

Operating instructions

Hydraulic rescue equipment

CUTTERS

COMBI TOOLS



S 50, S 220-54, S 270, S 33-14, S 140-26 LIGHT,
SPS 270 MK2, SPS 360 MK2, SPS 370 MK2, SPS 400 MK2, SPS480 MK2, SPS 270 H,
HANDVARIO RIT, RIT TOOL

RSX 105, RSX 160, RSX 165-65, RSX 180-80, RSX 175, RSX 185 ALL NINE,
RSX 200-107, RSU 180 PLUS, RSU 210 PLUS,
RSC 170, RSC 170 PLUS, RSC 190, RSC 190 PLUS, RSC 200, RSC F7

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SYSTEMS

Content

1. General	4
1.1 Information on the operating instructions	4
1.2 Explanation of symbols	5
1.3 Limitation of liability	6
1.4 Copyright	6
1.5 Warranty provisions	7
1.6 Customer Service	7
2. Safety	8
2.1 Intended use	8
2.2 Operator responsibility	10
2.3 Operating personnel	11
2.4 Personal protective equipment	12
2.5 Particular hazards	13
2.6 Safety devices	15
2.7 How to respond in the event of danger or accidents	16
2.8 Signage	17
3 Technical data	18
3.1 Cutters	18
3.2 Combi tools	22
3.3 Operating conditions	25
3.4 Type plate	25
4 Structure and function	26
4.1 Overview	26
4.2 Brief description	26
4.3 Hydraulic supply	27
4.4 Equipment connections	29
4.5 Use of the control handle	31
4.6 Replacing the spreader tips	32
4.7 Replacing blade inserts (PLUS)	33

5. Possible applications	35
5.1 Safety information	35
5.2 Cutting	35
5.3 Spreading (combi tools)	37
5.4 Pulling (combi tools)	37
5.5 Crushing (combi tools)	39
5.6 Lifting (combi tools)	39
5.7 Press (combined appliances with RZM)	40
6. Transport, packaging and storage	41
6.1 Safety instructions	41
6.2 Transport inspection	41
6.3 Symbols on the packaging	42
6.4 Disposal of packaging	42
6.5 Storage	42
7. Installation and commissioning	43
7.1 Safety information	43
7.2 Checking	44
7.3 Installation	44
7.4 Shutting down (end of work)	45
8. Maintenance	46
8.1 Safety instructions	46
8.2 Upkeep and maintenance	46
8.3 Maintenance after operation in humidity	47
8.4 Maintenance schedule	47
9. Malfunctions	48
10. Decommissioning / Recycling	49
11. EC Declaration of Conformity	50
12. Notes	51

1. General

1.1 Information on the operating instructions

These operating instructions provide important information on using SMART-FORCE appliances. To assure safety at the workplace, always observe all safety and handling instructions contained in this document.

Furthermore, the local accident prevention regulations and general safety determinations applicable to the operation site of the equipment must also be observed.

Before starting any work you must read these operating instructions thoroughly! They are a component of the product and must be stored in a known location that is accessible to personnel at all times.

This documentation contains information about the operation of your appliance, regardless of which type of appliance it is. For this reason, you will also find explanations that do not relate directly to your appliance.

All information, technical specifications, graphics and illustrations contained in these Operating Instructions are based on the most up-to-date data available at the time these instructions were created.

In addition to thoroughly reading the operating instructions, we also recommend that you undergo training and instruction in handling (possible uses, operational tactics, etc.) the rescue equipment from one of our qualified trainers.



NOTE!

The current version of the operating instructions can be found on our web-site
<https://www.weber-rescue.com/>
or by scanning the QR code.



1.2 Explanation of symbols

Warnings

In these operating instructions, warnings are identified by symbols.

The individual warnings are introduced by signal words expressing the degree of danger.

These warnings must be heeded to prevent accidents, injury and property damage.



DANGER!

... points out an immediately dangerous situation which can cause death or severe injury if it is not avoided.



WARNING!

...points out a potentially dangerous situation which can cause death or severe injury if it is not avoided.



CAUTION!

...points out a potentially dangerous situation which can cause minor or slight injury if it is not avoided.



ATTENTION!

...points out a potentially dangerous situation which can cause property damage if it is not avoided.

Tips and recommendations



NOTE!

...emphasises useful tips and information for efficient, trouble-free operation.

1.3 Limitation of liability

All information and instructions in these operating instructions were compiled under consideration of the applicable standards and regulations, the current state of technology and our long-standing knowledge and experience.

The manufacturer assumes no liability for damages due to:

- Non-observance of the operating instructions
- Improper use
- Assigning untrained personnel
- Unauthorised modifications
- Technical changes
- Use of impermissible replacement parts
- Use of non-original accessories

For special designs or due to technical changes, the actual scope of supply for may differ from the explanations and representations described.

1.4 Copyright

All texts, illustrations, drawings and images in these operating instructions may be used freely without prior authorisation.

**NOTE!**

Additional information, images and diagrams are available on our home page: www.weber-rescue.com.

1.5 Warranty provisions

The warranty provisions are included with the sales documentation as a separate document.

1.6 Customer Service

Our Customer Service would be happy to provide you with technical information.

Germany

Service Center, Göglingen

Phone: +49 7135 71 10112

E-mail: servicecenter@weber-rescue.com

Austria

Service Center, Losenstein

Phone: +43 7255 6237-12473

E-mail: ATL.Servicecenter@weber-rescue.com

International

For questions regarding spare parts, service and repair, please contact our certified local service partners. Scan the following QR code for an overview of our worldwide service and sales network.

**NOTE!**

When contacting our Customer Service, please provide the identification, type and year of manufacture of the appliance. This information can be found on the type plate.

For further processing, please complete the RMA document in full:



2. Safety

This section of the operating instructions presents a comprehensive overview of all important safety aspects for optimal protection of the operating personnel as well as for safe, trouble-free operation.

Non-observance of the handling and safety instructions presented in these Operating Instructions can result in serious dangers.

2.1 Intended use

The hydraulic battery tools are designed and tested exclusively for the intended applications described here. All other activities are fundamentally prohibited.

All battery tools are designed as one-man appliances and are therefore to be operated by only one person.

Cutters

S 50, S 220-54, S 270, S 33-14, S 140-26 LIGHT, RSX 105, RSX 160, RSX 165-65, RSX 180-80, RSX 175, RSX 185 ALL NINE, RSX 200-107, RSU 180 PLUS, RSU 210 PLUS, RSC 170, RSC 170 PLUS, RSC 190, RSC 190 PLUS, RSC 200, RSC F7

- The battery-powered cutting appliances are used exclusively for cutting doors and roof beams, pillars and door sills, the ring and the spokes of the steering wheel.
- If possible, for cutting solid material, always use the rear part of the cutter unit as it is equipped with special edges for cutting round material.
- In industrial application, the appliances can also be used to cut pipes, structural steels, profiles, sheets and cables.

Combi tools

SPS 270 MK2, SPS 360 MK2, SPS 370 MK2, SPS 400 MK2, SPS 480 MK2, SPS 270 H, HANDVARIO RIT, RIT TOOL

- All combi tools are designed as one-man devices and therefore may be operated by one person only.
- The devices serve exclusively for the cutting of doors and roof pillars, posts and sills, the rims and spokes of steering wheels.
- The rear cutter section should be used whenever possible for separating solid material as this is equipped with special round material cutters.
- In industrial applications the equipment can also be used for cutting pipes, construction steel, profiles, sheets and cables.
- In addition, the combi tools can be used for opening doors, lifting vehicles, pushing away vehicle parts and squeezing tubes.
- The chain set is to be used exclusively for pulling.

Accessories - chain sets

- Combi tools may only be used with the appropriate chain set and pulling device. Pulling chains are exclusively for pulling away obstacles and loads and for enlarging openings to free trapped persons.



WARNING!

Danger caused by improper use!

Any use other than intended use and/or other type of use of these appliances can cause dangerous situations!

Therefore, it is absolutely necessary to:

- » Only use the appliances for the intended uses described above.
- » Observe all other information regarding proper use of the appliances in Chapter 5 (Possible uses).

2.2 Operator responsibility

In addition to the occupational safety information in these operating instructions, the safety, accident prevention and environmental prevention regulations applicable to the operation site of the appliance must also be observed. Thereby, the following applies in particular:

- The operator must inform himself regarding the applicable occupational safety regulations and carry out a risk assessment to identify additional dangers arising from the special work conditions at the operation site of the appliance.
- The operator must clearly regulate and determine responsibility for installation, maintenance and cleaning.
- The operator must ensure that all persons engaged with the appliance have completely read and understood the operating instructions.
- Furthermore, he must train the personnel at regular intervals and inform them of the dangers associated with handling the appliance.

The operator is also responsible for ensuring that the equipment is always in a technically flawless condition. Therefore, the following applies:

- After each time the equipment is used, or at least once a year, a visual inspection of the appliance by an instructed person is required (per DGUV guideline 305-002 or country-specific rules).
- Every three years, or whenever a doubt is raised about the safety or reliability of the appliance, a function and load test must also be carried out (per DGUV guideline 305-002 or country-specific regulations).

2.3 Operating personnel

The following qualifications for different areas of activity are specified in the operating instructions:

- **Instructed persons**
Have been instructed by the operator regarding the tasks they have been assigned and the possible dangers caused by improper actions.
- **Expert personnel**
Because of their professional training, knowledge and experience as well as their knowledge of the applicable manufacturer's provisions, expert personnel are able to carry out the tasks they have been assigned and independently recognize potential dangers.



WARNING!

Danger of injury caused by insufficient qualifications!

Improper handling of these appliances can cause serious injury and property damage.

Therefore, it is absolutely necessary to:

- » Only permit the people specified in the respective chapters of these operating instructions to carry out the special activity.
- » In case of doubt, immediately call in expert personnel.



NOTE!

Never operate the appliance after consuming alcohol, medications or drugs!



NOTE!

Maintenance work can be carried out by instructed persons. Maintenance measures and repairs may only be carried out by the appliance manufacturer, or by specialist personnel trained by the appliance manufacturer and the authorised service partners. Continuous training and instruction by the appliance manufacturer is mandatory for a valid training certificate.

2.4 Personal protective equipment

To minimise danger for the operating personnel, wearing personal protective equipment (PPE) when handling the hydraulic rescue equipment is absolutely mandatory.

As a matter of principle, always wear the following protective clothing for all work:



Safety work clothing

Only wear closely fitting work clothing with narrow sleeves and without projecting pieces while working. This is primarily for protection against entanglement in moving parts of the equipment.



Safety shoes

Always wear steel-capped safety shoes to protect against heavy falling objects and slipping on slippery surfaces.



Work gloves

Wear safety work gloves to protect against sharp edges and glass splinters when operating the equipment.



Helmet with face shield

Wear a helmet with face shield to protect against flying or falling parts and glass splinters.



Protective goggles

In addition to a face mask, protective goggles should be worn to protect the eyes from projectile particles.

Also wear during any special kinds of work that cause noise:



Ear defenders

To protect your hearing, ear defenders should be worn in addition to personal protective equipment.

2.5 Particular hazards

The dangers resulting from the risk assessment are presented in the following section.

To minimize potential health hazards and prevent dangerous situations, the safety instructions listed below and the warning instructions in the following chapters of these Operating Instructions must be observed.

Electrical current



DANGER!

Danger of death due to electrical current!

There is an immediate danger of death if live parts are touched. Damage to insulation or individual components can be life-threatening.

Therefore:

- » If the insulation is damaged, immediately disconnect the power supply and arrange for repairs.
- » Only allow electricians to carry out work on the electrical system.
- » When any work is being carried out on the electrical system, it must be disconnected from the mains supply and checked to ensure that it is not live.
- » Before carrying out maintenance, cleaning or repair work, the power supply must be switched off and secured to prevent it being switched on again.
- » Do not bypass or shut down any fuses.
Use fuses with the correct amperage when replacing.
- » Keep live parts away from moisture.
This can cause a short circuit.

Noise



WARNING!
Noise can damage hearing!

The noise occurring in the work area can cause severe hearing damage.

Therefore:

- » You should also wear ear protectors when carrying out certain noise-producing tasks.
- » Do not stay in the hazardous area longer than necessary.

Hydraulic power



WARNING!
Hydraulic power hazard!

Serious injury can result due to the released hydraulic forces and escaping hydraulic oil.

Therefore:

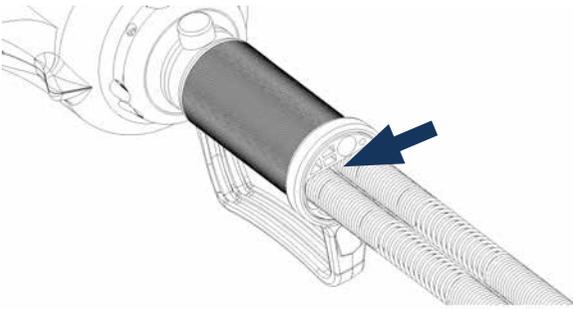
- » Constantly monitor the device during the work procedure and set down if necessary.
- » Inspect the hose lines and devices for damage after every use.
- » Avoid skin contact with the hydraulic oil (wear protective gloves).
- » Immediately remove the hydraulic oil from wounds and consult a doctor.

2.6 Safety devices

Safety valve for SKS couplings

If the return line is not correctly coupled such that the oil cannot return then a safety valve integrated into the control handle actuates in order to protect the equipment and the operator. This causes hydraulic oil to seep harmlessly from the end of the handle.

Move the switching valve on the hydraulic power unit immediately to the „0“ position and connect the coupling parts together correctly.



2.7 How to respond in the event of danger or accidents

Preventative measures

- Always be prepared for accidents
- Keep first aid equipment (first-aid box, blankets etc.) at hand
- Familiarise personnel with accident alarms, first-aid gear and emergency equipment
- Keep entryways clear for emergency vehicles

In the event of an accident

- Shut down equipment immediately
- Initiate first aid measures
- Get people out of the danger zone
- Inform the responsible parties at the site of the incident
- Notify a doctor and/or the fire brigade
- Clear entryways for emergency vehicles

2.8 Signage

The equipment bears the following symbols and instructional signs. They refer to the immediate vicinity in which they are affixed.



Comply with the operating manual

Do not use the marked equipment until you have read the operating manual.

Hand injury warning

When working with the equipment, take care to avoid hand injuries through trapping or sharp edges.



WARNING!

Danger of injury due to illegible symbols!

Over time, stickers and symbols on the equipment can become soiled or otherwise illegible.

Therefore, make absolutely sure to:

- » Keep all safety, warning and operating information on the device easily legible.
- » Replace damaged signs and stickers immediately.

3 Technical data

3.1 Cutters



RSX105



S 140-26 LIGHT



RSX 160



RSX 165-65



RSX 175-105



RSX 185 ALL NINE

	RSX 105	S 140-26 LIGHT	RSX 160	RSX 165-65	RSX 175	RSX 185 ALL NINE
Length	575 mm	642 mm	718 mm	711 mm	819 mm	866 mm
Width	183 mm	172 mm	236 mm	225 mm	298 mm	298 mm
Hight	157 mm	143 mm	158 mm	202 mm	225 mm	225 mm
Weight	9,2 kg	7,9 kg	14,5 kg	16,3 kg	21,9 kg	22,4 kg
Opening width	100 mm	140 mm	160 mm	165 mm	170 mm	265 mm
Nominal pressure	700 bar	700 bar	700 bar	700 bar	700 bar	700 bar
EN class	AC100D-9,2 1E-2E-3E-4D-5G	AC115D-7,9 1F-2D-3D-4D-5G	BC160H-14,5 1I-2K-3H-4J-5H	BC165F-16,3 1J-2F-3G-4J-5G	BC178K-21,9 1K-K-3K-4K-5K	CC240K-22,4 1K-2K-3K-4K-5K
NFPA class	A5-B4-C5- D6-E6-F2	A5-B3-C4-D6-E7	A7-B8-C6-D7-E8	A8-B6-C6- D7-E9-F3	A8-B9-C8- D9-E9-F5	A9-B9-C9- D9-E9-F5
ID No.	1096350	1075652	1093226	5932068	1096171	1093248



RSU 180 PLUS



RSX 180-80



RSX 200-107



RSU 210 PLUS

	RSX 180-80	RSU 180 PLUS	RSX 200-107	RSU 210 PLUS
Length	740 mm	737 mm	833 mm	833 mm
Width	232 mm	236 mm	265 mm	260 mm
Height	206 mm	159 mm	217 mm	221 mm
Weight	17,6 kg	16,7 kg	19,7 kg	19,6 kg
Opening width	180 mm	185 mm	200 mm	210 mm
Nominal pressure	700 bar	700 bar	700 bar	700 bar
EN class	BC180I-17,6 1J-2K-3I-4J-5J	BC185J-16,7 1J-2K-3K-4K-5K	CC200J-19,7 1J-2K-3K-4K-5K	CC200K-19,6 1K-2K-3K-4K-5K
NFPA class	A7-B9-C7-D9-E9	A8-B9-C7-D9-E9-F4	A8-B9-C8-D9-E9	A8-B9-C8-D9-E9-F4
ID No.	1059226	1093279	5935849	1093298



S 50



S 33-14



S 220-54



S 270

	S 50	S 33-14	S 220-54	S 270
Length	362 mm	388 mm	728 mm	765 mm
Width	138 mm	71 mm	236 mm	236 mm
Height	71 mm	129 mm	196 mm	161 mm
Weight	4,2 kg	3,9 kg	14,4 kg	16,7 kg
Opening width	50 mm	30 mm	220 mm	280 mm
Nominal pressure	700 bar	700 bar	700 bar	700 bar
EN class	AC50B-4,2 1C-2D-3B	- -	BC170H-14,4 1I-2H-3H-4K-5I	CC218I-16,7 1I-2K-3I-4K-5J
NFPA class	A4-B3-C2-D4-E3	A3-B2-C1-D2-E2	A7-B7-C6-D8-E8	A7-B8-C7-D8-E9-F6
ID No.	1093906	2836661	1063372	1096170



RSC 170



RSC 170 PLUS



RSC 190



RSC 190 PLUS



RSC 200



RSC F7

	RSC 170	RSC 170 PLUS	RSC 190	RSC 190 PLUS	RSC 200	RSC F7
Length	727 mm	732 mm	758 mm	758 mm	827 mm	886
Width	236mm	236 mm	236 mm	236 mm	296 mm	295
Height	164 mm	164 mm	164 mm	164 mm	179 mm	177
Weight	14,3 kg	15,4 kg	16,9 kg	18,0 kg	21,0	23,3
Opening width	175 mm	175 mm	187 mm	187 mm	202 mm	300
Nominal pressure	700 bar					
EN class	BC166I-14,3 1J-2K-3I-4J-5J	BC166I-15,4 1J-2K-3I-4J-5J	BC187K-16,9 1K-2K-3K-4K-5K	BC187K-18,0 1K-2K-3K-4K-5K	CC202K-21,0 1K-2K-3K-4K-5K	CC268K-23,3 1K-2K-3K-4K-5K
NFPA class	A4-B3-C5- D6-E6	A7-B8-C6-D8-E- 9-F4	A8-B9-C7-D9-E- 9-F4	A8-B9-C7-D9-E- 9-F4	A9-B9-C9-D9-E- 9-F5	A9-B9-C9-D9-E- 9-F7
ID No.	1099459	1101568	1099319	1101569	1098473	1101567

3.2 Combi tools



SPS 270 MK2



SPS 360 MK2



SPS 370 MK2



SPS 400 MK2



SPS 480 MK2

	SPS 270 MK2	SPS 360 MK2	SPS 370 MK2	SPS 400 MK2	SPS 480 MK2
Length	649 mm	765 mm	771 mm	827 mm	899 mm
Width	192 mm	236 mm	236 mm	236 mm	263 mm
Hight	152 mm	158 mm	158 mm	161 mm	172 mm
Weight	9,7 kg	14,2 kg	15,4 kg	17,2 kg	21,0 kg
Opening width	221 mm	285 mm	295 mm	343 mm	402 mm
Nominal pressure	395 mm	440 mm	405 mm	450 mm	525 kg
EN class	31 - 591 kN	36 - 783 kN	35 - 783 kN	35 - 1071 kN	45 - 1600 kN
NFPA class	36 kN	53 kN	57 kN	58 kN	78 kN
ID No.	700 bar	700 bar	700 bar	700 bar	700 bar
EN-Klasse	BK31/270G-9,7 1K-2K-3K-4K-5K	CK36/360I-14,2 1I-2K-3I-4K-5J	CK35/370H-15,4 1I-2I-3H-4J-5I	CK35/405I-17,2 1I-2K-3J-4K-5J	CK45/480K-21,0 1K-2K-3K-4K-5K
NFPA-Klasse	A6-B7-C6-D7-E7-F3	A7-B8-C7-D9-E8-F5	A7-B8-C7-D8-E8-F5	A7-B9-C7-D9-E9-F6	A8-B9-C9-D9-E9-F7
ID-Nr.	1093263	1096646	1096648	1096650	1098258

* nach EN 13204



SPS 270 H



HANDVARIO RIT



RIT TOOL

	SPS 270 H	HANDVARIO RIT	RIT TOOL
Length	682 mm	695 mm	615 mm
Width	192 mm	192 mm	192 mm
Hight	161 mm	161 mm	152 mm
Weight	9,8 kg	11,1 kg	9,4 kg
Opening width	270 mm	215 mm	215 mm
Pulling path	380 mm	320 mm	320 mm
Spreading force in working range*	26 – 534 kN	25 - 1175 kN	30 - 1.305 kN
Max. pulling force*	32 kN	40 kN	47 kN
Nominal pressure	630 bar	630 bar	700 bar
EN class	BK26/270G-9,8 1H-2G-3G-4H-5G	BK25/280G-11,1 1H-2G-3G-4H-5G	AC140H-13,3 1H-2H-3H-4H-5H
NFPA class	A6-B7-C6-D7-E7	A6-B7-C6-D7-E7-F3	A6-B7-C6-D7-E7-F3
ID No.	1084065	1100441	1104778



PLUS shear blade without insert

PLUS shear blade insert

PLUS shear blade with insert

PLUS shear blade inserts in case

Shear blade

ID no.	RSC 170 PLUS	RSC 190 PLUS
Shear blades without inserts	1099757	1099397
Shear blade insert	1099753	1099753
Shear blade with insert	1099758	1099396
Shear blade inserts in bag	1103455	1103455
Shear blades for RSC 170	1099451	
Shear blades for RSC 190	1099309	
Shear blades for RSC 20	1099765	
Shear blades for RSC F 7	1101226	



Shear blades

Pulling device

RZM

ID no.	SPS 270 MK2	SPS 360 MK2	SPS 370 MK2	RIT-TOOL	SPS 400 MK2	SPS 480 MK2
Shear blades	1101470	1101471	1101472	1101159	1100144	1085938
Tips	-	-	1050616			
Pulling device	1103553	2835746	2836033			
Chain set	2819139	2819139				1095147
RZM	1094619		1094618 + 1094618BLK			-

3.3 Operating conditions

The permissible operating temperature range for the cutters lies between -20°C and $+55^{\circ}\text{C}$. Reliable functioning of the equipment cannot be guaranteed outside this range.

Underwater operation

The cutters (exception: SPS 270 H) can also be used under water. Do not exceed the maximum submersion depth of 40 metres with this. At this depth the water pressure still has no influence on the hydraulic pressure in the equipment and the hoses.



NOTE!

After underwater use in salt water, the device must be completely disassembled and cleaned. In fresh water, a complete complete cleaning is sufficient.

After operation in moisture or underwater, the unit must be dried in any case. Burnished parts (bolts, blades and lugs) must be greased or lubricated.

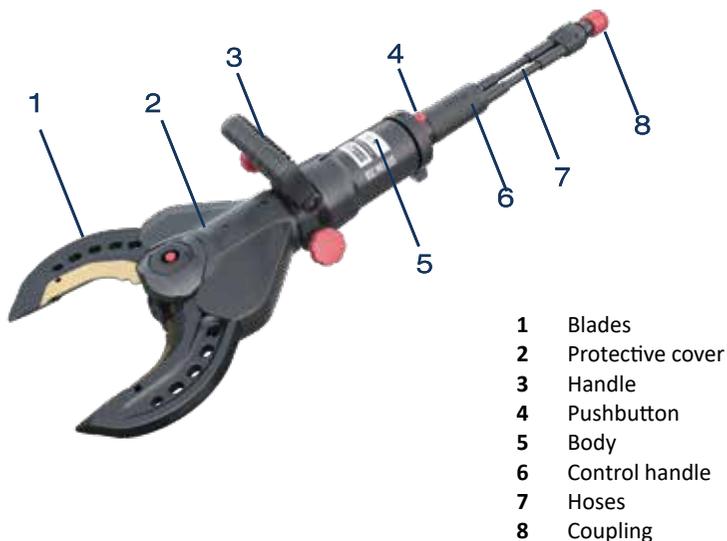
3.4 Type plate

The type plate for all SMART-FORCE appliances is located on the bottom of the drive. It provides the serial number, production date, nominal pressure, appliance designation and TIN number.

The TIN - “Tool Identification Number” is a 15-digit number and is assigned once. This is made up of the product ID and the serial number, and as such enables unique identification.

4 Structure and function

4.1 Overview



4.2 Brief description

Hydraulic cutters are specially designed rescue equipment for cutting bodywork parts. They are used for rescuing trapped or enclosed accident victims.

Driven by a hydraulic power unit it is possible to cut door and roof pillars, posts and sills etc. with the cutters.

The speed of movement of the shearing blades is controlled by the greater or lesser degree of force applied to the pushbutton on the handle. The maximum cutting force is only applied when the pushbutton is fully depressed.

4.3 Hydraulic supply

Power units and pumps

Only WEBER-HYDRAULIK power units and hand pumps may be used to drive the cutters. Equipment from other manufacturers can only be used under certain conditions. Therefore always consult with us before operating a device with a power unit from another manufacturer!



ATTENTION !

Before using pumps and power units from other manufacturers always contact WEBER-HYDRAULIK or an authorised dealer. Incorrect application can lead to hazardous situations for which we cannot accept any liability!

Hoses

The connection of the device with the power unit is carried out via high pressure hoses. Hoses are available in lengths of 5 m, 10 m, 15 m and 20 m. As the length of the hoses increases so too does the associated pressure loss. With a line length of 50 metres this pressure loss remains acceptable and has no significant effect.



CAUTION !

Do not use damaged hoses !

With damaged hoses there is a danger of escaping hydraulic medium under pressure, or of the hoses whipping around.

Therefore:

- » The hoses should be subjected to a visual inspection (leak-tightness, surface damage such as kinks) after every use and at least once per year.

- » Every three years, or in the event of doubts about the safety or reliability, carry out an additional functional and load test (as per DGUV 305-002 or specific national directive).
- » Replace hoses every 10 years! The date (code letters or quarter/year) is specified on the hose bonding.
- » Ensure that the hoses are not exposed to tension or torsion (turning).
- » Do not kink the hoses or draw them over edges (smallest bend radius 40 mm).
- » Do not subject the hoses to high temperatures.
- » Protect hoses from contact with materials that can cause damage to the outer covering e.g. acids, alkalis, or solvents.

Hydraulic oil

All cutters are designed and tested for WEBER hydraulic oil ID No. 804932. This oil possesses a particularly high purity level and also works flawlessly at temperatures below zero, down to -20° C.

With limitations in the low temperature range (low output), however, a standard oil (mineral based) of viscosity class HLP 10 or HVLP 10 can be used in keeping with DIN 51502.



NOTE !

We recommend the following hydraulic oils for trouble-free operation of WEBER rescue devices:

- » AERO Fluid 41 (Shell)
- » Univis HVI-13 (Esso)
- » Aero-hydraulic 520 (Total)
- » Hydraulik DB (Castrol)
- » Renolin/MR310 (Fuchs)
- » HVI Extra 380 (Maier & Korduletsch)
- » Hydrex Arctic 15 (Petro Canada)
- » Naturelle HFE 15

4.4 Equipment connections

SINGLE coupling

Connecting:

Remove the protective cap from the coupling male and the coupling female (Fig. 1).

Conflate SINGLE coupling male and female in the bayonet catch (Fig. 2). Hold coupling female on the black slew ring and turn clockwise until the coupling snaps in (Fig. 3). Put protective caps together (Fig. 4). You don't have to switch the power unit to position 0 to connect or disconnect the coupling!

Disconnecting:

Remove the protective caps. Hold coupling female on the black slew ring and turn anticlockwise direction. Turn the black slew ring until you can release the coupling easily. Put protective caps to coupling male and the coupling female.



Fig. 1



Fig. 2



Fig. 3



Fig. 4



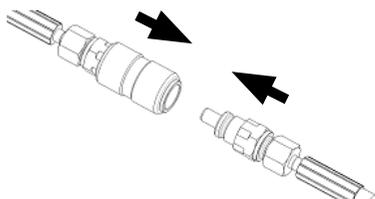
NOTE !

When using the SINGLE coupling, pressure relief connectors are no longer required.

Plug-in coupling (SKS)

Before coupling the two coupling parts together, the dust protection caps must be removed. Then grasp the sleeve of the coupling socket with one hand and hold the coupling plug by the hexagon with the other hand. Bring the two parts together and press the sleeve against the coupling plug with slight pressure until it engages.

To separate, hold the coupling plug by the hexagon, grasp the coupling sleeve by the sleeve with the other hand. Sleeve with the other hand and pull it back. A few drops of hydraulic oil will inevitably escape during disconnection. To avoid contamination, the protective caps must be replaced immediately afterwards.



CAUTION!

When coupling SKS couplings, the shift lever on the pump-motor unit must always be in the 0 position.

DANGER due to incompletely coupled SKS return line!

If the return line (T) of the SKS coupling system is not coupled correctly, an independent movement of the implement is possible until the safety valve responds!

Therefore:

Always check the SKS couplings for correct locking, do not place your hands or other body parts in the working area of the moving components. It is essential to check that the couplings are correctly locked, especially the return line (T). line (T), must be ensured!



NOTE!

A pressure relief plug is attached to the hydraulic power packs and the hand pump. pressure relief plug, which can be used to release a few drops of oil from the hose line. hose line can be released. This makes coupling possible again in the event of pressure increases in uncoupled units. To do this, simply insert the pressure relief plug into the coupling sleeve and turn the knurled screw to the right until oil escapes.

**NOTE!**

In the following, only the SINGLE coupling will be discussed. Please note that when coupling SKS couplings, the shift lever must always be moved to the 0 position first!

4.5 Use of the control handle

The cutter can be operated by the pushbutton on the control handle. The speed of movement of the shearing blades is controlled precisely by the greater or lesser degree of force applied to the pushbutton.

The maximum cutting force is only applied when the pushbutton is fully depressed.

Closing the cutters

The primary motion direction of the device (closing) is triggered by pressing the lower tapered (convex) end of the button.

The direction of movement is marked on the equipment with the symbol:



Opening the cutters

The cutters are opened with the upper curved (concave) end of the button, which is marked with the following symbol:



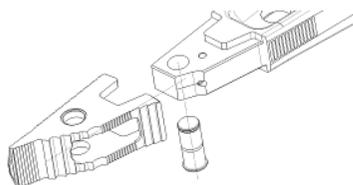
Dead-man's switching

If the pushbutton is released then it returns to the neutral position automatically. With this, the device stops still in any position (including under load).

4.6 Replacing the spreader tips

The spreader tips of the SPS 370 MK2, SPS 400 MK2, SPS 480 MK2 and RIT-TOOL are secured with captive collar studs in the spreader arms. To replace them, the studs must be pushed out. After the tips have been replaced, the collar studs can be pushed back through. Check that the studs are seated correctly (pressed completely in).

The holder for the chain set must be mounted in identical fashion. The chain lock must be installed with the latch facing upward.



NOTE !

Fitting the chain lock to the SPS 270 H, SPS 270 MK2 and SPS 360-L is exactly the same. However, in this case it is not necessary to remove spreader tips beforehand.



CAUTION!

Ensure that the door opening tips always have full-surface contact!

If the optionally available door opening tips are attached to the combi tool or spreader, they must always be inserted into the gap while ensuring full-surface contact. Furthermore, reposition as often as possible to insert the teeth at least 20 mm into the gap. Otherwise, the tip may break when the appliance is fully loaded.

4.7 Replacing blade inserts (PLUS)

During a change of blades, the shear is fixed in place. Any slipping should be avoided. Changing the blade requires a soft-face hammer, the tensioning pins supplied, the punch and the blade inserts themselves. It is expedient to replace both blade inserts to continue enjoying optimum cutting performance.



NOTE!

The blade inserts should not be reground, simply cleaning off any soil is recommended. The change of blades for the RSU shears technology works identically but both clamping pins must be removed.

Procedure:



Fig. 1

When the blade insert is being changed, the battery must be removed from the shear. The shear blades are wide open (see Fig. 1) but the shear is not under load. This means that the shear is not completely open or closed. Now the blade insert can be changed on the shear blade with the smooth surface, using the punch to knock out the tensioning pin downwards (see Fig. 1 - Knocking out the tensioning pin).



Fig. 2

After the tensioning pin has been knocked out of its position, the blade insert can be pulled out. If the blade insert is stuck, it is advisable to lever it slightly with the punch in the holes and thereby loosen it. (see Fig. 2 - Loosening the blade insert)



Fig. 3

Carefully remove dirt and grime before inserting the new blade insert. (see Figure 3 - Removing dirt). When inserting, make sure that the blade insert does not tilt. To do this, approach with the rounded side of the insert first.



Fig. 4

If the blade insert cannot be inserted by hand, it is advisable to use lubricant and a soft-face hammer. (see Fig. 4 - Inserting the new blade insert)

After the new blade insert has been fully inserted, the shears are turned and the tensioning pin is driven in again from the rear. (see Figure 5 - Driving in the tensioning pin). Make sure that the tensioning pin is fully driven in again with the punch. (see Fig. 6 - Fully hammering in the tensioning pin)



Fig. 5



Fig. 6

5 Possible applications

5.1 Safety information



WARNING !

Never reach between the cutter arms!

WARNING !

During all work with the cutters, parts which are tensioned can break off or be blown off and thus endanger personnel.

Uninvolved parties must therefore remain a safe distance away or stay in the danger zone only as long as necessary.

5.2 Cutting

The devices' cutting capabilities can only be used optimally if they are placed as near as possible to the blades' pivot point (Figure 1).

This means it may be necessary to readjust the device.

The device only achieves full cutting performance when the rocker lever is pressed all the way through. In addition, it can take several seconds for the unit to reach full operating pressure.



Fig. 1



Fig. 2

To prevent the blades from being damaged, they must always be placed at right angles to the material to be cut.

Also, the tips of the blades must not be more than 5 mm (3 mm for S 50) apart during the cutting process. If this value is exceeded, the cutting process must be stopped and then started again.

**CAUTION !**

Do not sever any parts with loose ends, because this can result in personal injury due to parts flying off.

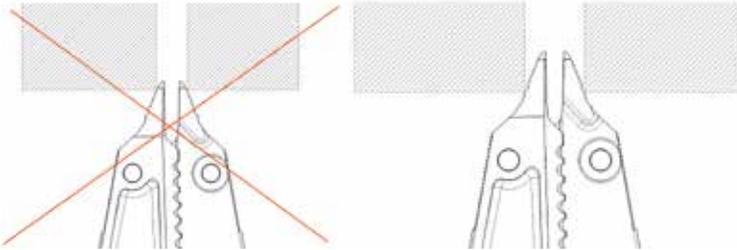
**ATTENTION !**

When cutting high-strength vehicle body parts, such as shock absorbers, hinges or steering columns, the shear blades (arms) may cause severe damage.

5.3 Spreading (combi tools)

The spreading function's uses include opening doors, lifting vehicles and other movable loads, pushing vehicle parts away, and squashing tubes and beams. For this, the vehicle must be stably stabilized and supported.

To prevent any sliding during spreading, the arms and tips are fluted inside and out. Whenever possible, the tips should be used only to enlarge a gap, because repositioning the spreader prevents slipping.



5.4 Pulling (combi tools)

After the chain set (as explained in chapter 4.6) has been mounted on the spreader tips, the combi device can also be used for pulling.

For this, the chains must be tightly tensioned and must be tensed only in the pulling direction. To tension the chain, only one lock can be pressed in, so that the chain can be pulled through the holder.

If the range of movement is not sufficient, tension chains or other means must be used so that the spreader can be reopened and the chain retensioned.

**ATTENTION !**

It is necessary to ensure that the lock has latched into the bracket securely.

**ATTENTION !**

Store the pulling chains with the chain locks fitted approx. 10 - 20 cm from the end. Check the chains before each use. Check that the weight does not load the point of the hook but rather lies in the middle of the hook.

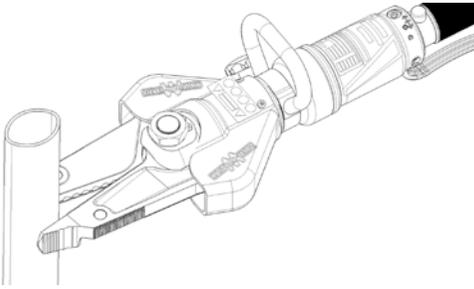
- » Do not make any repairs on your own.
- » Do not stress the chains beyond the permitted load carrying capacity.
- » Do not load with a jerking movement.
- » Do not galvanize or paint the chains.
- » Do not shorten the chain by knotting it.
- » Do not subject the chains to heat stress.
- » Use the chains and accessories only between -40°C and $+200^{\circ}\text{C}$.
- » During all maintenance work, observe the applicable German accident prevention regulations (UVV) as well as the specifications of DIN EN 818-7 and DIN 685-5.
- » Chains must only be used for lashing. Lifting loads is not permitted.

Chains must not be used if:

- » Deformations, cracks, signs of corrosion are present.
- » The wire diameter of the chain link has decreased by 10% of the nominal thickness.
- » An individual chain link has been permanently stretched.
- » An individual link has been enlarged by more than 2%.
- » The internal chain pitch over a measuring distance of 11 chain links has increased by more than 2%.

5.5 Crushing (combi tools)

Pipes and other hollow profiles are crushed by closing the spreader arms. With combi devices, however, crushing is only to be performed in the tip area.



ATTENTION !

Material to be crushed can suddenly jump away.

Do not remain in the work area of the spreading and combi devices!

5.6 Lifting (combi tools)

Spreaders, combi tools and rescue cylinders can be used to lift vehicles or other moving loads on one side.

Care must be taken to secure the load against slipping away and to position the spreader tips far enough apart under the load to prevent slipping.

The load being lifted must be constantly monitored (tipping, rolling away or changing position). Also, the lifted load must immediately be propped up and supported in a suitable way.



NOTE!

Complete lifting of loads is not permitted with rescue equipment. permitted.

5.7 Pressing (combined appliances with RZM)

In order to further increase the spreading travel of the combination units, a mechanical rescue cylinder can be optionally mounted on these two units. This is inserted into the shear blades by means of spring-loaded bolts (see page 29, „4.6 Changing the spreader tips“). To make it easier to insert the RZM, the blades should be slightly open!

If the shear blades of the combi unit are now moved apart, the RZM also opens.



NOTE!

The use of the RZM in combination with the combi unit SPS 480 MK 2 is not permitted.



ATTENTION!

While pressing with the RZM, the combi unit moves in the direction of the vehicle. Therefore, do not stand in the direct working area of the combi unit!



6 Transport, packaging and storage

6.1 Safety instructions

**CAUTION!****Damage due to incorrect transport!**

Improper transport can result in considerable material damage, considerable amount.

Therefore::

- » When unloading the packages, proceed carefully and observe the symbols on the packaging.
- » Do not open and remove the packaging completely at the actual storage location.

6.2 Transport inspection

Upon receipt, the delivery should be checked immediately for completeness and possible transport damage, so that remedial action can be taken quickly if necessary.

Proceed as follows in the event of externally visible damage:

- Do not accept the delivery or accept it only with reservations.
- Note the extent of the damage on the transport documents or on the carrier's delivery bill.
- Initiate a complaint.

**NOTICE!**

Complain about any defect as soon as it is detected.

Claims for compensation can be addressed to our customer service (see chapter 1.6).

6.3 Symbols on the packaging



Caution, fragile !

Handle the package carefully - do not drop, throw, strike or tie up.



This way up !

The package must be transported and stored strictly so that the arrows point upward. Do not roll or tilt.

6.4 Disposal of packaging



All packaging materials and disassembled parts (transportation protection) must be disposed of properly in accordance with applicable local regulations.

6.5 Storage

The equipment should be stored in a dry and dust-free environment where possible. Avoid direct UV radiation to the hoses.



CAUTION !

The equipment must be stowed securely in the mountings provided in order to avoid damage during transit, etc.

7 Installation and commissioning

7.1 Safety information

**WARNING !****Danger of injury due to improper operation !**

Improper operation can cause serious injury or material damage.

Therefore, make absolutely sure to:

- » All operating steps are executed in keeping with the information in this operating manual.
- » All covers and protective devices are installed and in proper working order prior to starting work.

Personal protective equipment

Wear the protective equipment detailed in chapter 2.4 for all work!

**NOTE !**

Special reference is made where it is necessary to wear additional protective equipment for certain work with or on the device.

7.2 Checking

Inspect the cutter devices for damage. If the cutting device is not in pristine condition, it must not be used! In this case, immediately contact your supplier.

- Check the blades (damage)
- Check the control handle including pushbutton (function)
- Check the couplings (damage, dirt)
- Check the hand grip (securely fastened)
- Check the protective cover (damage)
- Check the hoses (damage)

7.3 Installation

Move both switching levers of the hydraulic unit to 0-position (Fig. 1), pull off the dust protection caps on the coupling halves and connect the hydraulic hoses to the cutter as described in chapter 4.4.

Then put the protective caps back together to prevent contamination avoided.

When using the SINGLE coupling, it is also possible to couple in pressureless circulation (0-position on the power unit is not necessary).

When using a hydraulic unit, the operating instructions of the unit must be observed!

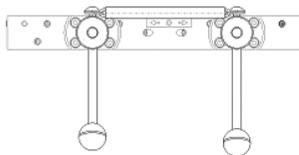


Fig. 1

7.4 Shutting down (end of work)

After work is over, the blade tips must be placed one above the other to prevent injury. The blades of the cutting device must not be completely closed, as otherwise tension will build up in the device.



NOTE!

With combi tools, drive the spreader arms to within a few millimetres of each other in order to relieve the hydraulics.

Then the equipment can be disconnected providing that the power unit control lever is in the „0“ position. Care must be taken to ensure that no dirt ends up on the coupling and that the protective caps are immediately fitted.

8 Maintenance

8.1 Safety instructions

**WARNING!****Danger of injury due to defective maintenance work!**

Improper operation of the appliance can cause severe injury or property damage.

Therefore, it is absolutely necessary to:

- » Have all maintenance work carried out by trained specialists.
- » Ensure good housekeeping and cleanliness at the workplace! Loose components and tools left lying around constitute a potential hazard.
- » Wear protective gloves during all work!

8.2 Upkeep and maintenance

To be ready for operation at any time, the following measures are absolutely imperative:

- After every load, but at least once a year, visually check the appliance and its accessory parts.
Pay particular attention to spreader tips, joints, blades, hoses and coupling parts.
- Every three years, or whenever a doubt is raised about the safety or reliability of the appliance, a function and load test must also be carried out (per DGUV guideline 305-002 or country-specific regulations).
- After every load, check the lubrication of the movable parts and pins, and spray with suitable grease if necessary.
- Every 10 years we recommend a complete change of the hydraulic oil by our factory service to maintain full performance.

**ATTENTION!**

Prior to all maintenance work, the equipment must be cleaned of any dirt so that it does not get into the hydraulic system. Cleaning can be carried out using a conventional cleaner.

8.3 Maintenance after operation in humidity

- The appliance must be dried after being operated in damp conditions
- Brownd parts (bolts, blades and clips) must be greased

**NOTE!**

If problems occur when maintaining the appliances, our customer service department is available to assist (see Chapter 1.6).

8.4 Maintenance schedule

For an exact maintenance schedule with inspection intervals, regulations and reports, see DGUV guideline 305-002, point 18 (hydraulically-actuated rescue appliances).

9 Malfunctions

Fault	Possible cause	Remedial measures
Device does not reach full performance	Control buttons not fully depressed	Fully depress control buttons
Equipment delivers no power or moves in the opposite direction to that commanded	Pressure line (P) and return line (T) were transposed when hoses or couplings were replaced	Change round in accordance with the repair instructions
Cutter cannot be coupled	Pressure build-up due to heating (only SKS coupling) Coupling halves are damaged or heavily soiled	Drain a little oil out of the equipment with the pressure relief plug, see chapter 4.3 (only SKS coupling)
Oil escaping at the control handle (hole between the hoses)	Return hose is not correctly coupled (only SKS coupling)	Move power unit control lever to the "0" position and couple correctly (only SKS coupling)
Equipment non-functional despite actuating the control buttons	Pressure hose is not coupled	Move power unit control lever to the "0" position and couple correctly (only SKS coupling)
Combi tool exhibits movement in the opposite direction under load	Check non-return valve	Have the equipment checked by authorised customer services
Oil discharge on the hoses or their bondings	Hoses leaking, possibly due to damage	Replace hoses, see repair instructions
Degradation of the surfaces of the hoses	Contact with aggressive chemical fluids	Replace hoses, see repair instructions
Oil escaping at the coupling halves	Coupling leaking	Replace coupling, see repair instructions
Blades loose and gaping apart when cutting	Attachment of blades to the shearing head not in accordance with specifications	Repair by authorised customer service
Tip spread of cutter below target value	Shearing head settings incorrect	Repair by authorised customer service
Tip spread of combi tool below target value	Shearing head settings incorrect	Repair by authorised customer service
Pressure build up despite movement (open - closed) without any load	Hex nut / central bolt too firmly tightened	Repair by authorised customer service
Nick or gouge in blade	Blade damaged e.g. through cutting hardened materials	Can be reground up to approx. 2 mm (see repair instructions), otherwise replace
Chip or groove	Blade damaged e.g. through cutting high-strength materials	Have the blades replaced by authorised customer services

10 Decommissioning / Recycling

After the end of the normal service life, the equipment must be professionally disposed of. Individual parts can, however, certainly be used again.

The hydraulic oil must be completely drained and collected. Make sure that the hydraulic oil is disposed of separately!

For disposal of all device components and packaging materials, the disposal conditions of the specific location apply.



NOTE !

Please ask your supplier about disposing of the device.

11 Declaration of Conformity

**WEBER-HYDRAULIK GMBH**

Emil Weber Platz 1, A-4460 Losenstein, Austria



DECLARATION OF CONFORMITY

according to Directive 2006/42/EC

Herewith we declare, that our "Hydraulic rescue Equipment"

SPREADERS	SP 44 AS, SP 49, SP 50 BS, SP 54 AS, SP 64 BS, SP 84 BS
CUTTERS/COMBI-TOOLS	S 25-20, S 33-14, S 50 (-14), S 140-26, S 220-54, S 270-71, RS 130-49, RS 170-105, RSU 180 PLUS, RSU 210 PLUS, RSX 105-29, RSX 160 (-50), RSX 165-65, RSX 185 (-105), RSX 200-107 (PLUS), SPS 270 MK2, SPS 360 MK2, SPS 370 MK2, SPS 400 MK2, SPS 480 MK2, RIT-TOOL, RSC 170 (PLUS), RSC 190 (PLUS), RSC 200 (PLUS), RSC F7
RAMS	RZ 1-850, RZ 1-1810 CROSSRAMMER, RZ 2-1290, RZ 3-1640, RZT 2-600 (RC7), RZT 2-775, RZT 2-1170, RZT 2-1500, RZT 2-1250 XL, RZT 2-1500 XL, RZT 3-1310 XL
SPECIAL TOOLS	BC 250 MK2, C 45-9, SPK 250 MK2, DO 105, DO 120, DO 140 MK2, SBH 15-255, C120 MK2, HANDVARIO RIT TOOL, MSE 15-255, SPS 270
POWER-UNITS	E/V 50..., E/V 70..., E/V 400 (S)..., V 400 ECO, B-COMPACT (ECO/ XL / XL SMART), E-COMPACT, V 50 ECO, AKKUPAC (ECO) (BLK), V-ECOCOMPACT(*3600U/min), V-ECOSILENT, V 50S TURBO PLUS
HANDPUMPS/ACCESSORIES	DPH 0705..., DPH 3215..., DPH 4018..., DPF 4018, EPH 0203 and accessories to all tools

meets the relevant basic safety and health requirements of the Directive

EC-MACHINE DIRECTIVE 2006/42/EC**EC-LOW VOLTAGE DIRECTIVE 2014/35/EC****EC-ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2014/30/EU****EC-DIRECTIVE RoHS 2011/65/EU**

For the relevant implementation of the safety and health requirements mentioned in the directives, the following standards and or technical specifications has been respected:

EN 13204 : 2016	EN 61000-6-1: 2019	EN ISO 13857 : 2019
NFPA 1936 : 2020	EN 61000-6-2: 2019	EN ISO 12100 : 2010
DIN 14751-4 : 2011-04	EN 61000-6-3: 2006 + A1:2010	EN ISO 13849-1 : 2008
DIN EN 62311:2008-09	EN 61000-6-4: 2019	
EN 60529 : 1991 + A1:2000 + A2:2014		

The tools are tested according to EN 13204:2016 and NFPA 1936:2020 through TÜV-Süd and SGS
Authorised person to compile the technical file(s): Josef Eder - Head of Development**WEBER-HYDRAULIK GMBH**
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Losenstein, 09.01.2024
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