in epoxy coating or hot dip galvanized. Load bearing capacity of anchor plates can be easily determined by software Peikko Designer, **which is freely available on** www.peikko.com**.**



WELDA anchor plate

WELDA® Anchor Plates are true all-rounders in transferring moderate and medium loads to concrete via welded connection. They are designed to fit to thin and shallow structures.

JPL anchor plate

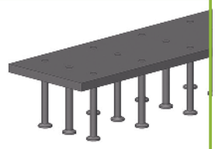
Plate thickness 25 or 30 mm. Ribbed bars with headed studs. Standard fastening plate for demanding fixings..

KL anchor plate

Plate thickness 8 - 15 mm. Straight ribbed bars as anchors. Welded on surface. Especially suits well on dynamic anchoring.

P3KL long anchor plate

Dlhé kotevné platne s hrúbkou 25 mm. Kotviace tŕne s rozkovanou hlavou sú navarené do otvorov pásnice



SKT corner protector angle bar

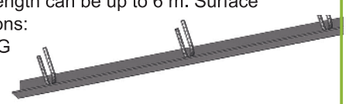
SKT Angle Bars are inner corner protector of the concrete construction for moderate loads. The length can be up to 6 m. Surface coating options painted, HDG or Stainless.

UKT corner protector angle bar

UKT Angle Bars are outer corner protector of the concrete construction for moderate loads. The length can be up to 6 m. Surface coating options painted, HDG or Stainless.

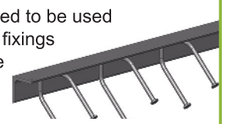
KS Corner Protector

KS Corner Protectors are designed to protect the corners of columns and walls. They do not transfer any constructional loads. The length can be up to 6 m. Surface coating options: painted, HDG or Stainless.



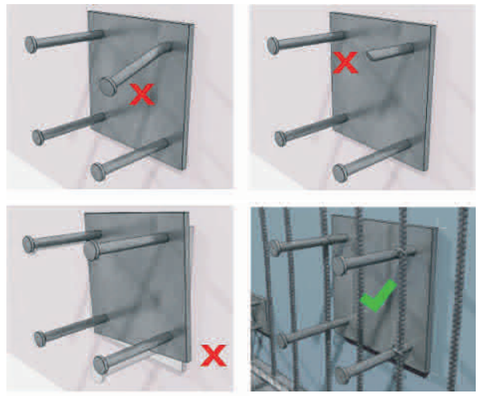
KKT fastening angle bar

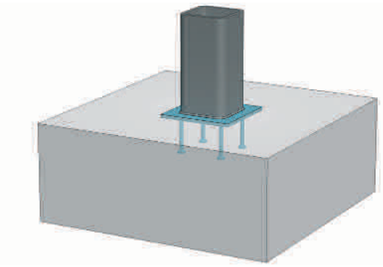
KKT Angle Bars are designed to be used when long fixing or several fixings are needed on the concrete edges at heavy industrial constructions. The length can be up to 6 m.



WELDA® anchor plate

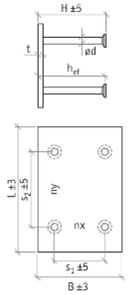
Designed to transfe moderate and medium loads





Standard WELDA® Anchor Plates comes in various sizes from 50 mm x 100 mm up to 400 mm x 2000 mm, covering all fastening needs from small connections to welding of larger or multiple profiles to one long plate. Plate thicknesses varies from 8 mm to 20 mm making the effective product depth from 68 mm to 170 mm. They are also available in various material combinations in plates and studs.

WELDA anchor plate



	BxLxt	H	S_1	S_2	Ød	N_{Rd}	$V_{Rd,x}$	$M_{Rd,L}$	$M_{Rd,B}$	T_{Rd}	WELDA
		[mm]				[kN]		[kNm]			[kg]
WELDA 50x100-68	50x100x8	68	0	60	10	7,8	19,0	0,8	0,3	0,9	0,4
WELDA 100x100-68	100x100x8	68	60	60	10	17,2	30,5	1,1	1,1	1,8	0,8
WELDA 100x150-70	100x150x10	70	60	90	10	20,3	37,2	1,8	1,3	2,7	1,4
WELDA 100x200-72	100x200x12	72	70	120	13	23,9	46,0	2,5	1,6	4,0	2,2
WELDA 100x200-162	100x200x12	162	70	120	13	79,2	89,0	6,4	5,4	7,7	2,6
WELDA 100x300-162	100x300x12	162	70	100	13	90,1	94,9	11,0	5,4	10,3	3,9
WELDA 150x150-70	150x150x10	70	90	90	10	22,7	44,4	2,0	2,0	3,5	2,0
WELDA 150x150-162	150x150x12	162	90	90	13	77,9	90,6	7,5	7,5	7,1	2,8
WELDA 200x200-72	200x200x12	72	120	120	13	28,5	58,4	3,1	3,1	5,8	4,1
WELDA 200x200-162	200x200x12	162	120	120	16	86,6	143,2	10,4	10,4	14,3	4,9
WELDA 200x300-165	200x300x15	165	120	180	16	97,6	145,7	15,9	12,0	18,3	8,2
WELDA 250x250-165	250x250x15	165	170	170	16	104,2	150,2	15,7	15,7	20,3	8,5
WELDA 300x300-165	300x300x15	165	180	180	16	107,5	151,1	18,2	18,2	21,5	11,7

Load bearing capacity is valid only with additional reinforcement calculated. Plate thickness 20 or 30mm.
Anchor bars are made with forged head.

WELDA is painted A40 µm. We also manufacture completely stainless and acidproof WELDA fastening plates.

APPROVALS:

ETA: ETA-16/0430,

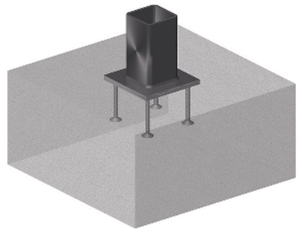
Finland: BY 5 B-EC2 N:o 13 M2

Materials for WELDA

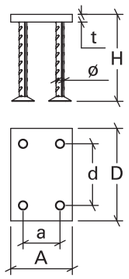
	Plate	Standard	Anchor
WELDA	S355J2+N	EN 10025-2	SD1 (black steel)
WELDA R	1.4301	EN 10088-2	SD1 (black steel)
WELDA Rr	1.4301	EN 10088-2	SD3 (stainless steel)
WELDA A	1.4401	EN 10088-2	SD1 (black steel)
WELDA Ar	1.4401	EN 10088-2	SD3 (stainless steel)

JPL fastening plates

For fixings where great capacities are needed.



JPL fastening plates



	AxDxt	H	d	a	Ø	N_{Rd}	V_{RdD}	M_{RdD}	M_{RdA}	T_{rd}	JPL
		[mm]				[kN]			[kNm]		[kg]
JPL 150x150	150x150x25	220	90	90	16	177	61,0	15,1	15,1	4,8	5,9
JPL 150x200	150x200x25	220	120	100	20	295	96,7	31,4	23,6	8,9	8,3
JPL 150x250	150x250x25	220	190	100	20	316	101,0	49,7	23,6	12,5	9,8
JPL 200x200	200x200x25	220	120	120	20	314	100,4	31,4	31,4	10,0	10,3
JPL 200x250	200x250x25	220	190	120	20	339	103,0	49,7	31,4	13,3	12,2
JPL 250x250	250x250x25	220	190	190	20	369	107,0	49,7	49,7	15,9	14,7
JPL 200x300	200x300x25	280	200	120	25	533	161,0	81,8	49,1	21,6	16,6
JPL 300x300	300x300x25	280	200	200	25	584	168,0	81,8	81,8	26,2	22,5
JPL 500x300	300x500x30	280	400	200	25	867	353,0	252,0	108,0	65,6	45,3
JPL 400x400	400x400x30	280	300	300	25	646	173,0	123,0	123,0	39,3	44,0
JPL 500x500	500x500x30	280	400	400	25	682	176,0	164,0	164,0	52,3	63,7
JPL 800x500	500x800x30	280	700	400	25	1400	448,0	496,0	316,0	142,0	107,6
JPL 600x600	600x600x30	280	500	500	25	705	178,0	205,0	205,0	65,4	89,6

Anchor plates thicknes of 25 or 30 mm. Anchor bars are ribbed rebars with headed end.
Standard anchor plates for challenging fixings

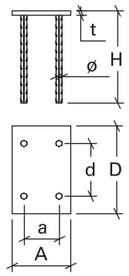
JPL is painted A40 µm. We also manufacture completely stainless and acidproof JPL fastening plates.

APPROVALS:
ETA 04/0056,
Finland BY243,
Sweden 340/89,
Poland AT-15-5256/2002,
Russia РОСС FI. СП19.H00289

Materials of JPL

	plate	standard	anchor	standard
JPL	S355J2+N	SFS-EN 10025	B500B	SFS 1215/EN 10080
JPLR	1.4301	SFS-EN 10088	B500B	SFS 1215/EN 10080
JPLH	1.4401	SFS-EN 10088	B500B	SFS 1215/EN 10080
JPLRr	1.4301	SFS-EN 10088	Gr500	BS 6744:2001

KL fastening plates



	AxDxt	H	d	a	Ø	N_{Rd}	V_{Rd}	M_{RdD}	M_{RdA}	T_{Rd}	KL
		[mm]				[kN]			[kNm]		[kg]
KL 50x100	50x100x8	218	60	-	12	7,7	9,8	0,38	0,28	0,49	0,7
KL 100x100	100x100x8	218	60	60	12	13,7	19,3	0,68	0,68	1,38	1,4
KL 100x150	100x150x10	220	90	60	12	18,4	19,3	1,20	0,91	1,76	2,0
KL 150x150	150x150x12	222	90	90	16	39,6	22,6	2,57	2,57	2,10	3,6
KL 100x200	100x200x12	222	120	60	16	37,2	19,3	2,96	1,86	2,15	3,3
KL 200x200	200x200x12	312	120	120	20	82,8	43,5	6,62	6,62	4,92	6,9
KL 100x300	100x300x15	315	180	60	20	72,3	34,8	7,94	3,61	5,50	6,7
KL 200x300	200x300x15	315	180	120	20	90,3	43,5	9,94	7,22	6,28	10,3
KL 300x300	300x300x15	315	180	180	20	91,7	45,0	8,70	8,70	6,00	13,9

Plate thickness 8 – 15 mm. Anchor bolts are straight ribbed bars welded to plate surface.
Suitable for dynamic loading.

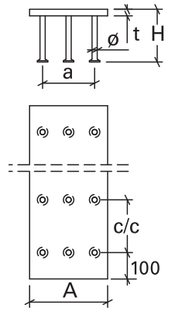
KL is painted A40µm. We also manufacture completely stainless or acid-proof KL fastening plates.

APPROVALS:
Finland BY 5 B N:o 330,
Sweden 3403/89,
Russia РОСС RU.AB28.H15899

Materials of KL

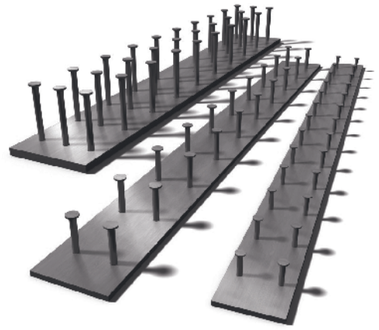
	plate	standard	anchors	standard
KL	S355J2+N	SFS-EN 10025	B500B	SFS-1215/DIN 488/EN 10080
KLR	1.4301	SFS-EN 10088	B500B	SFS-1215/DIN 488/EN 10080
KLH	1.4401	SFS-EN 10088	B500B	SFS-1215/DIN 488/EN 10080

P3KL fastening plates

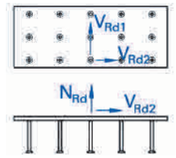


	A	H	a	Ø	t	c/c	N_{Rd}	V_{Rd1}	V_{Rd2}	weight
	[mm]						[kN]			[~kg/m]
P3KL 300	300	220	200	22	25	200	143,5	56,8	57,6	68
P3KL 400	400	220	300	22	25	200	143,5	56,8	58,3	88
P3KL 500	500	220	400	22	25	200	143,5	56,8	59,1	108
P3KL 600	600	220	500	22	25	200	143,5	56,8	59,7	128

Long anchor plates with a thickness of 25 mm. the studs are welded in holes.



Long fastening plates (PKL, P2KL ja P3KL) load bearing capacities are per one row of anchors.



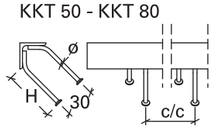
APPROVALS for PKL, P2KL and P3KL:
ETA 04/0056,
Finland: BY 5 B N:o 330,
Sweden: 3403/89,
Russia: POCC FI.AB28.H16302
Ukraina: UA1.058.0190082-08,
Ukraina: UA1.058.0190088-08

Materials of P3KL

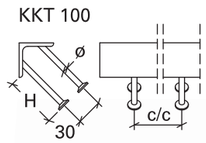
	plate	standard	anchor
PKL, P2KL, P3KL	S355J2+N	SFS-EN 10025	Ø12-S235J2+N/Ø16-S355J2+N
PKLR, P2KLR, P3KLR	1.4301	SFS-EN 10088/10025	Ø12-S235J2+N/Ø16-S355J2+N
PKLH, P2KLH, P3KLH	1.4401	SFS-EN 10088/10025	Ø12-S235J2+N/Ø16-S355J2+N

KKT fastening angle bar

KKT 50 - KKT 80



KKT 100



	profile	Ø	c/c	H	N_{Rdd}	V_{Rdd}	weight
	[mm]				[kN]		[~kg/m]
KKT 50	50x50x5	12	250	160	14,6	16,3	5,3
KKT 80	80x80x8	12	250	160	14,6	16,3	11,2
KKT 100	100x100x10	16	200	120	26,0	28,7	18,0

Lenght up to L=6000m

Non stainless models available as painted A40 µm or hot dip galvanized.
KKT is designed to protect corners with high loads.
Load bearing capacities are per single pair of anchor rebars welded to angle profile.

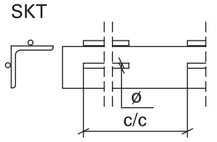
APPROVALS:
Finland: BY 5 B N:o 330
Russia: POCC FI.AB28.H16302
Sweden: 3403/89:

Materials of KKT

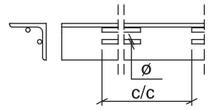
	profile	anchor
KKT	S235JR	S235J2+N
KKTR	1.4301	S235J2+N
KKTH	1.4401	S235J2+N

SKT and UKT corner protector angle bar

SKT



UKT



	profile	Ø	c/c	weight
	[mm]			[~kg/m]
SKT 50	50x50x5	6	300	4,2
SKT 70	70x70x7	6	300	7,8
UKT 40	40x40x4	6	300	2,8
UKT 50	50x50x5	6	300	4,2
UKT 60	60x60x6	6	300	5,9
UKT 70	70x70x7	6	300	7,8
UKT 80	80x80x8	6	300	10,2
UKT 100x50	100x50x8	6	300	9,6
UKT 100	100x100x10	6	300	16,0

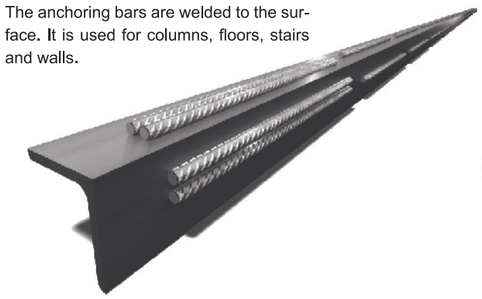
Lenght up to L=6000m

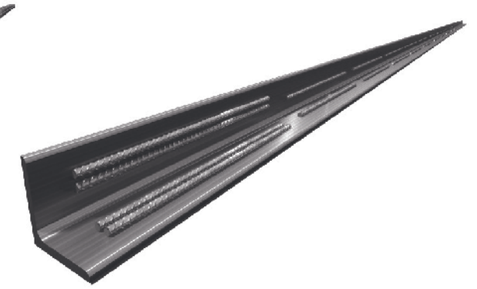
Non stainless models available as painted A40 µm or hot dip galvanized.

SKT - Corner protector for inner corners. The anchoring bars are the same as for the UKT angle.

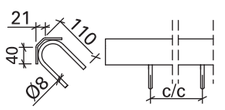
UKT - Corner protector for outer corners. The anchoring bars are welded to the surface. It is used for columns, floors, stairs and walls.

	profile	anchor
SKT / UKT	S235JR	B500B
SKTRr / UKTRr	1.4301	B600KX
SKTHr / UKTHr	1.4401	B600KX



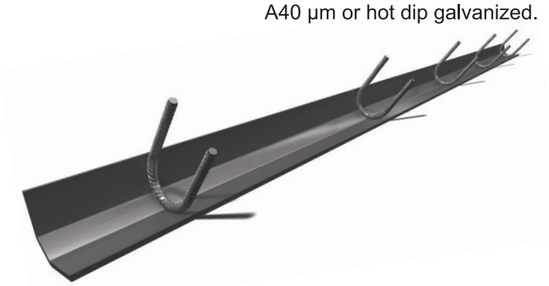


KS corner protector



	L	angle	Ø	c/c	weight
		[mm]			[~kg/m]
KS	2000	60x60x4	8	400	4,0

KS corner protector; to protect chamfered corners of columns. Anchor bars are welded to the angle surface. Non stainless models available as painted A40 µm or hot dip galvanized.



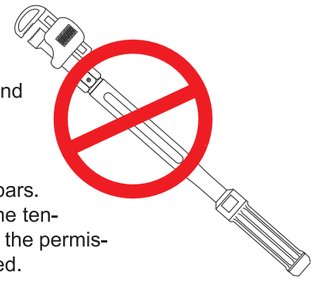
Materials of KS

	angle	anchors
KS	S235J2+N	B500B
KSRr	1.4301	B600KX
KSHr	1.4401	B600KX

MODIX rebar threaded splicing system

In structures which have heavy reinforcement with small center to center distances, splicing rebars are wasting valuable space from concrete. In concreting joints, continuing the reinforcement can be difficult through the formwork, and creating rigid column to beam connections is complex with continuous reinforcement. These problems can be solved by using industrially made and approved end to end threaded connections. Peikko® MODIX system is a state of the art rebar coupling system. Check the Approval status and supplier network from local sales.

Peikko® MODIX rebar splicing systems is available for rebar sizes d12 - d40. System consists of female and male thread muffs and connectors. Due to unique design installation does not require special tools to ensure proper tightness of the connection - normal pipe wrenches will do the work just fine. Various lengths and bendings available upon order.



MODIX muffs are produced under using a special grade steel for the muffs. The muffs are hydraulic pressed on cut of to design length of B500 B grade rebars. Under predominantly dead (static) loads the MODIX coupler can sustain the same tensile and compressive loads as a non-butted reinforcing bar. Under dynamic loads the permissible stress range 2 • σA, according to the certification MODIX, is to be maintained.

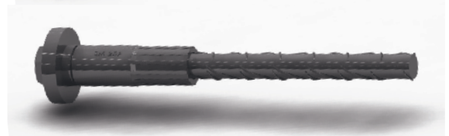
Connection types

MODIX SM – Standard Muffs SM A+B
For connection of rebars with equal diameter. One of the rebar must be able to rotate free.

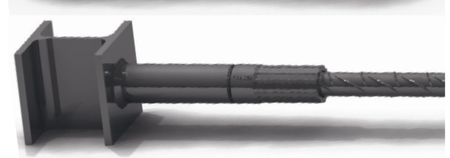
MODIX PM – "Positions Muff"
Connection part for rebars which are both fixed, not able to rotate free. Rebars can be bent or straight. Rebars must be axially in line.

MODIX RM – "Reduction Muff"
For the connection of rebars with different diameters. One of the rebar must be able to rotate free.

MODIX KM – "Combination Muff"
For fastening the female coupler to structures with standard metric screw. KM ring is installed between the muff and the screw.

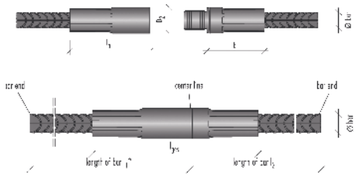


MODIX EM – "End anchoring Muff"
Part for anchoring the coupled rebar to concrete without using a hook.



MODIX AM – "A weldable Muff"
For cases where reinforcement must be welded to steel construction elements or end-plates, where the connecting bar can be rotated.

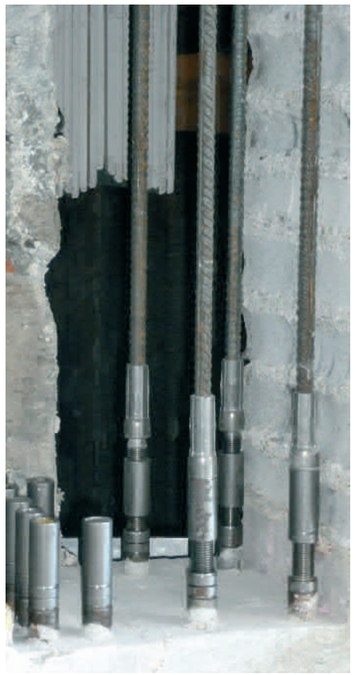
MODIX SM mufs dimensions

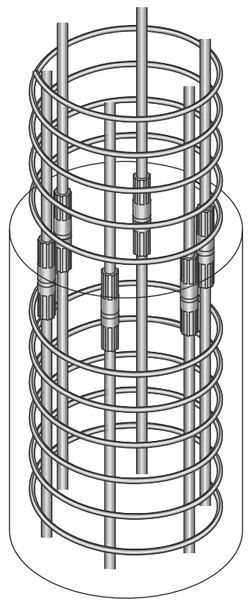


	Length A l_a	Length B l_b	Length A+B l_{ges}	Bar Ø	Ø D_2	ISO-metric M	colour
	[mm]						
SM 10	52	46	96	10	17,5	M 12x1,75	orange
SM 12	63	52	113	12	21	M 16x2	yellow
SM 14	72	57	127	14	24	M 18x2,5	blue
SM 16	80	63	141	16	27	M 20x2,5	withe
SM 20	98	77	173	20	33	M 24x3	grey
SM 25	122	98	218	25	41	M 30x3,5	red
SM 28	141	111	250	28	47	M 36x4	black
SM 32	156	124	278	32	53	M 42x4,5	brown

Accessories

MODIX size (d) [mm]	Colour	Protective cap with thread for A muff	Protective plug B muff	Plastic installation plate	Magnetic installation plate
10	orange				
12	yellow				
14	blue				
16	white				
20	grey				
25	red				
28	black				
32	brown				
Delivery:		With muff	With muff	By order	By order





Universal flooring products for general use

Peikko's flooring product range offers the largest available selection of innovative products for use in ground-bearing and pile-supported ground-level concrete floor construction. We offer solutions for even the most demanding types of industry and operating environments.

Peikko's flooring product offering covers the full range of construction methods

- Screed layer application
- Long strip concrete floor construction techniques
- Large area construction method
- Jointed and jointless floor construction methods (supported by laser screed technology)
- Technology for post-tension floors

There is a full range of solutions readily available for both external and internal applications, from light- to heavy-duty usage, and with or without arris protection capability. All our flooring products are environmentally friendly and 100% recyclable.

Peikko's carefully designed flooring products enable you to:

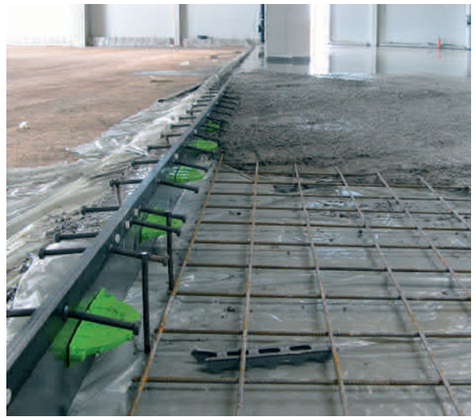
- Carry out the floor construction process faster, easier, and more reliably
- Construct to the highest category of flatness
- Choose the best solution for the full range of floor categories, loadings, and joint openings
- Improve operational performance
- Ensure long-term low maintenance requirements for floor joints, minimize repair costs, and extend the overall service life of the floor

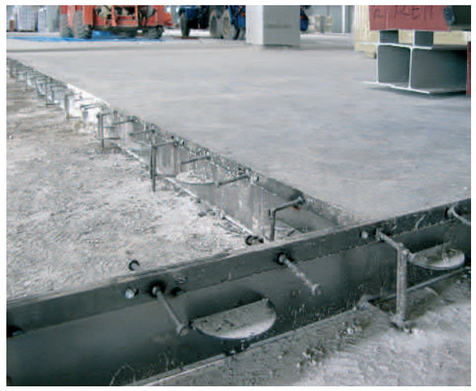
Industry standard free movement joint with sharp arris protection

TERAJOINT

Load transfer systems

TERADOWEL
ULTRADOWEL
DOWELCRADLES





TERAJOINT

Industry standard free movement joint with sharp arris protection

TERAJOINT is the industry standard in the range of prefabricated heavy-duty movement joint systems, suitable for all large-area construction methods for ground-bearing and pile-supported concrete floors. The cold-drawn steel rails provide extremely durable protection to the slab arrises, making it ideal for floors in a heavy-duty traffic environment.

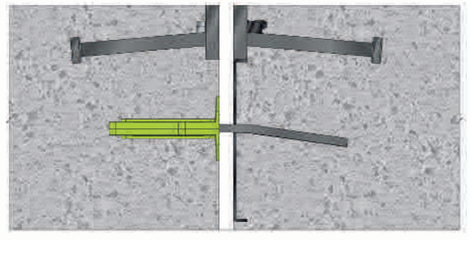
The system ensures reliable load transfer in formed free-movement contraction joints with openings of up to 20 mm wide, and suitable for slab depths from 100 mm to 300 mm.

It is available in Plain Steel, Hot Dip Galvanized Finish or Stainless Steel versions.

The TERAJOINT system range includes a selection of prefabricated intersections, including "T" sections, "X" sections and rounded sections.

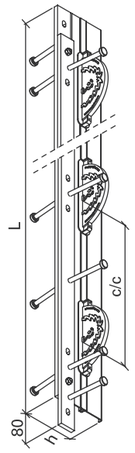
SYSTEM BENEFITS

- Prefabricated leave-in-place free movement joint system with a variety of integral load transfer mechanisms to suit all floor loadings
- Heavy Duty performance with 40mm x 10mm cold drawn steel for extreme armouring of joint arrises.
- Suitable for the high flatness category floor and superflat floor construction.
- Fast track installation with a selection of fixing methods and accessories.



Flooring products

TERAJOINT TJ6/TJ8 - straight element dimensions

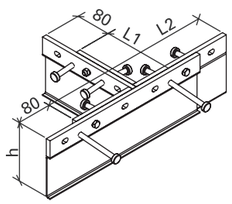


	height h	dowel	c/c	length L	weight	advisable slab thickness
		[mm]			[kg]	[mm]
TJ6-90-3000	90	TDC 6	500	3000	29,4	100-120
TJ6-115-3000	115	TDC 6	500	3000	30,5	125-145
TJ6-135-3000	135	TDC 6	500	3000	31,5	145-170
TJ6-160-3000	160	TDC 6	500	3000	32,6	170-195
TJ6-185-3000	185	TDC 6	500	3000	33,8	195-225
TJ6-215-3000	215	TDC 6	500	3000	35,2	225-250
TJ6-230-3000	230	TDC 6	500	3000	35,9	245-270
TJ6-245-3000	245	TDC 6	500	3000	36,6	260-300
TJ8-135-3000	135	UDR 8	500	3000	36,1	145-170
TJ8-160-3000	160	UDR 8	500	3000	37,2	170-195
TJ8-185-3000	185	UDR 8	500	3000	38,4	195-225
TJ8-215-3000	215	UDR 8	500	3000	39,8	225-250
TJ8-230-3000	230	UDR 8	500	3000	40,5	245-270
TJ8-245-3000	245	UDR 8	500	3000	41,2	260-300

TERA X-junction element dimensions

	height h	width L1	width L2	weight	compatibility
		[mm]		[kg]	
TJX-90	90	400	400	6,3	TJ6-90
TJX-115	115	400	400	6,7	TJ6-115
TJX-135	135	400	400	7,0	TJ6-135/TJ8-135
TJX-160	160	400	400	7,4	TJ6-160/TJ8-160
TJX-185	185	400	400	7,8	TJ6-185/TJ8-185
TJX-215	215	400	400	8,2	TJ6-215/TJ8-215
TJX-230	230	400	400	8,5	TJ6-230/TJ8-230
TJX-245	245	400	400	8,7	TJ6-245/TJ8-245

TERA T-junction element dimensions



	height h	width L1	width L2	weight	compatibility
		[mm]		[kg]	
TJT-90	90	160	400	4,9	TJ6-90
TJT-115	115	160	400	5,3	TJ6-115
TJT-135	135	160	400	5,6	TJ6-135/TJ8-135
TJT-160	160	160	400	5,9	TJ6-160/TJ8-160
TJT-185	185	160	400	6,3	TJ6-185/TJ8-185
TJT-215	215	160	400	6,7	TJ6-215/TJ8-215
TJT-230	230	160	400	6,9	TJ6-230/TJ8-230
TJT-245	245	160	400	7,1	TJ6-245/TJ8-245

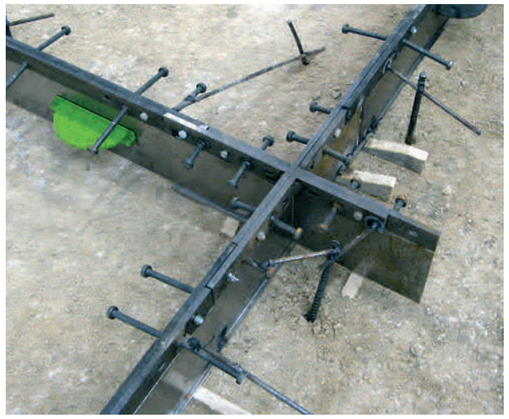
Dowels and sleeves

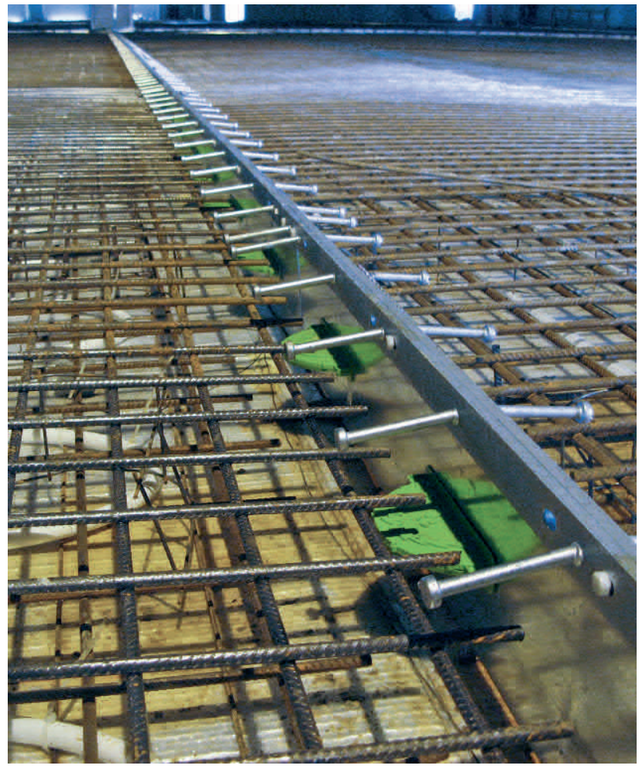
	dovel thickness t	dovel dimension	sleeve type	advisable joint opening
	[mm]			[mm]
TDC 6	6	150 circular	TSC 6	0-15
UDR 8	8	145x175 rectangular	TSR 8	15-20

TERAJOINT materials

	Divider plate	Top strips	Top strip dowels	Shear connectors	plastic sleeve
TERAJOINT	DC01	S235JRC+C	S700 MC	S235J2+C450	ABS
TERAJOINT HDG*	DC01 HDG	S235JRC+C HDG	S700 MC HDG	S235J2+C450 HDG	ABS
TERAJOINT SS*	DC01 HDG	1.4301	S700 MC HDG	S235J2+C450	ABS
TERAJOINT Acid Proof*	1.4401	1.4401	1.4401	1.4301	ABS

* = not in stock, production on reqest, HDG = hot dip galvanized SS - stainless steel





OPTIMAJOINT

Prefabricated Free Movement Joint System for Heavy Duty Concrete Floors

OPTIMAJOINT is an innovative patented design of a prefabricated heavy duty, free movement joint system, suitable for all large bay construction methods for ground bearing and pile supported fl oors. The effi cient armouring of slab arrises, makes it ideal for heavy duty traffic environments.

The system ensures reliable load transfer in formed free movement joints with openings of up to 20 mm wide, and is suitable for slab depths from 125 mm to 300 mm.

Available in Plain Steel and Hot Dip Galvanized when corrosion resistance is required. The OPTIMAJOINT system range includes a selection of prefabricated intersections, including “T” sections and “X” sections.

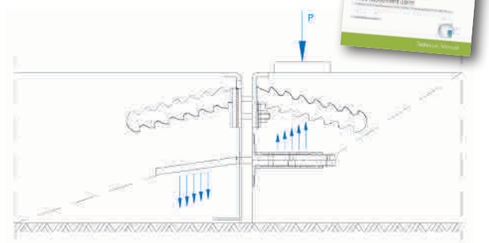
SYSTEM BENEFITS

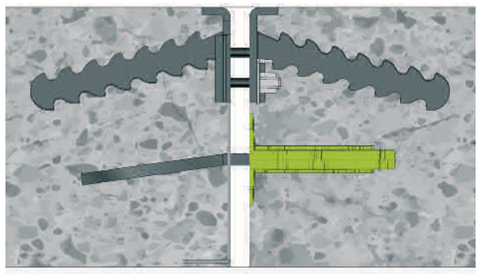
- Arris protection provided by unique radiused inner edge of top rail reduces impact damage, and it is kinder to truck wheels.
- Reliable anchoring by anchor tangs with greater surface area and resistance to pull out is improving failure resistance together with tag locks.
- Suitable for the high flatness category floor construction.
- Class leading plate dowel load tranfer systems included.
- Reduced weight, lower carbon foot print, all materials are 100% recyclable.

OPTIMAJOINT joint system

OPTIMAJOINT is designed for extremely heavy industrial flooring with minimal maintenanc needs (eg logistics, ware houses, heavy engineer ing, refrigerator, etc.).

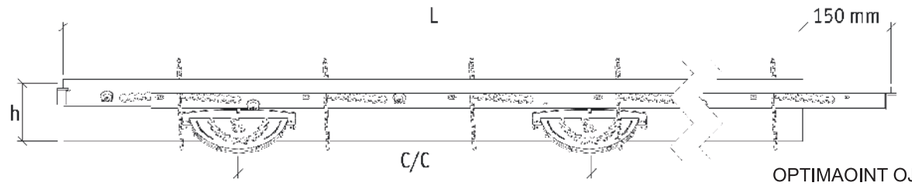
OPTIMAJOINT are produced for floors thickness 125-300 mm. Length of 3 m.





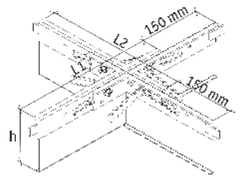
OPTIMAJOINT formwork OJ6/OJ8 - straight

Type	Height h	Dowel type	Dowel centres c/c	Length L	Weight kg	Advisable slab depth
OJ6-115-3000	115	TDC 6	600	3000	19,1	125-145
OJ6-135-3000	135	TDC 6	600	3000	19,8	145-170
OJ6-160-3000	160	TDC 6	600	3000	20,7	170-195
OJ6-185-3000	185	TDC 6	600	3000	21,5	195-225
OJ6-215-3000	215	TDC 6	600	3000	22,6	225-250
OJ6-230-3000	230	TDC 6	600	3000	23,1	245-270
OJ6-245-3000	245	TDC 6	600	3000	23,6	260-300
OJ8-135-3000	115	UDR 8	600	3000	23,2	125-145
OJ8-160-3000	135	UDR 8	600	3000	23,9	145-170
OJ8-185-3000	160	UDR 8	600	3000	24,7	170-195
OJ8-215-3000	185	UDR 8	600	3000	25,6	195-225
OJ8-215-3000	215	UDR 8	600	3000	26,6	225-250
OJ8-230-3000	230	UDR 8	600	3000	27,1	245-270
OJ8-245-3000	245	UDR 8	600	3000	27,7	260-300



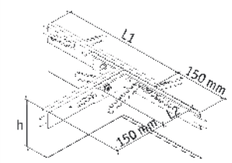
OPTIMAOINT OJ8

OPTIMAJOINT X-junction



Type	Height h	Width L1 [mm]	Width L2	Weight [kg]	Use with profile
OJX-115	115	350	350	3,5	OJ6/OJ8-115
OJX-135	135	350	350	3,7	OJ6/OJ8-135
OJX-160	160	350	350	4,0	OJ6/OJ8-160
OJX-185	185	350	350	4,2	OJ6/OJ8-185
OJX-215	215	350	350	4,6	OJ6/OJ8-215
OJX-230	230	350	350	4,8	TJ6/OJ8-230
OJX-245	245	350	350	5,0	OJ6/OJ8-245

OPTIMAJOINT T-junction



Type	Height h	Width L1 [mm]	Width L2	Weight [kg]	Use with profile
OJT-115	115	350	100	2,7	OJ6/OJ8-115
OJT-135	135	350	100	2,9	OJ6/OJ8-135
OJT-160	160	350	100	3,1	OJ6/OJ8-160
OJT-185	185	350	100	3,1	OJ6/OJ8-185
OJT-215	215	350	100	3,6	OJ6/OJ8-215
OJT-230	230	350	100	3,8	TJ6/OJ8-230
OJT-245	245	350	100	4,8	OJ6/OJ8-245

TERADOWEL and ULTRADOWEL

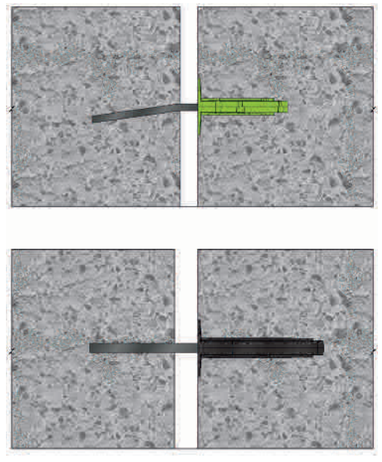
Load Transfer System for Contraction Free Movement Joints in Concrete Floors

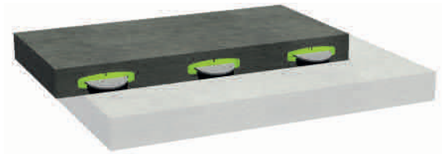
A range of effi cient plate dowel load transfer systems for contraction free movement joints designed for use with traditional methods of formed joint construction with timber form-work (construction joint). Available in Plain Steel, or Hot Dip Galvanized finish, for use in interior and exterior applications.

TERA Dowel and ULTRA Dowel are recommended to be used for joint openings up to 20 mm wide, and are suitable for construction of all types of ground level floor slabs such as jointed or jointless, ground bearing and pile supported concrete floors.

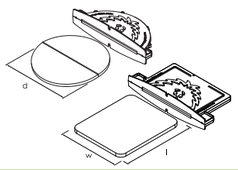
System benefits

- Dowels manufactured from high strength carbon structural steel.
- Combined with rigid high density thin wall plastic release sleeves.
- Optimized shape of dowels for maximal bearing, bending and punching shear resistance.
- Allows all directional movement in the horizontal slab plane, minimizes vertical deflection of the slab edges.
- Easy and fast installation.

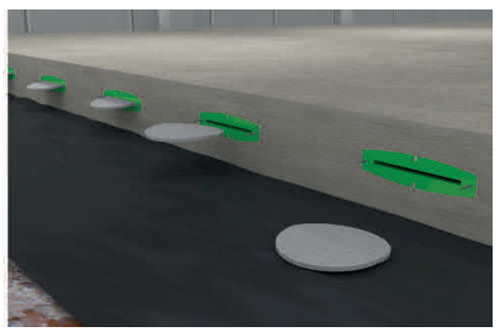




TERA dowel ans sleeve



Dowel Type	Thickness [mm]	Dimensions	Sleeve Colour	Advisable Joint Opening [mm]
TDC6	6	150(d)	zelená	0-15
UDR8	8	145(w) x 175(l)	tmavo šedá	15-20

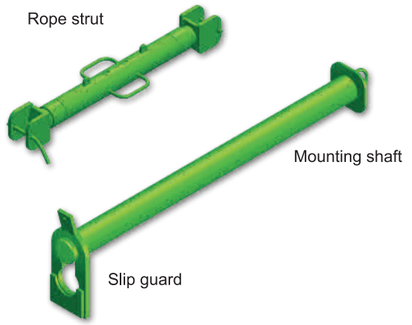


COLIFT - Mounting System

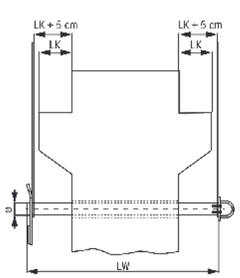
for precast concrete elements

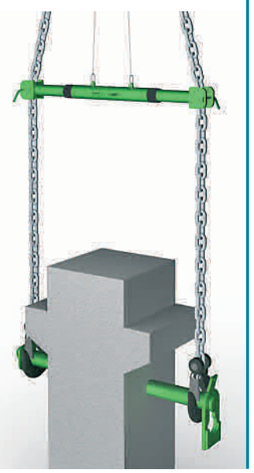
The COLIFT Mounting System is designed for easy and time-saving lifting and handling of precast concrete elements such as columns or precast beams. The mounting system can be remotely released with a cord.

- Standardized assembly and handling system for different load levels
  - 5.6 - 35,5 tons with corbels up to 30 cm
  - 15.8 - 90 tons without corbels
- Complete system
- Minimal maintenance
- CE marking - manufactured under strict quality control



- The COLIFT Mounting System consists of mounting shaft, slip guard, rope strut and slings.
- The slip guard secures the position of the slings on the mounting shaft and allows remote disassembling of the system from the precast element.
- Lifting ropes, loops, chains and cables are not included





COLIFT - Mounting System

corbel projection LK [cm] **type [mm]**	max. bearing capacity [t] **Lenght [mm]**	WLL [t] corbel projektion LK **Weight [kg]**
Ø 70	**1200**	**45**
without corbel	15,8	7,9
20	7,0	3,5
25	6,3	3,15
30	5,6	2,8
Ø 90	**1400**	**82**
without corbel	37,0	18,5
20	15,5	7,75
25	13,0	6,5
30	11,5	5,75
Ø 115	**1800**	**168**
without corbel	58,0	29,0
20	26,5	13,25
25	23,0	11,5
30	20,0	10,0
Ø 140	**2000**	**270**
without corbel	90,0	45,0
20	45,5	22,75
25	40,0	20,0
30	35,5	17,75

COLIFT - Rope strut

type	Lenght of strut [mm]	Weight [kg]	Permissible vertical inclination
PS 01	1125 - 1800	80	ß ≤ 15°
PS 03	858 - 1200	65	ß ≤ 15°
PS 03	625 - 900	60	ß ≤ 15°

JENKA
Threaded Lifting Systems

JENKA product range consists of various R_d threaded socket anchors with load capacities from 500 kg to 12,5 tons, threaded lifting loops and various accessories.

JENKA anchors are suitable also for narrow and thin structures. WAS and WAL are for reduced anchoring depth, SRA for narrow structures and CSA to arrange bonding with separate rebar. The anchors are generally protected from corrosion through electro zinc plating, excluding the rebars. Anchors made of stainless steel are also available.

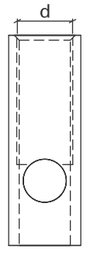
Peikko's lifting systems are CE marked.

At the time of first lifting, the concrete must have a compressive strength of at least 15 N/mm².

CSA crosshole socket anchor

Item name:
CSA Rd thread size (d)

Item name	Load class [kg]	Length [mm]
CSA 12	500	40
CSA 14	800	47
CSA 16	1200	54
CSA 18	1600	65
CSA 20	2000	67
CSA 24	2500	77
CSA 30	4000	105
CSA 36	6300	125
CSA 42	8000	145
CSA 52	12500	195

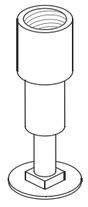


If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

BSA bolt socket anchor

Item name:
BSA Rd thread size (d)

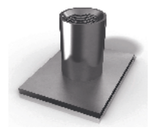
Item name	Load class [kg]	Length [mm]
BSA 12	500	60
BSA 14	800	70
BSA 16	1200	80
BSA 18	1600	90
BSA 20	2000	100
BSA 24	2500	115
BSA 30	4000	150



If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

PSA plate socket anchor

Item name:
PSA Rd thread size (d)



Item name	Load class [kg]	Length [mm]
PSA 12	500	30
PSA 14	800	33
PSA 16	1200	35
PSA 18	1600	44
PSA 20	2000	47
PSA 24	2500	54
PSA 30	4000	72
PSA 36	6300	84
PSA 42	8000	98
PSA 52	12500	117

If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

ESA eye socket anchor

Item name:
ESA Rd thread size (d)

Item name	Load class [kg]	Length [mm]
ESA 12	500	60
ESA 14	800	70
ESA 16	1200	77
ESA 18	1600	85
ESA 20	2000	92
ESA 24	2500	105

If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

WAS short wawytail anchor

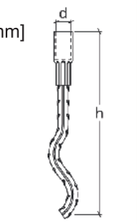
Item name:
WAS Rd thread size (d) x length (h) [mm]

Item name	Load class [kg]
WAS 12X105	500
WAS 14X130	800
WAS 16X165	1200
WAS 18X175	1600
WAS 20X195	2000
WAS 24X240	2500
WAS 30X300	4000
WAS 36X380	6300
WAS 42X450	8000

If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

WAL long wawytail anchor

Item name:
WAL Rd thread size (d) x length (h) [mm]

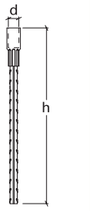


Item name	Load class [kg]
WAL 12X135	500
WAL 14X170	800
WAL 16X215	1200
WAL 18X235	1600
WAL 20X270	2000
WAL 24X350	2500
WAL 30X450	4000
WAL 36X570	6300
WAL 42X620	8000
WAL 52X880	12500

If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

SRA straight rebar anchor

Item name:
SRA Rd thread size (d) x length (h) [mm]



Item name	Load class [kg]
SRA 12X195	500
SRA 14X235	800
SRA 16X275	1200
SRA 18X305	1600
SRA 20X360	2000
SRA 24X400	2500
SRA 30X505	4000
SRA 36X690	6300
SRA 42X840	8000
SRA 52X950	12500

If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

TF "Trollfoot"

Item name:
TF Rd thread size (d) x length [mm]

Item name	Load class [kg]
TF 12X100	500
TF 12X150	500
TF 14X105	800
TF 14X155	800
TF 16X130	1200
TF 16X175	1200
TF 18X150	1600
TF 18X225	1600
TF 20X185	2000
TF 20X250	2000
TF 24X200	2500
TF 24X275	2500
TF 30X275	4000
TF 30X350	4000
TF 36X335	6300
TF 36X450	6300
TF 42X385	8000
TF 42X500	8000
TF 52X550	12500
TF 52X700	12500

If the lifting angle (angle between socket axis and lifting rope) is greater than 45°, **load capacity shall be reduced to half** of value given.

Lifting devices (JENKA, PLA)

TLL threaded lifting loop
Available in sizes TLL 12 - TLL 52. Rd thread.
Max. lifting agle 45°.

JLW threaded lifting loop with joined rope loop. Intended for use in combination with threaded anchors and for lifting and lateral-angular pull Available in sizes TLL 12 - TLL 52. Rd thread.
Max. lifting agle 45°.

JL threaded eyebolt with joined steel loop. Intended for use in combination with threaded anchors and for lifting. Available in sizes TLL 12 - TLL 52. Rd thread.
Max. lifting agle 45°.

Rd thread size	Load class [kg]
12	500
14	800
16	1200
18	1600
20	2000
24	2500
30	4000
36	6300
42	8000
52	12500

TLL, JLW and JL lifting devices are compatible with JENKA and PLA anchors.

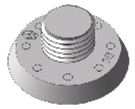
If the lifting angle (angle between screw axis and lifting rope with JL and JLW) is greater than 45°, **load capacity shall be reduced to half** of value given.

For TLL is permissible lifting angle max. 45 °

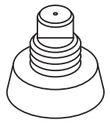
Installation fixings (JENKA, PLA)

Installation fixings for wood and metal moulds

NPP plastic nail plate
Fixed by nailing trough the plate into the mould. Compatible with JL “JENKA lifter”. Available in sizes NPP 12 - NPP 52 (Rd).



NNP narrow nail plate
Fixed by nailing trough the plate into the mould. Material: plastic. Available in thread sizes M12 - M52 (M thread).



NPM magnetic holder
Fastens with magnet.
Available in sizes NPM 12 - NPM 42 (Rd).

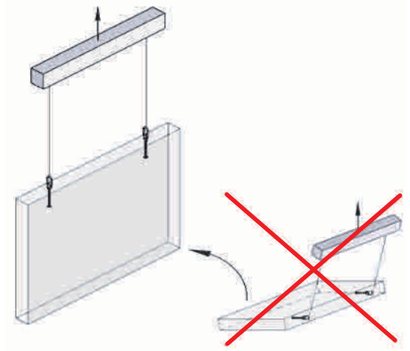
Other supplies (JENKA, PLA)

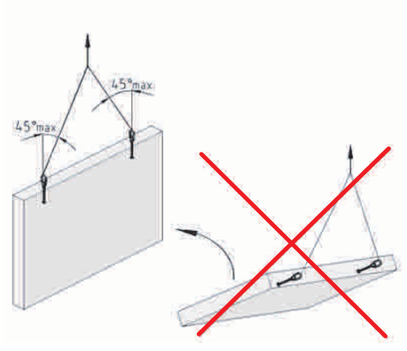
CPP Plastic cap
For JENKA and PLA anchors. Concrete grey color, no threads, is pressed down. Available in sizes CPP 12 - CPP 52. Sold in 100 pcs packages.

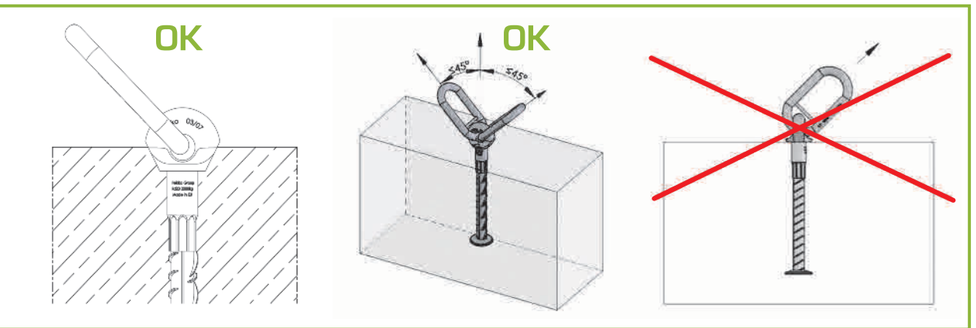
JID JENKA identifi cation ring
For JENKA anchors. Colour-coded plastic ring with the defi nition of load class. Remains visible in the element. Available in sizes JID 12 - JID 52. Sold in 100 pcs packages.

JFR JENKA fi xing ring
Similar to JID, but has clips for reinforcement. Plastic, colour-coded. Available in sizes JFR 12 - JFR 52.

Note: Anchors’ load groups/classes refer to anchor’s steel tensile strength. Capacity marked to the anchor is the Safe Working Load with safety factor 3 for the steel part only. Load bearing capacity of anchor’s are depended from location in concrete member, concrete quality and used reinforcement in member. Anchor’s actual capacity and safe working load when installed into concrete must be checked from user instructions available from local sales.







KK lifting system

KK lifting system is a rapid release lifting anchor system consisting of anchors of load classes from 1,3 to 32 tons, lifting clutches and recess formers. It is used for lifting beams, thick slabs and wall panels as well as concrete tubes.

Standard anchors are delivered as plain “black”. Hot dip galvanized (HDG) or electro galvanized models are available on customer request. Contact local sales for more detailed information.

Note: Anchors’ load groups/classes refer to anchor’s steel tensile strength. Capacity marked to the anchor is the Safe Working Load with safety factor 3 for the steel part only. Load bearing capacity of anchor’s are depended from location in concrete member, concrete quality and used reinforcement in member. Anchor’s actual capacity and safe working load when installed into concrete must be checked from user instructions available from local sales.

KKL lifting clutch

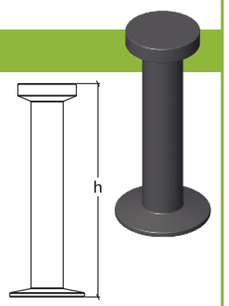
For KK-lifting anchors

KKL lifting clutch is a heady duty lifting device for continuous use for load classes from 1,3 – 32 tons.

Item name	Load class [tons]	Unit weight [kg]
KKL 13	1,3	0.9
KKL 25	2,0 -2,5	1.5
KKL 50	4,0 - 5,0	3.2
KKL 100	7,5 - 10	9.4
KKL 200	20	20.0
KKL 320	32	45.5

KK-anchor

Available for load classes 1,3 to 32 tons in various lengths.



Item name	Load class [tons]	Lenght h [mm]
KK 1,3	1,3	40-240
KK 2,5	2,5	45-280
KK 4,0	4,0	75-420
KK 5,0	5,0	65-480
KK 7,5	7,5	95-680
KK 10	10	115-680
KK 15	15	140-840
KK 20	20	200-1000
KK 32	32	200-1200

KRC recess former

Color coded rubber recess former for KK-lifting system.

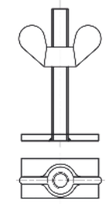
Available for load classes 1,3 – 32 tons

Item name	Load class [tons]	color
KRC 13	1,3	blue
KRC 25	2,0 -2,5	yellow
KRC 50	4,0 - 5,0	blue
KRC 75	7,5	red
KRC 100	10	yellow
KRC 150	15	grey
KRC 200	20	black
KRC 320	32	grey

KFS recess fixing screw

For fi xing KRC recess former to casting mould.

Available for load classes 1,3 – 32 tons



Item name	Load class [tons]
KFS 13	1,3
KFS 25	2,0 -2,5
KFS 50	4,0 - 5,0
KFS 75	7,5
KFS 100	10
KFS 150	15
KFS 200	20
KFS 320	32

KMR magnetic recess former

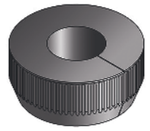
Magnetic recess former
for KK-lifting system

Available for load
classes 1,3 – 7,5 tons

Item name	for load class (tons)
KMR 13	1,3
KMR 25	2,0 -2,5
KMR 50	4,0 - 5,0
KMR 75	7,5

KMG magnetic recess grommet

Magnetic recess grommet.
For use with KMR.
Material: rubber.



Item name	for load class (tons)
KMG 13	1.3
KMG 25	2,0 -2,5
KMG 50	4,0 - 5,0
KMG 75	7.5

RR lifting lugs

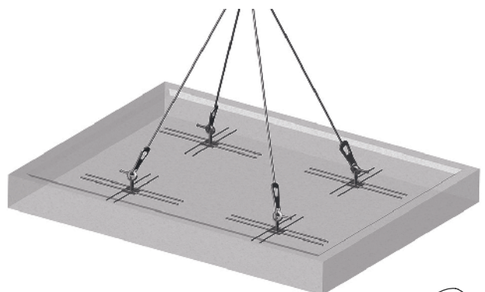
RR lifting lugs are lifting parts for precast elements. They are used together with dedicated lifting devices.

Note: Anchors' load groups/classes refer to anchor's steel tensile strength. Capacity marked to the anchor is the Safe Working Load with safety factor 3 for the steel part only. Load bearing capacity of anchor's are depended from location in concrete member, concrete quality and used reinforcement in member. Anchor's actual capacity and safe working load when installed into concrete must be checked from user instructions available from local sales.

Lifting device (RR lifting lugs)

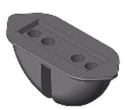
Lifting device for "RR" line of lifting lugs (including RRPr)

Load class (tons)	Item name
2,5	RR-C-2,5
5,0	RR-C-5,0
10,0	RR-C-10,0



RR supplies

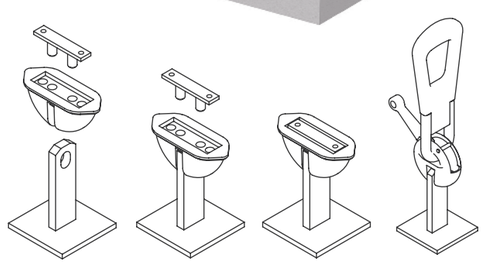
RR-RF recess former
For RR system.
Color-coded.



For load class (tons)	Item name	colour
2,5	RR-RF-2,5	orange
5,0	RR-RF-5,0	black
10,0	RR-RF-10,0	green
26,0	RR-RF-26,0	blue

RR-HP installation plate
For fi xing RR-RF into mould

For load class (tons)	Item name
2,5	RR-HP-2,5
5,0	RR-HP-5,0
10,0	RR-HP-10,0



SOUTH EASTERN EUROPE

Groupama Aréna, Budapest, Hungary

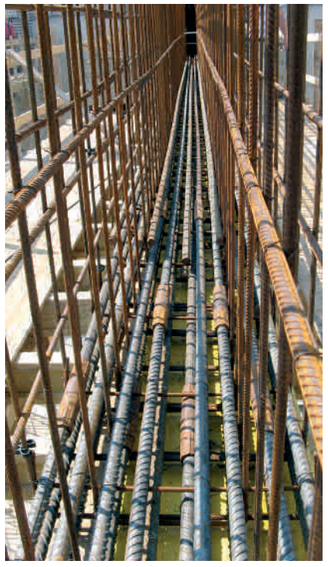
Stadium Rujevica, Rijeka, Croatia

Reference

SOUTH EASTERN EUROPE

Ilie Oană Stadium, Ploiești, Romania

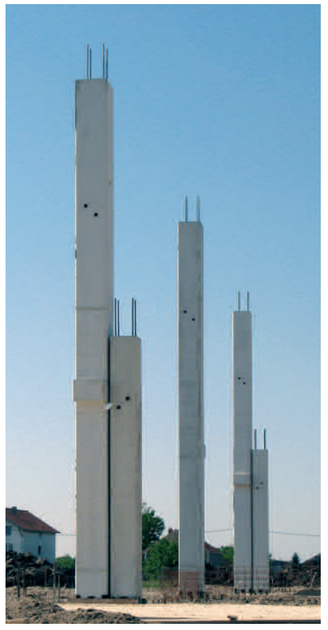
Elementary School, Orebić, Croatia



RCERO Ljubljana, Slovenia

Uni Viridas Biomass CPP, Babina Greda, Croatia

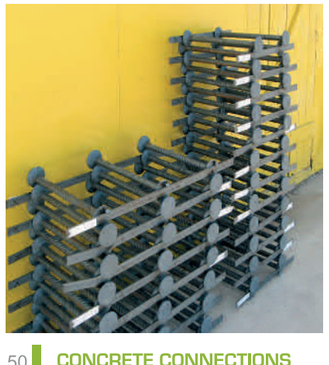
Aviv Arlon, Zrenjanin, Serbia



Carbotech, Smederevo, Serbia

Delhaize LC, Nova Pazova, Serbia

Vibac Production Plant, Jagodina, Serbia



Cungu&Co, Ulcinj, Montenegro

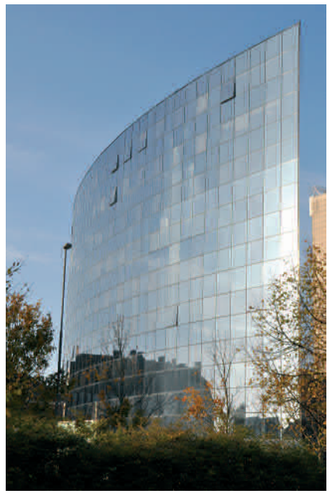
Hotel Bigeste, Ljubuški, Bosnia and Herzegovina

Delta Planet Shopping Mall, Banja Luka, Bosnia and Herzegovina

PSP, Okoli, Croatia

PPV, Vršac, Serbia

AIRRAIL, Germany



Patient Hotel, Denmark

peikko group

Peikko Designer®

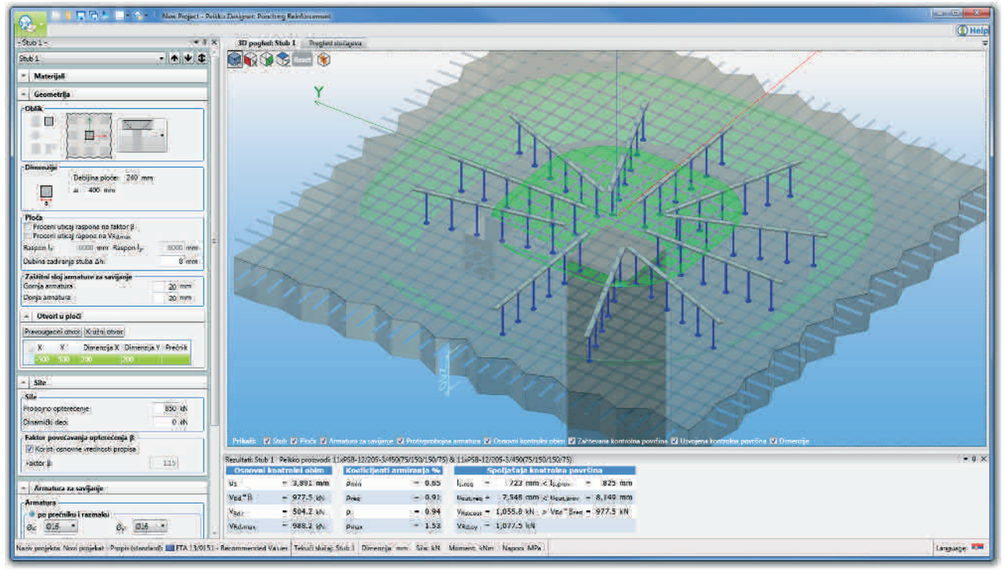
Software for structural design

Peikko Designer® is Peikko's own design software to help designers to solve connections in concrete members. Peikko Designer® is FREE.

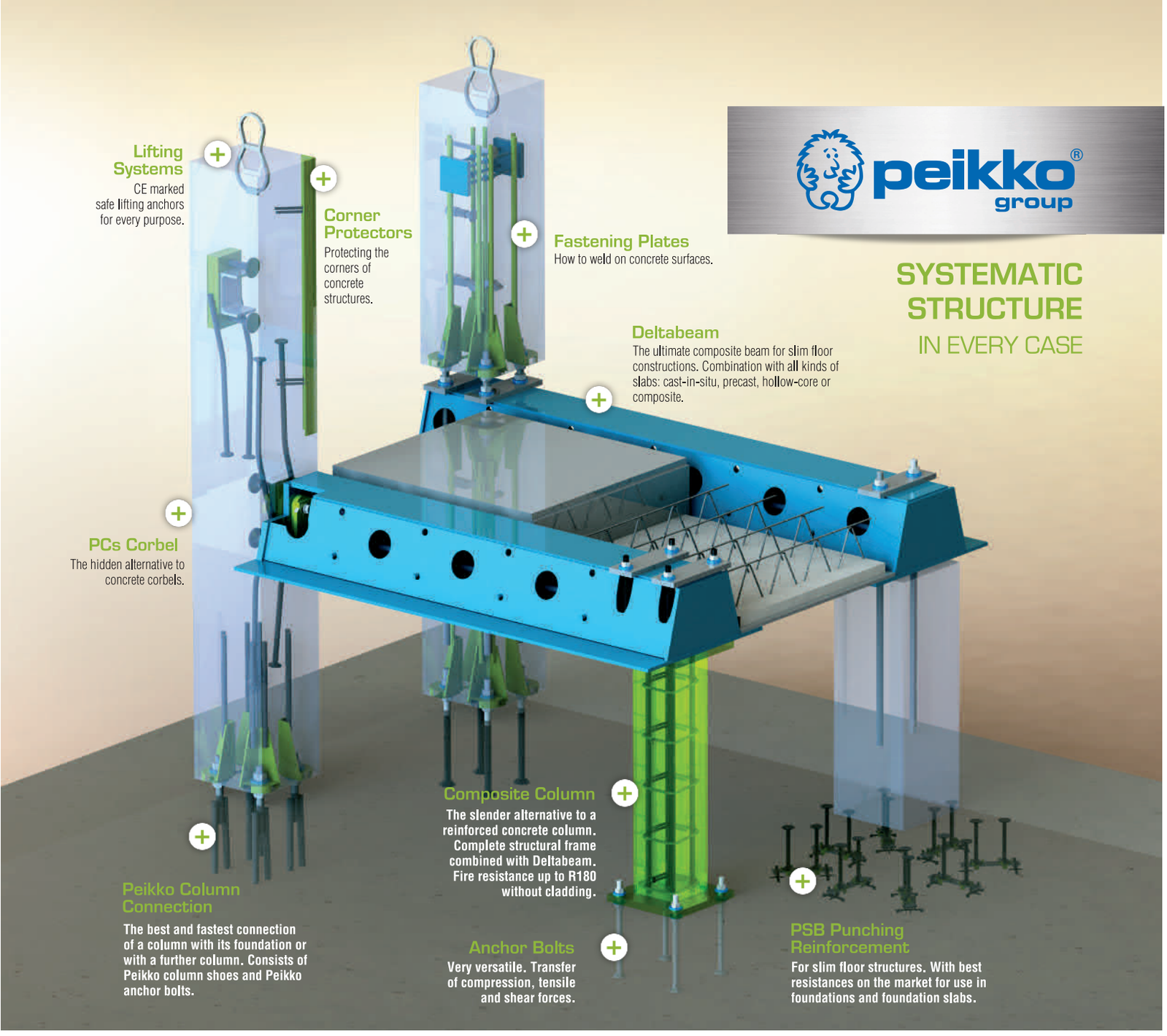
Peikko Designer® has 3 modules:

- Column Connection
- Punching Reinforcement and
- Fastening Plate.

The modern and intuitive user interface is based on interactive 3D graphics. The software updates automatically, the designer can always benefit the latest features. Peikko Designer® is includes a wide range of European design norms and several languages.



Install Peikko Designer®
www.peikko.com/software



peikko® group

SYSTEMATIC STRUCTURE
IN EVERY CASE

Romania

www.peikko.ro

Peter Kiss, dipl. ing.
Sales Manager – Romania Nord-Vest
Tel. +40 753 021 666
peter.kiss@peikko.com

Laurentiu Dumitrescu
Sales Manager – Romania Sud-Est
Tel. +40 752 239 070
laurentiu.dumitrescu@peikko.com

www.peikko.com

Peikko Group - Concrete Connections since 1965