

# Operating instructions Hydraulic rescue equipment

## CUTTERS COMBI TOOLS



S 50-14, S 140-26, S 200-49, S 270-71, C 100-31  
SPS 360, SPS 400, SPS 260 H, RSX 105-29, RSX 160-50  
RSX 165-65, RSX 200-107, RSX 200-107 PLUS, RSX 185-105

814.261.0



Tested according to  
EN 13204-2005 and  
NFPA 1936:2010  
ISO 9001:2008

**WEBERRESCUE**  
SYSTEMS

[www.weber-hydraulik.com](http://www.weber-hydraulik.com)

## Table of Contents

<b>1</b>	<b>General</b>	<b>4</b>
1.1	Information regarding the operating instructions	4
1.2	Explanation of symbols	5
1.3	Limitations of liability	6
1.4	Copyright	6
1.5	Guarantee conditions	7
1.6	Customer service	7
<b>2</b>	<b>Safety</b>	<b>8</b>
2.1	Proper use	8
2.2	Responsibility of the customer	10
2.3	Operating personnel	11
2.4	Personal protective gear	12
2.5	Specific hazards	13
2.6	Safety devices	15
2.7	Behaviour in the event of danger or accidents	16
2.8	Symbols	17
<b>3</b>	<b>Technical data</b>	<b>18</b>
3.1	Operating conditions	20
3.2	Type plate	20
<b>4</b>	<b>Structure and function</b>	<b>21</b>
4.1	Overview	21
4.2	Brief description	21
4.3	Hydraulic supply	22
4.4	Equipment connections	24
4.5	Use of the control handle	26
4.6	Changing the spreader tips (combi tools)	27

<b>5</b>	<b>Possible applications</b>	<b>28</b>
5.1	Safety information	28
5.2	Cutting	28
5.3	Spreading (combi tools)	30
5.4	Pulling (combi tools)	30
5.5	Squeezing (combi tools)	32
5.6	Lifting (combi tools)	32
5.7	Continuous Cuts (C 100-31)	33
<b>6</b>	<b>Transport, packaging and storage</b>	<b>34</b>
6.1	Safety information	34
6.2	Transport inspection	34
6.3	Symbols on the packaging	35
6.4	Disposal of packaging	35
6.5	Storage	35
<b>7</b>	<b>Installation and commissioning</b>	<b>36</b>
7.1	Safety information	36
7.2	Checks	37
7.3	Installation	37
7.4	Shutting down (end of work)	38
<b>8</b>	<b>Servicing</b>	<b>39</b>
8.1	Safety information	39
8.2	Care and maintenance	39
8.3	Maintenance schedule	40
<b>9</b>	<b>Faults</b>	<b>41</b>
<b>10</b>	<b>Decommissioning/recycling</b>	<b>42</b>
<b>11</b>	<b>EC Declaration of Conformity</b>	<b>43</b>

# 1 General

## 1.1 Information regarding the operating instructions

These operating instructions provide important information for using the hydraulic rescue cutters and combi tools. Compliance with all of the safety and handling instructions specified is a condition for safe work.

Furthermore, adhere to the local accident prevention guidelines and general safety regulations for the region in which the devices are used.

The instruction manual should be read carefully before starting work! It is part of the product and must be kept in a place that is known and accessible to personnel at all times.

This documentation contains information for operating your equipment, irrespective of the equipment type. For this reason you will also find explanations which do not refer directly to your equipment.

All information, technical data, graphics and diagrams contained in these operating instructions are based on the most up-to-date data available at the time of writing.

In addition to read through the operating instructions we also recommend that you be trained and instructed on handling the rescue equipment (possible applications, application tactics etc.) by our qualified trainers.

## 1.2 Explanation of symbols

### Warning instructions

Warning instructions are marked by symbols in this operating manual. The individual instructions are introduced by signal words that express the degree of hazard.

It is essential to comply with the instructions in order to prevent accidents, injuries and damage to property.



#### **DANGER!**

...indicates an immediate dangerous situation that can result in death or serious injury if it is not avoided.



#### **WARNING!**

...indicates a potentially dangerous situation that can result in death or serious injury if it is not avoided.



#### **CAUTION!**

...indicates a potentially dangerous situation that can result in minor or light injuries if it is not avoided.



#### **ATTENTION!**

...indicates a potentially dangerous situation that can result in material damage if it is not avoided.

## Tips and recommendations



### NOTE!

...indicates useful tips and recommendations as well as information for efficient and trouble-free operation.

## 1.3 Limitations of liability

All information and instructions in this operating manual have been provided under due consideration of applicable standards and guidelines, the current state of technology, as well as our many years of knowledge and experience.

The manufacturer assumes no liability for damage due to:

- Failure to follow the operation instructions
- Improper use
- Use by untrained personnel
- Unauthorized modifications
- Technical changes
- Use of non-approved spare parts
- Use of non-original accessories

The actual scope of delivery can vary from the explanations and graphic representations provided in this manual in the case of special versions, or due to technical changes.

## 1.4 Copyright

All text, diagrams, drawings and images in this operating manual may be used without restriction and without any prior approval.

**NOTE!**

Further information, images and drawings can be found on our homepage. [www.weber-hydraulik.com](http://www.weber-hydraulik.com)

## 1.5 Guarantee conditions

The guarantee conditions can be found as a separate document in the sales documentation.

## 1.6 Customer service

Our customer service department is available to you for technical information.

### Germany

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**NOTE!**

When contacting our customer service department please provide the designation, type and year of manufacture of your equipment. This information can be found on the equipment type plate.

## 2 Safety

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

Significant hazards can occur if the handling and safety instructions in this manual are not complied with.

### 2.1 Proper use

The hydraulic cutters are designed and tested exclusively for the appropriate designated purposes described here. All other activities are fundamentally prohibited.

**Cutters** (S 50-14, S 140-26, S 200-49, S 270-71, C 100-31, RSX 105-29, RSX 160-50, RSX 165-65, RSX 200-107, RSX 200-107 PLUS, RSX 185-105)

- All of the cutters are designed as one-man devices and may therefore 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.

**Combi tools** (SPS 360, SPS 400, SPS 260 H)

- 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.



**WARNING!**  
Danger due to improper use!

Any use of the equipment that exceeds the intended use or deviates from it can lead to dangerous situations!

Therefore it is imperative that:

- » The equipment is used only for the purposes listed above.
- » Observe all other instructions in chapter 5 (Possible applications) regarding appropriate use of the equipment.

## 2.2 Responsibility of the customer

In addition to the working safety instructions in this operating manual, observe safety and accident protection guidelines and environmental protection guidelines applicable to the area of application of the equipment. Particularly applicable in this regard:

- The customer must inform himself of applicable industrial safety regulations and, within the framework of a hazard analysis, identify other hazards that may exist at the equipment's installation site due to the specific working conditions.
- The customer must clearly regulate and specify responsibilities for installation, operation, maintenance, and cleaning.
- The customer must ensure that all personnel who handle the equipment have fully read and understood the operating manual.
- In addition, the operator must train personnel and inform them of the dangers of working with the machinery at regular intervals.

Moreover, the customer is responsible for ensuring that the equipment is always in technically faultless condition. Consequently the following applies:

- After every usage, at least once per year, the device must undergo a visual inspection by trained personnel (per GUV-G 9102 or country-specific directive).
- Every three years, or in the event of doubts about the safety or reliability of the equipment, an additional functional and load test is to be carried out (per GUV-G 9102 or country-specific directive).

## 2.3 Operating personnel

The following qualifications are cited in the operating manual for the various activity areas:

- **Trained person**  
Is informed about the tasks assigned to them and the possible dangers in the event of improper behaviour through customer training.
- **Specialist**  
Is an individual who, due to their specialized training, skills, and experience, as well as knowledge of the applicable manufacturer's regulations is capable of executing the tasks assigned to them and of recognizing possible hazards on their own.



### **WARNING!**

**Danger of injury due to insufficient training!**

Improper handling of the equipment can lead to serious injury or material damage. Therefore it is imperative that:

- » Particular tasks are only carried out by the personnel listed in the appropriate chapter of this instruction manual.
- » In case of doubt call in specialists immediately.



### **NOTE!**

The equipment may not be used by personnel who have consumed alcohol, taken medication or drugs!

## 2.4 Personal protective gear

Wearing personal protective equipment (PPE) is essential to minimize the risks to operating personnel when working with the hydraulic spreaders.

It is essential to wear the following protective clothing for all work:



### Protective work clothing

Tight-fitting work clothing with tight sleeves and without projecting parts should be worn for work. It is primarily used to protect against entanglement by moving equipment parts.



### Safety footwear

Safety footwear with steel toecaps must always be worn as protection against heavy falling parts and from slipping on slippery ground.



### Work gloves

Work gloves must be worn when working with the equipment for protection against sharp edges and glass fragments.



### Helmet with face shield

A helmet with face shield must be worn for protection against flying or falling parts and glass fragments.



### Protective goggles

Protective goggles must also be worn in addition to the face shield in order to protect the eyes from slivers.

With certain work the following must also be worn in addition:



### Ear protectors

In addition to the basic protective equipment, ear protectors should also be worn for protection against hearing damage.

## 2.5 Specific hazards

The hazards that arise within the framework of the risk evaluation are listed in the following section.

Follow the safety instructions listed here and the warning instructions in the other sections of this manual to minimise potential health hazards and avoid dangerous situations.

### Electric shock



#### **DANGER!**

#### **Life-threatening danger due to electric shock!**

There is an imminent life-threatening danger if live parts are touched. Damage to insulation or to specific components can pose a life-threatening danger.

Therefore:

- » Disconnect the power supply immediately if there is damage to the insulation and have it repaired.
- » Only a qualified electrician should perform work on the electrical equipment.
- » All electrical work on the system must be carried out with the system disconnected from the mains power supply and the system must be checked to confirm that it is de-energised.
- » Prior to any maintenance, cleaning or repair works the power supply must be switched off and secured against being unintentionally switched back on.
- » Do not bypass fuses or render them inoperable. Always use the correct amperage when changing fuses.
- » Keep moisture away from live parts. Moisture can lead to a short circuit.

## Noise



### **WARNING !** **Hearing damage due to noise !**

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

Therefore:

- » Also wear ear protectors when carrying out particularly noise-intensive works.
- » Do not stay in the hazardous area longer than necessary.

## Hydraulic energy



### **WARNING !** **Danger due to hydraulic energy !**

Serious injuries can be caused by discharged hydraulic force and the emergence of hydraulic oil.

Therefore:

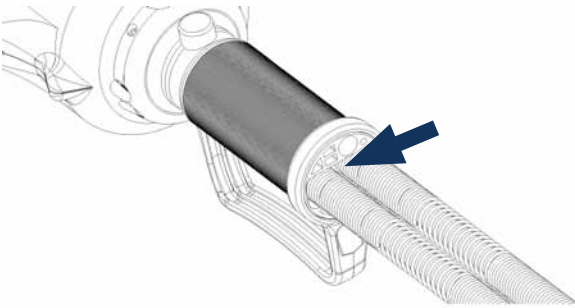
- » Always keep your eyes on the hydraulic equipment throughout the working process and set down if necessary.
- » Check the hoses and the equipment for damage after every usage.
- » Avoid skin contact with the hydraulic oil (wear protective gloves).
- » Remove hydraulic oil from wounds without delay and seek medical attention immediately.

## 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 Behaviour in the event of danger or accidents

### Preventative measures

- Always be prepared for accidents
- Keep first aid equipment (first-aid box, blankets etc.) to hand
- Familiarize personnel with accident alarms, first-aid kits and rescue equipment
- Keep entry ways clear for rescue vehicles

### In the event of an accident

- Shut down the equipment immediately
- Initiate first-aid measures
- Get people out of the danger zone
- Inform the responsible parties at the implementation site
- Notify a physician and/or the fire department
- Keep entry ways clear for rescue vehicles

## 2.8 Symbols

The following symbols and instruction signs are found on the equipment. These symbols and instructions refer to the immediate vicinity in which they are affixed.



**Comply with the instructions in the operating manual**

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



**Warning of injury to hands**

When working with the equipment care should be taken to avoid hand injuries through clamping or sharp edges.



**WARNING!**

**Danger of injury due to illegible symbols!**

Over time, stickers and symbols on the equipment can become fouled or can become illegible in some other manner.

Therefore it is imperative that:

- » Keep all safety, warning, and operating instructions that are affixed to the device in good, legible condition.
- » Replace damaged signs and stickers immediately.

### 3 Technical data



S 50-14



S 140-26



S 200-49



S 270-71



C 100-31



SPS 360



SPS 400



SPS 260 H



RSX 105-29



RSX 160-50



RSX 165-65



RSX 200-107 PLUS



RSX 185-105

	SPS 360	SPS 400	SPS 260 H
Length	810 mm	867 mm	682 mm
Width	263 mm	253 mm	180 mm
Height	217 mm	227 mm	161 mm
Weight	15,3 kg	18,3 kg	11,2 kg
Opening width	360 mm	425 mm	260 mm
Max. cutting force*	46 t	54 t	29 t
Max. cutting capacity with round material*	Ø 30 mm	Ø 35 mm	Ø 25 mm
Spreading force in working range*	47 – 330 kN	48 – 726 kN	33 – 383 kN
Squeezing force	52 kN	63 kN	-
Pressure	630 / 700 bar	630 / 700 bar	630 / 700 bar
EN cutting class	BK 30/360-H-15	CK 36/420-H-19	BK 33/250-E-11
NFPA cutting class	A6/B8/C6/D8/E8	A7/B9/C7/D9/E9	A6/B6/C6/D7/E7
Part no.	593.195.9	593.113.4	593.439.7

	<b>S 50-14</b>	<b>S 140-26</b>	<b>S 200-49</b>	<b>S 270-71</b>	<b>C 100-31</b>
Length	423 mm	643 mm	774 mm	822 mm	585 mm
Width	138 mm	190 mm	225 mm	225 mm	162 mm
Height	71 mm	221 mm	218 mm	221 mm	288 mm
Weight	4,3 kg	9,2 kg	14,2 kg	17,0 kg	19,5 kg
Opening width	50 mm	140 mm	200 mm	270 mm	120 mm
Max. cutting force*	14 t	26 t	49 t	71 t	31 t
Max. cutting capacity with round material*	Ø 16 mm	Ø 25 mm	Ø 32 mm	Ø 36 mm	Ø 19 mm
Pressure	630 / 700 bar	630 / 700 bar	630 / 700 bar	630 / 700 bar	630 / 700 bar
EN cutting class	AC 50-B-5	AC 115-D-10	BC 166-H-14	CC 210-H-17	AC 120-C-20
NFPA cutting class	A4/B3/C2/ D4/E3	A6/B3/C4/ D7/E7	A6/B7/C7/D8/ E8	A7/B8/C7/D8/ E9	A4/B3/C5/ D6/E6
Part no.	283.339.5	180.558.4	593.286.6	593.208.4	593.519.9

	<b>RSX 105-29</b>	<b>RSX 160-50</b>	<b>RSX 165-65</b>	<b>RSX 185-105</b>	<b>RSX 200-107 (RSX 200-107 PLUS)</b>
Length	932 mm	772 mm	771 mm	855 mm	833 mm
Width	170 mm	225 mm	225 mm	273 mm	265 mm
Height	221 mm	218 mm	221 mm	237 mm	236 mm
Weight	9,3 kg	14,6 kg	16,3 kg	22,5 kg	19,9 kg (20,9 kg)
Opening width	105 mm	160 mm	165 mm	185 mm	200 mm
Max. cutting force*	29 t	50 t	65 t	105 t	107 t
Max. cutting capacity with round material*	22 mm	32 mm	38 mm	45 mm	43 mm
Pressure	630 / 700 bar	630 / 700 bar	630 / 700 bar	630 / 700 bar	630 / 700 bar
EN cutting class	AC 105-E-9	BC 160-H-15	BC 165-F-16	CC 240-H-23	CC200-H-20 (CC200-H-21)
NFPA cutting class	A5/B4/C5/ D6/E6	A7/B6/C6/ D7/E9	A8/B6/C6/ D7/E9	A9/B9/C9/ D9/E9	A8/B9/C8/D9/ E9
Part no.	593.678.0	105.053.9	593.206.8	593.293.9	593.584.9 (593.584.9SIP)

\* per EN 13204

## 3.1 Operating conditions

The permissible operating temperature range for the cutters lies between  $-20^{\circ}\text{C}$  and  $+80^{\circ}\text{C}$ . Reliable functioning of the equipment cannot be guaranteed outside this range.

### Underwater operation

The cutters (exception: SPS 260 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!

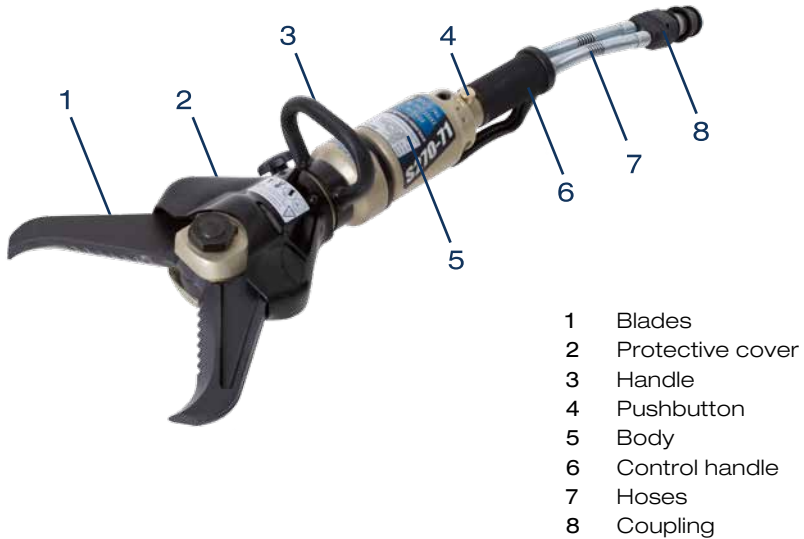
After underwater use in saltwater, the equipment must be completely disassembled and cleaned. With fresh water complete cleaning is sufficient.

## 3.2 Type plate

The type plate can be found on the device body of all cutting devices. Here you can find the serial number, manufacturing date, nominal pressure, equipment designation and the EN standard.

## 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 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 GUV-G 9102 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 Part no. 080.493.2. This oil possesses a particularly high purity level and also works flawlessly at temperatures below zero, down to -20° C.



#### **NOTE!**

In addition to the oil mentioned above we recommend:

- » AERO Fluid 41 (Shell)
- » Univis HVI-13 (Esso)
- » Aero-hydraulic 520 (Total)
- » Hydraulik DB (Castrol)
- » Renolin/MR310 (Fuchs)

## 4.4 Equipment connections

### SINGLE coupling

#### Connecting:

1. Remove the protective cap from the coupling male and the coupling female.



2. Conflate Single coupling male and female in the bayonet catch.



3. Hold coupling female on the black slew ring and turn clockwise (direction 1) until the coupling snaps in.



4. Put protective caps together. You don't have to switch the power unit to position 0 to connect or disconnect the coupling!



#### Disconnecting:

1. Remove the protective caps.



2. Hold coupling female on the black slew ring and turn anticlockwise direction.



3. Turn the black slew ring until you can release the coupling easily.



4. Put protective caps to coupling male and the coupling female.



#### NOTE!

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

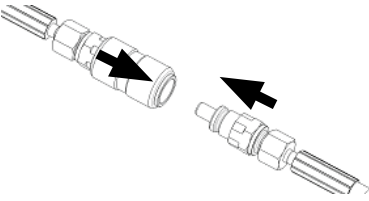
## Plug-in coupling (SKS)

### Connecting:

Remove the protective cap from the coupling male. Take hold of the coupling female by the knurled sleeve cover and pull out the protective plug. With one hand take hold of sleeve cover of the coupling female, with the other grasp the coupling male (black) by the hex nut, and press the sleeve cover slightly against the coupling male until the ball bearings engage. Twisting the male coupling slightly when pressing together eases the coupling process.

### Disconnecting:

Grasp the coupling male (black) by the hex nut with one hand and with the other take hold of the sleeve cover and draw it back. The disconnecting will cause a few drops of hydraulic oil to escape. Plug in the protective caps immediately.



### CAUTION!

When coupling SKS connections the power unit operating lever must be in the „0“ position.



### NOTE!

A pressure relief connector is fitted to the hydraulic power units and the hand pump, with which a few drops of oil can be discharged from the hoses. This permits re-coupling following pressure increases in de-coupled equipment.

In this case simply insert the pressure relief connector into the coupling sleeve and turn the knurled screw to the right until oil leaks out.



**NOTE!**

The following section only pertains to the SINGLE coupling. When connecting SKS couplings first ensure that the control lever is in the „0“ position!

## 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:



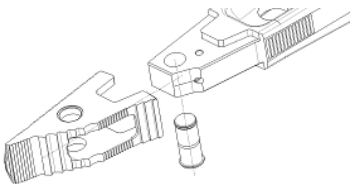
### Dead-man's switching

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 Changing the spreader tips (combi tools)

The SPS 400 spreader tips are secured with pivot pins in the spreader arms. In order to change, press out the pins secured by a spring-loaded ball. After changing the tips, push the pivot pins back in again. When doing this ensure that the pins are correctly fitted (completely pressed in).

Fitting the bracket for the chain set is identical, however an appropriate pulling adapter must also be fitted before. The chain lock must be fitted with the lock facing upwards.



### NOTE!

Fitting the chain lock to the SPS 360 is exactly the same. However, in this case it is not necessary to remove spreader tips beforehand.

## 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.

Therefore, personnel who are not directly involved must maintain a safe distance or only stay in the hazardous area as long as is strictly necessary.

### 5.2 Cutting

The cutting capacity of the equipment can only be optimally utilised if it is applied as close to the pivot point of the cutter as possible (Fig.1).

Some readjustment of the equipment may be necessary here.

The full cutting capacity of the device is only attained when the operating lever is fully depressed. In addition, there can be a delay of a few seconds before the unit has full working pressure available.

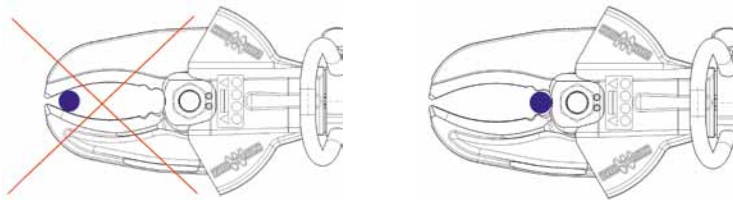


Fig. 1

In order to avoid the cutter being damaged, it must always be applied at right angles to the cutting material.

In addition, the shearing blades must not be more than 5 mm apart at the tips during the cutting process (3 mm with the S 50-14). If this value is exceeded then the cutting process must be stopped and the cutter reapplied.



**CAUTION!**

Do not cut parts with free ends, as this is a risk that personnel get injured from flying parts.



**ATTENTION!**

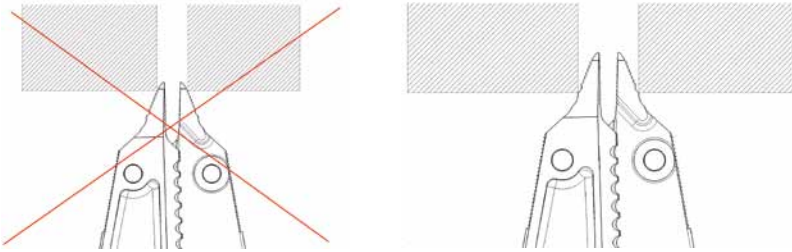
When cutting high strength body parts such as shock absorbers, hinges or steering columns serious damage to the shearing blades (arms) can be incurred.

### 5.3 Spreading (combi tools)

With the help of the combi tools' spreader function, possible applications include doors being opened or vehicle parts being pushed out of the way. A stable positioning and support of the vehicle is essential with this.

In order to avoid slipping off when spreading, the arms and tips are serrated on the inner and outer sides.

If possible the tips should only be used to enlarge a gap because slipping off can be avoided by readjusting the spreaders.



### 5.4 Pulling (combi tools)

After the chain set is attached to the spreader tips (as explained in chapter 4.6), the combi tool can also be used for pulling.

The chains must always be pulled tight during this application, and must only be loaded in the direction of pulling. To tension the chain, it is possible to press one lock in respectively so that the chain can be pulled through the bracket.

If the pulling distance is insufficient then it must be secured with tensioning chains or alternative means so that the spreader can be opened again and the chain re-tensioned.

**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.

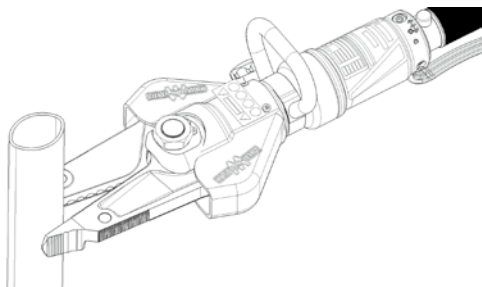
- » Do not carry out any repairs yourself.
- » Do not load the chains beyond the intended load capacity.
- » Do not apply loads jerkily.
- » Do not galvanise or paint the chains without the permission of the manufacturers.
- » Do not shorten the chains by knotting.
- » Do not apply thermal loads to the chains.
- » Only use chains and accessory parts between -40°C and +200°C.
- » Observe the applicable accident prevention guidelines as well as the stipulations of DIN EN 818-7 and DIN 685-5 with all maintenance work.
- » Chains may only be used for pulling. Lifting loads is not permitted.

Chains must no longer be used if:

- » Deformation, cracks or corrosive pitting are present.
- » The chain link wire diameter has lost 10% of its thickness.
- » An individual chain link is permanently stretched.
- » An individual link has increased in size by more than 2%.
- » The inner pitch of a measured string of 11 chain links has increased by more than 2%.

## 5.5 Squeezing (combi tools)

The squeezing of pipes and other hollow profiles is performed by closing the spreader arms. However, with combi tools only the area of the tips can be used for squeezing!



### ATTENTION!

Items being squeezed can jump out suddenly.  
Do not remain in the working area of the combi tool!

## 5.6 Lifting (combi tools)

The combi tool can also be employed for lifting vehicles or other moveable loads. It is necessary to ensure that the load is secured against sliding away and that the spreader tips are applied far enough under the load to prevent slippage.

The lifting load must be observed constantly (for tilting, rolling away or changes in attitude) throughout the lifting process. In addition, the lifting load must be immediately supported and braced in an appropriate manner.

## 5.7 Continuous Cuts (C 100-31)

Continuous Cuts are possible with the C 100-31 without the need for time-consuming V-cuts. Here the special cutting device is set at right angles to the object to be cut (drive in from above) and the cutter driven closed.

It is necessary to ensure that the cut-out piece falls from the ejection aperture. Then open the cutter again and re-insert it into the same cut. It is possible to continue to work vertically downwards in this way.

## 6 Transport, packaging and storage

### 6.1 Safety information



**CAUTION!**

**Incorrect transportation can cause damage!**

Significant material damage can occur due to incorrect transportation.

Therefore:

- » Proceed with caution when unloading packages and observe the symbols on the packaging.
- » Do not open fully or dispose of packaging until at the intended storage location.

### 6.2 Transport inspection

The delivery should be checked immediately upon receipt for completeness and any possible transportation damage, so that a quick remedy can be instigated if necessary.

In the event of visible external damage proceed as follows:

- Do not accept the delivery, or only accept it with reservation.
- Note the extent of transport damage on the transport documents or on the transport company's delivery note.
- Submit a complaint.



**NOTE!**

Report any defect as soon as it is detected.

Claims for damages can be directed to our customer service department (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 such that the arrows point upwards. 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 on the hoses.



**CAUTION!**

The equipment must be stowed securely in the mountings intended for this, in order to avoid it being damaged whilst in 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 it is imperative that:

- » Execute all operating steps in accordance with the information in this operating manual.
- » Prior to starting work ensure that all covers and protective devices are installed and functioning properly.

#### Personal protective gear

Wear the protective gear detailed in chapter 2.4 with all work!



**NOTE!**

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

## 7.2 Checks

Check the cutter for damage. If the equipment should be found not to be in flawless condition then it must not be used! In this event, inform your supplier immediately.

- 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 control levers on the hydraulic power unit to the „0“ position (Fig. 1), pull off the dust protection cover on the coupling and connect the hydraulic hoses with the cutter as described in chapter 4.4. In order to avoid contamination then recouple the protective caps.

When using the SINGLE coupling, coupling can also be carried out without pressure („0“ position on power unit not necessary).

When operating a hydraulic power unit observe the operating instructions for the equipment!

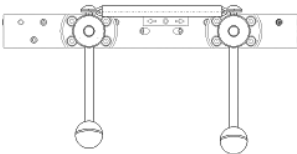


Fig. 1

## 7.4 Shutting down (end of work)

After the work is finished the cutter blades must be placed over each other, in order to preclude any risk of injury.

The cutter's blades must never be fully closed as this will cause hydraulic stress to be built up in the equipment.



### **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 Servicing

### 8.1 Safety information

**WARNING!**

Injury hazard due to improperly executed maintenance tasks!

Improper maintenance can cause serious injury or material damage.

Therefore it is imperative that:

- » Maintenance work is carried out only by specialist personnel.
- » Order and cleanliness are assured at the installation site! Parts and tools that are lying loose are a source of hazards.
- » Protective gloves are worn during all work!

### 8.2 Care and maintenance

The following measures are imperative in the interest of maintaining a state of constant operational readiness:

- After each use and at least once per year, the device and the accessory parts must undergo a visual inspection. You should pay particular attention to the spreader tips, joints, hoses and coupling.
- Every three years, or in the event of doubts about the safety or reliability of the equipment, an additional functional and load test is to be carried out (per GUV-G 9102 or country-specific directive).
- After each use, check the lubrication of the moving parts and bolts and inject Fin grease OG into them if necessary.
- The hydraulic oil in the cutting and combi tools must be completely replaced every three years.



**ATTENTION!**

The equipment must be cleaned of all contaminants before any maintenance work so that no dirt can enter the hydraulic system. The cleaning can be carried out with a standard citrus cleaning agent or with WD-40.

## 8.3 Maintenance schedule

A more precise maintenance schedule with test intervals, test regulations and test results can be taken from GUV - G 9102 item 17 (hydraulically actuated rescue equipment).



**NOTE!**

Our customer service department is available for you if there should be problems with the maintenance of the equipment (see chapter 1.6).

## 9 Faults

Fault	Possible cause	Remedial measures
Equipment fails to deliver 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 service life has expired the equipment must be disposed of correctly. Individual parts can however certainly be reused.

The hydraulic oil must be completely drained off and collected. Please note that the hydraulic oil must be disposed of separately!

The local disposal regulations apply to the disposal of all equipment parts and packaging materials.



**NOTE!**

Please consult your supplier regarding the disposal of the equipment.

# 11 EC Declaration of Conformity

## EC-DECLARATION OF CONFORMITY

according to Directive 2006/42/EG

### WEBER-HYDRAULIK GMBH

Industriegebiet 3 + 4, A-4460 Losenstein, OÖ,

Herewith we declare, that our "Hydraulic rescue Equipment"

<b>SPREADER</b>	SP35, SP40EN, SP43XL, SP49, SP50XL, SP60, SP80
<b>POWER WEDGE</b>	SPK250
<b>CUTTER/ VARIO</b>	S 33-14, S 50-14, S140-26, S200-49, S260-50, S270-71, S310-36, C100-31
	RS130-49, RS(X)160-50, RS(X)165-65, RS170-105, RSX105-29, RSX185-105, RS(X)200-107 (PLUS)
	SPS330EN, SPS360, SPS400
<b>RESCUECYLINDER</b>	RZ 1 - ... bis RZ 3 - ..., RZ 11 - ... bis RZ 22 - ..., RZT 2- 600, RZT 2- 750, RZT 2-1000, RZT 2-1170, RZT 2-1500, RZT 2-1120-XL, RZT 2-1500-XL, RZT 3-1310-XL
<b>POWER-UNITS</b>	E/V 50 ..., E/V 60 ..., E/V 400 ..., V400- Silent, V400-ECO E/V- Matic, E-Compact, V 50- Eco, V-Ecocompact, V- Ecosilent E/V- TRIPPPLE T, HYDROPAC
<b>HANDPUMP/ACCESSORIES</b>	DPH 3215 .. and accessories to all tools

meet the relevant basic safety and health requirements of the Directive  
**EC-MACHINE DIRECTIVE 2006/42/EC**

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

<b>DIN EN 13204</b>	<b>DIN EN ISO 12100-1</b>	<b>DIN EN ISO 12100-2</b>
<b>DIN EN ISO 13857</b>	<b>NFPA 1936</b>	<b>NFS 61.571</b>

The tools are tested according to EN 13204 trough TÜV-Süd Auto Service GmbH.

Authorised person to compile the technical file(s):

J. Schmollngruber, WEBER HYDRAULIK GmbH, A-4460 Losenstein, Industriegebiet 3+4

### WEBER-HYDRAULIK GmbH

Losenstein, 16.05.11

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**WEBER**RESCUE  
SYSTEMS