

KOMMETAL



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ABOUT US

Nanjing Kommetal co.,ltd is specialized in manufacturing bushing and other metal products. Our bushing include self-lubricating solid Brass-Sleeve, nylon bushing, zinc-base,aluminium-base and other bichemical bushing. We can also provide hose ,adapters and others metal parts.

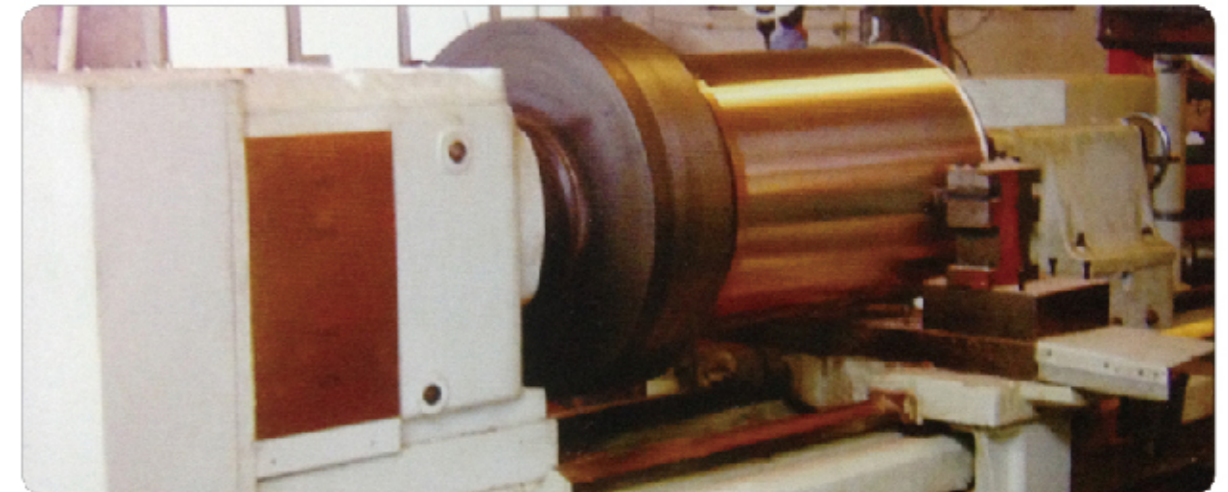
We have over 100 staffs and occupied over 800 square meters. our annual production capacity is over five million piece of metal parts. We have advanced caster, lathe,miller,planer grinder which enable us to provide integral service from casting to precision mechanical service.

We have rich experience in operating on strict quality control. Our facility is accredited with Quality Control System ISO9001, 2000 and environmental Certification ISO14000.We have precision machines for position tolerance, chemical,physical test.

We have exerted wide cooperation with customers over 30 countries with good reputation, such as America, Sweden, England, Germany and India etc .We focus on long-term cooperation and strategic partner.

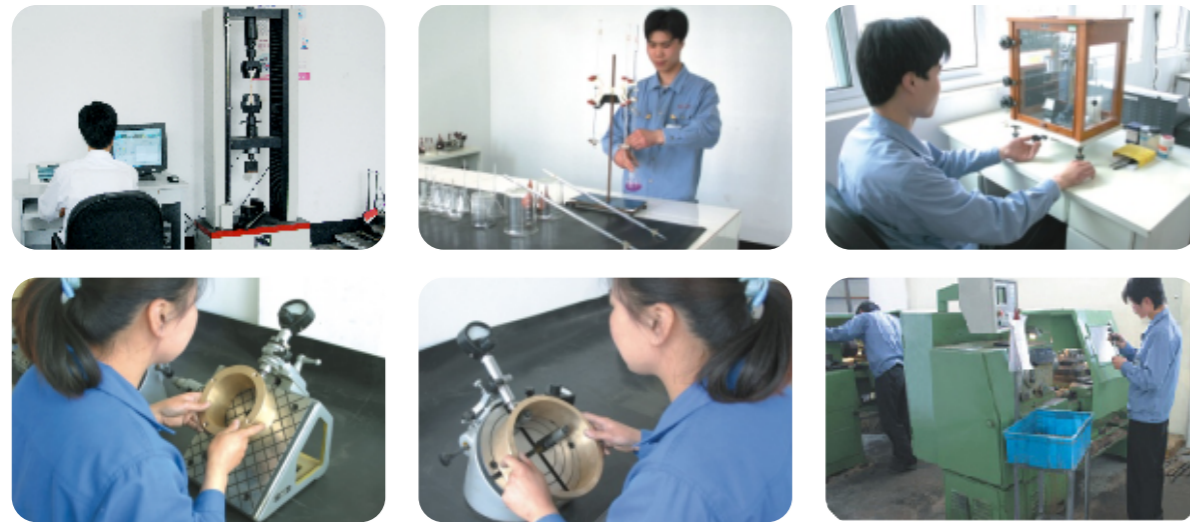
Our equipment

to be strict with quality

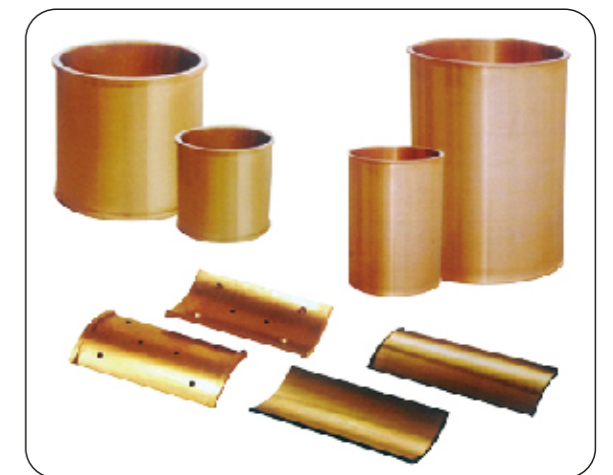


Quality principle

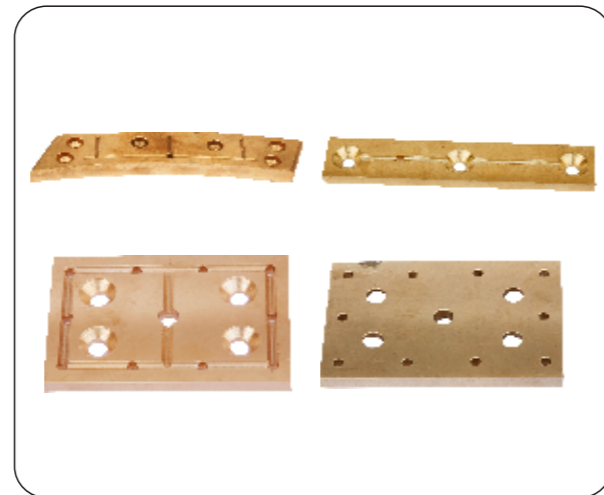
We are strict on quality control and seek Zero Inferior quality



Solid copper bushing



Solid copper bushing



graphite insert bushing



JDB-1

JDB self lubricating sleeve is made from punching holes in proportion on surface of high strength brass and then injecting solid lubricant to the holes. Under co-operation of solid lubricant and sleeve spindle through fabrication, the spindle is not easily worn out and the lubricating effect can last for long time. This Sleeve are widely used for heavy load and low speed workplace

model	Image	metallography	Basic material
JDB-1			CuZn25A16FeMn4 hardness: 210-250HB
JDB-2			CuSn6Zn6Pb3 hardness 80-120HB
JDB-3			Steel+CuSn6Zn6Pb3 hardness 60-90HB
JDB-4			HT250 hardness 180-230HB
JDB-5			GCr15 hardness HRC55-60

Steel-base coppery alloy self -lubricating sleeve



Combined with the wear resistance of copper alloy and high mechanical strength properties of steel.

Different cast copper alloy material is available according to work condition, including lower friction lead bronze.

The different coefficient of friction of the inner and outer material can protect the axial and rotating movement of the bearing in the housing under extremely high load with low speed.

The solid lubricant plug can be embedded to achieve the self-lubricating performance. Compare with pure bronze bearing, the cost is reduced obviously.

The steel backing allowed to heat treatment to get high hardness, meanwhile the inner layer can be re-machined if necessary.

The bronze layer can be casted on one or more layers to complex structure.

This material has same characteristic as pure bronze bearing, suitable for wide temperature range, different oil condition.

The 650SF has better mechanical load performance compared with bronze material, especially the impact strength.

steel based copper self bushing



steel based copper self bushing

Material and performance

Grade	650SF 600SF	650S1 600S1	650S3 600S3	650S5 600S5
Bronze layer material	Cuzn25Al5Mn4Fe3	CuSn5Pb5Zn5	CuSn12	CuZn25Al15Mn4Fe3
Bronze hardness HB	>210	>70	>95	>250
Interlay bonding strength	>150	>100	>100	>150
Max.Static load mpa	250	150	150	250
Max.Dynamic load mpa	100	60	70	120
Max.Speed(dry) m/min	15	10	10	15
Max.PV value n/mm ² *m/min	200	60	80	200
Coef.Of themal expansion 10 ⁻⁵ /k	1.2×10 ⁻⁵ ?	1.2×10 ⁻⁵ ?	1.2×10 ⁻⁵ ?	1.2×10 ⁻⁵ ?
Temperature range	-40~+300	-40~+400	-40~+400	-40~+150
Compression defomation 300n/mm2	<0.01mm	<0.05mm	<0.05mm	<0.05mm

650SF :
Steel shell bronze casted with solid lubricant

600SF :
Steel shell bronze casted without solid lubricant

This type of products can be widely used under high temperature and high load with low speed conditions,such as successive casting machinery, mineral machinery,injection molding machinery, dock machinery and so on.



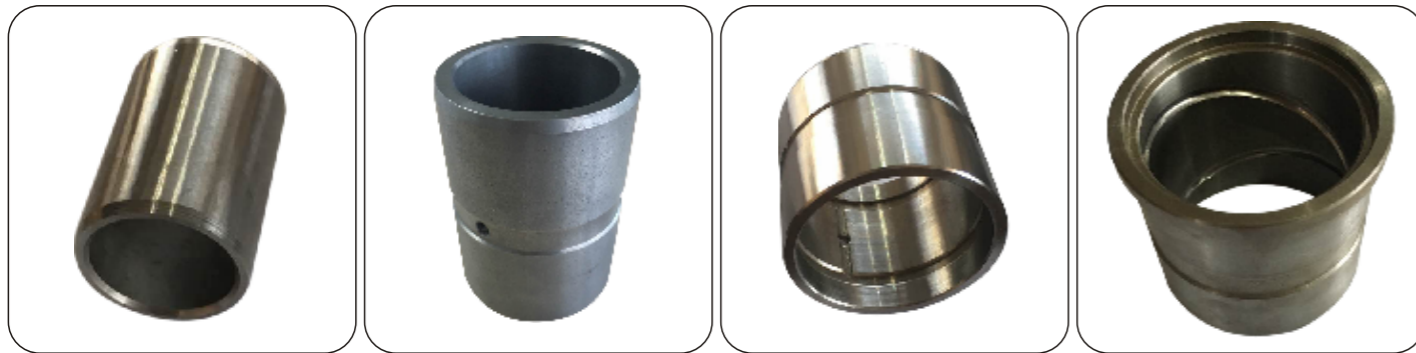
MC Self-lubricate nylon sleeve

Charateristic:

- 1.good rebound resilience and ductibility enable bushing to endure repeat impact and no DE-shape
2. Self-lubricate facilitates maintenance and assembly. Life time can be duplicate or triplicated.
- 3.Cost is lower 40% ~50% comparing with copper bushing and 20%~30% comparing with zinc-base or aluminium-base bushing.
- 4.It is widely used in mineral machinery,injection machinery,transmission machinery and engineer machinery.



self-lubricating iron bushing



High strength zin-base alloy sleeve



Charteristics:

- 1.Comparing with copper bushing, iron bushing require less oil-supply and oil film can be kept for long time. With charastic of wear resistant and anti- ,
- 2.Sliding face is restricted by movement direction and product size is not restricted.
- 3.Price is lower 40% than copper material and 20% than zinc material

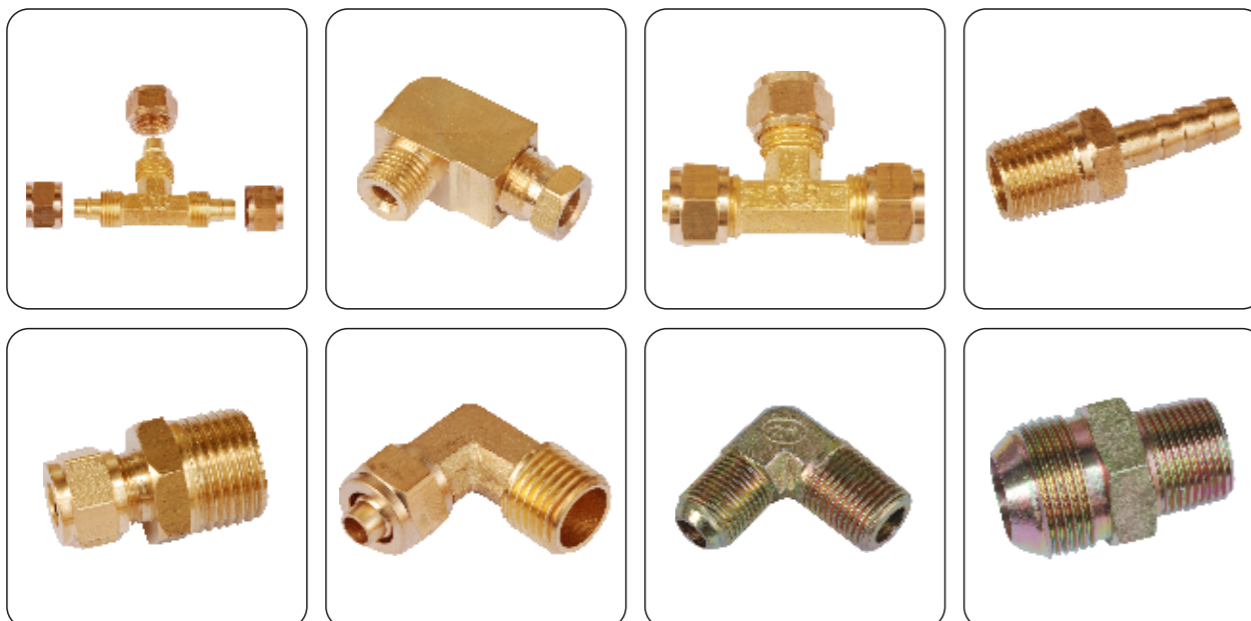
lubricate condition	non-lubricate/periodical lubricate
temperature range °C	-40 +100 +150
Max.allowed pressure p N/mm ² (kgf/cm ²)	10 (102)
Max.allowed velocity V N/S (m/min)	1.00 3.35 (60、 201)
Max.allowed PV value N/mm ² .m/s (kgf/cm ² .m/min)	1.25 3.25 (765、 1.9901)

comparison of mechanical performance of high strength zinc-base alloy and other metal alloy

performance index 型号 Type	High strength brass	Tin bronze	Al Ni bronze	Lead bronze	zin base
P(N/mm ²) Maximum dynamic load	100	60	120	40	50
V(m/s) Maximum sliding speed	Dry 0.4M/S Oil 5M/S	Dry 2M/S Oil 10M/S	Dry 1M/S Oil 6M/S	Dry 3M/S Oil 12M/S	Dry 0.2M/S Oil 5M/S
(N/mm ² .m/s) Max PV Value Limit	3.8	0.5	4.2	0.3	0.5
ρ(g/cm ³)Density	8	8.75	7.6	9.2	5
σ bMPa(kgf/mm ²) Tensile strength	> 750	> 250	> 630	> 220	> 420
σ 0.2MPa(kgf/mm ²) Yield strength	> 380	> 100	> 250	> 110	> 270
(100%)Elongation rate	> 7	> 13	> 16	> 6	> 8
(HB)Hardness	> 170	> 64	> 160	> 38	> 110
Maximum use temperature	> 300	> 350	> 300	> 450	> 80
μ coefficient of friction	Dry < 0.16 Oil < 0.03	Dry < 0.15 Oil < 0.03	Dry < 0.16 Oil < 0.03	Dry < 0.10 Oil < 0.02	Dry < 0.12 Oil < 0.03
10-a coefficient of linear expansion	21.6	17.1	16.2	18.1	25
C.S.C Thermal conductivity	0.18	0.22	0.14	0.12	0.24

Advantage of high strength zinc-based alloy

Copper,iron adapters



self lubricate composite bushing

SF-1 SELF-LUBRICATING BEARING



SF-1 is wall wrapped bearing made of triple layer composites material which consists of a steel backing,a sintered porous bronze particles interlayer and calendared with PTFE and Pb mixture as surface layer.It is of low friction compact,anti shaft seizing and low noise.
SF-1 is widely applied in various sliding position of different kind of machines,such as textile machines,lift,tobacco machines,fitness equipment,hydraulic vechicles,antomobiles,agriculture and forest machinese and so on.

SF-1T GEAR OIL PUMP BEARING



SF-1T is composed of a specially designed surface layer of PTEE formulations and is specifically applied for the high PV bushes gear oil pumps.It is to be used in hydrodynamic or boundary lubricating condition of medium or high pressure gear oil pumps such as P=16-25 Mpa,V=3.5-5m/s,it shows the benefit of low friction coefficient ,wear resistant and anti-impact properties.At hydrodynamic lubrication.The PV limit reaches to 120N/mm².m/s.It is a best choice for the bushes of various kinds of gear pumps as well as plunger pumps,vane pumps and so on.

SF-1P RECIPROCATING MOTION BEARING



SF-1P is particularly suitable for bushes in reciprocating motion,and the properties are similar to Dd2 type product in foreign country.It is wear resistant,and so can keep the lubricating oil clear after long period of working.Meanwhile it can protech the mating surface from wearing.
It is widely use as oil damping vibrating absorber of automobiles,motorcycles and various hydraulic cylinders,hydraulic motors and pneumatic elements.

SF-2 BORDER LUBRICATION BEARING



SF-2 boundary lubricated bearings,Steel substrate,middle sintering spherical bronze powder,surface rolled modified POM(POM),and contain storage pits.It is suitable for normal temperature conditions,the low-contained place,to replace the rtaditional copper sleeve both to reduce costs and extend service life.
The product has been widely used in automotive chassis,forging machine,metallurgical and mining machinery, engineering machinery,utilities,steel rolling industries.