The Timken Company
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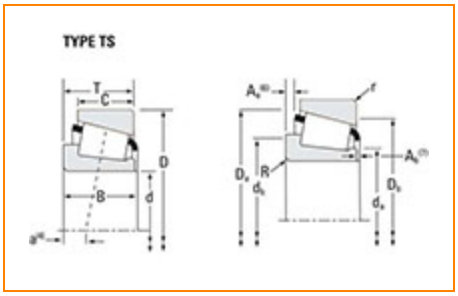
Part Number 30204, Tapered Roller Bearings - TS (Tapered Single) Metric

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.



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Specifications

Series	30204M
Cone Part Number	X30204M
Cup Part Number	Y30204M
Design Unit	Metric
Bearing Weight	0.1 Kg 0.3 lb
Cage Material	Stamped Steel
Full Timken Part Number	30204

Dimensions

	20 mm

d - Bore	20 mm 0.7874 in
D - Cup Outer Diameter	47.0 mm 1.8504 in
B - Cone Width	14.000 mm 0.5512 in
C - Cup Width	12.000 mm 0.4724 in
T - Bearing Width	15.250 mm 0.6004 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	1.020 mm 0.04 in
r - Cup Backface "To Clear" Radius[2]	1.02 mm 0.04 in
da - Cone Frontface Backing Diameter	26 mm 1.02 in
db - Cone Backface Backing Diameter	27.5 mm 1.08 in
Da - Cup Frontface Backing Diameter	43.94 mm 1.73 in
Db - Cup Backface Backing Diameter	40.89 mm 1.61 in
Ab - Cage-Cone Frontface Clearance	2.8 mm 0.11 in
Aa - Cage-Cone Backface Clearance	-0.5 mm -0.02 in
a - Effective Center Location[3]	-4.3 mm -0.17 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	8620 N 1940 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	33200 N 7470 lbf
C0 - Static Radial Rating	33000 N 7420 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	5090 N 1140 lbf

Factors

K - Factor[7]	1.69
e - ISO Factor[8]	0.35
Y - ISO Factor[9]	1.74
G1 - Heat Generation Factor (Roller-Raceway)	7.1
G2 - Heat Generation Factor (Rib-Roller End)	7.3
Cg - Geometry Factor[10]	0.0474

[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

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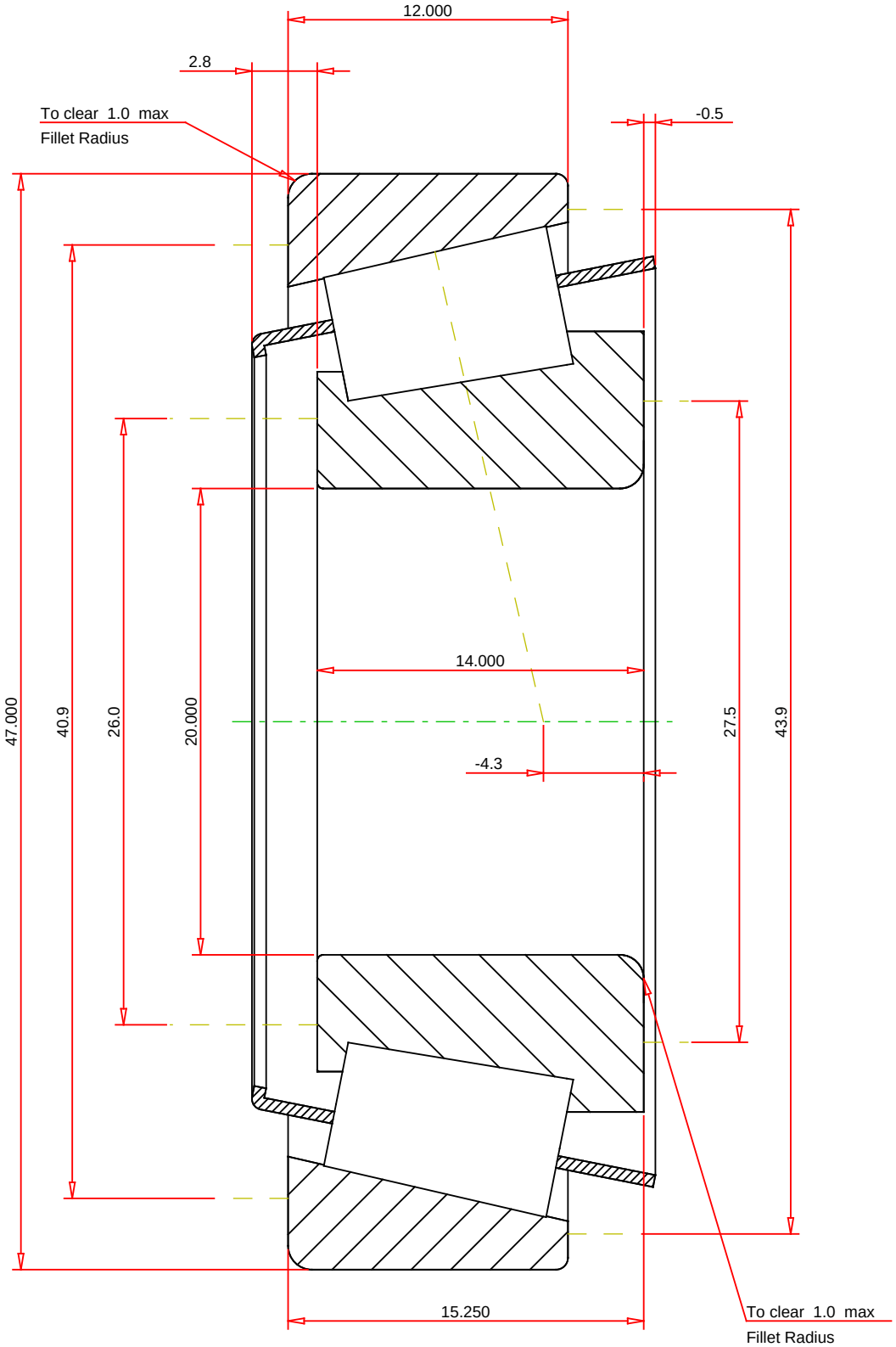
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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



METRIC UNITS

ISO Factor - e	0.35	
ISO Factor - Y	1.74	
Bearing Weight	0.1	kg
Number of Rollers Per Row	16	
Effective Center Location	-4.3	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

X30204M - Y30204M

Tapered Roller Bearings - TS (Tapered Single)
Metric

K Factor	1.69	
Dynamic Radial Rating - C90	8620	N
Dynamic Thrust Rating - Ca90	5090	N
Static Radial Rating - C0	33000	N
Dynamic Radial Rating - C1	33200	N

FOR DISCUSSION ONLY