



Product Name	Copper Alloy (Bronze)		Copper Alloy (Brass)		Cast Iron		Multi-Layer (PTFE Filler)	Multi-Layer (Fluororesin Filler)	Resin (Polyacetal)	Resin (PTFE)
Usage, Picture										
Typical Usage	Best suited for high speed and low load applications when lubricated.		Best suited for high load and low speed applications.		Best suited for medium load and low speed applications.		Thin wall and light weight. Best suited for high load and low speed applications.	Thin wall and light weight. Best suited for high speed applications.	Light weight. Best suited for high speed and food applications.	Light weight. Best suited for high speed and food applications.
Lubrication Type	Grease	Oil	Grease	Oil	Grease	Oil	Lube Free	Lube Free	Lube Free	Lube Free
Rotation, Oscillating & Reciprocation Motion	•		•		•		•	•	•	•
Recommended Mating Shaft Tolerance	f8, g6		d8, e7, f8, g6		e7, h7, g6		f8	f8, h7, g6	h7, g6	g6
Operating Temp.	-40 to 150 °C		-40 to 150 °C -40 to 200 °C		-40 to 150 °C		-195 to 280 °C	-50 to 140 °C	-40 to 80 °C	-200 to 200 °C
Load vs. Velocity	Allowable Load [N/mm²]		10.0		29.0, 98.0*		49.0, 137.0*	6.0	17.5	7.0
	Allowable Speed [m/s]		1.66 5.00		0.15 0.25		0.65	3.33	0.85	1.65
	Allowable PV Value [N/mm² * m/s]		1.65 3.25		0.50 0.80		3.60	0.98	2.45	1.00
Environmental Conditions	Air		G		G		G	G	G	G
	Oil		G		G		G	P	G	G
	Water		P		P		A	P	A	G
	Seawater		P		P		P	P	A	G
	Chemicals		P		P		A	P	A	G
Corrosive Atmosphere		P		A		P		A	A	G
Cost \$	\$		\$		\$		\$	\$	\$	\$

*Allowable static surface pressure (no sliding motion or extremely low speed)

Unit Conversions: 1. °F = (°C * 1.8) + 32 (Example: °F = (100°C * 1.8) + 32 = 212°F) 2. kgf = N x 0.10192

● Good ● Acceptable ● Poor

Oil-Free Bushings / Washers



#MPBZ
Oil-Free Bushings – Copper Alloy, Standard, I.D. F7, O.D. m6



#MPFZ
Oil-Free Bushings – Copper Alloy, Flanged



#MPBU
Oil-Free Bushings – Copper Alloy, Thin Wall, I.D. F7, O.D. m6



#MPBR
Oil-Free Bushings – Copper Alloy, I.D. E7



#MPBP
Oil-Free Bushings – Copper Alloy, Standard, I.D. G6, O.D. h6



#MPFU
Oil-Free Bushings – Copper Alloy, Flanged, Thin Wall



#MPGZ
Oil-Free Bushings – Copper Alloy, Thrust



#MPTP
Oil-Free Bushings – Copper Alloy, Standard, Flanged I.D. F7



#MPIZ
Flanged Oil-Free Bushings with Pilot



#MPCZ
Flanged Oil-Free Bushings – Center Flange



#MPWZ
Oil-Free Copper Alloy Washers



#SHBR
Oil-Free Bushings – Bronze, Straight, O.D. m6



#SHFZ
Oil-Free Bushings – Bronze, Flanged



#SHTZ
Oil-Free Bronze Bushings with Mounting Flange



#MFKK
Center Flanged Oil-Free Bushings – Double Bushing



#MFKL
Oil-Free Bushings – Flanged, Standard



#MFIK
Pilot, Flanged Oil-Free Bushings – Single Bushing



#MHUT
Oil-Free Bushing Pillow Block – Tall Block, Single Bushing



#MHUA
Oil-Free Bushing Wide Pillow Block – Single Bushing