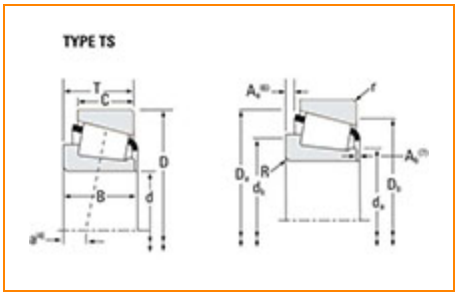
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number JP16049P - JP16010, Tapered Roller Bearings - TS (Tapered Single) Metric

This is the most basic and most widely used type of tapered roller bearing. It 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.



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

Specifications

Series	JP16000
Cone Part Number	JP16049P
Cup Part Number	JP16010
Design Units	METRIC
Bearing Weight	3.60 Kg 8.000 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	160 mm 6.2992 in

D - Cup Outer Diameter	220.000 mm 8.6614 in
B - Cone Width	43 mm 1.6929 in
C - Cup Width	23.000 mm 0.9055 in
T - Bearing Width	45 mm 1.7717 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.050 mm 0.12 in
r - Cup Backface "To Clear" Radius[2]	3.05 mm 0.12 in
da - Cone Frontface Backing Diameter	166.88 mm 6.57 in
db - Cone Backface Backing Diameter	171.96 mm 6.77 in
Da - Cup Frontface Backing Diameter	213.10 mm 8.39 in
Db - Cup Backface Backing Diameter	205.99 mm 8.11 in
Ab - Cage-Cone Frontface Clearance	4.8 mm 0.19 in
Aa - Cage-Cone Backface Clearance	14.5 mm 0.57 in
a - Effective Center Location[3]	-5.1 mm -0.2 in

Basic Load Ratings

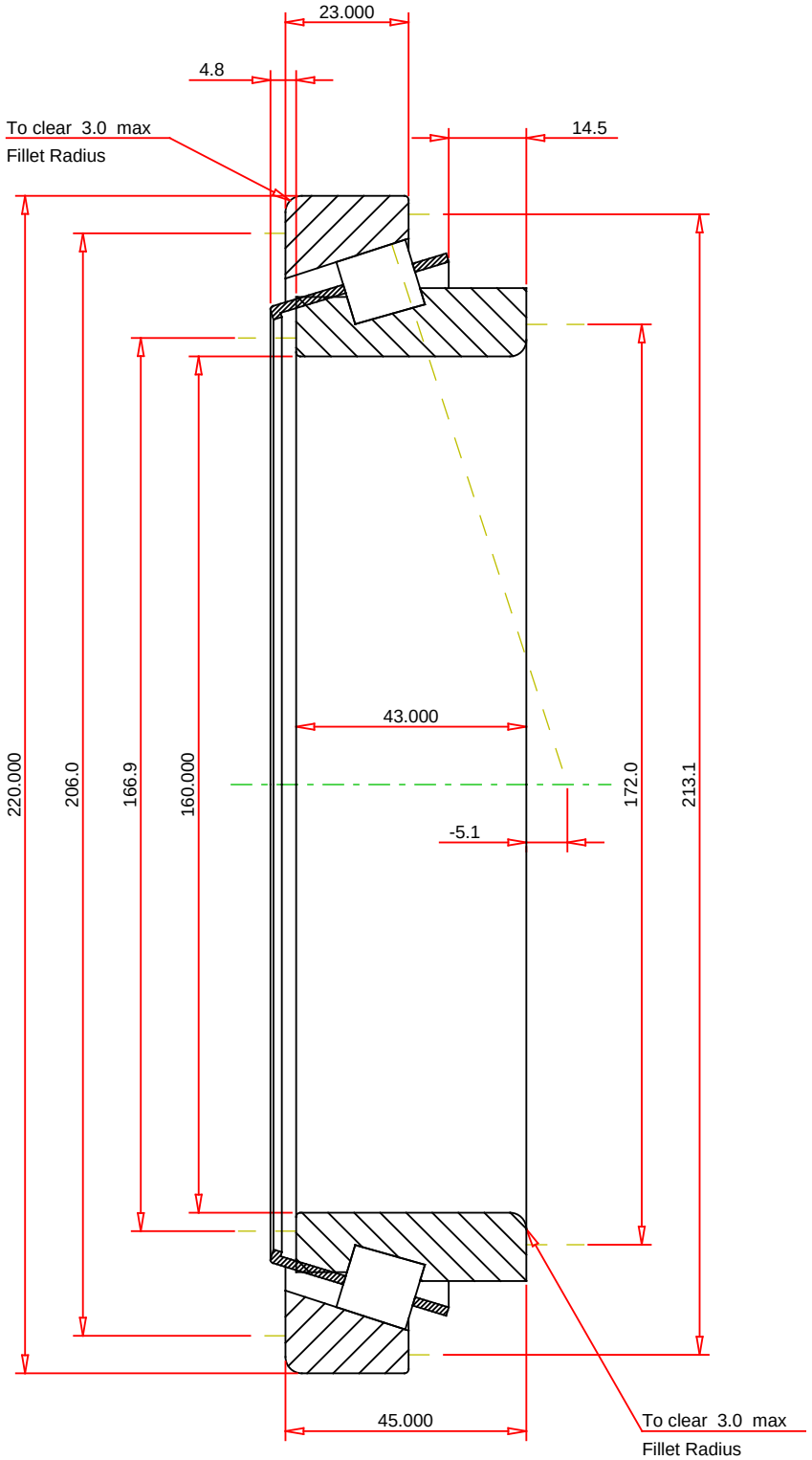
C90 - Dynamic Radial Rating (90 million revolutions)[4]	60900 N 13700 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	235000 N 52800 lbf
C0 - Static Radial Rating	393000 N 88300 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	42400 N 9530 lbf

Factors

K - Factor[7]	1.2
e - ISO Factor[8]	0.49
Y - ISO Factor[9]	1.23
G1 - Heat Generation Factor (Roller-Raceway)	318.2
G2 - Heat Generation Factor (Rib-Roller End)	58.9
Cg - Geometry Factor[10]	0.125

[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] Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

ISO Factor - e	0.49	
ISO Factor - Y	1.23	
Bearing Weight	3.6	kg
Number of Rollers Per Row	28	
Effective Center Location	-5.1	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JP16049P - JP16010
TS BEARING ASSEMBLY

K Factor	1.2	
Dynamic Radial Rating - C90	60900	N
Dynamic Thrust Rating - Ca90	42400	N
Static Radial Rating - C0	393000	N
Dynamic Radial Rating - C1	235000	N

FOR DISCUSSION ONLY