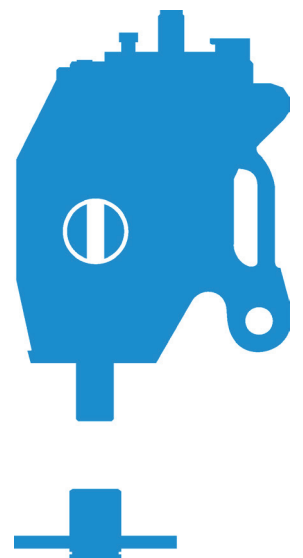




# OPERATING INSTRUCTIONS

Drilling gearbox DGB1000

Index 000



## **Congratulations!**

With a Hydrostress unit from TYROLIT you have chosen a tried and tested piece of equipment designed and built to the highest technical standards. Only genuine TYROLIT Hydrostress replacement parts can guarantee quality and interchangeability. If maintenance work is neglected or carried out inexpertly we will be unable to honour our warranty obligations. Any repair work must be carried out by trained personnel only.

Our after-sales service is available to help ensure that your TYROLIT Hydrostress units remain in perfect working order.

We hope that working with your TYROLIT unit will be a satisfying and fault-free experience.

TYROLIT Hydrostress

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## 1 Safety



These instructions are just one part of the documentation which is supplied together with the drilling gearbox. These instructions go together with the "Core Drill Safety Manual / System Description" to form a complete set of documentation.



### **DANGER**

Failure to comply with the safety instructions in the "Safety Manual / System Handbook" may result in serious injury or even death.

- ▶ Please ensure that the "Safety Manual / System Description for Core Drilling" has been read and understood in full.



### **DANGER**

#### **Risk of cutting injuries from the drill bit!**

- ▶ Safety gloves must be worn when working on core drilling equipment, particularly the drill bit.



### **DANGER**

#### **Risk of serious injuries from using excessive speed!**

- ▶ Please ensure that the correct speed has been selected using gear 1 or 2 before starting. For speed table see pages 12 and 13.



### **DANGER**

#### **Risk of serious injuries from using system components that are too weak!**

- ▶ Only use approved TYROLIT Hydrostress system components  
For approved system components see pages 6 and 7.

## 2 Description

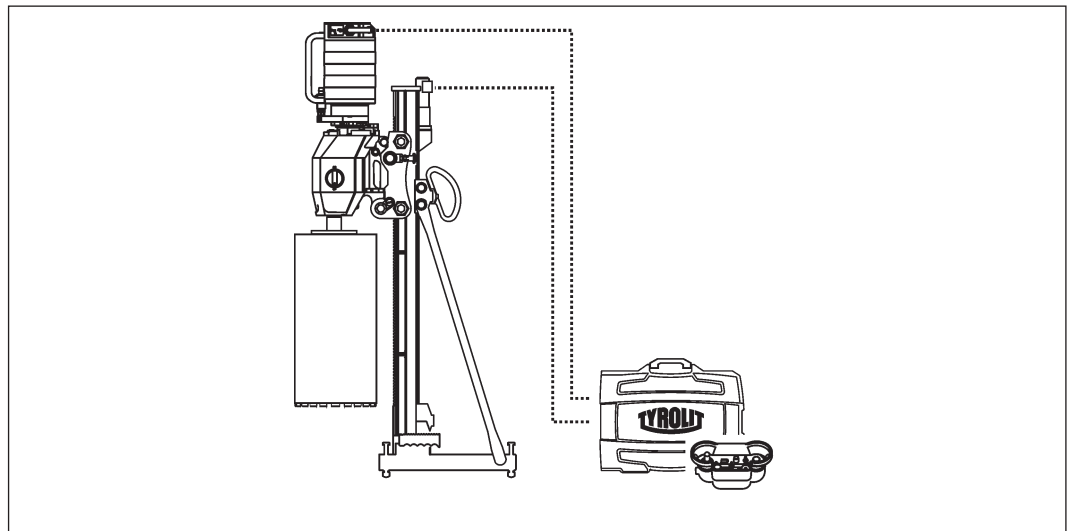
### 2.1 General description

Drilling gearbox for large core bore holes using an electric drive motor or a hydraulic motor.

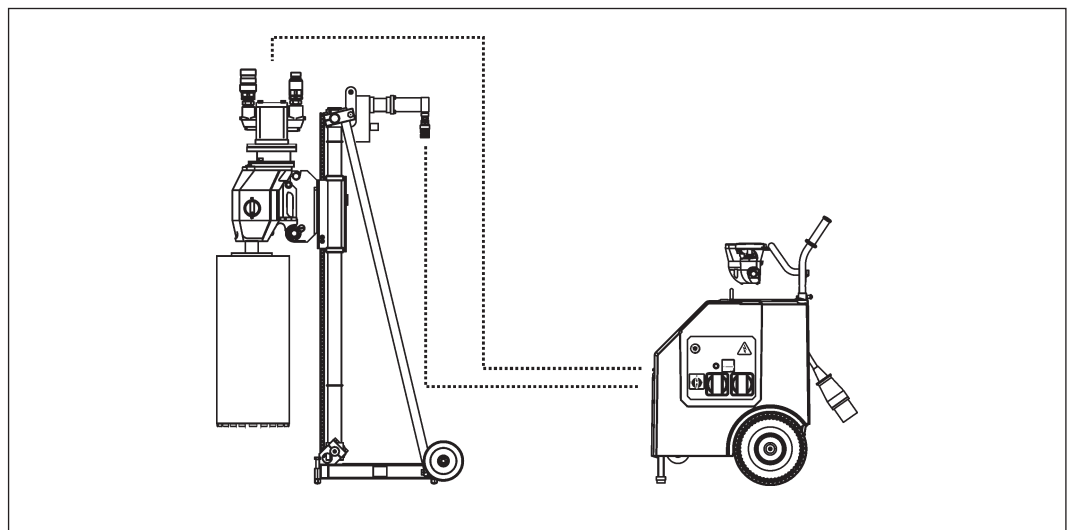
### 2.2 Use for correct purpose

Mobile drilling gearbox for driving with an electric drive motor / controller or a size 2 hydraulic motor with a suitable drive unit. For construction site use, for drilling (reinforced) concrete in all locations, for wet cutting only, for industrial use only, unsuitable for use in potentially explosive areas.

#### Electric drilling system

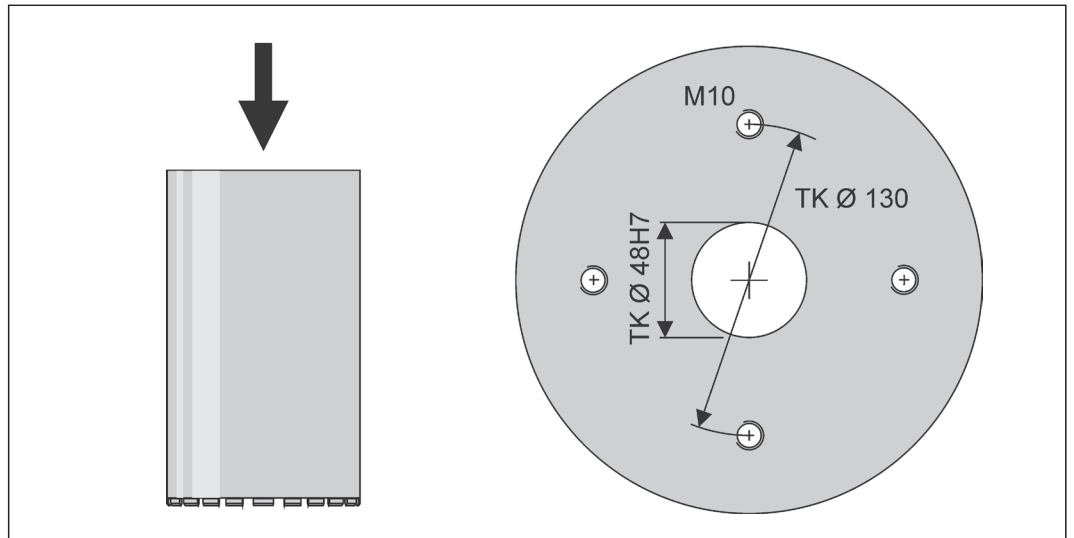


#### Hydraulic drilling system

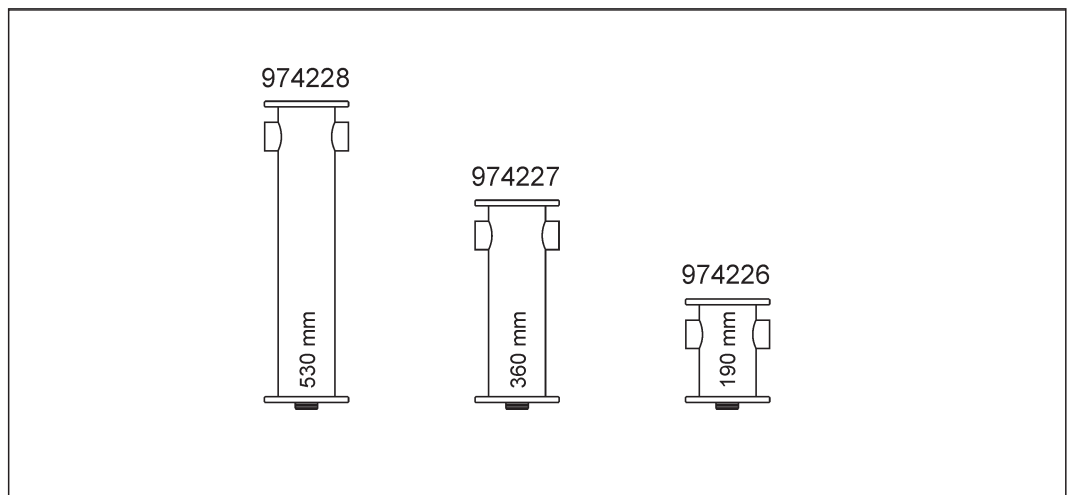


## 2.3 Diamond tool

### Drill bit hole pattern

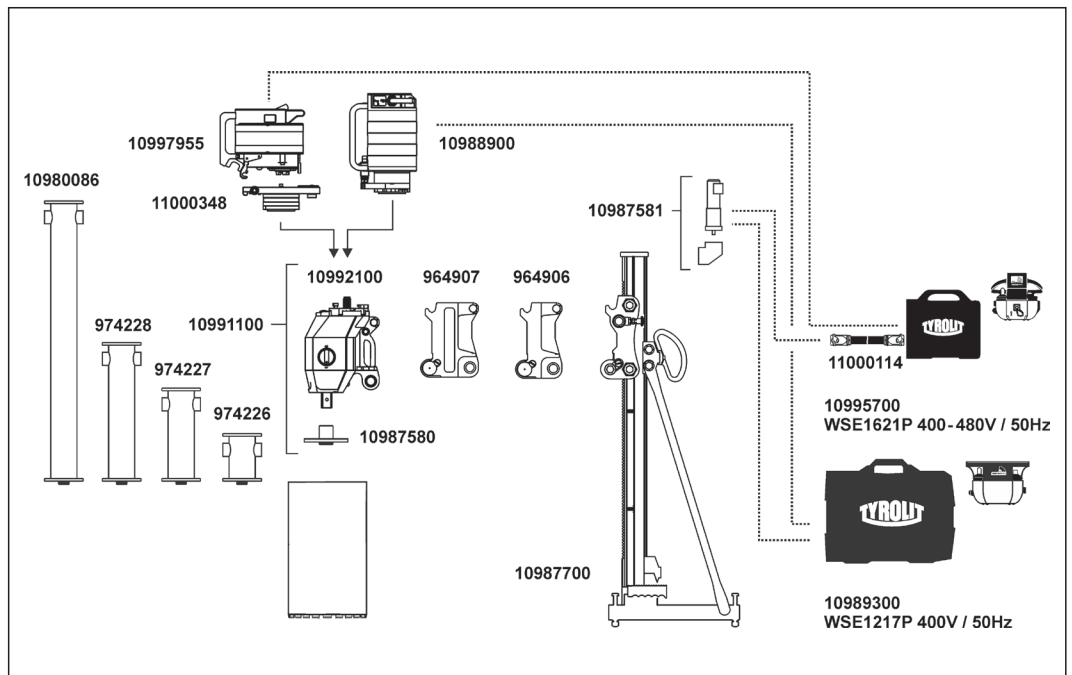


### Drill bit extensions

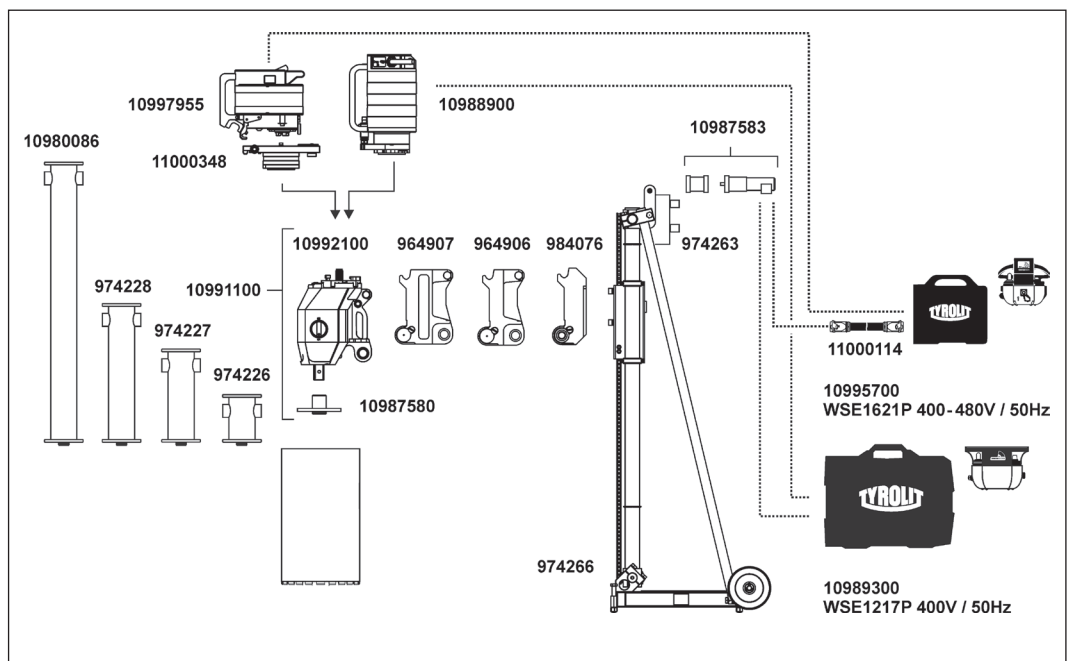


## 2.4 Core drilling system

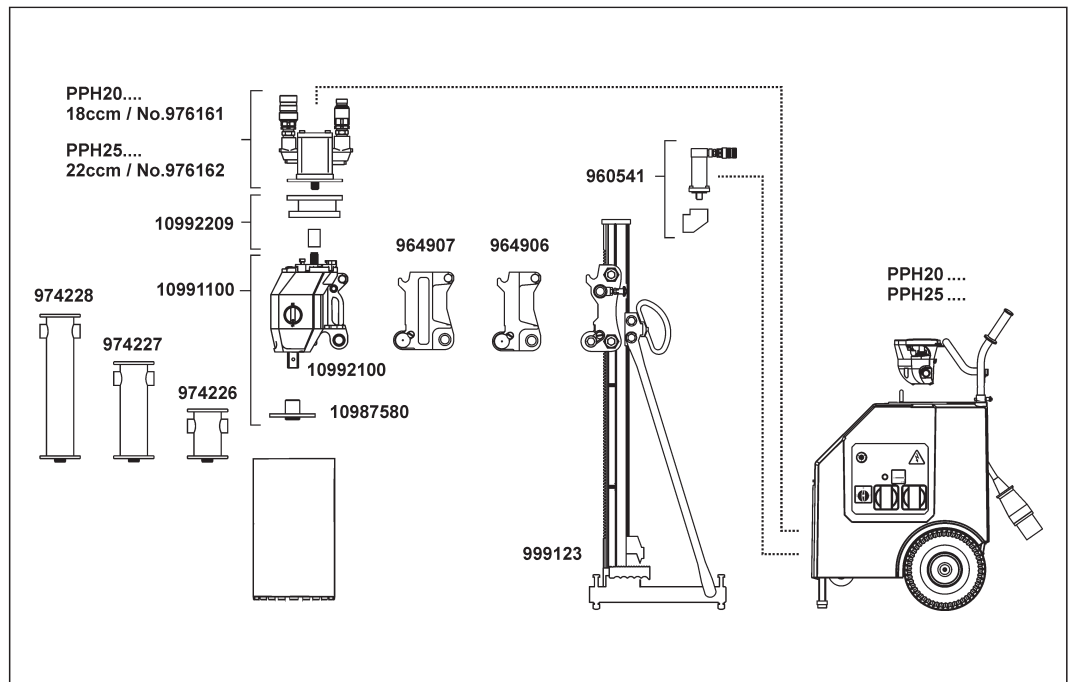
### Core drilling system, electrical, from Ø150 mm to Ø500 mm



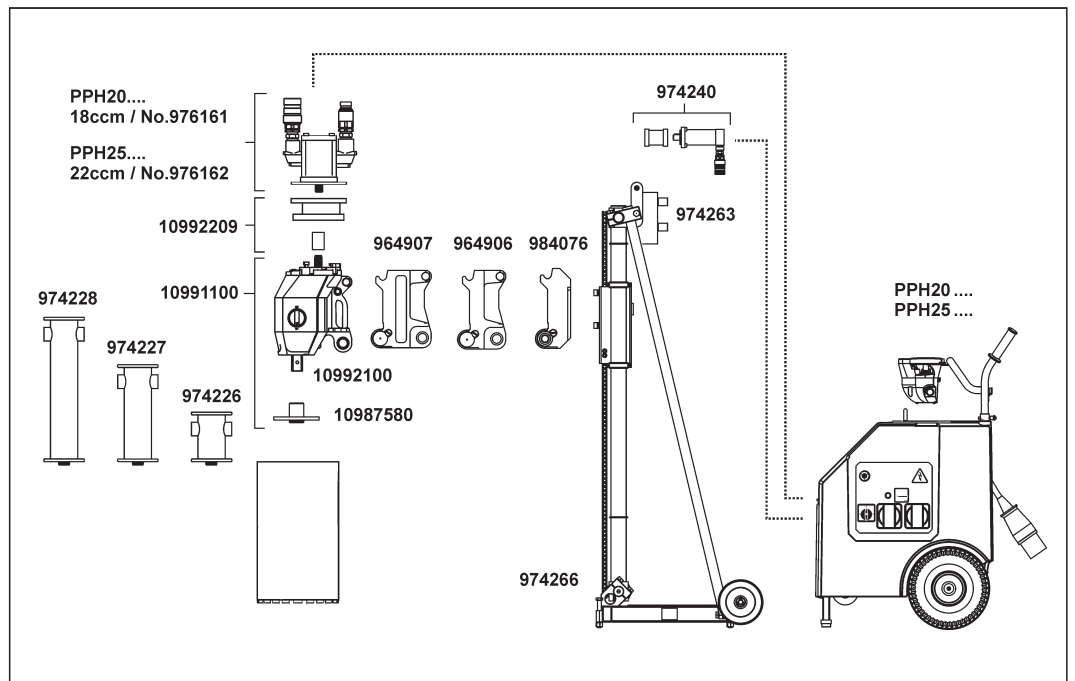
### Core drilling system, electrical, from Ø150 mm to Ø1000 mm



**Core drilling system, hydraulic, from Ø150 mm to Ø500 mm**

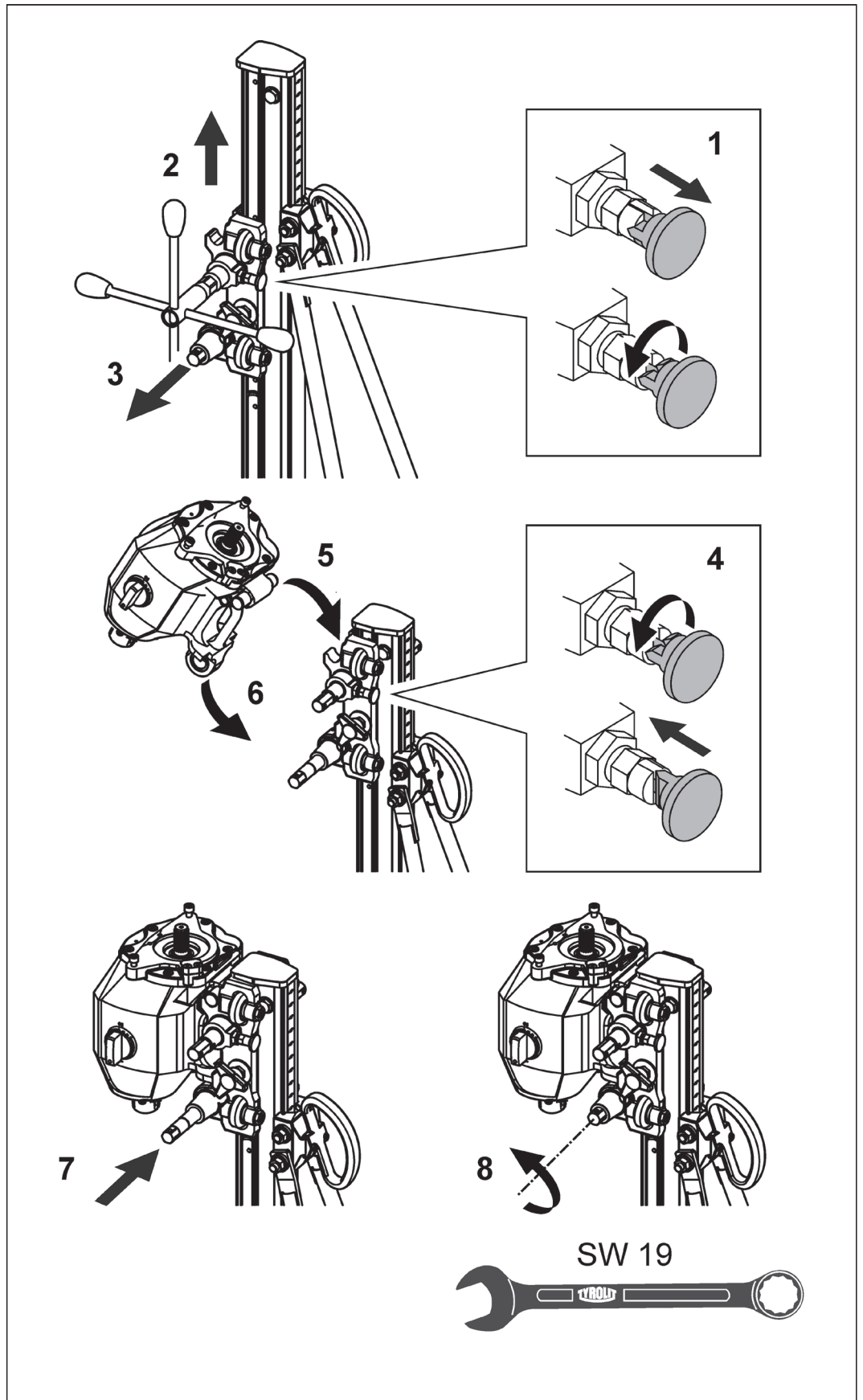


**Core drilling system, hydraulic, from Ø150 mm to Ø1000 mm**



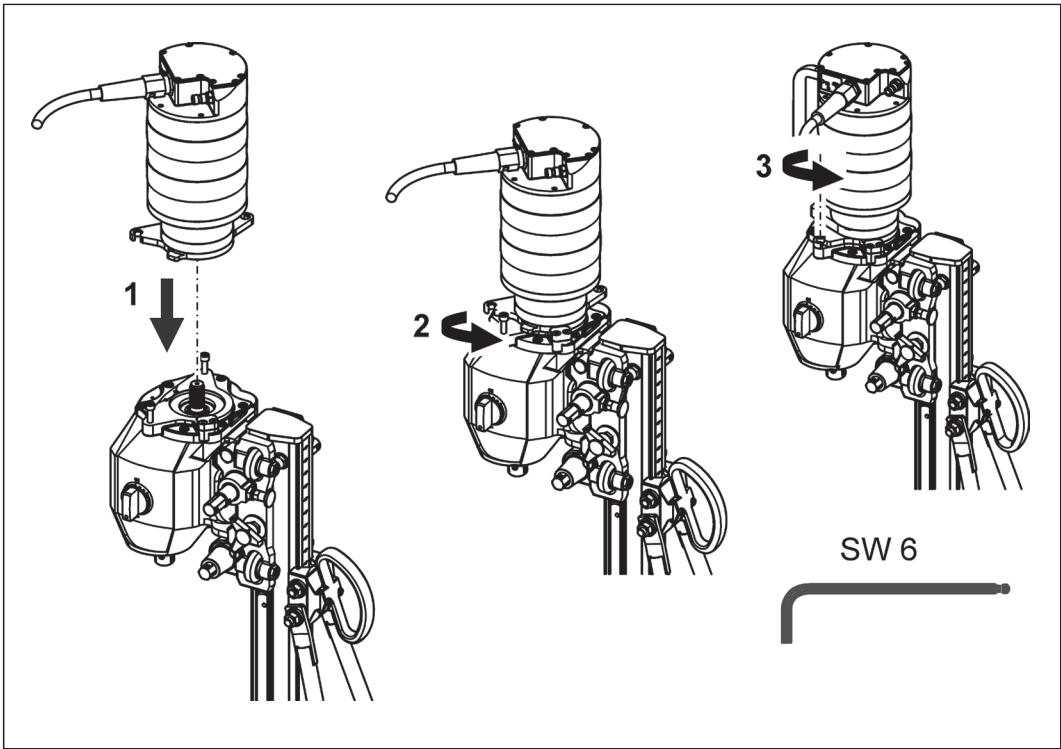
### 3 Assembly

#### 3.1 Drilling gearbox installation

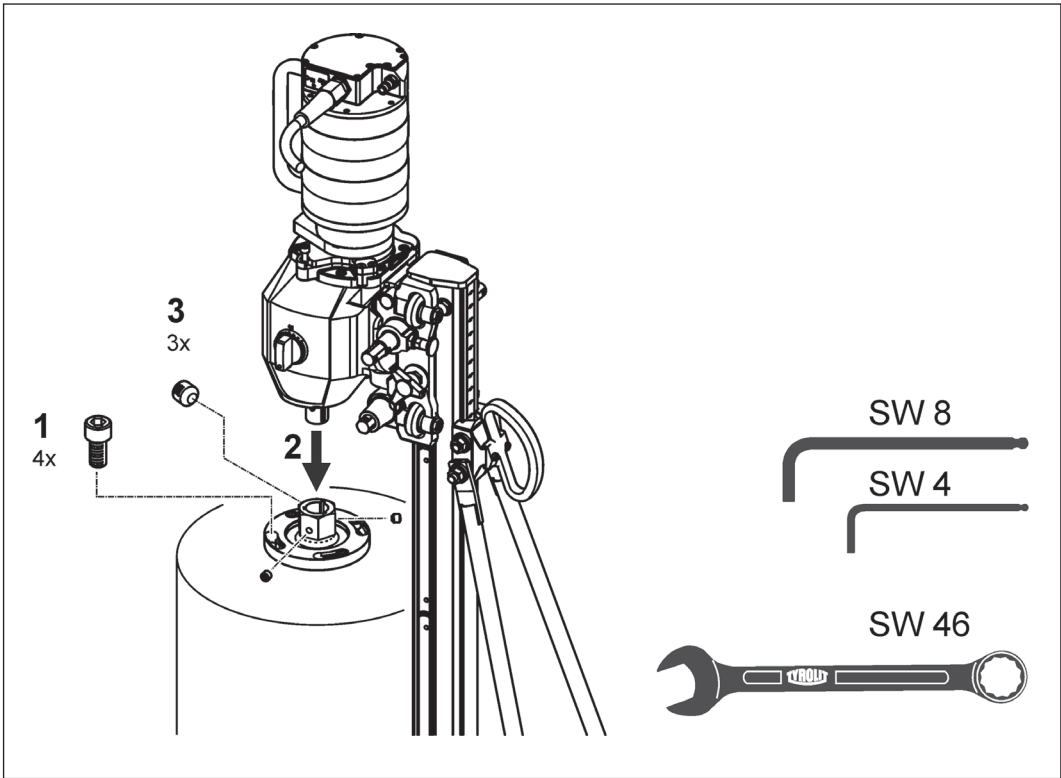




3.2 Drilling motor installation

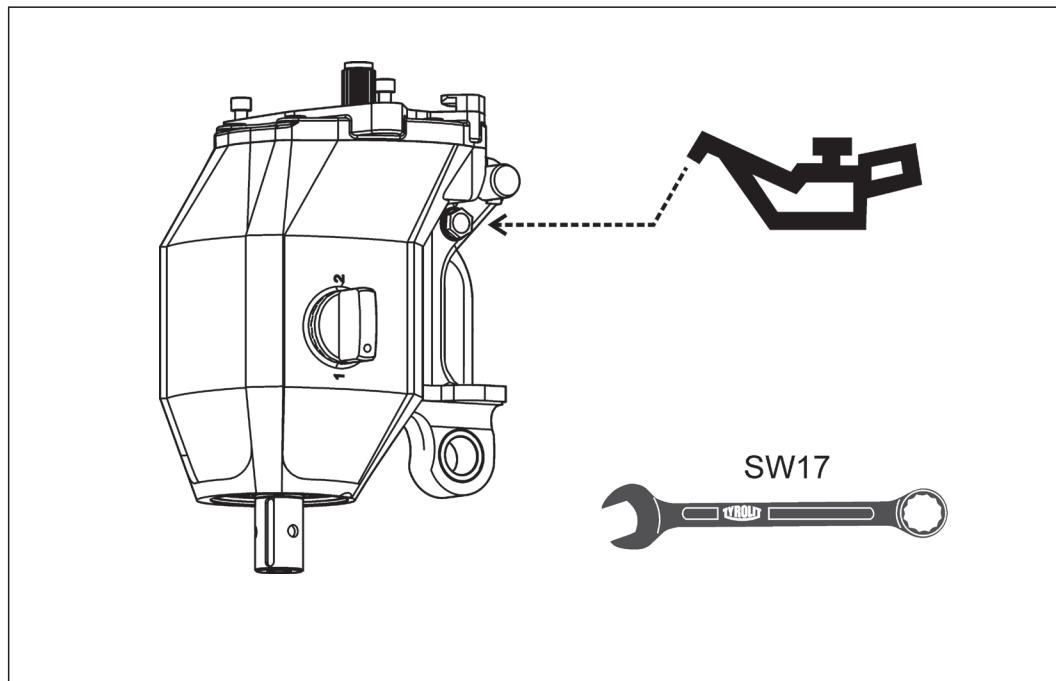


3.3 Drill bit installation



## 4 Servicing

### 4.1 Gear oil



Only use «Klüber GEM 4-150N» gear oil, TYROLIT no. 10979557 / 2x0.5l.

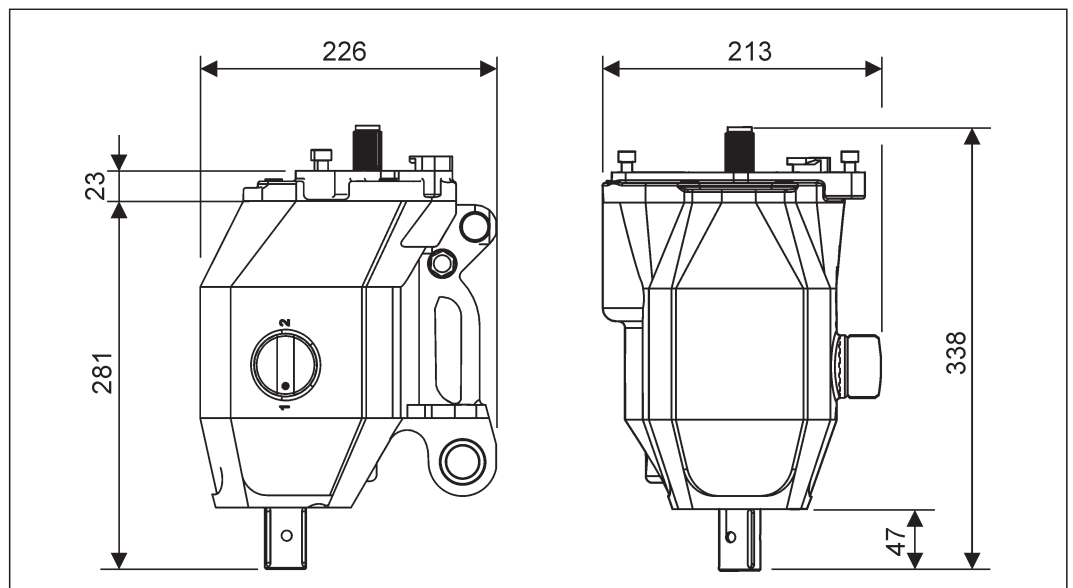
### 4.2 Service



The service must be carried out by TYROLIT Hydrostress AG or an authorised representative after 1 / 3 / 5 / 7 years of operation.

## 5 Technical data

### 5.1 Dimensions



Dimensions in mm

### 5.2 Gearbox data

Parameter	Value
Max. drill bit diameter	Max. Ø1000 mm
Weight	15.7 kg
Deployment temperature	-10 °C to +50 °C
Gearbox	2-gear, mechanical Gear 1 $i = 1:18.5$ Gear 2 $i = 1:5.9$
Overload coupling	Multidisk clutch

### 5.3 Lubricating grease / gear oil



Parameter	Value	
Gear oil	«Klüber GEM 4-150N», 0,5l TYROLIT No. 10979557 (2x0.5l)	
Lubricating grease	Penetration	265 to 295 NLGI
	NLGI	2

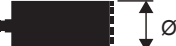
### 5.4 Speed tables






TYROLIT Hydrostress AG recommends a circumferential speed of 2-6 m/s.

#### Hydraulic drive units

Hydraulic drive units PPH20 ... / Hydraulic motor 19 cm <sup>3</sup>																			
STAGE	GEAR	2-6 m/s																	
 PPH20 ...	 DGB1000P																		
4	1					2.2	2.7	3.1	3.6	4.0	4.4	4.9	5.3	5.8					
4	2	2.8	3.3	4.2	5.6														
3	1						2.2	2.6	3.0	3.3	3.7	4.1	4.5	4.8	5.2	5.6	5.9		
3	2	2.3	2.8	3.5	4.6	5.8													
2	1							2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.1	4.4	4.7	5.0	5.3
2	2		2.2	2.8	3.7	4.6	5.6												
1	1								2.0	2.2	2.4	2.7	2.9	3.2	3.4	3.7	3.9	4.2	4.4
1	2			2.3	3.1	3.8	4.6	5.3											
		100	120	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
		950	1000																





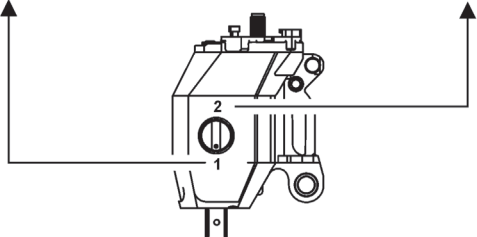
Hydraulic drive units PPH25 ... / Hydraulic motor 22 cm <sup>3</sup>																			
STAGE	GEAR	2-6 m/s																	
 PPH25 ...	 DGB1000P																		
4	1					2.2	2.6	3.0	3.5	3.9	4.3	4.8	5.2	5.6					
4	2	2.7	3.3	4.1	5.4														
3	1						2.2	2.6	3.0	3.3	3.7	4.1	4.5	4.8	5.2	5.6	5.9		
3	2	2.3	2.8	3.5	4.6	5.8													
2	1							2.2	2.5	2.8	3.1	3.4	3.7	4.0	4.3	4.6	5.0	5.3	5.6
2	2		2.3	2.9	3.9	4.8	5.8												
1	1								2.0	2.2	2.5	2.8	3.1	3.3	3.6	3.9	4.2	4.5	4.7
1	2		2.1	2.6	3.5	4.4	5.2												
		100	120	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
		950	1000																





### 5.5 Name plate with reference value table

		TYROLIT Hydrostress AG CH-8330 Pfäffikon ZH				
Index	Serial No.	<b>DGB1000***</b>			Article No. 10992100	Weight 14kg
<b>GEAR 1 CORE BIT Ø</b>		<b>SWITCH RADIOCONTROL</b>			<b>GEAR 2 CORE BIT Ø</b>	
		PPH20... 18ccm	PPH25... 22ccm	WSE1217P		
250 - 400		4	4	650	100 - 120	
400 - 550		3	3	800	120 - 150	
550 - 700		2	2	1000	150 - 200	
700 - 1000		1	1	1200	200 - 250	


**DANGER**

**Risk of serious injuries from using excessive speed!**

Please ensure that the speed is correct using gear 1 or 2 before starting.

## 6 EC Declaration of Conformity

Description	Drilling gearbox
Type designation	DGB1000★ ★ ★
Year of construction	2011

We declare under our sole responsibility that this product complies with the following directives and standards:

### Directive applied

2006/42/CE	17.05.2006
------------	------------

### Applied standards

EN ISO 12100:2010  
EN 12348/A1:2009

**TYROLIT Hydrostress AG**  
Witzbergstrasse 18  
CH-8330 Pfäffikon  
Switzerland

Pfäffikon, 28.11.2011



Pascal Schmid

