

PDF technical sheet

24176BK30C3

Double row spherical roller bearings

Spherical roller bearing, with central rib on inner ring, 2-part machined cage centred on inner ring, groove and lubrication holes on outer ring, tapered bore 1:30

Product definition	
d	14.9606 "
D	24.4094 "
B	9.5669 "
d2	17.7165 "
D1	20.8189 "
rs min	0.1969 "
Number of lubrication holes	8
b	1.2992 "
k	0.7874 "
Associated sleeve reference	AH24176
e	0.39
Y1	1.73
Y2	2.58
Y0	1.69
Radial clearance class	C3
Brand	NTN

Product performance	
Dynamic load, C	4,800 kN
Static load, C0	9,650 kN
Fatigue limit load, Cu	767 kN
Nref	330 RPM
Nlim	800 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.44 Hz
Characteristic rolling element frequency, BSF	8.12 Hz
Characteristic outer ring frequency, BPF0	9.71 Hz
Characteristic inner ring frequency, BPFI	12.29 Hz

Abutment dimensions	
da min	15.7480 "
Da max	23.6220 "
ra max	0.1575 "

Calculation factors

Equivalent dynamic radial load

$$P = X.F_r + Y.F_a$$

$F_a / F_r \leq e$		$F_a / F_r > e$	
X	Y	X	Y
1	Y1	0.67	Y2

Equivalent static radial load

$$P_0 = X_0.F_r + Y_0.F_a$$

X_0	Y_0
1	Y0

The values for e, Y1, Y2 and Y0 are shown in the above table .