

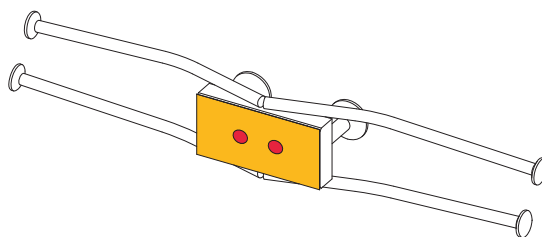
## Installing PCs® Corbels

### Identification of the product

PCs® Corbels are available in different models (PCs® and PCs® UP) and different sizes (2, 3, 5, 7, 10, and 15). The models and sizes can be identified by the name on the product's label; the sizes may be also identified according to the product's color. The color codes are shown in the table below.

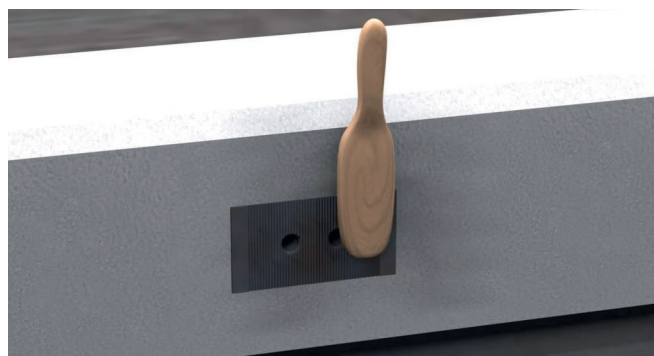
### At the precast factory – before casting







The column part is installed in the mold according to the design plans of the column together with the column's reinforcement. The column part is fixed so that it does not move during casting. There is a thin plate on the column part to protect the teeth and plastic caps to protect the inner threads. The plastic caps can be removed to bolt the column part through the mold (for instance when using wooden and glass fiber molds where holes in mold might need to be fixed after casting). The column part can also be fixed onto the main reinforcement of the column so that it is not able to move during casting. The inner threads must be protected against concrete. Supplementary reinforcement must be placed at the area of the column part according to the design plans of the column.



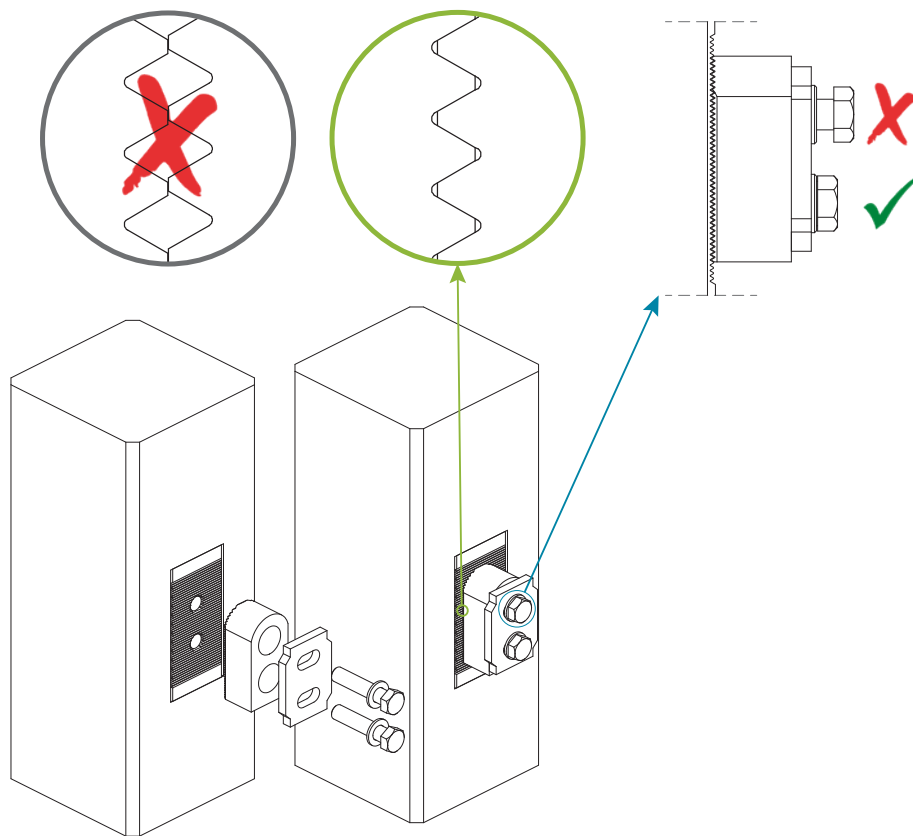
### At the precast factory – after casting

The thin plate that covers the teeth is removed after casting and the teeth should be cleaned if necessary.



	Color		Metric bolt thread	Bolt length		Head size		Torque	
PCs 2		Red	M16	100 mm	4"	24 mm	1 5/16"	40 Nm	30 lbs×ft
PCs 3		Gray	M24	120 mm	5"	36 mm	1 7/16"	130 Nm	100 lbs×ft
PCs 5		Yellow	M30	145 mm	5 3/4"	46 mm	1 13/16"	220 Nm	170 lbs×ft
PCs 7		Green	M30	145 mm	5 3/4"	46 mm	1 13/16"	220 Nm	170 lbs×ft
PCs 10		Blue	M30	150 mm	6"	46 mm	1 13/16"	220 Nm	170 lbs×ft
PCs 15		Black	M30	155 mm	6"	46 mm	1 13/16"	220 Nm	170 lbs×ft

The teeth of the column part and corbel part must be checked: they must be undamaged before installing the corbel parts. The corbel parts are installed according to the design plans of the column using bolts so that the rounded surface will be towards the top of the column, the teeth will be tightly interlocked, and the heads of the bolts are tight against the washers.



The bolts are tightened according to the torque presented in the table.

## On the construction site

Visual inspections must be carried out before installing the beam to ensure that the corbel parts are installed such that the teeth are tightly interlocked and the heads of the bolts fit tightly against the washers. This is an important step in guaranteeing the resistance of the corbel.

It is possible to move the corbel parts on-site by untightening the bolts. If this is done, the bolts must be subsequently retightened, the teeth must be tightly interlocked, and the heads of the bolts must fit tightly against the washers.

The beams are installed and supported according to the installation and supporting plans. The corbel will be located in the slot at the end of the beam and the end plate of the beam will be on the corbel plate.

The joint between the column and the beam is grouted at the same time as the joints of slabs.

## Installation control

### Check list before casting the column:

- Proper location of the column part
- Proper position of the column part comparing to the axis of the column
- Proper attachment of the column part in the mold
- Amount and position of the additional reinforcement
- Proper protection of the grooved teeth against grouting mortar

### Check list before welding the beam end plate:

- Size and the position of the bottom plate link
- Size and the position of the end plate link
- Position of the end plate comparing to the bottom plate link
- Perpendicularity of the end plate to the bottom plate

### Check list before installing the corbel parts:

- The protection of the teeth is taken away
- The grooved teeth are undamaged and clean
- The proper location of the corbel parts
- Bolts are tightened according to the torque presented in table
- There won't be empty space between teeth

### Check list before erecting the beam:

- Bolts are tightened according to the torque presented in table
- Erection plan of the slabs is obeyed
- Erection plan of the beam is obeyed