

# Hydraulic tools



Accurate mounting of SKF spherical roller and CARB toroidal roller bearings on tapered shafts and sleeves

## SKF Drive-up Method

The SKF Drive-up Method is a well-proven method, unique to SKF, of accurately achieving the adjustment of SKF spherical roller and CARB toroidal roller bearings mounted on tapered seatings. The method incorporates the use of an SKF HMV ..E hydraulic nut fitted with a dial indicator, and a high accuracy digital pressure gauge, mounted on the selected pump.

The correct fit is achieved by controlling the axial drive-up of the bearing from a pre-determined starting position, defined by the pressure in the SKF HMV..E hydraulic nut. The second stage is monitored by driving the bearing up a calculated distance on the taper seating.

The starting position pressure and the drive-up distance for many SKF bearings can be determined by using the SKF Drive-up Method PC program, available at [skf.com](http://skf.com) or by downloading the iOS or Android app for smartphones and tablets. In addition, SKF's unique information service for mounting and dismount bearings, [skf.com/mount](http://skf.com/mount), also features the SKF Drive-up Method.

- More accurate and easier than using feeler gauges
- Greatly reduces the time to mount spherical roller and CARB toroidal roller bearings
- The only suitable way to mount SKF sealed spherical roller and CARB bearings

### The SKF Drive-up Method



### Products for the SKF Drive-up Method

Designation	Description
HMV ..E (e.g. HMV 54E)	Metric thread hydraulic nut
HMVC ..E (e.g. HMVC 54E)	Inch thread hydraulic nut
729124 DU (for nuts ≤ HMV 54E)	Pump with digital gauge (MPa/psi)
TMJL 100DU (for nuts ≤ HMV 92E)	Pump with digital gauge (MPa/psi)
TMJL 50DU (all sizes HMV ..E nuts)	Pump with digital gauge (MPa/psi)
THGD 100	Digital gauge only (MPa/psi)
TMCD 10R	Horizontal dial indicator (0–10 mm)
TMCD 5P	Vertical dial indicator (0–5 mm)
TMCD 1/2R	Horizontal dial indicator (0–0.5 in.)

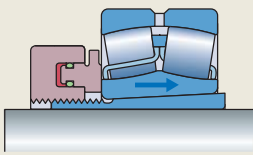
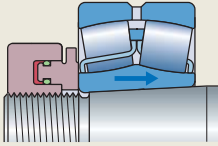
### Technical data – Hydraulic pumps

Designation	729124 DU	TMJL 100DU	TMJL 50DU
Max. pressure	100 MPa (14 500 psi)	100 MPa (14 500 psi)	50 MPa (7 250 psi)
Volume/stroke	0,5 cm <sup>3</sup> (0.03 in. <sup>3</sup> )	1,0 cm <sup>3</sup> (0.06 in. <sup>3</sup> )	3,5 cm <sup>3</sup> (0.21 in. <sup>3</sup> )
Oil container capacity	250 cm <sup>3</sup> (15 in. <sup>3</sup> )	800 cm <sup>3</sup> (48 in. <sup>3</sup> )	2 700 cm <sup>3</sup> (165 in. <sup>3</sup> )
Digital pressure gauge unit	MPa/psi	MPa/psi	MPa/psi

Note: All above pumps are supplied complete with digital pressure gauge, high pressure hose and quick connect coupling.

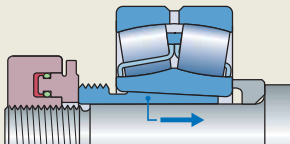
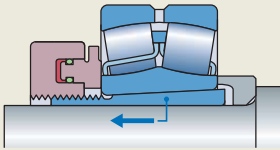
## Step by step procedure

### One sliding surface



1. Determine whether one or two surfaces slide during mounting; see figures.
2. Lightly oil all mating surfaces with a thin oil, e.g. SKF LHM 300, and carefully place the bearing on the shaft.
3. Use the SKF Drive-up Method program or app or [skf.com/mount](http://skf.com/mount) to calculate the initial pressure value and required drive-up distance appropriate to the bearing and the mounting arrangement.
4. Drive the bearing up to the starting position by applying the required hydraulic nut pressure. The pressure is monitored on the digital pressure gauge fitted to the appropriate pump.

### Two sliding surfaces



5. Drive the bearing up the taper by the calculated distance as given by the program, app or [skf.com/mount](http://skf.com/mount). The axial drive-up is best monitored by a dial indicator. The SKF Hydraulic Nut HMV ..E is prepared for dial indicators. The bearing is now mounted with a suitable interference on the shaft and a suitable residual clearance.



For use with previous generation of SKF HMV(C) hydraulic nuts

### SKF Hydraulic Nut Drive-up Adapter HMVA 42/200

The SKF Drive-up Method is the preferred method for mounting SKF spherical roller and CARB toroidal roller bearings on tapered seatings. An adapter, used in conjunction with an SKF Dial Indicator, the adapter allows the previous generation of SKF HMV nuts to be used with the SKF Drive-up Method. The adapter can be used with nuts from size SKF HMV(C) 42 to HMV(C) 200. The adapter is not required for the current generation of SKF HMV(C) ..E nuts.

- One adapter suits the previous generation nuts from SKF HMV(C) 42 up to 200
- Rugged construction
- Easy to attach to the SKF HMV nut using strong magnets
- Used in conjunction with SKF dial indicators