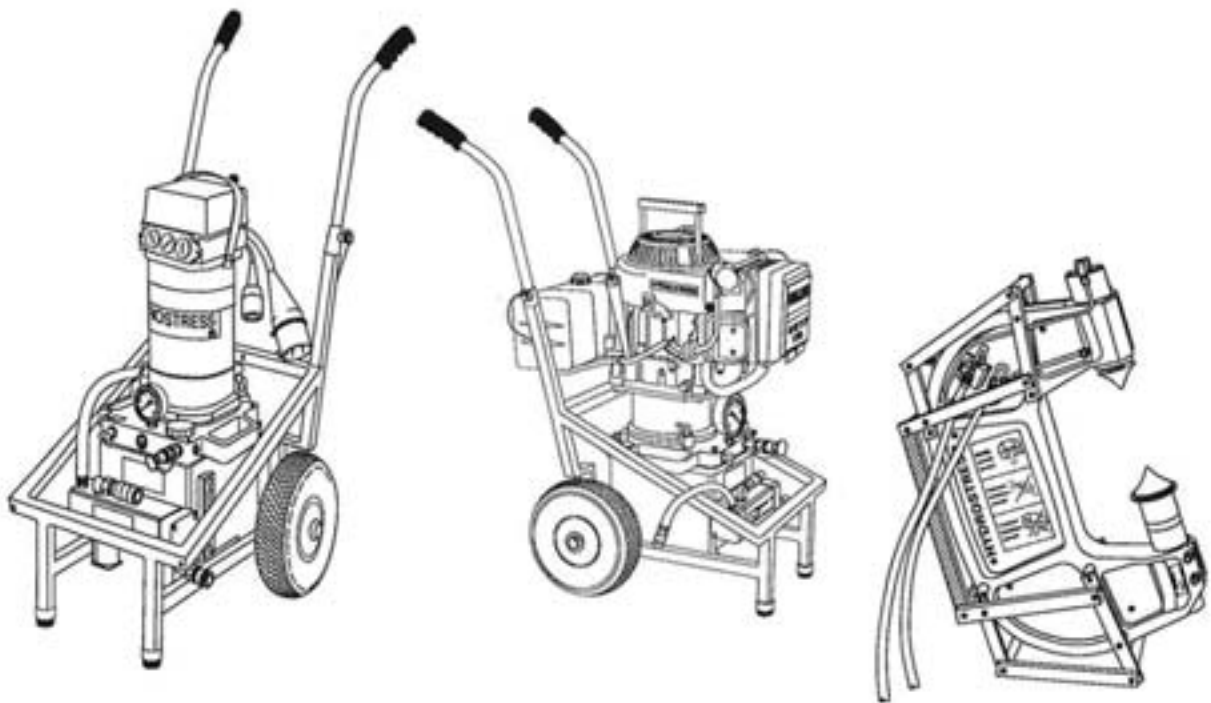


OPERATING INSTRUCTION AND SPARE PARTS LIST



CONCRETE CRUSHING SYSTEM BW-2/BW-2B/BZ

January 1993

PREFACE

Dear customers,

congratulations on having decided to buy a HYDROSTRESS system - you acquired a highly sophisticated and reliable state-of-the-art unit.

Due to our special efforts in the field of quality assurance, the concrete crushing system BW-2/BW-2B/BZ is a further Swiss, top-of-the-range product:

- unmatched weight per unit of drive
- reliable operation
- high mobility
- easy handling

This manual contains any information required for operation, maintenance, and ordering of spare parts. The exclusive use of genuine HYDROSTRESS spare parts ensures quality and interchangeability.

In the case of neglected or inappropriate maintenance, we refuse to accept any warranty commitment as specified in our terms of delivery.

Any repair work is to be carried out by trained specialists exclusively.

Should you need to know more details concerning your HYDROSTRESS system in order to keep it in perfect condition, please contact our after-sales service for further information.

We would be pleased to hear that working with your HYDROSTRESS system was without any difficulties and troublefree.

HYDROSTRESS® AG

The Management

These instructions are only valid for the concrete crushing system BW-2/BW-2B/BZ, mutation code 001 and 002 (see type plate). Technical data is only valid for power packs with a connected load of 3 x 380 V/ 50 Hz. Technical modifications reserved that do not affect handling and function.

Edition January 1993, mutation code 001

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1993

In this manual we use the following remarks:

CAUTION

This headline indicates that any inappropriate compliance or noncompliance of instructions or procedures may cause injuries or fatal accidents.

IMPORTANT

This headline indicates that any inappropriate compliance or noncompliance of instructions or procedures may damage the unit.

NOTICE

The headline indicates an important feature.

Please observe any instructions and safety regulations attached to the unit.















Abbreviations:




ETL - Spare parts list
NA - Not shown in the illustration
Fig. - Figure
Tab. - Table

In the following description the power units BW-2 and BW-2B will only be referred to as the units.

GENERAL SAFETY REGULATIONS

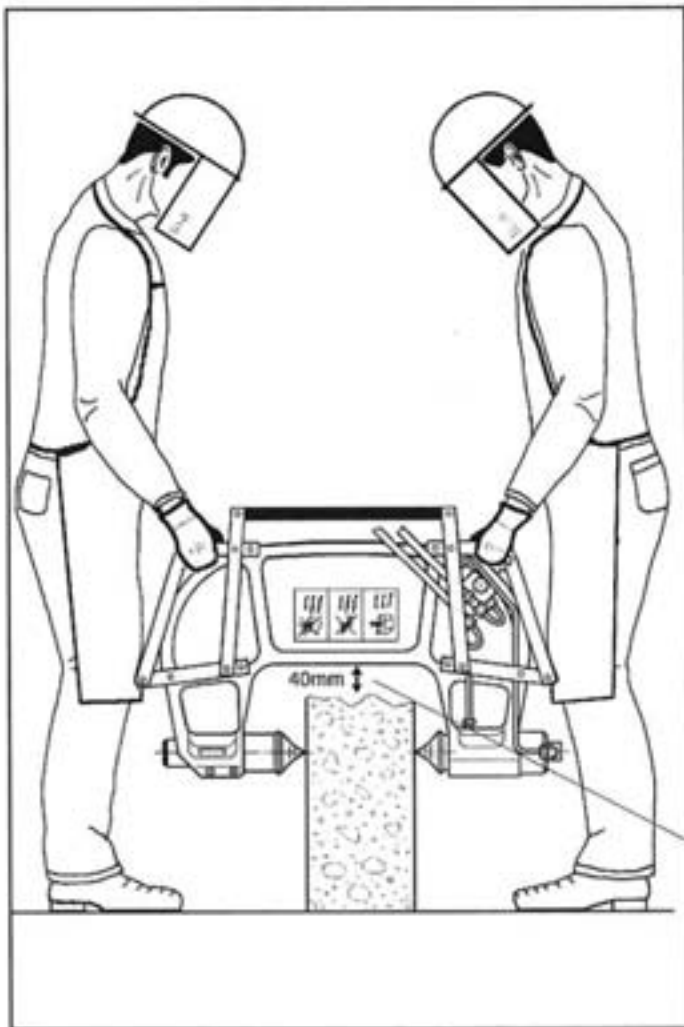
Please read these safety regulations very carefully !

-  **Crusher BZ must only be used for crushing concrete and natural stone. HYDROSTRESS refuses any warranty and liability if the unit is not used for its intended purpose.**
-  **This unit operates at high pressure (780 bar). Check the unit as well as the crusher before starting your work according to our instruction (see section 5).**
-  **Make sure that the hydraulic lines cannot be damaged by falling concrete pieces.**
-  **Never connect or disconnect hoses when the unit is running.**
-  **Maximum water pressure is 10 bar. If the local water supply provides water at a higher pressure, be sure to insert a pressure reducing valve.**
-  **Never modify the crusher body (e.g. no boreholes or welding). Modifications and repair works must always be carried out either by HYDROSTRESS or by an authorized HYDROSTRESS representation.**
-  **Observe the maximum working pressure of the connected unit.**
-  **Operate the unit only in its normal, upright position.**
-  **With ambient temperatures below 0 C and prior to longer stops of the unit remove and blow out the cooling water when having finished operation.**
-  **Before carrying out any maintenance and repair works make sure that the spark plugs of the engine are removed, the power unit is currentless and that there is no pressure in the hydraulic system.**
-  **Carry the crusher only by its carrying device for operational and transport purposes.**
-  **Never, not even temporarily, operate the electric motor of the unit without running cooling water. HYDROSTRESS refuses any liability for damages resulting thereof.**
-  **Connect only HYDROSTRESS equipment to the unit. HYDROSTRESS refuses any liability if other than genuine equipment was used.**
-  **Observe all general and specific regulations for prevention of accidents of the relevant professional and insurance associations.**

-  Only genuine HYDROSTRESS spare parts will ensure the perfect operation of the unit. HYDROSTRESS declines any liability for damages resulting from the use of other than genuine components.
-  Do not operate the unit BW-2B within closed rooms. Carry out refuelling only outdoors or in well-ventilated rooms and only when the motor is shut down.
-  Do not touch the sound absorber during operation. You risk to be seriously burnt.

SAFETY REGULATIONS FOR PREVENTION OF ACCIDENTS

CAUTION
 Nonobservance of the following safety regulations implies risk of accident.

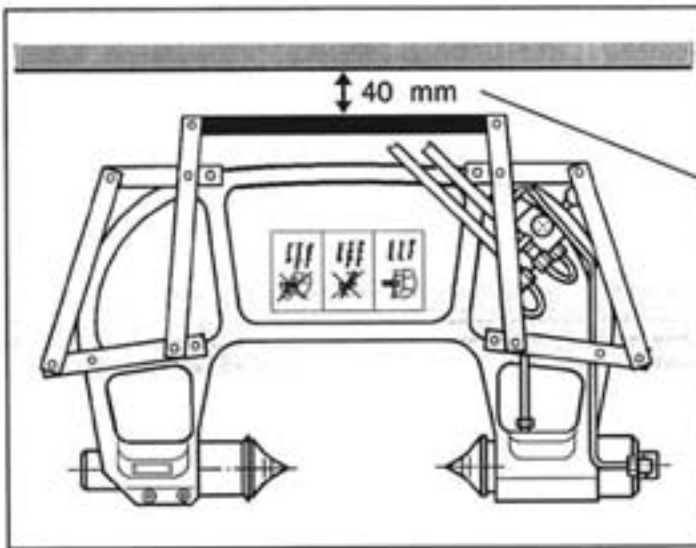


1. Only instructed personnel, familiar with the system, is allowed to operate the crusher.
2. When operating the unit, wear a helmet with face screen or eye protectors, gloves, a leather apron and boots with instep and shinbone protection (order indications see section 9).
3. Always set the crusher to the walling in crosswise direction.

IMPORTANT

Minimum distance:
40 mm

Nonobservance of this distance may damage the crusher body.

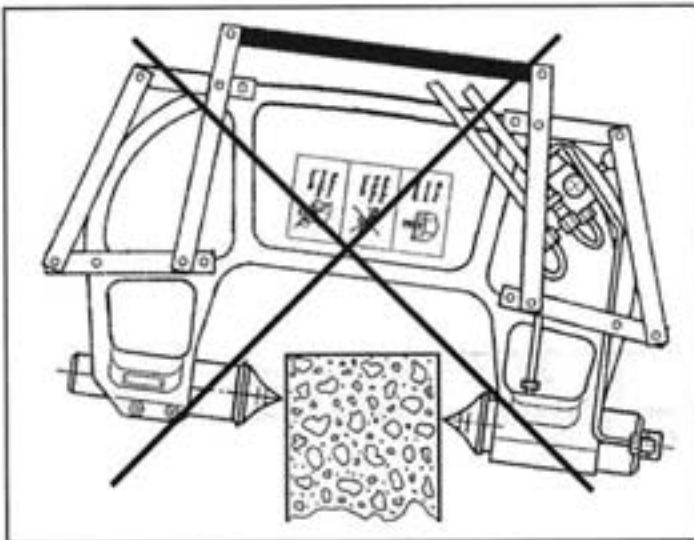


IMPORTANT

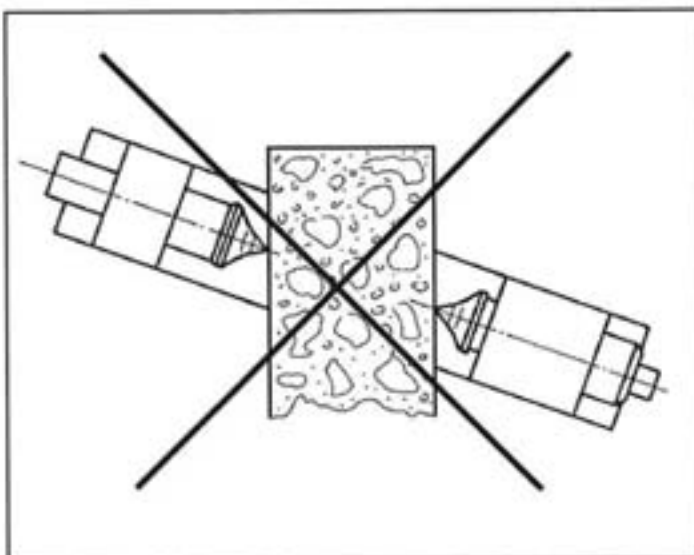
Minimum distance:
40 mm

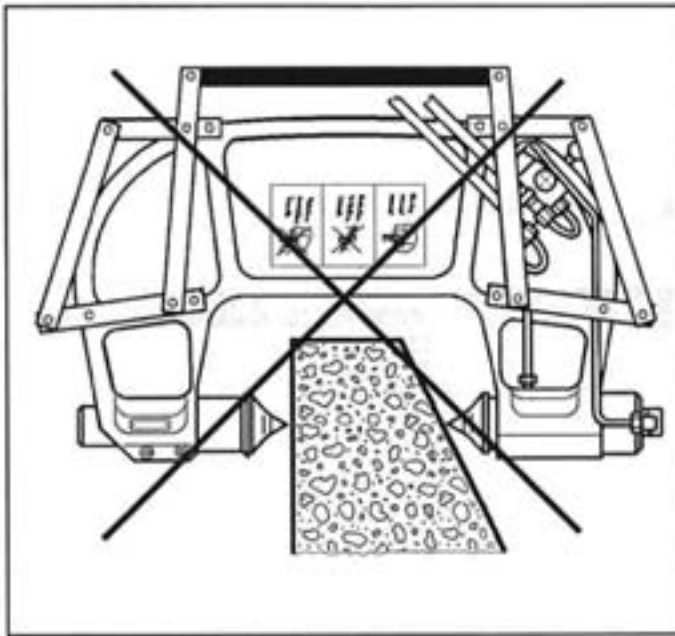
Nonobservance of this distance may damage the carrying device.

If the red carrier side rails are damaged the pliers shackles could be damaged too.

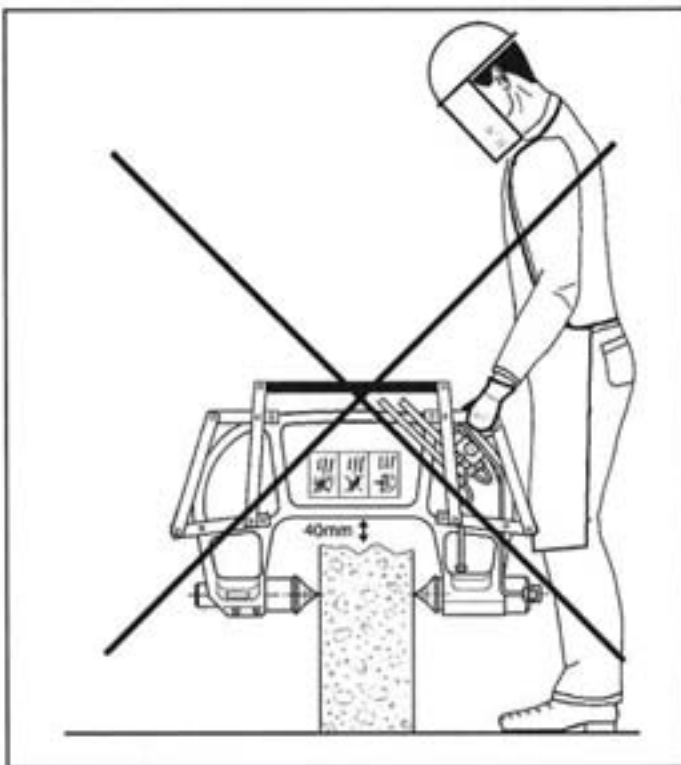


4. Never set the crusher in bias to the walling or tilt it.





5. Never set the crusher to biased or round surfaces.



6. The crusher must always be operated by two persons. Never handle the crusher when alone, unless the crusher is suspended by appropriate devices such as a crane.

7. Secure the danger area by information signs or by barriers.

IMPORTANT

- Inappropriate application may deform or destroy the crusher.
- Do not modify the crusher body, such as apply additional bore holes or weldings. Modifications and repair works must only be carried out by HYDROSTRESS or by an authorized HYDROSTRESS representation.

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TECHNICAL DATA

Crusher BZ

Total weight:	39 kg
Hydraulic cylinder:	- High pressure at crushing - Low pressure at removing
Maximum crushing power:	30 t
Wall thickness:	10 - 30 cm

Power Unit BW-2

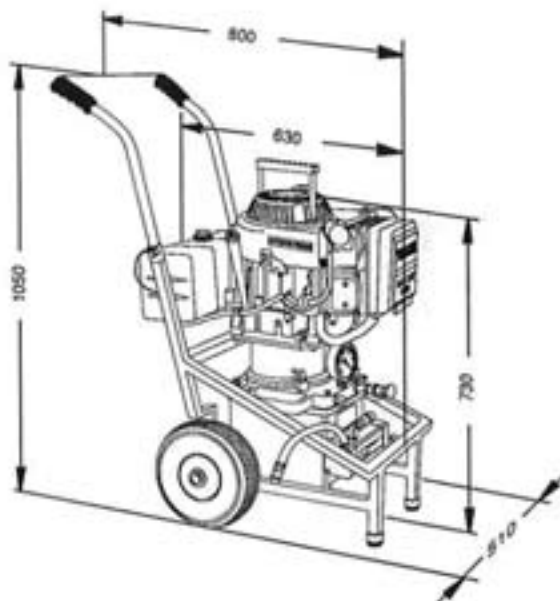
Total weight:	60 kg
Tire pressure:	2,3 bar
Driving motor:	Water-cooled, light-metal electric
- Power supply	380 V/50 Hz, 5-lead cable, 2.5 mm ²
- Power consumption	16 A at maximum load
- Output	5.7 kW (8 PS)
- Type of protection	IP 44
- Revolutions/min	2920 rpm
- Flow rate of cooling water at a water temperature of 25 °C	5 l/min
- Overload protection	Protective motor switch
Electric control:	
- Protective motor switch:	Thermal type (heat package)
- Operation:	On/Off switch on protective motor switch
- Secondary current supply:	Secondary socket 220 V/10 A

Power Unit BW-2B

Total weight:	75 kg
Tire pressure:	2,3 bar
Driving motor:	
- Carburetor type petrol engine	2 cylinder four-stroke V-engine
- Brand	Briggs and Stratton
- Type	Vanguard OHV
- Output	11 kW (15 PS)
- Revolutions/min	3000 rpm
- Cooling	Air cooling
- Fuel	Non-leaded petrol, octane number minimum 77 (in exceptional cases also regular petrol can be used)
- Tank capacity	7 l
- Engine oil	See „Maintenance“
Hydraulic design:	
- Tank capacity	7 l
- Radial piston pump	7.4 l/min., max. 750 bar
- Hydraulic couplings	Drip-free
- Filter refinement	10 µm
- Oil quality	Recommended: - Mobilfluid 316 or - Mobil D.T.E. 15
	For further details please refer to section „Maintenance“
- Length of hose packages	8 m
- Oil	Water/oil heat exchanger
- Water supply	10 bar max., 1 bar min.

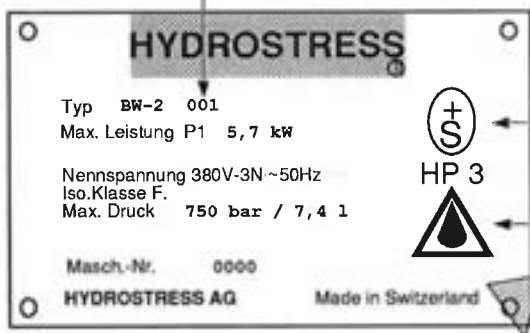
TECHNICAL DATA

(Dimensions in mm)



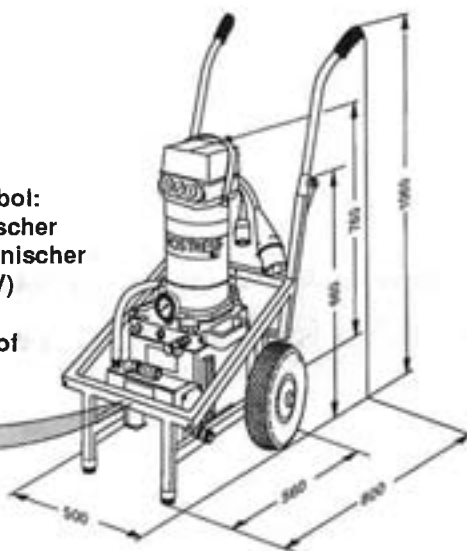
Power unit BW-2B
Total weight: 75 kg

Mutation code



Check symbol:
Schweizerischer
Elektrotechnischer
Verein (SEV)

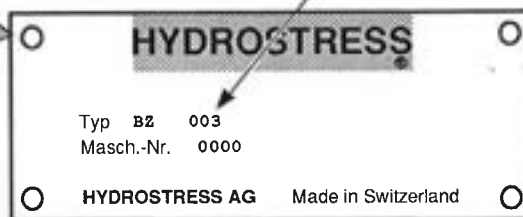
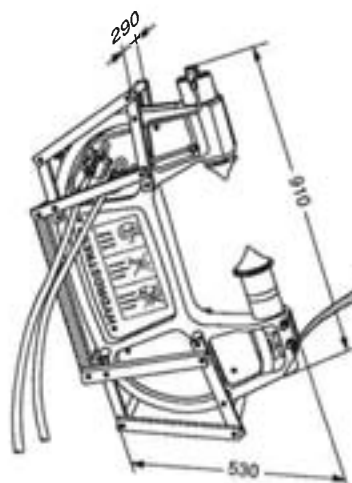
Splash proof



Type plate BW-2/BW-2B

Power unit BW-2
Total weight: 60 kg

Mutation code



Type plate BZ

Power unit BZ
Total weight: 39 kg

Fig. 0-1 Dimensions, type plate

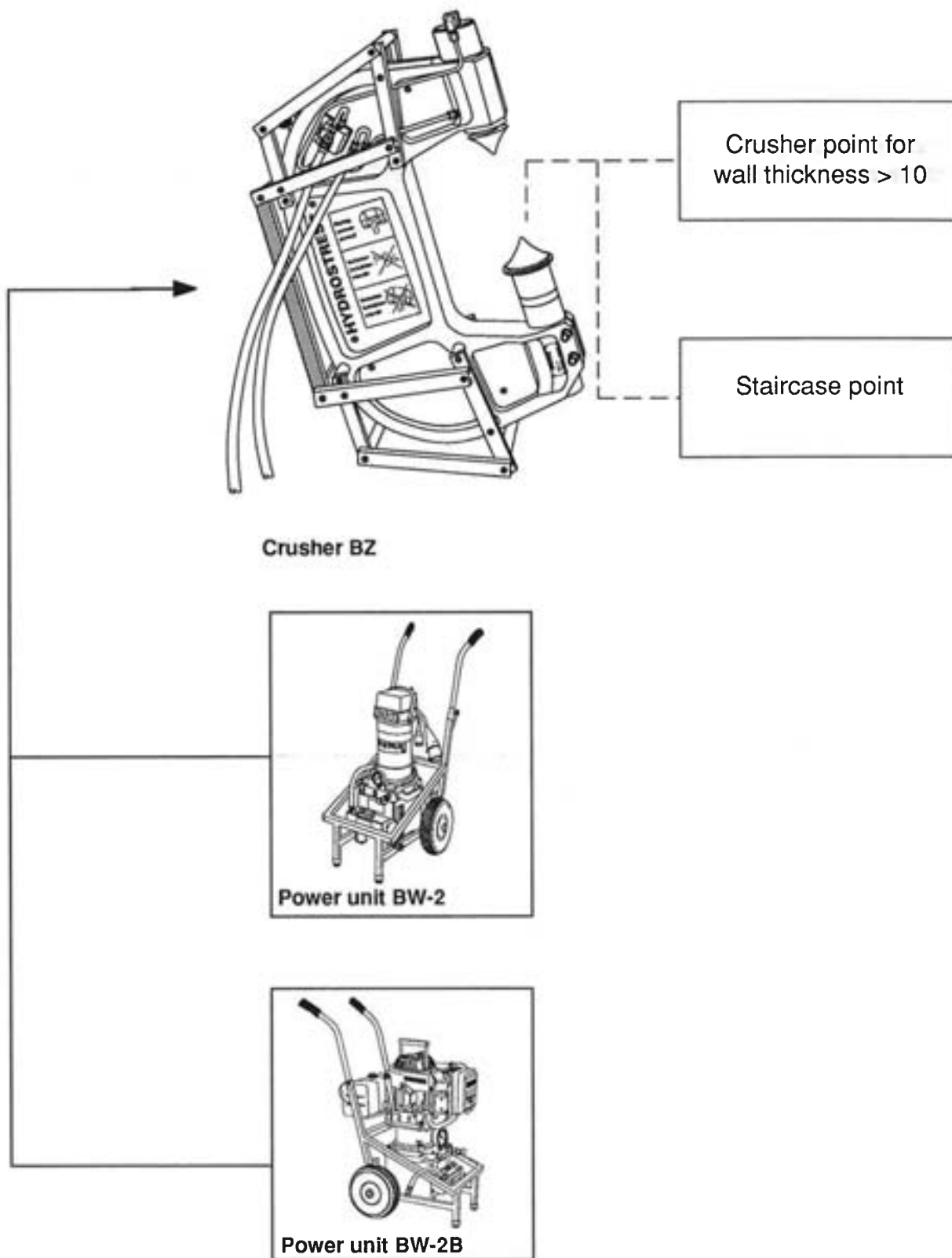


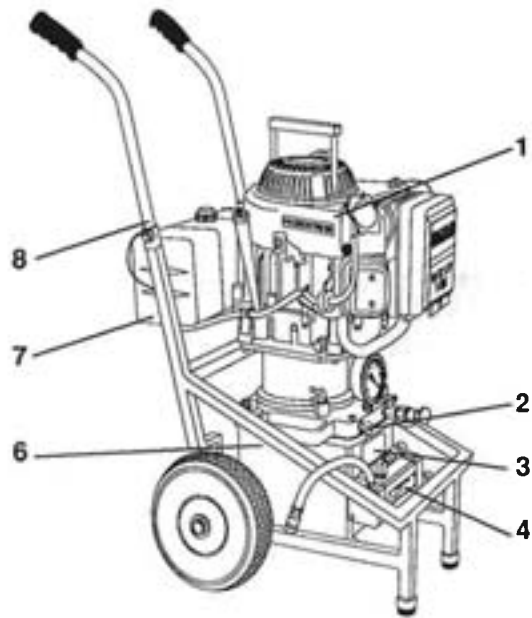
Fig.1-1 Connectable Units

1 RANGE OF APPLICATION**1.1 Connectable Equipment to Crusher BZ**

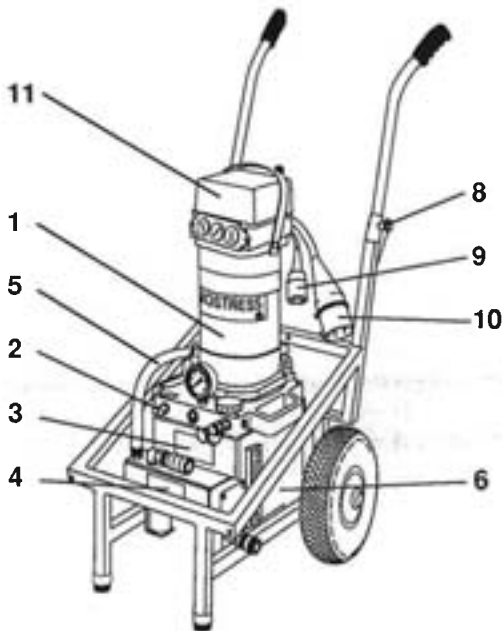
Either the petrol-operated unit BW-2 or the electrically operated drive unit BW-2B can be connected to crusher BZ.

1.2 Possible Applications

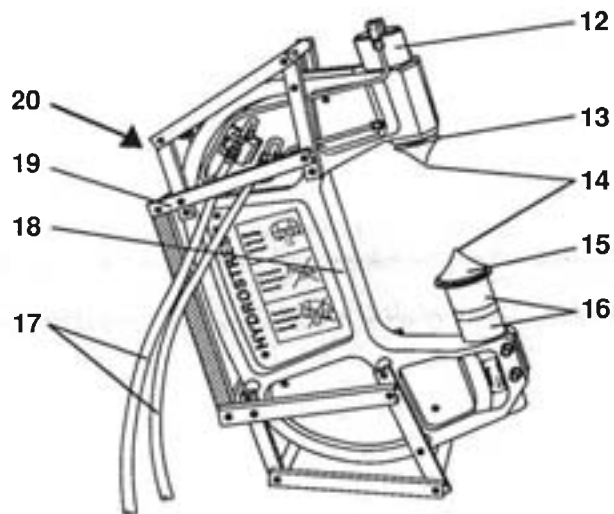
- Crushing of pieces that are cut out (e.g. for doors)
- Dismantling of walls
- Enlarging of cutouts in walls and ceiling
- Dismantling of stairs



Power unit BW-2B



Power unit BW-2



Crusher BZ

- 1 Engine
- 2 Relief valve
- 3 Oil reservoir
- 4 Oil cooler
- 5 Water hose (oil cooler - electric motor)
- 6 Radial piston pump
- 7 Fuel tank
- 8 Trolley frame
- 9 Secondary socket
- 10 Power supply socket (CEE16)

- 11 Electric control
- 12 Crusher cylinder
- 13 Crusher point hyd. operated
- 14 Steel point
- 15 Crusher point, fixed
- 16 Separators
- 17 Hose package
- 18 Crusher body
- 19 Carrying device
- 20 Spool valve

Fig. 2-1 Design of Crusher BZ and drive unit BW-2/BW-2B

2 DESIGN AND FUNCTION

2.1 Design of Crusher BZ

The crusher body is made of high-performance aluminium. Therefore the crusher is light-weighted and can be handled without difficulty.

The crusher cylinder (12, fig. 2-1), the pistons of which are bearing the crusher point (13), is incorporated into one side of the crusher body.

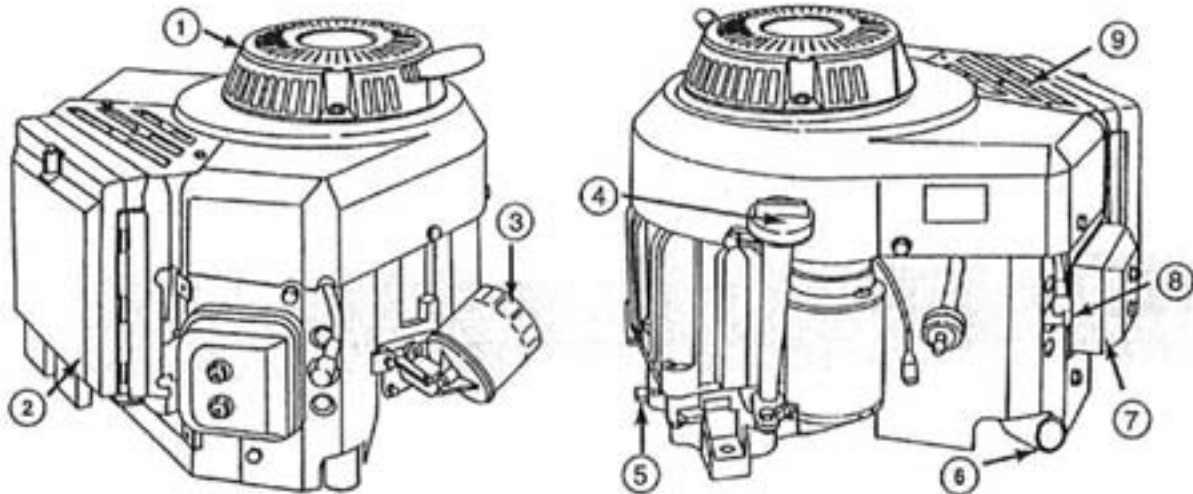
The fixed crusher point (15) is mounted to the other side of the crusher body. The fixed crusher point can be adjusted by means of separators (16).

Steel points (14) are pressed into the crusher points. These steel points are wearing parts and can easily be replaced (see 7.1.1).

The carrying device (19) is fixed to each side of the crusher body.

2.2 Design of Unit BW-2/BW-2B

- Drive Unit:** It consists of the carburetor type petrol engine (1) and the radial piston pump (6) in the oil reservoir (3). The carburetor type petrol engine is flange-mounted to the oil reservoir.
- Carburetor type petrol engine:** The carburetor type petrol engine is an air-cooled 2 cylinder four-stroke V-engine with manual engine launcher. It should be operated with non-leaded petrol (fig. 2-2).
- Electric control:** The electric control (11, fig. 2-1) is mounted onto the electric motor (1). It consists of the On/Off lever, the star-delta starter and the protective motor switch. The protective motor switch consists of the following components:
- thermal excess-current release
 - undervoltage release
 - monitoring of the temperature of the end windings
 - protective switch for secondary socket 220 V.
- The socket provided for power supply (10) and the secondary socket (9) are beside the control.
- Trolley frame** One-axle steel tube construction for transport purposes and insertion of the drive unit. The oil reservoir (11) is fixed to the chassis by means of four screws.
- Oil cooler:** The oil cooler (4) is mounted in front of the oil reservoir. It incorporates the water supply connection. The oil cooler is a water/oil heat exchanger.
- Oil reservoir:** The oil reservoir contains the essential components of the hydraulic system:
- radial piston pump
 - oil filter
 - pressure control valve
- The tank capacity is 7 l.
- Hoses:** The crusher has a fixed connection to:
- the feed hose (high pressure)
 - the return hose (low pressure)



- 1 Take-up unit for launching rope
- 2 Air filter
- 3 Oil filter
- 4 Oil filler neck
- 5 Oil drain plug

- 6 Exhaust head
- 7 Cylinder head cover
- 8 Spark plugs (2x)
- 9 Carburetor

Fig. 2-2 Carburetor Type Petrol Engine

2.3 Function BW-2B

Voltage is supplied to the electric motor as well as to the secondary socket via the electric control. The electric motor (10, fig. 2-3) permanently drives the radial piston pump. The carburetor type petrol engine is started by pulling the launching rope; it provides the direct and permanent drive for the radial piston pump.

Hydraulic circuit: The radial piston pump (13) takes in the hydraulic oil via the suction filter (20) and pumps it to the crusher via the coupling (24, 25). The following happens at the various positions of the spool valve (8):

- When the spool valve is in center position, the oil flows directly into the return circuit back to the unit.
- When the spool valve is in extended position, the piston of the crusher cylinder (2) is impinged with pressure on its high pressure side. The cylinder extends and pressure is developed until the pressure control valve (19) in the unit opens at 750 bar. The pressure is indicated at the pressure gauge (5).
- When the spool valve is in retracted position, the piston of the crusher is impinged with pressure from the opposite, low pressure side and retracts, while the piston spill valve (6) limits the pressure to a low value.

Return to the oil reservoir (11) is carried out via the couplings (26, 23) and the oil cooler (12). The security valve (1) is a safety valve for the low pressure hose of the crusher cylinder.

When the relief valve (16) is opened, the hydraulic oil is pumped over without being under pressure, thus relieving the radial piston pump.

Water circuit: The water serves for cooling the hydraulic oil. It flows to the open via the nipple (20), the oil cooler (12), and the coupling (21) (open circuit).

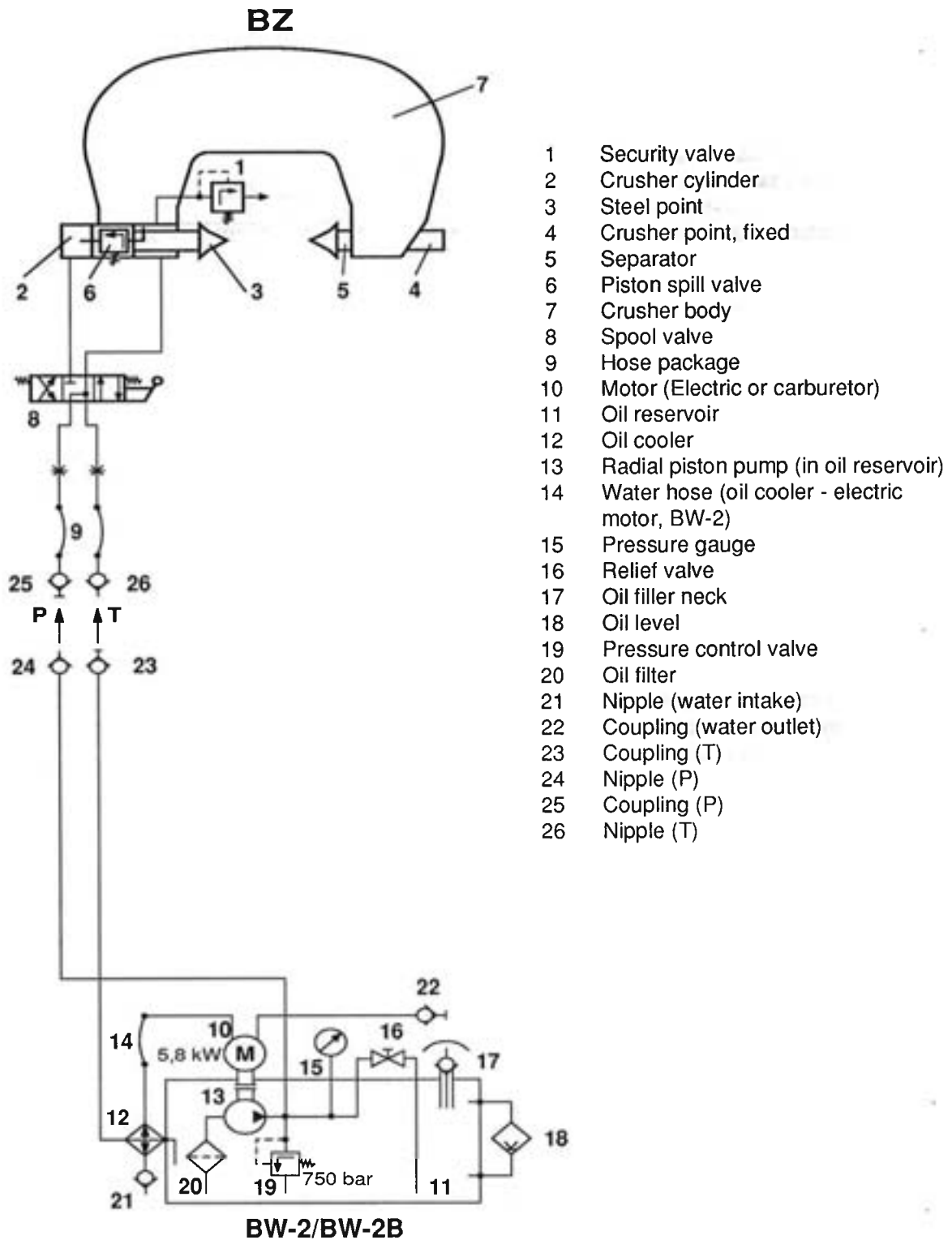
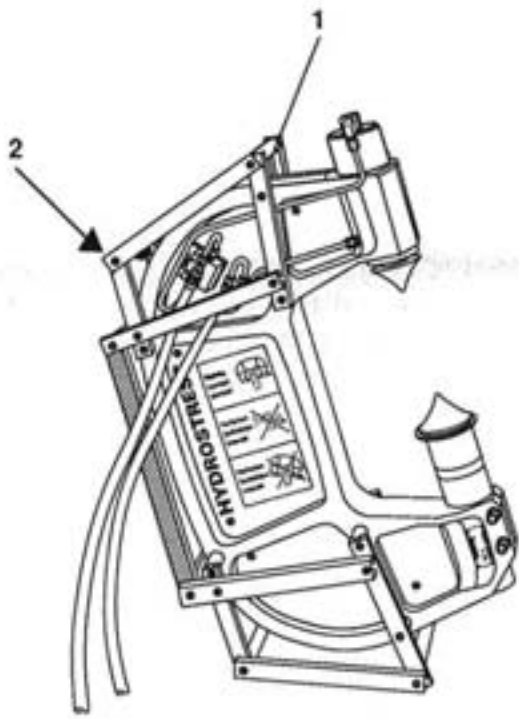
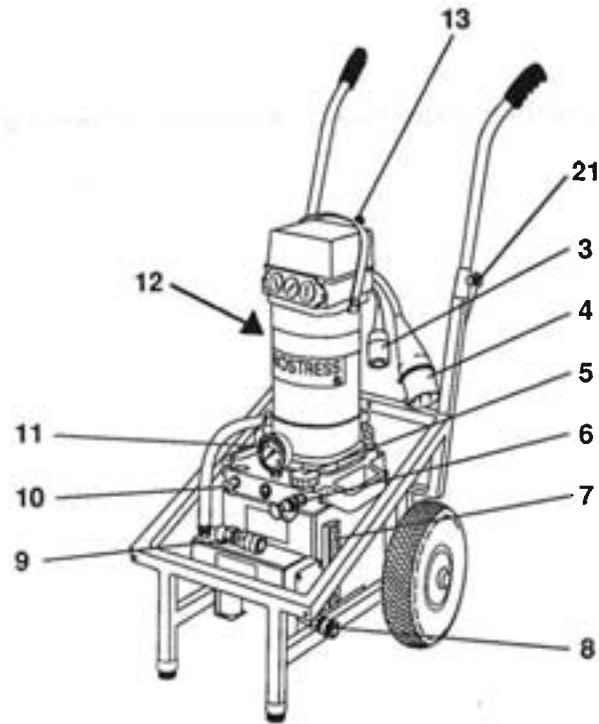


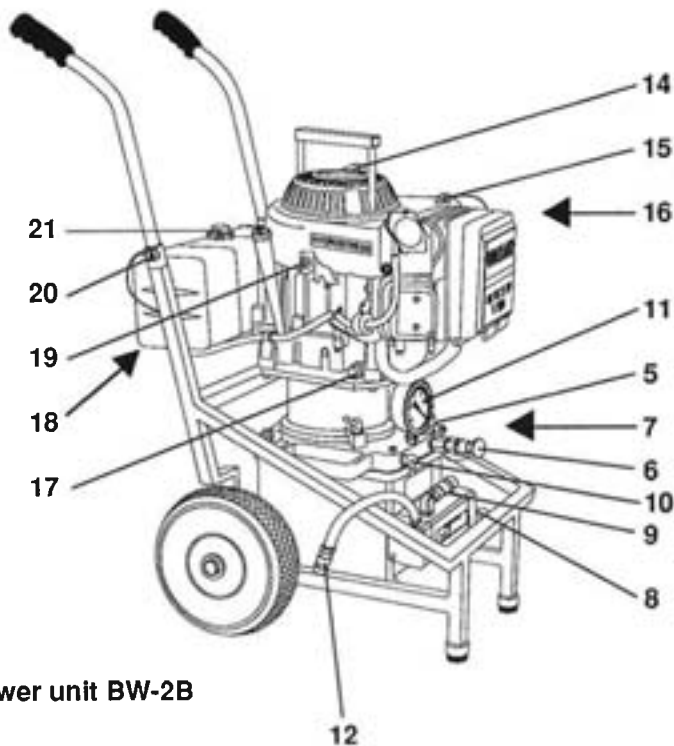
Fig. 2-3 Functional Scheme of Hydraulic System



Crusher BZ



Power unit BW-2



Power unit BW-2B

(Legend overleaf)

Fig. 3-1 Operating Elements (Page 1 of 2)

3 OPERATING ELEMENTS AND CONNECTIONS

Pos.	Bezeichnung	Kennzeichnung	Funktion/Anzeige
1	Carrying device		Carrying and setting of the crusher CAUTION Keep crusher only at its carrying device when operating it!
2	Spool valve		3 positions: up - crushing center - zero position down - retract
3	Secondary socket		220V/10A, connection of equipment. NOTICE Voltage is only applied when the unit is running
4	Power supply		380V/50 Hz, plug type CEE 16
5	Oil reservoir cap	OIL	Ventilation of the oil reservoir
6	Nipple, outlet		High pressure connection with protection cap.
7	Oil level indicator	Min/Max	Oil level in the oil reservoir
8	Water connection, intake		Connection of water supply
9	Coupling, intake		Return connection, low pressure
10	Relief valve	0/1	Closed - normal operation Open - hydraulic circuit is switched over to pressureless circulation. Pressure is reduced to zero.
11	Pressure gauge	P1	Pressure in the hydraulic circuit
12	Water connection, outlet		Connection of water discharge hose
13	ON/OFF lever		Switching the unit ON and OFF
14	Launching rope		Manual starter device for carburetor type petrol engine
15	Throttle handle	THROTTLE	Control of the engine speed
16	Choke		Cold start device
17	Oil drain plug		Draining of engine oil
18	Petrol valve		Petrol line ON/OFF (closed when turned in clockwise direction)
19	Stop lever	STOP/RUN	Shutting off the carburetor type petrol engine
20	Quick-disconnect bolts		Removing the handles
21	Fuel tank cap	Benzin	Refuelling, tank ventilation
22	Oil filler neck and level plunger	OIL Min/Max	Refill of engine oil and level control

Fig. 3-1 Operating elements (Page 2 of 2)

4 TRANSPORT

Drive unit as well as crusher easily be transported, since they are light-weighted and have good dimensions (see Technical Data).

Please observe the following when transported the drive unit.

General: Make sure that the hydraulic couplings do not touch any obstacles. Damages may lead to difficulties with the coupling procedure and cause leakages.

The electric motor can be removed in order to save weight.

The handles can be removed for space-saving reasons.

Do not tilt the power unit, since then hydraulic oil may escape.

Let the engine cool down before transporting the unit. Shut the petrol valve.

CAUTION

Never lift the unit at the carrier straps (see fig. 4-1) of the electric motor.

Transport by car: Secure the unit against shifting and tilting on the loading area. Because of its small dimensions it can also be transported in normal station wagons.

Transport by crane: Fix the lifting device at the trolley frame.

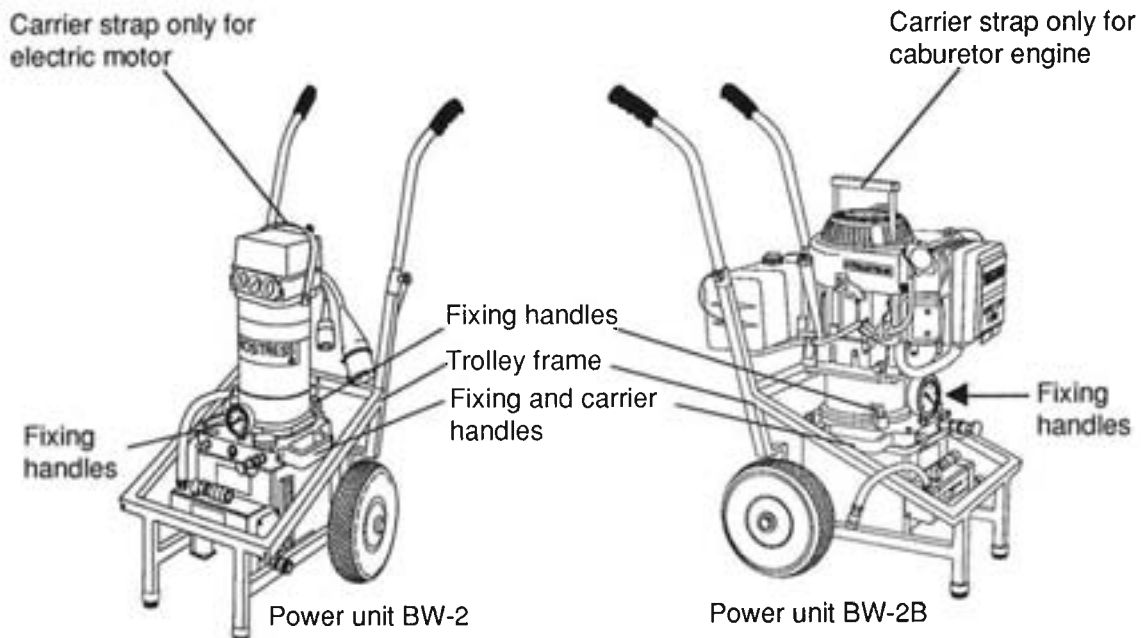


Fig. 4-1 Transport Fixations

5 Preparatory operations

5.1 Exchanging Motor

POWER UNIT BW-2

Removing the electric motor:

1. Pull out mains plug.
2. Disconnect hose pipe for water at the electric motor.
3. Open clamping lever and turn clamping element (fig. 4-1).
4. Lift out motor carefully by the handle (fig. 4-1).

IMPORTANT

- Place electric motor on clean surface (wooden beams etc).
- Protect end of shaft from damage.

Installing the electric motor:

1. Lower electric motor carefully into position making sure it locks into place.
2. Secure electric motor by means of the clamping lever at the oil tank (fig.4-1).
3. Connect hose pipe for water.

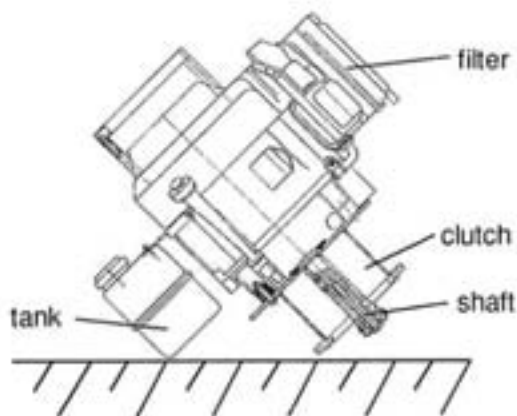
POWER UNIT BW-2B

Removing the petrol engine:

1. Close petrol tap. Allow engine to cool down.
2. Open clamping lever and turn clamping element (fig. 4-1).
3. Lift out engine carefully by the handle.
4. Always place the petrol engine on the tank side (fig. 5-1) or in the support supplied!

IMPORTANT

- Place petrol engine on clean surface (wooden beams) or on the support supplied.
- Protect end of shaft from damage.



NOTICE

If the unit is tilted forward for a longer period of time, oil and petrol can run into the cylinder and "drown" the motor.

CAUTION

Never operate the motor when it has been removed from the machine.

Installing the petrol engine:

1. Lower petrol engine carefully into position making sure it locks into place.
2. Secure petrol engine by means of the clamping lever at the oil tank (fig. 4-1).

Fig. 5-1 Laying the petrol engine down

5.2 Crusher BZ

Daily Controls and Checks

The following controls are to be carried out daily:

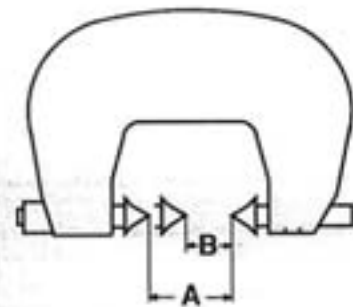
- Check of crusher points for damage.
- Check of crusher body for distortion or cracks.
- Check of carrying device for firm mounting and damage.
- Check of spool valve and crusher cylinder for leakage.
- Check of hydraulic connections and hoses for perfect condition.
- Check of spool valve for perfect functioning.

5.3 Adjusting the Crusher to Wall Thickness

Before starting to work, i.e. before connecting the crusher to the drive unit, the distance between the points must be adapted to the wall thickness. The number of the required separators is indicated in fig. 5-2.

Wall thickness in mm	Point distance in mm		Required separators	
	A piston retracted	B piston extended	No.	Length in mm
300	320	180	-	-
275	295	155	1	25
250	270	130	1	50
225	245	105	1 1	50 25
200	220	80	2	50
120-175	205	65	2 1	50 25

EXAMPLE: A wall of 225 mm requires 1 separator of 50 mm and 1 separator of 25 mm.



NOTICE

For better handling always select the intermediate ring on the right hand side.

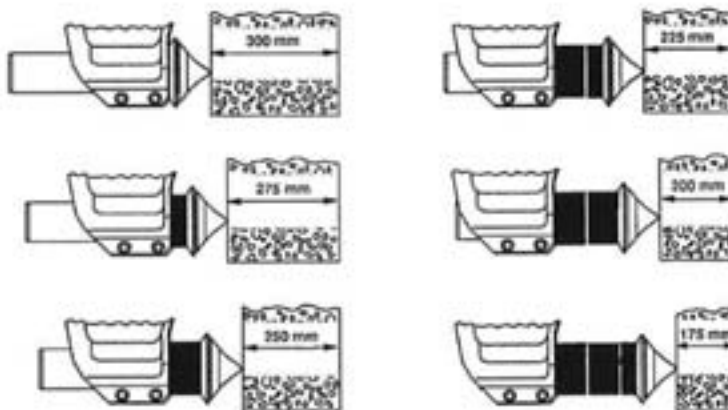
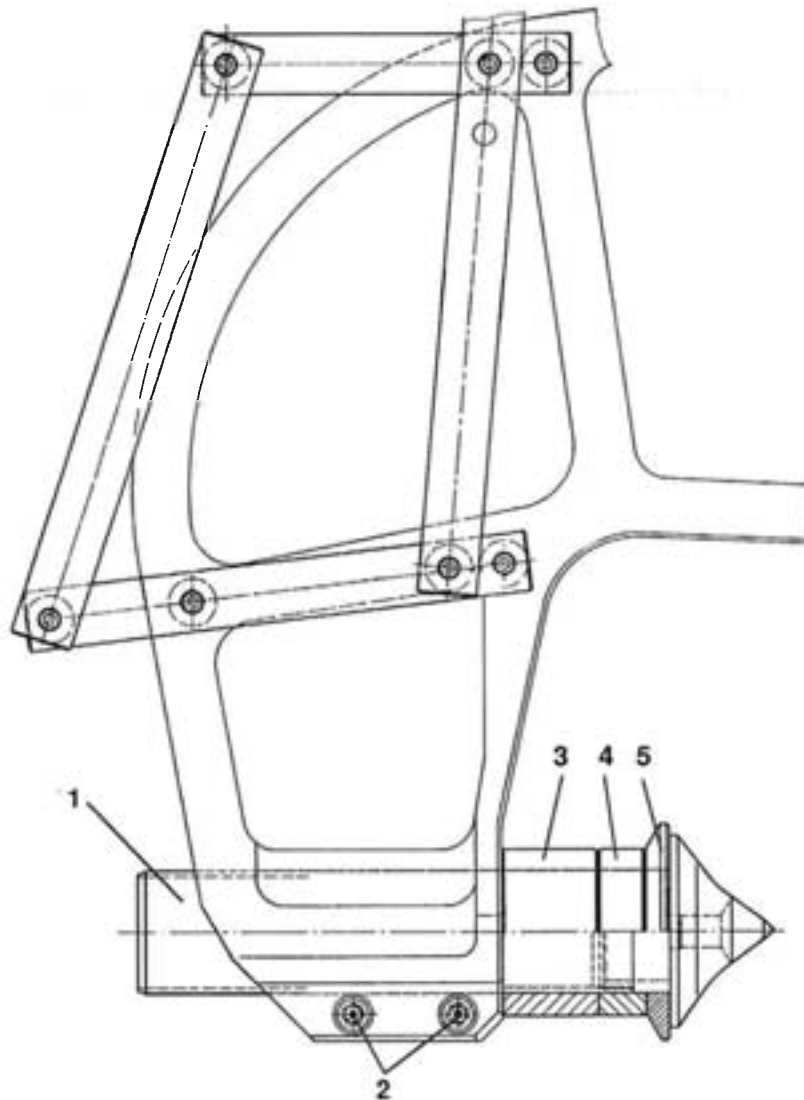


Fig. 5-2 Adjusting the point distance

Adjust the fixed crusher point as follows (fig. 5-3):

1. Loosen the clamping screws (2).
2. Withdraw the crusher point (1).
3. Slide on the required number of separators (3, 4) (according to fig. 5-2).
4. Re-insert the crusher point and tighten the clamping screws.



- 1 Crusher point
- 2 Clamping screw
- 3 Separator (50 mm)

- 4 Separator (25 mm)
- 5 Shield

Fig. 5-3 Adjusting the Point Distance

5.4 Carburetor unit BW-2B

- Daily visual inspection:**
- Fuel tank
 - Level of motor oil
 - Level of hydraulic oil (do not fill above maximum level!)
 - Oil loss
 - Dirt accumulation on and damage of couplings
 - Is the air filter dirty?

IMPORTANT

Make sure that the water supply is not interrupted unintendedly during operation.

- Water connection:**
- Max. admissible pressure: 10 bar. In case of higher pressure add pressure reducing valve.
Adjust water flow at the water tap of the water supply.
Never shut the water tap during operation.

CAUTION

Never connect or disconnect hoses when the unit is running or under pressure. Never force connections.

- Hose connections to unit:**
1. Push hose coupling on or into its counter-part until it is audibly locked into place.
 2. Turn the locking ring of the coupling.

NOTICE

When the coupling of the hoses is difficult or even impossible, the unit or the hose is under pressure (e.g. due to heating).

- Reduce pressure as follows:**
- At the unit:
Actuate relief valve (10, fig. 3-1).
- At the crusher:
Set pressure reducer (see 9, Accessories) onto the coupling of the low pressure hose and screw it in until the pressure is reduced.

IMPORTANT

Keep the couplings always clean. Observe the servicing and maintenance instructions.

CAUTION

- Refuelling only outdoors or in well ventilated rooms. During refuelling the engine must be shut off.
- When refuelling, do not smoke or light an open fire.

Refuelling: Non-leaded petrol is prescribed for the carburetor type petrol engine. In exceptional cases regular petrol can be used. The octane number must be at least 77.

IMPORTANT

- Never fill the fuel tank completely! Always leave some volume for expansion due to heat.
- Do not use petrol-alcohol mixtures.
- Do not use petrol-oil mixtures.

Installation of the unit:

Always put the unit BW-2B in upright position. When the unit is tilted forward over a longer period, petrol and oil can penetrate into the cylinders and the engine is flooded.

Keep the unit at a distance of at least 1 m from walls etc.

CAUTION

Do not operate the unit in closed or poorly ventilated rooms.

5.5 Electric unit BW-2

Daily visual inspection

- Oil level (do not fill above maximum level!)
- Oil loss
- Dirt accumulation on and damage of couplings

Power supply connection:

Minimum fusible cutout: 16 A
Required connection cable: 5-lead x 2,5 mm² cross section. The connection cable is to be as short as possible.

IMPORTANT

Make sure that the water supply is not interrupted unintendedly during operation.

Water connection:

Max. admissible pressure: 10 bar. In case of higher pressure add pressure control valve. Adjust water flow at the water tap of the water supply. Never shut the water tap during operation.

CAUTION

Never connect or disconnect hoses when the unit is running or under pressure. Never force connections.

Hose connections to unit:

1. Push hose coupling on or into its counterpart until it is audibly locked into place.
2. Turn the locking ring of the coupling.

NOTICE

When the coupling of the hoses is difficult or even impossible, the unit or the hose is under pressure (e.g. due to heating).

Reduce pressure as follows:

At the unit:
Actuate relief valve (10, Fig. 3-1).

At the crusher:
Set pressure reducer (see 9, Accessories) onto the coupling of the low pressure hose and screw it in until the pressure is reduced.

IMPORTANT

Keep the couplings always clean. Observe the servicing and maintenance instructions.

6 OPERATION

6.1 Power unit BW-2B

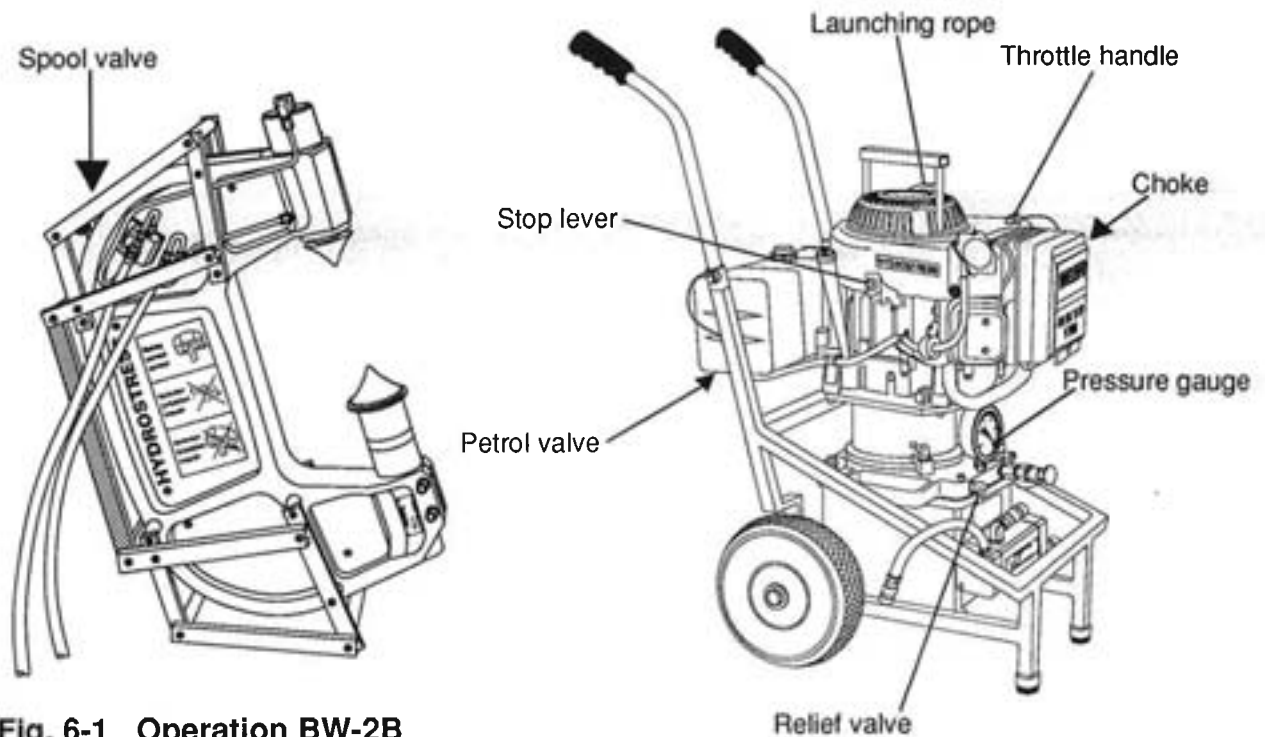


Fig. 6-1 Operation BW-2B

IMPORTANT

Before starting the unit, both hoses of the crusher must be coupled to the unit and the relief valve must be shut.

Before starting the unit:

1. Relief valve must be shut.
2. Adjust water flow at external water tap.
3. Check hydraulic connections for correct seat.

Starting the engine:

1. Set the stop lever to RUN.
2. Open the petrol valve.
3. If necessary, actuate the choke.
4. Set the throttle handle to 1/2 acceleration.
5. Actuate the manual starter device (launching rope).
6. Control the engine speed, eventually shut off the choke.
7. Set the throttle handle to full acceleration.

Normal operation:

1. Set the crusher to the wall (see Fig. 6.2). Observe the safety regulations.
2. Set the spool valve to „Crushing“ (upper position). The crusher cylinder extends.
3. Set the spool valve to „Retract“ (lower position). The crusher cylinder retracts.
4. Change place of the crusher.

Switching off the engine:

1. Set the throttle handle to idle running.
2. Set the stop lever to STOP.
3. Shut the petrol valve.

6.2 Power Unit BW-2

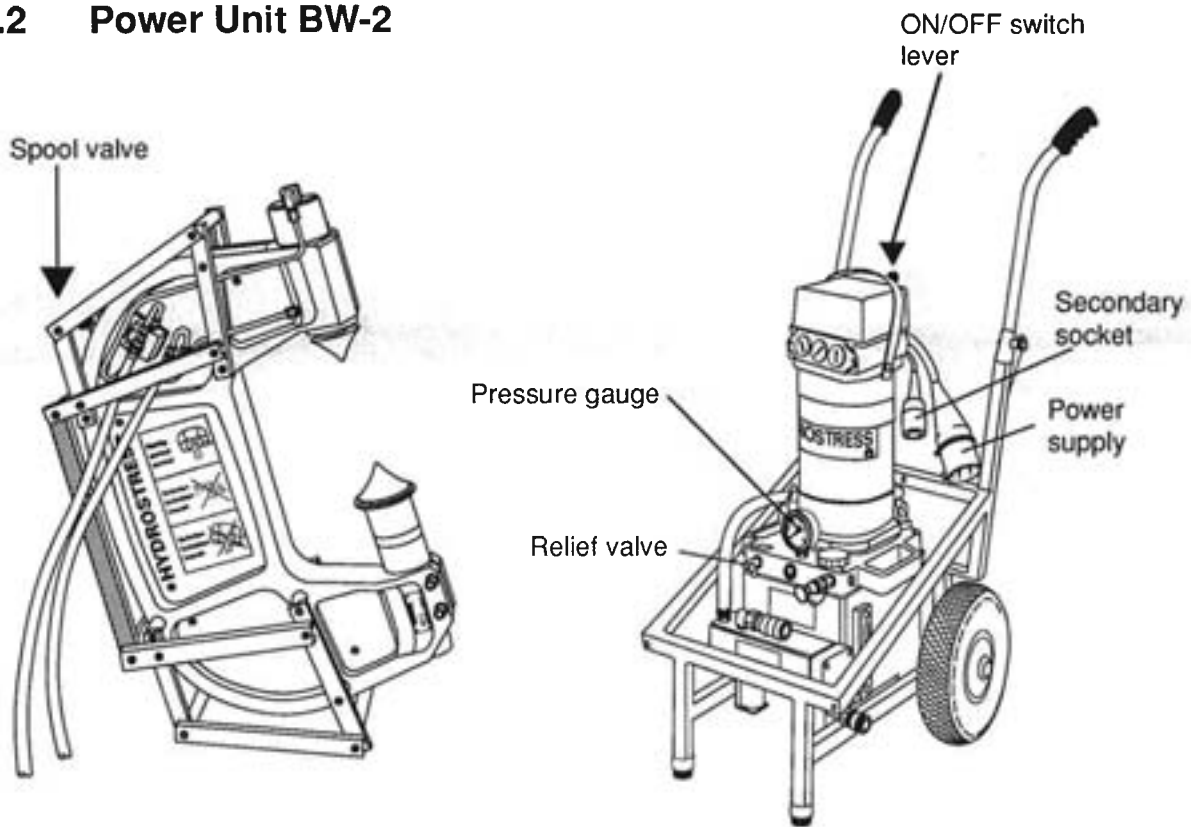


Fig. 6-2 Operation BW-2

IMPORTANT

Before starting the unit, both hoses of the crusher must be coupled to the unit and the relief valve must be shut.

Before starting the unit:

1. Relief valve must be shut.
2. Adjust water flow at external water tap.
3. Check hydraulic connections for correct seat.

Starting:

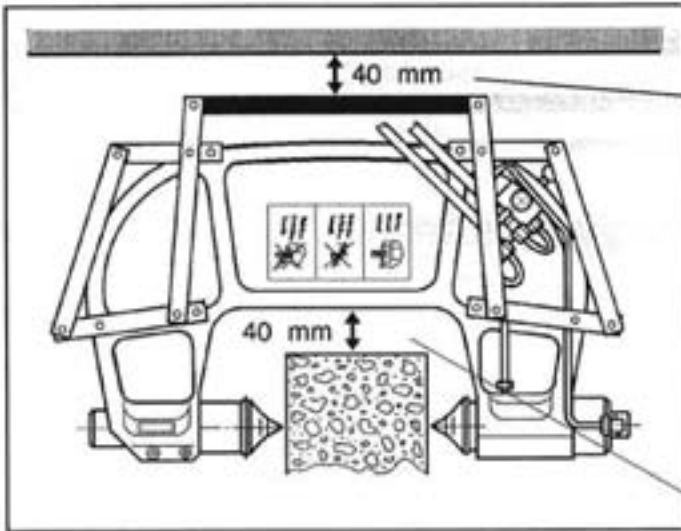
Set ON/OFF switch lever at the electric motor to position ON.
Observe the safety regulations (fig. 6-3).

Normal operation:

1. Set the crusher to the wall.
2. Set the spool valve to "Crushing" (upper position). The crusher cylinder extends.
3. Set the spool valve to "Retract" (lower position). The crusher cylinder retracts.
4. Change place of the crusher.

6.3 Crusher BZ

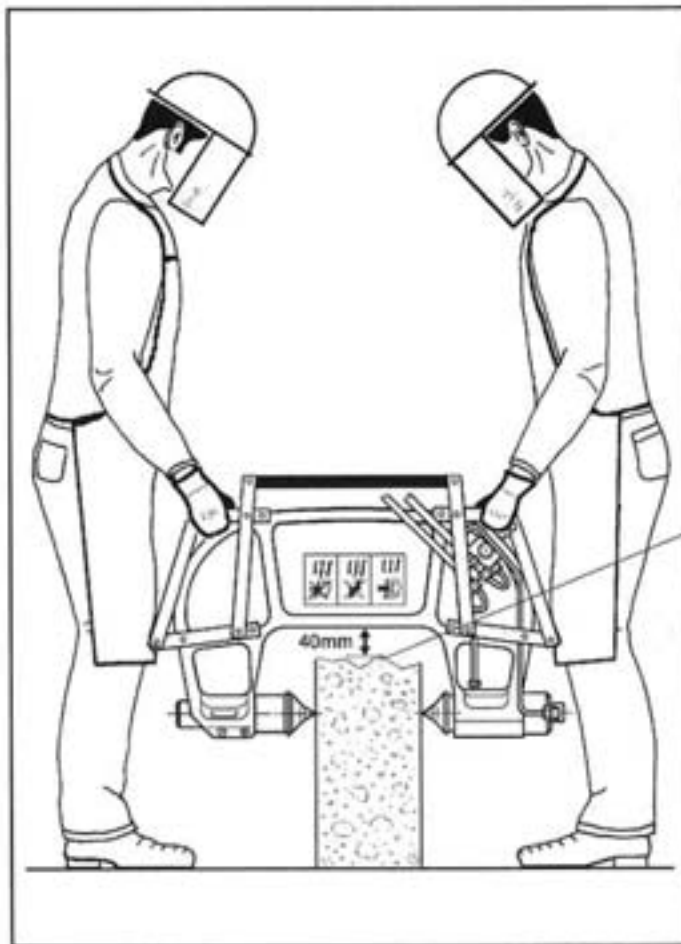
1. Always set the crusher to the walling in crosswise direction.
2. The distance between the upper edge of concrete and the crusher body must be at least 40 mm. This is also valid for the distance between the carrying device and a wall or a ceiling.



IMPORTANT

Minimum distance 40 mm

Nonobservance of this distance may damage the carrying device. If the red carrier side rails are damaged the pliers shackles could be damaged too.



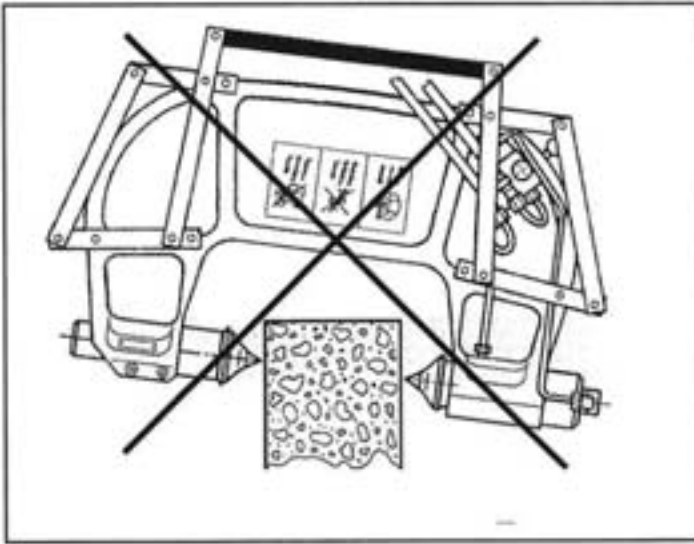
IMPORTANT

Minimum distance 40 mm

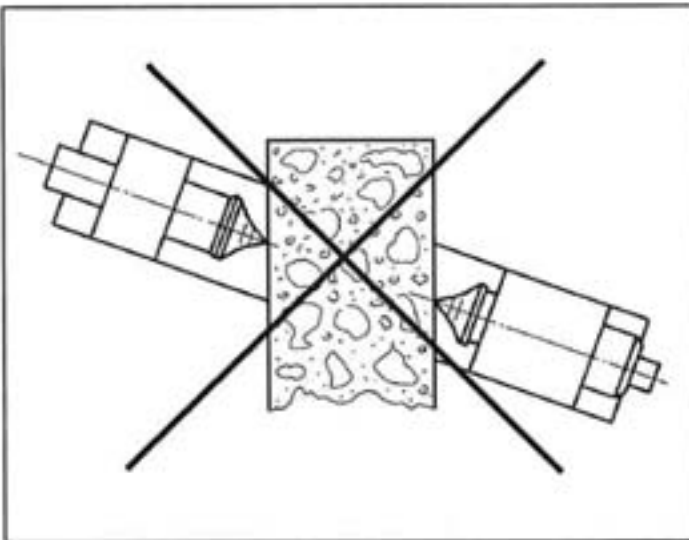
Nonobservance of this distance may damage the crusher body.

3. When operating the unit, wear a helmet with face screen or eye protectors, gloves, a leather apron and boots with instep and shinbone protection (order indications see section 9).

Fig. 6-3 Crusher Applications (page 1 of 3)



4. Never set the crusher in bias to the walling or tilt it.



5. Never set the crusher to biased or round surfaces.

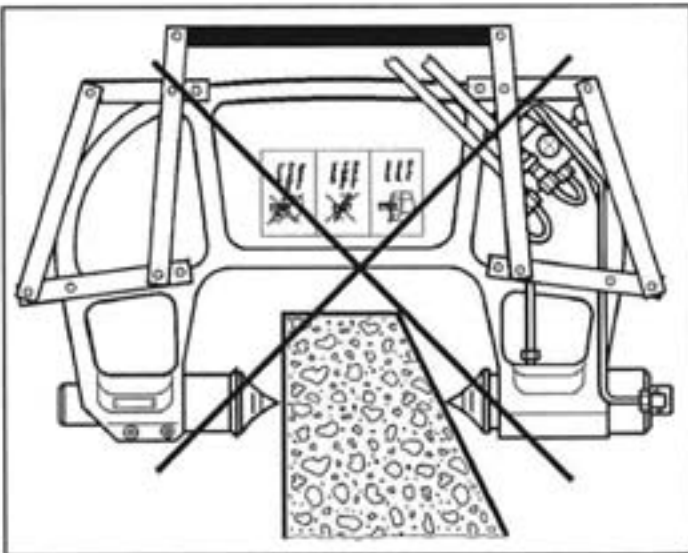
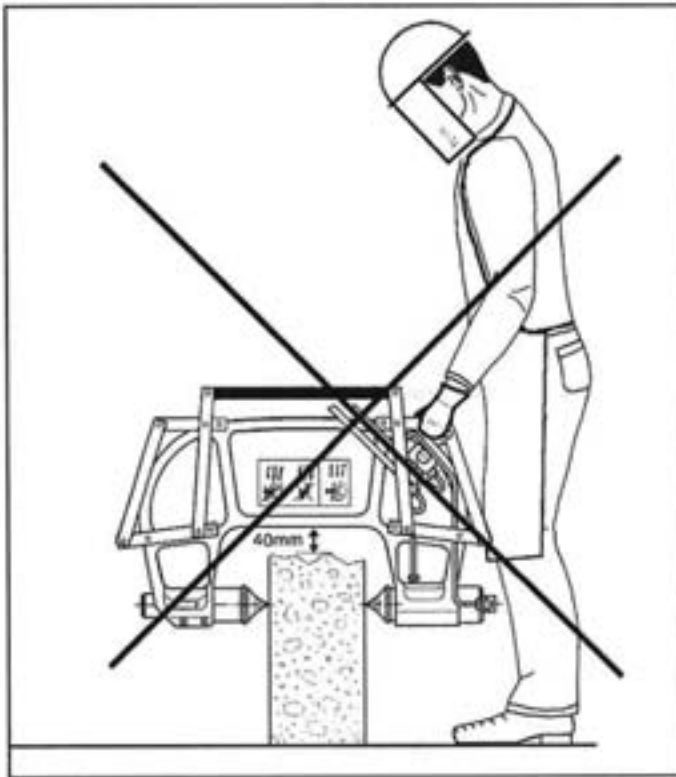
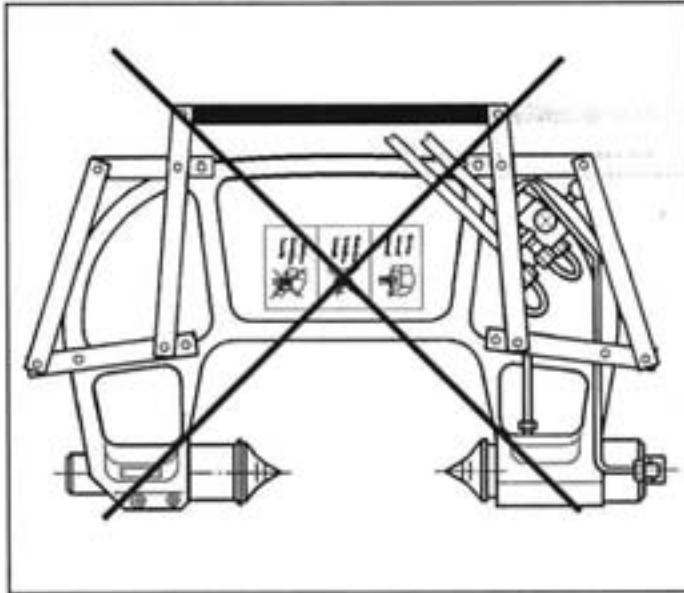


Fig. 6-3 Crusher Application (page 2 of 3)



- 6. The crusher must always be operated by two persons. Never handle the crusher when alone, unless the crusher is suspended by appropriate devices such as a crane.



- 7. Do not modify the crusher body, such as apply additional bore holes or weldings. Modifications and repair works must only be carried out by HYDROSTRESS or by an authorized HYDROSTRESS representation.

- 8. Secure the danger area by information signs or by barriers.

Fig. 6-3 Crusher Application (page 3 of 3)

IMPORTANT
Inappropriate application may deform or destroy the crusher.

7 SERVICING AND MAINTENANCE

IMPORTANT

Do not modify the crusher body, such as apply additional bore holes or weldings.

Maximum performance and optimum reliability of crusher BZ and drive unit BW-2/BW-2B are obtained as long as you carry out the necessary maintenance works - or have them carried out - at regular intervals indicated in the following tables.

These maintenance works are specified as being obligatory by the manufacturer. HYDROSTRESS will reject any liability for damages resulting from nonobservance of the maintenance intervals and of maintenance works.

CAUTION

Before carrying out any maintenance works make sure that the drive unit is currentless and that there is no pressure in the hydraulic system.

7.1 Crusher BZ

Maintenance interval	Activity	Remarks
Daily	1. Check for leakage	Check cause of leakage and eliminate it
	2. Check carrying device for firm seat and damage.	Tighten loose screw connection replace defective parts.
	3. Check steel points for alignment	Look in lengthwise direction over the crusher points. If they are no longer aligned, the crusher body must be adjusted. This is to be done either by HYDROSTRESS or an authorized HYDROSTRESS representation.
	4. Check steel points for damage.	Replace steel points according to section 7.1.1
	5. Check couplings for - leakage - damage	Replace damaged or leaking couplings
	6. Extend the piston of the crusher cylinder. Clean the running face of the piston with an oil-soaked cloth.	

Fig 7-1 Table of Maintenance Crusher BZ

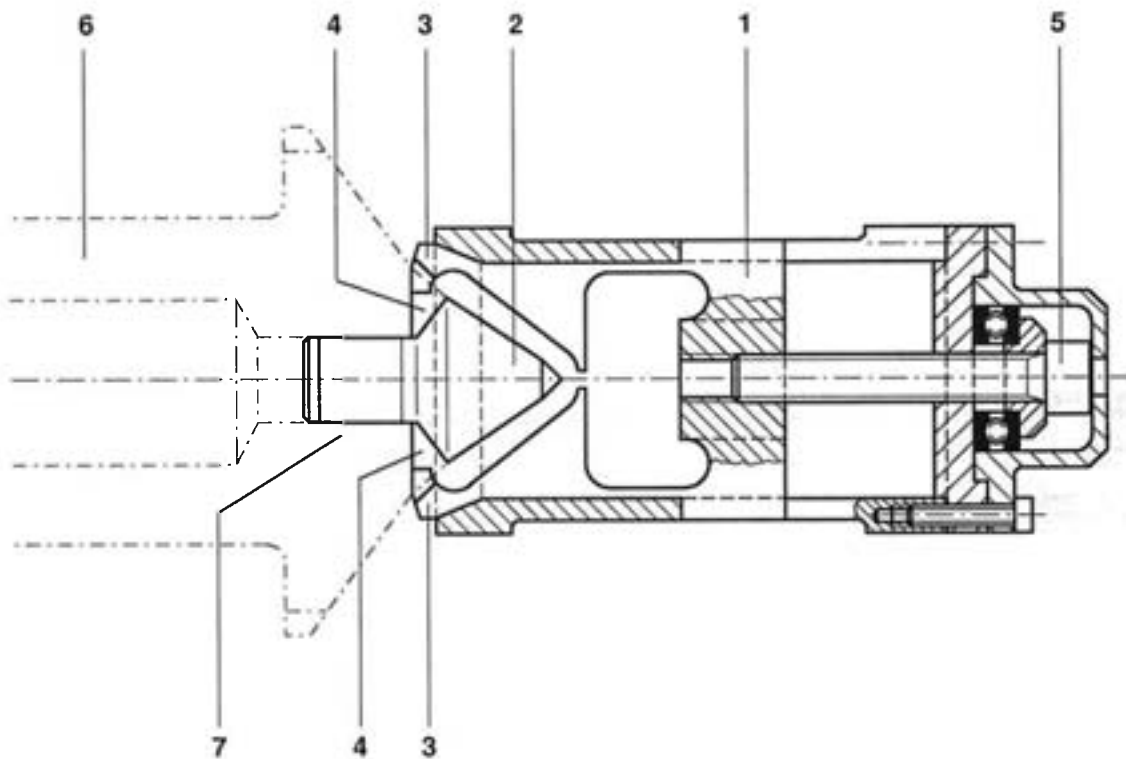
BW-2/BW-2B/BZ SERVICING AND MAINTENANCE

7.1.1 Replacement of Steel Points

You need the following tools:

- Take-off device
- Allen key 6 mm

1. Apply the take-off device (1, fig. 7-2) in a way that the two grip fingers (3) engage into the grooves (4) of the crusher point (6).
2. Turn the Allen head screw (5) in clockwise direction, withdraw the steel point (2) from the crusher piston.
3. Apply a slight layer of grease to the seat (7) of the new steel point.
4. Insert the steel point and push it in completely by means of a plastic hammer.



- 1 Take-off device
- 2 Steel point
- 3 Grip finger
- 4 Groove

- 5 Allen head screw
- 6 Crusher point
- 7 Seat of the steel point

Fig. 7-2 Replacing the Steel Points

7.2 Carburetor Unit BW-2B

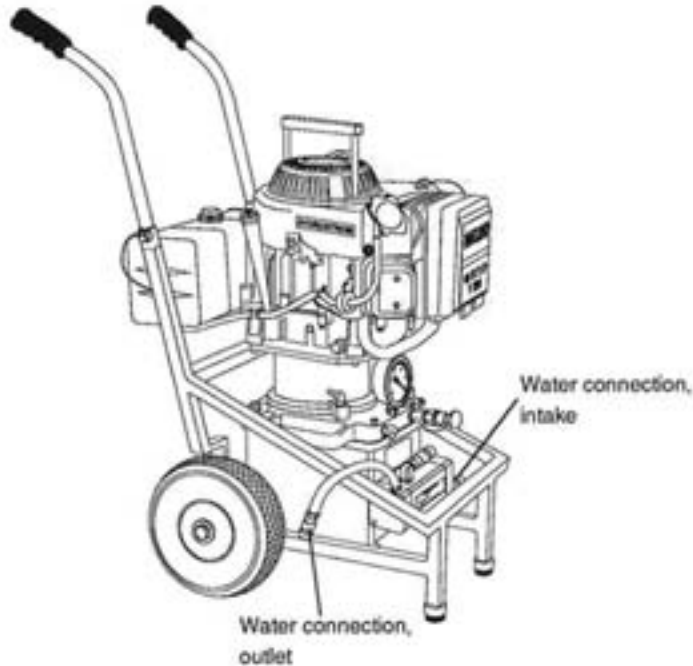
Maintenance interval	Activity	Remarks
Daily or after 8 operating hours	<ol style="list-style-type: none"> 1. Visual inspection of <ul style="list-style-type: none"> - leakage - dirt accumulation 2. Check screw connections for firm seat 3. Check level of engine oil, if necessary, refill 4. Check level of hydraulic oil, if necessary, refill 5. Check couplings for <ul style="list-style-type: none"> - leakage - damage 	<p>Detect and eliminate cause. Clean with water, steam jet etc.</p> <p>Tighten loose screw connections</p> <p>see fig. 7-7</p> <p>Do not refill above maximum!</p> <p>If necessary, replace couplings</p>
In case of frost and at end of operation	Drain the water from the oil cooler, blow the rest out by means of the blow-out pipe	see 7.2.1
Weekly or after 25 operating hours	Clean the dust filter (when working in excessive dust even earlier)	see 7.2.5
Monthly or after 50 operating hours	Change of engine oil (at high load or at high temperatures at 25 hours).	see 7.2.3
Yearly or after 100 operating hours	<ol style="list-style-type: none"> 1. Change of hydraulic oil 2. Clean the suction filter or replace it if necessary 3. Replace the engine oil filter 4. Clean the filter element/replace it 5. Clean the cooling circuit 6. Replace the spark plugs 	<div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;"> <p>IMPORTANT Use only the prescribed hydraulic oils: Mobilfluid 316 or Mobil D.T.E.15 (Cap. 7.2.2)</p> </div> <p>see 7.2.4</p> <p>see 7.2.4</p> <p>see 7.2.7</p>
200 operating hours	Major servicing	Is carried out either by HYDROSTRESS or an authorized HYDROSTRESS representation exclusively.

Fig 7-3 Table of Maintenance Unit BW-2B

BW-2/BW-2B/BZ SERVICING AND MAINTENANCE

7.2.1 Blowing out Water

In order to avoid damages due to frost, the oil cooler of the unit must be completely drained after finished operation or when you do not intend to run the unit for longer periods.



1. Remove the water hoses at the water intake and outlet.
2. Connect the blow-out pipe to the water outlet.
3. Blow into the blow-out pipe, until water stops emerging from the water intake.

Fig. 7-4 Blowing out Water BW-2B

7.2.2 Changing the Hydraulic Oil

Oil Quality:

HYDROSTRESS recommends the following hydraulic oils:

- For Switzerland: - Mobilfluid 316
International : - Mobil D.T.E.15

After long years of experience these hydraulic oils have proved to be particularly long-lived and resistant.

IMPORTANT

- When these oils are not available, make absolutely sure to use branded hydraulic oil of equal quality. The following requirements must be met:
 - Pour point at least at -30 °C or lower
 - Viscosity index at least 150 or more
 - Viscosity class HLP VG 46 or ISO 3498 HV 46
 - Wearing protection according to DIN 51524, part 3 (HV 46)
- Replenish the oil reservoir with oil products of different brand only after having drained and cleaned the reservoir from the remaining oil, since mixtures of various hydraulic oils are subject to rapid aging.

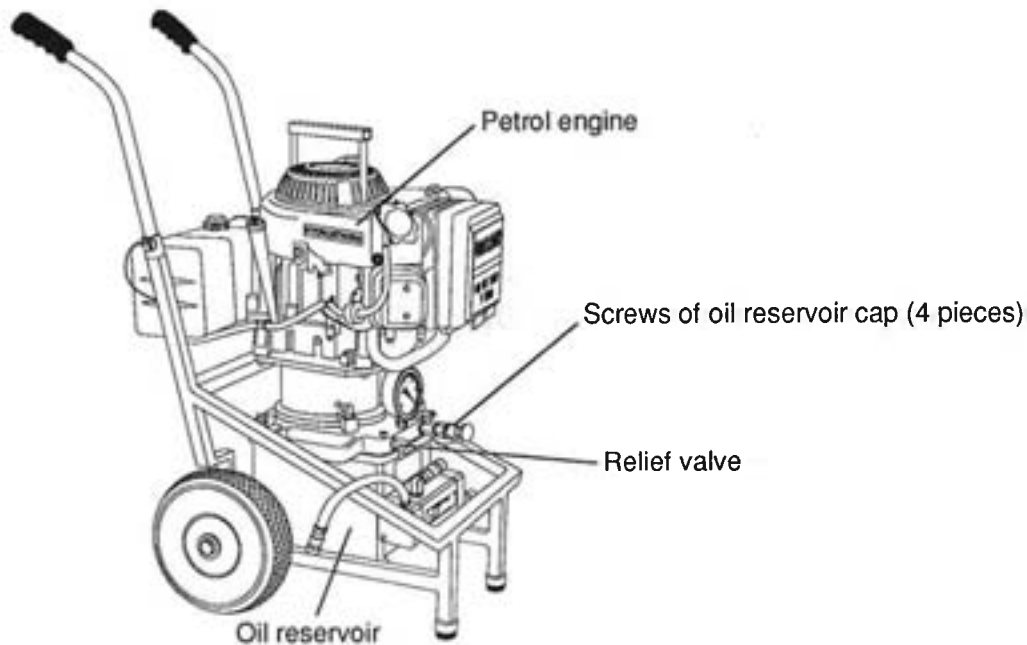


Fig. 7-5 Changing the Hydraulic Oil

Carry out the change of the hydraulic oil and the cleaning of the filter as follows:

CAUTION

Avoid any direct contact with hydraulic oil. When it happens, however, wash the hydraulic oil off immediately.

1. Remove the spark plug connectors.
2. Disconnect the intake of the water connection.
3. Drain the water completely.
4. Open the relief valve.
5. Remove the screws (4 pieces) of the cap of the oil reservoir.
6. Remove the complete carburetor type petrol engine together with the pump unit from the oil reservoir; let them drop in a leakage-proof oil tray.
7. Pour the hydraulic oil from the oil tray into a collecting pan for waste oil.
8. Clean the oil reservoir.
9. Remove the suction filter from the hydraulic pump, wash it and re-insert it.
10. Replenish the reservoir with new hydraulic oil (approximately 7 l).
11. Check whether the O-ring on top of the oil reservoir is seated correctly in its groove.
12. Mount complete carburetor type petrol engine together with the pump unit onto the oil reservoir and tighten the screws.
13. Connect the spark plug connectors.
14. Connect the crusher and the drive unit and run them for a short moment without actuating the crusher (venting of the hydraulic pump).
15. Shut the relief valve.

7.2.3 Changing the Engine Oil

NOTICE

- Choose the appropriate type of engine oil according to the outdoor temperatures (see fig. 7-6).
- Any oil change should only be carried out when the engine is still warm.

1. Tilt the unit and open the oil drain plug.
2. Let the engine oil drain into a collecting pan for waste oil.
3. Reinsert the oil drain plug
4. Remove the oil reservoir cap together with the oil level plunger.
5. Refill approx. 1/5 l of engine oil of appropriate viscosity (see fig. 7-6).
6. Screw the oil reservoir cap on again together with the oil level plunger.

Fig. 7-6 Engine Oil Viscosities

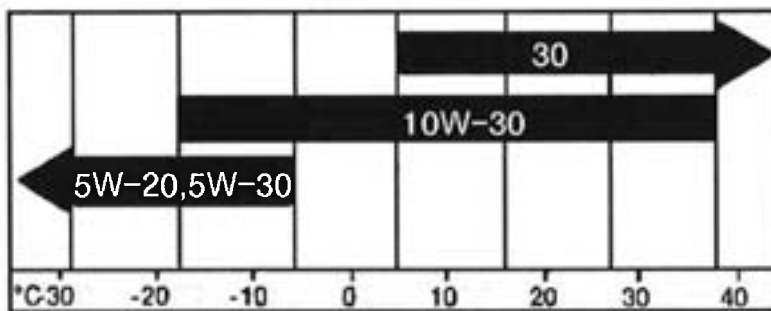


Fig. 7-6 Engine Oil Viscosities

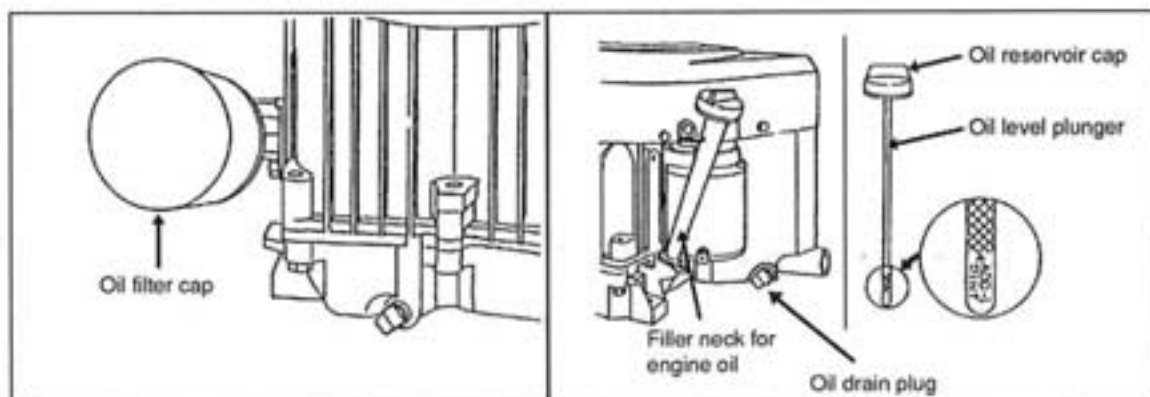


Fig. 7-7 Oil Level Plunger and Oil Drain Plug

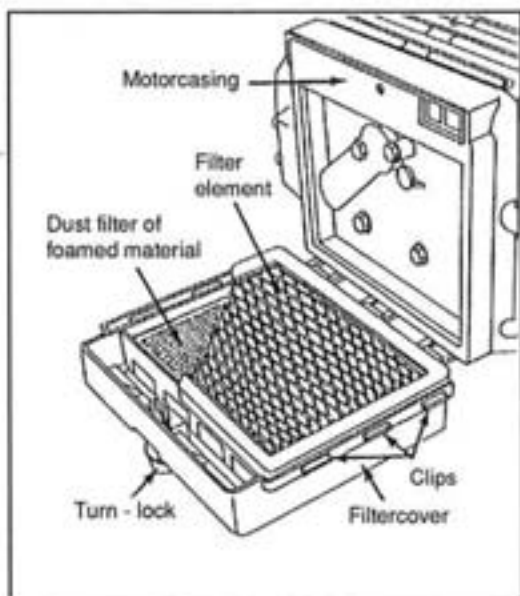
7.2.4 Changing the Engine Oil Filter

1. Drain the engine oil (fig. 7-7).
2. Unscrew the oil filter (fig. 7-7).
3. Lubricate the sealing of the new oil filter with fresh and clean engine oil.
4. Screw the oil filter in until the sealing sits tight. Then tighten the oil filter with further 3/4 of a turn.
5. Refill engine oil (approx: 1,5 l).
6. Check the level of the engine oil:
 - Start the carburetor type petrol engine.
 - Let the engine run for about 30 seconds.
 - Stop the carburetor type petrol engine.
 - Check the level of the engine oil, refill if necessary.
 - Start the engine again and check the unit for oil losses.

7.2.5 Cleaning the Dust Filter

NOTICE

When working under extremely dusty conditions clean the filter more frequently according to requirements.



1. Open the turn-lock and remove the filter cover (fig. 7-8).
2. Withdraw the filter element.
3. Remove the dust filter and clean it as follows:
 - Clean the dust filter with liquid detergents and water.
 - Dry the dust filter with a clean cloth.
4. Reinsert the dust filter as follows: net side towards the cover, side of foamed material towards the filter element.
5. Insert the clips of the filter element into the slots of the filter cover.
6. Fix the filter cover to the engine.

Fig. 7-8 Air Filter with Dust Filter and Filter Element

BW-2/BW-2B/BZ SERVICING AND MAINTENANCE

7.2.6 Cleaning the Filter Element

IMPORTANT

- Do not use detergents containing petrol such as kerosenes for cleaning the filter element. This might impair the function of the filter.
- Do not lubricate the filter element with oil.
- Do not clean the filter element with compressed air.

NOTICE

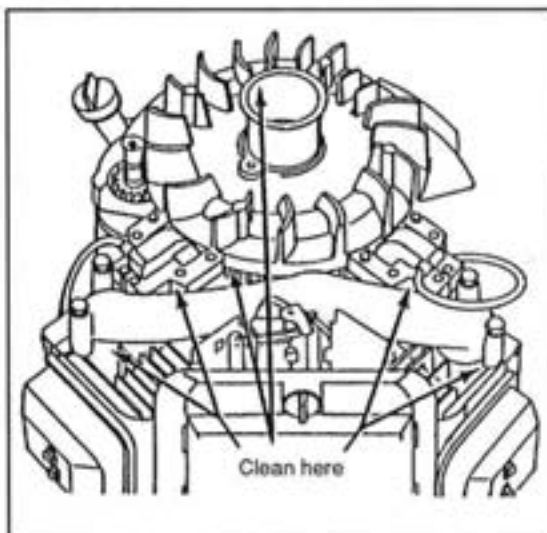
Clean the filter element according to requirements when working under conditions with excessive dust development.

1. Open the turn-lock and remove the filter cover (see fig. 7-8).
2. Withdraw the filter element.
3. Clean the filter element by slightly tapping it on a flat surface. At high dirt accumulation either replace the filter element completely or clean it as follows:
 - Clean the filter element with non-foaming detergents and warm water.
 - Rinse it under running water from the side directed towards the engine.
 - Let the filter element air-dry completely.
4. Insert the clips of the filter element into the slots of the filter cover.
5. Fix the filter cover to the engine.

7.2.7 Cleaning the Cooling Circuit

IMPORTANT

Do not use water or detergents.

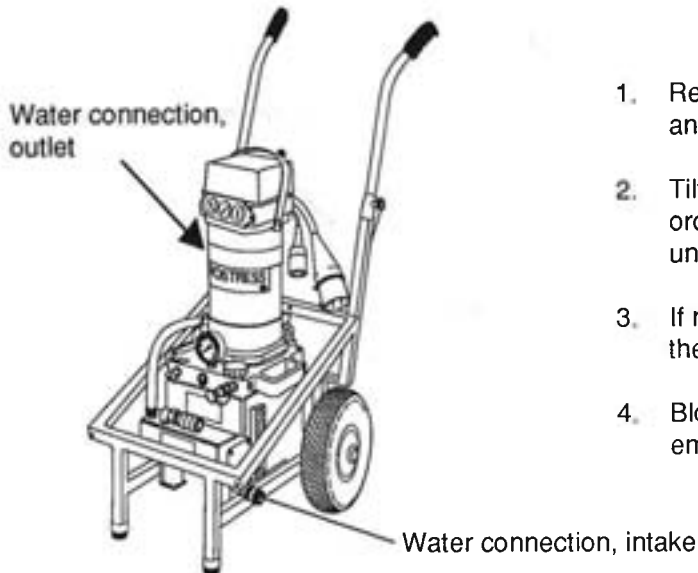


1. Dismount the cover of the cooling fan.
2. Clean the corresponding areas (see fig. 7-9) with a smooth brush.

Fig. 7-9 Cleaning the Cooling Circuit

7.3.1 Blowing out Water

In order to avoid damages due to frost, the electric motor as well as the oil cooler of the unit must be completely drained after finished operation or when you do not intend to run the unit for longer periods.



1. Remove the water hoses at the water intake and outlet.
2. Tilt the unit slightly in forward direction in order to drain the water completely from the unit.
3. If necessary, connect the blow-out pipe to the water outlet.
4. Blow into the blow-out pipe, until water stops emerging from the water intake.

Fig. 7-11 Blowing out Water

7.3.2 Changing of Hydraulic Oil

CAUTION

Avoid any direct contact with hydraulic oil. When it happens, however, wash the hydraulic oil off immediately.

1. Disconnect the power supply plug (unit must be currentless).
2. Disconnect the intake of the water connection.
3. Drain the water completely.
4. Disconnect the water hose (oil cooler - electric motor).
5. Open the relief valve.
6. Remove the screws (4 pieces) of the cap of the oil reservoir.
7. Remove the complete electric motor together with the pump unit from the oil reservoir; let them drop in a leakage-proof oil tray.
8. Pour the hydraulic oil from the oil tray into a collecting pan for waste oil.
9. Clean the oil reservoir.
10. Remove the suction filter from the hydraulic pump, wash it and re-insert it.
11. Replenish the reservoir with new hydraulic oil (approximately 7 l).
12. Check whether the O-ring on top of the oil reservoir is seated correctly in its groove.
13. Set the complete electric motor together with the pump unit again onto the oil reservoir and fix it with screws.
14. Connect the water hose (oil cooler - electric motor).
15. Connect the crusher and the drive unit and run them for a short moment without actuating the crusher (venting of the hydraulic pump).
16. Close the relief valve

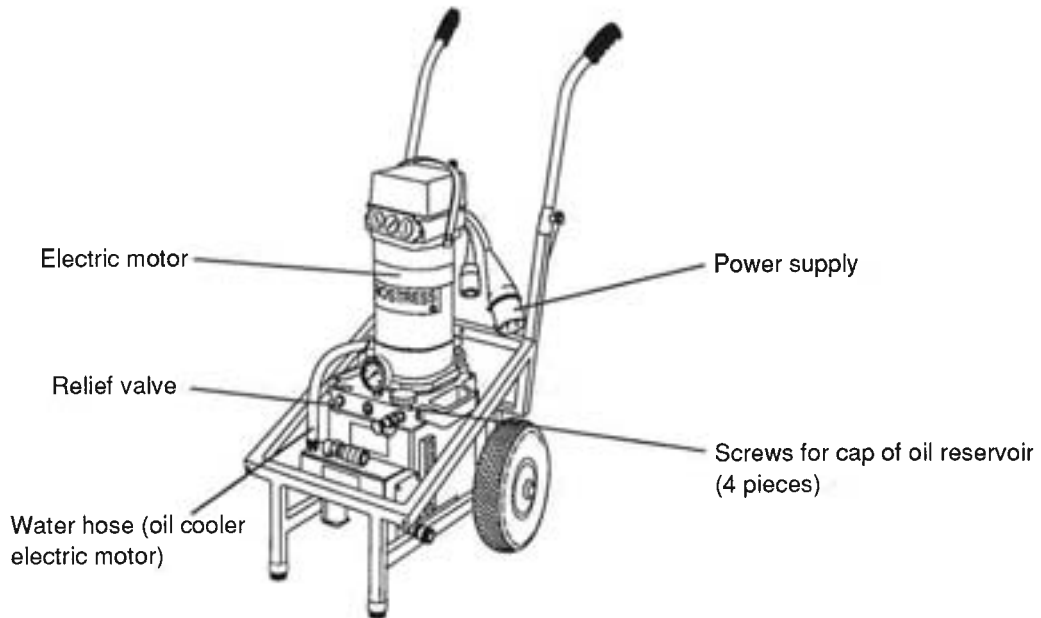


Fig. 7-12 Changing of Hydraulic Oil

Oil Quality:

HYDROSTRESS recommends the following hydraulic oils:

- | | |
|------------------|------------------|
| For Switzerland: | - Mobilfluid 316 |
| International : | - Mobil D.T.E.15 |

After long years of experience these hydraulic oils have proved to be particularly long-lived and resistant.

IMPORTANT

- When these oils are not available, make absolutely sure to use branded hydraulic oil of equal quality. The following requirements must be met:
 - Pour point at least at -30 °C or lower
 - Viscosity index at least 150 or more
 - Viscosity class HLP VG 46 or ISO 3498 HV 46
 - Wearing protection according to DIN 51524, part 3 (HV 46)
- Replenish the oil reservoir with oil products of different brand only after having drained and cleaned the reservoir from the remaining oil, since mixtures of various hydraulic oils are subject to rapid aging.

7.4 Replacement of Components

Hydraulic system: The replacement of components must only be carried out by personnel trained by HYDROSTRESS or similarly qualified staff. In the latter case please contact HYDROSTRESS or an authorized HYDROSTRESS representation prior to any replacement work.

Electric system: The replacement of components must only be carried out by qualified personnel (electrical engineers).

8 TROUBLESHOOTING

Proceed systematically when looking for the cause of defects. For this purpose also use the hydraulic scheme (see section 10).

If you cannot find the defect or eliminate the faulty condition, please contact our after-sales service. Before calling us, please observe the following:

- The better you describe the defect, the better we can help you.
- Have the operating instructions (hydraulic scheme, electric diagrams) at hand.
- Note machine type and machine number of your unit.

CRUSHER BZ

Trouble	Cause	Remedy
Crusher cylinder does not extend.	<ol style="list-style-type: none"> 1. Relief valve at unit is open. 2. Unit is defective. 3. Spool valve is faulty. 4. Crusher cylinder is defective. 	<p>Shut the relief valve.</p> <p>Check the unit.</p> <p>Have spool valve replaced</p> <p>Have crusher cylinder replaced.</p>
Crusher cylinder extends jerkily	Air in hydraulic system	Switch unit on and actuate crusher cylinder several times.
Crusher cylinder does not retract.	<ol style="list-style-type: none"> 1. Piston spill valve is defective. 2. Crusher cylinder is defective. 	<p>Have the piston replaced.</p> <p>Have crusher cylinder replaced.</p>
Crusher does not reach optimum pressing power.	<ol style="list-style-type: none"> 1. Unit is defective. 2. System is leaking. 3. Crusher cylinder is defective 	<p>Check the unit.</p> <p>Check connections and hoses</p> <p>Have crusher cylinder replaced.</p>
Safety valve responds (hydr. oil is leaking)	<ol style="list-style-type: none"> 1. Return hose is not connected 2. Safety valve is defective. 3. Piston spill valve is defective. 	<p>Check couplings. Connect return hose correctly.</p> <p>Replace safety valve.</p> <p>Have the pistons replaced.</p>

Fig. 8-1 Troubleshooting, Crusher BZ

POWER UNIT BW-2B

Trouble	Cause	Remedy
<p>The engine does not start or stops after only a few revolutions</p>	<ol style="list-style-type: none"> 1. Mixture too poor or motor is too cold 2. Petrol flow interrupted 3. Spark plugs or connections defective 4. The unit has been tilted forward for a longer period. The engine is flooded 5. Mixture too rich, engine is flooded 6. Air filter clogged 	<p>Actuate choke, repeat starting procedure:</p> <ul style="list-style-type: none"> - Check petrol valve, if necessary open it - Check fuel tank, if necessary refuel - Check fuel filter, if necessary, have it replaced <p>Replace spark plugs or cables</p> <ul style="list-style-type: none"> - Clean the air filter - Repeat the starting procedure several times at full acceleration <p>Close the choke, repeat the starting procedure several times at full acceleration</p> <p>Clean or replace the air filter (dust filter, filter element) if necessary (see Fig. 7-8).</p>
<p>No pressure</p>	<p>Relief valve open</p>	<p>Shut the relief valve</p>
<p>Maximum power of the unit is not available</p>	<ol style="list-style-type: none"> 1. Pump is defective 2. Relief valve of the main circuit is defective 	<p>Contact our after-sales service</p>
<p>The hydraulic oil has a milky colour and the oil level rises</p>	<p>The oil cooler is defective</p>	<p>Contact our after-sales service and have the oil cooler replaced. Then:</p> <ul style="list-style-type: none"> - Flush the complete system and the hoses with hydraulic oil - Replenish the unit with fresh oil.
<p>Coupling leaks</p>	<ol style="list-style-type: none"> 1. Sealing defective 2. Coupling defective 	<p>Replace the coupling</p> <p>Replace the coupling</p>

Fig. 8-2 Troubleshooting, Power Unit BW-2B

POWER UNIT BW-2

Trouble	Cause	Remedy
Unit does not run but power supply is connected.	Unit receives no voltage because 1. the power supply cable is defective. 2. power supply at construction site is defective.	Replace the cable. Check power supply of the construction site.
The electr. motor hums after starting; no power.	Motor runs on two start-phases	Check the fuses. Consult only an electrician.
The unit starts and then switches off.	Fuse protection of the construction site responds	Fuse value is too low. Use another source of power supply.
No pressure	Relief valve open.	Shut the relief valve.
Maximum power of the unit is not available.	1. Pump is defective. 2. Pressure control valve of the main circuit is defective	Contact our after-sales service.
The unit stops running, during operation	1. Power supply is interrupted. 2. Protective motor switch responds because of - Undervoltage of power supply - Overvoltage of power supply 3. Cross section of incoming cable too small	Check power supply. Check power supply. Check power supply. Use cable with specified cross section (see technical data).

Fig. 8-3 Troubleshooting, Power Unit BW-2 (page 1 of 2)

7.3 Power Unit BW-2

Maintenance interval	Activity	Remarks
<p>Daily</p>	<p>1. Visual inspection for: - leakage - dirt accumulation</p> <p>2. Check screw connections for firm seat.</p> <p>3. Check oil level.</p> <p>4. Check couplings for: - leakage - damage</p>	<p>Check cause of leakage and eliminate it. Clean with water, steam jet etc.</p> <p>Tighten loose screw connections</p> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;"> <p>IMPORTANT Never run the unit when the oil level is below its minimum level.</p> </div> <p>Do not exceed the maximum level!</p> <p>Replace damaged or leaking couplings.</p>
<p>In case of frost at the end of operation</p>	<p>Drain the water and blow the rest out by means of the blow-out pipe.</p>	<p>Procedure see section 7.3.1</p>
<p>100 operating hours</p>	<p>1. Change of hydraulic oil.</p> <p>2. Clean or replace the suction filter.</p>	<div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;"> <p>IMPORTANT Use only the prescribed hydraulic oils: Mobilfluid 316 or Mobil D.T.E.15</p> </div>
<p>200 operating hours</p>	<p>Major servicing.</p>	<p>Is carried out either by HYDROSTRESS or an authorized HYDROSTRESS representation exclusively.</p>

Fig 7-10 Table of maintenance works BW-2

7.2.8 Storage and Preservation

When putting the unit BW-2B to storage or out of operation for more than 30 days, proceed as follows for preservation purposes

1. Drain the fuel tank completely: let the engine run until it stops because of lack of petrol.
2. Change the oil when the engine is still warm (cap. 7.2.3):
3. Remove the spark plugs.
4. Pour some engine oil into the cylinder head.
5. Slowly actuate the engine by means of the launching rope so that the oil is evenly distributed.
6. Reinsert the spark plugs.
7. Clean the cylinder, the cylinder heads, the fan casing and the exhaust and lubricate them slightly.
8. Store the drive unit in a clean and dry room.

Trouble	Cause	Remedy
The unit stops running, during operations (continued)	4. Defective plug connections 5. Winding thermostat responds because of: - Electric motor is too hot.	Check the plug connections, replace them, if necessary. Check the water circuit and the power supply.
No voltage at the secondary socket 220 V.	1. A four-lead cable is used. 2. The safety cutout in the control system responds	Use a five-lead cable (see technical data). <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;"> <p>CAUTION Before opening the control system make sure the unit is currentless.</p> </div> Check the connected device. Open the control system and reset the safety cutout.
The hydraulic oil has a milky colour and the oil level rises.	The oil cooler is defective.	Contact our after-sales service. Have the oil cooler replaced. then: 1. Rinse the complete system and the hoses with hydr. oil. 2. Replenish the unit with fresh oil.
Coupling leaks.	1. Sealing defective. 2. Coupling defective	Replace the coupling. Replace the coupling.

Fig. 8-3 Troubleshooting, Power Unit BW-2 (page 2 of 2)

9 ACCESSORIES

The standard equipment comprises the following accessories:

- Tool kit with following contents:
 - Eye protectors
 - Helmet with face screen
 - Neat's leather apron
 - Hexagon socket screw key (SW 10)
- Blow-out pipe
Order No. 99 ZU-ABLAS-00
- for draining the water from the oil cooler (see 7.)

Available upon request (optional):

- Take-off device
Order No. MB ZU-53058-00
- for removing the steel points from crusher BZ
- Pressure reducing valve
Order No. 99 ZU - 52802 - 00
- Fo reducing the pressure in the hose in order to permit a perfect coupling
- Crusher point
Order No. 99 MB - 53670 - 02
- for the demolition of walls with a thickness below 10 cm.
- Staircase point
Order No. 99 MB - 53670 - 01
- for the removal of staircases

10 SCHALTPLÄNE

Inhalt:	Seite
10-1	Hydraulikschema BZ	10-2
10-2	Hydraulikschema BW-2/BW-2B	10-4
10-3	Elektroschema BW-2	10-6

Für die Bestellung der Ersatzteile aus den Schaltplänen sind die gleichen Angaben wie für die Ersatzteilbestellung, gemäß Seite 11-2 erforderlich.

10 CIRCUIT DIAGRAMS

Contents:	Page
10-1	Scheme of hydraulic system BZ	10-2
10-2	Scheme of hydraulic system BW-2/BW-2B	10-4
10-3	Scheme of electric BW-2	10-6

Ordering spare parts from the circuit diagrams requires the same specifications as ordering spare parts shown on page 11-2.

10 SCHEMAS DE CONNEXIONS

Table des matières:	Page
10-1	Schéma hydraulique BZ	10-2
10-2	Schéma hydraulique BW-2/BW-2B	10-4
10-3	Schéma électrique BW-2	10-6

Pour toute commande des pièces détachées indiquées sur les schémas de connexions, prière de communiquer les mêmes spécifications que celles décrites à la page 11-2.

HYDROSTRESS

BW-2/BW-2B/BZ SCHALTPLÄNE
BW-2/BW-2B/BZ CIRCUIT DIAGRAMS
BW-2/BW-2B/BZ SCHEMAS DE CONNEXIONS

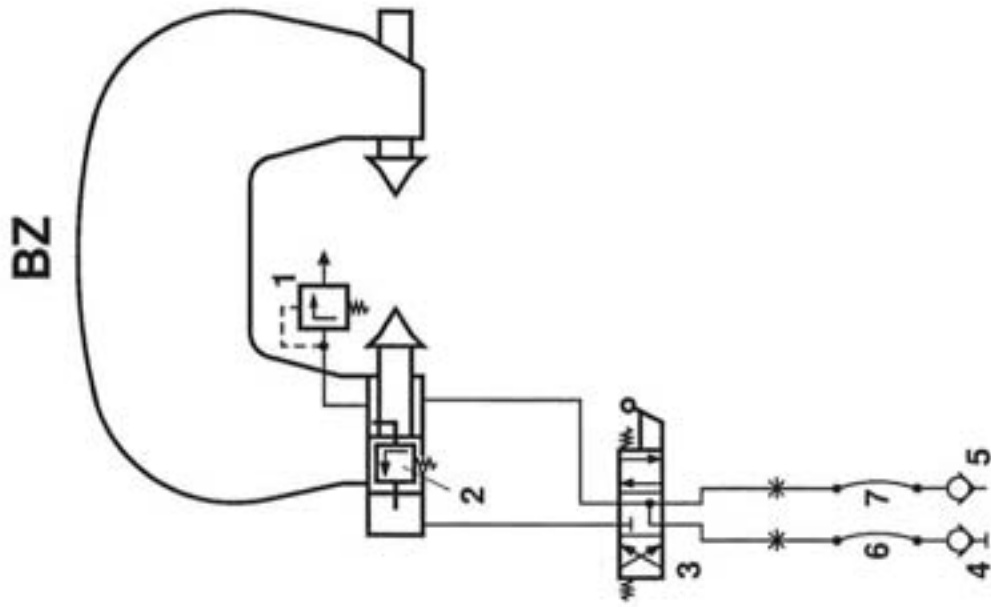


Abb. 10-1

Hydraulikschemata BZ

Scheme of hydraulic system BZ

Schéma hydraulique BZ

(Seite 1 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ SCHALTPLÄNE BW-2/BW-2B/BZ CIRCUIT DIAGRAMS BW-2/BW-2B/BZ SCHEMAS DE CONNEXIONS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Designation	Menge Qty	Bemerkung Remark
1	20HS - BZ003	Drucksicherung	Protection against pressure losses	Maintien de pression minimale	1	
2	20HS - BZ002	Kolben-Überströmventil	Piston spill valve	Valve de barrage à piston	1	
3	20HS - BZ001	4/3-Wegeventil	Directional control valve 3/4	Distributeur 4/3	1	SGOF-A mit W-Spiel
4	07S4 - HP060 - 38	Kupplung R 3/8"	Coupling 3/8"	Raccord femelle 3/8"	1	O-WR517-12
5	07S1 - 00372 - 38	Nippel 3/8"	Nipple 3/8"	Raccord mâle 3/8"	1	FF372-6 FB
6	99HS - 08008 - OP	HD-Schlauch	HD-hose	HD-Tuyau	1	12D3-75005-8R
7	99HS - 08008 - OT	ND-Schlauch	ND-hose	ND-Tuyau	1	12D3-35005-8R

Abb. 10-1 Hydraulikschemata BZ

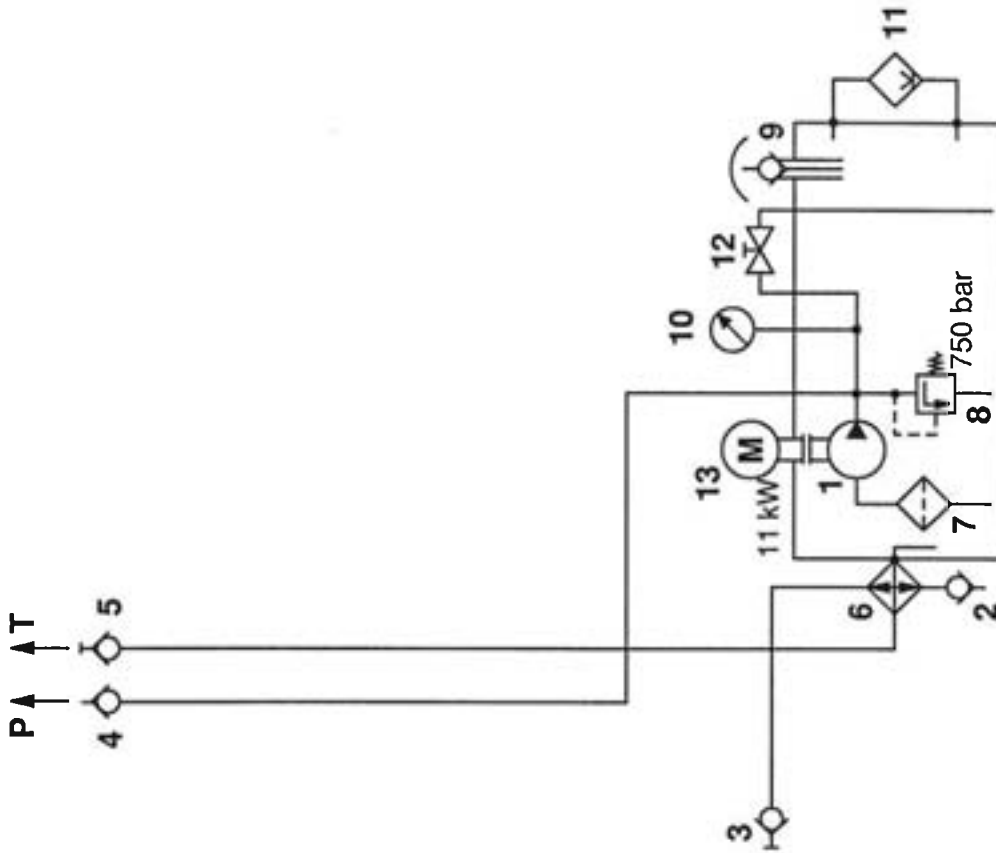
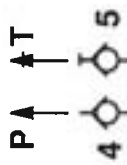
Scheme of hydraulic system BZ

Schéma hydraulique BZ

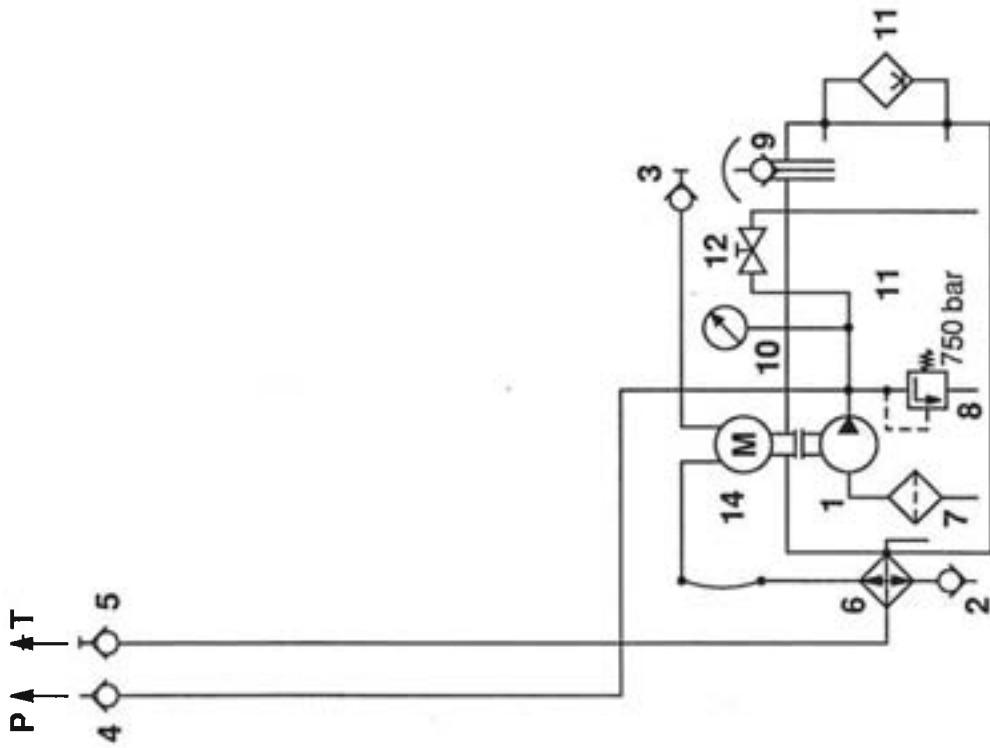
(Seite 2 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ SCHALTPLÄNE
BW-2/BW-2B/BZ CIRCUIT DIAGRAMS
BW-2/BW-2B/BZ SCHEMAS DE CONNEXIONS



BW-2B



BW-2

Abb. 10-2

Hydraulikschemata

Scheme of hydraulic system

Schéma hydraulique

(Seite 1 von 2)

**BW-2/BW-2B/BZ SCHALTPLÄNE
BW-2/BW-2B/BZ CIRCUIT DIAGRAMS
BW-2/BW-2B/BZ SCHEMAS DE CONNEXIONS**

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	07P1 - 37000 - 00	Radialkolbenpumpe	Radial piston pump	Pompe à piston radial	1	R3,7
2	07S2 - 07213 - 14	Nippel 1/4"	Nipple 1/4"	Raccord mâle 1/4"	1	LP-007-1-WR013
3	07S2 - 07217 - 38	Kupplung R 3/8"	Coupling 3/8"	Raccord femelle 3/8"	1	LP-007-0-WR517
4	07S4 - HP062 - 38	Nippel 1/2"	Nipple 1/2"	Raccord mâle 1/2"	1	115-1204
5	07S1 - 00371 - 38	Kupplung	Coupling	Raccord femelle	1	FF 371
6	siehe Abb. 11-15	Öl-Wasserkühler	Oil-water cooler	Réfrigérateur à l'huile et à l'eau	1	ref. Fig. 11-15
7	07O2 - 00021 - 00	Ansaugfilter	Suction filter	Filter d'aspiration	1	S21
8	99MB - 52533 - 01	Druckbegrenzungsventil	Pressure control valve	Soupape de limitation de pression	1	3-52533
9	07B2 - 13634 - 10	Einfüllschraube	Filler screw	Vis de remplissage	1	Nr. 13.634
10	07N1 - 11000 - 01	Manometer	Pressure gauge	Manomètre	1	VDO 1775088011
11	07L1 - 00127 - 12	Ölstand	Oil level	Niveau d'huile	1	FSA 127-1.1/12
12	0004 - 52491 - 01	Entlastungshahn	Relieving tap	Robinet de décharge	1	4-52491
13	99MA - 16BS3 - 10	Benzinmotor	Engine	Moteur	1	430 VCS
14	99MA - 06385 - 10	Elektromotor	Electric motor	Moteur électrique	1	

HYDROSTRESS

**BW-2/BW-2B/BZ SCHALTPLÄNE
 BW-2/BW-2B/BZ CIRCUIT DIAGRAMS
 BW-2/BW-2B/BZ SCHEMAS DE CONNEXIONS**

ACHTUNG

Die Ersatzteilnummern sind nur für Antriebsaggregate mit einem Anschlußwert von 3x380V/50 Hz gültig.

IMPORTANT

The part numbers are to be valid only for power units with a power supply of 3x380V/50 Hz.

ATTENTION

Le numéros de la pièces de rechange de repère n'est valable que pour les groupes d'entraînement ayant une raccordement au réseau de

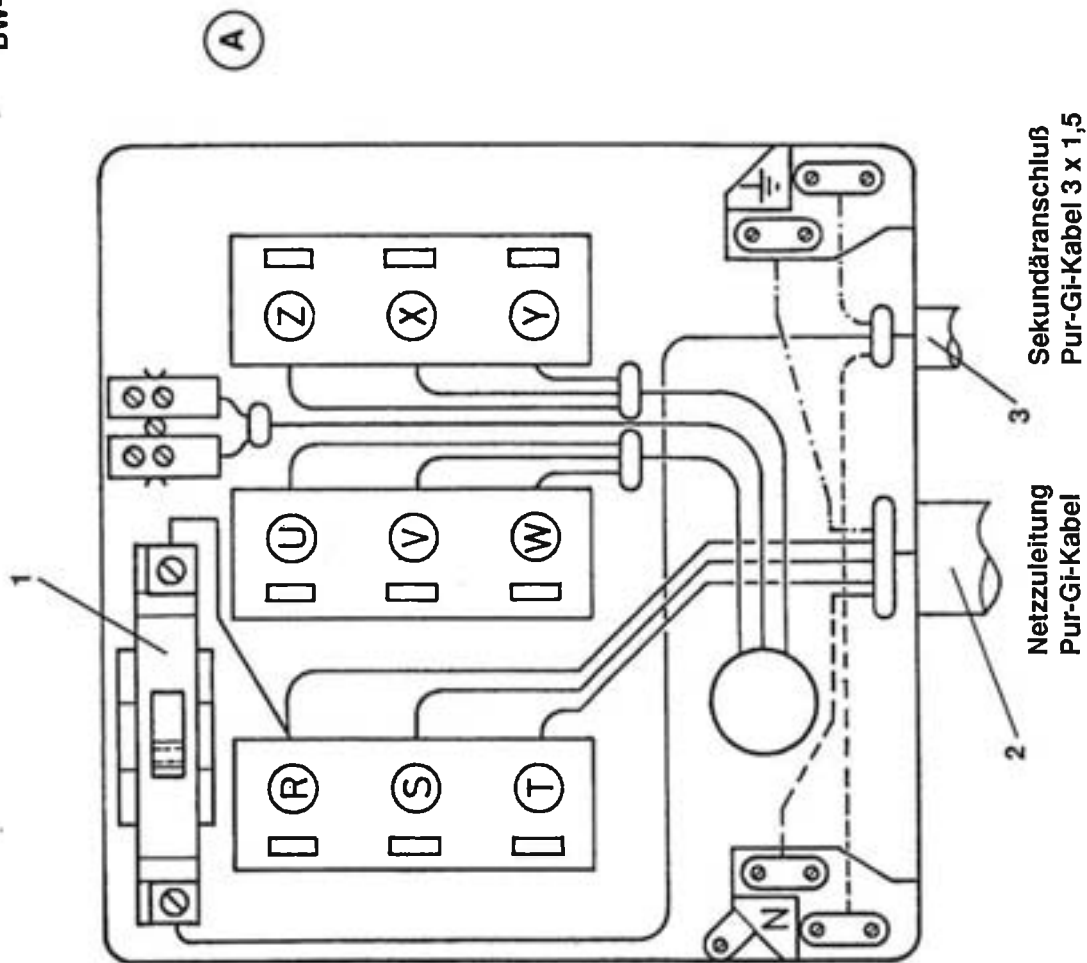


Abb. 10-3 Elektroschema BW-2

Scheme of electric BW-2

Schéma électrique BW-2

BW-2/BW-2B/BZ SCHALTPLÄNE
BW-2/BW-2B/BZ CIRCUIT DIAGRAMS
BW-2/BW-2B/BZ SCHEMAS DE CONNEXIONS

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
NA	11S3 - 01118 - 35	Motorschutzschalter	Motor-protection	Disjoncteur-protecteur	1	CTYP 40 mit UA 40
1	1111 - 10000 - 00	Sicherungsautomat	Safety cutout	Coupe-circuit automatique	1	Picomat PLV1/10A
3	0003 - CEE16- WS	Elektrostecker	Main plug	Coupe-circuit automatique	1	CEE16
4	11F4 - 00013 - 03	Sekundäranschluss	Secondary connection	Connexion secondaire	1	Pur-Gi-Kabel 3 x 1,5

11 ERSATZTEILLISTE

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11-2 Beißzangenzylinder	11-6
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11 SPARE PARTS LIST

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11-12 Tool kit	11-26
11-13 Outlay of subassembly BW-2/BW-2B	11-29
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11-15	Electric engine	11-32
11-16	Pump unit	11-34
11-17	Pressure control valve	11-36
11-18	Oil reservoir incl. oil cooler	11-38
11-19	Staircase-adapted trolley	11-42

11 LISTE DES PIÈCES DE RECHANGE

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Liste des illustrations

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11-1	Etrier de la pince à croquer	11-4
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11-10	Jeu de joints du cylindre BZ	11-23
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11-19	Charriot	11-42

11.1 Bestellungen

Für Ersatzteilbestellungen benötigen wir folgende Angaben:

1. Maschinentyp gemäß Typenschild (z. B. BW-2 001)
2. Nennspannung und Frequenz gemäß Typenschild (z.B. 380 V - 3N ~ 50Hz)
3. Maschinenummer gemäß Typenschild (z. B. 2136)
4. Ersatzteilnummer (z. B. 08W7-75648-02)

Für Bestellungen, Fragen und Informationen wenden Sie sich bitte an unsere für Sie zuständige Niederlassung (siehe unten).

11.1 Description of orders

For spare part orders we need the following indications::

1. Type of machine, according to type plate (e.g. BW-2 001)
2. Standard voltage and frequency according to type plate (e.g. 380 V - 3N ~ 50Hz)
3. Number of machine, according to type plate (e.g. 2136)
4. Stock number of spare part (e.g. 08W7-75648-02)

For orders, inquiries and information, please refer to your responsible branch office (indicated below).

11.1 Spécifications effectuées à la commande

Prière d'indiquer les spécifications suivantes pour toute commande de pièces de rechange :

1. Type de machine selon plaque d'identité (p.ex. BW-2 001)
2. Puissance connectée selon plaque d'identité (p.ex. 380 V - 3N ~ 50Hz)
3. Numéro de machine selon plaque d'identité (p.ex. 2136)
4. Numéro de la pièce de rechange (p.ex. 08W7-75648-02)

Prière de contacter notre filiale (voir ci-dessous) pour toute commande, question ou renseignement.

Unsere zuständige Vertretung

our branch office

notre filiale

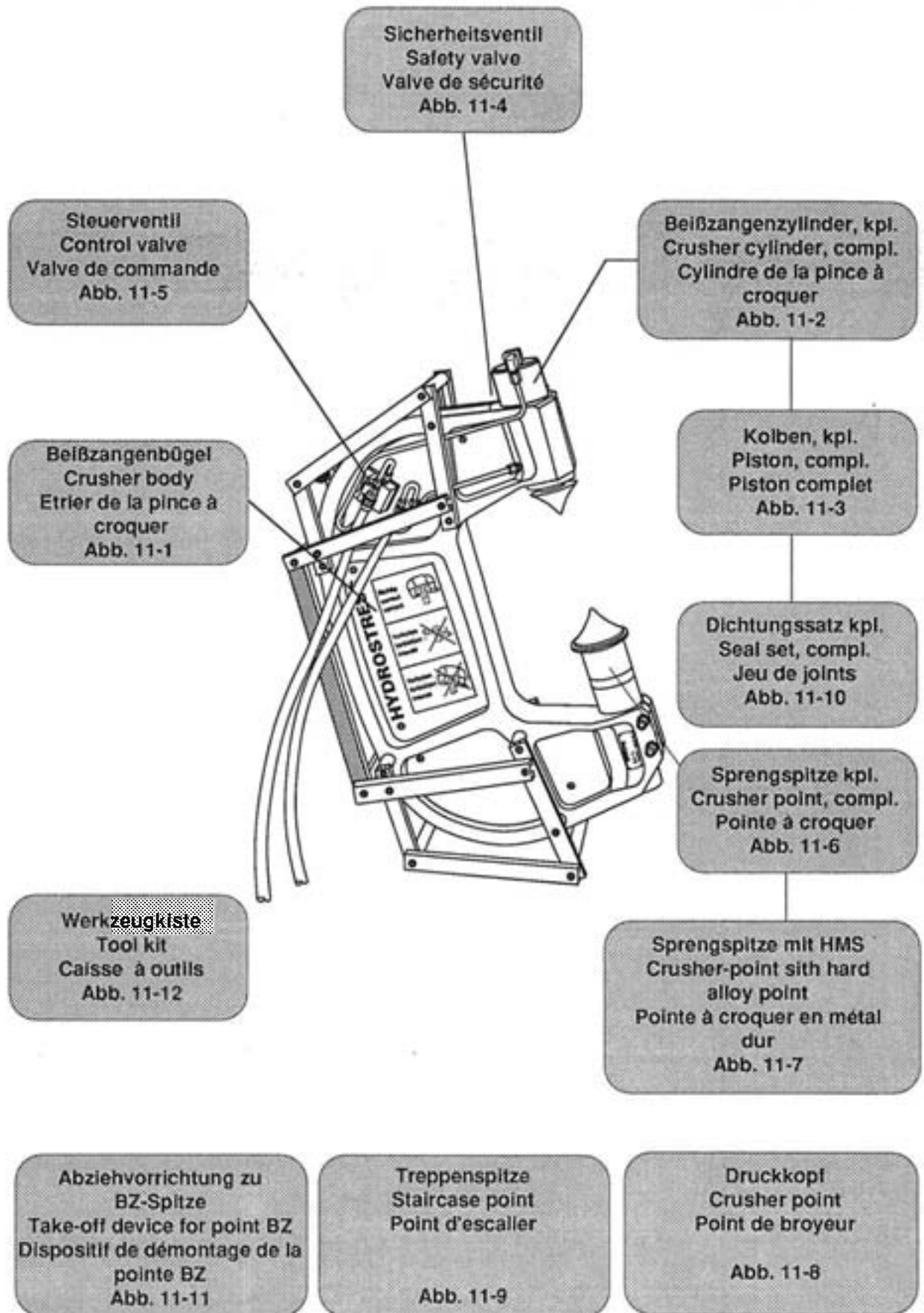


Abb. 11-0 Baugruppen-
übersicht BZ

Outlay of
subassembly BZ

Plan des sous-
groupes BZ

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**BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE PARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE**

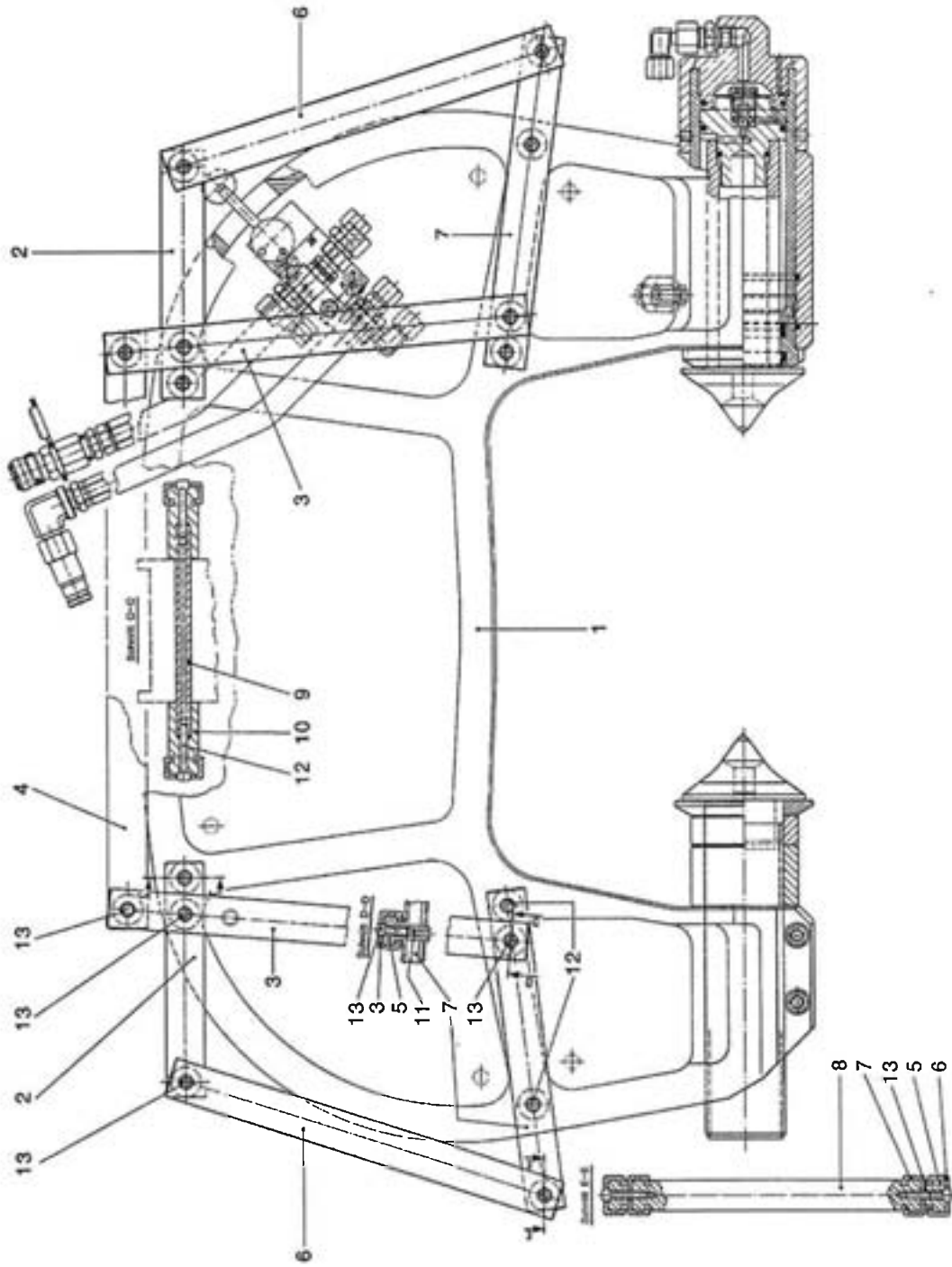


Abb. 11-1 Beißzangenbügel

Crusher body

Pince à croquer courbée

(Seite 1 von 2)

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	0000 -52527 -01	Beißzangenbügel	Crusher body	Pince à croquer courbée	1	
NA	20HS - BZ006	Haltegriff zu BZ kompl.	Grip handle for BZ, compl.	Poignée de transport compl.de la BZ	30	
2	0000 -52649 -06	Griffleiste BZ	Grip strip BZ	Baguette de la poignée BZ	4	
3	0002 -52868 -02	Griff 323	Handle 323	Poignée 323	4	
4	0002 -52868 -01	Schutzleiste	Guard strip	Baguette de protection	2	
5	0000 -52649 -02	Profilhalter kurz	Profile retainer, short	Support de profil court	20	
6	0000 -52649 -03	Griff 310	Handle 310	Poignée 310	4	
7	0000 -52649 -05	Griffleiste kurz	Grip strip, short	Baguette de poignée courte	4	
8	0000 -52649 -07	Griffstab	Handlebar	Barre de poignée	8	
9	0000 -52649 -08	Befestigungsrohr	Mounting tube	Tuyau de fixation	6	
10	0000 -52649 -09	Profilhalter	Profile retainer	Support de profil	12	
11	01M4 -06000 -00	Langmutter	Long nut	Ecrou long	8	M6x30
12	0111 -06040 -00	Inbusschraube	Allen head screw	Vis à six pans creux	12	M6x40
13	0111 -06030 -00	Inbusschraube	Allen head screw	Vis à six pans creux	20	M6x30

HYDROSTRESS

11-6

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE PARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

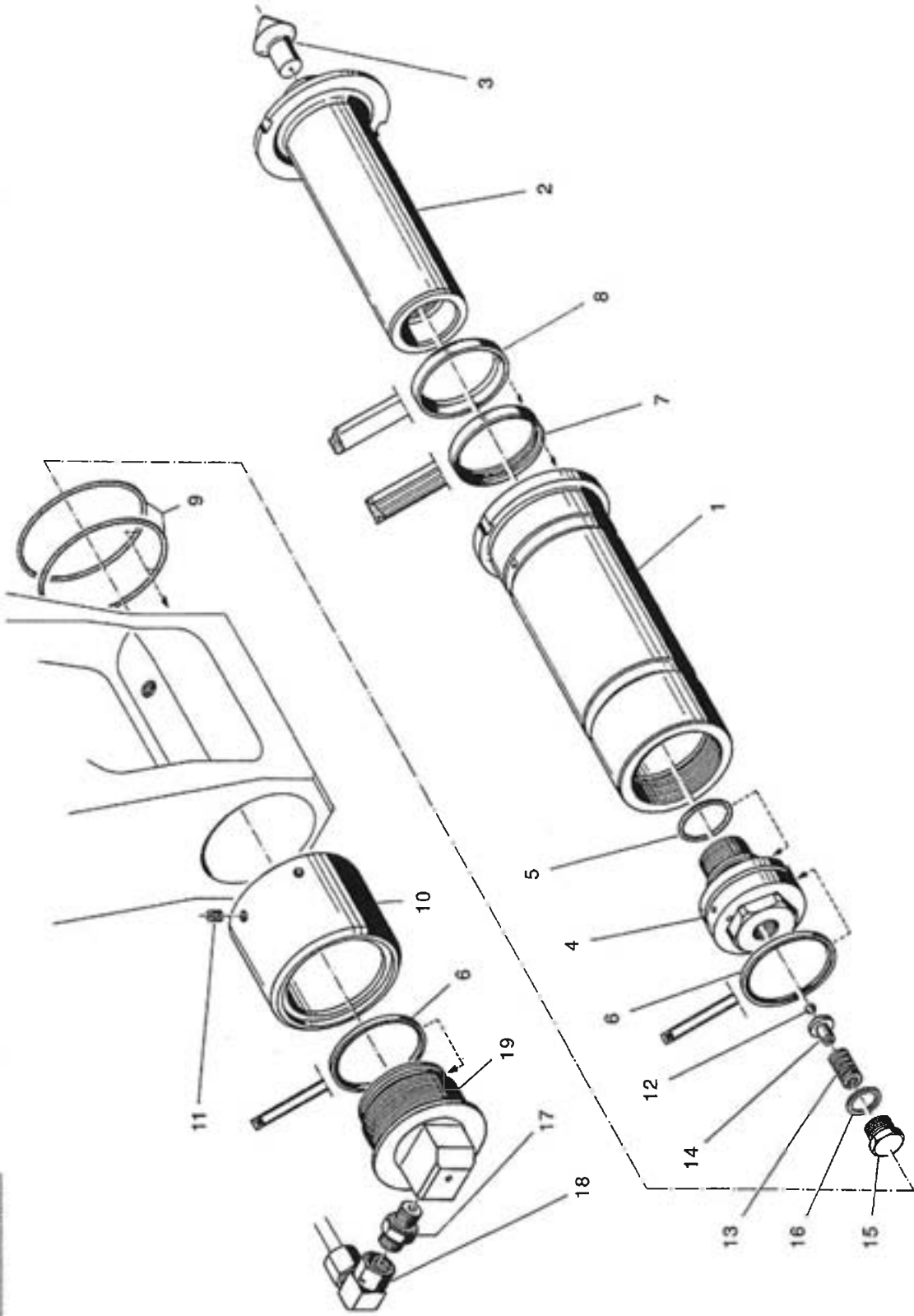


Abb. 11-2 Beißzangenzylinder

Crusher cylinder

Cylindre de la pince à croquer

(Seite 1 von 2)

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE SPARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr.	Ersatzteil-Nr.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
Pos.-No.	Spare part-No.					
NA	20HS - BZ007	Zylinder kompl. zu BZ	Compl. cylinder for BZ	Cylindre complet de la BZ		
1	0001 - 52433 - 01	Zylinder BZ kompl.	Cylinder BZ compl.	Cylindre de la BZ compl.	1	
2	0001 - 52718 - 11	Sprengholben BZ mit HM	BZ crusher piston with hard alloy	Piston de la BZ en métal dur	1	K 455
3	0003 - 52719 - 01C	Stahlspitze	Steel point	Pointe en acier	1	
4	0001 - 52674 - 03	Kolben BZ	Piston BZ	Piston de la BZ	1	
5	05O1 - 00350 - 40	O-Ring	O-Ring	O-ring	1	35x4 N70
6	05K1 - 00700 - 40	Dichtung	Sealing	Joint	2	KDS 70
7	05T1 - 06860 - 11	Teleskopdichtung	Telescopic sealing	Joint télescopique	1	Dm 60
8	05A2 - 07060 - 10	Abstreifring	Wiping ring	Segment racleur	1	Dm 60/70/10
9	05O1 - 00880 - 35	O-Ring	O-Ring	O-ring	2	88x3,5 90 Shore
10	0001 - 52755 - 04	Bremshülse BZ	Brake sleeve BZ	Douille de freinage	1	M8x8
11	01G1 - 08008 - 45	Gewindestift	Set screw	Vis sans tête	6	
12	04B1 - 08000 - 00	Kugel	Ball	Bille	1	Dm 8
13	03S1 - 91004 - 36	Feder schwer	Spring, solid	Ressort lourd	1	16/8x25
14	0001 - 52755 - 02	Kugelhalter zu BZ	Ball retaining device for BZ	Porte-bille de la BZ	1	
15	0001 - 52755 - 01	Stellhülse BZ	Adjusting screw BZ	Douille de réglage de la BZ	1	
16	0001 - 52674 - 04	Einstellring	Self-aligning ring	Bague de réglage	1	K.V. X=3,4
17	08H7 - 73128 - 10	Ger.Verschr.	Straight screw-connection	Raccord à vis	1	3/8-10S
18	08W7 - 73648 - 10	Winkelverschr.	Angle screw-connection	Raccord à vis condensé	1	Rohr 10S
19	0001 - 52674 - 01	Zylinderdeckel BZ	Cylinder cover	Couvre-cylindre BZ	1	

Abb. 11-2 Beißzangenzylinder

Crusher cylinder

Cylindre de la pince à croquer

(Seite 2 von 2)

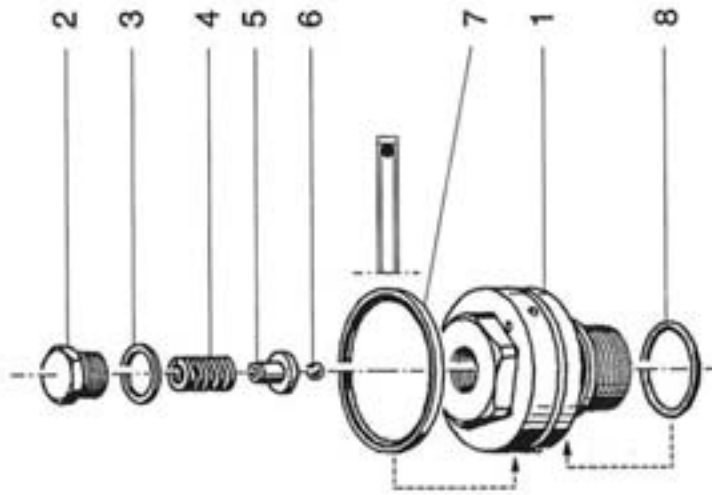


Abb. 11-3 Kolben kompl.

Piston, complete

Piston complet

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE PARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr.	Ersatzteil-Nr.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
Pos.-No.	Spare part-No.					
NA	20HS - BZ002	Kolben BZ kompl.	Piston BZ, complete	Piston complet de la BZ	1	
1	0001 - 52674 - 03	Kolben	Piston	Piston	1	
2	0001 - 52755 - 01	Stellhülse	Adjusting screw	Douille de réglage	1	
3	0001 - 52674 - 04	Einstellring	Self-aligning ring	Bague de réglage	1	K.V. x=3,4
4	03S1 - 91004 - 36	Feder schwer	Spring, solid	Ressort lourd	1	16/8 x 25
5	0001 - 52755 - 02	Kugelhalter	Ball retaining device	Porte-bille	1	
6	04B1 - 08000 - 00	Kugel	Ball	Bille	1	ø 8 mm
7	05K1 - 00700 - 40	Dichtung	Sealing	Joint	1	KDS 70
8	05O1 - 00350 - 40	O-Ring	O-Ring	O-ring	1	35x4

Abb. 11-3 Kolben kompl.

Piston, complete

Piston complet

(Seite 2 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE SPARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

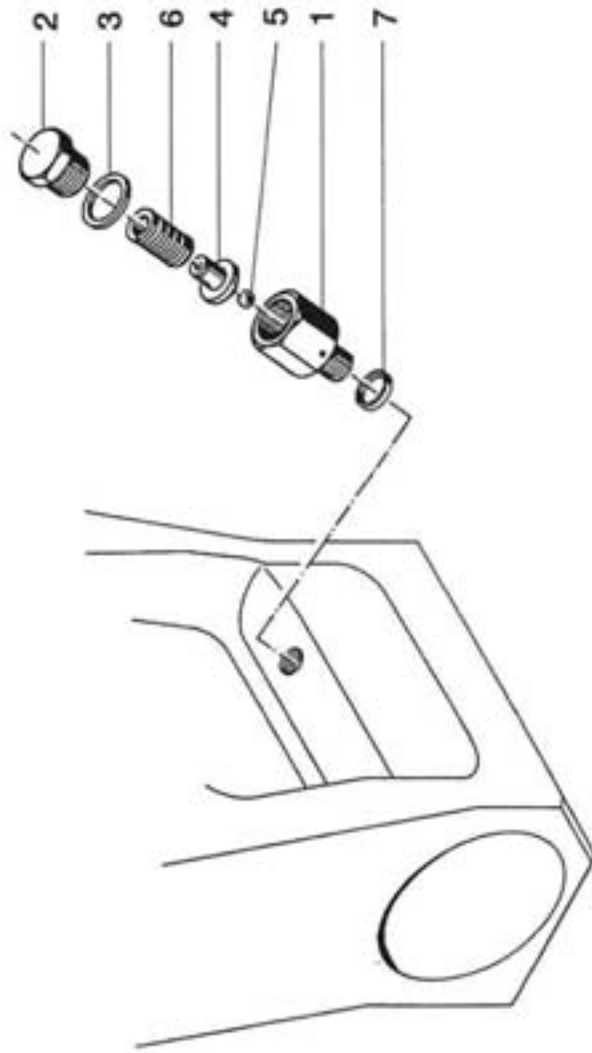


Abb. 11-4 Sicherheitsventil

Safety valve

Valve de sécurité

(Seite 1 von 2)

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE SPARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
NA	20HS - BZ003	Sicherheitsventil BZ kompl.	Safety valve BZ, complete	Valve de sécurité complète BZ		
1	0002 - 52522 - 01	Gehäuse BZ	Housing BZ	Boîtier BZ	1	
2	0001 - 52755 - 01	Stellhülse BZ	Adjusting screw BZ	Douille de réglage BZ	1	
3	0001 - 52674 - 04	Einstellring	Self-aligning ring	Bague de réglage	1	
4	0001 - 52755 - 02	Kugelhalter zu BZ	Ball retaining device for BZ	Porte-bille de la BZ	1	
5	04B1 - 08000 - 00	Kugel	Ball	Bille	1	ø 8
6	03S1 - 91004 - 36	Feder schwer	Spring, solid	Ressort lourd	1	16/8x25
7	08D1 - 80301 - 14	Dichtkantenring	Sealing ring	Bague d'étanchéité	1	G 1/4"

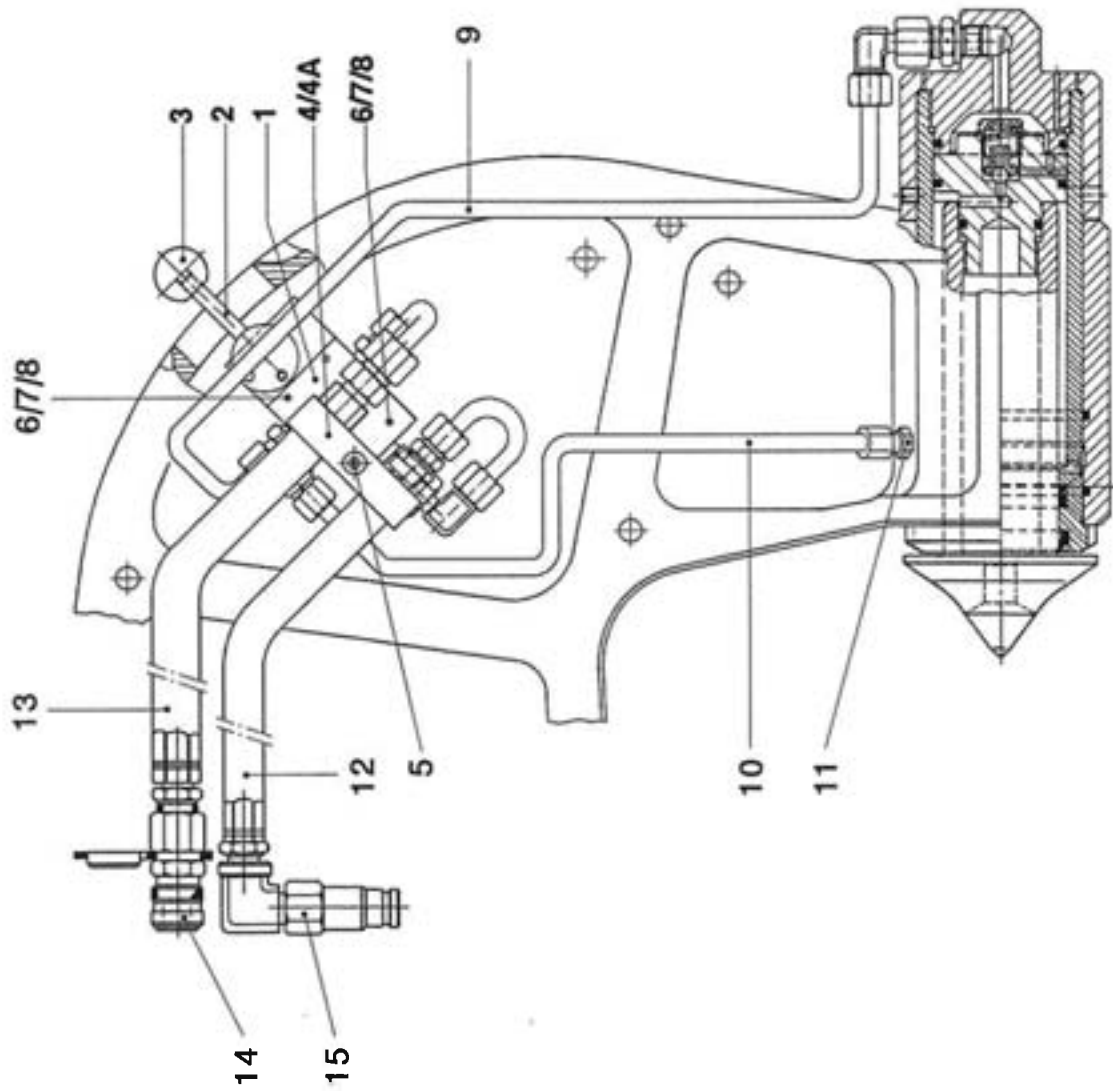


Abb. 11-5 Steuerventil

Control valve

Valve de commande

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	20HS - BZ001	Steuerschieber BZ kompl.	Spool valve BZ, complete	Tiroir de distribution BZ complet	1	Nur kompl. lieferb.
2	0003 - 53185 - 01	Gew.Stange Steuerschieber	Threaded rod of spool valve	Tige filetée du tiroir de distribution	1	
3	0003 - 53185 - 02	Kugel Steuerschieber	Ball of spool valve	Tiroir de distribution à bille	1	
4	0004 - 52762 - 01	Schlauchbride	Hose Clamp	Bride	1	
4A	0004 - 52762 - 02	Klemmbride	Clamp	Bride	1	
5	0111 - 08050 - 00	Inbusschr.	Allen head screw	Vis à six pans creux	1	M8x50
6	0111 - 08016 - 00	Inbusschr.	Allen head screw	Vis à six pans creux	2	M8x16
7	01U1 - 08015 - 50	U-Scheibe	Washer	Rondelle	2	M8
8	02O1 - 08020 - 02	Distanzscheibe	Spacer	Plaque d' écartement	2	M8 spez.
9	20HS - BZ004	Hochdruckstahlleitung	High pressure line	Conduite acier haute pression	1	Nur kompl. lieferb.
10	20HS - BZ005	Niederdruckleitung	Low pressure line	Conduite basse pression	1	Nur kompl. lieferb.
11	08H7 - 73117 - 10	Ger.-Verschr.	Straight screw-connection	Raccord à vis	1	G 1/4"/10L
12	99HS - 08008 - OT	Rücklaufschlauch	Return hose	Tuyau de retour	1	
13	99HS - 08008 - OP	Druckschlauch	Pressure hose	Tuyau de pression	1	
14	07S4 - Hp060 - 38	Steckkupplung	Coupling female	Raccord femelle	1	O-WR 517-12
15	07S1 - 00372 - 38	Nippel	Nipple	Raccord mâle	1	Brunning FF372 Vater

Abb. 11-5 Steuerventil

Control valve

Valve de commande

(Seite 2 von 2)

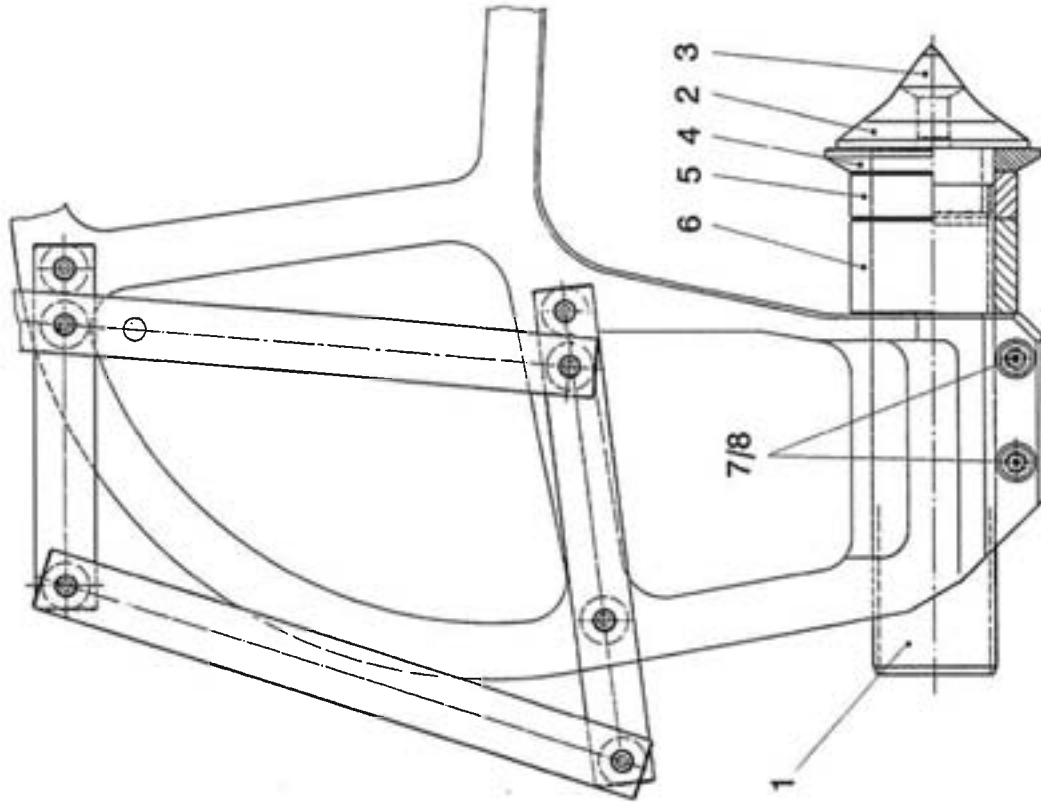


Abb. 11-6 Sprengspitze kpl.

Crusher point, complete

Pointe de la pince à croquer com pièce

(Seite 1 von 2)

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIÉCES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	0001 - 52718 - 02	Halterohr	Stay tube	Tube support	1	
2	0001 - 52718 - 03	Aufschraubspitze	Screw-on point	Pointe vissable	1	
3	0003 - 52719 - 01C	Stahlspitze	Steel point	Pointe en acier	1	K 455
4	0001 - 52433 - 02	Blende	Steel ring	Cache	1	
5	0001 - 52434 - 02	Stützring	Spacer	Bague d'appui	1	25 mm
6	0001 - 52434 - 03	Stützring	Spacer	Bague d'appui	2	50 mm
7	0111 - 12070 - 00	Inbusschr.	Allen head screw	Vis à six pans creux	2	M12x70
8	01U1 - 12020 - 50	U-Scheibe	Washer	Rondelle	2	M12

Abb. 11-6 Sprengspitze

Crusher point, complete

Pointe de la pince à croquer complète

(Seite 2 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE SPARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

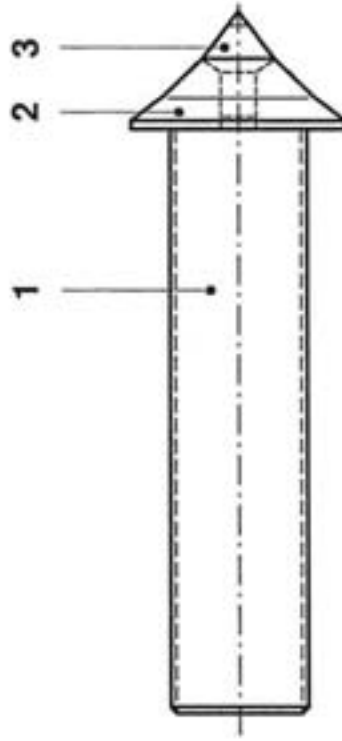


Abb. 11-7 Sprengspitze mit Hartmetallspitze

Crusher point with hard alloy point

Pointe en métal dur

(Seite 1 von 2)

**BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE SPARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE**

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Francais Désignation	Menge Qty	Bemerkung Remark
NA	20HS - BZ010	Sprengspitze kompl. mit HMS	Crusher point, compl. with hard alloy point	Pointe complète avec pointe en métal dur	1	
1	0001 - 52718 - 02	Halterohr zu Sprengsp. BZ	Stay tube for crusher point BZ	Tube support de la pointe BZ	1	
2	0001 - 52718 - 03	Aufschraubspitze BZ	Screw-on point	Pointe vissable BZ	1	
3	0003 - 52719 - 01C	Stahlspitze	Steel point	Pointe en acier	1	K 455

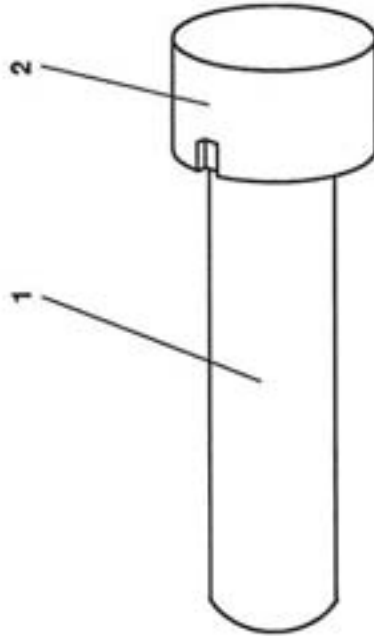


Abb. 11-8 Druckkopf 150 mm

Crusher point 150 mm

Point de broyeur 150 mm

(Seite 1 von 2)

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Francais Désignation	Menge Qty	Bemerkung Remark
NA	99MB - 53670 - 02	Druckkopf 150	Crusher point 150	Point de broyeur 150	1	
1	0001 - 52718 - 02	Halteroehr	Holding tube	Tube de support	1	
2	0002 - 53670 - 02	Druckkopf	Crusher point	Point de broyeur	1	ø 150 mm

Abb. 11-8 Druckkopf 150 mm

Point de broyeur 150 mm

(Seite 2 von 2)

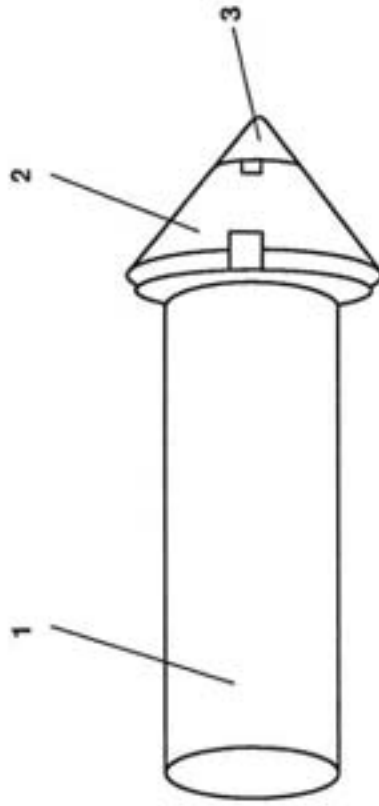


Abb. 11-9 Treppenspitze

Staircase point

Point d'escalier

(Seite 1 von 2)

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE SPARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
NA	99MB - 53670 - 01	Treppenspitze kpl.	Staircase point cpl.	Point d'escalier cpl.	1	
1	0001 - 52718 - 02	Halterohr	Holding tube	Tube de support	1	
2	0002 - 53670 - 01	Schraubspitze	Screw point	Point de vis	1	
3	0003 - 52719 - 01C	Stahlspitze	Steel point	Point d'acier	1	K 445

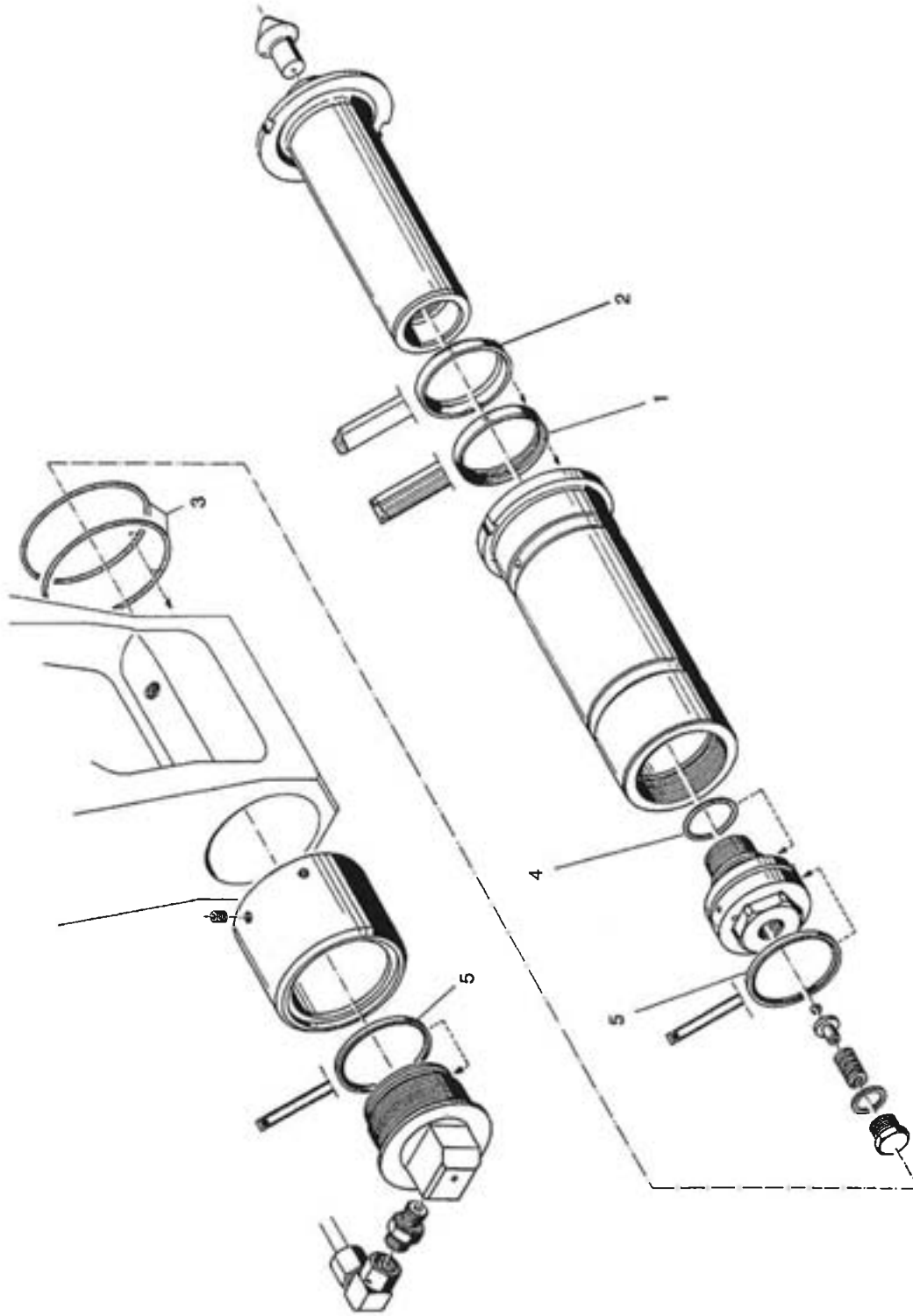


Abb. 11-10 Dichtungssatz BZ Zylinder

Seal set of BZ cylinder

Jeu de garnitures BZ

(Seite 1 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
NA	20D2 - ZYL00 - BZ	Dichtungssatz BZ Zylinder	Seal set of BZ cylinder	Jeu de garnitures	1	
1	05T1 - 06860 - 11	Teleskopdichtung	Telescopic sealing	Joint télescopique	1	ø 60 mm
2	05A2 - 07060 - 10	Abstreifring	Wiping ring	Joint cacleur	1	ø 60/70/10 mm
3	05O1 - 00880 - 35	O-Ring	O-Ring	O-ring	2	88x3,5 90 Shore
4	05O1 - 00350 - 40	O-Ring	O-Ring	O-ring	1	35x4 N 70
5	05K1 - 00700 - 40	Dichtung	Sealing	Joint	2 1	KDS 70

Abb. 11-10 Dichtungssatz BZ Zylinder

Seal set of BZ cylinder

Jeu de garnitures BZ

(Seite 2 von 2)

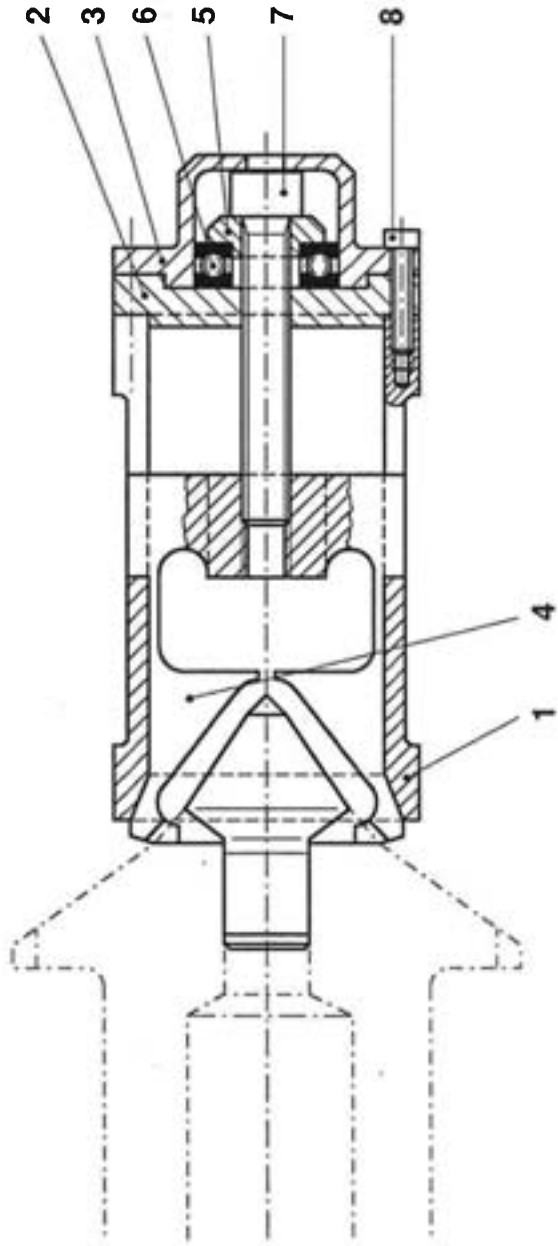


Abb. 11-11 Abziehvorrichtung zu Spitze BZ Take-off device for point BZ Dispositif de démontage de la pointe BZ (Seite 1 von 2)

**BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE SPARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE**

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Francais Désignation	Menge Qty	Bemerkung Remark
NA	99ZU - 53058 - 00	Abziehvorrichtung BZ	Take-off device BZ	Dispositif de démontage BZ	1	
1	0001 - 53057 - 01	Hülse	Bushing	Douille	1	
2	0001 - 53057 - 02	Haltescheibe	Retaining washer	Plaque de retenue	1	
3	0001 - 53057 - 03	Deckel	Cover	Couvercle	1	
4	0001 - 53057 - 04	Greifer	Grab	Griffe	1	
5	0001 - 53057 - 05	Zentrierscheibe	Plug washer	Plaque de centrage	1	
6	04A1 - 51101 - 00	Axial-Kugellager	Axial ball bearing	Butée à billes	1	51101
7	0111 - 08060 - 83	Inbus-Schraube	Allen head screw	Vis à six pans creux	1	M 8x60
8	0111 - 04020 - 00	Inbus-Schraube	Allen head screw	Vis à six pans creux	4	M 4x20

**BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE SPARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE**

Nicht abgebildet
Not illustrated
Sans illustration

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
NA	MBZU -WZ000 -BZ	Werkzeugkiste BZ/BW	Tool kit BZ/B	Caisse à outils BZ/BW	1	
NA	19W1 - WERKZ-KI	Werkzeugkiste lose	Tool kit empty	Caisse à outils vrac	1	
NA	19S3 - INBOO - 10	Inbusschlüssel	Hexagon socket screw key	Clé mâle coudée pour	1	SW 10
NA	18A1 - 02022 - 00	Schutzbrille	Eye protectors	Lunettes de protection	2	
NA	18A1 - 06523 - 00	Helm mit Gesichtsschild	Helmet with face screen	Casque avec visière rabattable	2	
NA	18A1 - 03673 - 00	Rindlerschürze	Neat's leather apron	Tablier de protection en cuir	2	

Abb. 11-12 Werkzeugkiste

Tool kit

Caisse à outils

(Seite 2 von 2)

NOTIZEN/NOTES

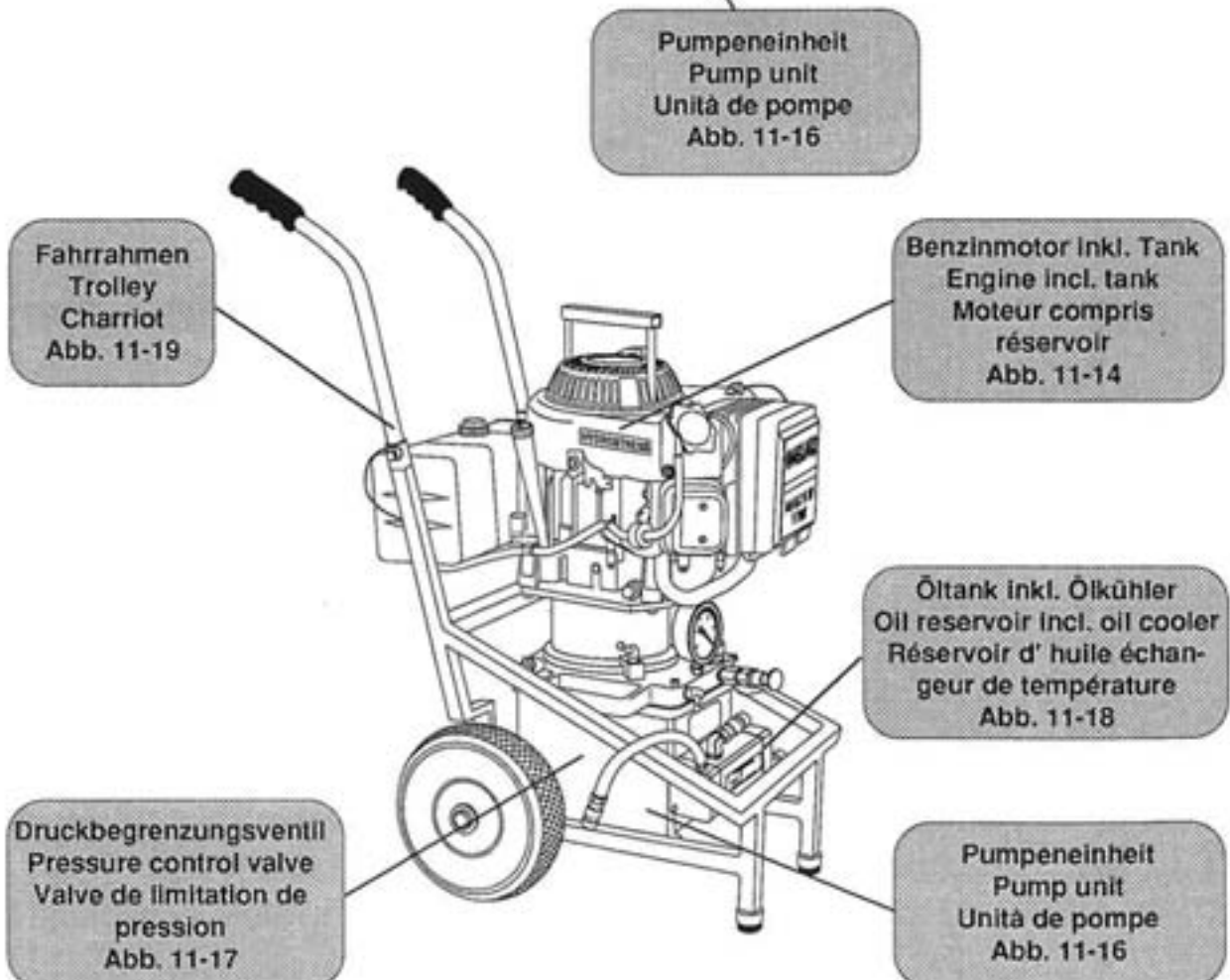
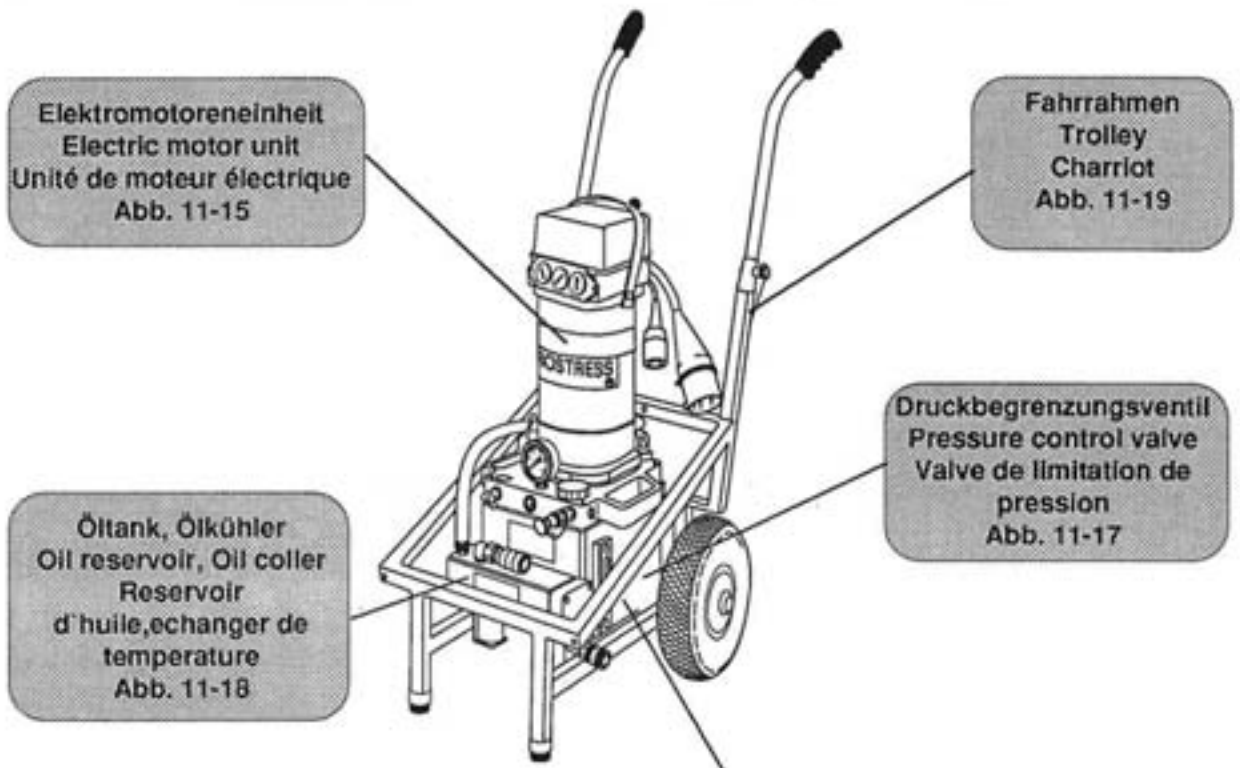


Abb. 11-13 Baugruppen-
übersicht BW-2/BW-2B

Outlay of
subassembly BW-2/BW-2B

Plan des sous-
groupes BW-2/BW-2B

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE PARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

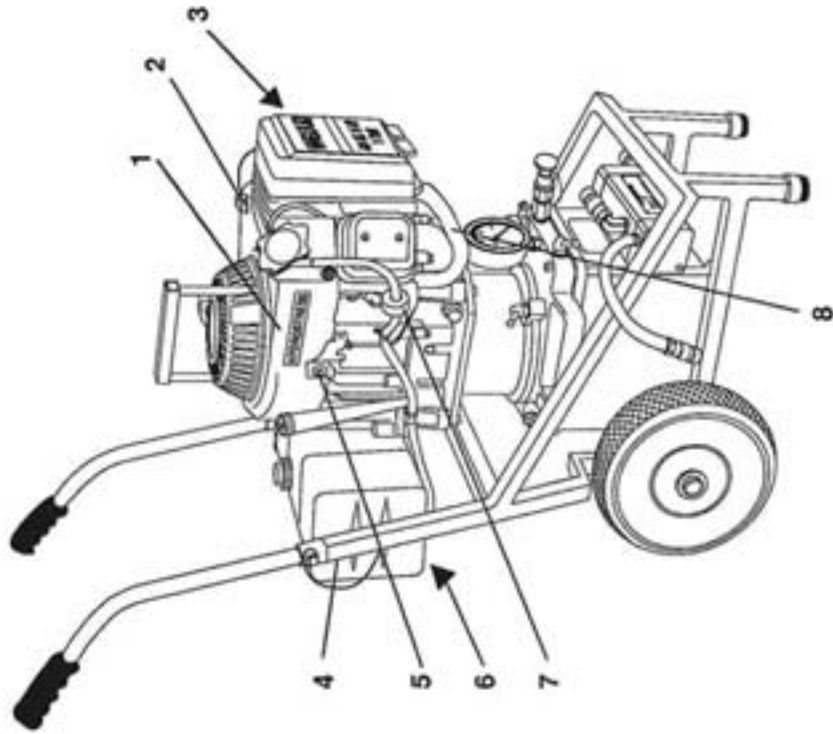


Abb. 11-14 Benzinmotor inkl. Tank

Engine incl. tank

Moteur compris réservoir

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Francais Désignation	Menge Qty	Bemerkung Remark
NA	99MA - 16BS3 -10	Benzinmotor kpl.	Petrol engine cpl.	Moteur à essence cpl.	1	
1	06M1 - 00480 - 00	Benzin-Motor	Engine	Moteur	1	Brig. & Strat. 480VCS
2	06M9 - BS480 - 08	Gaszug 480 VCS	power control 480 VCS	bride de réservoir 480 VCS	1	Brig. & Strat. 480VCS
NA	06M9 - BS480 - 02	Tanksupport, klein	fuel support	appla d'esseuce	1	Brig. & Strat. 480VCS
NA	06M9 - BS480 - 03	Tankbride 480 VCS	tie 480 VCS	éclisse 480 VCS	1	Brig. & Strat. 480VCS
3	06M9 - BS480 - 06	Choke 480 VCS	Choke 480 VCS	Choke 480 VCS	1	Brig. & Strat. 480VCS
4	06M9 - BS480 - 01	Benzin-tank - 7L	fuel tank	Réservoir	1	Brig. & Strat. 480VCS
5	06M9 - BS480 - 09	Abstellhebel 480 VCS	stopping lever 480 VCS	levier d'arrêt du moteur 480 VCS	1	Brig. & Strat. 480VCS
6	06M9 - BS480 - 05	Benzin-hahn	fuel switch	interrupteur d'essence	1	Brig. & Strat. 480VCS
7	06M9 - BS480 - 04	Benzinfilter 480 VCS	fuel filter 480 VCS	filter d'essence 480 VCS	1	Brig. & Strat. 480VCS
8	06M9 - BS480 - 07	Auspuff 480 VCS	Exhaust 480 VCS	Echappement 480 VCS	1	Brig. & Strat. 480VCS
NA	0001 - 52178 - 01	Motor Flansch	Engine flange	Bride de moteur	1	
NA	0111 - 08020 - 00	Inbusschraube	Allen head screw	Vis à six pans creux	4	M8x20
NA	0114 - 11030 - 23	Senkkopfschraube	Countersunk head screw	Vis à tête fraisée	1	7/16" x 11/4"
NA	0003 - 52993 - 02	Rückhalte- deckel	Retaining cover	Couvercle de retenue	1	
NA	0004 - 52129 - 01	Kupplung Motor	Coupling	Accouplement moteur	1	
NA	0004 - 52133 - 01	Wellenkeil	Shaft key	Clavette d'arbre	1	7x6,35x29,5
NA	01M3 - 08000 - 00	Stoppmutter	Stop nut	Ecrou d'arrêt	4	M8
NA	01U1 - 08015 - 50	Unterlagscheibe	Washer	Pondelle	4	M8
NA	0111 - 08045 - 00	Inbusschraube	Allen head screw	Vis à six pans creux	4	M8x45
NA	0003 - 52993 - 01	Distanzhülse	Seperator	Anneau d'écartement	1	

Abb. 11-14 Benzinmotor inklusive Tank

Engine incl. tank

Moteur compris réservoir

(Seite 2 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

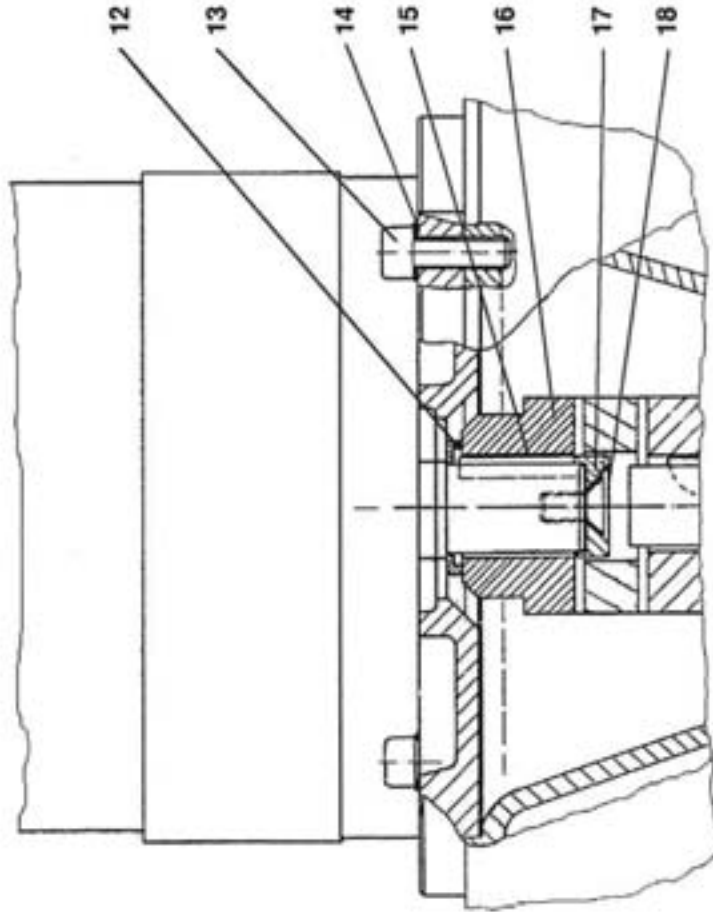
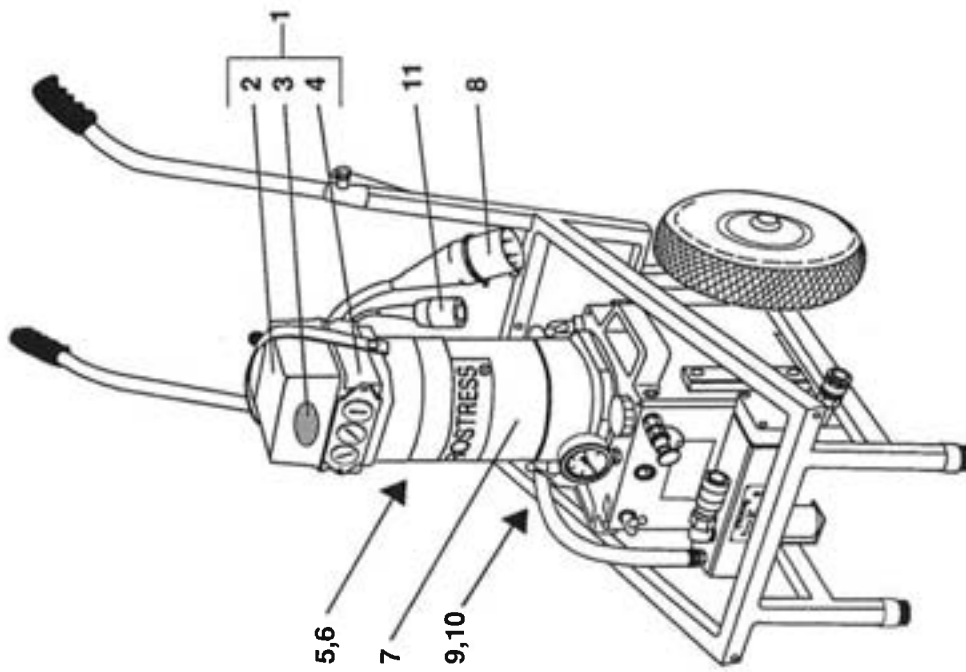


Abb. 11-15 Elektromotoreinheit

Electric motor unit

Unité de moteur électrique

(Seite 1 von 2)

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE SPARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	11S3 - E1118 - 20	Motorschutzschalter kompl.	Protective motor switch	Disjoncteur protecteur, compl.	1	Typ 40
2	11S3 - 00040 - 00	Deckel, Motorschutzschalter	Cover protective motor switch	Tôle le protection du moteur	1	
3	11S3 - 01118 - 20	Einsatz Motorschutzschalter	Inset protective motor switch	Garniture de protection de moteur	1	
4	0001 - 52097 - 02	Gehäuse Motorschutzsch.	Housing protective motor switch	Caisse de protection de moteur	1	
5	14W2 - 00092 - 48	GF-Winkel	GF-angle iron	Raccord coudé (GF)	1	G1/4" a- I3/8"
6	07S2 - 07217 - 38	Kupplung	Coupling	Raccord femelle	1	G3/8" a O-WRO17
7	11M1 - 08008 - 00	Elektromotor	Electric motor	Moteur électrique	1	15,9 kW
8	11F3 - CEE16 - 05	Stecker	Plug	Fiche mâle	1	CEE 16/5 Pol
9	14W2 - 00092 - 14	GF-Winkel	GF-angle iron	Raccord coudé (GF)	1	G1/4" A/G1/4" I
10	12S1 - 59939 - 14	Außengewindetülle	Outer thread socket	Douille filetée	1	G1/4"
11	11F4 - 00013 - 03	Kupplung	Coupling	Raccord femelle	1	2200/3 Pol
12	0002 - 52127 - 03	Distanzring	Separator	Anneau d'écartement	1	
13	0111 - 08015 - 00	Inbusschraube	Allen head screw	Vis à six pans creux	4	M8x25
14	01U1 - 08015 - 50	U-Scheibe	Washer	Rondelle	4	M8
15	02W1 - 00606 - 30	Wellenkeil	Shaft key	Clavette d'arbre	1	6x6x30
16	0002 - 52127 - 01	Kupplung Welle	Coupling feed shaft	Raccord femelle arbre	1	
17	0002 - 52127 - 04	Rückhahndeckel	Retaining cover	Couvercle de retenue	1	
18	0114 - 08020 - 21	Senkkopfschraube	Countersunk head screw	Vis à tête fraisée	1	M8x20

Abb. 11-15 Elektromotoreinheit

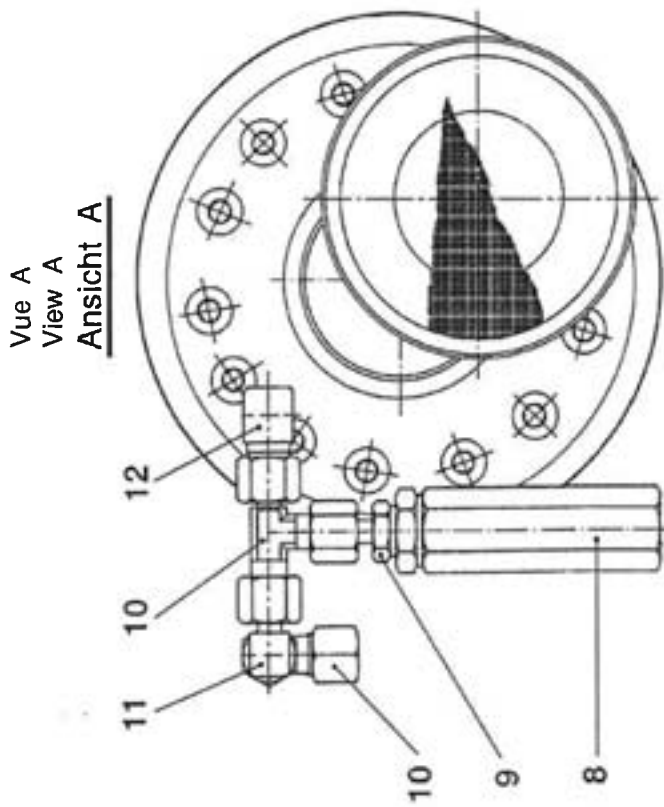
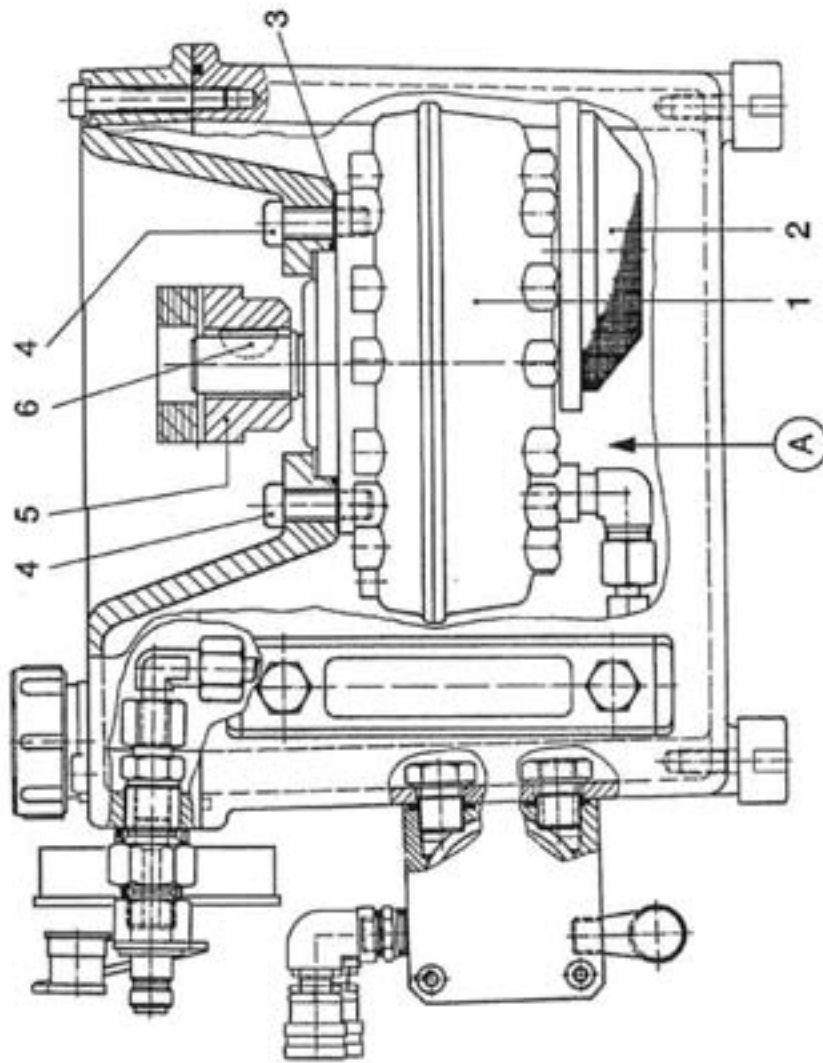
Electric motor unit

Unité de moteur électrique

(Seite 2 von 2)

HYDROSTRESS

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE PARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE



Vue A
View A
Ansicht A

Abb. 11-16 Pumpeneinheit

Pump unit

Unité de pompe

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	07P1 - 37000 - 00	Hydraulikpumpe	hydraulic pump	Pompe hydraulique	1	Radialkolbp. R 3,7
2	07O2 - 00021 - 00	Ansaugfilter	Suction filter	Filter d'aspiration	1	S 21 zu Hawe
3	0004 - 53000 - 01	Pumpendichtung	Pump sealing	Joint de pompe	1	Hawe
4	0111 - 10030 - 00	Inbusschraube	Allen head screw	Vis à six pans creux	4	M10x30
5	0004 - 52619 - 02	Kupplung Bowex	Coupling Bowex	Raccord Bowex	1	Bowex
6	02W2 - 00609 - 21	Pass-Feder	Feather key	Ressort d' ajustage	1	6x9x21
7	-	Entfällt	Leacking	Néant	-	
8	99MB - 52533 - 01	Druckbegrenzungsventil	Pressure control valve	Valve de limitation de pression	1	
9	08H7 - 73868 - 08	Gerade Einschr.Stutzen	Straight screwed socket	Raccordements vissables droits	1	Rohr 8S
10	08L7 - 73727 - 08	L-Verschraubung	L-type connection	Raccord coudé	2	Rohr 8S
11	08W7 - 73647 - 08	Winkel-Verschraubung	Angle screw connection	Raccord à vis coudé	1	Rohr 8S
12	08W7 - 73240 - 08	Winkel-Verschraubung	Angle screw connection	Raccord à vis coudé	1	Rohr 8S/1/4"NPT

Abb. 11-16 Pumpeneinheit

Pump unit

Unité de pompe

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HYDROSTRESS

BW-2/BW-2B/BZ ERSATZTEILLISTE
BW-2/BW-2B/BZ SPARE PARTS LIST
BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

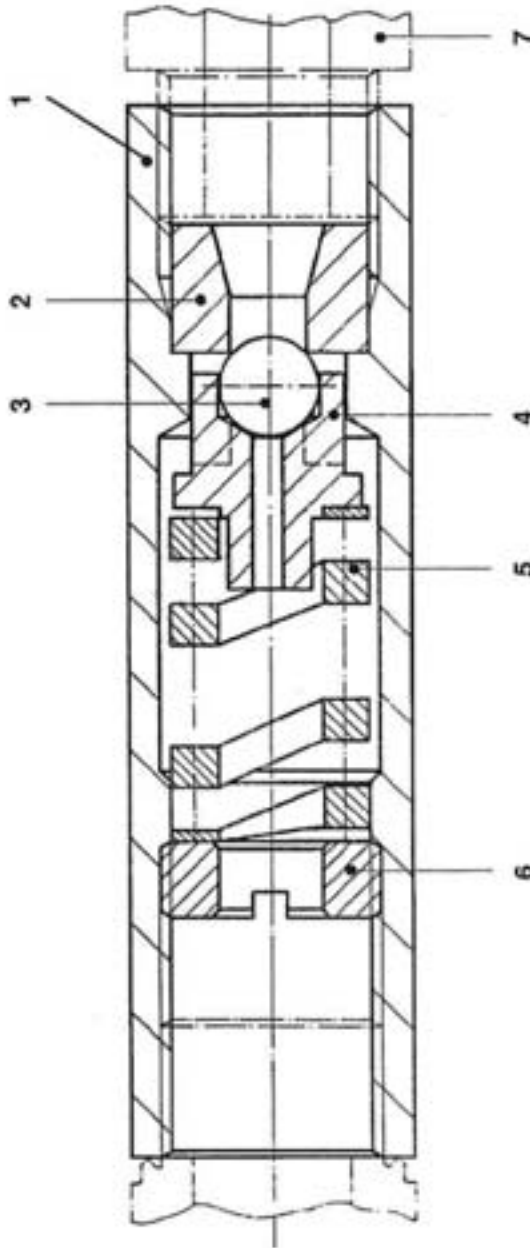


Abb. 11-17 Druckbegrenzungsventil

Pressure control valve

Valve de limitation de pression

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
NA	99MB - 52533	Druckbegrenzungsventil	Pressure control valve	Valve de limitation de pression		
1	0001 - 52286 - 04	Ventilgehäuse	Valve chamber	Boîtier de valve	1	
2	0001 - 52286 - 06	Düse	Nozzle	Buse	1	
3	04B1 - 10000 - 00	Kugel	Ball	Bille	1	ø10
4	0001 - 52286 - 03	Kugelhalter	Ball retainer	Porte-bille	1	
5	03S1 - 91206 - 36	Feder	Spring	Ressort	1	20x10x38
6	0001 - 52286 - 01	Rückhaltering	Retaining ring	Bague de retenue	1	
7	08G1 - 49141 - 14	Gew. Reduktion	Thread reduction	Coupe filetage	1	G1/2"A/G1/4"

Abb. 11-17 Druckbegrenzungsventil

Pressure control valve

Valve de limitation de pression

(Seite 2 von 2)

HYDROSTRESS

**BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE**

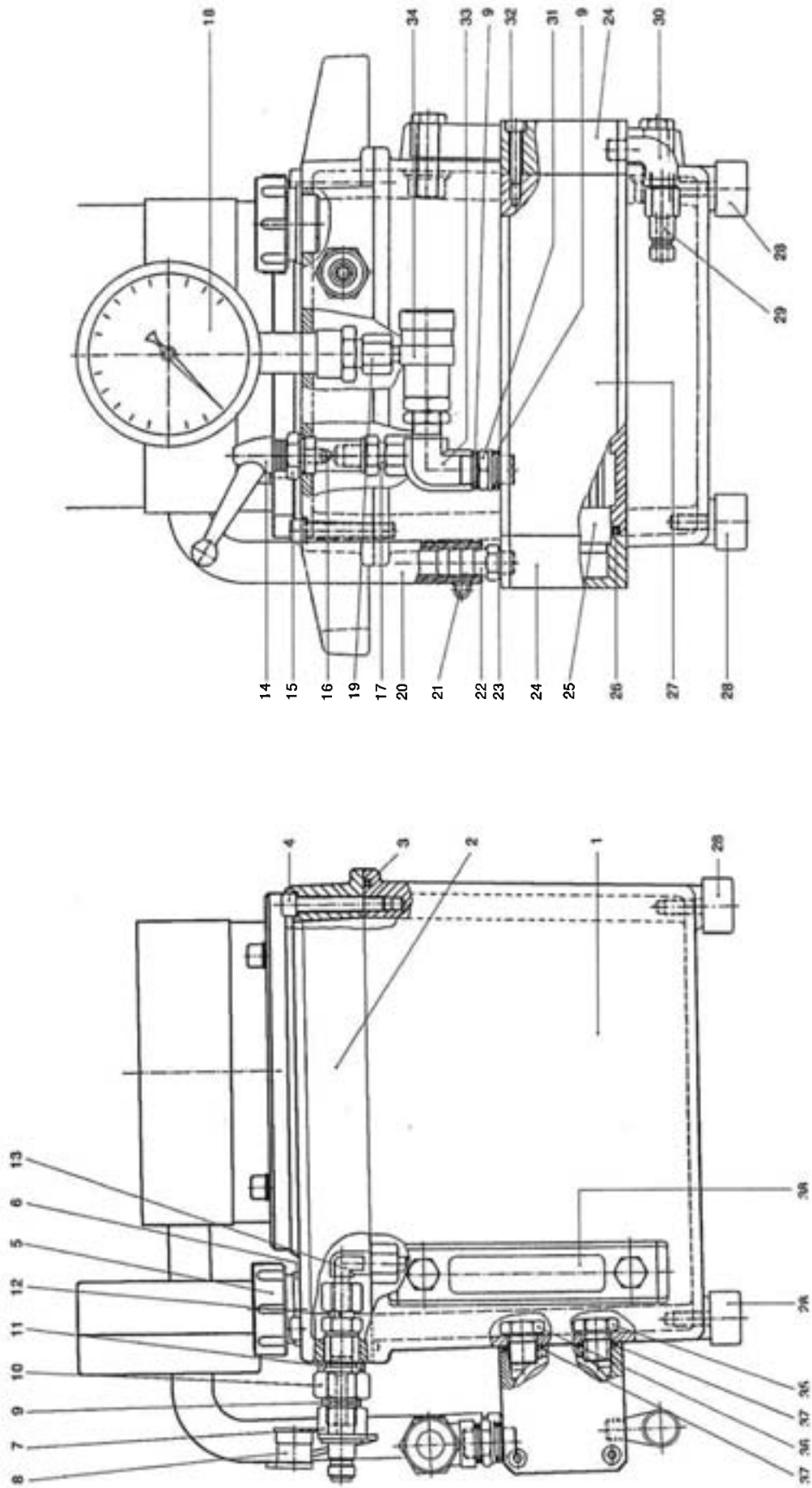


Abb. 11-18 Öltank inkl. Ölkühler

Oil reservoir incl. oil cooler

Réservoir d' huile échangeur de température

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
1	0000 - 52090 - 01	Tank	Tank	Réservoir	1	
2	0000 - 52091 - 01	Tankdeckel	Tank cap	Couvercle du réservoir	1	
3	0501 - 02950 - 40	O-Ring	O-Ring	O-ring	1	ø295x4
4	0111 - 08045 - 00	Inbusschr.	Allen head screw	Vis à six pans creux	4	M8x45
5	07B2 - 13634 - 10	ATAL-Einfüllschr.	ATAL filler neck	Vis de remplissage ATAL	1	1" 13.634
6	05D1 - 13494 - 00	Dichtung KTM	KTM sealing	Joint KTM	1	ø 33x42x3,2
7	07S4 - HP062 - 38	Stecknippel	Water coupling male	Raccord mâle-fermelle	1	2-WRS17-12
8	07S4 - HP065 - 73	Staubkappe	Dust cap	Chapeau de valve	1	5-73-KU
9	08D1 - 80321 - 38	Dichtkantenring	Sealing ring	Joint d' étanchéité	3	G3/8"
10	0003 - 52629 - 01	Nippel Tankdeckel	Tank cap fitting	Raccord mâle du réservoir	1	
11	08D1 - 80341 - 12	Dichtkantenring	Sealing ring	Joint d' étanchéité	1	G1/2"
12	08H7 - 73127 - 08	Ger. Verschr.	Straight screw connection	Raccord à vis	1	1/4"8S
13	08W7 - 73647 - 08	Winkel-Verschr.	Angle screw connection	Raccord à vis coudé	1	Rohr 8S
14	06K3 - 08020 - 00	Klemmhebel	Clamping lever	Levier de serrage	1	M8 Jaccard
15	0003 - 52114 - 01	Entlastungsventil	Relief valve	Valve de vidange	1	
16	04B1 - 06350 - 00	Kugel	Ball	Bille	1	ø 6,35 mm
17	08H7 - 73127 - 08	Ger.-Verschr.	Straight screw connection	Raccord à vis	1	1/4" -8S
18	07N1 - 63000 - 01	Manometer	Pressure gauge	Manomètre	1	VDO Klasse 1
NA	08M7 - 74339 - 08	Manometer-Verschr.	Pressure gauge connection	Raccord manomètre	1	1/2" -08S
19	13V1 - 13493 - 00	Verschlußdeckel	Cup	Couvercle	1	3/4"

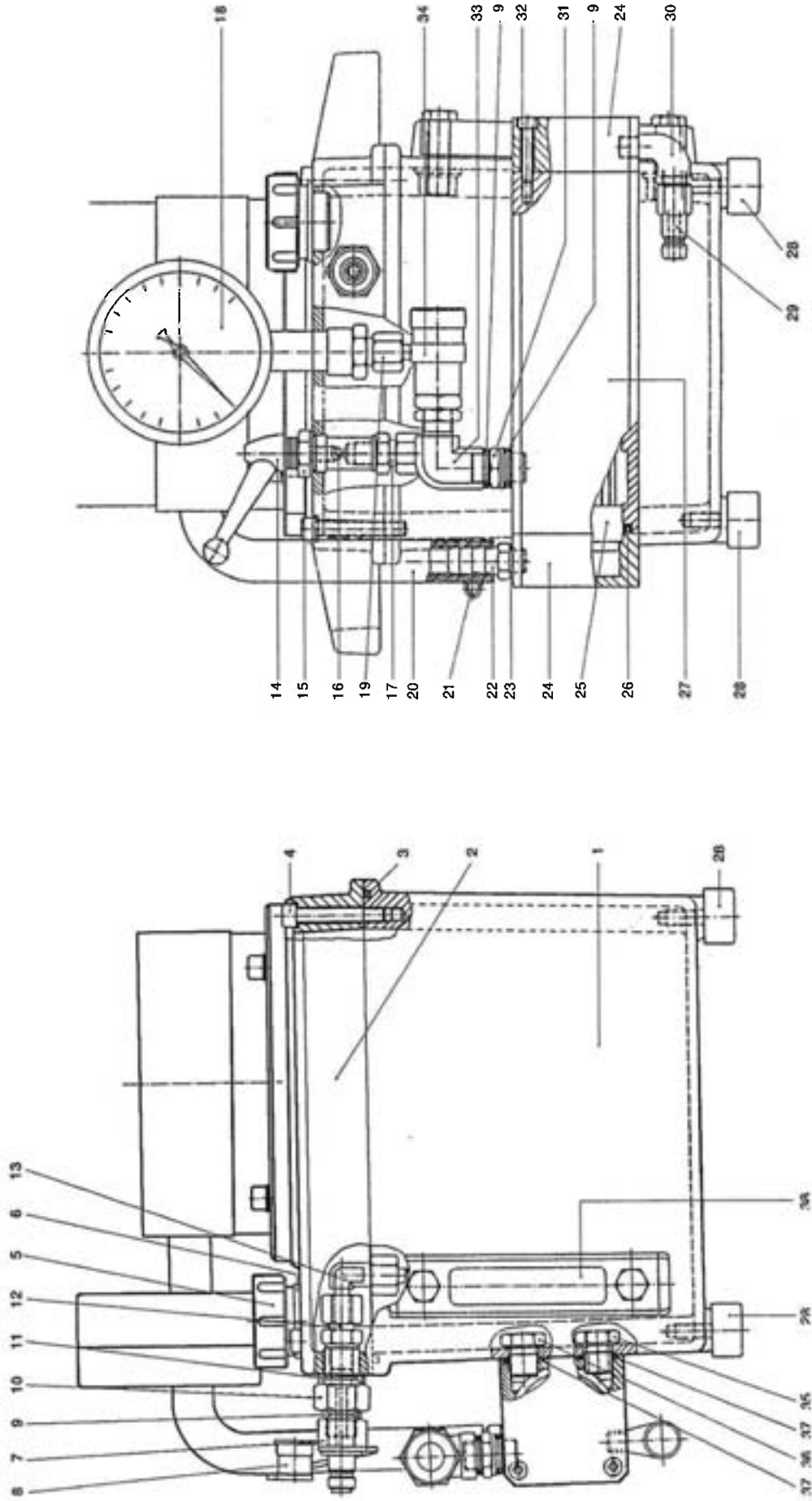


Abb. 11-18 Öltank inkl. Ölkühler

Oil reservoir incl. oil cooler

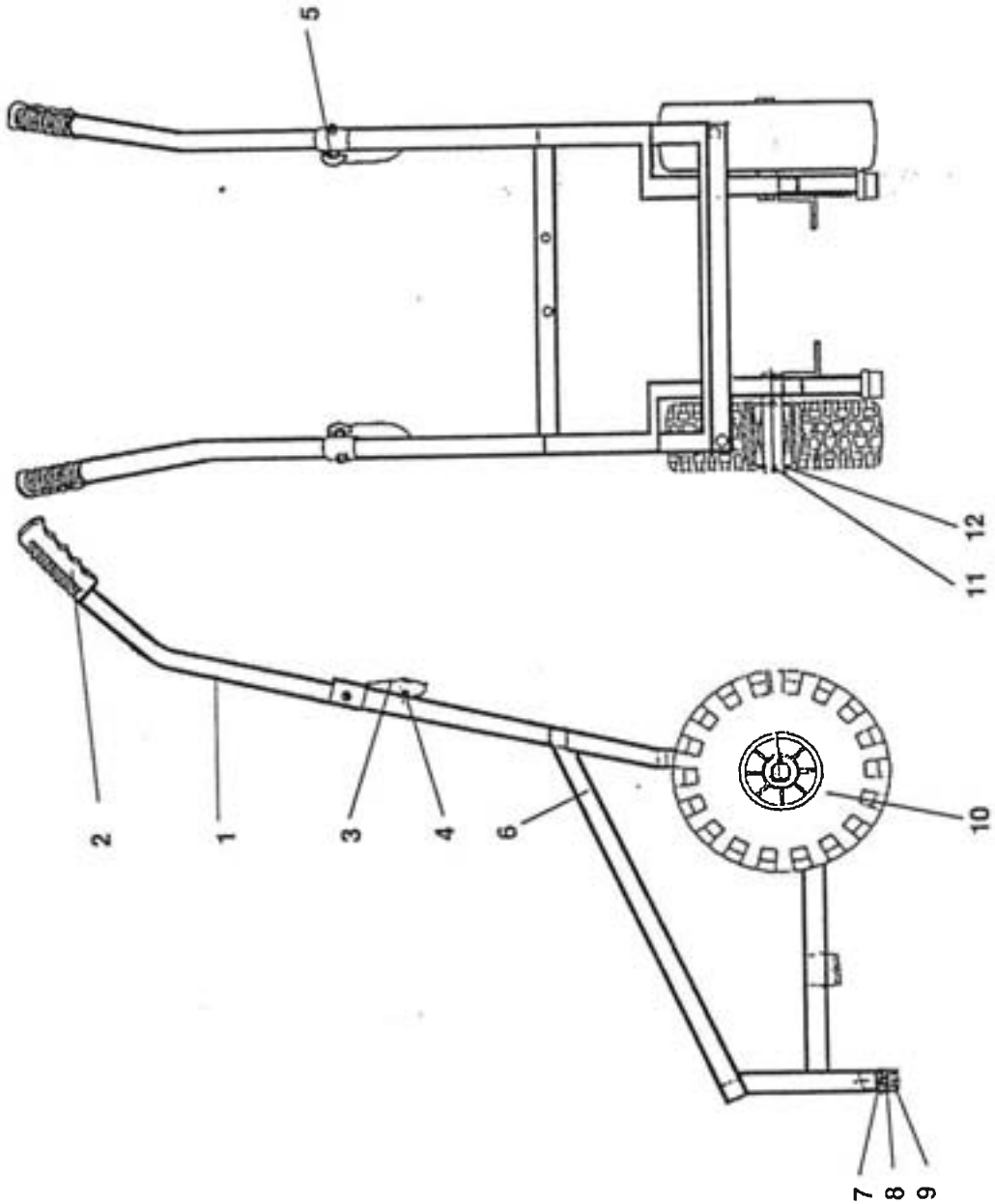
Réservoir d'huile échangeur de température

(Seite 3 von 4)

BW-2/BW-2B/BZ ERSATZTEILLISTE
 BW-2/BW-2B/BZ SPARE PARTS LIST
 BW-2/BW-2B/BZ LISTE DES PIECES DE RECHANGE

HYDROSTRESS

Pos.-Nr. Pos.-No.	Ersatzteil-Nr. Spare part-No.	Deutsch Bezeichnung	English Designation	Français Désignation	Menge Qty	Bemerkung Remark
20	05D1 - 13493 - 00	Dichtung	Sealing	Joint	1	KDM
21	07S2 - 07217 - 38	Steckkupplung	Coupling	Raccord femelle	1	G3/8"
22	14WZ - 00092 - 48	GF-Winkel	GF-angle iron	Raccord coudé (GF)	1	G1/4"/G3/8"
23	-	Entfällt	Lacking	Néant	-	
24	0001 - 51863 - 02	Kühlerdeckel	Cooler cap	Couvercle du radiateur	2	
25	07X9 - 00524 - 00	Rohrbündel klein	Bank of tubes, small	Faisceau de tuyaux, petits	1	
26	05O1 - 00530 - 60	O-Ring	O-Ring	O-ring	2	ø 53x6 mm
27	0001 - 51863 - 01	Kühlergehäuse	Cooler casing	Boîtier du radiateur	1	
28	03A2 - 40230 - 08	Gummilager	Antivibration element	Elément anti-vibration	4	40/30/M8/A
28A	0111 - 08018 - 00	Inbusschraube	Allen head screw	Vis à six pans creux	4	M8x12
29	07S2 - 07214 - 14	Nippel	Nipple	Raccord mâle	1	G1/4"
30	14W2 - 00092 - 14	GF-Winkel	GF-angle iron	Raccord coudé (GF)	1	G1/4"/G1/4"A
31	14D4 - 90193 - 38	Doppelnippel	Double fitting	Raccord mâle double	1	G3/8"A
32	0111 - 06030 - 00	Inbus-Schr.	Allen head screw	Vis à six pans creux	8	M6x30
33	14B1 - 69015 - 38	Bogenstück 90°	Bow-shaped connection 90°	Coude 90°	1	25UG 06 3/8"
34	07S1 - 00371 - 38	Kupplung	Coupling	Raccord Femelle	1	Brunning FF 371-Mutter
35	0002 - 52117 - 01	Überwurfschraube	Male fitting for pipes	Vis chapeau	1	
36	0002 - 52117 - 02	Verschlußschr.	Screwed sealing plug	Vis de vidange	1	
37	05O1 - 00180 - 30	O-Ring	O-Ring	O-ring	2	ø18x3
38	07L1 - 00127 - 12	Ölstand	Oil level	Niveau d'huile	1	FSA 127-1.1/12



Fahrrahmen

Telaio del carrello