

# DDK02 Metal Polymer Bearings



This lead-free, ecofriendly bearing comprises a porous copper-tin alloy sintered on steel backing and a lining made of PTFE (polytetrafluoroethylene) mixed with a special filler. This bearing demonstrates superior durability along boundary surfaces and under fluid lubrication, and the excellent tribological properties of this lining provide optimal utilization of the strength, dimensional stability, and other characteristics of the metals.

## MAJOR APPLICATIONS

Gear pumps, shock absorbers, other automotive parts, and general-purpose industrial machinery

## FEATURES

- Provides performance under high loads that is comparable to metal bearings
- Offers a low coefficient of friction and excellent wear-resistance along boundary surfaces and under fluid lubrication
- Eliminates “stick and slip” thanks to a low coefficient of friction
- Offers superior resistance to chemical substances
- Offers cavitation-resistant performance
- Performs well through an extended range of operating temperatures

## MICROSTRUCTURE



- PTFE + special fillers
- Porous sintered bronze
- Steel backing



## CHARACTERISTICS

		Metric		Imperial	
Max Load, P	Static	MPa (N/mm <sup>2</sup> )	304	psi	44,100
	Dynamic	MPa (N/mm <sup>2</sup> )	140	psi	20,000
Temperature Range		°C	-200 ~ +280	°F	-328 ~ +536
Coefficient of Thermal Exp.	Parallel to Surface	10 <sup>-6</sup> /°C	11	10 <sup>-6</sup> /°F	6
	Thickness Direction	10 <sup>-6</sup> /°C	30	10 <sup>-6</sup> /°F	17
Dry Condition	Max Sliding Speed, V	m/s	—	fpm	—
	Max PV	MPa x m/s	—	psi x fpm	—
Coefficient of Friction			—		—
Wet condition	Max Sliding Speed, V	m/s	10	fpm	2,000
	Max PV	MPa x m/s	10	psi x fpm	290,000
Coefficient of Friction			0.01-0.08*		0.01-0.08*

\* Depending on the operating conditions

Note: This data is not guaranteed. Since conditions differ every application, it may be able to be used beyond the listed value.