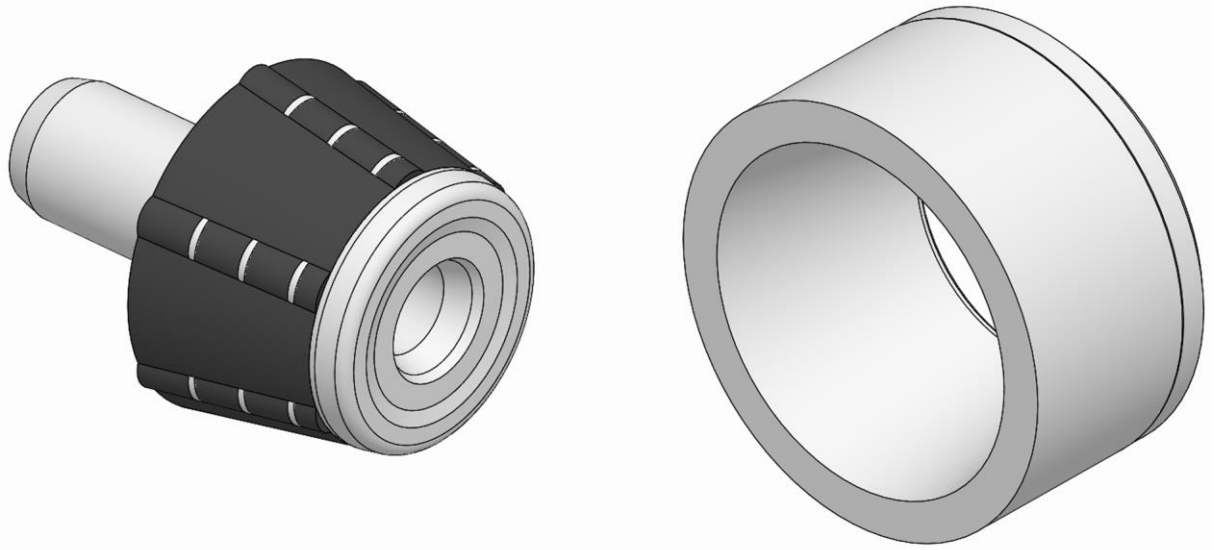
HAINBUCH



Extra page

CENTREX duo

EN

1 General

1.1 Information about this manual

This extra page enables you to work safely and efficiently with the product.

This extra page is part of the product and must be kept in a location directly beside the product that is accessible to the personnel at all times. The personnel must have read this extra page carefully and understood its contents before starting any work. The basic requirement for safe work is compliance with all stipulated safety notices and work-related instructions on this extra page.

If the product is passed onto a third party, this extra page must accompany it.

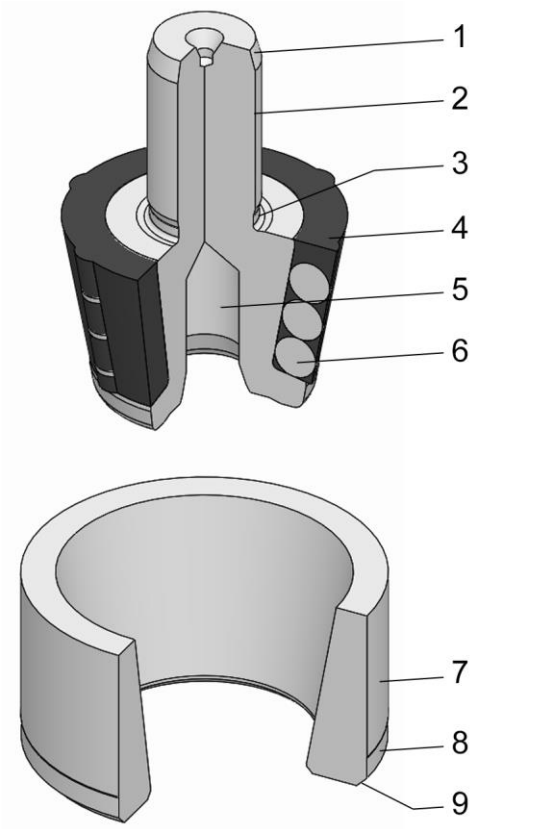
Illustrations on this extra page are there to facilitate a basic understanding, and may differ from the actual design configuration of the product.

WARNING

Serious injuries caused by individual products or by inappropriate combinations of them!

- In addition to this extra product page, all documents apply to products in this combination.
- Read and pay attention to all documents for individual products and this combination.

2 Layout



1 Insertion chamfer at the positioning taper
2 Positioning taper
3 Free grinding for plane-parallel installation of the positioning taper
4 Rubber for positioning the precision balls
5 Extraction thread
6 Precision balls
7 Positioning bushing
8 Attachment diameter at the position bushing
9 Insertion chamfer on the position bushing

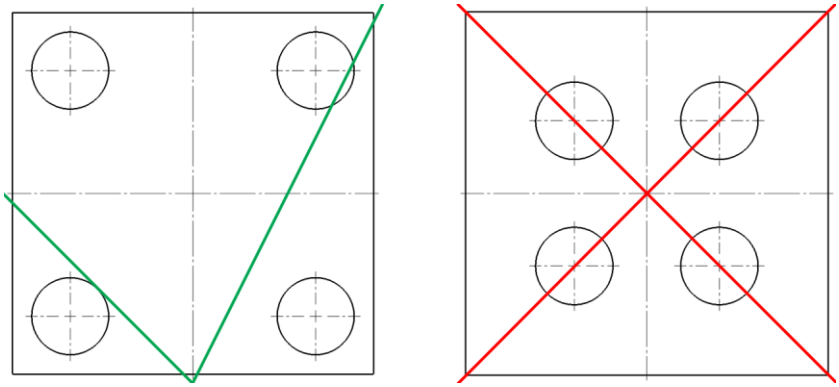
CENTREX duo is a centering unit, which can be flexibly integrated into your own design.

CENTREX duo consists of a positioning bushing and positioning taper, which must be inserted into the plates.

3 Installation

3.1 Installation instructions

- In order to achieve the repeatability of the system, four positioning bushings or positioning tapers are required.
- In addition, fastening elements are required, which must be attached as close as possible to the CENTREX duo elements.
- Usually, the positioning bushing is inserted into the base plate and the positioning taper into the changing plate / workpiece.



- The positioning bushings or the positioning tapers must be placed as far apart from each other as possible.

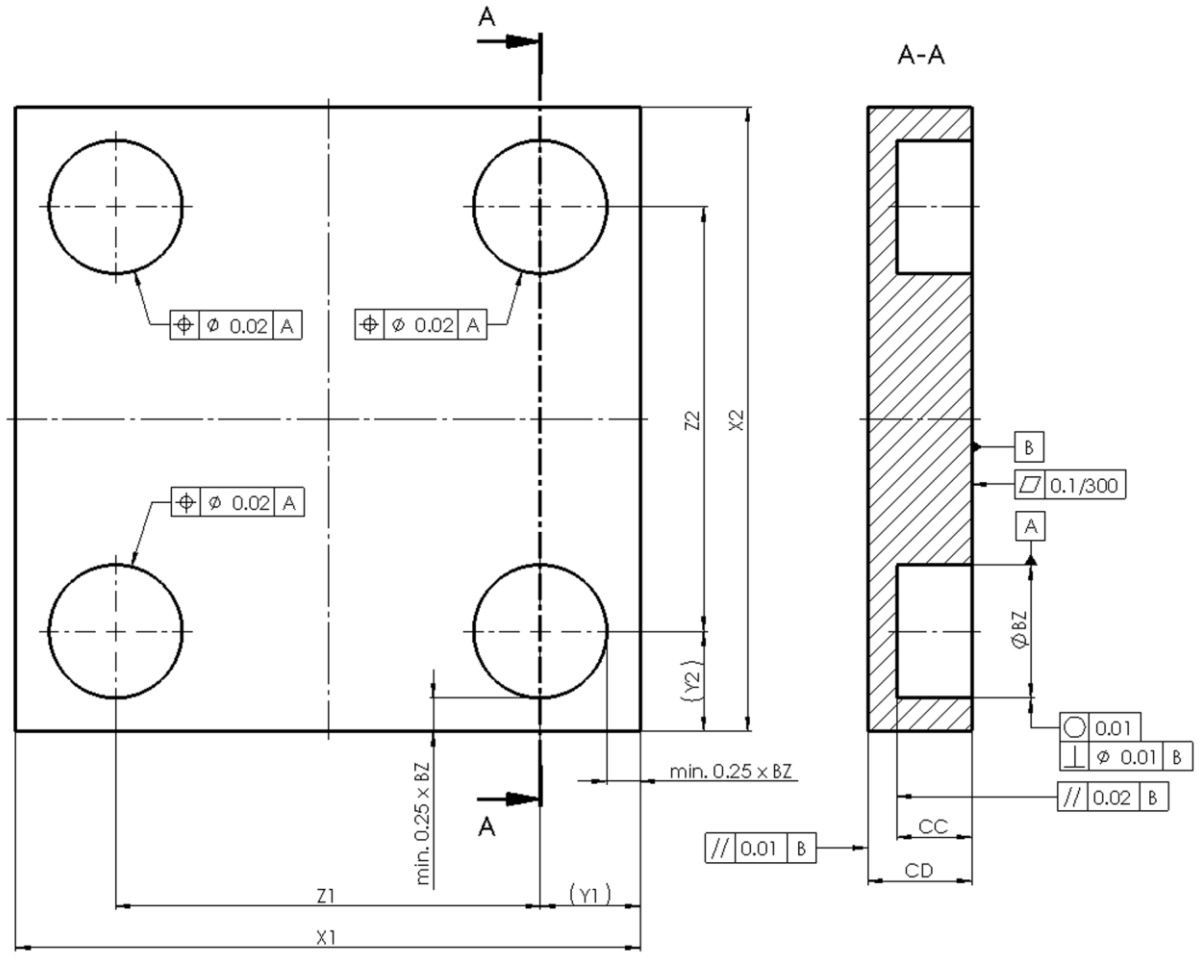
3.2 Installation dimensions

NOTE

Material damage due to overloading of the system if the product is installed incorrectly!

- The installation dimensions must be adhered to.

Positioning bushing

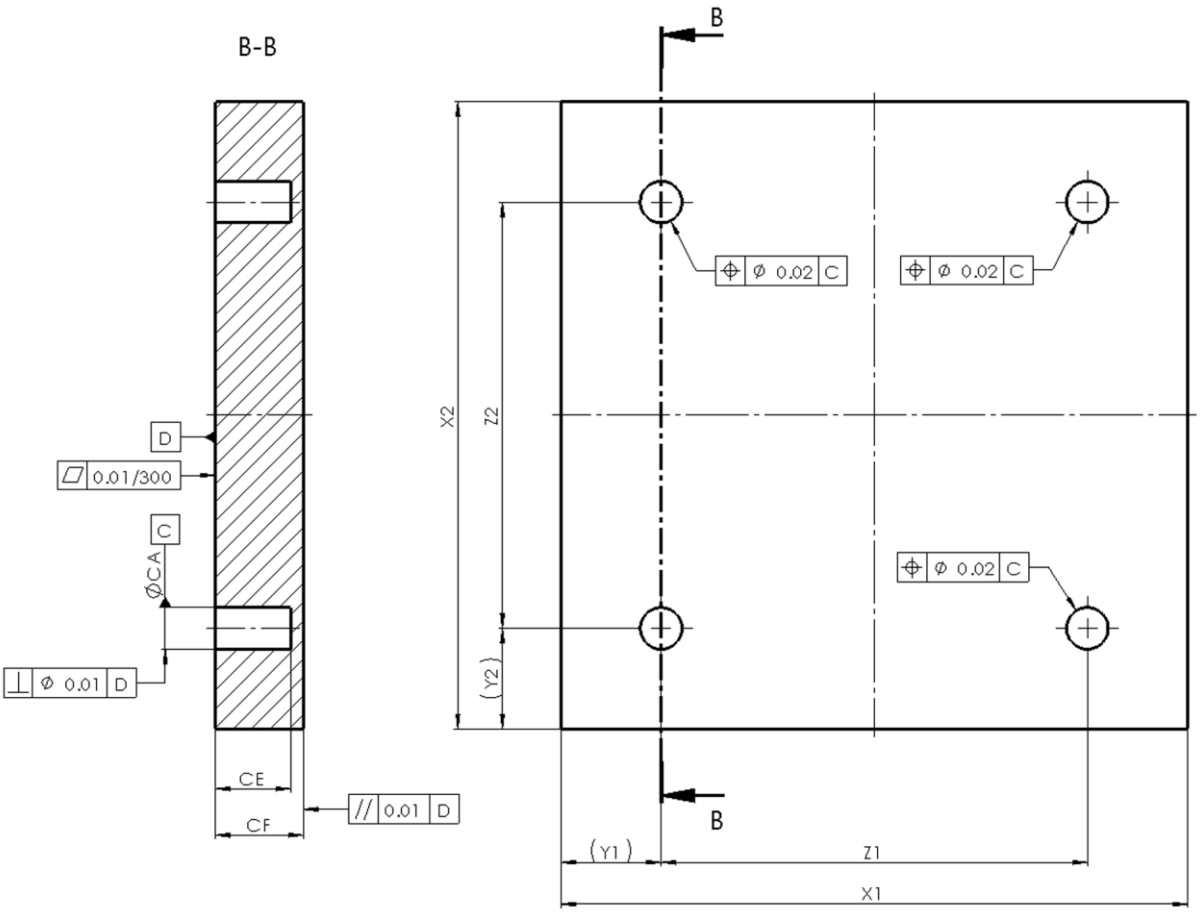


Size	1	3
Bore diameter bushing $ØBZ$	16 H7	32 H7
Bore depth bushing CC	$9^{0}_{-0.1}$	$18^{0}_{-0.1}$
Minimum plate thickness bushing CD	12.5	25

Table 1: Installation dimensions positioning bushing

To dismount the positioning bushing, an undercut should be made for removal.

Positioning taper



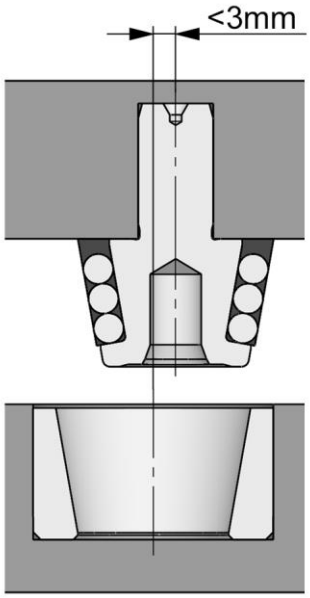
Size	1	3
Bore diameter taper $\emptyset CA$	6 H7	10 H7
Bore depth taper CE	≥9	≥18
Minimum plate thickness taper CF	12	21

Table 2: Installation dimensions positioning taper

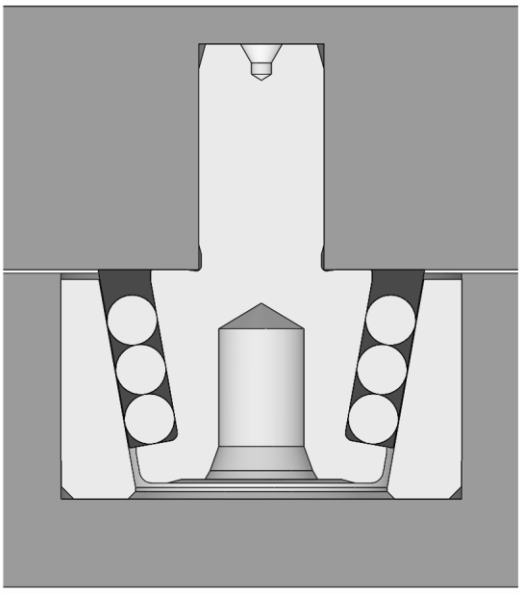
To dismount the positioning taper, a hole should be drilled to knock it out.

4 Use

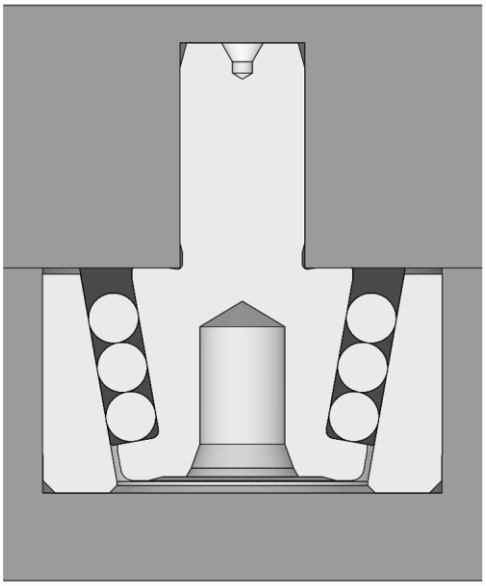
4.1 Mounting the changing plate



1. Place the changing plate on the base plate. The maximum axis center offset of positioning taper and positioning bushing must be < 3 mm.



2. After fitting, the balls of the positioning taper rest lightly against the positioning bushing. However, the two plates do not yet lie flat on top of each other.



3. Attach the fastening elements. This applies the pull-down force and centers the plates to each other with repeatable accuracy.

4.2 Repeatability

The position repeatability of the change plate on the same base plate is ≤ 0.003 mm when using four CENTREX duo.

The position of the same carrier plate on different base plates may differ.

4.3 Minimum pull-down force

A pull-down force must be built up so that the repeatability can be maintained. This must be absorbed by the fastening elements.

The minimum pull-down force can be found in the following table.

Size	**1**		**3**	
Number of CENTREX duo	1	4	1	4
Minimum pull-down force [kN]	1.5	6	2.5	10

Table 3: Minimum pull-down force

4.4 Transverse force

The CENTREX duo are not suitable for absorbing transverse forces. Due to the pull-down force, the CENTREX duo remain free from transverse forces. Any transverse forces must be absorbed by the fastening elements.

When changing plates, the CENTREX duo may be loaded with the following maximum transverse forces.

Size	**1**		**3**	
Number of CENTREX duo	1	4	1	4
Maximum transverse force [*N*]	35		250	

Table 4: Maximum transverse force

4.5 Operating conditions

The maximum operating temperature is 80 °C.

A temperature difference of the plates is not permissible. At most, the position tolerance of the holes may be used.

No ester-containing or polar cooling lubricants may be used.

5 Annex

5.1 Contact

The following hotlines are available to you for orders, schedule tracking and emergencies.

Order hotline

Ordered quickly, supplied swiftly. Just phone:

+49 7144. 907-333

Tracking hotline

Current status of your order? Just call:

+49 7144. 907-222

24 hour emergency phone line

Has a system crash occurred, or some other technical emergency?

Our experts are there for you around the clock:

+49 7144. 907-444

For advice or help, you can contact the sales partners and service staff listed in www.hainbuch.com.

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