



# Inner Tension Bushes

## Type PN3000

Inner Tension Bushes are slotted hollow cylinders with a variety of slot forms. They are manufactured from hardened and tempered spring steel strip giving elasticity and extended wear resistance. They are defined by slot type, diameters and length to our factory standard PN3000 (DIN 1498 refers).  
e.g. EG 50/40 x 40 PN3000  
for size availability see page 1.

## PN3000 – Areas of Application

Pentz Inner Tension Bushes are used wherever there is exposure to heavy duty working conditions and high surface forces. They are found in applications of slowly rotating machinery, wave movement operations, assemblies with short cycle reverse rotational functions, and of course they excel when dealing with shock loads!

Such as:

- Construction machines
- Agricultural machines
- Conveying systems
- Machine building Industries
- Railway Industry
- Mining and Digging

### PN3000 – Advantages

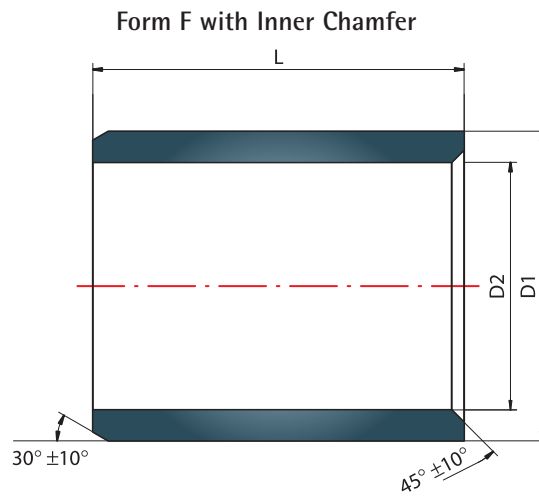
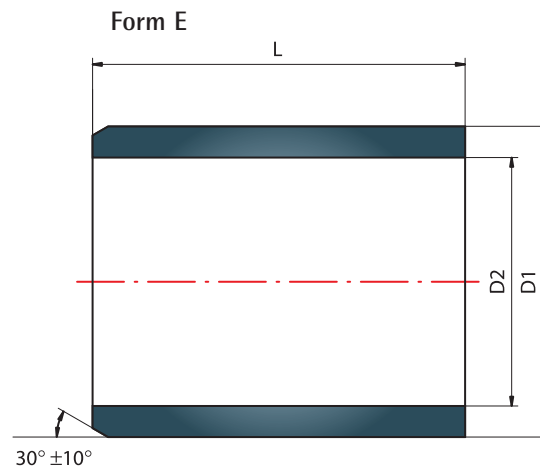
- Easy Assembly
- No further treatment after assembly
- Rescuing expensive parts by re-boring and fitting a Bush
- Low repair costs
- Short down times
- Self locating in housing
- Manufacturing to a hardness giving maximum life
- Minimum maintenance



# Inner Tension Bushes Type PN3000

This is type DIN 1498 standard Bush which custom and practice allows us to offer for a host of regular applications.

Diameter D1 is oversize prior to fitting and the pre-tension generated allows the Bush to hold itself into position after assembly, without further mechanical constraint. The pre-tension is product of the wall thickness and Bush length.



## EG

- Straight slot, the most usual form



## ES

- Inclined slot, favoured
- For rotary motion



## EP

- Arrow slot, again for rotary motion and longer length Bushes

# Technical data

## Inner diameter – tolerance for Inner Tension Bushes PN3000

Nominal size range of the 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 +0,050	+0,160 +0,050		+0,195 +0,065	+0,195 +0,065		+0,240 +0,080	+0,240 +0,080		+0,290 +0,100			+0,340 +0,120										
	D 12			+0,230 +0,050			+0,275 +0,065			+0,330 +0,080		+0,400 +0,100		+0,470 +0,120		+0,470 +0,120		+0,545 +0,145		+0,630 +0,170				
	D 13												+0,560 +0,100		+0,660 +0,120		+0,660 +0,120		+0,775 +0,145		+0,890 +0,170			

### Minimum oversize before assembly

Inner Ø D2	10 to 50	50 to 100	100 to 250
Oversize Ø D1 in mm	< 0,5	< 0,8	< 1,0

### Length tolerance

Inner Ø D2	10 to 50	50 to 100	100 to 250
Length > 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 8	+0,027 0	+0,033 0	+0,039 0	+0,046 0	+0,054 0	+0,063 0	+0,072 0

All dimensions in millimetres.

