LUMET - SOLID LUBRICANT SLIDING STRIPS AND SLIDING PLATES

LUMET - Solid lubricant sliding strips/sliding plates made of solid bronze

The customised LUMET solid lubricant sliding strips or sliding plates are made of solid bronze with a permanently integrated graphite lubricant and are therefore characterised by their low maintenance requirements. They are designed for high loads (temperatures up to 400°C) at low friction speeds. Products from this series are used in particular in the offshore sector and in connection with food or textile machinery.

We would be happy to analyse your requirements in detail in order to offer you the best possible solution for your individual case. You can rely on over 40 years of experience, specialising in the production and manufacture of high-quality slide rails, slide plates and slide bearings.

LUMET®
BRONZE sliding bushings

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LUMET-GL

LUMET is a solid bronze slide plate with integrated graphite lubricant that enables automatic and energy-efficient lubrication and offers significantly higher load limits than oil-regulated elements. It is suitable for heavy-duty operation and corrosive environments as well as hard-to-reach lubrication points, for example in die casting, mining, shipbuilding, turbo generators and injection moulding machines.

Profile	Design	Base material	Dynamic load N/mm²	Density	Hard-ness HB	Elongation %	Temperature limit	Yield point N/mm²	Tensile strength N/mm²	Max. speed (dry)
	**LUMET-GL**	CuZn24Al6/ CuZn25Al 6Fe3Mn4	100	8	>210	>12	+300°C	>450	>750	15 m/min

LUMET-GLSH1

LUMET-GLSH1 is based on the CuSn5Pb5Zn5 alloy and combines good wear resistance with reliable emergency running properties and high corrosion resistance. The material of the slide plate is suitable for medium loads up to 400 °C and enables dry sliding operation up to approx. 10 m/min.

Profile	Design	Base material	Dynamic load N/mm²	Density	Hard-ness HB	Elongation %	Temperature limit	Yield point N/mm²	Tensile strength N/mm²	Max. speed (dry)
	**LUMET-GLSH1**	CuSn5Pb5Zn5	60	8.9	>70	>15	+400°C	>90	>200	10 m/min

LUMET-GLSH2

Made from CuAl10Ni5Fe5 aluminium bronze, the LUMET-GLSH2 offers high strength, outstanding fatigue resistance and very good chemical resistance. The alloy of this sliding strip is a versatile all-rounder for high loads up to 400 °C and sliding speeds up to approx. 20 m/min.

Profile	Design	Base material	Dynamic load N/mm²	Density	Hard-ness HB	Elongation %	Temperature limit	Yield point N/mm²	Tensile strength N/mm²	Max. speed (dry)
	**LUMET-GLSH2**	CuAl10Ni5Fe5	50	7.8	>150	>10	+400°C	>260	>600	20 m/min

LUMET-GLSH3

Based on the high-alloy tin bronze CuSn12, the LUMET-GLSH3 offers good toughness, high wear resistance and reliable emergency running properties even with limited lubrication. The alloy of this is suitable for alternating loads up to 400 °C and sliding speeds up to approx. 10 m/min.

Profile	Design	Base material	Dynamic load N/mm²	Density	Hard-ness HB	Elongation %	Temperature limit	Yield point N/mm²	Tensile strength N/mm²	Max. speed (dry)
	**LUMET-GLSH3**	CuSn12	70	8.9	>95	>8	+400°C	>150	>260	10 m/min

LUMET-GLSH5

Made from CuZn25Al5Mn4Fe3 aluminium-manganese bronze, LUMET-GLSH5 offers very high strength, hardness and outstanding corrosion resistance. The material can withstand temperatures of up to +150 °C and speeds of around 15 m/min and is particularly suitable for high point loads at moderate speeds.

Profile	Design	Base material	Dynamic load N/mm²	Density	Hard-ness HB	Elongation %	Temperature limit	Yield point N/mm²	Tensile strength N/mm²	Max. speed (dry)
	**LUMET-GLSH5**	CuZn25Al 5Mn4Fe3	120	8	>250	>8	+150°C	>450	>800	15 m/min

LUMET-GLHHP

Made from CuZn25Al5Mn4Fe3 aluminium-manganese bronze, LUMET-GLSH5 offers very high strength, hardness and outstanding corrosion resistance. The material can be used at temperatures up to +150 °C and speeds of around 15 m/min, and is particularly suitable for high point loads with a moderate speed profile.

Profile	Design	Base material	Dynamic load N/mm²	Density	Hard-ness HB	Elongation %	Temperature limit	Yield point N/mm²	Tensile strength N/mm²	Max. speed (dry)
	**LUMET-GLHHP**	CuZn32Al 5Ni3	150	8	>280	>0.3	+150°C	>450	>540	15 m/min

Material structure

The material of the LUMET sliding strips and sliding plates is characterised by high strength and excellent load-bearing capacity - even under alternating or shock loads.
The embedded solid lubricants form a uniform friction film on the bearing surface during commissioning and transfer this to the mating material on first contact

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This is particularly important under dry running conditions: A running-in film is formed at the beginning, which smoothes the friction partners and transfers the solid lubricant specifically into the microstructure of the mating surface. This reduces stick-slip effects, micro-vibrations and plastic deformation - the typical causes of friction and wear in unlubricated metal pairings.

In contrast to conventional lubricants, which are displaced from the contact area under pressure, the solid lubricant film in LUMET sliding strips and sliding plates remains stable in the friction zone. The lubricant is continuously released from the plugs and evenly distributed due to the micro-movements during operation.

The result:
- Constantly low frictional resistance
- Minimised wear even under high loads and a significantly longer service life of the bearing point

Material properties

LUMET materials have been developed for demanding applications and impress with the following properties:
- Maintenance-free operation with a long service life
- High load capacity - under both static and dynamic loads
- Constantly low coefficient of friction - without stick-slip effects, even in start-stop operation
- Resistant to dirt, corrosion, impacts and edge loads
- The cast copper alloy has a shock-absorbing effect and protects neighbouring components
- Generous temperature range - for applications in extremely cold or hot environments.
- Suitable for linear, rotating and oscillating movements
- Long service life and service life

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