

***Tension Bushings According to  
Jörg-Vogelsang Standard.***







#### Wide tolerance and fast delivery time

Tension bushings are made of rolled, quenched, and tempered spring strip steel and are particularly suited for lower RPM or oscillating bearing movements.

Creative ideas are one thing – marketable products are another. You can order tension bushings for bearings from us at any time. The JV-WN 211-01 factory standard defines the properties and special features of the tension bushings of Jörg Vogelsang. It is similar to DIN 1498:1965 for tension bushings, but differs in regards to special characteristics.

The wider product tolerance of the inner diameter and the fact that a groove is not necessary assure lower manufacturing costs, and a reduced product price to the customer.

***Special characteristics.***

### Area of application

JV-WN 211 defines the properties of tension bushings with a nominal diameter from 10 mm to 120 mm; this corresponds with engineering practices. The dimensional range can be individually expanded upon request.

### Special features

- Defined oversized dimensions guarantees a secure, firm fit within the bore
- External chamfers simplify installation

### Slot Types



Straight slot (EG)



Arrow-shaped slot (EP)



Wavy slot (EW)

***As customized as you require.***

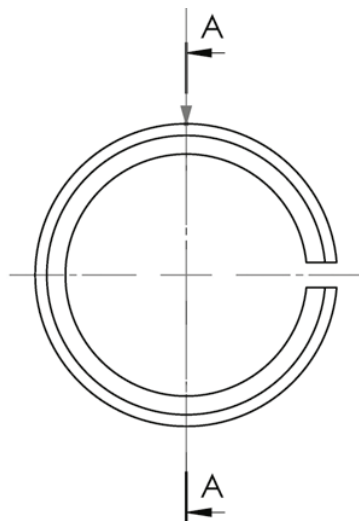
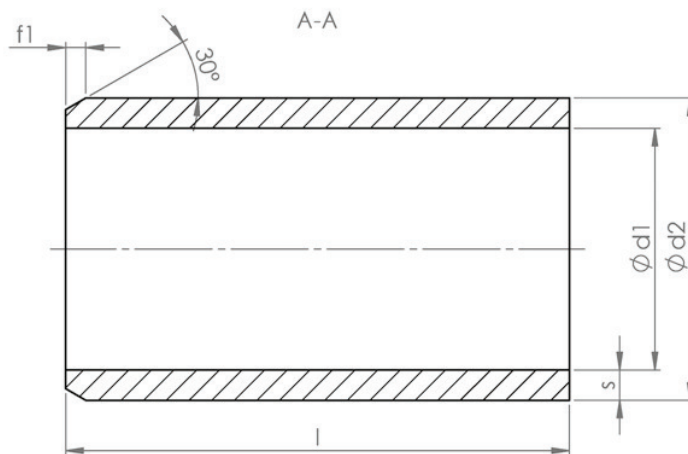
## Standard references

The following, quoted specifications are required for the use of this document. In case of dated references, only the edition referred to applies. In case of undated references, the last edition of the document referred to applies (including all modifications).

- DIN 1498:1965: Tension bushings for internal application
- DIN EN 10083-3:2007: Steel for quenching and tempering.  
– Part 3: Technical delivery conditions for alloy steels.
- DIN EN 10132-4:2003: Cold rolled narrow steel strip for heat treatment. Technical delivery conditions. – Part 4: Spring steels and other applications.
- DIN EN ISO 6507: Metallic materials – Vickers hardness test



Form E Tension bushings without counterbore – measuring points and direction of force



***The offer – fitting dimensions.***



### Application forms

The tension bushings must be inserted into the mounting hole in such a way that the slot does not lie in the load zone, but rather offset by about 90° opposite the direction of force.

Standard tension bushings are particularly suited for the strong reduction of wear on bolts and bearing holes due to a high bearing pressure and low oscillation movement under rough operating conditions. The advantage particularly becomes noticeable in case of low, or no lubrication.

The material of the shaft used or its surface is not stipulated in this standard since it varies as to which part should wear the earliest. It is recommended that the bolt be surface-hardened.



***A high load requires high quality.***



### Materials

- C67S (1.1231), 56Si7 (1.5026) and 51CrV4 (1.8159) according to DIN EN 10132-4:2003.
- 37MnB4 (1.5524) according to DIN EN 10083-3:2007.

The manufacturer selects the material.

### Heat treatment

- 420 HV – 560 HV
- Hardness test according to ISO 6507-1

### Surface

Uncoated, i.e., if nothing else was agreed between the customer and supplier, the tension bushings must be delivered as manufactured and treated with short-term corrosion protection.

### Slot

For various applications, the following slot forms are available.

- Straight slot
  - Conventional solution of all bearing problems in case of a point load
- Arrow-shaped slot and wavy slot
  - For bearings with a tangential load
  - Including linkage lock

### Designation

EG 50/40 x 30 – JV-WN 211-01

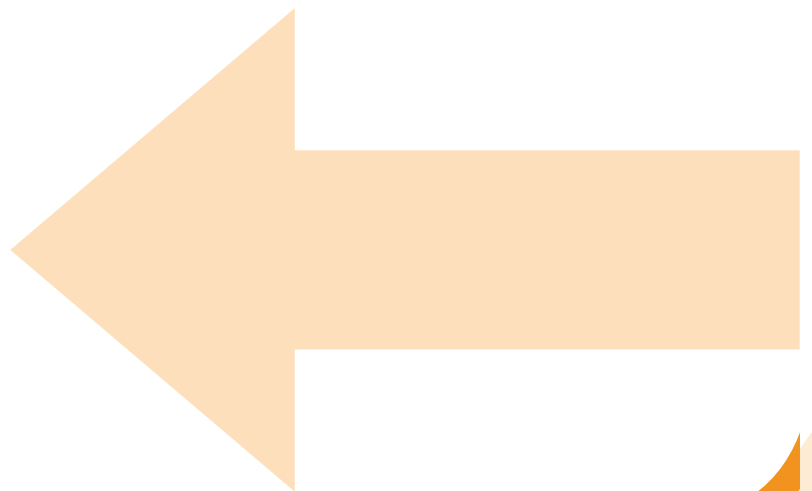
Designation of tension bushings with a straight slot according to factory standard JV-WN 211-01, with a nominal diameter of 50 mm and a nominal length of 30 mm.

### Note

Additional special features, for example, lubricating grooves or ground tension bushings, can be found in factory standard JV-WN 213. The use of press-fit bushings are described in more detail in factory standard JV-WN 212.

### Version index

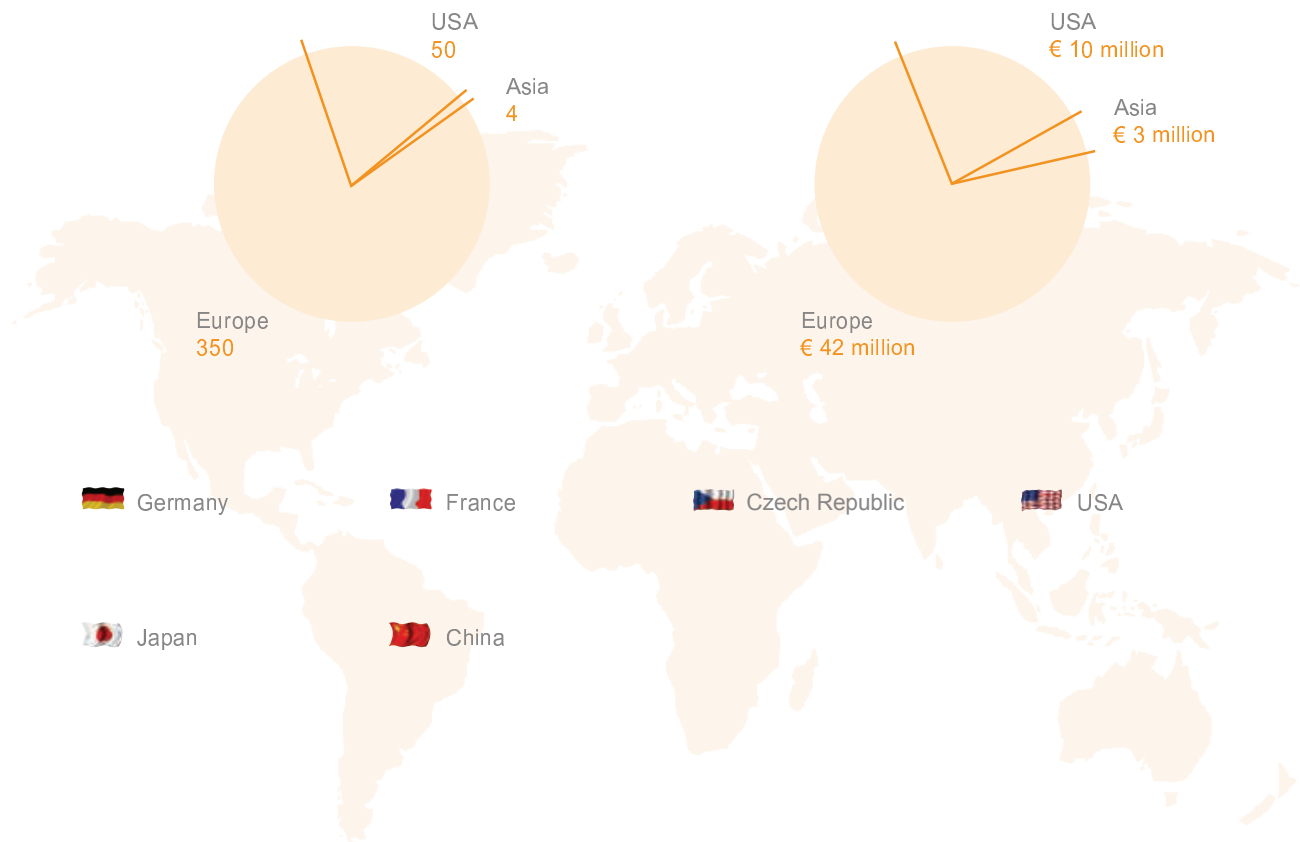
2014: Publication of the standard



***Success is in the details.***

## Number of employees

## Sales



### Everything on board and on time

We are well-known for the inexpensive and quick handling of all orders. Thanks to our sophisticated logistics concept, timely delivery is always guaranteed. We are there whenever and wherever you need us. Furthermore, we offer various additional services such as packaging according to customer requirements, reliable stock management and much more besides.

### Key data

Number of customers:	2,000
Number of products/variants:	5,000
Area of company premises:	55,000 m <sup>2</sup>
Delivery items:	> 1 billion units p.a.
Material use:	15,000 t
Industry certifications:	ISO TS 16949 ISO TS 14001
Automotive sales:	80%

### Manufactured range

- Spring pins
- Coiled spring pins
- Tension bushings
- Chassis components
- Compression limiters®
- Automotive spring pins®
- Guiding and positioning sleeves

***You can rely on a wide range worldwide.***





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