



## BTW 50 CTN9/SP

Angular contact thrust ball bearings,  
double direction, super-precision

Bearing data

[Tolerances,](#)  
P4C, SP, UP

Principles of bearing

selection and application

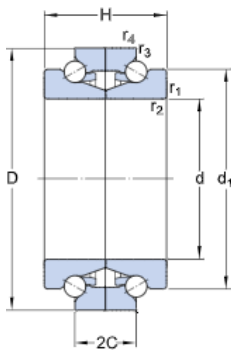
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

### Technical specification

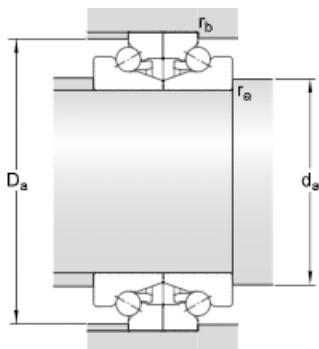


#### DIMENSIONS

d	50 mm
D	80 mm
H	38 mm
$d_1$	67.5 mm
2C	19 mm
$r_{1,2}$	min. 1 mm
$r_{3,4}$	min. 0.3 mm

#### ABUTMENT DIMENSIONS

$d_a$	min. 61 mm
$D_a$	min. 74.9 mm
$D_a$	max. 76 mm
$r_a$	max. 1 mm
$r_b$	max. 0.3 mm



## CALCULATION DATA

Basic dynamic load rating	C	22.5 kN
Basic static load rating	$C_0$	60 kN
Fatigue load limit	$P_u$	2.85 kN
Attainable speed for grease lubrication		9 000 r/min
Attainable speed for oil-air lubrication		11 000 r/min
Contact angle	$\alpha$	60 °
Preload		415 N
Static axial stiffness		559 N/ $\mu$ m
Reference grease quantity	$G_{ref}$	3.3 cm

## MASS

Mass bearing	0.58 kg
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## More information

<p>Product details</p> <ul style="list-style-type: none"> <li><a href="#">Designs and variants</a></li> <hr/> <li><a href="#">Markings on bearings</a></li> <hr/> <li><a href="#">Bearing data</a></li> <hr/> <li><a href="#">Preload, clearance, and stiffness</a></li> <hr/> <li><a href="#">Loads</a></li> <hr/> <li><a href="#">Attainable speeds</a></li> <hr/> <li><a href="#">Mounting</a></li> <hr/> <li><a href="#">Designation system</a></li> <hr/> </ul>	<p>Engineering information</p> <ul style="list-style-type: none"> <li><a href="#">Principles of bearing selection and application</a></li> <hr/> <li><a href="#">General bearing knowledge</a></li> <hr/> <li><a href="#">Bearing selection process</a></li> <hr/> <li><a href="#">Bearing failure and how to prevent it</a></li> <hr/> </ul>	<p>Tools</p> <ul style="list-style-type: none"> <li><a href="#">SimPro Quick</a></li> <hr/> <li><a href="#">SimPro Spindle</a></li> <hr/> <li><a href="#">Engineering Calculator</a></li> <hr/> <li><a href="#">LubeSelect for SKF greases</a></li> <hr/> <li><a href="#">Heater selection tool</a></li> <hr/> </ul>
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