FAG

FAG Pressure Generation Devices

SCHAEFFLER GROUP
INDUSTRIAL

Note on ordering designations

This catalogue contains the current ordering designations of Schaeffler Group Industrial. In some countries, other ordering designations are still in use (please see the comparison on page 20).

Frequently used units for pressure and contact pressure

1 bar = 10^5 N/m^2
= 0,1 N/mm^2 (MPa)
≈ 14,5 psi (lbf/in^2)
1 psi ≈ 0,07 bar

Overview table

Overview table of FAG pressure generation devices

FAG pressure generation devices Ordering designation	Oil container volume l	Connector	Max. oil pressure bar (psi)	Application	Max. shaft diameter mm	Page
Oil injector **INJECT1600**	0,027	G¾	**1 600** (23 200)	Mounting and dismounting of bearings with tapered bore. Press fits up to approx. 80 N/mm² contact pressure.	150	2
Oil injector **INJECT2500**	0,008	G⅜	**2 500** (36 250)	Mounting and dismounting of bearings with tapered bore. Press fits up to approx. 125 N/mm² contact pressure.	80	2
Hand pump set single stage **PUMP1000-0,7L**	0,7	G¼	**1 000** (14 500)	Mounting and dismounting of rolling bearings. Mounting of press fits up to approx. 50 N/mm² contact pressure. For driving hydraulic nuts up to HYDNUT395 / HYDNUT300-HEAVY	250	4
Hand pump set twin stage **PUMP1000-4L**	4	G¼	**1 000** (14 500)	Mounting and dismounting of rolling bearings. Mounting of press fits up to 50 N/mm² contact pressure, e.g. ships' propellors. For driving hydraulic nuts up to HYDNUT800	Unlimited	5
Hand pump set twin stage **PUMP1000-4L-CONTROL**	4	G¼	**1 000** (14 500)	Driving up of rolling bearings using hydraulic nut on tapered seat.	Unlimited	6
Hand pump set twin stage **PUMP1600-4L**	4	G¼	**1 600** (23 200)	Mounting and dismounting of rolling bearings. Mounting of press fits up to approx. 80 N/mm² contact pressure, e.g. of rudder spindles and rudder blades	Unlimited	8
Hand pump set twin stage **PUMP2500-4L**	4	G¼ (direct)	**2 500** (36 250)	Mounting and dismounting of rolling bearings. Mounting of press fits up to 125 N/mm² contact pressure, e.g. of gears and couplings	Unlimited	9
High pressure pump **PUMP4000-0,2L**	0,2	G¾ (direct)	**4 000** (58 000)	For press fits with high contact pressure (> 100 N/mm²). Dismounting of bearings with cylindrical bore. Flow rate and oil reservoir are small.	Unlimited For rolling bearings up to ø 250	10
High pressure pump set **PUMP2500-0,2L-KIT**	0,2	G¼ with high pressure hose	**2 500** (36 250)			11
Compressed air driven hydraulic unit **AGGREG-P1000-1/P2500-2**	13	G¼	**2 500** (36 250)	Mounting of shaft couplings and press fits, gears etc. by the hydraulic method. Contact pressure up to 100 N/mm²	Unlimited	12
Electrically driven hydraulic unit **AGGREG-E700**	10	G¼	**700** (10 150)	For driving large hydraulic nuts up to HYDNUT1180. Mounting of large press fits: ship shaft couplings, ships' propellers, gears, contact pressure up to 50 N/mm²	Unlimited	12

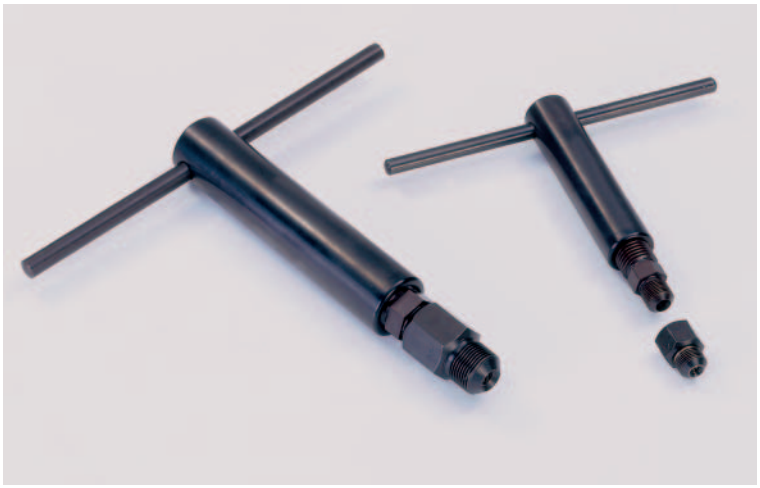
FAG oil injectors

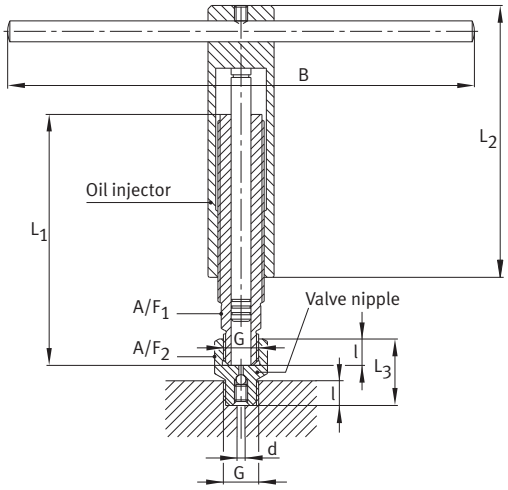
FAG oil injectors

Oil injectors have a small volume displacement; they can be used in the hydraulic method for the dismounting of rolling bearings and other press fits with direct seating on tapered shafts, for example in machine tools for cylindrical roller bearings FAG NNU49..-S-K, NN30..-AS-K, N10..-K, N19..-K. The INJECT2500 can be used for shaft diameters up to 80 mm, the INJECT1600 up to 150 mm.

Conventional O rings can be used as replacement seals:
OR6×1,5 (for INJECT2500),
OR10×2,0 (for INJECT1600).

FAG oil injectors and valve nipples





Oil injector Ordering designation	Valve nipple	Connector G	Oil volume cm^3	Max. oil pressure bar	Mass ≈ kg	Dimensions l	d	L_1	L_2	L_3	B	A/F_1	A/F_2
						mm							
INJECT2500	**INJECT2500.VALVE**	G⅜	8	2 500	0,91	12	5	120	130	30	220	19	22
INJECT1600	**INJECT1600.VALVE**	G¾	27	1 600	2,18	22	8	180	185	55	280	27	32

The oil injector can be refilled with oil without losses by connecting the valve nipple to the oil injector.
In this case, the oil injector is ordered with a valve nipple.
Ordering designation for INJECT2500 + INJECT2500.VALVE: **INJECT2500-SET**,
Ordering designation for INJECT1600 + INJECT1600.VALVE: **INJECT1600-SET**.

FAG hand pump sets

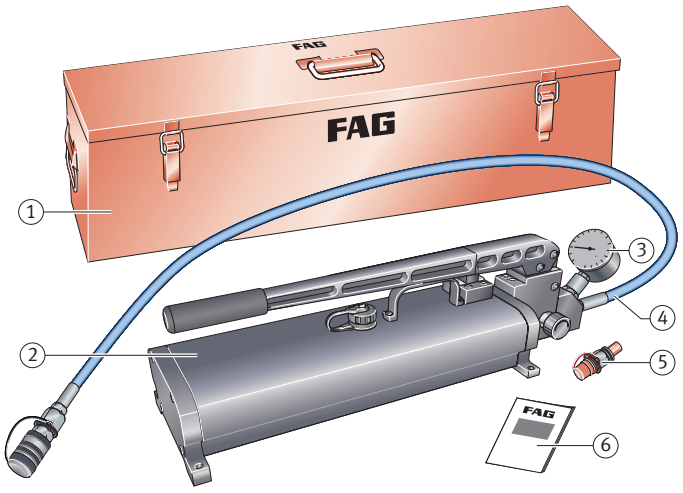
Pressure generation devices for the hydraulic method and for hydraulic nuts

FAG hand pump sets

The range of FAG hand pump sets comprises the basic designs:
- PUMP1000-0,7L (single stage)
- PUMP1000-4L (twin stage)
- PUMP1600-4L (twin stage)
- PUMP2500-4L (twin stage).

The twin stage pumps have a high flow rate in the low pressure range and then switch automatically to the high pressure stage. This gives a high work rate.
Where there is an increased oil requirement, the twin stage pumps are alternatively available with an 8 litre oil container (suffix -8L).
In cases where the type of installation of the adapter or withdrawal sleeve requires a separate oil supply, we can upon request supply a two-way valve (suffix D).

Scope of delivery of an FAG hand pump set (example: PUMP1000-4L)



① Metal case
② Hand pump with 4 l oil container/1 000 bar
③ Manometer, 0 bar – 1 000 bar
④ High pressure hose with coupling sleeve
⑤ Plug-in coupling nipple (connector G¼)
⑥ User manual

FAG hand pump sets (overview of ordering designations)

Pump	Hand pump set Basic design	With 8 l oil container	With distributor	With 8 l oil container and distributor
single stage				
1 000 bar	**PUMP1000-0,7L**			
twin stage				
1 000 bar	**PUMP1000-4L**	**PUMP1000-8L**	**PUMP1000-4L-D**	**PUMP1000-8L-D**
1 600 bar	**PUMP1600-4L**	**PUMP1600-8L**	**PUMP1600-4L-D**	**PUMP1600-8L-D**
2 500 bar	**PUMP2500-4L**	**PUMP2500-8L**	**PUMP2500-4L-D**	**PUMP2500-8L-D**

Repair sets:

PUMP1000-0,7L.SPARE-KIT	0,2 kg	**PUMP1600-4L.SPARE-KIT**	0,4 kg
PUMP1000-4L.SPARE-KIT	0,4 kg	**PUMP2500-4L.SPARE-KIT**	0,6 kg

FAG hand pump set 1 000 bar (single stage)

Pressure generation devices for the hydraulic method and for hydraulic nuts

FAG hand pump set 1 000 bar (single stage)

The hand pump set is suitable for the mounting and dismounting of rolling bearings by the hydraulic method, the mounting of press fits up to 50 N/mm² contact pressure and for driving hydraulic nuts up to HYDNUT395 or HYDNUT300-HEAVY. The oil container has a volume of 0,7 l. The pump is connected using a high pressure hose, 1 000 bar, 1,5 m long and a plug-in coupling, 1 000 bar (for a threaded connector bore G¼, see drawing).
For the mounting and dismounting of rolling bearings with adapter or withdrawal sleeves, sleeve connectors must be used. If other connectors are present, adapters and reduction nipples can be used. The pump set is supplied ready-to-use in a metal case.

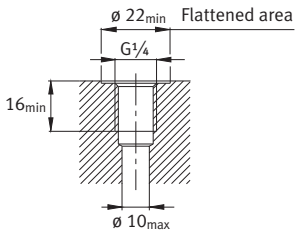
Scope of delivery:

1 hand pump, 1000 bar
with 0,7 l oil container filled with Shell Voltol Gleitöl 32 oil (viscosity 32 mm²/s at +40 °C), manometer connector in pump head
1 manometer, 0 bar – 1 000 bar (ø 63 mm)
1 high pressure hose, 1 000 bar, 1,5 m long
1 plug-in coupling, 1 000 bar (connector thread G¼)
1 metal case 650×260×200 mm
Mass (including oil charge and metal case) 10 kg

Ordering designation:
PUMP1000-0,7L

Ordering designation for repair set for single stage 1 000 bar pump:
PUMP1000-0,7L.SPARE-KIT

FAG hand pump set 1 000 bar (0,7 l)
Oil volume per stroke cm³
2,2



Threaded connector bore G¼

FAG hand pump sets 1000 bar (twin stage)

Pressure generation devices for the hydraulic method and for hydraulic nuts

FAG hand pump sets 1000 bar (twin stage)

The hand pump sets are suitable for the mounting and dismounting of rolling bearings and for the mounting of press fits up to 50 N/mm^2, for example for ships' propellors, using the hydraulic method. Hand pump sets with a 4 l oil container can be used to drive hydraulic nuts up to HYDNUT800 (alternatively, 8 l oil containers can be used for larger hydraulic nuts). The pump is connected using a high pressure hose, 1000 bar, 2 m long and a plug-in coupling, 1000 bar (for a threaded connector bore G¼, see drawing on page 4).
If two connectors must be supplied with oil at the same time, the pump set can be supplied fitted with a two-way valve. The oil is then supplied via two high pressure hoses and two plug-in couplings. The pump sets are supplied ready-to-use in a metal case.

FAG hand pump set PUMP1000-4L
(for 1 connector)

Scope of delivery:

1 hand pump, 1000 bar
with 4 l oil container filled
with Shell Voltol slideway 32 oil
(viscosity 32 mm^2/s at +40 °C)
1 flange-mounted manometer
connector
1 manometer, 0 bar – 1000 bar
(ø 63 mm)
1 high pressure hose, 1000 bar,
2 m long
1 plug-in coupling, 1000 bar
1 metal case 900×250×250 mm
Mass (including oil charge and metal case) 24 kg

Ordering designation:
PUMP1000-4L

FAG hand pump set PUMP1000-4L-D
(for 2 connectors)

Scope of delivery:

1 hand pump, 1000 bar
with 4 l oil container filled
with Shell Voltol slideway 32 oil
(viscosity 32 mm^2/s at +40 °C)
1 flange-mounted two-way valve
(with manometer connector)
1 manometer, 0 bar – 1000 bar
(ø 63 mm)
2 high pressure hoses, 1000 bar,
2 m long
2 plug-in couplings, 1000 bar
1 metal case 900×250×250 mm
Mass (including oil charge and metal case) 27 kg

Ordering designation:
PUMP1000-4L-D

Ordering designation for repair set for twin stage 1000 bar pumps:
PUMP1000-4L.SPARE-KIT

FAG hand pump set 1000 bar (4 l)

Oil volume per stroke	
up to 30 bar cm^3	30 bar to 1000 bar
29	1,45

FAG hand pump sets 1 000 bar (twin stage)

Pressure generation devices for the hydraulic method and for hydraulic nuts

FAG hand pump set
PUMP1000-4L-CONTROL
(for 1 connector)

Scope of delivery:

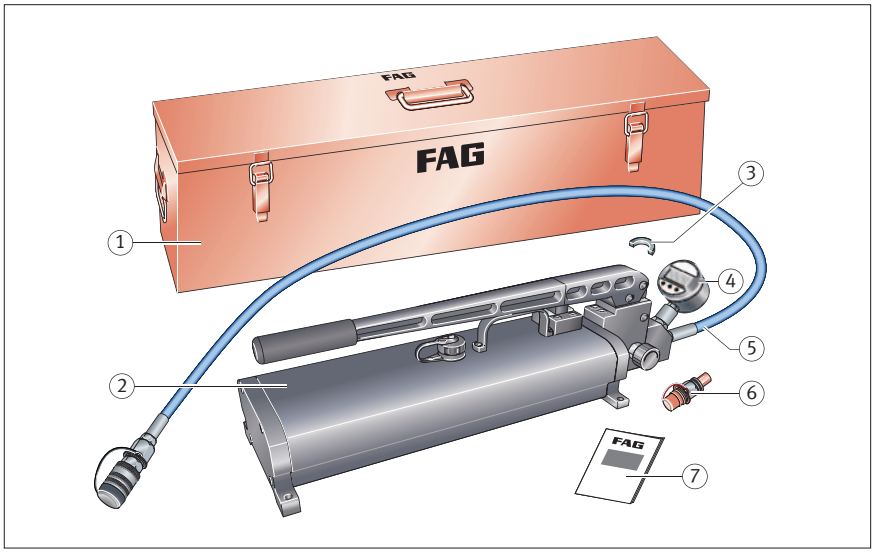
1 hand pump, 1 000 bar
with 4 l oil container filled
with Shell Voltol Gleitöl 32 oil
(viscosity 32 mm^2/s at +40 °C)
1 flange-mounted manometer
connector
1 spacer ring (HYDNUT50 to 150)
1 digital manometer,
0 bar – 1 000 bar (ø 73 mm)
1 high pressure hose with coupling
sleeve, 1 000 bar, 2 m long
1 plug-in coupling, 1 000 bar
1 metal case 900×250×250 mm
Mass (including oil charge and
metal case) 24 kg

Ordering designation:
PUMP1000-4L-CONTROL

The FAG hand pump set PUMP1000-4L-CONTROL can be used to drive hydraulic nuts up to HYDNUT1180.
The stroke volume can be adjusted to match the hydraulic nut being used in each case.

Ordering designation for repair set for twin stage 1 000 bar pumps:
PUMP1000-4L.SPARE-KIT

FAG hand pump set 1 000 bar (4 l)	
Oil volume per stroke	
up to 30 bar	**30 bar to 1 000 bar**
cm^3	
29	1,45



① Metal case
② Hand pump
③ Spacer ring (HYDNUT 50 to 150)
④ Digital manometer
⑤ High pressure hose
with coupling sleeve
⑥ Plug-in coupling nipple
⑦ User manual

FAG hand pump sets 1 000 bar (twin stage)

Pressure generation devices for the hydraulic method and for hydraulic nuts

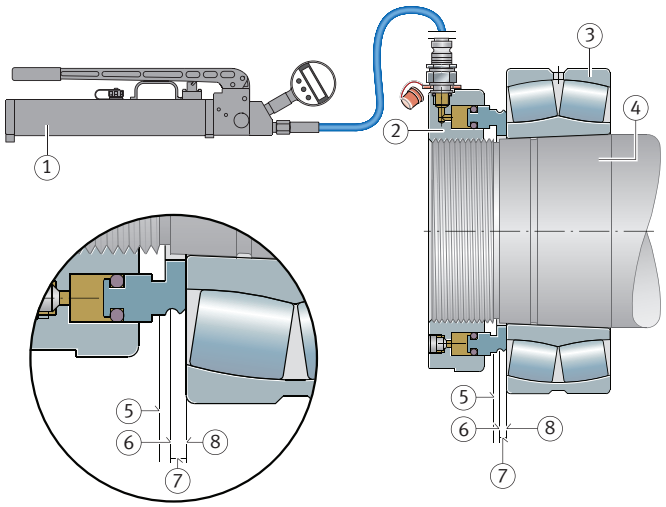
Application of the hand pump set PUMP1000-4L-CONTROL in the mounting of rolling bearings using a hydraulic nut

The 1 000 bar pumps, especially the PUMP1000-4L-CONTROL, are suitable as pressure generation devices where rolling bearings are to be driven onto their tapered seats using a hydraulic nut.

First, the bearing is pushed smoothly onto the tapered seat as far as the initial position. A suitable hydraulic nut is then screwed onto the shaft and the hand pump is connected. The hand pump is then operated until the pressure to reach the start position (start pressure) is achieved.

By further operation of the pump, the bearing is driven up by the required distance and thus reaches the final position. The required drive-up distance can be determined, for example, using the FAG software Mounting Manager. The user manual for the pump PUMP1000-4L-CONTROL contains a table which shows the number of strokes required for the required drive-up distance of the bearing. Note: For the other hand pump sets, the reduction in radial internal clearance is measured in order to check the firm seating of the bearing.

Driving up a rolling bearing using a hydraulic nut



① Hand pump
② Hydraulic nut
③ Rolling bearing
④ Tapered seat
⑤ Initial position
⑥ Start position
⑦ Drive-up distance
⑧ Final position

FAG hand pump sets 1 000 bar (twin stage)

Pressure generation devices for the hydraulic method

FAG hand pump sets 1 600 bar (twin stage)

The hand pump sets 1 600 bar are suitable for the mounting and dismounting of rolling bearings and for the mounting of press fits up to 80 N/mm², e.g. for rudder spindles and rudder blades, using the hydraulic method.
The oil containers have a volume of 4 l (upon request 8 l).
The pump is connected using a high pressure hose, 1 600 bar, 2 m long and a plug-in coupling, 1 600 bar (for a threaded connector bore G¼, see drawing on page 4).
If two connectors must be supplied with oil at the same time, the pump set can be supplied fitted with a two-way valve. The oil is then supplied via two high pressure hoses and two plug-in couplings.
The pump sets are supplied ready-to-use in a metal case.

Hand pump set PUMP1600-4L
(for 1 connector)

Scope of delivery:

1 hand pump, 1 600 bar
with 4 l oil container filled with Shell Voltol Gleitöl 32 oil (viscosity 32 mm²/s at +40 °C)
1 flange-mounted manometer connector
1 manometer, 0 bar – 1 600 bar (ø 100 mm)
1 high pressure hose, 1 600 bar, 2 m long
1 plug-in coupling, 1 600 bar
1 metal case 900×250×250 mm
Mass (including oil charge and metal case) 25 kg

Ordering designation:
PUMP1600-4L

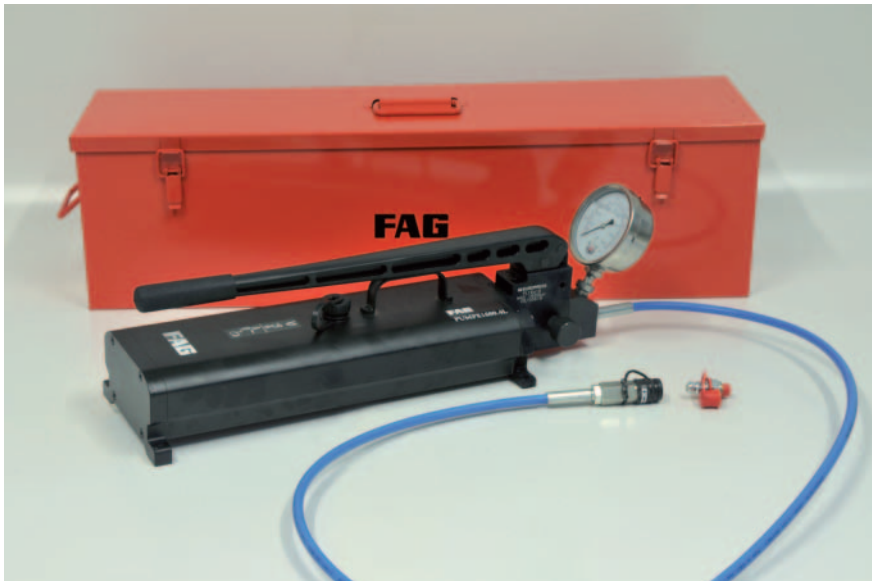
Hand pump set PUMP1600-4L-D
(for 2 connectors)

Scope of delivery:

1 hand pump, 1 600 bar
with 4 l oil container filled with Shell Voltol Gleitöl 32 oil (viscosity 32 mm²/s at +40 °C)
1 flange-mounted two-way valve (with manometer connector)
1 manometer, 0 bar – 1 600 bar (ø 100 mm)
2 high pressure hoses, 1 600 bar, 2 m long
2 plug-in couplings, 1 600 bar
1 metal case 900×250×250 mm
Mass (including oil charge and metal case) 28 kg

Ordering designation:
PUMP1600-4L-D

Ordering designation for repair set for twin stage 1 600 bar pumps:
PUMP1600-4L.SPARE-KIT



FAG hand pump sets 1 600 bar

Oil volume per stroke	
up to 30 bar cm³	30 bar to 1 600 bar
29	1,45

FAG hand pump sets 2 500 bar (twin stage)

Pressure generation devices for the hydraulic method

FAG hand pump sets 2 500 bar (twin stage)

The hand pump sets 2 500 bar are suitable for the mounting and dismounting of rolling bearings and for the mounting of press fits up to 125 N/mm², for example for gears and couplings, using the hydraulic method. The oil containers have a volume of 4 l (upon request 8 l). The pump is connected using a high pressure hose, 2 500 bar, 2 m long, via a reduction nipple or adapter (for dimensions and connector bore, see drawing and table).
If two connectors must be supplied with oil at the same time, the pump set can be supplied fitted with a two-way valve. The oil is then supplied via two high pressure hoses.
The pump sets are supplied ready-to-use in a metal case.

Hand pump set PUMP2500-4L
(for 1 connector)

Scope of delivery:
1 hand pump, 2 500 bar with 4 l oil container filled with Shell Voltol Gleitöl 32 oil (viscosity 32 mm²/s at +40 °C)
1 flange-mounted manometer connector
1 manometer, 0 bar – 2 500 bar (ø 100 mm)
1 high pressure hose, 2 500 bar, 2 m long
1 nipple plug G¼
1 each adapter G¼, reduction nipple G⅜, G½, G¾
1 metal case 940×280×280 mm
Mass (including oil charge and metal case) 27 kg

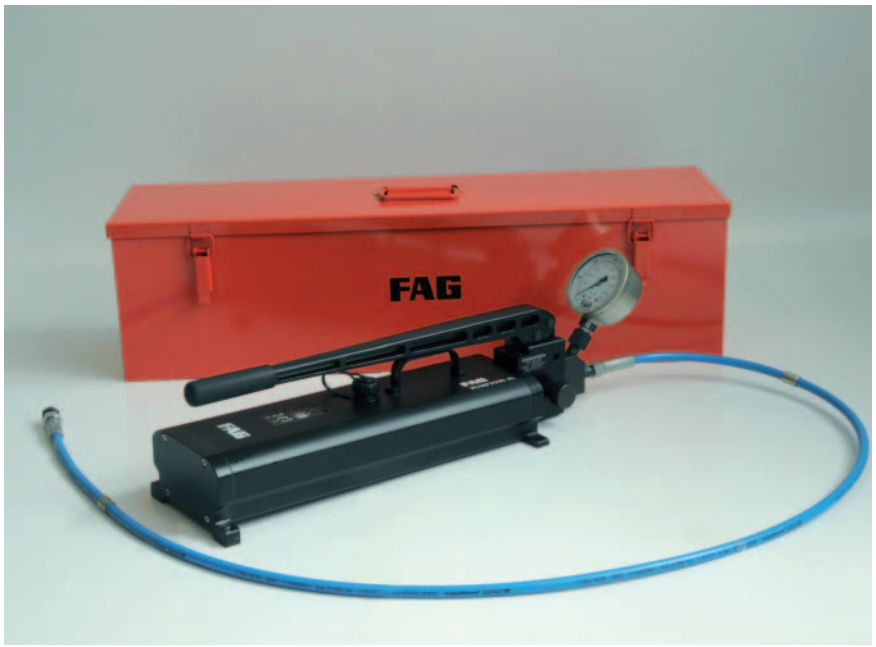
Ordering designation:
PUMP2500-4L

Hand pump set PUMP2500-4L-D
(for 2 connectors)

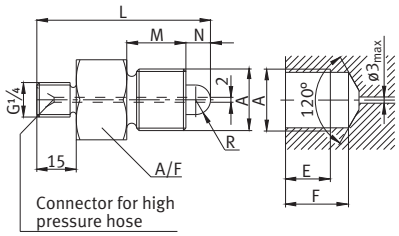
Scope of delivery:
1 hand pump, 2 500 bar with 4 l oil container filled with Shell Voltol Gleitöl 32 oil (viscosity 32 mm²/s at +40 °C)
1 flange-mounted two-way valve (with manometer connector)
1 manometer, 0 bar – 2 500 bar (ø 100 mm)
2 high pressure hoses, 2 500 bar, 2 m long
2 nipple plugs G¼
2 each adapters G¼, reduction nipples G⅜, G½, G¾
1 metal case 940×280×280 mm
Mass (including oil charge and metal case) 30 kg
Ordering designation:
PUMP2500-4L-D

Ordering designation for repair set:
PUMP2500-4L.SPARE-KIT

Oil volume per stroke	
up to 20 bar	20 bar to 2 500 bar
cm³	
32	0,9



Threaded bore for connectors



Threaded connector A	Dimensions mm R	L	A/F	M	N	E	F
G¼	5,5	56	17	14	8	14	15
G⅜	6,0	58	17	16	10	16	20
G½	6,75	58	17	20	12	18	25
G¾	8,0	67	32	20	12	18	25

FAG high pressure pump

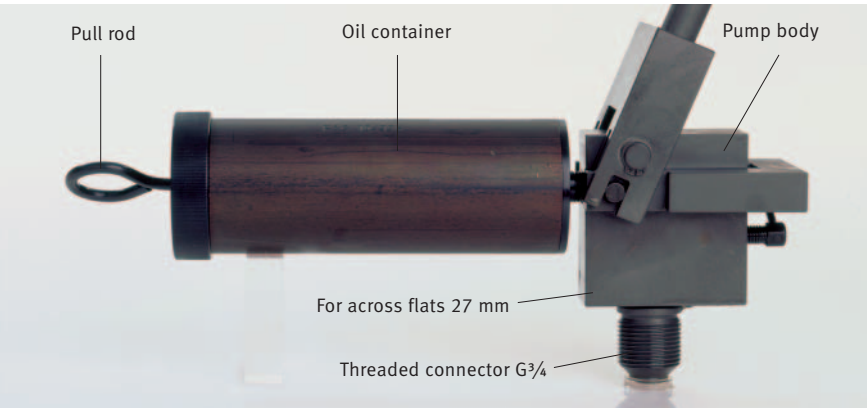
FAG high pressure pump PUMP4000-0,2L

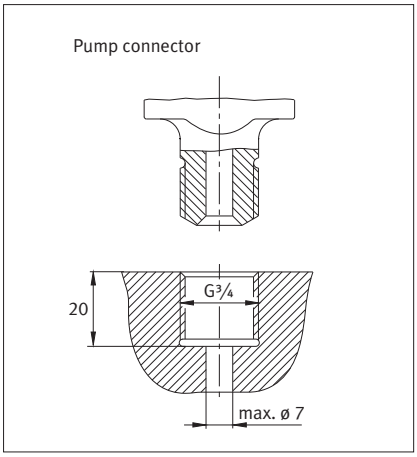
The high pressure pump is suitable for the mounting and dismounting of rolling bearings for shaft diameters up to 250 mm. Since it generates pressures of up to 4 000 bar, the pump can be used to expand heavy shaft couplings and gears by the hydraulic method. The pump is connected directly or via thick-walled adapters.

The high pressure pump can also be connected via a pump holder and a 2 m long flexible high pressure hose (maximum permissible oil pressure 2 500 bar). The pump must always be operated with a manometer.

Recommended oil for normal ambient temperature:
mineral oil with a nominal viscosity of 68 mm^2/s at +40 °C.

Handling of the pump is described in the user manual BA 06.





FAG high pressure pump PUMP4000-0,2L

High pressure pump Ordering designation	Connector	Oil container volume l	Flow rate cm^3/stroke	Max. oil pressure bar	Mass ≈ kg
PUMP4000-0,2L comprising **PUMP4000-0,2L.BODY** (pump body) **PUMP4000-0,2L.TANK** (oil container)	G¾	0,2	0,3	4 000	3,8

FAG high pressure pump set

FAG high pressure pump set

In order to make it easier to select the right device, FAG supplies complete sets in storage cases: FAG high pressure pump set PUMP2500-0,2L-KIT with manometer up to 2 500 bar.

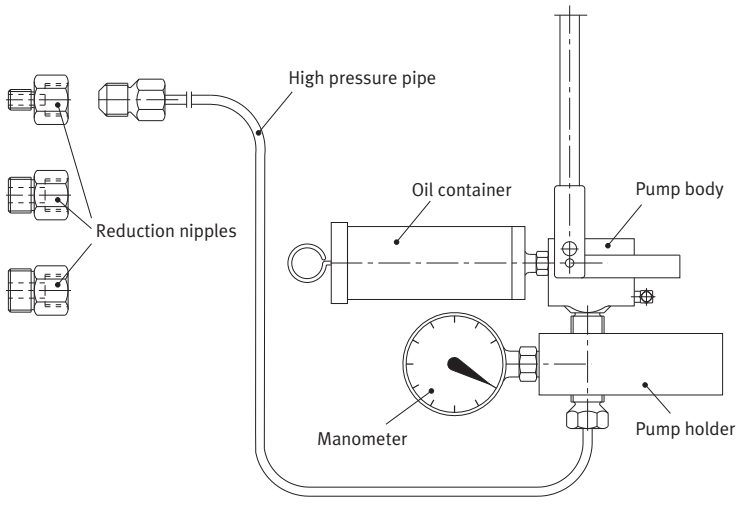
FAG high pressure pump set PUMP2500-0,2L-KIT

FAG high pressure pump set PUMP2500-0,2L-KIT with manometer up to 2 500 bar

Scope of delivery:

1 high pressure pump	PUMP4000-0,2L	1 manometer	PUMP2500.MANO-G1/2
1 pump holder	PUMP.HOLDER-3	1 high pressure pipe	PUMP.PIPE-G1/4
3 reduction nipples	(PUMP.NIPPLE-B-G1/4-G1/8, PUMP.NIPPLE-B-G1/4-G3/4, PUMP.NIPPLE-B-G1/4-G1/2)	1 storage case	
		Mass (including case) 12,75 kg	

Ordering designation for kit: **PUMP2500-0,2L-KIT**



FAG hydraulic units

Compressed air driven FAG hydraulic unit

The compressed air driven FAG hydraulic unit AGGREG-P1000-1/P2500-2 is mobile and comprises a 13 litre oil container made from light metal and two pumps (1 000 bar and 2 500 bar). We supply designs for other operating pressures by agreement.

The pump (2 500 bar) has two independently controllable outputs and is suitable as a pressure generation device for the hydraulic method for the expansion of shaft couplings and gears. The pump (1 000 bar) can drive a hydraulic nut at the same time. The pump is suitable for press fits with contact pressures up to 100 N/mm^2.

Scope of delivery:

basic unit, ready-to-use, including
1 manometer, 0 bar to 1 000 bar,
1 manometer, 0 bar to 2 500 bar,
3 high pressure hoses, 2 500 bar, 2 m long,
1 oil distributor

Compressed air driven FAG hydraulic unit

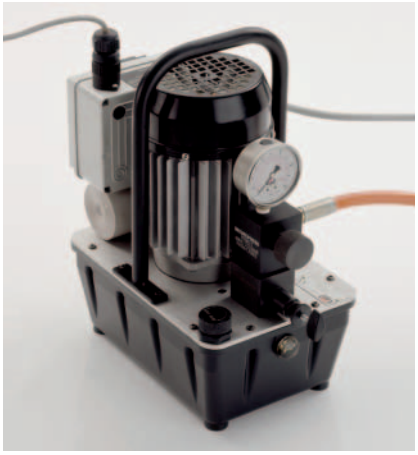
Hydraulic unit Ordering designation	Oil container volume l	Max. oil pressure bar	Mass ≈ kg
AGGREG-P1000-1/P2500-2	13	1 000 or 2 500	40 (without oil charge)

Electrically driven FAG hydraulic unit

These units are suitable for driving hydraulic nuts and for the mounting of large press fits such as ship shaft couplings, ships' propellers and gears (contact pressure up to 50 N/mm^2).
Electrical connection:
plug, voltage 400 V at 50 Hz.
Other voltages and frequencies by agreement.

Scope of delivery:

basic unit, ready-to-use, including
1 manometer, 0 bar to 1 000 bar,
1 high pressure hose, 1 000 bar, 2 m long
1 pressure control valve



Electrically driven FAG hydraulic unit

Hydraulic unit Ordering designation	Oil container volume (effective suction quantity) l	Oil volume flow l/min	Max. oil pressure bar	Motor power rating kW	Mass ≈ kg
AGGREG-E700	10	0,9	700	1,1	40 (with oil charge)

FAG hydraulic unit

Mobile FAG hydraulic unit for batch mounting

The mobile unit has a valve-controlled, double direction pressure cylinder (pressure force 700 kN, stroke 215 mm) driven by a motor pump. The height position of the cylinder can be varied between 290 and 690 mm by means of a lifting cylinder and rocker.

Accessories such as guide bushes, mounting sleeves, traction and pressure spindles and drawing frames must be ordered according to the individual application.

When making enquiries or placing orders, information on the bearing types and power connection as well as installation drawings (shaft, housing, additional parts) are required.

This unit is predominantly used for the mounting and dismounting of FAG wheelset bearings TAROL (see also TPI 156, Tapered roller bearing units TAROL – mounting and maintenance).

Ordering designation:
TAROL-RAILWAY-AGGREGATE

FAG accessories

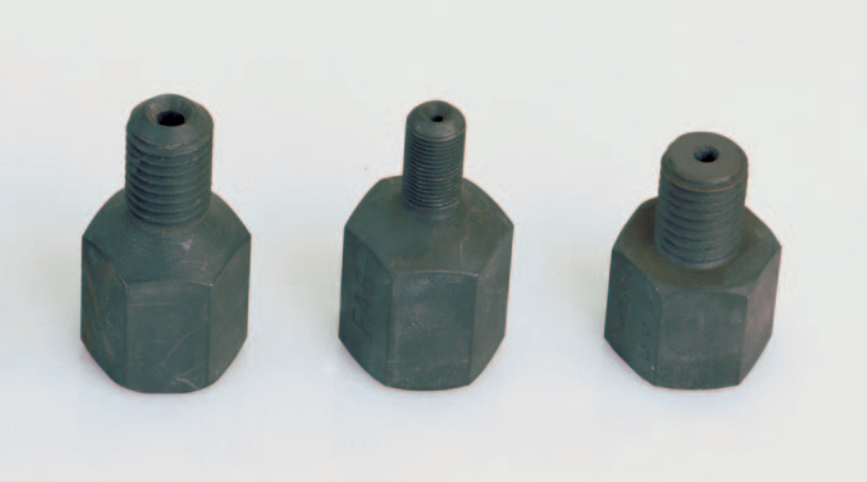
FAG accessories

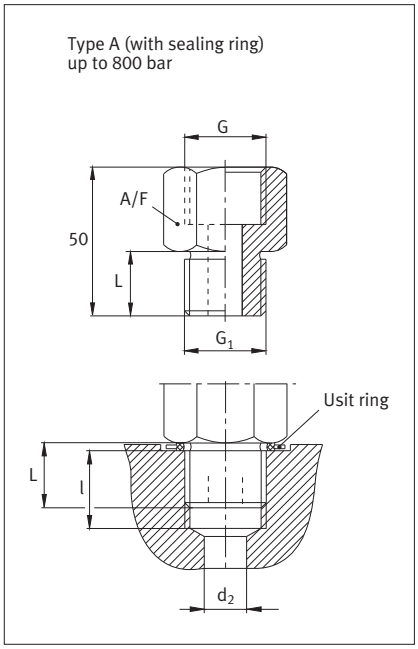
The FAG connectors include:

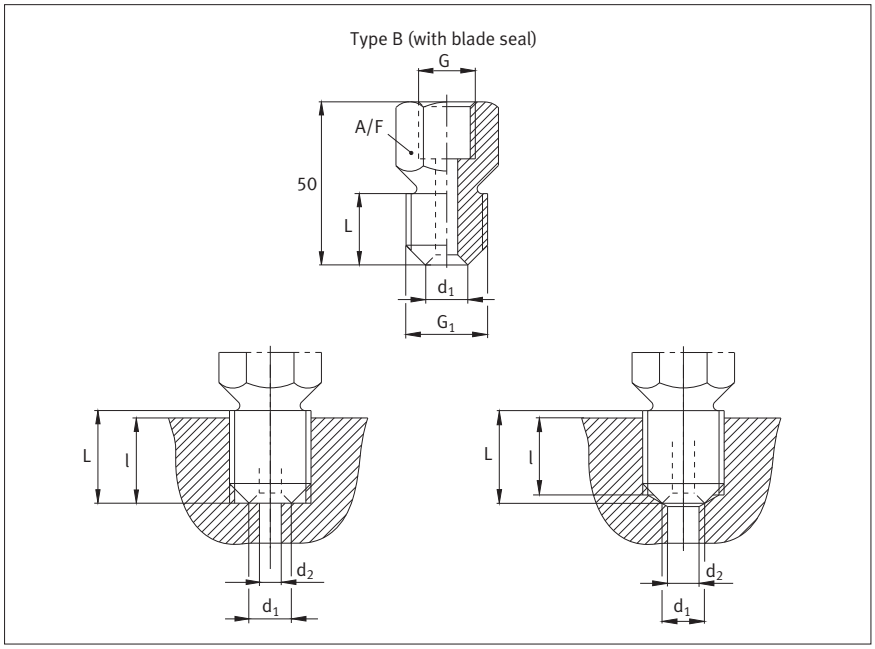
- Adapters and reduction nipples . . . . . .page 14
- Connectors for hand pump sets . . . .page 16
- Connectors for high pressure pump sets . . . . . .page 17

FAG adapters and FAG reduction nipples

Adapters and reduction nipples are matched to the threads of high pressure hoses and pressure pipes. Adapters and reduction nipples of **type A** (with sealing ring) are suitable for oil pressures up to 800 bar.
Type B (with blade seal) is suitable for oil pressures up to 2 500 bar.
In addition to the sizes listed here, we can supply other adapters and reduction nipples by agreement.







FAG accessories

FAG adapters

Adapters	G = G_1						
	G	G_1	d_1	L	Width across flats	Connecting bore $d_{2\ max}$	l
Ordering designation			mm		A/F		
PUMP.ADAPTER-A-G1/4	G¼	G¼		15	27	10	min 17
PUMP.ADAPTER-B-G1/4	G¼	G¼	8	17	27	5	max 15
PUMP.ADAPTER-A-G3/4	G¾	G¾		20	36	15	min 22
PUMP.ADAPTER-B-G3/4	G¾	G¾	13	22	36	9	max 20

FAG reduction nipples

Reduction nipples	G ≠ G_1						
	G	G_1	d_1	L	Width across flats	Connecting bore $d_{2\ max}$	l
Ordering designation			mm		A/F		
PUMP.NIPPLE-A-G1/4-G1/8	G¼	G⅛		15	27	7	min 17
PUMP.NIPPLE-B-G1/4-G1/8	G¼	G⅛	6	17	27	4	max 15
PUMP.NIPPLE-A-G1/4-G1/2	G¼	G½		20	32	15	min 22
PUMP.NIPPLE-B-G1/4-G1/2	G¼	G½	11	22	32	8	max 20
PUMP.NIPPLE-A-G1/4-G3/4	G¼	G¾		20	36	15	min 22
PUMP.NIPPLE-B-G1/4-G3/4	G¼	G¾	13	22	36	9	max 20
PUMP.NIPPLE-A-G1/4-M14	G¼	M14		15	24	10	min 17
PUMP.NIPPLE-B-G1/4-M14	G¼	M14	8	17	24	5	max 15
PUMP.NIPPLE-A-G1/4-M18X1,5	G¼	M18×1,5		18	27	13	min 20
PUMP.NIPPLE-A-G3/8-G1/4	G⅜	G¼		15	27	10	min 17
PUMP.NIPPLE-B-G3/8-G1/4	G⅜	G¼	8	17	27	5	max 15
PUMP.NIPPLE-A-G3/4-G1/8	G¾	G⅛		15	36	7	min 17
PUMP.NIPPLE-B-G3/4-G1/8	G¾	G⅛	6	17	36	4	max 15
PUMP.NIPPLE-A-G3/4-G1/4	G¾	G¼		15	36	10	min 17
PUMP.NIPPLE-B-G3/4-G1/4	G¾	G¼	8	17	36	5	max 15
PUMP.NIPPLE-A-G3/4-G3/8	G¾	G⅜		15	36	12	min 17
PUMP.NIPPLE-B-G3/4-G3/8	G¾	G⅜	10	17	36	7	max 15
PUMP.NIPPLE-A-M18X1,5-G1/4	M18×1,5	G¼		15	27	10	min 17
PUMP.NIPPLE-A-M18X1,5-G3/8	M18×1,5	G⅜		20	27	12	min 22
PUMP.NIPPLE-A-M18X1,5-G3/4	M18×1,5	G¾		20	36	15	min 22

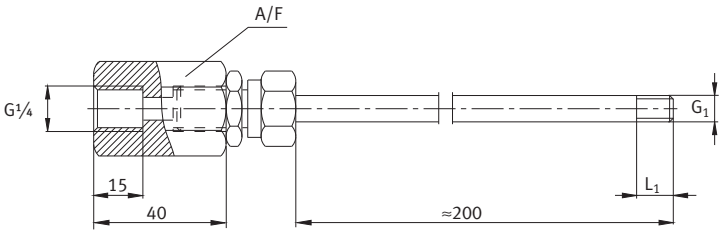
FAG accessories

For FAG hand pump sets 1000 bar

FAG sleeve connectors for adapter and withdrawal sleeves (up to 800 bar)

(special lengths available by agreement)

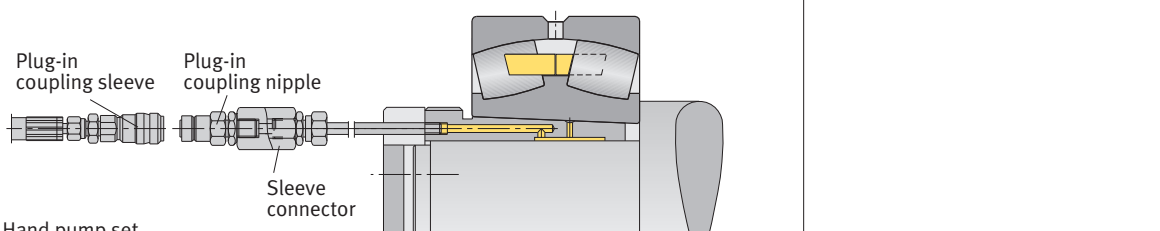
No seal is required for connection to adapter and withdrawal sleeves.



FAG sleeve connectors for adapter and withdrawal sleeves (up to 800 bar)

Connector Ordering designation	Dimensions Threaded connector G_1	L_1 mm	Outside ø × Thickness	A/F	Mass ≈ kg
PUMP.SLEEVE-CONNECTOR-M6	M6	6	6×2,25	24	0,22
PUMP.SLEEVE-CONNECTOR-M8	M8	10	8×2,5	24	0,245
PUMP.SLEEVE-CONNECTOR-G1/8	G⅛	11	10×2,5	24	0,285
PUMP.SLEEVE-CONNECTOR-G1/4	G¼	14	14×3	27	0,42

The connector for the hand pump set is G¼.



Sleeve connectors are used where, for example, a hand pump set cannot be connected directly to an adapter sleeve or withdrawal sleeve for reasons of space.

FAG accessories

For FAG high pressure pump PUMP2500-0,2L-KIT

FAG manometers

When selecting a manometer, pay attention to the maximum operating pressure.

FAG manometers

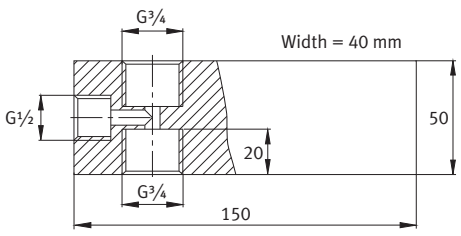
Manometer	Threaded connector	Pressure display	Diameter	Mass ≈
Ordering designation		bar	mm	kg
PUMP1000.MANO-DIGI	G¼	0 – 1 000	73	0,4
PUMP1000.MANO-G1/2	G½	0 – 1 000	100	0,8
PUMP1600.MANO-G1/2	G½	0 – 1 600	100	1,5
PUMP2500.MANO-G1/2	G½	0 – 2 500	160	1,7

FAG pump holders

FAG pump holders

Pump holder		Mass ≈
Ordering designation		kg
PUMP.HOLDER-3	with connector G½ for manometer	1,95

PUMP.HOLDER-3 (with manometer connector)

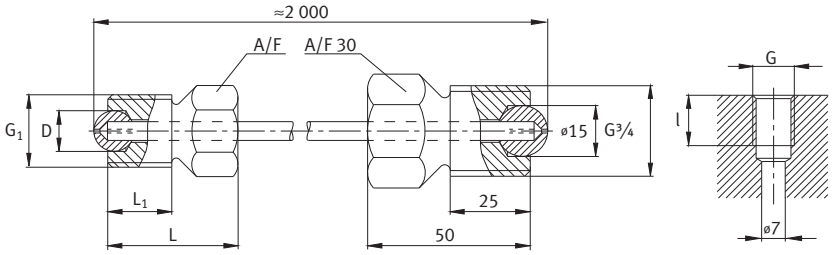


FAG accessories

For FAG high pressure pump sets PUMP2500-0,2L-KIT

FAG high pressure pipes,
sheathed in PVC hose

A manometer is used to check that the pressure does not exceed the maximum permissible pressure of 2 500 bar.



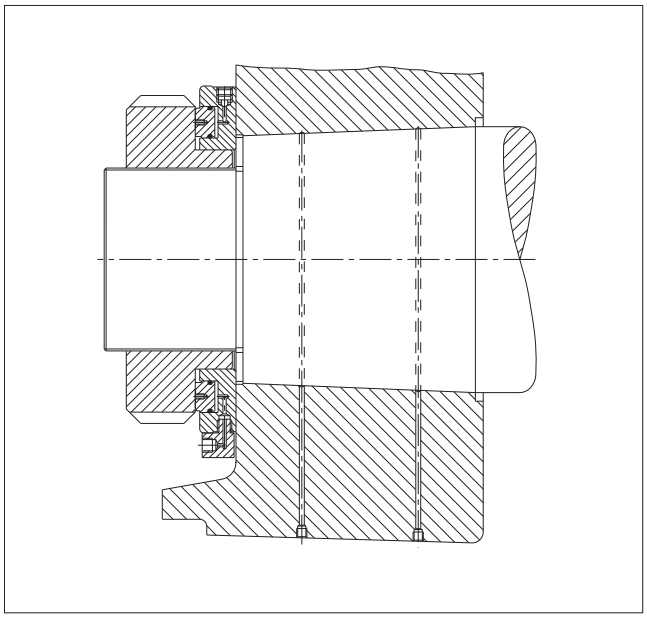
FAG high pressure pipes

High pressure pipe	Dimensions Connector	D	L	L_1	l	A/F	Mass ≈
Ordering designation	G_1=G	mm					kg
PUMP.PIPE-G1/4	G¼	11	35	15	15	17	0,6
PUMP.PIPE-G3/8	G⅜	11	40	20	18	24	0,6
PUMP.PIPE-G1/2	G½	11	50	25	20	24	0,6
PUMP.PIPE-G3/4	G¾	15	20	25	20	30	0,8

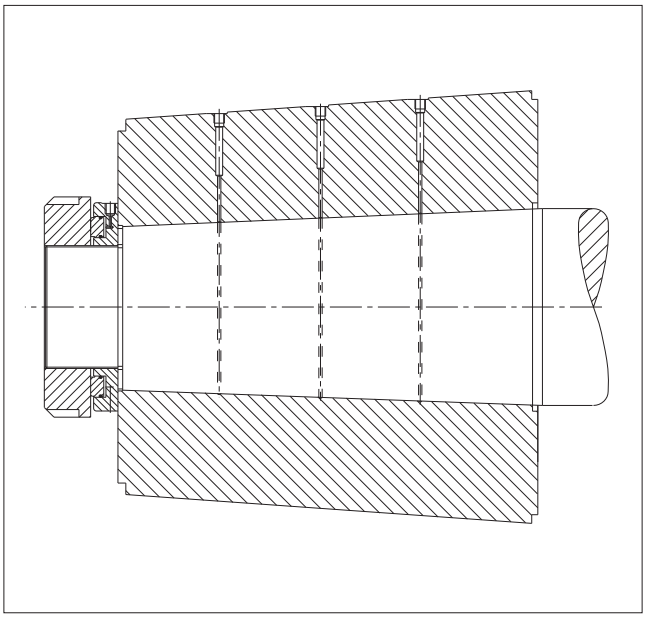
The connector for the pump holder is G¾.
For other connectors, a suitable reduction nipple must be used in addition.

General mounting assistance for the hydraulic method

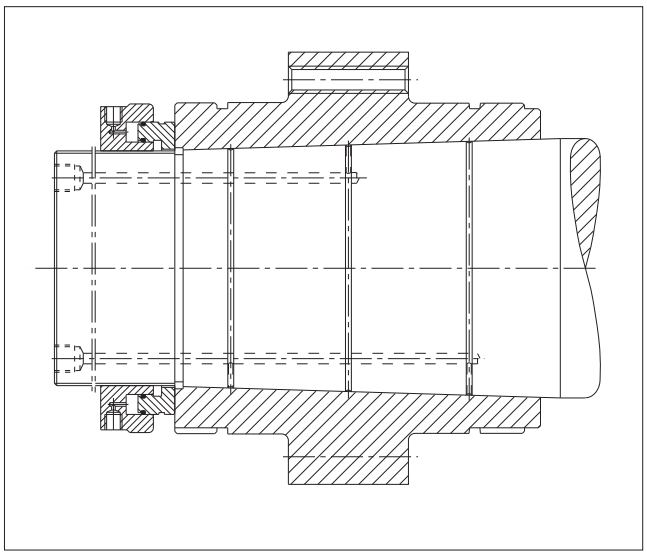
The use of FAG pressure generation devices is not restricted to the mounting of rolling bearings. Other press fits (e.g. in the mounting of gears, drive wheels and couplings) can also be realised by means of the hydraulic method, for example using FAG hydraulic nuts that are driven by FAG pressure generation devices. Considerable pressing forces are often required in general machine building and especially in shipbuilding. Such forces can be applied cost-effectively using FAG hydraulic nuts. The following pictures show examples of mounting practice.



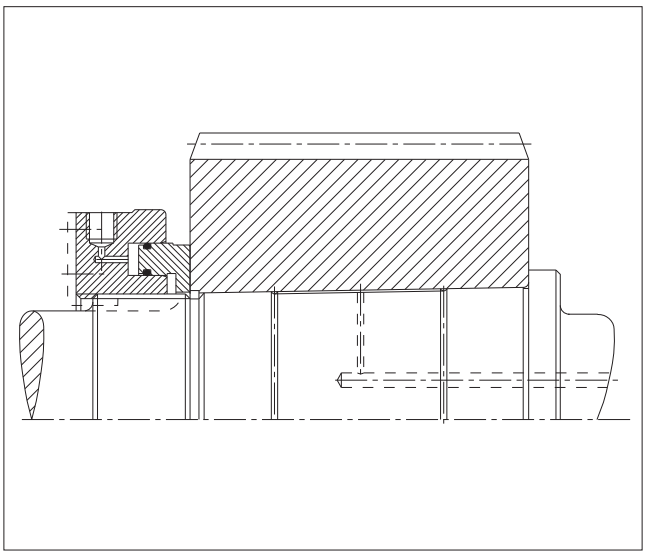
Mounting of a press fit between a rudder and rudder spindle



A hydraulic nut is used to realise the press fit between a propeller hub and ship driveshaft.



Mounting of a coupling



Gear mounting using a hydraulic nut

Comparison of ordering designations

Comparison of ordering designations	
Ordering designation, current (EP1)	**Ordering designation, old (Pxx)**
AGGREG-E700	AGGREGATE.E700
AGGREG-P1000-1/P2500-2	AGGREGATE.P1000/2500
INJECT1600 (~2500)	OILINJECTOR1600 (~2500)
INJECT1600.VALVE (~2500.VALVE)	OILINJECTOR1600.VALVE (~2500.VALVE)
INJECT1600-SET (~2500-SET)	OILINJECTOR1600.SET (~2500.SET)
PUMP1000-0,7L	PUMP1000.0,7L
PUMP1000-0,7L.SPARE-KIT	PUMP1000.0,7L.KIT
PUMP1000-4L (~8L)	PUMP1000-4L (~8L)
PUMP1000-4L-CONTROL	PUMP1000.4L.CONTROL
PUMP1000-4L-D (~8L-D)	PUMP1000.4L.D (~8L.D)
PUMP1000-4L.SPARE-KIT	PUMP1000.4L.KIT
PUMP1600-4L (~8L)	PUMP1600.4L (~8L)
PUMP1600-4L-D (~8L-D)	PUMP1600.4L.D (~8L.D
PUMP1600-4L.SPARE-KIT	PUMP1600.4L.KIT
PUMP2500-4L (~8L)	PUMP2500.4L (~8L)
PUMP2500-4L-D (~8L-D)	PUMP2500.4L.D (~8L.D
PUMP2500-4L.SPARE-KIT	PUMP2500.4L.KIT
PUMP2500-0,2L-KIT	PUMP2500.0,2L.SET
PUMP4000-0,2L	PUMP4000.0,2L
PUMP4000-0,2L.BODY	PUMP4000.0,2L.BODY
PUMP4000-0,2L.TANK	PUMP4000.0,2L.TANK
PUMP.ADAPTER-A-...(~B-...)	PUMP.ADAPTER.A....(~B....)
PUMP.HOLDER-3	PUMP.HOLDER.3
PUMP1000.MANO-DIGI	PUMP1000.MANO.DIGI
PUMP1000.MANO-G1/2	PUMP1000.MANO.G1/2
PUMP1600.MANO-G1/2	PUMP1600.MANO.G1/2
PUMP2500.MANO-G1/2	PUMP2500.MANO.G1/2
PUMP.NIPPLE-A-...(~B-...)	PUMP.NIPPLE.A....(~B....)
PUMP.PIPE-G..	PUMP.PIPE.G..
PUMP.SLEEVE-CONNECTOR-...	PUMP.SLEEVE.CONNECTOR....
TOOL-RAILWAY-AGGREGATE	TAROL.MOUNTING.AGGREGATE

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