

PDF technical sheet

24040EMK30W33

Double row spherical roller bearings

Spherical roller bearing, one-piece machined cage, groove and lubrication holes on outer ring, tapered bore 1:30

Product definition	
d	7.8740 "
D	12.2047 "
B	4.2913 "
D1	11.1535 "
rs min	0.0827 "
Number of lubrication holes	3
b	0.5000 "
k	0.2362 "
e	0.33
Y1	2.06
Y2	3.07
Y0	2.01
Radial clearance class	CN
Mass	110.76 oz
Brand	SNR

Product performance	
Dynamic load, C	1,520 kN
Static load, C0	2,120 kN
Fatigue limit load, Cu	135 kN
Nref	1,400 RPM
Nlim	2,000 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	392 °C
Characteristic cage frequency, FTF	0.44 Hz
Characteristic rolling element frequency, BSF	8.12 Hz
Characteristic outer ring frequency, BPF0	10.14 Hz
Characteristic inner ring frequency, BPFI	12.86 Hz

Abutment dimensions	
da min	8.2756 "
Da max	11.8031 "
ra max	0.0787 "

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 .