



SKF BTW 120 CTN9/SP

Super-precision, basic design double direction angular contact thrust ball bearing

These double direction angular contact thrust ball bearings consist of two single row angular contact thrust ball bearings, arranged back-to-back. They accommodate high axial loads in both directions and provide a high degree of system rigidity.

Technical specifications

Dimensions	
Bore diameter	120 mm
Outside diameter	180 mm
Height	72 mm
Shoulder diameter shaft washer (high shoulder)	155 mm
Shoulder diameter housing washer (low shoulder)	169.8 mm
Height of both housing washers	36 mm
Shaft washer chamfer radius	2 mm
Housing washer small chamfer radius	1 mm
Contact angle	60 °

Abutment dimensions	
Abutment diameter shaft	142 mm
Abutment diameter shaft	169.8 mm
Abutment diameter housing	171 mm
Fillet radius	2 mm
Fillet radius	1 mm

Calculation data	
Basic dynamic load rating	85.2 kN
Basic static load rating	280 kN
Fatigue load limit	10.8 kN
Attainable speed for grease lubrication	4000 r/min
Attainable speed for oil-air lubrication	4800 r/min
Contact angle	60 °
Ball diameter	12.7 mm
Number of rolling element rows	2
Number of balls (per bearing)	29
Reference grease quantity	28.4 cm ³
Preload	800 N
Static axial stiffness	979 N/μm
Axial stiffness for preload A (sets of two brgs back-to-back or face-to-face)	979 N/μm

Performance	
Basic dynamic load rating	85.2 kN
Basic static load rating	280 kN
Attainable speed for grease lubrication	4000 r/min
Attainable speed for oil-air lubrication	4800 r/min

Properties	
Axial load capability	Double-direction
Number of rows	2
Locating feature, bearing outer ring	Without
Design	Basic (BTW series)
Housing washer type (double-row angular contact thrust ball bearings)	Two-piece
Cage	Non-metallic

Tolerance class	SP
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without
Indicative carbon footprint for new product	18.2 kg CO ₂ e

Logistics	
Product net weight	5.05 kg
eClass code	23-05-10-02
UNSPSC code	31171531

SKF drawings

