

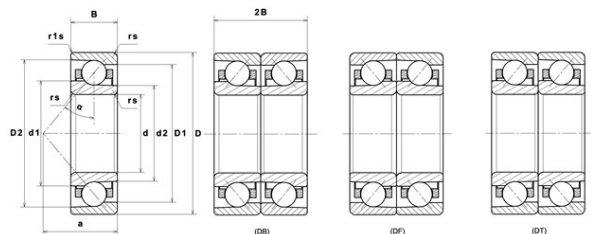
## PDF technical sheet 7900UADG/GLP42U3G



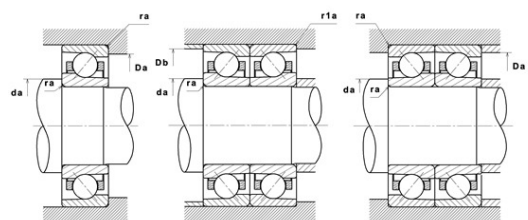
### High precision angular contact ball bearings

High precision angular contact ball bearing, moulded polyamide cage centred on balls

Product definition	
d	0.3937 "
D	0.8661 "
B	0.2362 "
d1	0.5630 "
d2	0.5315 "
D1	0.6969 "
D2	0.7638 "
a	0.2677 "
Contact angle, $\alpha$	25 °
rs min	0.0118 "
r1s min	0.0059 "
f0	14.5
Precision class	P42
Mass	0.04 oz
Brand	NTN



Product performance	
Dynamic load, C	3.05 kN
Static load, C0	1.58 kN
Nlim (oil)	102,500 RPM
Nlim (grease)	63,400 RPM
Preload level	GL
Min operating temperature, Tmin	-4 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	4.88 Hz
Characteristic outer ring frequency, BPF0	4.92 Hz
Characteristic inner ring frequency, BPF1	7.08 Hz



Abutment dimensions	
da min	0.4921 "
Da max	0.7677 "
Db max	0.8189 "
r1a max	0.0059 "
ra max	0.0118 "
D6	0.5748 "

## Calculation factors

### Equivalent dynamic radial load

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

Series	e	Single or DT bearing arrangement				DB or DF arrangement					
		Fa / Fr ≤ e		Fa / Fr > e		Fa / Fr ≤ e		Fa / Fr > e			
		X	Y	X	Y	X	Y	X	Y		
70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR)	15°	0.178	0.38	1	0	0.44	1.47	1	0.72	0.67	2.39
		0.357	0.4				1.4				2.28
		0.714	0.43				1.3				2.11
		1.07	0.46				1.23				2
		1.43	0.47				1.19				1.93
		2.14	0.5				1.12				1.82
		3.57	0.55				1.02				1.66
		5.35	0.56				1				1.63
	7.14	0.56	1	1.63							
	25°	0.68	0.41	0.87	0.92	1.41					
	30°	0.8	0.39	0.76	0.78	1.24					

### Equivalent static radial load

$$Po = Xo \cdot Fr + Yo \cdot Fa$$

Series	e	Single or DT bearing arrangement		DB or DF arrangement	
		X <sub>0</sub>	Y <sub>0</sub>	X <sub>0</sub>	Y <sub>0</sub>
70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR)	15°	0.5	0.46	1	0.92
	25°		0.38		0.76
	30°		0.33		0.66

For single or DT bearing arrangement :

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