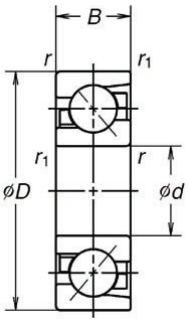
Special Bearings for Screw Compressors

High load capacity Cylindrical Roller Bearings with L-PPS cage

High load capacity HPS Angular Contact Ball Bearings with L-PPS cage

Features of screw compressor bearings

- **L-PPS plastic cage:** This plastic cage offers superior heat and wear resistance, cage strength, and chemical stability. These characteristics change little even if the bearing is exposed to compressor oil, refrigerants, or ammonia gas. L-PPS is greatly superior to traditional polyamide cage material.
- **Increased load capacity:** The optimal bearing internal design associated with the L-PPS plastic cage provides higher bearing load ratings resulting in improved fatigue life.
- **Increased axial load limit for angular contact bearings:** Higher load ratings result in increased axial load.
- **Improved lubrication performance:** The optimised cage design is rolling element guided thereby allowing more internal free space, resulting in flow of lubricant improved.

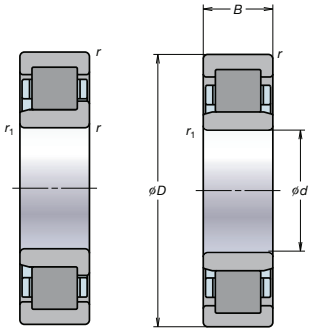


Bearing Nomenclature (HPS Angular Contact Ball Bearing)

Example: 7310 | B | EA | T7 | SU | CNB

- 7310 — Series and bore number
- B — Contact angle 40°
- EA — High load capacity
- T7 — L-PPS plastic cage
- SU — Single Universal
- CNB — CNB: standard axial clearance; GA: light preload

This screw compressor specification includes all HPS features, and L-PPS « T7 » cage.
Range: From 12 to 80 mm bore (7201BEA to 7216BEA))



Bearing Nomenclature (High Load Capacity Cylindrical Roller Bearings)

Example: NU | 310 | E | T7

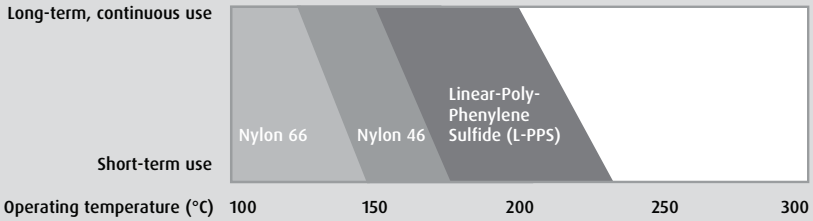
- NU — Bearing type
- 310 — Series and bore number
- E — High load capacity
- T7 — L-PPS plastic cage

This screw compressor specification includes high-capacity design, and L-PPS « T7 » cage.
Range: From 20 to 100 mm bore (NU204ET7 to NU2320ET7)

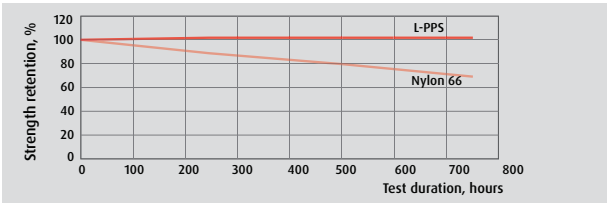
Features of cage material

Material	Nylon 66	Nylon 46	L-PPS
Features	› Standard cage material	› High crystallization rate provides superior high temperature strength › Superior heat resistance	› Greater heat resistance than nylon 46 › Superior resistance to oil and chemicals › Wear resistant › Good dimensional stability
Standard grade	› Contains fiberglass	› Contains fiberglass	› Contains fiberglass
Plastic melting point	› 262 °C	› 290 °C	› 280 °C

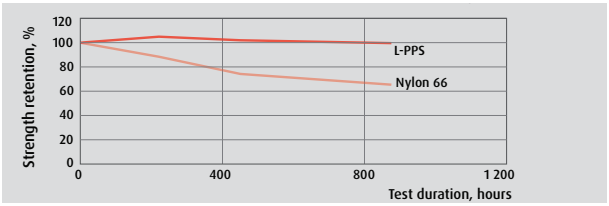
Target for heat resistance



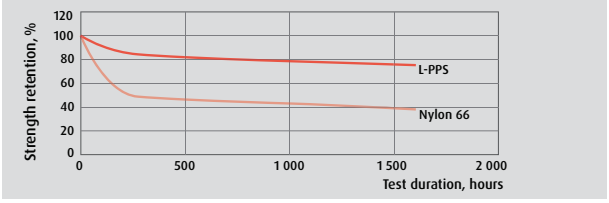
Performance of L-PPS cage material



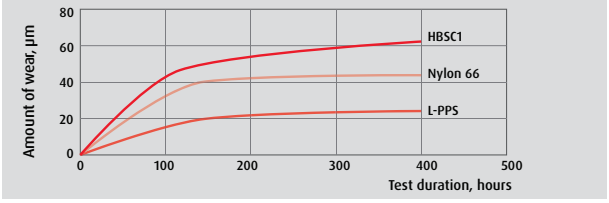
Resistance to compressor oil | Tensile strength – compressor oil at 150 °C



Heat resistance | Heat resistance at 180 °C



Resistance to gear oil | Tensile strength – gear oil at 180 °C



Wear resistance (µm)