SOLID LUBICANT SLIDING BUSHINGS

LUMET - Solid lubicant sliding bushings made from solid bronze, cast iron and steel.

In the solid lubricant sliding bushing product category, we offer products made from three different materials. LUMET solid lubricant sliding bushings are made from solid bronze with a permanently integrated graphite lubricant, while LUMET-4 solid lubricant sliding bushings are made from HT250 cast iron.

LUMET-5 sliding bushings are made of GCr15 steel, are characterised by high compressive strength and are particularly suitable for use in lifting and conveyor machinery.

LUMET®
BRONZE sliding bushings

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LUMET

LUMET solid lubricant sliding bushings are made of solid bronze with pre-integrated solid graphite lubricant. Their load limit is considerably higher than standard sliding bushings, where lubrication is dependent upon there being a film of oil. 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 molding 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	CuZn24Al6/ CuZn25Al 6Fe3Mn4	100	8	>210	>12	+300°C	>450	>750	15 m/min

LUMET-SH1

LUMET-SH1 is based on the CuSn5Pb5Zn5 alloy and combines good wear resistance with reliable emergency running properties and high corrosion resistance. The material 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-SH1	CuSn5Pb5Zn5	60	8.9	>70	>15	+400°C	>90	>200	10 m/min

LUMET-SH2

Made from CuAl10Ni5Fe5 aluminium bronze, LUMET-SH2 offers high strength, excellent fatigue resistance and very good chemical resistance. The alloy 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-SH2	CuAl10Ni5Fe5	50	7.8	>150	>10	+400°C	>260	>600	20 m/min

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LUMET-SH3

Based on the high-alloy tin bronze CuSn12, LUMET-SH3 has good toughness, high wear resistance and reliable emergency running properties even with limited lubrication. The alloy 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-SH3	CuSn12	70	8.9	>95	>8	+400°C	>150	>260	10 m/min

LUMET-SH5

Made from CuZn25Al5Mn4Fe3 aluminium-manganese bronze, LUMET-SH5 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-SH5	CuZn25Al 5Mn4Fe3	120	8	>250	>8	+150°C	>450	>800	15 m/min

LUMET-HHP

LUMET-HHP bushings are based on high-performance zinc bronze CuZn32Al5Ni3. Thanks to their high mechanical strength and hardness, LUMET-HHP plain bearings are suitable for harsh operating conditions up to +150 °C, offering high load-bearing capacity and sliding speeds of up to 15 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-HHP	CuZn32Al5Ni3	150	8	>280	>0.3	+150°C	>450	>540	15 m/min

LUMET-4

LUMET-4 solid lubricant sliding bushings have a HT250 cast iron base. These sliding bushings are used when a cost-effective solution is required and when the mechanical requirements are not to high, e.g. in guide rods for moulding tools, cast-iron plates for plastic injection moulding machinery.

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-4	HT250	60		HB180 HB230		+400°C			15 m/min

LUMET-5

LUMET-5 solid lubricant sliding bushings are reinforced-material products from the LUMET series and have a GCr15 steel base.

These sliding bushings have high levels of compression resistance and are particularly suitable for use in guides for lifting machinery and winding equipment. They are also used in winches and cranes. They should not be used in water or in acidic or alkaline conditions.

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-5	100 Cr6	250		HRC58 HRC60		+350°C			6 m/min

LUMET®
BRONZE sliding bushings

Structure

The lubricator, which is based on aintenance-free solid lubricant or graphite, is embedded into the steel or bronze of the sliding bearing. The lubricator makes it possible, and easier, to work in dry environments.

LUMET sliding bearings are more resistant at higher temperatures compared to other types of sliding bearings.

Technical information

The application conditions must be observed without fail when selecting the solid lubricant.

Application conditions			
Maximum specific load		P	100 N/mm²
Maximum speed		v	0.5 m/s
Maximum sliding bearing load		pv	1.65 N/mm² × m/s
Temperature	**PTFE/graphit + MoS_2 With lubricant**	T	- 40 to + 300 °C - 40 to + 150 °C
Friction coefficient		m	0.16

Movement

LUMET sliding bushings are suitable for applications with heavy loads and low speeds. They mainly operate laterally.

Application

Underwater sliding bearings, e.g. floodgates, foundries, steel work, tool operations, the printing and mining industries, building construction and civil engineering.

Possible lubricants

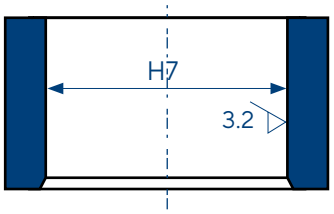
- Graphite
- Graphit + MoS_2
- PTFE

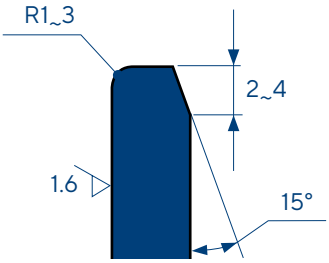
LUMET sliding bearing range

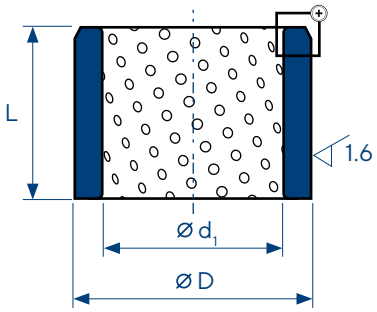
The product range includes cylindrical sliding bushings, flanged sliding bearings, thrust bearing washers and panels. For specific enquiries, please contact our technical team.

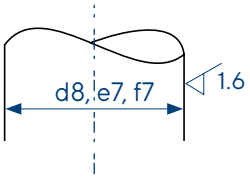
LUMET – Solid lubricant sliding bushings – Cylindrical standard dimensions

d_1: Nominal inner diameter
D: Nominal outer diameter
D_3: Hole diameter
L: Length









d_1	d_1 F7	D	D m6	L -0.30											
				8	15	20	25	30	35	40	45	50	60	70	80
8	+0.028 +0.013	12	+0.018 +0.007	081208	081210	081212	081215								
10		14		101408	101410	101412	101415		101420						
12	+0.034 +0.008	18			121810	121812	121815	121816	121820	121825	121830				
13		19	+0.021 +0.008		131910		131915	131916							
14		20			142010	142012	142015		142020	142025	142030				
15		21			152110	152112	152115	152116	152120	152125	152130				
16		22			162210	162212	162215	162216	162220	162225	162230	162235	162240		
18		24				182412	182415	182416	182420	182425	182430	182435	182440		
20	+0.041 +0.020	28			202810	202812	202815	202816	202820	202825	202830	202835	202840	202850	
22		32	+0.025 +0.009			223212	223215		223220	223225					
25		33				253312	253315	253316	253320	253325	253330	253335	253340	253350	253360
30		38				303812	303815		303820	303825	303830	303835	303840	303850	303860
35	+0.050 +0.025	45							354520	354525	354530	354535	354540	354550	354560
40		50							405020	405025	405030	405035	405040	405050	405060
45		55	+0.030 +0.011								455530	455535	455540	455550	455560
50		60									506030	506035	506040	506050	506060

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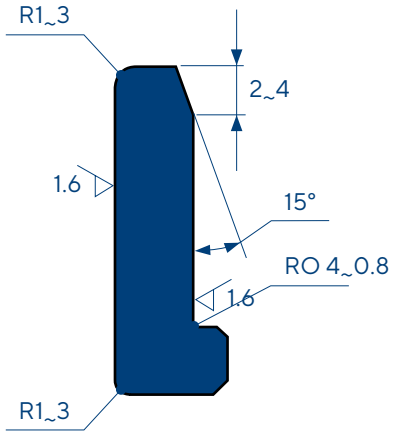
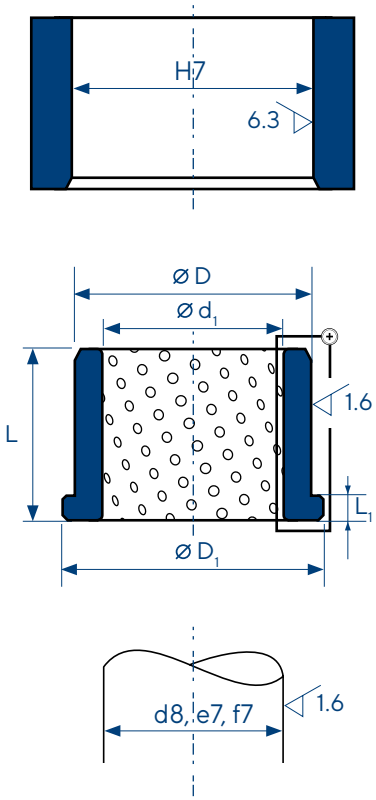
LUMET – Solid lubricant sliding bushings – Flanged sliding bearings, standard dimensions

d_1: Nominal inner diameter
D: Nominal outer diamet
D_3: Hole diameter
L: Length





d_1	d_1 E7	D	D r6	F	$L_1^{-0.10}$	L $^{-0.30}$									
						15	20	25	30	35	40	50	60	80	100
10	+0.040 +0.025	14	+0.034 +0.023	22	2	1015	1020								
12	+0.050 +0.032	18		25	3	1215	1220								
13		19	+0.041 +0.028	26		1315	1320								
14		20		27		1413	1420								
15		21		28		1515	1520	1525	1530						
16		22		29		1615	1620	1625	1630						
20	+0.061 +0.040	30		40	5	2015	2020	2025	2030		2040				
25		35	+0.050 +0.034	45		2515	2520	2525	2530		2540				
30		40		50			3020	3025	3030	3035	3040	3050			
31.5	+0.075 +0.050	40		50			3120			3135					
35		45		60			3520		3530		3540	3550			
40		50		65			4020		4030		4040	4050			
45		55	+0.060 +0.041	70					4530		4540	4550	4560		
50		60		75					5030		5040	5050	5060		
55	+0.090 +0.060	65		80							5540		5560		
60		75	+0.062 +0.043	90	7.5						6040	6050		6080	

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LUMET – Solid lubicant sliding bushings – Flanged sliding bearings, standard dimensions

d_1	d_1 E7	D	D r6	F	$L_1^{-0.10}$	$L^{-0.30}$									
						15	20	25	30	35	40	50	60	80	100
63	+0.090 +0.060	75	+0.062 +0.043	85	7.5									6367	
70		85	+0.073 +0.051	105								7050		7080	
75		90		110									7560		
80		100		120	10								8060	8080	80100
90	+0.107 +0.072	110	+0.076 +0.054	130									9060	9080	
100		120		150										10080	100100
120		140	+0.088 +0.063	170										12080	120100

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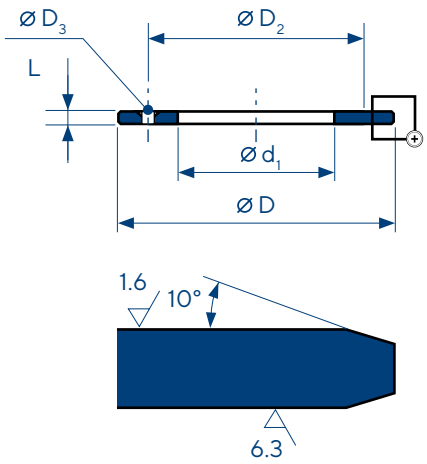
LUMET – Solid lubicant sliding bushings – Thrust washers, standard dimensions

d_1: Nominal inner diameter
D: Nominal outer diameter
D_2: Screw hole position
D_3: Screw hole diameter
L: Thickness



Shaft Diameter f7	d	D	Bolt			
			D_2	Quality	Size	D_3
10	10.2	30				
12	12.2	40	28	2	M3	3.5
13	13.2					
14	14.2					
15	15.2	50	35			
16	16.2					
18	18.2					
20	20.2				M5	6
25	25.2	55	40			
30	30.2	60	45			
35	35.2	70	50			
40	40.2	80	60		M6	7
45	45.2	90	67.5			
50	50.2	100	75			
55	55.2	110	85			
60	60.2	120	90		M8	9
65	65.2	125	95			
70	70.2	130	100			
75	75.2	140	110			
80	80.2	150	120			
90	90.2	170	140		M10	11
100	100.2	190	160			
120	120.2	200	175			

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