



DE600

Turned bearings are often technically and economically favourable bearing solutions.

High loading capability, low weight, good corrosion resistance and small radial diameters are some good properties for turned bearings.

The choice of the suitable material and the arrange of additional lubrication properly are important when using turned bearings.

Material:

Turned bearings and bearing elements can be manufactured in several copper alloys. The material will be chosen to meet the specific needs for each construction. This is important to reach the optimal performance for the life time, service and total economy.

Properties for the standard materials are on the table. In addition to standard materials there are many other alloys to use when necessary.

Tolerances:

Turned bearings can be manufactured with tighter tolerances than wrapped thin walled bearings.

The tolerance can be adapted to the needs of the construction. Therefore it is possible to reach the clearance which is wanted.

Design:

Turned bearings are always manufactured according to the customer drawings. Therefore the bearing can be designed to meet the needs of the specific construction.

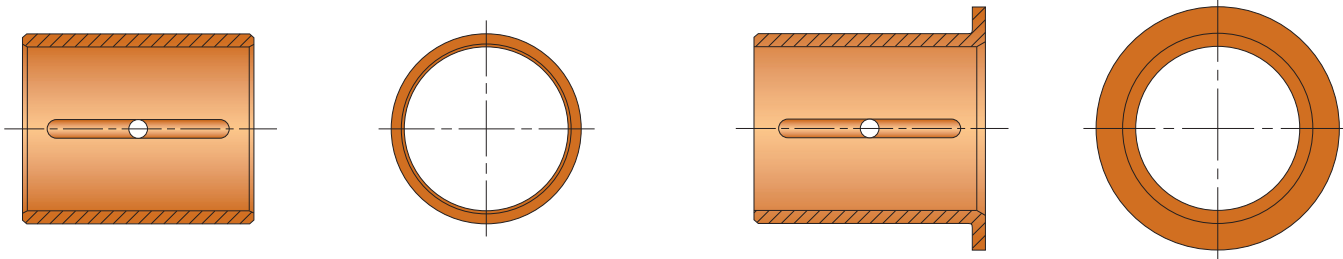
The design of lubrication grooves, quantity of the lubrication holes, tolerances and chamfering can be manufactured according to customer needs.

Lubrication:

Turned bearings from copper alloys are aimed to be additionally lubricated. The need of the additional lubrication depends on the bearing material and the general conditions of the bearing solution.

The design of the lubrication grooves, the choice of the lubricant and the general conditions of the bearing solution affect how the additional lubrication should be arranged.

With the right material and design can also turned bearings be used with quite a long lubrication intervals.



Material Data					
	DE600	DE600S1	DE600S2	DE600S3	DE600S4
Material Composition %					
Cu	62-68	85	80	88	80
Sn		5		12	10
Pb		5			10
Zn	Rest	5			
Ni			5		
Al	5-7,5		10		
Fe	2-4		5		
Mn	2,5-5				
Properties					
Yield point N/mm ²	>450	>90	>260	>150	>100
Tensile strenght N/mm ²	>750	>250	>500	>270	>210
Permitted load N/mm ²	100	60	50	70	60
Permitted speed m/min	15	10	20	10	10
Density	8,0	8,8	7,6	8,8	8,9
Hardness HB	>210	>70	>150	>95	>75
Temperature range	-40/+300°C	-100/+400°C	-100/400°C	-100/+400°C	-100/+400°C

Material determination The table helps to choose different materials to different conditions. When choosing the material especially the strength of the material and the hardness should be carefully considered. See the table above.
 Symbols: +=Recommended, O=Suitable, -=Boundary use.

Parameter	Load	High	High	High	Avarage	Avarage	Blow
	Speed	High	Slow	Slow	Avarage	Avarage	
	Lubrication	Good	Good	Bad	Good	Temporary	
	Shaft	Hard	Hard	Hard	Nonharde- ned	Nonharde- ned	
Material	DE600	+	+	O	-	-	+
	DE600S1	O	O	-	+	O	O
	DE600S2	+	+	+	-	-	+
	DE600S3	+	O	-	+	O	O
	DE600S4	-	-	-	+	+	-

Benefits:

- High load capacity.
- Can be used in difficult circumstances.
- Can be designed to specific conditions.
- Several materials..

Design:

- In- or outside lubrication grooves.
- Lubrication holes.
- Thrust washers.
- Slide pads.
- Bearing halves.
- Tolerance according to needs

Typical applications:

- Forest machines.
- Offshore industry
- Ship industry
- Dumpers.
- Agricultural machines.