

C 3180 M

CARB toroidal roller bearings are unique: as well as accommodating misalignment without increased stress levels, they also provide frictionless axial movement within the bearing in the non-locating position in self-aligning bearing arrangements. Being NR Explorer bearings, they can accommodate higher load levels and provide significantly extended service life.



- Accommodate misalignment and axial displacement within the bearing
- High radial load carrying capacity
- Provide frictionless axial movement
- Long bearing system life
- Reduce noise and vibration levels

Bore type

Cylindrical



Dimensions

d	400 mm	Bore diameter
D	650 mm	Outside diameter
B	200 mm	Width
d ₂	≈ 488 mm	Shoulder diameter of inner ring
D ₁	≈ 589 mm	Shoulder or recess diameter of outer ring
s ₁	max. 50.7 mm	Permissible axial displacement
r _{1,2}	min. 6 mm	Chamfer dimension



Abutment dimensions

d _a	min. 426 mm	Diameter of shaft abutment
d _a	max. 525 mm	Diameter of shaft abutment
D _a	min. 566 mm	Diameter of housing abutment
D _a	max. 624 mm	Abutment diameter housing

C_a	min. 4 mm	Minimum width of space required in housing
r_a	max. 5 mm	Radius of fillet
A negative value for C_a is theoretical.		

Calculation data

AGA performance class	AGA Explorer	
Basic dynamic load rating	C	4 800 kN
Basic static load rating	C_0	8 300 kN
Fatigue load limit	P_u	585 kN
Reference speed		700 r/min
Limiting speed		950 r/min
Misalignment factor	k_1	0.106
Internal clearance factor	k_2	0.109

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P5, tapered bore 1:12, tapered bore 1:30
- Radial internal clearance: cylindrical bore, tapered bore

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit