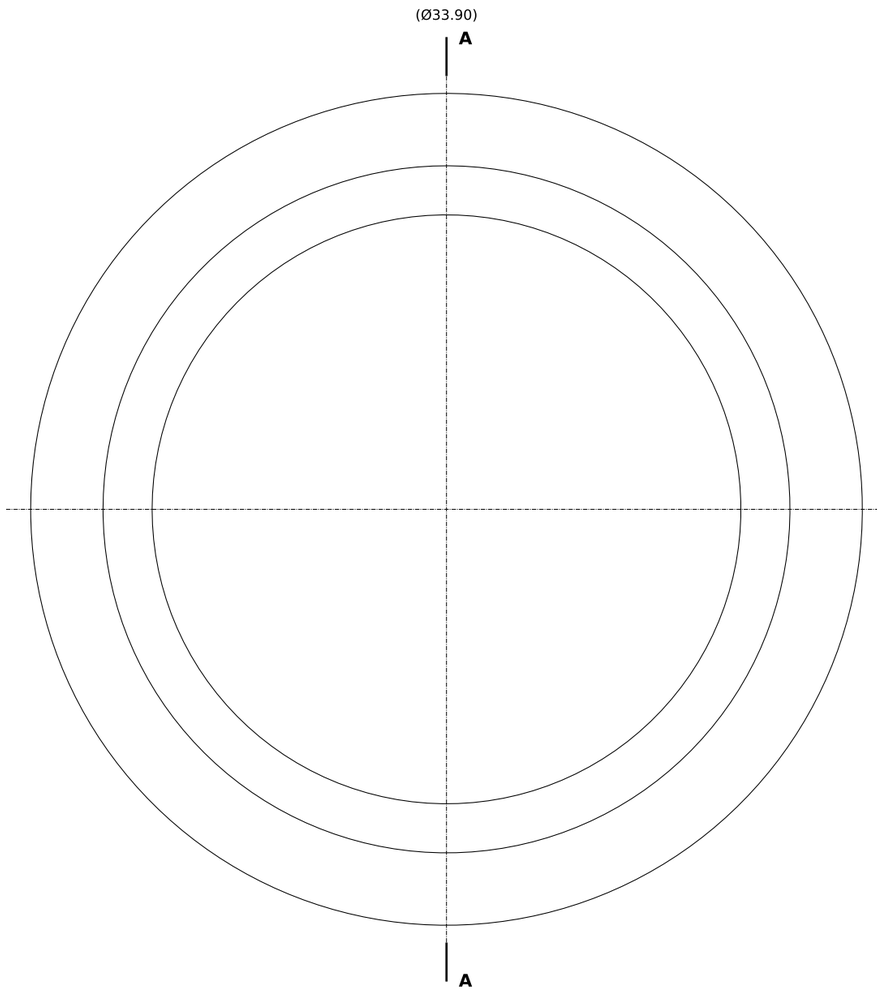
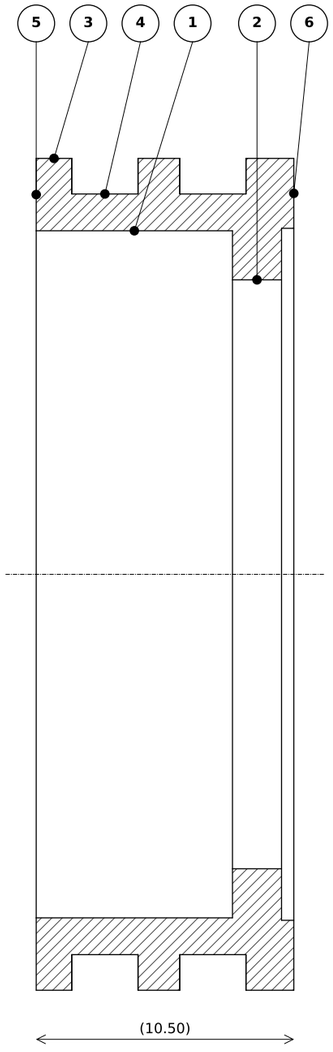


VIEW FROM THE INLET



SECTION A-A

REQUIREMENTS

1 A: bore Ø28 J6 (27.995–28.008), 8.0 deep to the lip; Ra 0.4; the bearing presses in against the lip

2 Lip bore Ø24.0 ±0.1; lip face (the bearing's outer ring seats on it) perpendicular 0.005 to A

3 OD Ø33.90 ±0.02, coaxial Ø0.01 to A

4 2× O-ring grooves: bottom Ø31.00 ±0.03, width 2.70 +0.10/0, Ra 0.8, corners R0.2 max; centres 2.8 and 7.2 from the open end (±0.05). For 31 × 2 FKM O-rings (20% squeeze in the Ø34.20 bore)

5 Both end faces: perpendicular 0.005 to A, parallel 0.005; length 10.00 ±0.02 (to the lip's face, not the rim)

6 Rim on the lip's face: bore Ø28.2 +0.1/0, 0.5 ±0.05 high; it centres the preload shim

NOTES

1. Model is master: sizes not called out come from cartridge.step, at the general tolerance.
2. Break sharp edges 0.1–0.3 unless noted. No burrs. No tool marks across sealing or seating faces.
3. Surface finish Ra 1.6 µm unless noted. Threads to ISO 965 (metric fine).
4. The front bearing's: it goes in lip-back, the lip toward the preload spring.
5. The preload shim (bought: DIN 988 20 × 28 × 1, A2, KIPP K1151.12028100) sits inside the rim.
6. Bearing: SKF 7001 CD/HCP4A, PEEK cage (PEEK (TNHA), 150 C); rated 120,000 rpm oil-air, runs 86,000.
7. Inspection report, CMM and material certificates are add-ons on the quote.

HIGHLAND Turbojet, 170 N class

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PART Front bearing cartridge	PART NUMBER HL-TJ-06		REVISION A
MATERIAL Steel 4140 prehard, 28-32 HRC (ASTM A434 bar)			
FINISH None, as machined		HEAT TREAT None	
TOLERANCE UNLESS NOTED ±0.13 mm (±0.005 in) unless noted; angles ±0.5°			
QUANTITY 1 per engine	MASS 19.9 g		SCALE 4:1
UNITS mm	PROJECTION Third angle	DATE 2026-11-20	SHEET A3, 1 of 1