

PDF technical sheet

24144EMK30W33C3

Double row spherical roller bearings

Spherical roller bearing, with central rib on inner ring, one-piece machined cage centred on inner ring, groove and lubrication holes on outer ring, tapered bore 01:30

Product definition	
d	8.6614 "
D	14.5669 "
B	5.9055 "
D1	12.6102 "
rs min	0.1575 "
Number of lubrication holes	3
b	0.6260 "
k	0.2756 "
e	0.39
Y1	1.74
Y2	2.59
Y0	1.7
Radial clearance class	C3
Mass	220.46 oz
Brand	SNR

Product performance	
Dynamic load, C	2,600 kN
Static load, C0	3,540 kN
Fatigue limit load, Cu	178 kN
Nref	850 RPM
Nlim	1,400 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	392 °C
Characteristic cage frequency, FTF	0.43 Hz
Characteristic rolling element frequency, BSF	6.74 Hz
Characteristic outer ring frequency, BPF0	8.16 Hz
Characteristic inner ring frequency, BPFI	10.84 Hz

Abutment dimensions	
da min	9.3307 "
Da max	13.8976 "
ra max	0.1181 "

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 .