

Oiles 2000S Sintered oil-impregnated bearings with dispersed solid lubricant



Feature

- Serviceable without the need for lubrication. Demonstrates higher performance when greased.
- Distributed solid lubricant allows motions in any direction.
- Features low coefficient of friction and quite superior wear resistance.
- Lower prices than bearings with copper alloy bases.

Service range

Lubrication condition	Dry (initial greasing recommended)
Service temperature range °C	-40~+120
Allowable max. pressure P N/mm ² {kgf/cm ² }	29 (49) {296 (500)}
Allowable max. velocity V m/s {m/min}	1.00 {60}
Allowable max. PV value N/mm ² · m/s {kgf/cm ² · m/min}	1.63 {1,000}

The values in parentheses are static bearing pressures, which are the bearing pressures in applications with no motion or very small motion (≤ 0.0017 m/s [0.1 m/min]).

Mechanical properties

Density	—	g/cm ³	5.7
Radial crushing strength	JIS Z 2507	N/mm ² {kgf/mm ² }	350 {36}
Hardness	JIS K 7202-2	HRM	90
Oil impregnation rate	—	vol%	16
Co-efficient of thermal expansion	—	$\times 10^{-5} \text{ }^{\circ}\text{C}^{-1}$	1.2

※The value shown above are for sintered layer.

Test data

Journal oscillation test

<Testing conditions>

Bearing dimension : $\phi 60 \times \phi 75 \times l 50$

Mating material : S45C quenched by high frequency induction hardening

Pressure : 24.5 N/mm² {250.0 kgf/cm²}

Velocity : 0.033 m/s {2.0 m/min}

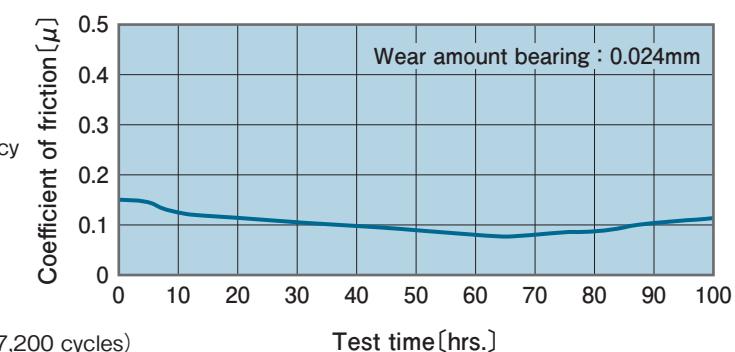
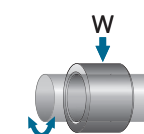
Oscillating cycle : 21.2 cpm

Oscillating angle : $\pm 45^{\circ}$

Test time : 100 hrs. (durable cycle frequency : 127,200 cycles)

Ambience : in the atmosphere, room temp.

Lubrication : initial greasing



Journal rotation test

<Testing conditions>

Bearing dimension : $\phi 40 \times \phi 50 \times l 30$

Mating material : S45C quenched by high frequency induction hardening

Test time : 100 hrs.

Ambience : in the atmosphere, room temp.

Pressure : — 9.8 N/mm² {100.0 kgf/cm²}

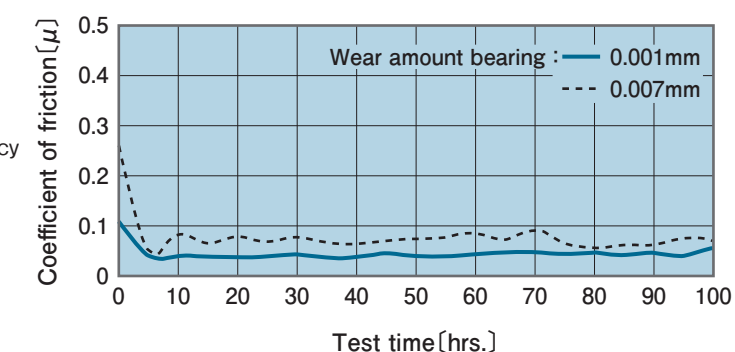
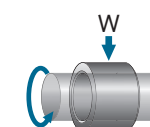
Velocity : — 0.167 m/s {10.0 m/min}

Lubrication : Initial greasing

----- 19.6 N/mm² {200.0 kgf/cm²}

0.083 m/s {5.0 m/min}

Dry



Receprocation test

<Testing conditions>

Mating material : SCM440 hard-chrome plating

Pressure : 1.18 N/mm² {12.0 kgf/cm²}

Velocity : 1 m/s {60 m/min}

Test time : 27.8 hrs.

Lubrication : Initial greasing

