

INSTALL THE PRODUCT – PRECAST FACTORY

Identification of the product

BECO Beam Shoes are available in standard models analogous to the M-thread sizes of the COPRA Anchoring Couplers. The model of the beam shoe can be identified by the name on the product's label and also the color of the product. The color codes are shown in the table below.

Color identification of BECO Beam Shoe with corresponding COPRA Anchoring Coupler.

Beam Shoe	Anchoring Coupler	Color Code
BECO 16H*	COPRA 16H-...	Yellow
BECO 20H*	COPRA 20H-...	Blue
BECO 24H*	COPRA 24H-...	Grey
BECO 30H*	COPRA 30H-...	Green
BECO 39H*	COPRA 39H-...	Orange
BECO 30P*	COPRA 30P-...	Black
BECO 36P*	COPRA 36P-...	Red
BECO 39P*	COPRA 39P-...	Brown
BECO 45P*	COPRA 45P-...	Purple
BECO 52P*	COPRA 52P-...	White

*Color code is marked on base surface of BECO bottom plate.

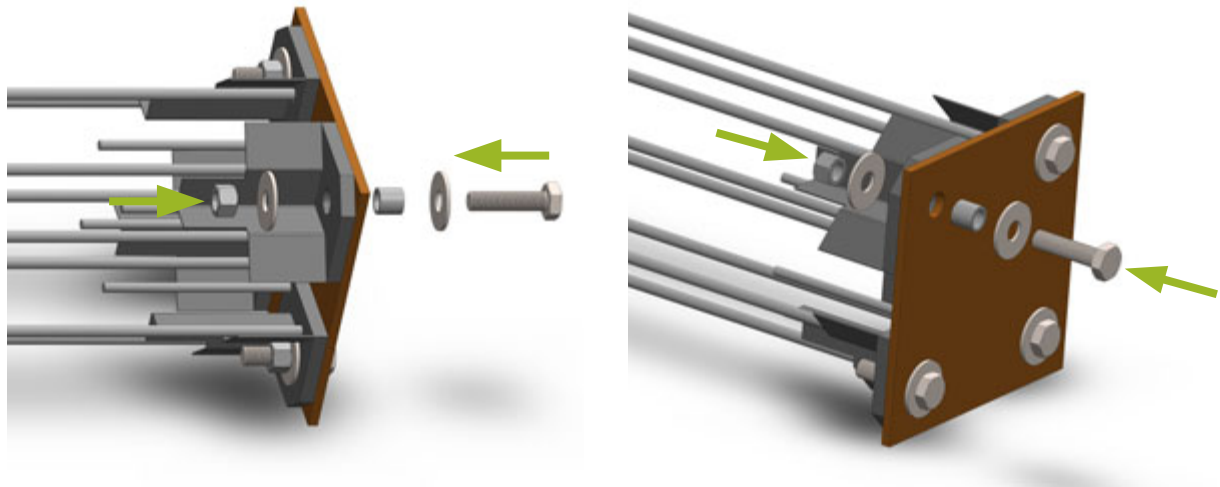


Installation of the beam shoes

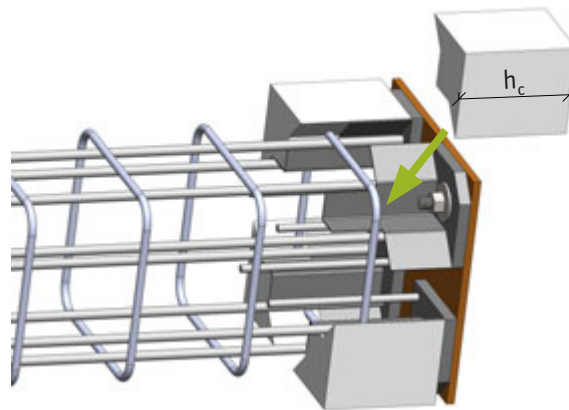
BECO Beam Shoes are placed into the reinforcement and fixed to the mold's end plate with bolts. Before concreting, the beam recess box must be filled with an additional element (Styrofoam) to ensure that there is a sufficient cavity for the insertion of the threaded bar, and the threaded bar should then be tightened. After the concrete has hardened, the additional element should be removed. Supplementary reinforcement must be provided in accordance with Annex A. The maximum installation tolerances of the beam shoe in the precast beam element are ± 2 mm.

Installation of BECO Beam Shoe

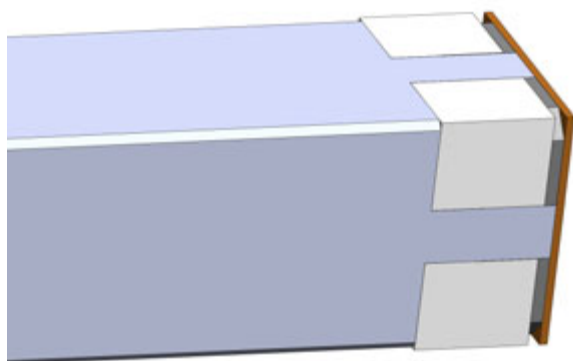
Installation of BECO Beam Shoe to the mold.



Installation of polystyrene recess block.



Concreting beam.



Removing additional element.

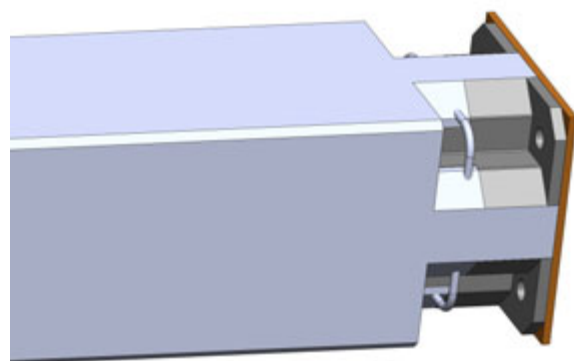


Table 7. Height of polystyrene recess block in mm.

	BECO 16H	BECO 20H	BECO 24H	BECO 30H	BECO 39H	BECO 30P	BECO 36P	BECO 39P	BECO 45P	BECO 52P
h_c [mm]	130	145	166	195	245	195	220	245	263	320

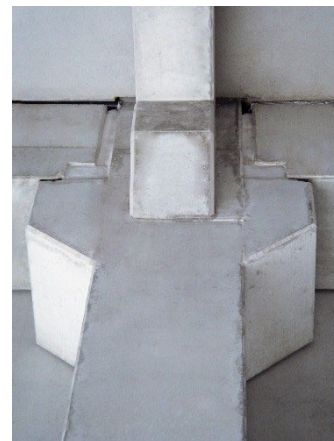
INSTALL THE PRODUCT – CONSTRUCTION SITE

Identification of the product

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BECO 30P*	COPRA 30P-...	Black
BECO 36P*	COPRA 36P-...	Red
BECO 39P*	COPRA 39P-...	Brown
BECO 45P*	COPRA 45P-...	Purple
BECO 52P*	COPRA 52P-...	White



*Color code is marked on base surface of BECO bottom plate.

Erection of a precast beam

When erecting the beam on the corbel, the position of the beam in the vertical direction may be adjusted using shims or steel plates on the corbel. The element must be checked to ensure that it is in the correct position before the nuts are tightened using a slogging ring wrench (DIN 7444) and a 1.5 kg sledgehammer or equivalent. The threaded bars must be screwed to the COPRA Anchoring Couplers. The nuts must be screwed on tightly. After the nuts have been tightened, the crane can be detached from the beam.

The joint of the element can then be grouted with mortar. The grout must be of a non-shrinking type. After the grout has reached sufficient strength, the connection is finalized. The installation must be carried out according to the erection plan.

The tolerances and the thickness of the joint are shown in *Table 8*.

	M16	M20	M24	M30	M36	M39	M45	M52
d_A	42	50	56	71	85	92	110	125
s_w	24	30	36	46	55	60	70	80

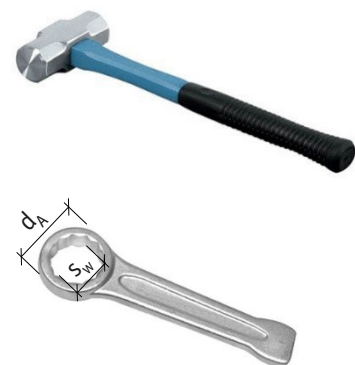
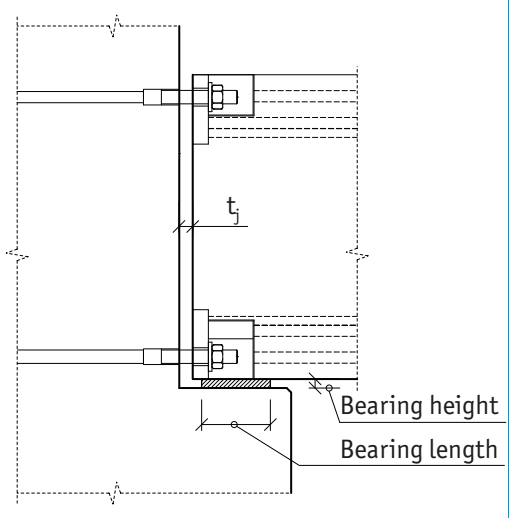


Table 8. Recommendations for tolerances.

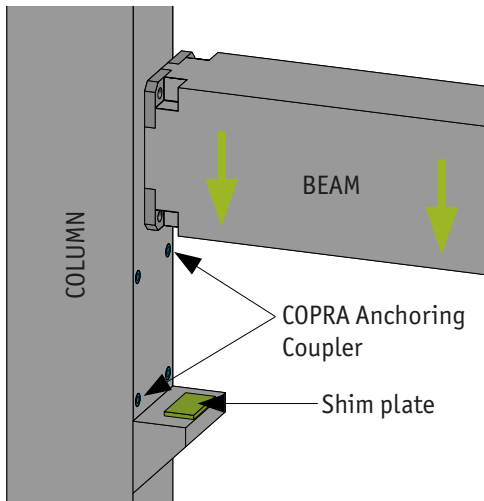
Beam Shoe	Anchoring Coupler	Joint thickness t_j [mm]	Tolerance of the joint [mm]
BECO 16H	COPRA 16H	20	± 5
BECO 20H	COPRA 20H	20	± 5
BECO 24H	COPRA 24H	20	± 5
BECO 30H	COPRA 30H	20	± 5
BECO 39H	COPRA 39H	20	± 8
BECO 30P	COPRA P30	20	± 5
BECO 36P	COPRA 36P	20	± 7
BECO 39P	COPRA 39P	20	± 8
BECO 45P	COPRA 45P	20	± 7
BECO 52P	COPRA 52P	20	± 9



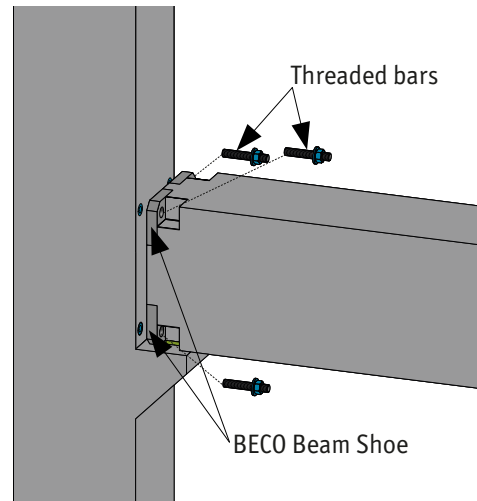
For alternative joint thickness solutions, please contact Peikko's Customer Engineering Service.

Erection of a precast concrete beam with beam shoes step by step

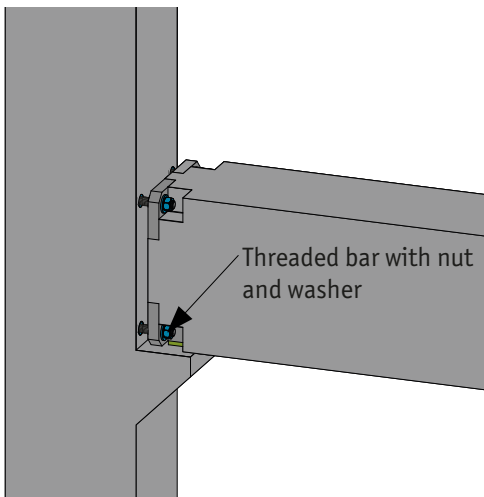
The beam is installed on pre-leveled shim plates.



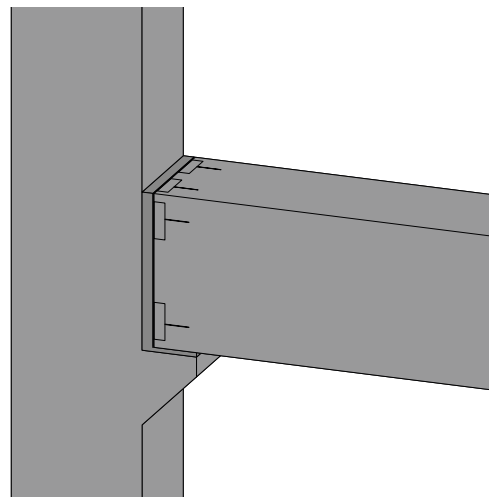
Insert the threaded bars with washers and nuts through the base plates into the coupler parts of the anchoring couplers



Screw the nuts, washers and threaded bars on and tighten them.

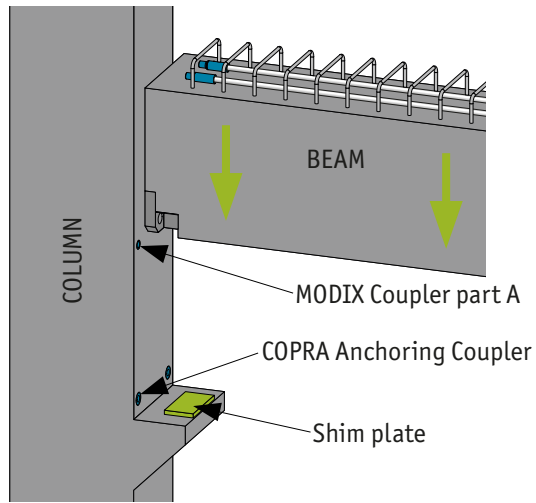


The connection is finalized after the grout has hardened

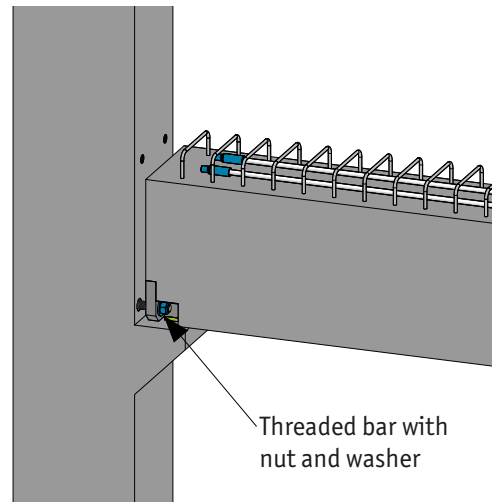


Erection of a precast concrete beam with half precast concrete slab step by step

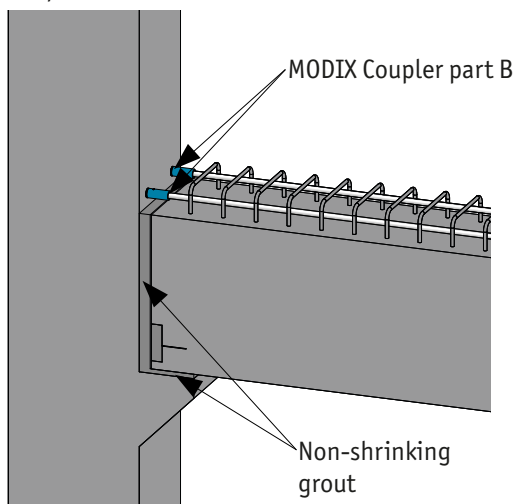
The beam is installed on pre-leveled shim plates.



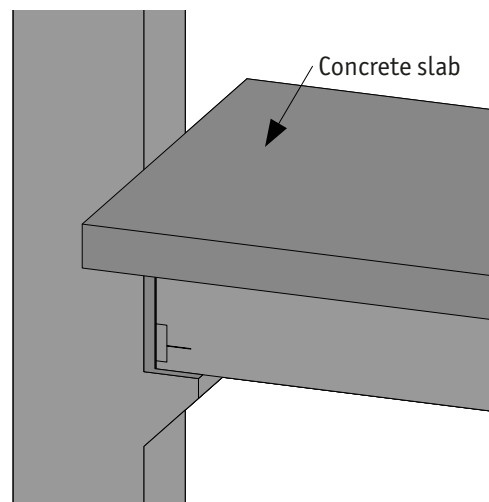
Screw the nuts, washers and threaded bars on and tighten them.



Fill the connection with grout and screw on the MODIX Rebar Couplers.



Finalized construction with concrete slab.



Installation of BECO Beam Shoe

Erection of a precast concrete beam.



Connecting a COPRA Anchoring Coupler with a BECO Beam Shoe with the help of a threaded bar step by step.

