

PDF technical sheet

24184BL1

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

Product definition	
d	16.5354 "
D	27.5591 "
B	11.0236 "
d2	19.6457 "
D1	23.3071 "
rs min	0.2362 "
Number of lubrication holes	8
b	1.2992 "
k	0.7874 "
e	0.4
Y1	1.69
Y2	2.51
Y0	1.65
Radial clearance class	CN
Brand	NTN

Product performance	
Dynamic load, C	6,150 kN
Static load, C0	12,200 kN
Fatigue limit load, Cu	1,024 kN
Nref	280 RPM
Nlim	750 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	7.66 Hz
Characteristic outer ring frequency, BPF0	9.20 Hz
Characteristic inner ring frequency, BPFI	11.80 Hz

Abutment dimensions	
da min	17.5591 "
Da max	26.5354 "
ra max	0.1969 "

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 .