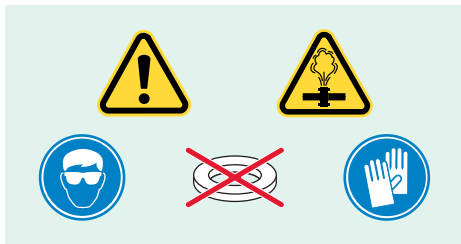


SKF THHP 300



Table of contents

Safety precautions	3
EU Declaration of Conformity	3
1. Application.....	4
2. Description	4
2.1 General description	4
2.2 Technical data	4
2.3 Contents list.....	5
2.4 Suggested connections.....	6
2.5 Spare parts and optional accessories.....	6
2.6 Application connection nipples	7
2.7 Hydraulic oil.....	7
3. Preventive maintenance	8
4. Assembly and operating instructions	8
4.1 Positioning.....	8
4.2 Oil	8
4.3 Prepare the application.....	9
4.4 Connecting and using the pump	9
5. Problem solving	10
6. Detailed dimensions	11



READ THIS FIRST Safety precautions

Read this instruction for use fully. Follow all safety precautions to avoid personal injury or property damage during equipment operation. SKF cannot be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect equipment operation. In case of any uncertainties as regards the use of the equipment contact SKF.

Failure to comply with the following could cause equipment damage and personal injury.

- Do ensure that the equipment is only operated by trained personnel.
 - Do wear proper personal protective gear, such as eye protection and protective gloves, when operating the equipment.
 - Do inspect the equipment and all accessories carefully before use.
 - Do ensure that all the air has been removed from the hydraulic system before pressurising the hydraulic system.
 - Do prevent the workpiece (e.g. bearing, gearwheel or similar item) from being forcibly ejected upon sudden release of pressure (e.g. by use of retaining nut).
 - Do use clean recommended hydraulic oils (SKF LHMF 300, LHDF 900 or similar).
 - Do use a pressure gauge to monitor the oil outlet pressure.
 - Do not use damaged components or modify the equipment.
 - Do not use glycerine or water-based fluids as a pressure medium. Premature equipment wear or damage can result.
 - Do not use the equipment above the stated maximum hydraulic pressure.
 - Do not extend the handle in order to reduce the required force to reach maximum pressure. Use hand pressure only.
- Do not use the pump with accessories, which are rated below the maximum working pressure of the injector.
 - Do not use washers on sealing surfaces.
 - Do not handle pressure hoses under pressure. Oil under pressure can penetrate the skin, causing serious injury. If oil is injected under the skin, seek medical attention immediately.
 - Do not use damaged pressure hoses. Avoid sharp bends and kinks when connecting hoses. Sharp bends and kinks will internally damage the hose leading to premature failure. Applying pressure to a damaged hose may cause it to rupture.
 - Do not lift the equipment by the hose or couplings.

EU Declaration of Conformity THHP 300

We, SKF MPT, Meidoornkade 14, 3992 AE Houten, The Netherlands herewith declare under our sole responsibility that the products described in these instructions for use, are in accordance with the conditions of the following Directive(s): MACHINERY DIRECTIVE 2006/42/EC and are in conformity with the following standards: EN-ISO 12100:2010, EN ISO 14121-1, ISO 4413:2010

Houten, The Netherlands, November 2020

Gondová

Mrs. Andrea Gondová
Manager Quality and Compliance



1. Application

The SKF High Pressure Pump, THHP 300, is intended for the mounting and dismounting of pressure joints using the SKF Oil Injection Method. This includes such applications as couplings, gears, pulleys, flywheels and SKF OK Couplings; where the surface pressure is often in the region of 250 N/mm² (250 MPa, 2500 bar, or 36 260 psi).

The high pressure generated by the THHP 300 should not be used with standard hydraulic cylinders, jacks and other such equipment, which generally require 70 N/mm² (70 MPa, 700 bar, or 10 150 psi).

2. Description

2.1 General description

The SKF High Pressure Pump THHP 300 consists of a high-pressure pump with a 0-300MPa (0-43,500 psi) pressure gauge mounted and includes a high pressure hose and a quick connection coupling. A loose quick connection nipple (THPN 300-1) is supplied and can be attached to the G1/4 and G3/4 conversion nipples included, to suit the application.

The design allows oil to be automatically returned to the reservoir, once the pressure is released, minimizing the risk of oil leakage to the environment.

2.2 Technical data

Designation	SKF THHP 300
Description	High pressure pump
Maximum pressure	300 MPa (43 500 psi.)
Volume per stroke 1st Stage	40 cm ³ (2.43 in. ³) – below 1.6 MPa (232 psi.)
Volume per stroke 2nd Stage	0.5 cm ³ (0.03 in. ³) – above 1.6 MPa (232 psi.)
Oil reservoir capacity	1.8 litres (110 in. ³) / 1.6 litres (97.6 in. ³) (usable)
Weight	7.5 kg (16.5 lb) with full oil reservoir
Pressure gauge	0-300 MPa / (0-43 500psi); Diameter 100 mm (4 in.) Accuracy 1% of full scale
Hose Length	2 m (78 in.)
Hose connection threads:	G1/4 female to pump M16 male thread with special sealing design to attach to the quick connection coupling.
Maximum torque for M16 thread	40-50 Nm / (29.5-36.9 ft-lb)
Main dimensions of the Pump (without hose and gauge)	574 x 130 x 200 mm (22.6 x 5.1 x 7.9 in.)
Dimensions of the carrying case	800 x 318 x 380 mm (31.5 x 12.5 x 15.0 in.)
Weight of the pump	7.5 kg (16.5 lb)
Weight of the full carrying case	22 kg (48.5 lb)

2.3 Contents list

The THHP 300 is supplied complete with the following accessories:



Fig.1 – SKF THHP 300 Content

Item	Description
A	Pump body
B	High pressure hose (assembled)
C	Pressure gauge and protection sleeve (assembled)
D	Quick connection coupling (assembled)
E	Connection nipple M16male - G1/4male
F	Connection nipple M16male - G3/4male
G	Quick connection nipple (loose item)
H	Mounting fluid (1 litre)
I	Carrying case
J	Instructions for use MP5501 SKF THHP 300

2.4 Suggested connections

The THHP comes complete with all components to connect it to the most common applications with G1/4 or G3/4 connections. The recommend way to connect is shown in **fig. 2** below.

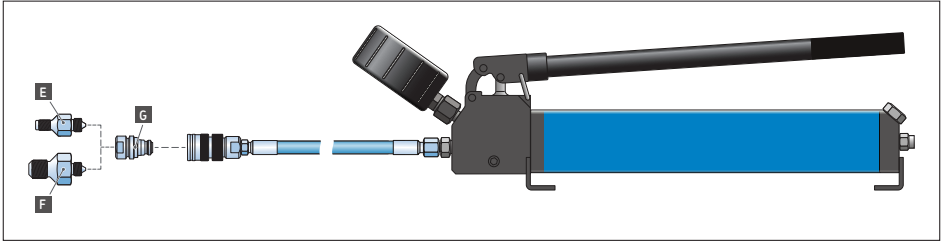


Fig.2 – Connections

2.5 Spare parts and optional accessories

Spare parts	Designation	Parts
Assembly of hydraulic pump body and pressure gauge	THHP 300-1	A, C
High pressure hose 2 m long	THHP 300-2H (M16x1.5m – G1/4f)	B
Pressure gauge (0-300 MPa/ 43500psi)	1077589	C
Pressure gauge protection sleeve	TMJG 100S	C
Connection nipple M16m - G1/4m	THPN M16G1/4	E
Connection nipple M16m - G3/4m	THPN M16G3/4	F
Quick connection coupling (loose item)	THPC 300-1	D
Quick connection nipple (loose item)	THPN 300-1	G
Mounting fluid (1 litre)	LHMF 300/1	H
Carrying case	THHP 300-9	I

Optional accessories	Designation
Connection nipple M16m – G1/8m	THPN M16G1/8
Connection nipple M16m – G3/8m	THPN M16G3/8
Connection nipple M16m – G1/2m	THPN M16G1/2
Mounting fluid (5 litre)	LHMF 300/5
Dismounting fluid (5 litre)	LHDF 900/5

2.6 Application connection nipples

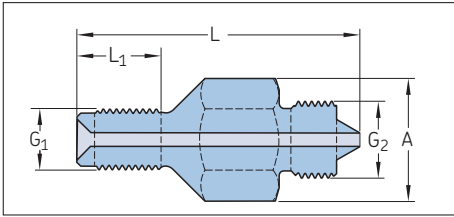


Fig.3 – Dimensions of the THPN M16 nipples

Item	A mm	G1	G2	L mm/in	L1 mm/in
THPN M16G1/8	Hex 22	G1/8	M16x1.5	60/2.36	15/0.59
THPN M16G1/4	Hex 22	G1/4	M16x1.5	60/2.36	17/0.67
THPN M16G3/8	Hex 22	G3/8	M16x1.5	60/2.36	20/0.79
THPN M16G1/2	Hex 22	G1/2	M16x1.5	60/2.36	20/0.79
THPN M16G3/4	Hex 32	G3/4	M16x1.5	67/2.64	30/1.81

2.7 Hydraulic oil

The pump is filled with SKF Mounting Fluid LHM 300.

Dirt and metal particles in the oil can cause wear of the piston mating surfaces, leading to excessive oil leakage and permanent damage to the THHP 300. The recommended oil cleanliness level should meet or exceed ISO 4406:1999 20/18/15.

Using fluids or oils, other than SKF mounting and dismantling fluids, can cause corrosion and/or damage to mating surfaces.
Do not mix fluids or oils of different brands.

Use appropriate oil with a viscosity of 300 cSt, at operating temperature, to mount bearings and similar items using the SKF Oil Injection Method.

SKF hydraulic fluids used in our pumps are especially formulated for the mounting and dismantling processes. In the table below is an overview of what to use when:

Job type	Environment temperatures	SKF Oil
Mounting	0 °C (32 °F) to 35 °C (95 °F)	SKF Mounting Fluid, LHM 300
	35 °C (95 °F) to 45 °C (113 °F)	SKF Dismounting Fluid, LHDF 900
Dismounting	0 °C (32 °F) to 10 °C (50 °F)	SKF Mounting Fluid, LHM 300
	10 °C (50 °F) to 45 °C (113 °F)	SKF Dismounting Fluid, LHDF 900

3. Preventive maintenance

To get the best results and safest operation from pumps, we recommend that you carry out the following checks before connecting the pump to the application:

- General state and cleanliness of the equipment
- Any excessive play in the movement of the handle
- Oil leaks
- Operating efficiency of the relief valve
- Damaged or badly fitted accessories

If any products are found to be damaged or defective, mark them clearly and store them in a specially designated area for unsuitable material. Consider using the SKF repair service to get it back in good working order.

4. Assembly and operating instructions

The pump has a stop lever clip to lock the handle. Do not transport the product without locking the handle (→ fig. 4).

4.1 Positioning

Place the pump in a horizontal position where it is stable and its feet are all in contact with the surface it is standing on. Make sure there is enough space to operate the handle over the complete handle stroke.

4.2 Oil

Remove the oil filler plug to check the oil level. (→ fig. 5). Make sure there is sufficient oil to complete the operation. Use the appropriate oil as described in chapter 3. The oil filler plug also works as a safety valve. In the event that too much oil is returned to the pump reservoir, the plug will leak the superfluous oil to ensure that the reservoir is not over-pressurised.

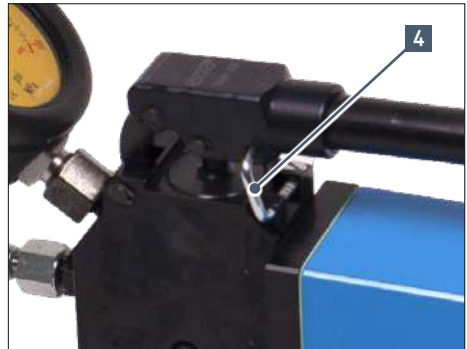


Fig.4 – Lever clip in locked position



Fig.5 – Oil filler plug

4.3 Prepare the application

Screw the appropriate THPN nipple, with G thread, to the application. Screw on the loose quick connection nipple (THPN 300-1) to the THPN nipple: Maximum torque for M16 thread is 40-50 Nm / 29.5-36.9 ft-lb (→ fig. 2).

For dismounting of components make sure that with the built up of oil pressure these are not suddenly released and can't freely fly away from the application. Position retaining or locknuts if necessary.

4.4 Connecting and using the pump

1. Make sure the hose and pump are depressurised.
2. Connect the quick connection coupling on the hose to the quick connection nipple. Check the locking of this connector.
3. Close the oil release valve clockwise (→ fig. 6).
4. Release the stop lever clip (→ fig. 7).
5. Operate the handle to pressurise the application carefully watch the pressure increase on the gauge and the check the application. You can now mount or dismount your application.
6. When finished the job at hand, open the oil release valve to depressurise the application.



Fig.6 – Oil release valve



Fig.7 – Stop lever clip in released position

5. Problem solving

The pump does not supply oil:

- Pump relief valve open
- Badly connected couplings
- Shortage of oil in tank
- Accumulation of dirt in the circuit

The pump does not reach maximum pressure:

- Safety valve on wrong setting
- Worn or damaged seals

The circuit gradually loses pressure:

- Worn or damaged relief valve
- Air in the circuit
- Accumulation of dirt in the circuit

Oil leaks:

- Worn or damaged seals
- Badly connected couplings

The application remains pressurized:

- Relief valve not fully open
- Accumulation of dirt in the hydraulic circuit
- Restrictions in the hose

6. Detailed dimensions

Here below a drawing of the main dimensions of the pump.

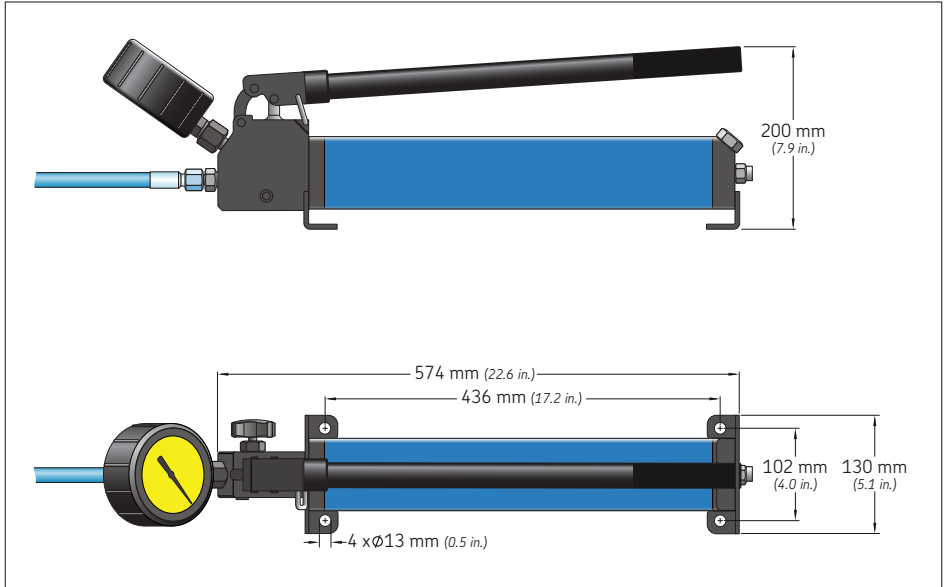


Fig.8 – Dimensions



skf.com | mapro.skf.com | skf.com/mount

© SKF is a registered trademark of the SKF Group.

© SKF Group 2020

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.

MP5501 EN · 2020/12