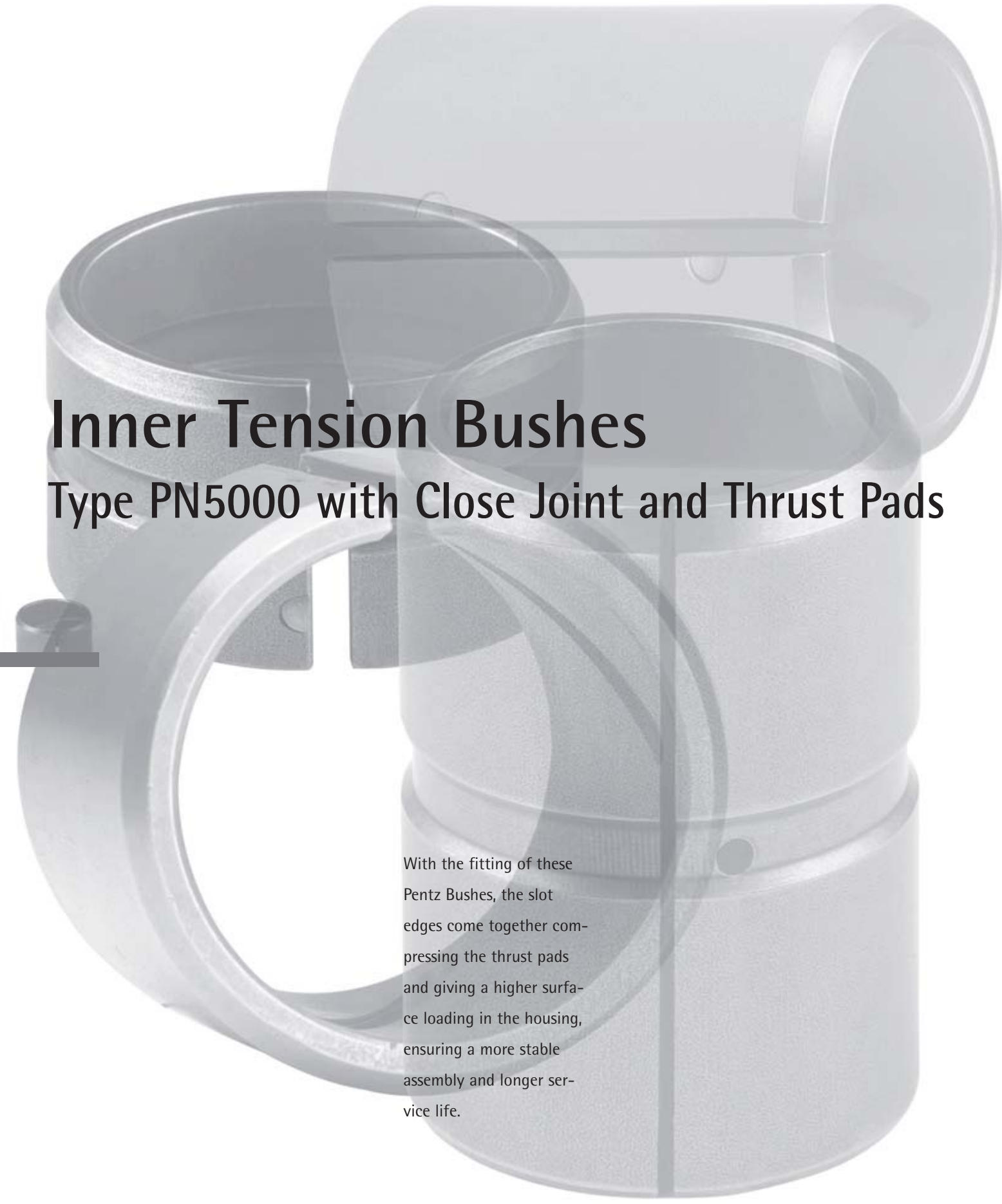


# Inner Tension Bushes

## Type PN5000 with Close Joint and Thrust Pads

With the fitting of these Pentz Bushes, the slot edges come together compressing the thrust pads and giving a higher surface loading in the housing, ensuring a more stable assembly and longer service life.

## PN5000 – Areas of Application

Pentz has developed this Bush to meet growing demand for increased service intervals together with longer working life. The close joint prevents contaminant entering the Bush and keeps the lubricant working longer. They have been tested for some years in:

- Construction machines
- Salvage operations
- Agricultural machines
- Conveying systems
- Building Industry Equipment
- Rail road Industry

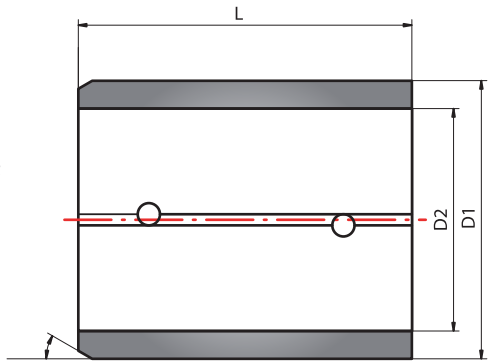
### PN5000 – Advantages

- Security against axial movement even in worn housings
- Security against torsional movement
- Bushes can be ground upon request to fine tolerances
- High retention force in housing
- Cost effective housing manufacture up to tolerance H11
- Easy assembly and removal with standard hydraulic fitment.
- Valuable to reclaim worn housings
- More cost effective due to longer service life
- Minimum maintenance

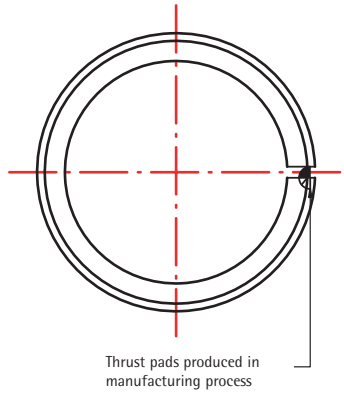
# Inner Tension Bush PN5000 cont'd

The number of thrust pads along the slot can be varied according to Bush length, diameter and desired retention force.

The result of this design feature is a considerable extension of application possibilities.




Also available in Form F (note PN3000)




**EGPN1 / EGPNG1***
**Inner Tension Bush with Close Joint and Thrust Pads**

- 1 inner spiral groove, one side running-out into chamfer

**EGPN2 / EGPNG2***
**Inner Tension Bush with Close Joint and Thrust Pads**

- To D2 90mm, 3 inner inclined grooves not running-out
- 90 mm Dia upwards 4 similar grooves
- Optionally with 1 inner annular groove

**EGPN3 / EGPNG3***
**Inner Tension Bush with Close Joint and Thrust Pads**

- 1 outer annular groove
- 1 inner annular groove
- To D2 90mm Dia. 3 inclined grooves not running out
- From D2 90mm Dia. 4 similar grooves
- 3 or 4 drilled holes

**EGPN4 / EGPNG4***
**Inner Tension Bush with Close Joint and Thrust Pads**

- 1 outer groove
- 1 inner groove
- 2 holes through

**EGPN5 / EGPNG5***
**Inner Tension Bush with Close Joint and Thrust Pads**

- To D2 90mm, Dia. 3 inner inclined grooves running-out to chamfer
- From D2 90mm Dia. 4 grooves similar

**EGPN / EGPNG***
**Inner Tension Bush with Close Joint and Thrust Pads**

- plain surface

*) internally ground

# Technical data

## Inner diameter – tolerances for Tension Bush PN5000

| Nominal size of inner Ø D2 | | 10 to 18 | | | 18 to 30 | | | 30 to 50 | | | 50 to 80 | | | 80 to 100 | | | 100 to 120 | | 120 to 180 | | 180 to 250 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bush length L | | to 50 | to 100 | to 150 | to 50 | to 100 | to 150 | to 50 | to 100 | to 150 | to 50 | to 100 | to 200 | to 50 | to 100 | to 200 | to 100 | to 200 | to 100 | to 200 | to 100 | to 200 |
| ISO tolerances of inner Ø D2 | D 11 | +0,160<br>+0,050 | +0,160<br>+0,050 | | +0,195<br>+0,065 | +0,195<br>+0,065 | | +0,240<br>+0,080 | +0,240<br>+0,080 | | +0,290<br>+0,100 | | | +0,340<br>+0,120 | | | | | | | | |
| | D 12 | | | +0,230<br>+0,050 | | | +0,275<br>+0,065 | | | +0,330<br>+0,080 | | +0,400<br>+0,100 | | | +0,470<br>+0,120 | | +0,470<br>+0,120 | | +0,545<br>+0,145 | | +0,630<br>+0,170 | |
| | D 13 | | | | | | | | | | | | +0,560<br>+0,100 | | | +0,660<br>+0,120 | | +0,660<br>+0,120 | | +0,775<br>+0,145 | | +0,890<br>+0,170 |
| | *H 8 | +0,027<br>0,000 | | | +0,033<br>0,000 | | | +0,039<br>0,000 | | | +0,046<br>0,000 | | | +0,054<br>0,000 | | | +0,054<br>0,000 | | +0,063<br>0,000 | | +0,072<br>0,000 | |
| | *F 8 | +0,043<br>+0,016 | | | +0,053<br>+0,020 | | | +0,064<br>+0,025 | | | +0,076<br>+0,030 | | | +0,090<br>+0,036 | | | +0,090<br>+0,036 | | +0,106<br>+0,043 | | +0,122<br>+0,050 | |
| | *E 8 | +0,059<br>+0,032 | | | +0,073<br>+0,040 | | | +0,089<br>+0,050 | | | +0,106<br>+0,060 | | | +0,126<br>+0,072 | | | +0,126<br>+0,072 | | +0,148<br>+0,085 | | +0,172<br>+0,100 | |

* Tolerances for ground Bushes or others to your specification.
To control the inner diameter note the sum of the tolerances, housing plus tension Bush.

## Minimum oversize before assembly (pre-tension)

| Inner Ø D2 | 10 to 50 | 50 to 100 | 100 to 250 |
|---|---|---|---|
| Oversize D1 in mm | < 0,3 | < 0,5 | < 0,8 |

## Length tolerances

| Inner Ø D2 | 10 to 50 | 50 to 100 | 100 to 250 |
|---|---|---|---|
| Length L > 100 | -1 | -1,5 | -2 |
| < 100 | -1,5 | -1,5 | -2 |

## Recommendations for housing tolerances

| Housing | | 10 to 18 | 18 to 30 | 30 to 50 | 50 to 80 | 80 to 120 | 120 to 180 | 180 to 250 |
|---|---|---|---|---|---|---|---|---|
| ISO tolerance | H 11 | +0,110<br>0 | +0,130<br>0 | +0,160<br>0 | +0,190<br>0 | +0,220<br>0 | +0,250<br>0 | +0,290<br>0 |

All dimensions in millimetres.