PDF technical sheet
23180BL1K

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 1:12

Product definition	
d	15.7480 "
D	25.5906 "
B	7.8740 "
d2	18.8583 "
D1	22.3386 "
rs min	0.2362 "
Number of lubrication holes	8
b	1.0630 "
k	0.6299 "
Associated sleeve reference	H3180
e	0.31
Y1	2.21
Y2	3.28
Y0	2.16
Radial clearance class	CN
Brand	NTN

Product performance	
Dynamic load, C	4,200 kN
Static load, C0	8,050 kN
Fatigue limit load, Cu	854 kN
Nref	490 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	8.39 Hz
Characteristic outer ring frequency, BPF0	10.18 Hz
Characteristic inner ring frequency, BPFI	12.83 Hz

Abutment dimensions	
da min	16.7717 "
db min	16.5748 "
Ce min	0.5906 "
Da max	24.5669 "
ra max	0.1969 "

Calculation factors

Equivalent dynamic radial load

$P = X.Fr + Y.Fa$

Fa / Fr ≤ e		Fa / Fr > e	
X	Y	X	Y
1	Y1	0.67	Y2

Equivalent static radial load

$P_0 = X_0.Fr + Y_0.Fa$

X_0	Y_0
1	Y0

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