

Originalbetriebsanleitung
Gebrauchsanweisung / Ersatzteilliste

Original instructions
Instruction manual / Spare parts list

Notice original
Instructions d'emploi /
Liste de pièces de rechange

Manual original
Manual del usuario /
Lista de piezas de recambio

Istruzioni originali
Istruzioni d'impiego /
Lista dei pezzi di ricambio

Oorspronkelijke gebruiksaanwijzing
Gebruiksaanwijzing / onderdelenlijst

Druckspritze
Backpack sprayer
Pulvérisateur
Rociador a presión
Spruzzatore
Sproeier

de

en

fr

es

it

nl



Achtung!

Lesen Sie vor der ersten Inbetriebnahme diese Gebrauchsanweisung gründlich durch und beachten Sie unbedingt die Sicherheitsvorschriften!
Bei Betrieb der Druckspritze: **Schutzhandschuhe**, **Schutzbrille** und **Atemschutz** tragen.

Attention!

Read this instruction manual carefully before first operation and strictly observe the safety regulations! At using the sprayer wear **protective gloves**, **goggles** and **breathing protection**.

Attention!

Lire attentivement le présent manuel avant la première mise en service et observer impérativement les consignes de sécurité ! Porter des **gants de protection**, **lunettes de protection** et **de la respiration**.

Atención!

¡Lea atentamente este manual de empleo antes de la primera puesta en funcionamiento y respete imprescindiblemente las prescripciones de seguridad!
Usar **guantes de protección**, **gafas de protección** y **respiración**.

Attenzione!

Prima della prima messa in funzione leggere a fondo le presenti istruzioni per l'uso e osservare assolutamente le norme di sicurezza! Indossare **guanti di protezione**, **occhiali di protezione** e **respirazione**.

Attentie!

Lees vóór de eerste inbedrijfstelling deze handleiding zorgvuldig door en let absoluut op de veiligheidsvoorschriften!
Draag **beschermende handschoenen**, **bril** en **ademhaling bescherming**.



Instruction manual / Original instructions

1. Technical specifications

Type		425	435	473P	473D	475	485
Weight empty	kg	ca. 4.3	ca. 4.6	ca. 3.9	ca. 3.9	ca. 4.3	ca. 4.6
Tank capacity	l	15	20	12	12	15	20
Pump system		Piston pump			Diaphragm pump		
Pressure tank volume	l	1.3					
Stroke volume	cm ³	80					
Operating pressure max.	bar	4 ; with pressure plug 6 bar			4		
Dimensions with lever							
Height	mm	520	580	540	540	520	580
width	mm	400	440	360	360	400	440
depth	mm	240	280	220	220	240	280
Hopper mesh width	mm	2.0					
Mesh width of filter screen in spray tubing	mm	0.8					

2. Workshop service, replacement parts and guarantee

Maintenance and repair:

Maintenance and repair of modern motorized devices, as well as their safety-relevant assemblies, require qualified, specialized training and a workshop equipped with special tools and test devices. Thus SOLO recommends that you have a specialized SOLO workshop carry out all work that is not described in these operating instructions. Your SOLO specialist has the required training, experience, and equipment at his disposal to provide you with the most cost-effective solution and can help you in many ways with advice and service.

Replacement parts:

Dependable operation and the safety of your device also depend on the quality of the replacement parts that you use. Use only original SOLO replacement parts. Only original parts come from the production of the device and thus guarantee the highest possible material quality, dimensional accuracy, function, and safety. Original replacement parts and accessory parts are available from your dealer. He also maintains the requisite replacement part lists to determine the required replacement part numbers, and he is constantly provided with information concerning detail improvements and innovations in the replacement part offering. Please note as well that guarantee performances from SOLO are not possible if parts other than SOLO original parts are used.

Guarantee:

SOLO guarantees problem-free quality and will assume the costs for defect remediation by replacing the defective parts in the case of material or manufacturing defects that occur within the guarantee period after the date of purchase. Please note that specific guarantee conditions apply in some countries. Ask your sales person if you have any questions. As vendor of the products he is responsible for the guarantee. We request your understanding that no guarantee can be assumed for damages due to the following:

- Non-compliance with the operating instructions.
- Neglecting required maintenance and repair work.
- Normal wear and tear.
- Using non-approved cutting bar and chain lengths in the case.
- Damages caused by overheating due to dirt build up on the ventilator casing.
- Intervention by non-specialized persons, or improper repair attempts.
- Using unsuitable fuel or fuel that has been stored too long.
- Damages that can be traced to implementation conditions from the rental business.

Cleaning, care, and adjustment work are not recognized as guarantee performances. All guarantee work must be carried out by a SOLO dealer.

3. Safety regulations

Correct use / Application

- This backpack sprayer must only be used for the purpose of applying approved liquid pesticides, insecticides, weed killer (herbicides) and liquid fertilizers available from authorised specialist dealers.
- Observe all instructions provided by the pesticide manufacturer.
- This backpack sprayer must not be used to spray any other media.
- We recommend only using pesticides that have been approved for use by the relevant authorities in your country.
- Never use fluids with a temperature in excess of 40°C.
- The backpack sprayer must not be used for any other purposes, e.g. for the spraying of liquid paint.
- The backpack sprayer can be used for applications in fruit farming, tree nurseries, forestry, vineyards, vegetable growing and greenhouse cultivation (subject to adequate ventilation).

Safe handling of spray pesticides

- Pesticides must never be allowed to enter public sewer systems, sprayed onto wastelands, allowed to drain into natural bodies of water or disposed of together with normal domestic waste. This also means that appropriate care must be taken during filling to ensure that none of the pesticide is drawn back into water pipes. Pesticides and any unused leftovers of pesticides must always be collected in a suitable container and disposed of via approved facilities for household chemical waste. Please contact your local authorities for information about your nearest disposal facilities.
- Never eat, smoke or drink whilst working with herbicides.
- Avoid any direct contact with pesticides.
- Stop working immediately if you start to feel unwell while working, or if you become unusually tired. Seek medical advice if the condition persists.
- Never allow children or anybody who is not familiar with handling this type of spraying agent to handle the spraying agent.
- Clean the solution tank whenever the spraying agent is changed. Run the backpack sprayer with clear water after cleaning the solution tank – but before the next spraying agent is filled – flush out any residue from the pump and the hoses. This will prevent the risk of any chemical reactions taking place between the different substances.
- Never spray in narrow or enclosed spaces – pesticides are toxic and there is a risk of poisoning. Spraying equipment must for example only be used in greenhouses if adequate ventilation is provided. Signs must be put up in greenhouses that have been treated. Nobody should enter the

greenhouse again until it has been thoroughly ventilated.

- When you have finished spraying, follow the steps in section 13 "Draining and cleaning the solution tank" to prepare the device for storage, thoroughly wash your face and hands with soap, take off your work clothing and ensure that it is washed regularly

Work clothing

When using this equipment, wear the prescribed clothing and protective gear.

- Wear appropriate protective clothing which covers all body parts. This includes gloves, head protection, foot protection, body protection and possibly an apron or breathing mask. Clothing should be suitable, i.e. tight without being obstructive. Do not wear a scarf, necktie, jewellery or any clothing which can get caught on shrubs or branches.
- Wear firm shoes with good traction, preferably safety shoes.



Wear protective gloves with non-slip grip.



Wear face protection (e.g. safety goggles) against the sprayed substance.



When using spray medium that can be hazardous to health, wear a breathing mask to prevent poisoning.

- Immediately change any clothing that becomes soaked with the spraying agent.

Always observe accident prevention regulations issued by local trade organizations or workers compensation boards.

Additional safety information regarding application, cleaning and maintenance

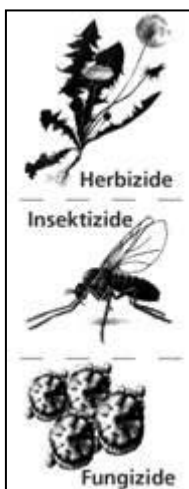
- Do not operate the sprayer while persons (especially children) or animals are in close vicinity. The operator is responsible for any damage or harm to third parties.
- Heavily dilute (approx. 1:10) surplus spray fluid left over after treatment of field or garden, and spray the solution over the area you have already treated.
- After every use and especially after the end of the spraying season, clean and flush the sprayer, tank as well as all parts which come in contact with chemicals. Residues of plant protection chemicals may lead to corrosion and damage of the sprayer. Clean and service wear parts such as nozzles, filters, gaskets and seals. We recommend the SOLO horticultural equipment cleaner in 500 ml bottles; part no. 49 00 600. Never clean nozzles with hard objects.
- Damaged parts should be replaced without delay. Always use Original Parts.
- Always release all pressure in the tank or spray line before commencing service or maintenance work on the machine.

- When removing the spray tube from the machine always point the end of the tube away from yourself.

For the operator and possibly the chemical manufacturer to test the material resistance to certain chemicals, the product manufacturer will provide details of the type of materials used for the Pressure Sprayer. Any unauthorized modification or changes made to the Pressure Sprayer will automatically exclude liability claims against the manufacturer.

4. Check list for completeness

- 1 piece Pressure Sprayer (assembled with Pressure tube and handle)
- 1 piece LX-lever
 - 2 pieces disc 16,5 x 24 x 1
 - 1 piece Screw M8 x 30
 - 1 piece disc 8,4
 - 1 piece nut M8
- 1 piece spray tube (complete assembled)
- 1 piece Tank Lid
- 1 piece Pressure Tank Plug with O-Ring 16 x 3 (not Model 473)
- 1 piece Operators Manual
- 1 piece Hollow Cone Nozzle with Swirl Plate and Gasket



- 1 pc. each symbolic label for container content: herbicide, fungicide and insecticide.

NOTE:

Affix the appropriate label to identify the container content.

PLEASE NOTE:

Never pour different agents at the same time into the container. Before using a different agent, thoroughly clean out the container and all parts in contact with the spray agent, then flush with plenty of water. We recommend the SOLO horticultural equipment cleaner in 500 ml bottles; part no. 49 00 600

5. Regular checks

At the start of the season and in regular use, check the following at least once a month by means of a test run using water:

- Tightness of all equipment components at maximum permissible pressure and closed manual valve
- Function of all active components
- Dosing and distribution accuracy whilst in use

→ Checking the delivery rate of solution

For this, fill the equipment up to the maximum marker with water, start using the equipment and spray for one minute exactly with 2 bar operating pressure.

Then measure the quantity of water required to refill the tank to its maximum level.

The actual volume measured represents the flow rate of the equipment in l/min at 2 bar operating pressure. This value must not deviate by more than 10% from the value indicated in chapter 16 " Specification of nozzle tips ".

If the actual value is inadequate, this may be caused by a contaminated nozzle or filter. Clean these parts and repeat the test.

If the actual value is too high, this may be due to wear or damage to the spray nozzle.

When checking the solution delivery rate of the device, also check whether the nozzle is producing an even, fan-shaped spray pattern.

If the flow rate is still inadequate even after cleaning, replace the relevant components with original spare parts.

Generally use only original spare parts with the correct grade when replacing wearing parts.

Filter grade in front of the filter nozzle: 0.8 mm
Sieve funnel filter: 2.0 mm

6. Maintenance and care

The SOLO Backpack Sprayer is almost maintenance free. If the tank lid becomes hard to tighten or open, apply all to the lid gasket.

Proper Maintenance also includes:

- Regular check of the spray tank,
- Regular check of spray line and screw connectors,
- Clean all filters and check for any damage,

To protect piston, cylinder and piston collar (models 425/435/ 473P) from impurities in the spray solution, an additional filter is fitted on the inlet side of the pressure tank. This filter can be cleaned by vigorously shaking the tank when flushing it.

With models 425/435/473P: After disassembly of pump components or after replacing the piston collar, use water resistant grease to lubricate the piston and the collar.

In case of unexpected problems please refer to your SOLO Dealer.

7. Assembly

The Sprayer is assembled except for the pump lever which can be attached to either side. (discharge hose and lever grip already fitted) 1-off lever grip (LX lever model). The pressure sprayer is supplied with fittings for assembly of the lever grip (LX lever) preattached on the left-hand side (facing towards the tank inscription). If you prefer the lever grip (LX lever) to be mounted on the opposite side, reposition the safety clips (a) on the r.h. side.



(schematic diagram / depending on the version)

When fitting the LX lever, the retaining tube (b) of the LX lever should be facing upwards and back (facing towards the tank inscription).

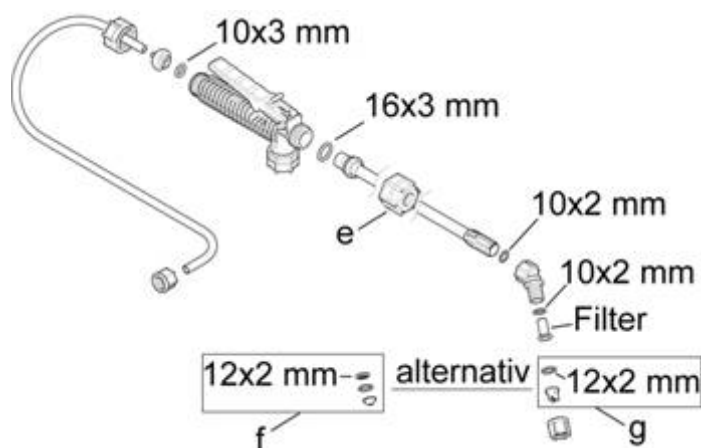
If you prefer the lever grip (LX lever) to be mounted on the opposite side, reposition the safety clips (a) on the r.h. side.

To store the device, raise the pump handle (C) of the LX lever in the retaining tube (b) and suspend the spray tube in both clips (d).

To work the pump handle (c), lower it again in the retaining tube (b).

The spray tube is connected to the shut-off valve by means of screw cap.

8. Correct choice of

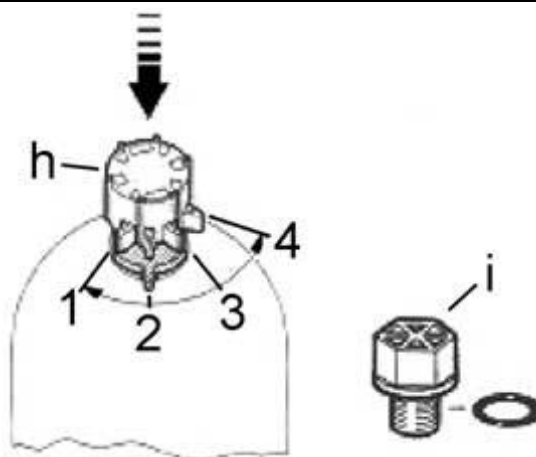


The spray tube is connected to the shut-off valve by means of screw cap (e).

For the treatment of shrubs, bushes and trees (three dimensional distribution) we recommend the use of the hollow cone nozzle (f). For area treatment (two dimensional distribution) we recommend the use of a flat spray nozzle (g).

For the treatment of tall bushes or trees, a brass tree lance (150cm length) is available as an accessory (part no. 49 00528).

9. Pressure adjustment



To regulate the output quantity/ droplet size, the spray pressure can be adjusted in steps from 1-4 bar.

The pressure is adjusted prior to filling the tank by turning the adjuster cap (h) on top of the pressure tank. After any pressure in the pressure tank has been released via the shutoff valve, press down adjuster cap and locate the selected pressure marker tooth over the tooth on the pressure tank.

Should spray pressure in excess of 4 bar be required we recommend to replace the pressure valve with the pressure plug (i) (part no. 42 00 215) which is supplied with the unit. Release any pressure in the pressure tank first before replacing the valve. A spanner width of 24 mm is required.

10. Preparing spray solution

Prepare spray solution according to the instructions provided by the chemical manufacturer. Prepare only as much solution as is required for the job. nate the environment or water mains network.

Medium Volume Guide for Plant Protection:

- Ground Plants 0.3 - 0.5 ltr. for 10 m²
- Espalier trees, pencil bushes 0.5 - 1.0 ltr. per plant
- Taller bush trees 2.0 ltr. per plant.
- Older, free standing trees 3.0 - 5.0 ltr. per tree
- Small Shrubs 1.0 - 1.5 ltr. for 10 m²

Only use as much spray agent as required.

Prepare solution outside, never within living areas, stables or n storage area for foodstuff.

Prepare solution with powder chemicals in a separate container. Mix well and then transfer to sprayer tank.

NOTE:

If necessary, the solution can be re-agitated in the tank by stirring with the spray tube.

With liquid plant protection chemicals (if full tank is required), fill sprayer tank 1/4 full with water, add pre-diluted chemical and then add remaining water as required.

When applying organic spray solutions please filter the solution as or before pouring into the spray tank.



Always observe the Safety Notes provided by the chemical manufacturer!

11. Filling

When filling the spray tank always use the filter provided with the machine and observe the total filling process.

Avoid a direct connection between water hose and spray tank.

Spray Chemical may not reach the water mains.

When filling ensure that no spray chemicals will contaminate the environment or water mains network.

Never fill the container above its maximum fill marker. Avoid any overflow from the tank and any contamination of public waterways, drainage and water channels.

In addition to the details provided here and in chapter 3 reference is made to the AID datasheet 2079 "Filling herbicide protection equipment".

12. Spraying

Prime the pump with a few up and down strokes of the pump lever. By squeezing the shut-off trigger valve, liquid will be forced through the spray nozzle. When the shut-off trigger valve is released, the spray will stop.

Residual solutions / finishing spraying

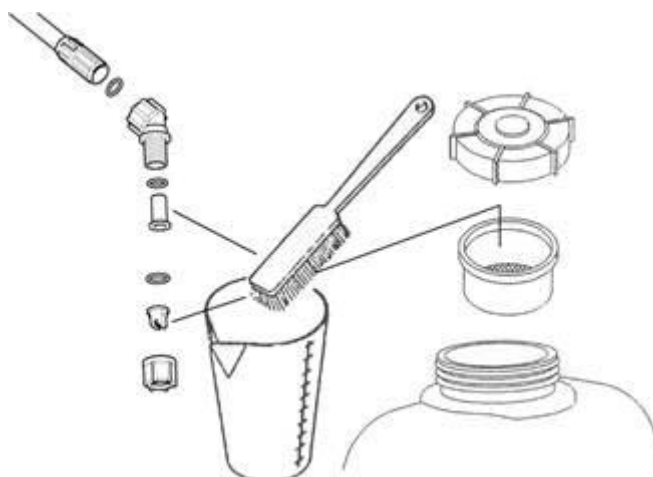
Switch off the pump immediately when any air sprays from the nozzle. This is indicated by a mist being sprayed from the nozzle. At that point the remaining spray chemical in the tank is less than 200 ml. Unless you want to refill the tank and continue with the spray operation, dilute the remaining spray volume with 2 litres of water. Apply the dilution over the already treated area.

13. Draining and cleaning the solution tank

Empty the sprayer daily after use and flush thoroughly with water. Observe cleaning instructions supplied with the herbicide/fungicide.

The container can be easily drained via the filler aperture.

After cleaning, leave the solution tank open to dry.

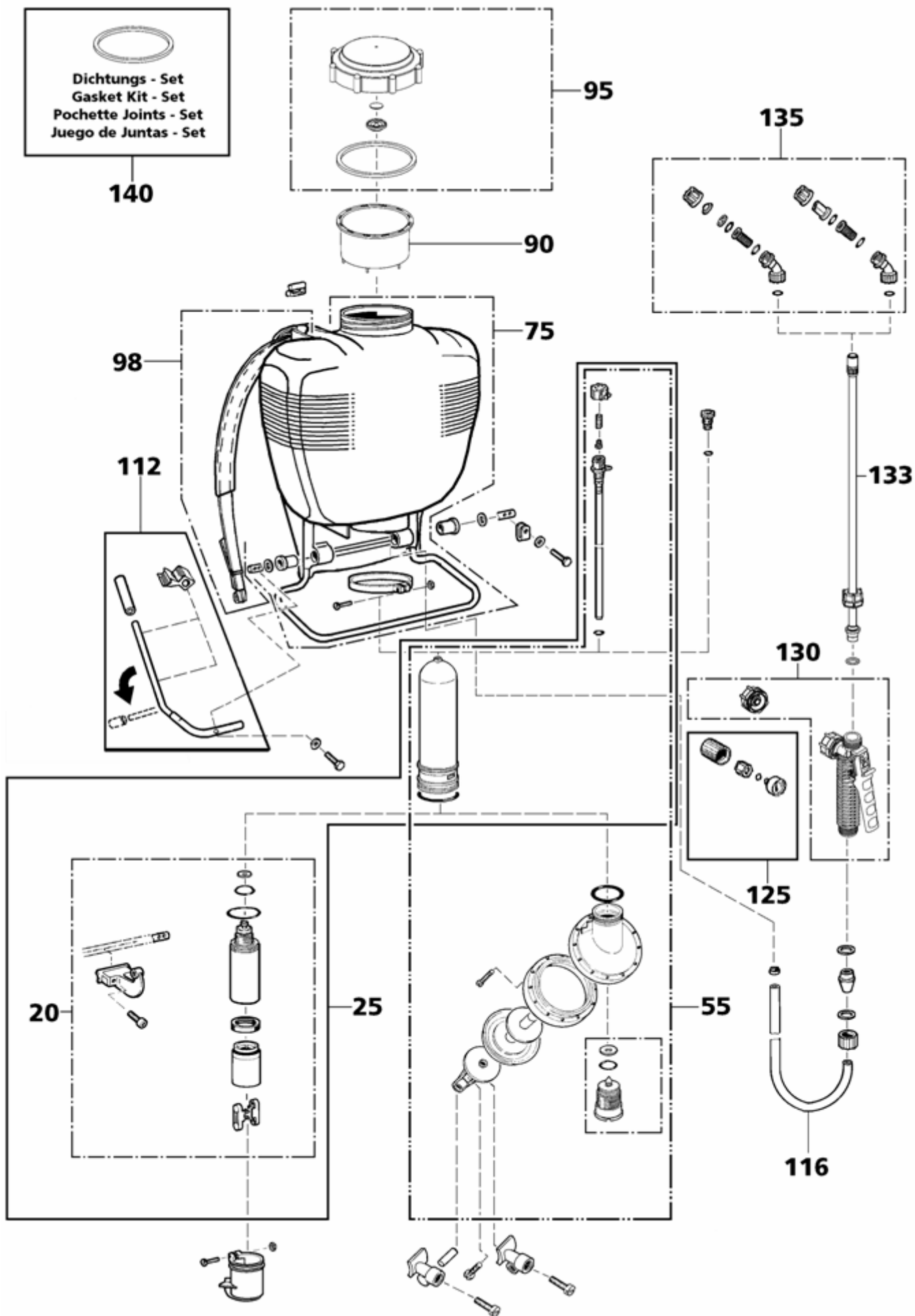


Occasionally clean the sieve funnel in the container opening, filter and spray nozzle with water and a soft brush. Never use your mouth to blow through the spray nozzle!

14. Storage





Even through the tank is manufactured from UV-stabilized material we recommend that the unit is protected from direct sunlight and stored in a dry room, away from children and animals. In areas subject to frost, always drain all the liquid from tank, pressure tank and hoses. Please always use SOLO Original Replacement Parts available from your SOLO Partner.

15. List of spare parts



Pos	Order-No.	Type	Specification
20	44 00 278	425/435/473P	cyli.+piston+connecting
25	44 00 203	425/435/473P	piston pump, compl..
55	44 00 221	475/485/473D	diaphragm pump, compl.
75	42 00 162	425/475	tank-frame, 15 l
75	42 00 201	435/485	tank-frame, 20 l
75	42 00 401	473P/ 473D	tank-frame, 12 ll
90	42 00 166 25		filler basket
95	42 00 242 25		tank lid, (incl.: gasket, vent cap, valve plate)
98	43 00 340		carrying strap, (incl.: plastic hook)
112	48 00 196 25		pump lever, LX, (incl.: grip, clip)
116	00 64 234		Hose 10x3x1300 mm
125	49 00 356	Accessories	pressure gauge
130	49 00 440		shut-off valve set
133	49 00 391		spray tube 500 mm
135	49 00 448	Accessories	nozzle kit incl.: 3 Flat spray Tipp, 3 Hollow cone jet, 2 No-Drift
140	49 00 442	425/435/473P	gasket kit
140	49 00 443	475/485/473D	gasket kit

16. Specification of nozzle tips

Specification	Order-No.	Delivery l/min	Pressure bar	Angle	Applications
Hollow Cone Tip 1 mm orifice grey *)	49 00 209	0.4 0.55	1.0 2.0	50° - 70°	For treatment of shrubs, bushes 
Hollow Cone Jet 1,4 mm orifice black **)	49 00 252	0.64 0.91 1.11	1.0 2.0 3.0	50° - 70°	
Hollow Cone Jet 1,8mm orifice blue **)	49 00 322	0.88 1.25 1.53	1.0 2.0 3.0	50° - 70°	
No-Drift DT 1,0 yellow **)	40 74 385	0.46 0.65 0.80 0.93	1.0 2.0 3.0 4.0	105°	Mainly for herbicides at low pressure 
No-drift DT 1,0 red **)	40 74 386	0.91 1.29 1.60 1.85	1.0 2.0 3.0 4.0	105°	
Adjustable nozzle brass **)	49 00 206	0.44 - 1.10 0.55 - 1.45 0.66 - 1.75 0.75 - 1.95	1.0 2.0 3.0 4.0		
Flat Spray Tip green **)	40 74 504	0.49 0.60 0.69	2.0 3.0 4.0	80°	Areal and row treatment 
Flat Spray Tip yellow **)	40 74 501	0.65 0.80 0.92	2.0 3.0 4.0	80°	
Flat Spray Tip red *)	40 74 263	1.31 1.60 1.85	2.0 3.0 4.0	110°	

*) Standard equipment **) Accessories

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