

Full Ceramic Bearings

LM76
Linear Bearings *The Engineering Edge*

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ceramicspeed

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Full Ceramic Bearings

Bearings dedicated to extreme high temperatures with notable hardness, low friction coefficient, lightweight nature, and exceptional resistance to corrosion and chemicals.

CeramicSpeed Full Ceramic Bearings are specifically engineered for use in extremely high-temperature environments, offering outstanding hardness, a low friction coefficient, lightweight characteristics, and exceptional resistance to corrosion and chemicals.

CeramicSpeed's Full Ceramic Bearings are meticulously crafted, featuring Zirconium dioxide (ZrO₂) bearing rings. Zirconium dioxide is an exceptionally tough ceramic material with heat expansion properties closely resembling those of steel, simplifying the design of shaft- and housing fits.

Notably, the bearings are fitted with superior Silicon Nitride balls that boast the highest achievable surface finish and roundness. This combination of Zirconium rings and silicon nitride balls results in a bearing solution with a low friction coefficient, reduced mass, and remarkable resistance to water, chemicals, and other aggressive media, presenting clear advantages over traditional steel bearings.

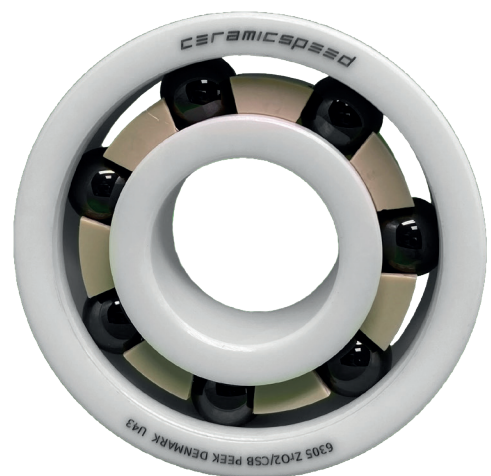
Whether applied in maritime, aerospace, or high-temperature environments, CeramicSpeed's Full Ceramic Bearings stand out as reliable, efficient, and long-lasting components. Their durability and performance make them a preferred choice for various industries, ensuring optimal functionality in demanding applications.

Advantages of CeramicSpeed Full Ceramic Bearings

- None corrosive: will survive submerged in water or other aggressive media.
- Heat resistant: Can run in temperatures beyond the possible for steel bearings.
- Low friction: Will survive running with no or very little lubrication.
- Non conductive and non magnetic: Will not influence electrical sensors or circuit.

Technical Highlights

- Inner & Outer Rings: Zirconium Oxide (ZrO₂)
- Balls: Si₃N₄ Ceramic Silicon Nitride
- Cage: PTFE (PEEK on request)
- Clearance: CN, (C3, C4 on request)
- Seals: None, (PEEK/PTFE shields on request)



| Dimension (mm) | | | Designation | Load Rating Static C0 [kN] | Load Rating Dynamic C [kN] | Limiting Speed RPM |
|----------------|----|----|--------------------------------|-------------------------------|-------------------------------|-----------------------|
| d | D | B | | | | |
| 10 | 19 | 5 | Xtreme 010 61800 ZrO2/CSB PTFE | 0,24 | 0,51 | 32.400 |
| 10 | 22 | 6 | Xtreme 010 61900 ZrO2/CSB PTFE | 0,39 | 0,81 | 28.800 |
| 10 | 26 | 8 | Xtreme 010 6000 ZrO2/CSB PTFE | 0,74 | 1,43 | 18.000 |
| 10 | 30 | 9 | Xtreme 010 6200 ZrO2/CSB PTFE | 0,89 | 1,62 | 14.400 |
| 10 | 35 | 11 | Xtreme 010 6300 ZrO2/CSB PTFE | 1,28 | 2,56 | 13.200 |
| 12 | 21 | 5 | Xtreme 012 61801 ZrO2/CSB PTFE | 0,30 | 0,57 | 30.000 |
| 12 | 24 | 6 | Xtreme 012 61901 ZrO2/CSB PTFE | 0,45 | 0,87 | 27.000 |
| 12 | 28 | 8 | Xtreme 012 6001 ZrO2/CSB PTFE | 0,89 | 1,62 | 16.800 |
| 12 | 32 | 10 | Xtreme 012 6201 ZrO2/CSB PTFE | 1,16 | 2,18 | 13.200 |
| 12 | 37 | 12 | Xtreme 012 6301 ZrO2/CSB PTFE | 1,56 | 3,03 | 12.000 |
| 15 | 24 | 5 | Xtreme 015 61802 ZrO2/CSB PTFE | 0,39 | 0,60 | 27.000 |
| 15 | 28 | 7 | Xtreme 015 61902 ZrO2/CSB PTFE | 0,69 | 1,29 | 22.800 |
| 15 | 32 | 9 | Xtreme 015 6002 ZrO2/CSB PTFE | 1,07 | 1,76 | 14.400 |
| 15 | 35 | 11 | Xtreme 015 6202 ZrO2/CSB PTFE | 1,41 | 2,42 | 12.000 |
| 15 | 42 | 16 | Xtreme 015 6302 ZrO2/CSB PTFE | 2,03 | 3,57 | 10.200 |
| 17 | 26 | 5 | Xtreme 017 61803 ZrO2/CSB PTFE | 0,45 | 0,66 | 24.900 |
| 17 | 30 | 7 | Xtreme 017 61903 ZrO2/CSB PTFE | 0,78 | 1,38 | 20.700 |
| 17 | 35 | 10 | Xtreme 017 6003 ZrO2/CSB PTFE | 1,22 | 1,91 | 13.200 |
| 17 | 40 | 12 | Xtreme 017 6203 ZrO2/CSB PTFE | 1,78 | 2,99 | 10.200 |
| 17 | 47 | 14 | Xtreme 017 6303 ZrO2/CSB PTFE | 2,44 | 4,29 | 9.000 |
| 20 | 32 | 7 | Xtreme 020 61804 ZrO2/CSB PTFE | 0,75 | 1,20 | 20.100 |
| 20 | 37 | 9 | Xtreme 020 61904 ZrO2/CSB PTFE | 1,11 | 1,92 | 17.100 |
| 20 | 42 | 12 | Xtreme 020 6004 ZrO2/CSB PTFE | 1,88 | 2,99 | 10.800 |
| 20 | 47 | 14 | Xtreme 020 6204 ZrO2/CSB PTFE | 2,46 | 4,05 | 9.000 |
| 20 | 52 | 15 | Xtreme 020 6304 ZrO2/CSB PTFE | 2,93 | 5,04 | 8.400 |
| 25 | 37 | 7 | Xtreme 025 61805 ZrO2/CSB PTFE | 0,87 | 1,29 | 16.800 |
| 25 | 42 | 9 | Xtreme 025 61905 ZrO2/CSB PTFE | 1,38 | 2,10 | 14.520 |
| 25 | 47 | 12 | Xtreme 025 6005 ZrO2/CSB PTFE | 2,46 | 3,57 | 9.000 |
| 25 | 52 | 15 | Xtreme 025 6205 ZrO2/CSB PTFE | 2,93 | 4,44 | 7.800 |
| 25 | 62 | 17 | Xtreme 025 6305 ZrO2/CSB PTFE | 4,35 | 7,02 | 6.600 |
| 30 | 42 | 7 | Xtreme 030 61806 ZrO2/CSB PTFE | 1,02 | 1,35 | 14.700 |
| 30 | 47 | 9 | Xtreme 030 61906 ZrO2/CSB PTFE | 1,50 | 2,16 | 13.020 |
| 30 | 55 | 13 | Xtreme 030 6006 ZrO2/CSB PTFE | 3,11 | 4,14 | 7.800 |
| 30 | 62 | 16 | Xtreme 030 6206 ZrO2/CSB PTFE | 4,20 | 6,09 | 6.600 |
| 35 | 62 | 14 | Xtreme 035 6007 ZrO2/CSB PTFE | 3,84 | 5,04 | 6.600 |
| 35 | 72 | 17 | Xtreme 035 6207 ZrO2/CSB PTFE | 5,74 | 8,10 | 5.700 |
| 40 | 68 | 15 | Xtreme 040 6008 ZrO2/CSB PTFE | 4,13 | 5,34 | 6.000 |

| Dimension (mm) | | | Designation | Load Rating Static C0 [kN] | Load Rating Dynamic C [kN] | Limiting Speed |
|----------------|----|----|-------------------------------|----------------------------------|----------------------------------|-------------------|
| d | D | B | | | | |
| 40 | 80 | 18 | Xtreme 040 6208 ZrO2/CSB PTFE | 7,13 | 9,75 | 5.100 |
| 45 | 75 | 16 | Xtreme 045 6009 ZrO2/CSB PTFE | 5,48 | 6,63 | 5.400 |
| 45 | 85 | 19 | Xtreme 045 6209 ZrO2/CSB PTFE | 8,10 | 10,53 | 4.500 |