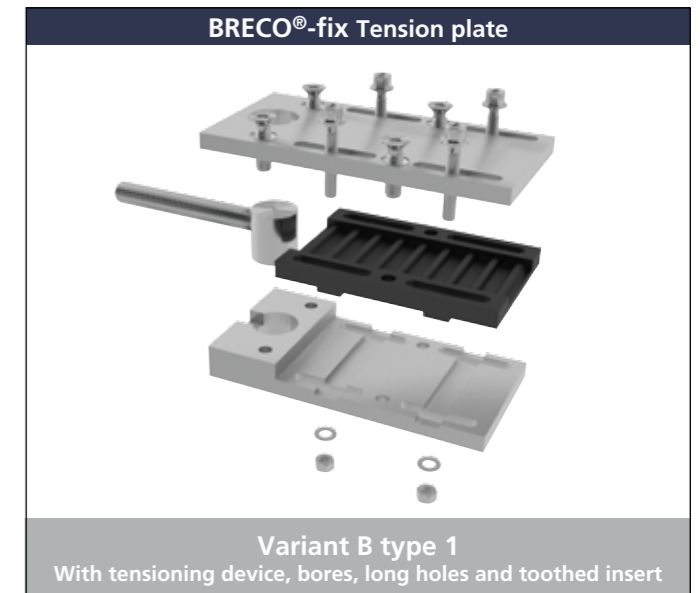
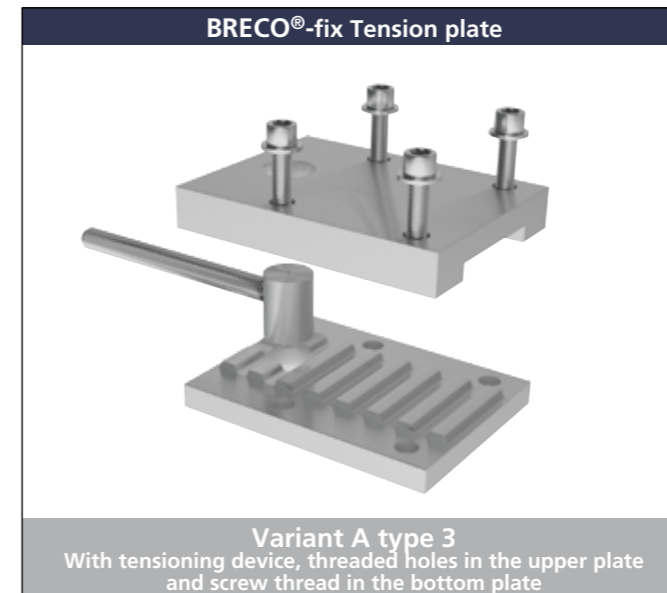
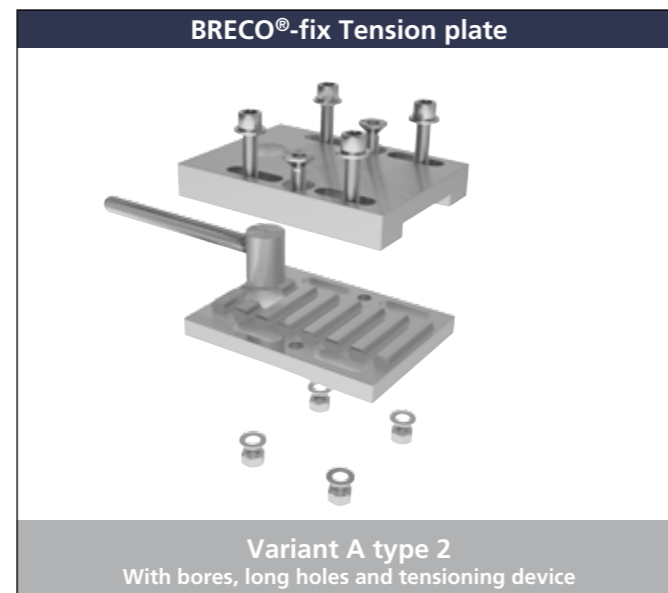
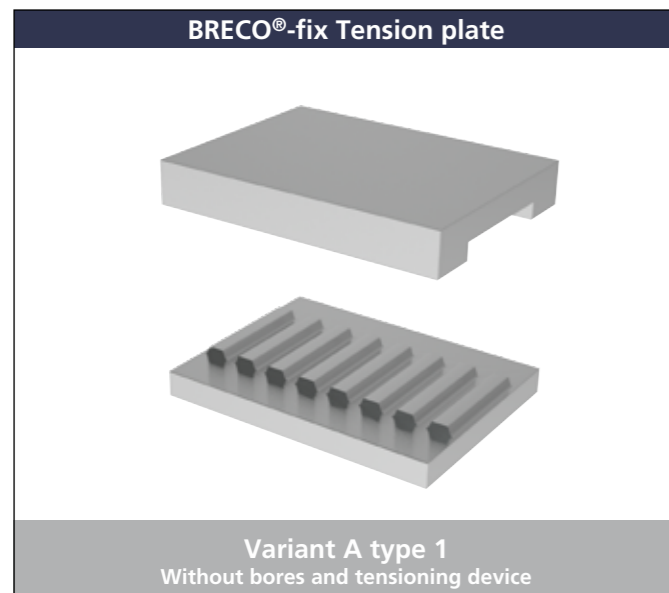
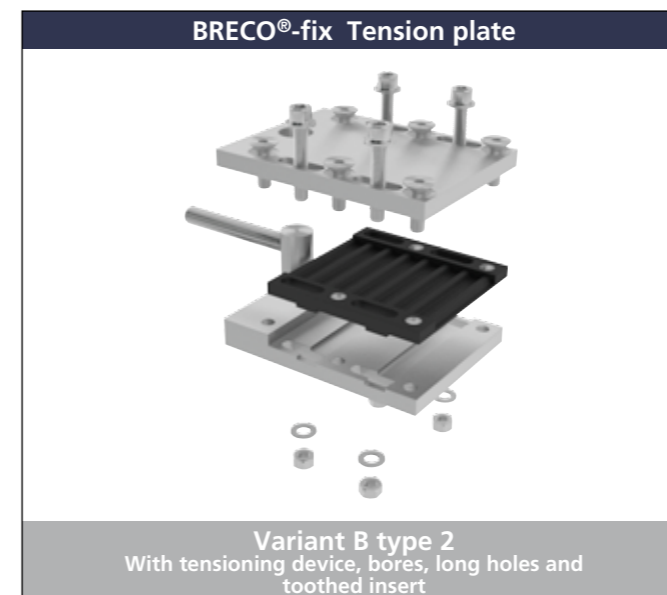


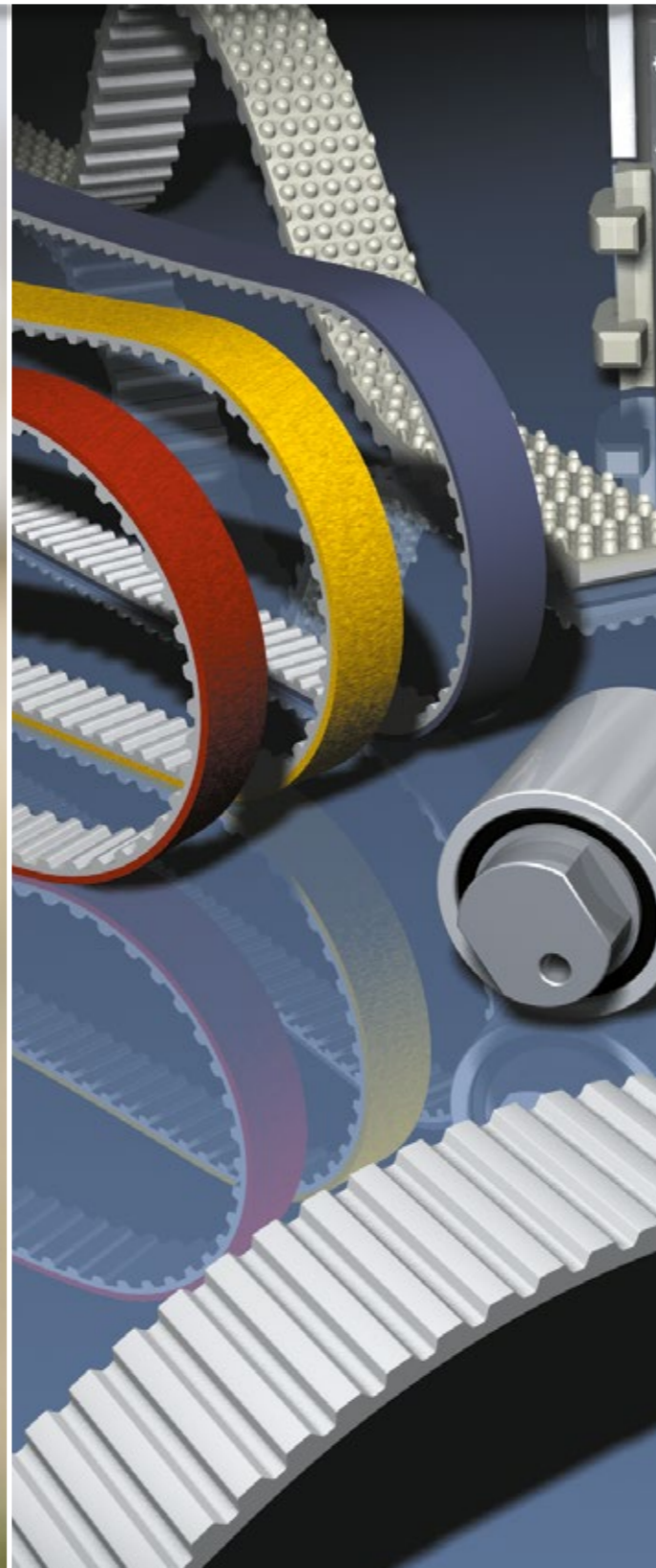
The table below is an overview about our available tension plate variants according to the different belt types.

| BRECO®-fix Tension plates | | | | | | | |
|---------------------------|------------|-------------------------|-------------------------|-------------------------|---------------------|---------------------|-----------|
| Pitch | Belt type | Belt widths | | | | | |
| | | 25 | 32 | 50 | 75 | 100 | 150 |
| 5 mm | T5 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | - | - | - |
| | AT5 / ATL5 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | - | - | - |
| 10 mm | T10 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | - | - | - |
| | AT10 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant B Type 2 | Variant B Type 2 | Variant C |
| | BATK10 | - | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant B Type 2 | Variant B Type 2 | - |
| | ATL10 | Variant A Type 1/2/3 | Variant A Type 1/2/3 | Variant B Type 1 | Variant B Type 2 | Variant B Type 2 | - |
| 15 mm | ATS15 | - | - | Variant B Type 1 | Variant B Type 2 | Variant B Type 2 | Variant C |
| | BATK15 | - | - | Variant B Type 1 | Variant B Type 2 | Variant B Type 2 | - |
| 20 mm | T20 | - | - | Variant B Type 1 | Variant B Type 2 | Variant B Type 2 | Variant C |
| | AT20 | - | - | Variant B Type 1 | Variant B Type 2 | Variant B Type 2 | Variant C |
| | ATL20 | - | - | Variant B Type 1 | Variant B Type 2 | Variant B Type 2 | - |



Remark:
Variant „B“ and „C“ are also available without tensioning device. If you don't need it, please make a note in the order code.





Notes on the assembly of BRECO® timing belts in the BRECO® fix clamp plates

The BRECO® fix clamp plates are designed so that clamping reliability and optimum assembly of the timing belt in the clamp plate are ensured. We therefore recommend reading and complying with the assembly notes for the relevant types as well as the following assembly workflow.

Please proceed in the following steps when assembling timing belts and clamp plates:

Step 1: Preparation for assembly

Cut the timing belt in a gap between two belt teeth to the required length and place it in the toothed section of the open clamp plate.

Step 2: Preassembly of the clamp plate

Place the upper and lower plate as well as the toothed insert, if necessary, and connect everything with the preassembly screws (countersunk screws). Use a suitable torque wrench for this. Please note the tightening torques indicated for the relevant types. The preassembly screws keep the clamp plates securely closed during the subsequent steps.

Step 3: Tensioning the belt /fastening on the machine frame

Move the clamp plate(s) into the required assembly position in the machine. The clamp plates are usually fastened directly on the machine frame. This fastening is done with fastening screws (cylinder head screws) via the long holes of the clamp plates. We recommend leaving the fastening screws loose until the clamp plate is moved into position by the clamping unit, meaning the necessary pretensioning force is applied to the timing belt. After the pretensioning force has been set in the timing belt, the fastening screws can be tightened according to the specifications.

Special feature of freely suspended assembly:

Freely suspended assembly on the clamping unit is possible, but not strictly recommended. Step 2 of these instructions is logically followed by step 4 and then tensioning of the belt (step 3). The fastening screws must also be installed and tightened according to the specifications for freely suspended assembly. To apply the tensioning force during freely suspended assembly, we recommend fixing the clamp plate in a vice or similar. The fixing should be carried out in the front area (near to clamping unit).

Step 4: Applying the clamping force in the clamp plate

To ensure the required clamping reliability, the belt fastening in the clamp plates must be clamped again in addition to the preassembly and fastening procedure.

This clamping is carried out for belt widths > 50 mm (clamp plate variant B type 2 and variant C) using the countersunk screws and tightening these to the specified tightening torque for the clamping force. The fastening screws must also be tightened to the corresponding torque.

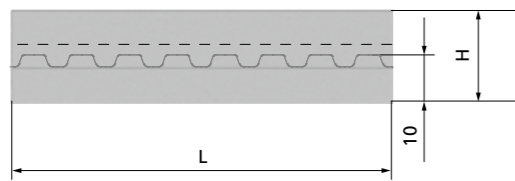
This step does not apply for the clamp plates variant A and variant B type 1, as this tensioning force was already applied here by tightening the fastening screws in the long holes.

Step 5: Retightening of the belt at a later date

If it is necessary to readjust the pretensioning force in the timing belt at a later date, only the fastening screws have to be loosened and „retightened“ via the clamping unit. The pretensioning of the belt tensioning in the clamp plate itself can be retained for this procedure.

In the case of assembly freely suspended on the threaded rod, there is no need to loosen the fastening screws, as retightening can be done directly.

Tension plate variant A type 1



Without bores and tensoning device

Tension plate variant A type 1



Without bores and tensoning device

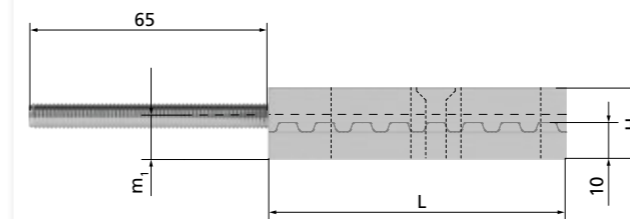
Tension plate variant A type 1

| Belt width b/ belt type | B [mm] | L [mm] | H [mm] |
|----------------------------|--------|--------|--------|
| 25 T5 | 50 | 80 | 18,5 |
| 32 T5 | 60 | 80 | 18,5 |
| 50 T5 | 75 | 80 | 18,5 |
| 25 T10 | 50 | 80 | 19,5 |
| 32 T10 | 60 | 80 | 19,5 |
| 50 T10 | 75 | 80 | 19,5 |
| 25 AT5 | 50 | 80 | 19,0 |
| 32 AT5 | 60 | 80 | 19,0 |
| 50 AT5 | 75 | 80 | 19,0 |
| 25 ATL5 | 50 | 80 | 19,0 |
| 32 ATL5 | 60 | 80 | 19,0 |
| 50 ATL5 | 75 | 80 | 19,0 |
| 25 AT10 | 50 | 80 | 19,5 |
| 32 AT10 | 60 | 80 | 19,5 |
| 50 AT10 | 75 | 80 | 19,5 |
| 25 ATL10 | 50 | 80 | 19,5 |
| 32 ATL10 | 60 | 80 | 19,5 |
| 32 BATK10 | 60 | 80 | 19,5 |
| 50 BATK10 | 75 | 80 | 19,5 |

BRECO order example

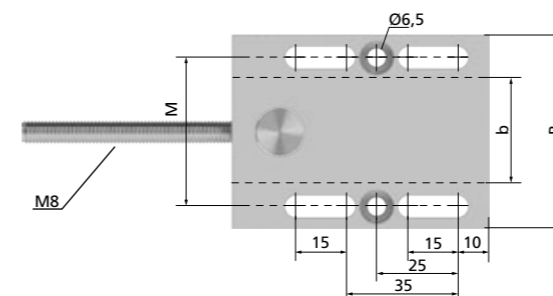
| | |
|----------------------|---------------------------------|
| Tension plate | 60 x 80 AT5 Var A Type 1 |
| Width B | |
| Length L | |
| Belt type / Pitch | |
| Variant | |
| Type | |

Tension plate variant A type 2



With bores, long holes and tensoning device

Tension plate variant A type 2



With bores, long holes and tensoning device

Tension plate variant A type 2

| Belt width b/ belt type | B [mm] | L [mm] | M [mm] | m ₁ [mm] | H [mm] |
|----------------------------|--------|--------|--------|---------------------|--------|
| 25 T5 | 50 | 80 | 38 | 10,25 | 18,5 |
| 32 T5 | 60 | 80 | 46 | 10,25 | 18,5 |
| 50 T5 | 75 | 80 | 62 | 10,25 | 18,5 |
| 25 T10 | 50 | 80 | 38 | 11,25 | 19,5 |
| 32 T10 | 60 | 80 | 46 | 11,25 | 19,5 |
| 50 T10 | 75 | 80 | 62 | 11,25 | 19,5 |
| 25 AT5 | 50 | 80 | 38 | 10,75 | 19,0 |
| 32 AT5 | 60 | 80 | 46 | 10,75 | 19,0 |
| 50 AT5 | 75 | 80 | 62 | 10,75 | 19,0 |
| 25 ATL5 | 50 | 80 | 38 | 10,75 | 19,0 |
| 32 ATL5 | 60 | 80 | 46 | 10,75 | 19,0 |
| 50 ATL5 | 75 | 80 | 62 | 10,75 | 19,0 |
| 25 AT10 | 50 | 80 | 38 | 11,25 | 19,5 |
| 32 AT10 | 60 | 80 | 46 | 11,25 | 19,5 |
| 50 AT10 | 75 | 80 | 62 | 11,25 | 19,5 |
| 25 ATL10 | 50 | 80 | 38 | 11,00 | 19,5 |
| 32 ATL10 | 60 | 80 | 46 | 11,00 | 19,5 |
| 32 BATK10 | 60 | 80 | 46 | 11,25 | 19,5 |
| 50 BATK10 | 75 | 80 | 62 | 11,25 | 19,5 |

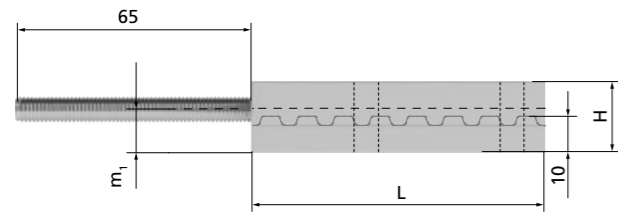
Mounting instructions

| Tension plate | Variant A type 2 | | |
|-------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| | Belt width | 25 | 32 |
| Pre-assembly screws (SW=wrench size across flats) | Countersunk head screws ISO 10642, 2xM5 - 8.8 zincd (SW3) | Countersunk head screws ISO 10642, 2xM5 - 8.8 zincd (SW3) | Countersunk head screws ISO 10642, 2xM5 - 8.8 zincd (SW3) |
| Recommended tightening moment of the pre-assembly screws M _A | 6 Nm | 6 Nm | 6 Nm |
| Fastening screws | Cheese head screws ISO 4762 4xM6 - 8.8 zincd (SW5) | Cheese head screws ISO 4762 4xM6 - 8.8 zincd (SW5) | Cheese head screws ISO 4762 4xM6 - 8.8 zincd (SW5) |
| Recommended tightening moment of the fastening screws M _A | 10 Nm | 10 Nm | 10 Nm |
| Tightening moment for generation of tension force M _A | 10 Nm | 10 Nm | 10 Nm |
| Admissible force of the tension plates F _{adm} | 22400 N | 28800 N | 34000 N |

BRECO order example

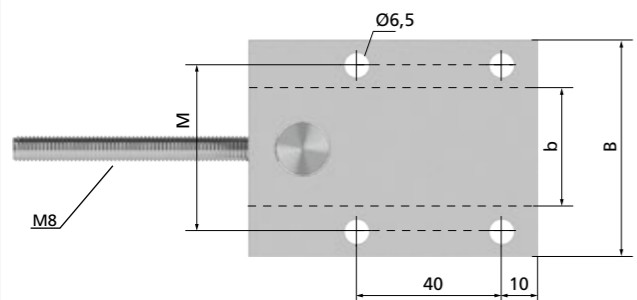
| | |
|----------------------|----------------------------------|
| Tension plate | 60 x 80 AT10 Var A Type 2 |
| Width B | |
| Length L | |
| Belt type / pitch | |
| Variant | |
| Type | |

Tension plate variant A type 3



With tensioning device, threaded holes in the upper plate and screw thread in the bottom plate

Tension plate variant A type 3



With tensioning device, threaded holes in the upper plate and screw thread in the bottom plate

Tension plate variant A type 3

| Belt width b/ belt type | B [mm] | L [mm] | M [mm] | m ₁ [mm] | H [mm] |
|----------------------------|--------|--------|--------|---------------------|--------|
| 25 T5 | 50 | 80 | 38 | 10,25 | 18,5 |
| 32 T5 | 60 | 80 | 46 | 10,25 | 18,5 |
| 50 T5 | 75 | 80 | 62 | 10,25 | 18,5 |
| 25 T10 | 50 | 80 | 38 | 11,25 | 19,5 |
| 32 T10 | 60 | 80 | 46 | 11,25 | 19,5 |
| 50 T10 | 75 | 80 | 62 | 11,25 | 19,5 |
| 25 AT5 | 50 | 80 | 38 | 10,75 | 19,0 |
| 32 AT5 | 60 | 80 | 46 | 10,75 | 19,0 |
| 50 AT5 | 75 | 80 | 62 | 10,75 | 19,0 |
| 25 ATL5 | 50 | 80 | 38 | 10,75 | 19,0 |
| 32 ATL5 | 60 | 80 | 46 | 10,75 | 19,0 |
| 50 ATL5 | 75 | 80 | 62 | 10,75 | 19,0 |
| 25 AT10 | 50 | 80 | 38 | 11,25 | 19,5 |
| 32 AT10 | 60 | 80 | 46 | 11,25 | 19,5 |
| 50 AT10 | 75 | 80 | 62 | 11,25 | 19,5 |
| 25 ATL10 | 50 | 80 | 38 | 11,00 | 19,5 |
| 32 ATL10 | 60 | 80 | 46 | 11,00 | 19,5 |
| 32 BATK10 | 60 | 80 | 46 | 11,25 | 19,5 |
| 50 BATK10 | 75 | 80 | 62 | 11,25 | 19,5 |

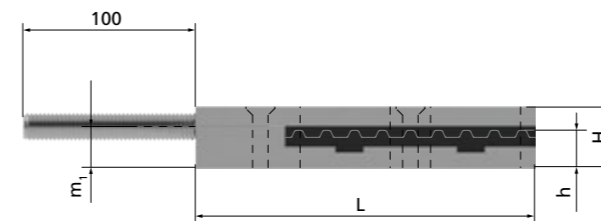
Mounting instructions

| Tension plate | Variant A type 3 | | | |
|----------------------------------------------------------------------|------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|
| | Belt width | 25 | 32 | 50 |
| Fastening screws | | Cheese head screws ISO 4762 4xM6 - 8.8 zined (SW5) | Cheese head screws ISO 4762 4xM6 - 8.8 zined (SW5) | Cheese head screws ISO 4762 4xM6 - 8.8 zined (SW5) |
| Recommended tightening moment of the fastening screws M _A | | 10 Nm | 10 Nm | 10 Nm |
| Tightening moment for generation of tension force M _A | | 10 Nm | 10 Nm | 10 Nm |
| Admissible force of the tension plates F _{adm} | | 22400 N | 28800 N | 34000 N |

BRECO order example

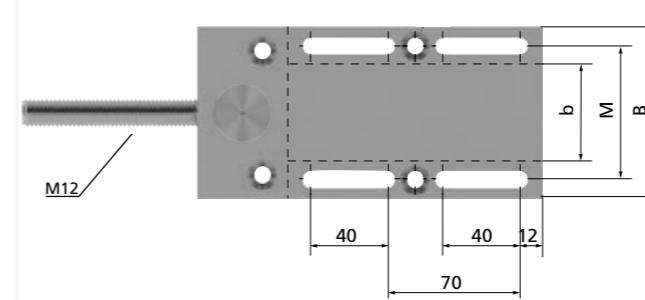
| | |
|-------------------|---------------------------|
| Tension plate | 50 x 80 AT10 Var A Type 3 |
| Width B | 50 |
| Length L | 80 |
| Belt type / pitch | AT10 |
| Variant | Var A |
| Type | Type 3 |

Tension plate variant B type 1



With tensioning device, bores, long holes and toothed insert

Tension plate variant B type 1



With tensioning device, bores, long holes and toothed insert

Tension plate variant B type 1

| Belt width b/ belt type | B [mm] | L [mm] | M [mm] | m ₁ [mm] | h | H [mm] |
|----------------------------|--------|--------|--------|---------------------|-------|--------|
| 50 ATL10 | 90 | 180 | 70 | 20,5 | 19,8 | 32 |
| 50 ATS15 | 90 | 180 | 70 | 20,5 | 19,38 | 32 |
| 50 BATK15 | 90 | 180 | 70 | 20,5 | 19,58 | 32 |
| 50 T20 | 90 | 180 | 70 | 20,5 | 19,08 | 32 |
| 50 AT20 | 90 | 180 | 70 | 20,5 | 19,08 | 32 |
| 50 ATL20 | 90 | 180 | 70 | 20,5 | 18,68 | 32 |

Remark:
The toothed insert for 50 BATK15 is the same for curve „left“ and „right“



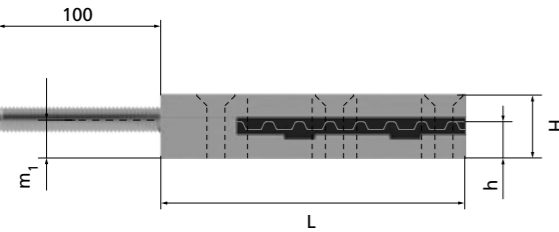
Mounting instructions

| Tension plate | Variant B type 1 |
|-------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Belt width | 50 mm |
| Pre-assembly screws (SW=wrench size across flats) | Countersunk head screws ISO 10642, 2xM8 - 8.8 (SW5) and 2xM10 - 8.8 (SW6) |
| Recommended tightening moment of the pre-assembly screws M _A | 8 Nm for M8 17 Nm for M10 |
| Fastening screws | Cheese head screws ISO 4762 4xM8 - 8.8 (SW6) |
| Recommended tightening moment of the fastening screws M _A | 34 Nm |
| Tightening moment for generation of tension force M _A | 34 Nm on Cheese head screws in the long hole |
| Admissible force of the tension plates F _{adm} | 61600 N |

BRECO order example

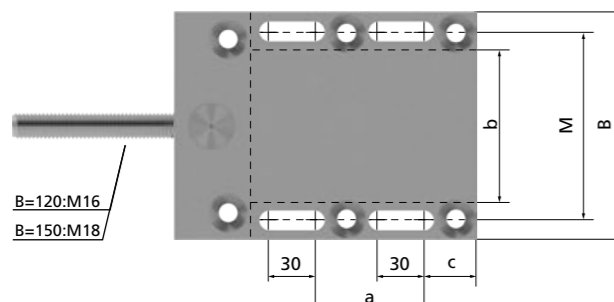
| | |
|-------------------|-------------------------------------------------------|
| Tension plate | 90 x 180 ATL10 Var B Type 1 without tensioning device |
| Width B | 90 |
| Length L | 180 |
| Belt type / pitch | ATL10 |
| Variant | Var B |
| Type | Type 1 |
| Version | without tensioning device |

Tension plate variant B type 2



With tensioning device, bores, long holes and toothed insert

Tension plate variant B type 2



With tensioning device, bores, long holes and toothed insert

Tension plate variant B type 2

| Belt width b/ belt type | B [mm] | L [mm] | M [mm] | m ₁ [mm] | a [mm] | c [mm] | h [mm] | H [mm] |
|----------------------------|-----------|-----------|-----------|------------------------|-----------|-----------|-----------|-----------|
| 75 AT10 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 19,09 | 33 |
| 100 AT10 | 150 | 200 | 124 | 25,5 | 72 | 35 | 25,09 | 42 |
| 75 BATK10 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 19,09 | 33 |
| 100 BATK10 | 150 | 200 | 124 | 25,5 | 72 | 35 | 25,09 | 42 |
| 75 ATL10 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 18,8 | 33 |
| 100 ATL10 | 150 | 200 | 124 | 25,5 | 72 | 35 | 24,8 | 42 |
| 75 ATS15 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 18,38 | 33 |
| 100 ATS15 | 150 | 200 | 124 | 25,5 | 72 | 35 | 24,38 | 42 |
| 75 BATK15 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 18,58 | 33 |
| 100 BATK15 | 150 | 200 | 124 | 25,5 | 72 | 35 | 24,58 | 42 |
| 75 T20 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 18,08 | 33 |
| 100 T20 | 150 | 200 | 124 | 25,5 | 72 | 35 | 24,08 | 42 |
| 75 AT20 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 18,08 | 33 |
| 100 AT20 | 150 | 200 | 124 | 25,5 | 72 | 35 | 24,08 | 42 |
| 75 ATL20 | 120 | 180 | 97 | 19,5 | 65 | 29,5 | 17,68 | 33 |
| 100 ATL20 | 150 | 200 | 124 | 25,5 | 72 | 35 | 23,68 | 42 |

Note:
For the timing belt types 75 BATK10/BATK15 and 100 BATK10/BATK15 it is necessary to indicate the curve direction!

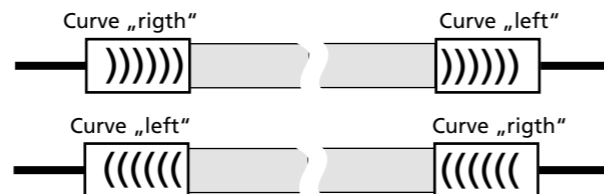
Mounting instructions

| Tension plate | Variant B type 2 | |
|-------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| | 75 mm | 100 mm |
| Belt width | 75 mm | 100 mm |
| Pre-assembly screws (SW=wrench size across flats) | Countersunk head screws ISO 10642, 6xM10 - 8.8 (SW6) | Countersunk head screws ISO 10642, 6xM12 - 8.8 (SW8) |
| Recommended tightening moment of the pre-assembly screws M _A | 18 Nm | 28 Nm |
| Fastening screws | Cheese head screws ISO 4762 4xM10 - 8.8 (SW8) | Cheese head screws ISO 4762 4xM12 - 8.8 (SW10) |
| Recommended tightening moment of the fastening screws M _A | 45 Nm | 70 Nm |
| Tightening moment for generation of tension force M _A | 64 Nm on Countersunk head screws | 114 Nm on Countersunk head screws |
| Admissible force of the tension plates F _{adm} | 95200 N | 126000 N |

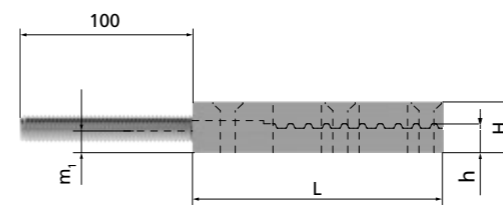
BRECO order example

| | | | | | |
|---------------------------------------|-----------|--------|-------|--------|------|
| Tension plate | 120 x 180 | BATK15 | Var B | Type 2 | left |
| Width B | | | | | |
| Length L | | | | | |
| Belt type / pitch | | | | | |
| Variant | | | | | |
| Type | | | | | |
| Curve direction (only BATK10, BATK15) | | | | | |

Note:
The gear inserts for BATK10 and BATK15 depend on the curve direction „left“ or „right“.

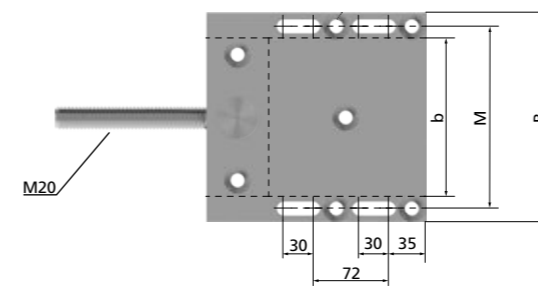


Tension plate variant C



With tensioning device, bores, long holes

Tension plate variant C



With tensioning device, bores, long holes

Tension plate variant C

| Belt width b/ belt type | B [mm] | L [mm] | M [mm] | m ₁ [mm] | h [mm] | H [mm] |
|----------------------------|-----------|-----------|-----------|------------------------|-----------|-----------|
| 150 AT10 | 200 | 210 | 174 | 25,5 | 25,05 | 42 |
| 150 ATS15 | 200 | 210 | 174 | 25,5 | 24,25 | 42 |
| 150 T20 | 200 | 210 | 174 | 25,5 | 24,20 | 42 |
| 150 AT20 | 200 | 210 | 174 | 25,5 | 23,85 | 42 |

Mounting instructions

| Tension plate | Variante C |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Belt width | 150 mm |
| Pre-assembly screws (SW=wrench size across flats) | Countersunk head screws ISO 10642, 7xM12 - 8.8 (SW8), additional screw M12 in the middle of the belt |
| Recommended tightening moment of the pre-assembly screws M _A | 42 Nm |
| Fastening screws | Cheese head screws ISO 4762 4xM12 - 8.8 (SW10) |
| Recommended tightening moment of the fastening screws M _A | 105 Nm |
| Tightening moment for generation of tension force M _A | 122 Nm on Countersunk head screws |
| Admissible force of the tension plates F _{adm} | 190400 N |

BRECO order example

| | | | | |
|-------------------|-----------|------|-------|---------------------------|
| Tension plate | 200 x 210 | AT10 | Var C | without tensioning device |
| Width B | | | | |
| Length L | | | | |
| Belt type / pitch | | | | |
| Variant | | | | |
| Version | | | | |