

Measuring the axial drive-up

The SKF drive-up method is based on measuring the axial displacement of the bearing inner ring on its tapered seat from a reliably determined starting position.

The SKF drive-up method (→ fig. 5) requires the use of an SKF HMV .. E hydraulic nut that can accommodate a dial gauge. A pressure gauge, appropriate to the mounting conditions, mounted on a suitably sized hand pump, enables accurate pressure measurement to determine the starting position. The tools required are shown in fig. 6.

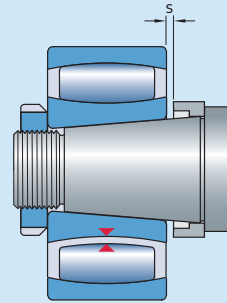
Guideline values for

- the requisite oil pressure
- the axial displacement

for the individual bearings are provided in table 3, starting on page 30.

Table 2

Recommended values for reduction of radial internal clearance and axial drive-up



Bore diameter d		Reduction of radial internal clearance		Axial drive-up s ¹⁾				Check values for the smallest radial clearance ²⁾ after mounting bearings with initial clearance		
over	incl.	min	max	Taper 1:12		Taper 1:30		Normal	C3	C4
mm	mm	mm	mm	min	max	min	max	mm	mm	mm
24	30	0,012	0,018	0,25	0,34	0,64	0,85	0,025	0,033	0,047
30	40	0,015	0,024	0,30	0,42	0,74	1,06	0,031	0,038	0,056
40	50	0,020	0,030	0,37	0,51	0,92	1,27	0,033	0,043	0,063
50	65	0,025	0,039	0,44	0,64	1,09	1,59	0,038	0,049	0,074
65	80	0,033	0,048	0,54	0,76	1,36	1,91	0,041	0,055	0,088
80	100	0,040	0,060	0,65	0,93	1,62	2,33	0,056	0,072	0,112
100	120	0,050	0,072	0,79	1,10	1,98	2,75	0,065	0,083	0,129
120	140	0,060	0,084	0,93	1,27	2,33	3,18	0,075	0,106	0,147
140	160	0,070	0,096	1,07	1,44	2,68	3,60	0,085	0,126	0,173
160	180	0,080	0,108	1,21	1,61	3,04	4,02	0,093	0,140	0,193
180	200	0,090	0,120	1,36	1,78	3,39	4,45	0,103	0,150	0,209
200	225	0,100	0,135	1,50	1,99	3,74	4,98	0,113	0,163	0,228
225	250	0,113	0,150	1,67	2,20	4,18	5,51	0,123	0,175	0,251
250	280	0,125	0,168	1,85	2,46	4,62	6,14	0,133	0,186	0,276
280	315	0,140	0,189	2,06	2,75	5,15	6,88	0,143	0,198	0,292
315	355	0,158	0,213	2,31	3,09	5,77	7,73	0,161	0,226	0,329
355	400	0,178	0,240	2,59	3,47	6,48	8,68	0,173	0,251	0,358
400	450	0,200	0,270	2,91	3,90	7,27	9,74	0,183	0,275	0,383
450	500	0,225	0,300	3,26	4,32	8,15	10,80	0,210	0,295	0,433
500	560	0,250	0,336	3,61	4,83	9,04	12,07	0,225	0,327	0,467
560	630	0,280	0,378	4,04	5,42	10,09	13,55	0,250	0,364	0,508
630	710	0,315	0,426	4,53	6,10	11,33	15,25	0,275	0,386	0,560
710	800	0,355	0,480	5,10	6,86	12,74	17,15	0,319	0,430	0,620
800	900	0,400	0,540	5,73	7,71	14,33	19,27	0,335	0,465	0,675
900	1 000	0,450	0,600	6,44	8,56	16,09	21,39	0,364	0,490	0,740
1 000	1 120	0,500	0,672	7,14	9,57	17,86	23,93	0,395	0,543	0,823
1 120	1 250	0,560	0,750	7,99	10,67	19,98	26,68	0,414	0,595	0,885

¹⁾ Valid only for solid steel shafts and general application. Not valid for the SKF drive-up method

²⁾ The residual clearance must be checked in cases where the initial radial internal clearance is in the lower half of the tolerance range and where large temperature differentials between the bearing rings can arise in operation. When measuring, make sure that the rings and the roller assembly are aligned and centred