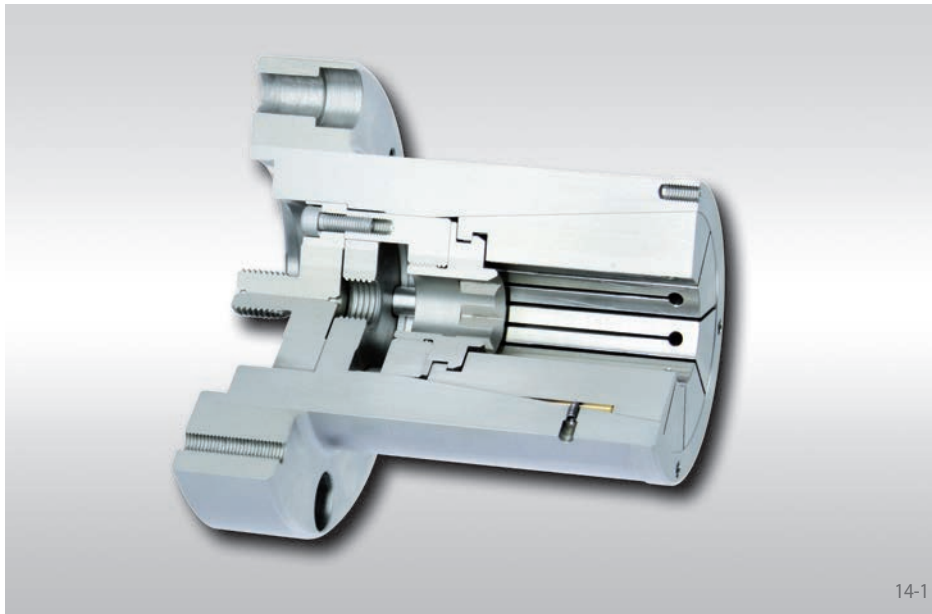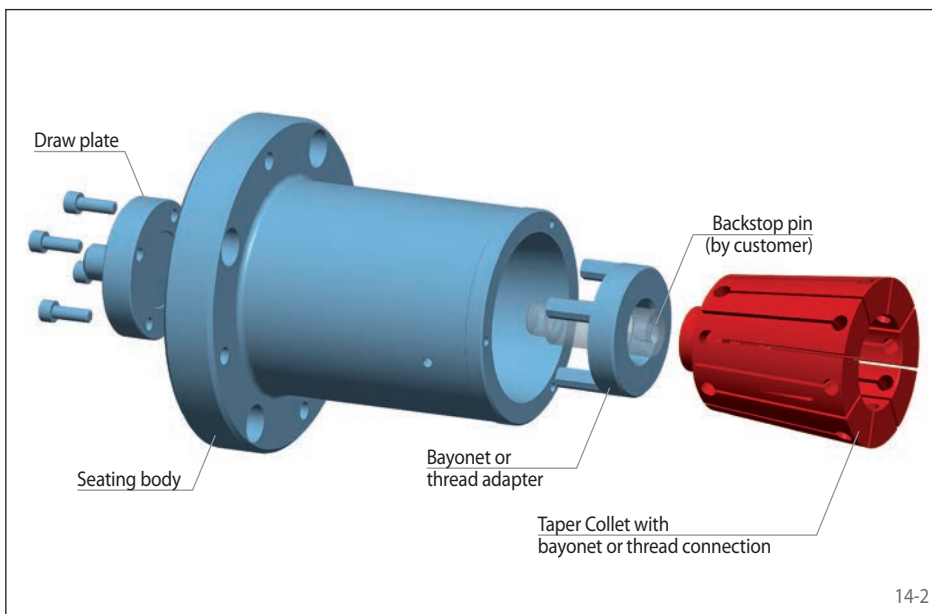# Taper Collet Flange Chucks BKFF

**RINGSPANN®**



14-1

## Features

- For clamping diameters from 7,2 mm to 73,6 mm
- High true running accuracy ≤ 0,01 mm
- Permissible component tolerance up to IT15
- Extended insertion depth
- Pull-back against external backstop surface or internal backstop pin by the customer
- For thin-walled or solid components



Draw plate

Backstop pin (by customer)

Seating body

Bayonet or thread adapter

Taper Collet with bayonet or thread connection

14-2

## Configuration

The Taper Collet Flange Chuck consists of a draw plate, a seating body, a bayonet or threaded adapter and a Taper Collet. Depending on its size, the Taper Collet has a bayonet or threaded connection. It is taken up by the seating body in a form-fitting connection and connected via the bayonet or threaded connection with the bayonet or threaded adapter. The Taper Collet Flange Chuck is attached to the machine with the seating body. The Clamping Fixture is actuated by the draw plate, which is connected to the machine power actuating unit.

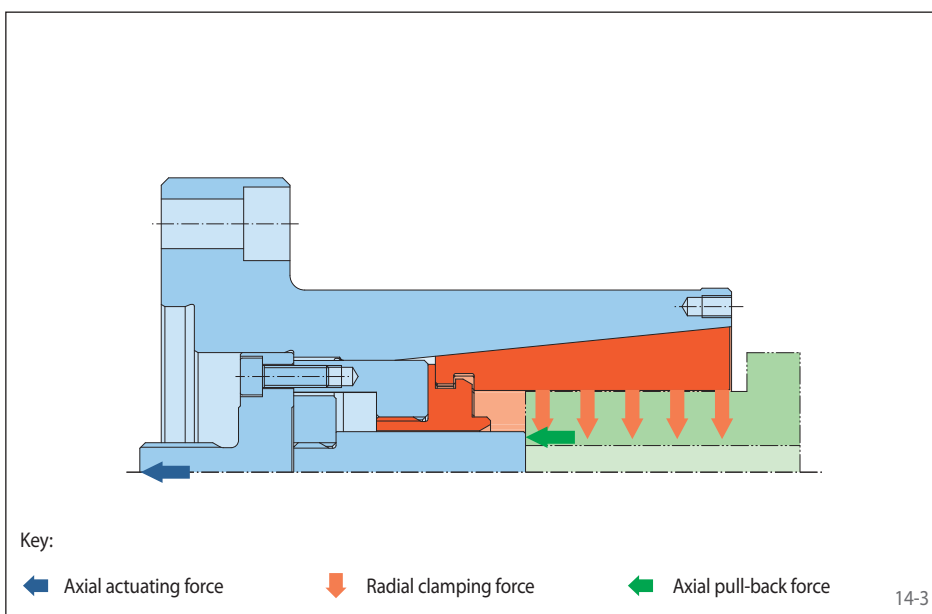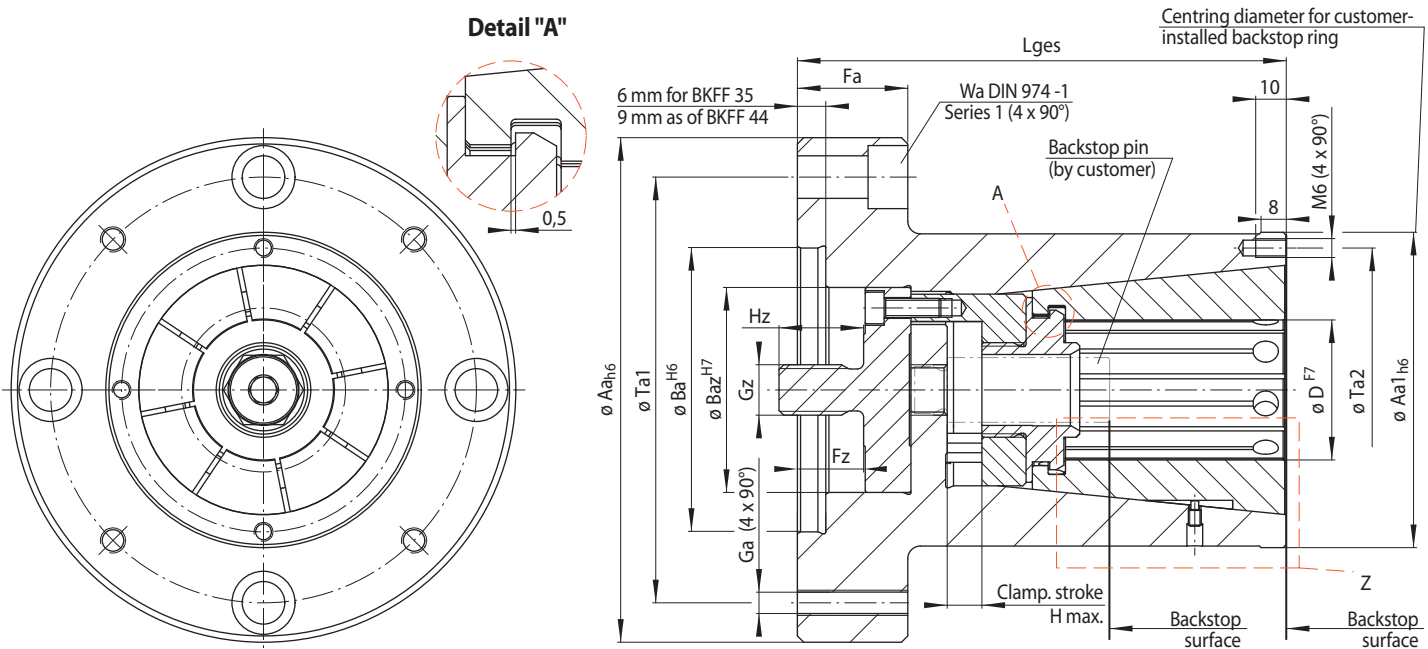## Clamping principle

For clamping, the Taper Collet is pulled against the seating body. The component is centred, pressed against the backstop and aligned flush.



Key:

← Axial actuating force   ↓ Radial clamping force   ← Axial pull-back force

14-3

# Taper Collet Flange Chucks BKFF

**RINGSPANN**®

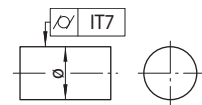**Detail "A"**

6 mm for BKFF 35
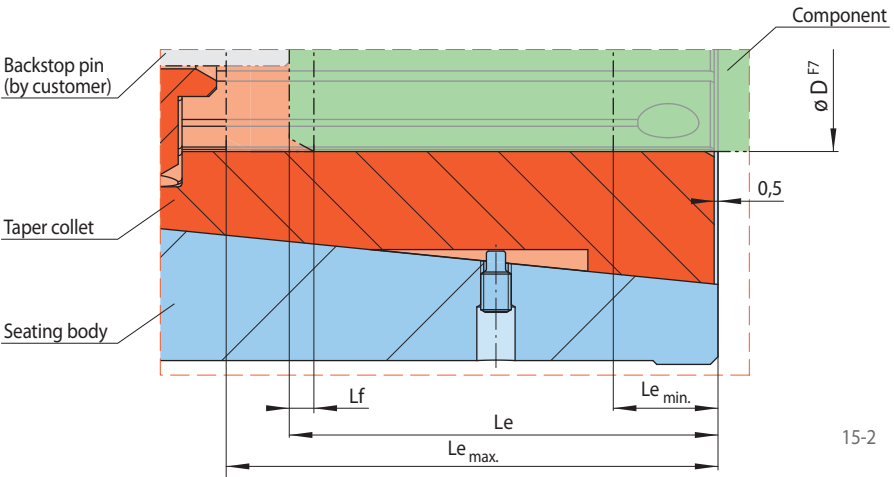9 mm as of BKFF 44

0,5

15-1

## Insertion depth Le

The minimum insertion depth $Le_{min.}$ is measured from the face of the seating body and derived according to the following formula from the length of the chamfer Lf of the component and the constant K:

$$Le_{min.} = K + Lf$$

## Please note

IT7

**Detail "Z"**

Backstop pin
(by customer)

Component

Taper collet

Seating body

0,5

15-2

| Size | Clamping range | Maximum diameter change* | Max. transmissible torque** | Max. actuating force** | Aa | Aa1 | Ba | Baz | Fa | Fz | Ga | Gz | H max. | Hz | K | Le max.[3] | Lges | Ta1 | Ta2 | Wa |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | $D^{1)}$ mm | $\Delta D$ mm | $M^{2)}$ Nm | F N | mm | mm | mm | mm | mm | mm | | | mm | mm | mm | mm | mm | mm | mm | |
| BKFF 35 | 14,60 - 7,20 | 0,6 | 10 - 20 | 8 500 | 90 | 55 | 50 | 27 | 20 | 10 | M 6 | M 10 | 3,5 | 14 | 9,5 | 39,5 | 93,5 | 70 | 45 | 8 |
| BKFF 44 | 23,60 - 14,40 | 0,8 | 27 - 42 | 11 000 | 120 | 70 | 60 | 50 | 30 | 19 | M 8 | M 16 | 5,0 | 18 | 12,5 | 40,5 | 110 | 95 | 60 | 10 |
| BKFF 56 | 33,60 - 23,40 | 1,2 | 63 - 87 | 16 000 | 120 | 75 | 60 | 50 | 30 | 19 | M 8 | M 16 | 7,0 | 18 | 21,5 | 44,5 | 119 | 95 | 65 | 10 |
| BKFF 79 | 51,60 - 33,40 | 2,0 | 158 - 234 | 28 000 | 160 | 100 | 90 | 65 | 35 | 21 | M 8 | M 16 | 11,0 | 22 | 25,5 | 64,5 | 155 | 135 | 90 | 12 |
| BKFF 110 | 73,60 - 51,40 | 2,4 | 346 - 479 | 40 000 | 200 | 135 | 125 | 90 | 35 | 22,5 | M 8 | M 20 | 13,0 | 25 | 29,5 | 88,5 | 190 | 175 | 125 | 12 |

* of the clamping diameter of the Clamping Element. • ** for clamping with pull-back action.
[1] Please note the standard clamping ranges according to the table on the next page „Clamping Elements Taper Collets BKF".
[2] The lower value refers to the smallest clamping diameter of the respective size, the higher value to the largest. For values between the two see the table "Taper Collet Clamping Elements" from page 16.
[3] Maximum insertion depth (corresponds to clamping length)

## Example for ordering

Please indicate the size of the Clamping Fixture and the clamping range of the requested Taper Collet, in your order:

Size:                    BKFF 35
Clamping range:          10,20 - 9,60 mm

➡ BKFF 35-10,20-9,60

# Taper Collet Flange Mandrels BKDF

**RINGSPANN**®
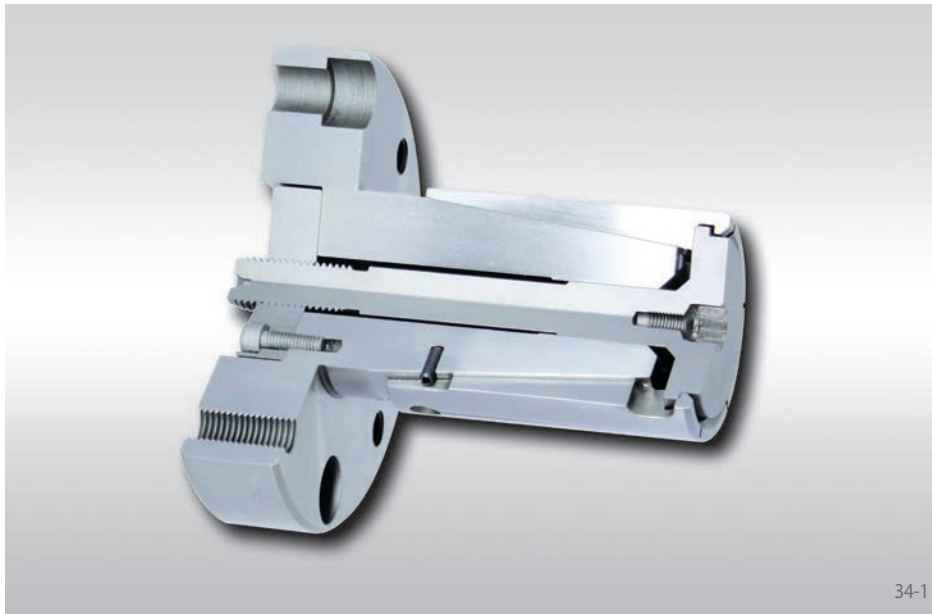


34-1

## Features

- For clamping diameters from 11,9 mm to 132 mm
- High true running accuracy ≤ 0,01 mm
- Permissible component tolerance up to IT15
- Pull-back against external backstop surface or external backstop ring by the customer
- For thin-walled or solid components
- Hand clamping optional possible



Seating body

Backstop ring (by customer)

Taper Collet with draw bolt

34-2

## Configuration

The Taper Collet Flange Mandrel consists of a seating body and a Taper Collet with draw bolt. Taper Collets with hexagon head or pre-centring and a plate with threaded bore are optionally available. The Taper Collet Flange Mandrel is attached to the machine with the seating body. The Clamping Fixture is actuated by the draw bolt, which is connected to the machine power actuating unit.

Intermediate Flanges and Spring Force Actuators are shown starting on page 58.
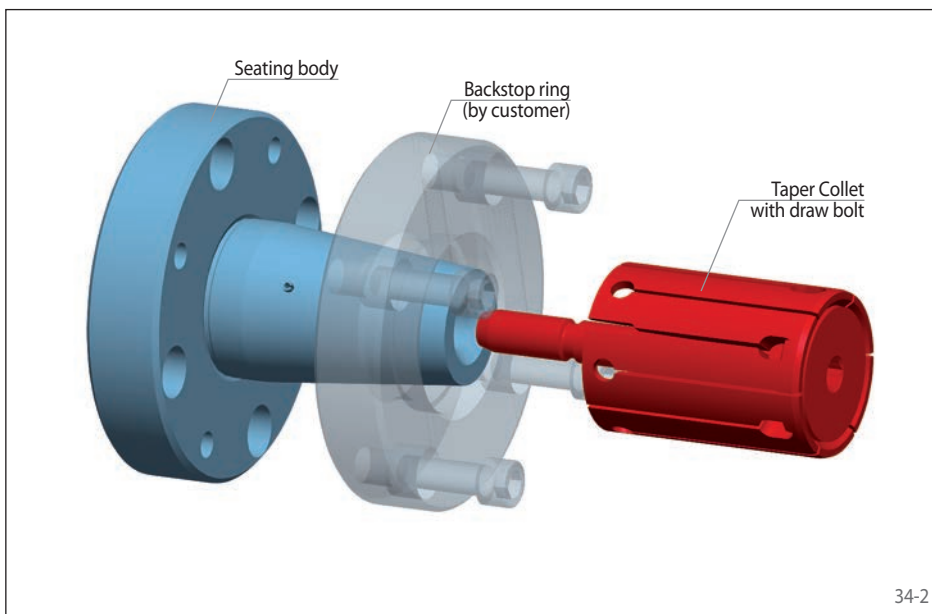
## Clamping principle

For clamping, the Taper Collet is pulled against the seating body and radially expands over the cone of basebody. The component is centred, pressed against the backstop and aligned flush.



Key:

◄ Axial actuating force     ▲ Radial clamping force     ◄ Axial pull-back force

34-3

34

# Taper Collet Flange Mandrels BKDF

**RINGSPANN®**

**Detail „A"**



0,5



Wa DIN 974 -1
Series 1 (4 x 90°)

Lges -0,5

Fa

Le max.
insertion depth
Sl

K

4

Clamping length
Sl min.

Clamp. stroke
H max.

A

ø Aa h6
ø Ta
ø Ba H6
Gz
Fz

ø D f7

Ga (4 x 90°)
Hz

Backstop ring
(by customer)

Backstop
surface

**Please note**

IT7

35-1

| Size | Clamping range D[1] mm | Maximum diameter change* Δ D mm | Max. transmissible torque** M Nm | Max. actuating force** F N | Aa mm | Ba mm | Fa mm | Fz mm | Ga | Gz | H max. mm | Hz mm | K mm | Le max. mm | Lges mm | Sl mm | Ta mm | Wa mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BKDF 6 | 11,90 - 15,00 | 0,6 | 11 | 5 000 | 70 | 37 | 20 | 9 | M 8 | M 5 | 4,1 | 18,4 | 8,1 | 31,9 | 53,1 | 14,9 | 50 | 8 |
| BKDF 7 | 14,70 - 20,90 | 1,2 | 13 | 5 000 | 70 | 37 | 20 | 9 | M 8 | M 5 | 6,9 | 18,4 | 10,9 | 46,9 | 69,6 | 24,1 | 50 | 8 |
| BKDF 12 | 20,70 - 27,90 | 1,2 | 44 | 12 000 | 70 | 37 | 20 | 9 | M 8 | M 8 | 6,95 | 16,35 | 11,45 | 61,45 | 84,65 | 33,55 | 50 | 8 |
| BKDF 18 | 27,70 - 32,80 | 1,2 | 58 | 12 000 | 70 | 37 | 20 | 9 | M 8 | M 8 | 7,0 | 16,4 | 11,5 | 60,5 | 82,0 | 33,5 | 50 | 8 |
| BKDF 19 | 32,60 - 42,80 | 1,2 | 114 | 20 000 | 90 | 50 | 30 | 14 | M 8 | M 12 | 7,0 | 18,3 | 13,0 | 82,0 | 113,5 | 52,0 | 70 | 8 |
| BKDF 27 | 42,60 - 51,80 | 1,2 | 147 | 20 000 | 90 | 50 | 30 | 14 | M 8 | M 12 | 7,0 | 18,3 | 13,0 | 82,0 | 113,5 | 52,0 | 70 | 8 |
| BKDF 32 | 51,60 - 64,00 | 2,4 | 273 | 30 000 | 120 | 60 | 30 | 19 | M 10 | M 16 | 13,0 | 16,5 | 21,5 | 117,5 | 149,0 | 68,5 | 95 | 10 |
| BKDF 43 | 63,60 - 72,00 | 2,4 | 333 | 30 000 | 140 | 60 | 30 | 19 | M 12 | M 16 | 13,0 | 16,5 | 21,5 | 117,5 | 149,0 | 68,5 | 115 | 12 |
| BKDF 44 | 71,60 - 82,00 | 2,4 | 373 | 30 000 | 140 | 60 | 30 | 19 | M 12 | M 16 | 13,0 | 16,5 | 21,5 | 147,5 | 179,0 | 98,5 | 115 | 12 |
| BKDF 54 | 81,60 - 132,00 | 2,4 | 424 | 30 000 | 140 | 60 | 30 | 19 | M 12 | M 16 | 13,05 | 16,45 | 21,55 | 147,55 | 179,05 | 98,45 | 115 | 12 |

[1] Please note the standard clamping ranges according to the tables on the next pages „Clamping Elements Taper Collets".
* of the clamping diameter of the Clamping Element.
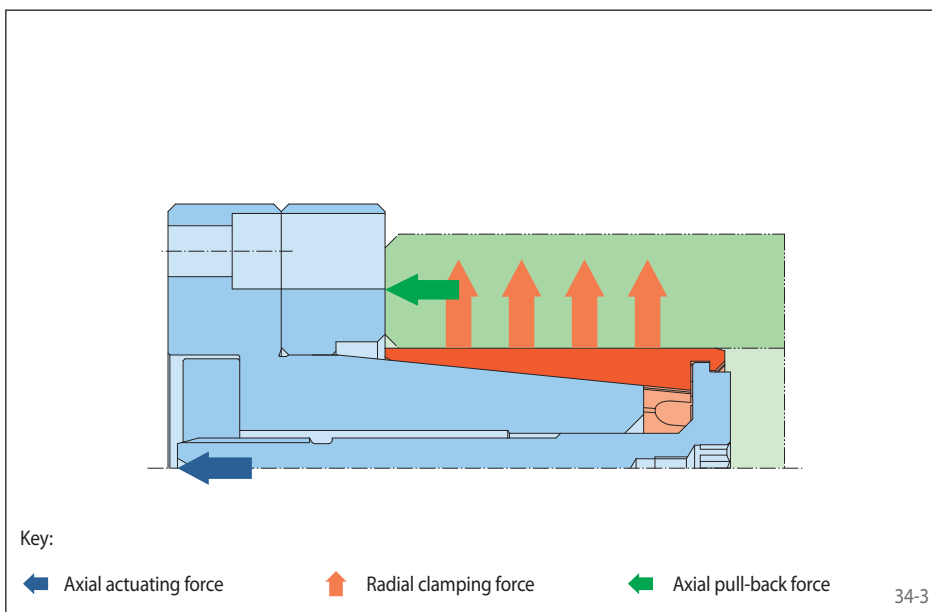** for clamping with pull-back action.

## Example for ordering

Please indicate the size of the Clamping Fixture and the clamping range of the requested Taper Collet, in your order:

| Size: | BKDF 27 |
|---|---|
| Clamping range: | 46,60 - 47,80 mm |

➡ BKDF 27-46,60-47,80

## Insertion depth

The minimum insertion depth $Le_{min.}$ is derived according to the following formula from the component chamfer length Lf and dimension K:

$$Le_{min.} = K + Lf + 4 \text{ mm } (Sl_{min.})$$