

Heavy-Duty Rod Ends PF with Integral Spherical Bearing

Material rod end: Alloyed, case-hardened steel (forged) quenched and tempered, bearing race hardened, ground and lapped. Thread rolled/cut, surface zinc-plated and chromatised.

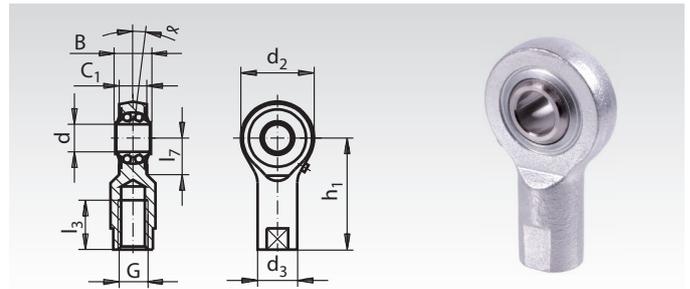
Material inner ring: Bearing steel hardened, precisely turned.

Lubricant: Aluminium-complex-soap-grease, approval according to NSF H1, -45°C to +120°C. Special grease if required.

Short design with internal thread.

Threaded bars with metric ISO thread and ISO fine thread page 556.

IR = Internal Right-hand thread. IL = Internal Left-hand thread.



Ordering Details: e.g.: Product No. 634 410 00, Rod End PF

Product No. IR	Product No. IL	d ₁ ¹⁾ mm	Bh ¹² mm	C ₁ mm	d ₂ mm	d ₃ mm	h ₁ mm	l ₃ mm	l ₇ mm	G mm	α °	Bearing loads [kN]		Calculation-Factors		Speed n _{max.}	Weight g
												dynam. C	static C ₀	Y	Y ₀		
634 410 00	634 460 00	10	13	9	30	15	38	17	14,5	M8	7	2,6	1,0	1,90	1,81	1225	63
634 415 00	634 465 00	15	16,5	12	40	19	51	24	20	M12	7	5,0	1,9	2,30	2,41	1025	143
634 420 00	634 470 00	20	20,5	15	48	22	65	32	22	M16	6,5	6,1	3,0	2,34	2,45	850	223

¹⁾ Tolerance DIN 620.

* in min⁻¹

Inner Rings - Tolerances DIN 620

Nominal dimension range of the bore d ₁ mm		Tolerance in μm	
above	up to	min.	max.
0,6	2,5	-8	+1
2,5	10	-8	+1
10	18	-8	+1
18	30	-9	+1
30	50	-11	+1

Rough Calculation for Rod Ends/Ball Bearing Type

- β = half the pivoting angle in °
- C = dynamic load rating in N
- C₀ = static load rating in N
- F_a = axial load in N (F_a ≤ 0.2 · F_r)
- F_r = radial load in N
- n = speed or pivoting frequency in min⁻¹
- P = dynamic equivalent radial load in N
(for self-aligning ball bearing P = F_r + Y · F_a)
(for self-aligning roller bearing P = F_r + 9.5 · F_a)
- P₀ = Static equivalent radial load in N
(for self-aligning ball bearing P₀ = F_r + Y₀ · F_a)
(for self-aligning roller bearing P₀ = F_r + 5 · F_a)
- Y = axial factor, dynamic
- Y₀ = axial factor, static

Nominal Service Life L_n (n)

Rotating:

$$L_{h_{rot}} = 10^6 \frac{\left(\frac{C}{P}\right)^z}{60 \cdot n} \text{ [h]}$$

Oscillating:

$$L_{h_{osz.}} = 10^6 \frac{\left(\frac{C}{P \sqrt[3]{\frac{\beta}{90}}}\right)^z}{60 \cdot n} \text{ [h]}$$

z = 3 for self-aligning ball bearing
z = 3.33 for self-aligning roller bearing

Conditions:

Pivoting angle β ≥ 3°
For pivoting angle β < 3° we recommend the use of rod ends with slide bearings.

Static load

stationary:

$$P_0 \leq C_0 \text{ [N]}$$



Loctite
Thread Locking
page 849.