



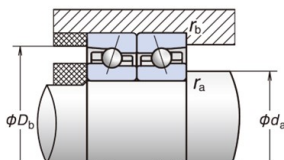
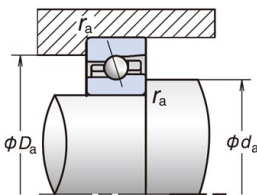
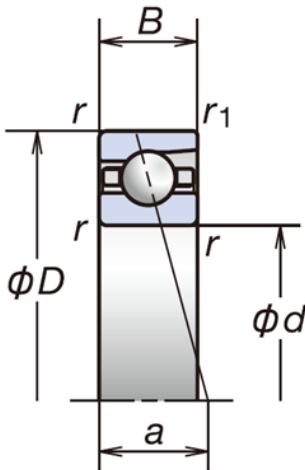
# PRODUCT DATASHEET

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## 7911C

### Standard Series High Precision Angular Contact Ball Bearings



#### Parts Number

|                 |
|-----------------|
| 7911CTRV1VSULP3 |
|-----------------|

#### Boundary Dimensions

|          |     |    |                   |
|----------|-----|----|-------------------|
| d        | 55  | mm | Bore diameter     |
| D        | 80  | mm | Outside diameter  |
| B        | 13  | mm | Width             |
| r(min.)  | 1   | mm | Chamfer Dimension |
| r1(min.) | 0.6 | mm | Chamfer Dimension |

#### Basic Load Ratings

|     |      |    |                           |
|-----|------|----|---------------------------|
| Cr  | 20.1 | kN | Basic Dynamic Load Rating |
| C0r | 17.7 | kN | Basic Static Load Rating  |

#### Speeds

|               |       |       |                |
|---------------|-------|-------|----------------|
| Grease        | 17100 | min-1 | Limiting Speed |
| Oil (Oil-air) | 26000 | min-1 | Limiting Speed |

#### Dimensions

|   |        |    |                       |
|---|--------|----|-----------------------|
|   | C: 15° |    | Contact Angle         |
| a | 15.5   | mm | Effective Load Center |

#### Abutment and Fillet Dimensions

|          |     |    |                                   |
|----------|-----|----|-----------------------------------|
| da(min.) | 61  | mm | Diameter of Shaft Abutment        |
| Da(max.) | 74  | mm | Diameter of Housing Abutment      |
| Db(max.) | 75  | mm | Diameter of Housing Abutment      |
| ra(max.) | 1   | mm | Radius of Shaft or Housing Fillet |
| rb(max.) | 0.5 | mm | Radius of Shaft or Housing Fillet |

#### Performance

|    |      |    |                        |
|----|------|----|------------------------|
| Pa | 11.0 | kN | Permissible Axial Load |
|----|------|----|------------------------|

#### Calculation factors

|    |      |  |        |
|----|------|--|--------|
| f0 | 16.3 |  | Factor |
|----|------|--|--------|

#### Preload,Rigidity(DB and DF arrangement)

|    | Preload | Axial Rigidity | Measured axial clearance |
|----|---------|----------------|--------------------------|
| EL | 60N     | 45N/μm         | -1μm                     |
| L  | 111N    | 58N/μm         | -5μm                     |
| M  | 296N    | 90N/μm         | -15μm                    |
| H  | 593N    | 126N/μm        | -26μm                    |



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### Additional information

|     |       |                               |
|-----|-------|-------------------------------|
| 1.1 | g/brg | Recommended Grease Quantities |
|-----|-------|-------------------------------|

### Mass

|       |    |               |
|-------|----|---------------|
| 0.182 | kg | Mass(approx.) |
|-------|----|---------------|

| Table A |     | EL  | L   | M   | H   |
|---------|-----|-----|-----|-----|-----|
|         | 15° | 6.5 | 6.0 | 5.0 | 4.5 |
|         | 25° | 2   |     |     |     |
|         | 30° | 1.4 |     |     |     |

| Table B         | DBD  | DBB |
|-----------------|------|-----|
| Preload factor  | 1.36 | 2   |
| Axial rigidity  | 1.48 | 2   |
| Radial rigidity | 1.54 | 2   |

#### Calculation of radial rigidity

Multiply axial rigidity by the appropriate factor in Table A.

#### Calculation of preload and axial rigidity for combined bearings

Multiply by the appropriate factor in Table B. For radial rigidity, multiply the value from Table A with the appropriate factor in Table B.