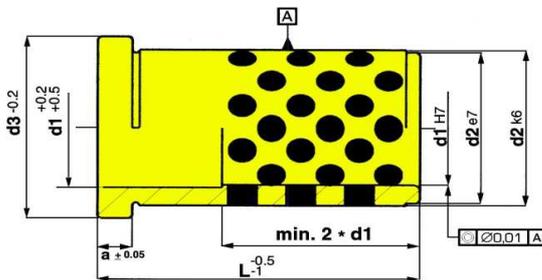




## SELF LUBRICATED BRONZE

### PRODUCT DESCRIPTION



The development of self-lubricated guidance systems arises from the need to solve the existing problems involved in lubrication. These are due either to the difficulty of access or to the convenience of continuous and permanent lubrication, which oils fail to ensure. Implementing these systems results in a significant reduction in seizing problems and maintenance costs, as well as in gas emission caused by oil heating. This permits to operate at high temperatures peaks of 200° C, although the recommended operating temperature is up to 190° C

These aluminium, bronze alloys are mostly used for building materials due to their hardness, resistance to hot and cold water, non-oxidizing acids, good mechanical properties and high resistance to abrasion, corrosion and cavitation. Besides, they are free of polluting components, which means our bushes are appropriate for production processes subject to toxic substance control.

The presence of aluminum in bronze reduces the attack of atmospheric agents and warm gases, whilst at the same time exhibiting great stability against distilled water, saline water, seawater or acid well water. Bleaches, except for ammonia, are harmless to it. Moreover, a protection layer produced by the material itself acts very favourably against the corrosive effect of sulphur and oxidizing gases.

### FEATURES

The continuous casting copper-based alloy has the following mechanical properties and chemical composition:

<b>CuAl10Fe5Ni5-C</b>												
%	Cu	Ni	Bi	Pb	Sn	Zn	Al	Fe	Si	Mg	Cr	Mn
min.	76.0	4.0	-	-	-	-	8.5	4.0	-	-	-	-
max.	83.0	6.0	0.01	0.03	0.1	0.50	10.5	5.5	0.1	0.05	0.05	3.0
Print Procedure												GC
Tensile Strength Rm N/mm <sup>2</sup> , min												650
Conventional Elastic Limit 0.2% Rp0,2 N/mm <sup>2</sup> , min												280
Elongation A % Min.												13
Brinell Hardness HB Min.												180

## **LUBRICATION**

BOLEXP self-lubricated bushes are made with a bronze base material to which solid lubricants are added under a minimum ratio of a 25% of the sliding surface. This solid lubricant is included in small cylindrical repositories within the material surface. Their arrangement ensures the lubricant is distributed in a way that overlaps in the sense of motion. This feature, combined with our base material grinding offers an optimum lubrication without maintenance and a long useful life.

The graphite used is a material with an extremely low chemical-inertia level, not interacting with most elements in nature under normal conditions. This ensures regular behaviour through the piece lifetime without unexpected contingency.

## **ASSEMBLING AND FIXING**

Determining the adequate bush size is based on the requirements of the tool to be constructed and the load capacity needed, as well as bush lifetime and operating security.

BOLEXP bushes can be mounted either in holes with tolerance H7 or in such a way that they can be manually slid into their cartridge. Never hit them with hammers or any other impacting tool. Otherwise, the bush structure could be damaged.

It is recommended to mount at least two units in parallel disposal so as to avoid possible rotation motions in the travelling of items. Bush length is also suggested to be at least twice its diameter in order to guarantee a correct operation of the bushes.

