

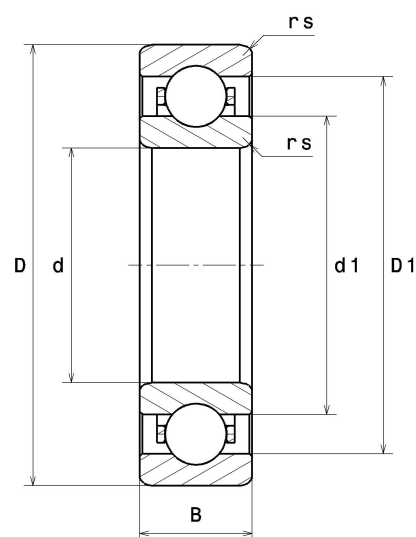
PDF technical sheet 6416M



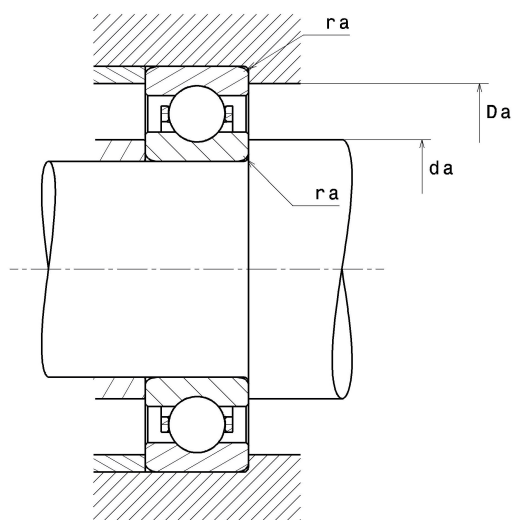
Single row deep groove ball bearings

Deep groove ball bearing, radial contact, machined cage, open

Product definition	
d	3.1496 "
D	7.8740 "
B	1.8898 "
d1	4.6417 "
D1	6.3819 "
rs min	0.1181 "
Radial clearance class	CN
Mass	28.47 oz
Brand	SNR



Product performance	
Dynamic load, C	161 kN
Static load, C0	124 kN
Fatigue limit load, Cu	4.75 kN
f0	12.2
Nref	5,400 RPM
Nlim	7,600 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.36 Hz
Characteristic rolling element frequency, BSF	3.40 Hz
Characteristic outer ring frequency, BPF0	2.55 Hz
Characteristic inner ring frequency, BPFI	4.45 Hz



Abutment dimensions

da min	3.6614 "
Da max	7.3622 "
ra max	0.0984 "

Calculation factors

Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

$\frac{f_0 F_a}{C_0}$	e	$F_a / Fr \leq e$		$F_a / Fr > e$	
		X	Y	X	Y
0.172	0.19	1	0	0.56	2.3
0.345	0.22				1.99
0.689	0.26				1.71
1.03	0.28				1.55
1.38	0.3				1.45
2.07	0.34				1.31
3.45	0.38				1.15
5.17	0.42				1.04
6.89	0.44				1

Equivalent static radial load

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

X_0	Y_0
0.6	0.5

For single or DT bearing arrangement :

If $P_0 < Fr$, then use $P_0 = Fr$