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Timken Part Number JP6049 - JP6010-B, Tapered Roller Bearings - TSF (Tapered Single with Flange) Metric

Like the TS bearing design, the TSF design consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft. TSF bearings have flanged cups to facilitate axial location and accurately align seals in through-bored housings.



Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	JP6000
Cone Part Number	JP6049
Cup Part Number	JP6010-B
Design Units	METRIC
Bearing Weight	0.600 Kg 1.40 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	60.000 mm 2.3622 in
D - Cup Outer Diameter	100.000 mm 3.9370 in
D1 - Flange Outer Diameter	105.000 mm 4.1339 in
B - Cone Width	20.000 mm 0.7874 in
C - Cup Width	15.500 mm 0.6102 in
C1 - Cup Flange Width	3.000 mm 0.1181 in
T1 - Bearing Width	21.000 mm 0.8268 in
T - Bearing Width to Flange	8.500 mm 0.3346 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	2.000 mm 0.080 in
r - Cup Backface "To Clear" Radius[2]	2 mm 0.08 in
da - Cone Frontface Backing Diameter	66.00 mm 2.60 in
db - Cone Backface Backing Diameter	69.10 mm 2.72 in
Da - Cup Frontface Backing Diameter	98.04 mm 3.90 in
Ab - Cage-Cone Frontface Clearance	3.6 mm 0.14 in

Aa - Cage-Cone Backface Clearance	0.8 mm 0.03 in
a - Effective Center Location[3]	1.3 mm 0.05 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	21400 N 4810 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	82500 N 18500 lbf
C0 - Static Radial Rating	101000 N 22800 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	17300 N 3890 lbf

Factors

K - Factor[7]	1.24
e - ISO Factor[8]	0.47
Y - ISO Factor[9]	1.27
G1 - Heat Generation Factor (Roller-Raceway)[10]	39.5
G2 - Heat Generation Factor (Rib-Roller End)	22.5
Cg - Geometry Factor[11]	0.0922

[1] These maximum fillet radii will be cleared by the bearing corners.
[2] These maximum fillet radii will be cleared by the bearing corners.
[3] Negative value indicates effective center inside cone backface.
[4] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are

radial and thrust values.

[5] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

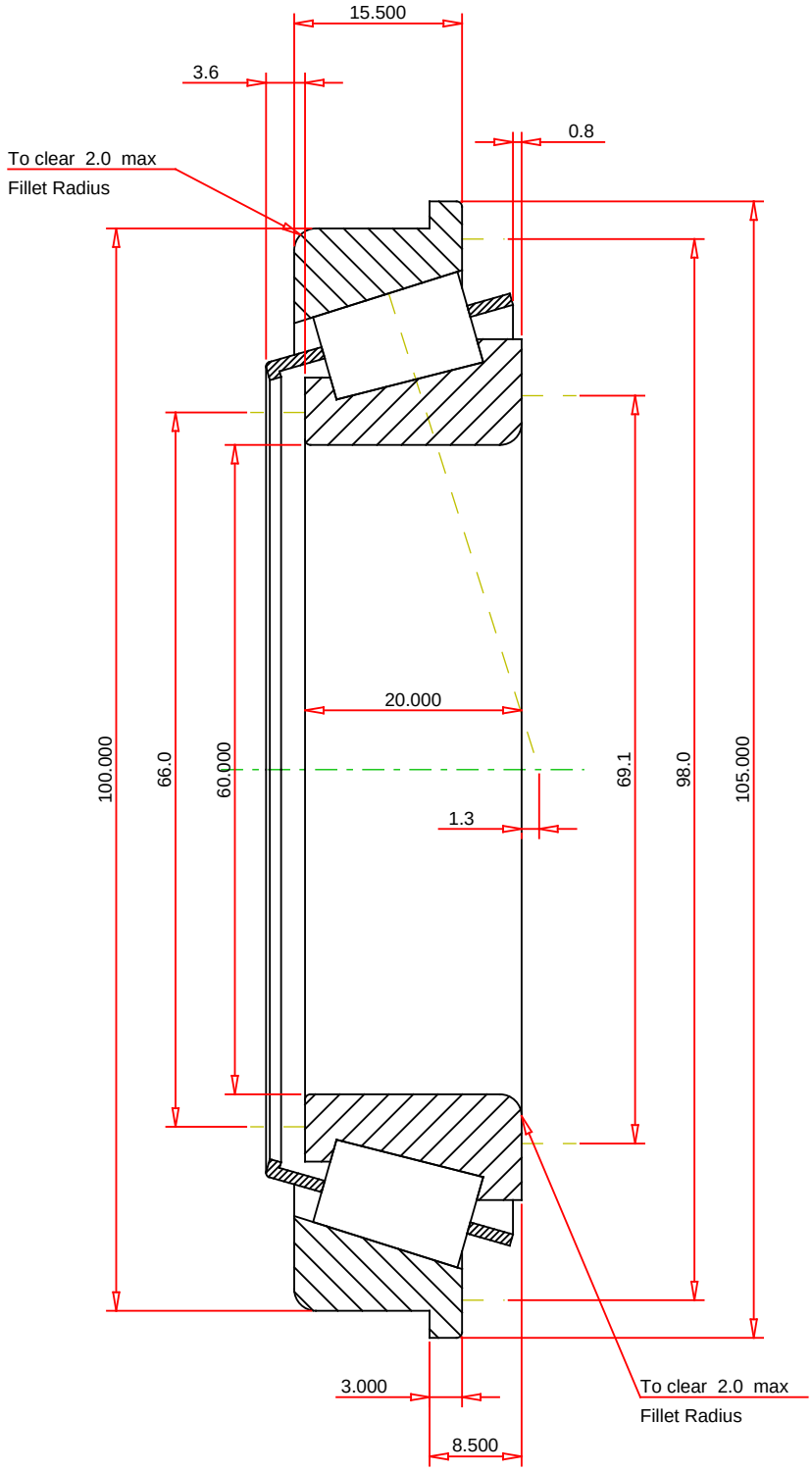
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[8] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[10] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[11] Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

ISO Factor - e	0.47	
ISO Factor - Y	1.27	
Bearing Weight	0.6	kg
Number of Rollers Per Row	19	
Effective Center Location	1.3	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JP6049 - JP6010-B
TSF BEARING ASSEMBLY

K Factor	1.24	
Dynamic Radial Rating - C90	21400	N
Dynamic Thrust Rating - Ca90	17300	N
Static Radial Rating - C0	101000	N
Dynamic Radial Rating - C1	82500	N

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

FOR DISCUSSION ONLY