GB

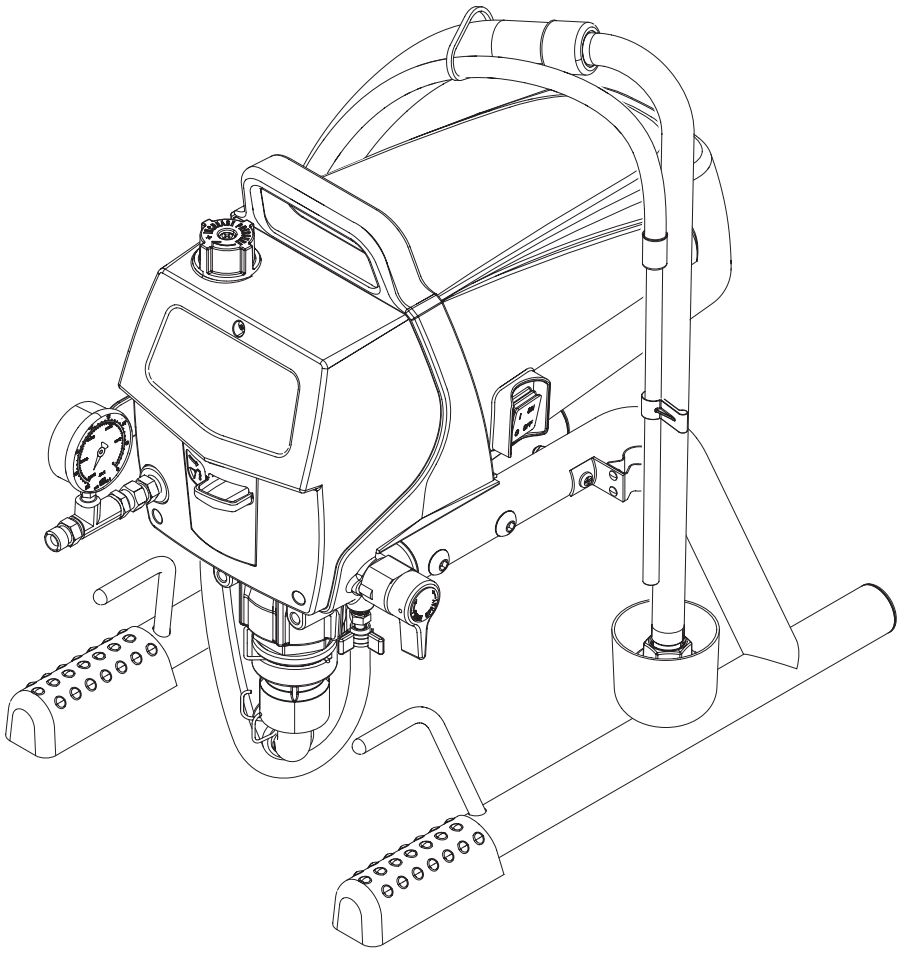
Operating manual

Airless high-pressure spraying unit

Exclusive Suppliers of

Maxi Spray 21.XL

(PS 3.20)



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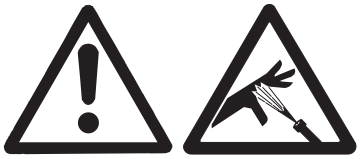
Warning!

Attention: Danger of injury by injection!

Airless units develop extremely high spraying pressures.



1

Never put your fingers, hands or any other parts of the body into the spray jet!

Never point the spray gun at yourself, other persons or animals.

Never use the spray gun without safety guard.

Do not treat a spraying injury as a harmless cut. In case of injury to the skin through coating materials or solvents, consult a doctor immediately for quick and expert treatment. Inform the doctor about the coating material or solvent used.

2

The operating instructions state that the following points must always be observed before starting up:

1. Faulty units must not be used.
2. Secure Spray Centre spray gun using the safety catch on the trigger.
3. Ensure that the unit is properly earthed.
4. Check allowable operating pressure of high-pressure hose and spray gun.
5. Check all connections for leaks.

3

The instructions regarding regular cleaning and maintenance of the unit must be strictly observed.

Before any work is done on the unit or for every break in work the following rules must be observed:

1. Release the pressure from spray gun and hose.
2. Secure the Spray Centre spray gun using the safety catch on the trigger.
3. Switch off unit.

Be safety conscious!

Contents

1. Safety regulations for Airless spraying

1.1 Explanation of symbols used

This manual contains information that must be read and understood before using the equipment. When you come to an area that has one of the following symbols, pay particular attention and make certain to heed the safeguard.

	**This symbol indicates a potential hazard that may cause serious injury or loss of life. Important safety information will follow.**
 Attention	**This symbol indicates a potential hazard to you or to the equipment. Important information that tells how to prevent damage to the equipment or how to avoid causes of minor injuries will follow.**
	**Danger of skin injection**
	**Danger of fire from solvent and paint fumes**
	**Danger of explosion from solvent, paint fumes and incompatible materials**
	**Danger of injury from inhalation of harmful vapors**
	**Notes give important information which should be given special attention.**

HAZARD: INJECTION INJURY

Attention: Danger of injury by injection! A high pressure stream produced by this equipment can pierce the skin and underlying tissues, leading to serious injury and possible amputation.

Do not treat a spraying injury as a harmless cut. In case of injury to the skin through coating materials or solvents, consult a doctor immediately for quick and expert treatment. Inform the doctor about the coating material or solvent used.

PREVENTION:

- NEVER aim the gun at any part of the body.
- NEVER allow any part of the body to touch the fluid stream. DO NOT allow body to touch a leak in the fluid hose.
- NEVER put your hand in front of the gun. Gloves will not provide protection against an injection injury.
- ALWAYS lock the gun trigger, shut the fluid pump off and release all pressure before servicing, cleaning the tip guard, changing tips, or leaving unattended. Pressure will not be released by turning off the engine. The PRIME/SPRAY valve or pressure bleed valve must be turned to their appropriate positions to relieve system pressure.
- ALWAYS keep tip guard in place while spraying. The tip guard provides some protection but is mainly a warning device.
- ALWAYS remove the spray tip before flushing or cleaning the system.
- NEVER use a spray gun without a working trigger lock and trigger guard in place.
- All accessories must be rated at or above the maximum operating pressure range of the sprayer. This includes spray tips, guns, extensions, and hose.

HAZARD: HIGH PRESSURE HOSE

The paint hose can develop leaks from wear, kinking and abuse. A leak can inject material into the skin. Inspect the hose before each use.

PREVENTION:

- High-pressure hoses must be checked thoroughly before they are used.
- Replace any damaged high-pressure hose immediately.
- Never repair defective high-pressure hoses yourself!
- Avoid sharp bends and folds: the smallest bending radius is about 20 cm.
- Do not drive over the high-pressure hose. Protect against sharp objects and edges.
- Never pull on the high-pressure hose to move the device.
- Do not twist the high-pressure hose.
- Do not put the high-pressure hose into solvents. Use only a wet cloth to wipe down the outside of the hose.
- Lay the high-pressure hose in such a way as to ensure that it cannot be tripped over.

Only use Spray Centre original-high-pressure hoses in order to ensure functionality, safety and durability.

HAZARD: EXPLOSION OR FIRE

Solvent and paint fumes can explode or ignite. Severe injury and/or property damage can occur.

PREVENTION:

- Do not use materials with a flashpoint below 38° C (100° F). Flashpoint is the temperature at which a fluid can produce enough vapors to ignite.
- Do not use the unit in work places which are covered by the explosion protection regulations.
- Provide extensive exhaust and fresh air introduction to keep the air within the spray area free from accumulation of flammable vapors.
- Avoid all ignition sources such as static electricity sparks, electrical appliances, flames, pilot lights, hot objects, and sparks from connecting and disconnecting power cords or working light switches.
- Do not smoke in spray area.
- Place sprayer sufficient distance from the spray object in a well ventilated area (add more hose if necessary). Flammable vapors are often heavier than air. Floor area must be extremely well ventilated. The pump contains arcing parts that emit sparks and can ignite vapors.
- The equipment and objects in and around the spray area must be properly grounded to prevent static sparks.
- Use only conductive or earthed high pressure fluid hose. Gun must be earthed through hose connections.
- Power cord must be connected to a grounded circuit (electric units only).
- Always flush unit into separate metal container, at low pump pressure, with spray tip removed. Hold gun firmly against side of container to ground container and prevent static sparks.

- Follow material and solvent manufacturer's warnings and instructions. Be familiar with the coating material's MSDS sheet and technical information to ensure safe use.
- Use lowest possible pressure to flush equipment.
- When cleaning the unit with solvents, the solvent should never be sprayed or pumped back into a container with a small opening (bunghole). An explosive gas/air mixture can arise. The container must be earthed.

HAZARD: HAZARDOUS VAPORS

Paints, solvents, and other materials can be harmful if inhaled or come in contact with body. Vapors can cause severe nausea, fainting, or poisoning.

PREVENTION:

- Wear respiratory protection when spraying. Read all instructions supplied with the mask to be sure it will provide the necessary protection.
- All local regulations regarding protection against hazardous vapors must be observed.
- Wear protective eyewear.
- Protective clothing, gloves and possibly skin protection cream are necessary for the protection of the skin. Observe the regulations of the manufacturer concerning coating materials, solvents and cleaning agents in preparation, processing and cleaning units.

HAZARD: GENERAL

This product can cause severe injury or property damage.

PREVENTION:

- Follow all appropriate local, state, and national codes governing ventilation, fire prevention, and operation.
- Pulling the trigger causes a recoil force to the hand that is holding the spray gun. The recoil force of the spray gun is particularly powerful when the tip has been removed and a high pressure has been set on the airless pump. When cleaning without a spray tip, set the pressure control knob to the lowest pressure.
- Use only manufacturer authorized parts. User assumes all risks and liabilities when using parts that do not meet the minimum specifications and safety devices of the pump manufacturer.
- ALWAYS follow the material manufacturer's instructions for safe handling of paint and solvents.
- Clean up all material and solvent spills immediately to prevent slip hazard.
- Wear ear protection. This unit can produce noise levels above 85 dB(A).
- Never leave this equipment unattended. Keep away from children or anyone not familiar with the operation of airless equipment.
- Do not spray on windy days.
- The device and all related liquids (i.e. hydraulic oil) must be disposed of in an environmentally friendly way.

1.2 Electric Safety

Electric models must be earthed. In the event of an electrical short circuit, earthing reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having an earthing wire with an appropriate earthing plug. Connection to the mains only through a special feed point, e.g. through an error protection insallation with INF < 30 mA.

DANGER — Work or repairs at the electrical equipment may only be carried out by a skilled electrician. No liability is assumed for incorrect installation. Switch the unit off. Before all repair work, unplug the power plug from the outlet.

Danger of short-circuits caused by water ingressing into the electrical equipment. Never spray down the unit with high-pressure or high-pressure steam cleaners.

Work or repairs at the electrical equipment:

These may only be carried out by a skilled electrician. No liability is assumed for incorrect installation.

1.3 Electrostatic charging (formation of sparks or flames)

Electrostatic charging of the unit may occur during spraying due to the flow speed of the coating material. These can cause sparks and flames upon discharge. The unit must therefore always be earthed via the electrical system. The unit must be connected to an appropriately-grounded safety outlet.

An electrostatic charging of spray guns and the high-pressure hose is discharged through the high-pressure hose. For this reason the electric resistance between the connections of the high-pressure hose must be equal to or lower than 1 MΩ.

2. General view of application

2.1 Application

The unit performance is conceived so that its use is possible on building sites for small- to middle-area dispersion work.

Examples of objects of spraying

The sprayer is able for all common varnishing jobs like doors, door frames, balustrades, furniture, woodencladding, fences, radiators (heating) and steel parts.

2.2 Coating materials

Processible coating materials

Pay attention to the Airless quality of the coating materials to be processed.

Dilutable lacquers and paints or those containing solvents, two-component coating materials, dispersions, latex paints, release agents, oils, undercoats, primers, and fillers.

No other materials should be used for spraying without SPRAY CENTRE's approval.

Filtering

Despite suction filter and insertion filter in the spray gun, filtering of the coating material is generally advisable.

Stir coating material before commencement of work.

Attention: Make sure, when stirring up with motor-driven agitators that no air bubbles are stirred in. Air bubbles disturb when spraying and can, in fact, lead to interruption of operation.

Viscosity

With this unit it is possible to process highly viscous coating materials of up to around 20.000 MPa·s.

If highly viscous coating materials cannot be taken in by suction, they must be diluted in accordance with the manufacturer's instructions.

Two-component coating material

The appropriate processing time must be adhered to exactly. Within this time rinse through and clean the unit meticulously with the appropriate cleaning materials.

Coating materials with sharp-edged additional materials

These have a strong wear and tear effect on valves, high-pressure hose, spray gun and tip. The durability of these parts cane be reduced appreciably through this.

3. Description of unit

3.1 Airless process

The main areas of application are thick layers of highly viscous coating material for large areas and a high consumption of material.

A piston pump takes in the coating material by suction and conveys it to the tip. Pressed through the tip at a pressure of up to a maximum of 207 bar (20.7 MPa), the coating material is atomised. This high pressure has the effect of micro fine atomisation of the coating material.

As no air is used in this process, it is described as an AIRLESS process.

This method of spraying has the advantages of finest atomisation, cloudless operation and a smooth, bubble-free surface. As well as these, the advantages of the speed of work and convenience must be mentioned.

3.2 Functioning of the unit

In the following there is a short description of the technical construction for better understanding of the function.

Spray Centre ProSpray 3.20 units are electrically driven high-pressure spraying units.

A gear unit transfers the driving force to a crankshaft. The crankshaft moves the pistons of the material feed pump up and down.

The inlet valve is opened automatically by the upwards movement of the piston. The outlet valve is opened when the piston moves downward.

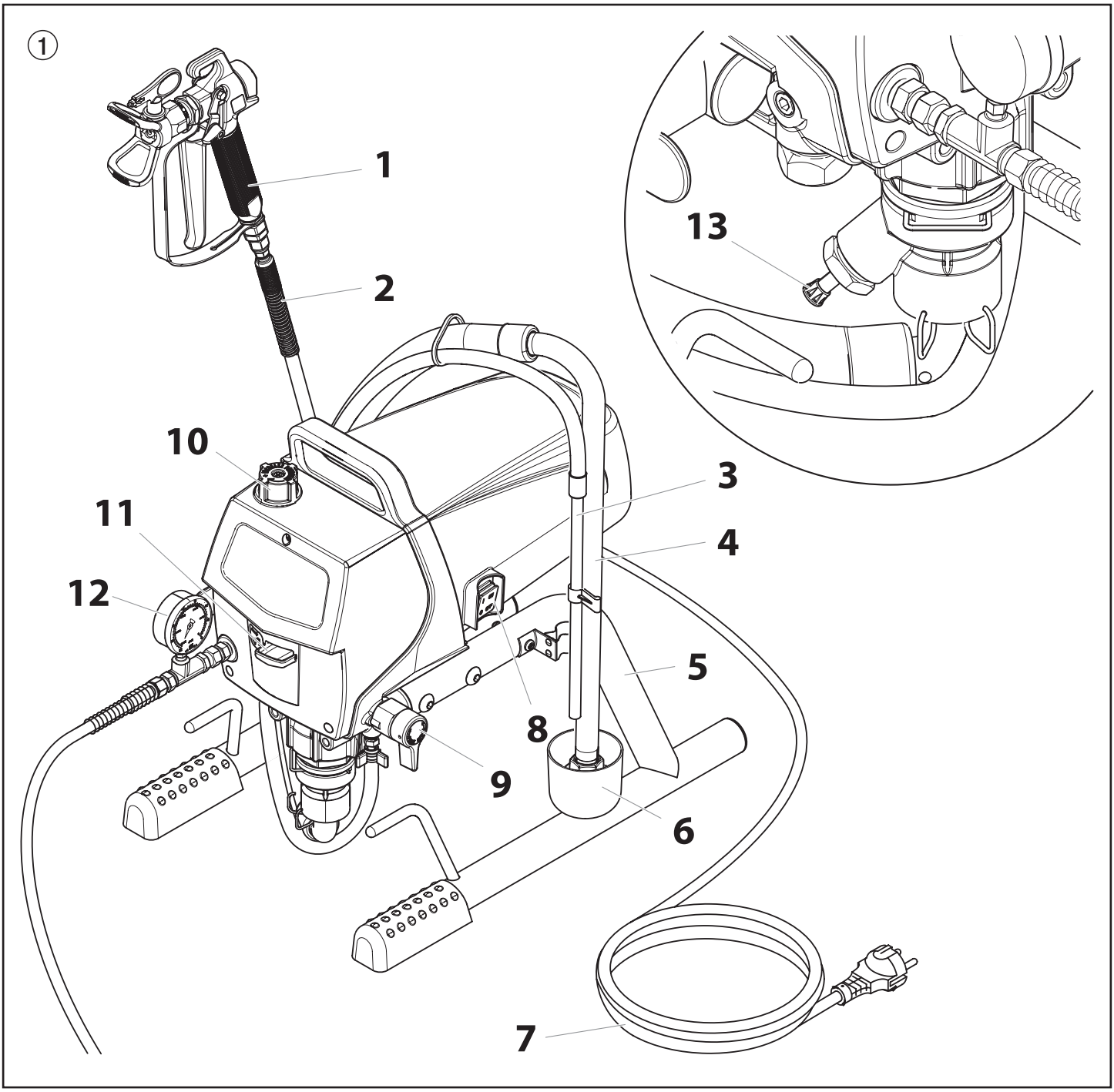
The coating material flows under high pressure through the high-pressure hose to the spray gun. When the coating material exits from the tip it atomizes.

The pressure control knob controls the volume and the operating pressure of the coating material.

3.3 Legend for explanatory diagram PS 3.20

1 Spray gun
2 High-pressure hose
3 Return hose
4 Suction hose
5 Frame
6 Drip cup
7 Power cord
8 ON/OFF switch
9 Relief valve
Lever position vertical – PRIME (circulation)
Lever position horizontal – SPRAY ( )
10 Pressure control knob
11 Oil cup for EasyGlide (EasyGlide prevents increased wear of the packings)
12 Pressure gauge
13 Pusher stem

3.4 Explanatory diagram PS 3.20



3.5 Technical data

Voltage	
	220~240 VAC, 50/60 Hz or 100~120 VAC, 50/60 Hz
Max. current consumption	
220~240 VAC	5.5 A
100~120 VAC	12 A
Power Cord	
	See page 27
Acceptance capacity	
	1000 Watt
Max. operating pressure	
	207 bar (20.7 MPa)
Volume flow at 12 MPa (120 bar) with water	
	1.62 l/min
Max tip size	
	0.021 inch – 0.53 mm
Max. temperature of the coating material	
	43°C
Max viscosity	
	20.000 MPa·s
Weight	
	13.6 kg
Special high-pressure hose	
	6,35 mm, 15 m - 1/4" - 18 NPSM
Dimensions (L X W X H)	
	441 x 324 x 415 mm
Vibration	
	Spray gun does not exceed 2.5m/s^2
Max sound pressure level	
	80 dB*

* Place of measuring: 1 m in distance from the unit and 1.6 m above the floor, 12 MPa (120 bar) operating pressure, reverberant floor.

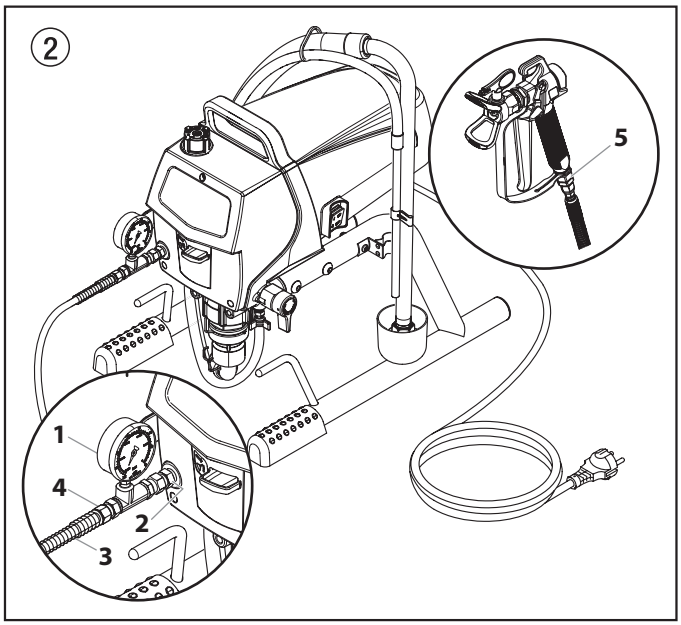
3.6 Transportation in vehicle

Secure the unit with a suitable fastening.

4. Starting operation

4.1 High-pressure hose, spray gun and separating oil

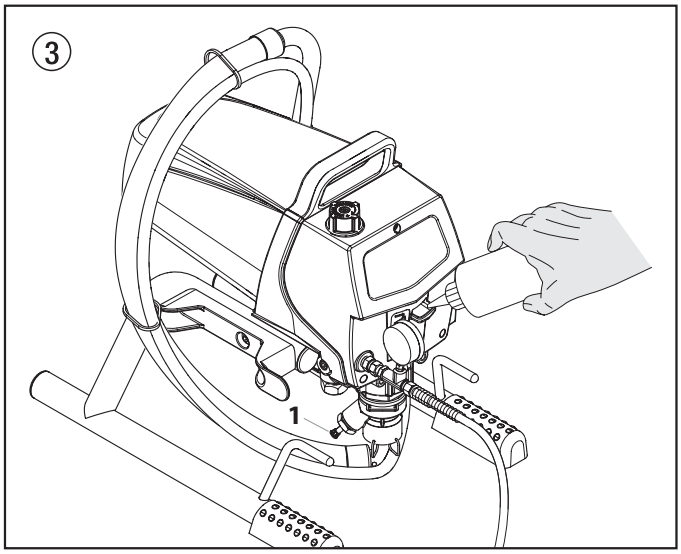
1. Screw the pressure gauge (1) to the coating material outlet (Fig. 2, Item 2).
2. Screw the high-pressure hose (3) to the coating material outlet on the pressure gauge (Fig. 2, Item 4).
3. Screw the spray gun (5) with the selected tip onto the high-pressure hose.
4. Tighten the union nuts at the high-pressure hoses firmly so that coating material does not leak.



5. Fill the oil cup with EasyGlide (Fig. 3). Do not use too much EasyGlide, i.e. ensure that no EasyGlide drips into the coating material container.

Attention

EasyGlide prevents increased wear and tear to the packings.



6. Fully depress the pusher stem (Fig. 3, item 1) to make sure the inlet ball is free.

4.2 Connection to the mains network

Attention

The unit must be connected to an appropriately-grounded safety outlet.

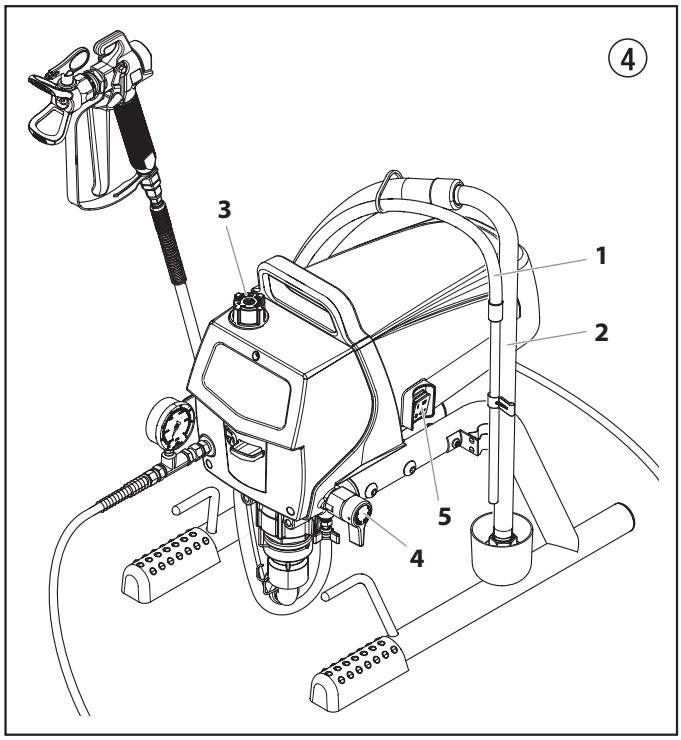
Before connecting the unit to the mains supply, ensure that the line voltage matches that specified on the unit's rating plate.

The connection must be equipped with a residual current protective device with INF ≤ 30 mA.

Spray Centre's accessories program also includes a mobile operator protection device for the electronic supply, which can also be used with other electronic equipment.

4.3 Cleaning preserving agent when starting-up of operation initially

1. Immerse the suction tube (Fig. 4, Item 2) return hose (1) into a container with a suitable cleaning agent.
2. Turn the pressure control knob counterclockwise (3) to minimum pressure.
3. Open the relief valve (4), valve position PRIME (↻ circulation).
4. Switch the unit (5) ON.
5. Wait until the cleaning agent exudes from the return hose.
6. Close the relief valve, valve position SPRAY (↱ spray).
7. Pull the trigger of the spray gun.
8. Spray the cleaning agent from the unit into an open collecting container.



4.4 Taking the unit into operation with coating material

1. Immerse the suction tube (Fig. 4, Item 2) and return hose (1) into the coating material container.
2. Turn the pressure control knob counterclockwise (3) to minimum pressure.
3. Open the relief valve (4), valve position PRIME (↻ circulation).
4. Switch the unit (5) ON.
5. Wait until the coating material exudes from the return hose.
6. Close the relief valve, valve position SPRAY (↱ spray).
7. Trigger the spray gun several times and spray into a collecting container until the coating material exits the spray gun without interruption.
8. Increase the pressure by slowly turning up the pressure control knob.

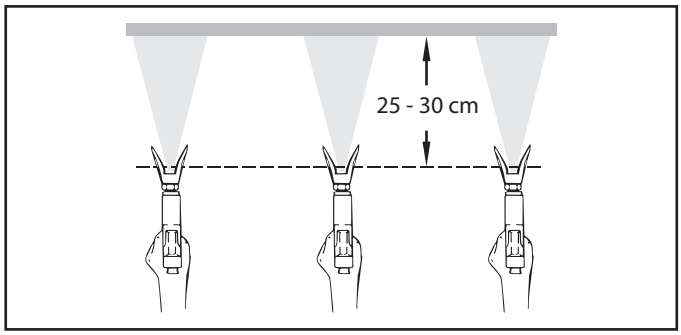
   Check the spray pattern and increase the pressure until the atomization is correct.

   Always turn the pressure control knob to the lowest setting with good atomization.
9. The unit is ready to spray.

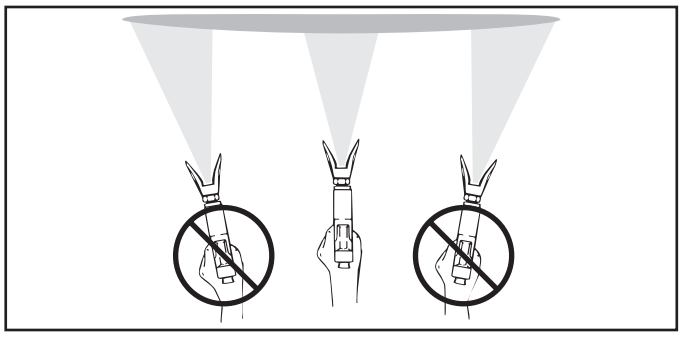
5. Spraying technique

Injection hazard. Do not spray without the tip guard in place. NEVER trigger the gun unless the tip is completely turned to either the spray or the unclog position. ALWAYS engage the gun trigger lock before removing, replacing or cleaning tip.

The key to a good paint job is an even coating over the entire surface. Keep your arm moving at a constant speed and keep the spray gun at a constant distance from the surface. The best spraying distance is 25 to 30 cm between the spray tip and the surface.

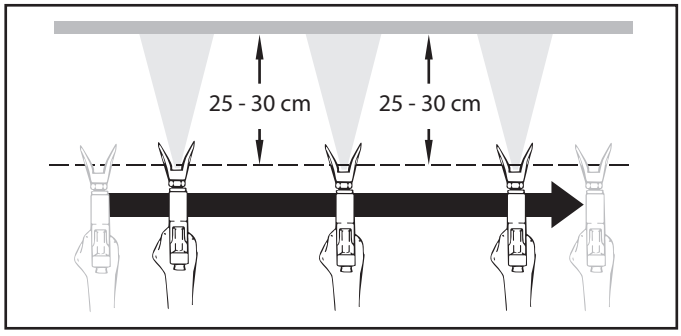


Keep the spray gun at right angles to the surface. This means moving your entire arm back and forth rather than just flexing your wrist.



Keep the spray gun perpendicular to the surface, otherwise one end of the pattern will be thicker than the other.

Trigger gun after starting the stroke. Release the trigger before ending the stroke. The spray gun should be moving when the trigger is pulled and released. Overlap each stroke by about 30%. This will ensure an even coating.



If very sharp edges result or if there are streaks in the spray jet – increase the operating pressure or dilute the coating material.

6. Handling the high-pressure hose

The unit is equipped with a high-pressure hose specially suited for piston pumps.

Danger of injury through leaking high-pressure hose. Replace any damaged high-pressure hose immediately.

Never repair defective high-pressure hoses yourself!

The high-pressure hose is to be handled with care. Avoid sharp bends and folds: the smallest bending radius is about 20 cm.

Do not drive over the high-pressure hose. Protect against sharp objects and edges.

Never pull on the high-pressure hose to move the device.

Make sure that the high-pressure hose cannot twist. This can be avoided by using a Spray Centre spray gun with a swivel joint and a hose system.

When using the high-pressure hose while working on scaffolding, it is best to always guide the hose along the outside of the scaffolding.

The risk of damage rises with the age of the high-pressure hose. Spray Centre recommends replacing high-pressure hoses after 6 years.

Use only Spray Centre original-high-pressure hoses in order to ensure functionality, safety and durability.

7. Interruption of work

1. Open the relief valve, valve position PRIME (↻ circulation).
2. Switch the unit OFF.
3. Turn the pressure control knob counterclockwise to minimum pressure.
4. Pull the trigger of the spray gun in order to release the pressure from the high-pressure hose and spray gun.
5. Secure the spray gun, refer to the operating manual of the spray gun.
6. If a standard tip is to be cleaned, see Page 18, Section 12.2.

   If a non-standard tip is installed, proceed according to the relevant operating manual.
7. Depending on the model, leave the suction tube or the suction hose and return hose immersed in the coating material or swivel or immerse it into a corresponding cleaning agent.

Attention

If fast-drying or two-component coating material is used, ensure that the unit is rinsed with a suitable cleaning agent within the processing time.

8. Cleaning the unit (shutting down)

A clean state is the best method of ensuring operation without problems. After you have finished spraying, clean the unit. Under no circumstances may any remaining coating material dry and harden in the unit.

The cleaning agent used for cleaning (only with an ignition point above 38 °C) must be suitable for the coating material used.

- **Secure the spray gun**, refer to the operating manual of the spray gun.

Clean and remove tip.

For a standard tip, refer to Page 17, Section 12.2.

If a non-standard tip is installed, proceed according to the relevant operating manual.

1. Remove suction hose from the coating material.
2. Close the relief valve, valve position SPRAY (spray).
3. Switch the unit ON.

Attention

The container must be earthed in case of coating materials which contain solvents.

Caution! Do not pump or spray into a container with a small opening (bunghole)!

Refer to the safety regulations.

4. Pull the trigger of the spray gun in order to pump the remaining coating material from the suction hose, high-pressure hose and the spray gun into an open container.
5. Immerse suction hose with return hose into a container with a suitable cleaning agent.
6. Turn the pressure control knob counterclockwise to minimum pressure.
7. Open the relief valve, valve position PRIME (circulation).
8. Pump a suitable cleaning agent in the circuit for a few minutes.
9. Close the relief valve, valve position SPRAY (spray).
10. Pull the trigger of the spray gun.
11. Pump the remaining cleaning agent into an open container until the unit is empty.
12. Switch the unit OFF.

8.1 Cleaning unit from outside

First of all pull out mains plug from socket.

Attention

Danger of short circuit through penetrating water!

Never spray down the unit with high-pressure or high-pressure steam cleaners.

Attention

Do not put the high-pressure hose into solvents. Use only a wet cloth to wipe down the outside of the hose.

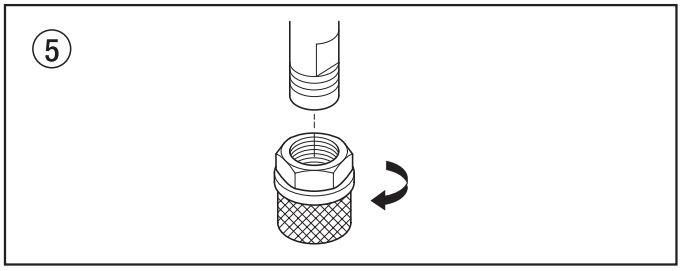
Wipe down unit externally with a cloth which has been immersed in a suitable cleaning agent.

8.2 Suction filter

A clean suction filter always guarantees maximum feed quantity, constant spraying pressure and problem-free functioning of the unit.

1. Screw off the filter (Fig. 5) from suction pipe.
2. Clean or replace the filter.

Carry out cleaning with a hard brush and an appropriate cleaning agent.



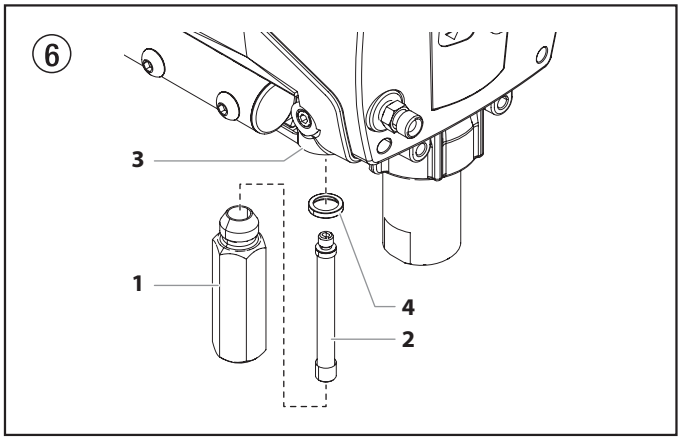
8.3 Cleaning the high-pressure filter

A high-pressure filter is available as an optional accessory that can be ordered separately. Clean the filter cartridge regularly. A soiled or clogged high-pressure filter can cause a poor spray pattern or a clogged tip.

1. Turn the pressure control knob counterclockwise to minimum pressure.
2. Open the relief valve, valve position PRIME (circulation).
3. Switch the unit OFF.

Unplug the power plug from the outlet.

4. Unscrew the filter housing (Fig. 6, Item 1) with a strap wrench.
5. Turning clockwise, unscrew the filter (2) from the pump manifold (3).
6. Clean all the parts with the corresponding cleaning agent. If necessary, replace the filter cartridge.
7. Check the O-ring (4), replace it if necessary.
8. Turning counterclockwise, screw the new or cleaned filter into the pump manifold.
9. Screw in filter housing (1) and tighten it as far as possible with the strap wrench.



8.3 Cleaning Airless spray gun

1. Rinse Airless spray gun with an appropriate cleaning agent.
2. Clean tip thoroughly with appropriate cleaning agent so that no coating material residue remains.
3. Thoroughly clean the outside of the Airless spray gun.

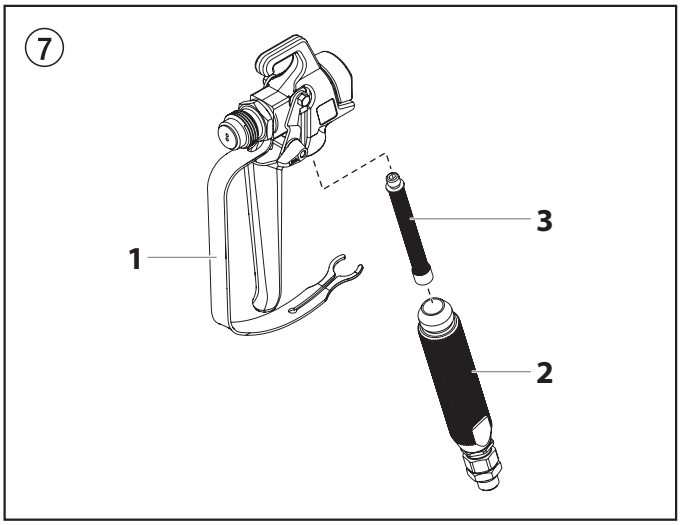
Intake filter in Airless spray gun (Fig. 7)

Disassembly

1. Pull protective guard (1) forward vigorously.
2. Screw grip (2) out of the gun housing. Remove intake filter (3).
3. Intake filter congested or defective – replace.

Assembly

1. Place intake filter (3) with the long cone into the gun housing.
2. Screw in grip (2) into the gun housing and tighten.
3. Slot in protective guard (1).



9. Remedy in case of faults

Type of malfunction	Possible cause	Measures for eliminating the malfunction
A. Unit does not start	1. No voltage applied. 2. Pressure setting too low. 3. ON/OFF switch defective.	1. Check voltage supply. 2. Turn up pressure control knob. 3. Replace.
B. Unit does not draw in material	1. Relief valve is set to SPRAY (spray). 2. Filter projects over the fluid level and sucks air. 3. Filter clogged. 4. Suction hose/suction tube is loose, i.e. the unit is sucking in outside air.	1. Set relief valve to PRIME (circulation). 2. Refill the coating material. 3. Clean or replace the filter. 4. Clean connecting points. Replace O-rings if necessary. Secure suction hose with retaining clip.
C. Unit draws in material, but the pressure does not build up	1. Tip heavily worn. 2. Tip too large. 3. Pressure setting too low. 4. Filter clogged. 5. Coating material flows through the return hose when the relief valve is in the SPRAY (spray) position. 6. Packings sticky or worn. 7. Valve balls worn. 8. Valve seats worn.	1. Replace 2. Replace tip. 3. Turn pressure control knob clockwise to increase. 4. Clean or replace the filter. 5. Remove and clean or replace relief valve. 6. Remove and clean or replace packings. 7. Remove and replace valve balls. 8. Remove and replace valve seats.
D. Coating material exits at the top of the fluid section	1. Upper packing is worn. 2. Piston is worn.	1. Remove and replace packing. 2. Remove and replace piston.
E. Increased pulsation at the spray gun	1. Incorrect high-pressure hose type. 2. Tip worn or too large. 3. Pressure too high.	1. Only use SPRAY CENTRE original-high-pressure hoses in order to ensure functionality, safety and durability. 2. Replace tip. 3. Turn pressure control knob to a lower number.
F. Poor spray pattern	1. Tip is too large for the coating material which is to be sprayed. 2. Pressure setting incorrect. 3. Volume too low. 4. Coating material viscosity too high.	1. Replace tip. 2. Turn pressure control knob until a satisfactory spraying pattern is achieved. 3. Clean or replace all filters. 4. Thin out according to the manufacturer's instructions.
G. Unit loses power	1. Pressure setting too low.	1. Turn pressure control knob clockwise to increase.
H. Pump over-pressurizes and will not shut off.	1. Pressure switch defective. 2. Transducer defective.	1. Take unit to a Spray Centre authorized service center. 2. Take unit to a Spray Centre authorized service center.

10. Servicing

10.1 General servicing

Servicing of the unit should be carried out once annually by the WAGNER service.

1. Check high-pressure hoses, device connecting line and plug for damage.
2. Check the inlet valve, outlet valve and filter for wear.

10.2 High-pressure hose

Inspect the high-pressure hose visually for any notches or bulges, in particular at the transition in the fittings. It must be possible to turn the union nuts freely.

The risk of damage rises with the age of the high-pressure hose. Spray Centre recommends replacing high-pressure hoses after 6 years.

11. Repairs at the unit

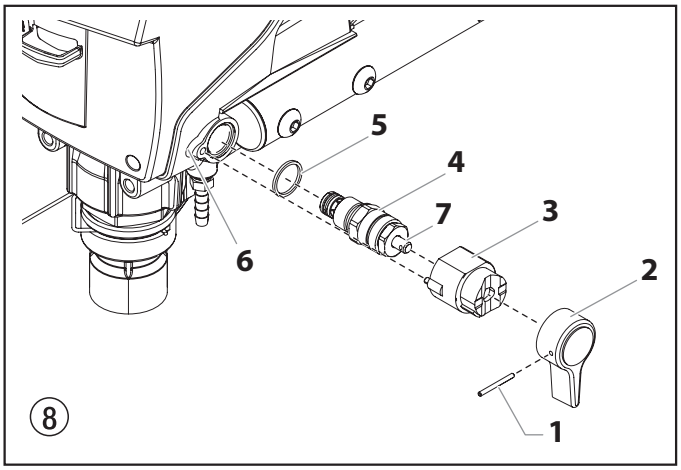
Switch the unit OFF.
Before all repair work: Unplug the power plug from the outlet.

11.1 Relief valve

Attention

The valve housing (4) should not be repaired. If worn, it should always be replaced with a new one.

1. Use a drift punch of 2 mm to remove the grooved pin (Fig. 8, Item 1) from the relief valve handle (2).
2. Remove the relief valve handle (2) and cam base (3).
3. Using a wrench, remove the valve housing (4) from the pump manifold (6).
4. Ensure that the seal (5) is seated correctly, then screw the new valve housing (4) completely into the pump manifold (6). Tighten securely with a wrench.
5. Align the cam base (3) with the hole in the pump manifold (6). Lubricate the cam base with grease and slide on the cam base.
6. Bring the hole in the valve shaft (7) and in the relief valve handle (2) into alignment.
7. Insert the grooved pin (1) to secure the relief valve handle in position.



11.2 Inlet and outlet valve

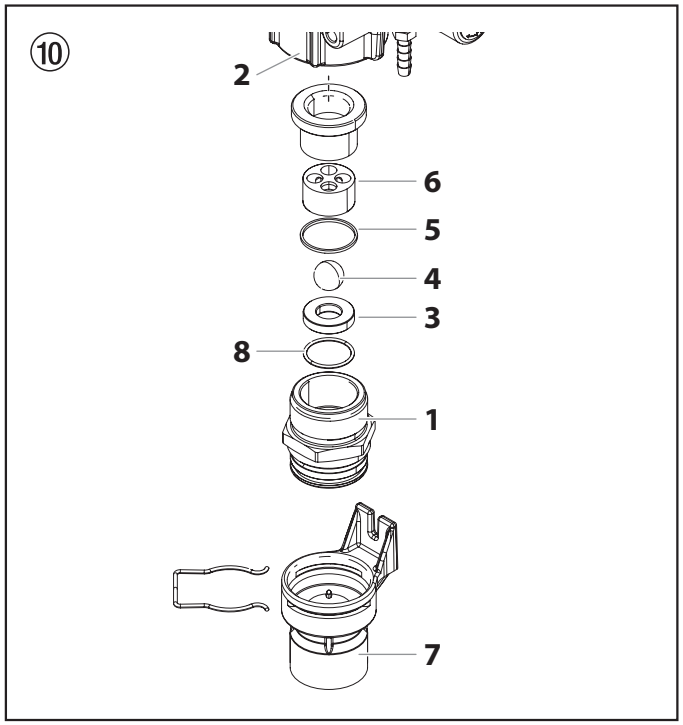
1. Remove the screw that secures the pressure control knob. Remove the knob.

   Remove the three screws in the front cover and then remove the front cover.
2. Switch the unit ON and then OFF so that the piston rod is positioned in the lower stroke position.

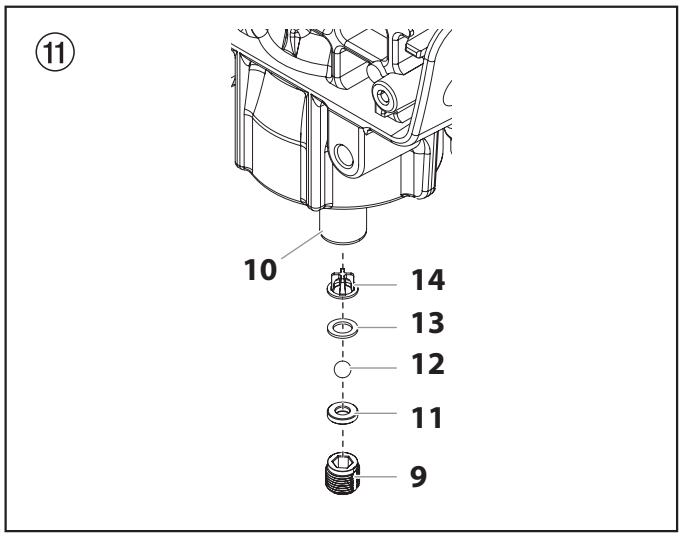
Danger of crushing - do not reach with the fingers or tool between the moving parts.

3. Unplug the power plug from the outlet.
4. Remove the retaining clip from the connecting bend at the suction hose and pull off the suction hose.
5. Screw off the return hose.
6. Swivel the unit 90° to the rear in order to work more easily on the material feed pump.
7. Remove the pusher stem clip and slide the pusher housing (7) from the inlet valve housing (1).
8. Unscrew the inlet valve housing (Fig. 10, Item 1) from the pump manifold (2).
9. Remove the lower ball guide (6), lower seal (5), inlet valve ball (4), inlet valve seat (3) and O-ring (8).
10. Clean all the parts with the corresponding cleaning agent.

    Check the inlet valve housing (1), inlet valve seat (3) and inlet valve ball (4) for wear and replace the parts if necessary.



11. Unscrew outlet valve housing (Fig. 11, Item 9) from the piston (10) with adjusting wrench.
12. Remove the upper ball guide (14), crush washer (13), outlet valve ball (12), and outlet valve seat (11).
13. Clean all the parts with the corresponding cleaning agent. Check outlet valve housing (9), outlet valve seat (11), outlet valve ball (12) and upper ball guide (14) for wear and replace parts if necessary.
14. Carry out installation in the reverse order. Make sure the outlet valve retainer (9) is reinstalled with the non-threaded "lip" facing up into the piston. Lubricate O-ring (Fig. 10, Item 8) with machine grease and ensure proper seating in the inlet valve housing (Fig. 10, Item 1).



11.3 Packings

Disassembly (Fig. 12)

1. Remove inlet valve housing in accordance with the steps in Chapter 11.2. It is not necessary to remove the outlet valve.
2. Remove the yoke screw (14) and washer (15) that secures the dowel pin (16). The dowel pin connects the yoke (17) to the piston (18).
3. Using a pliers, pull the dowel pin (16) out.
4. Rotate the pump shaft so the piston is in the top dead center position. Press the yoke (17) against the top bushing (19) with a screwdriver, for example. This is required to disassemble all the parts.
5. Remove the piston assembly (18) by pushing down on the piston near the yoke (17).
6. Unscrew and remove the upper bushing (19) using an adjustable wrench.
7. Remove the worn seals using a flat head screwdriver or punch. Remove the upper packing (20) from the top and the lower packing (21) from the bottom by pressing against the side of the seal and popping it out. Be sure not to scratch the housing where the seals are located.
8. Clean the area where the new packings are to be installed.

Assembly (Fig. 12)

1. Slide the upper packing (20) off the grey sizing/insertion tool (towards the tip) and install into the top of the pump housing with the raised lip (23) facing down. Save the upper packing sizing/insertion tool for use in step 6.
2. Place the upper bushing (19) into the top of the housing and tighten with an adjustable wrench (torque to 300-360 in-lbs). This will drive the upper packing (20) into the correct position.
3. Tilt the pump backwards so that it is laying on its back. Remove the plastic wrap from the lower packing and red pre-form tool.

Attention

Cut the plastic wrap with a scissors. Do not cut plastic wrap with a utility knife as damage can occur to the O-rings.

4. Slide the lower packing (21) off the pre-form tool (towards the top). Insert the lower packing partially into the bottom of the pump block so that the beveled edge (24) of the packing faces up.
5. Thread the inlet valve housing (22) back into the bottom of the pump housing by hand to drive the lower packing

into place. Once tightened as far as it will go, unthread and remove again.

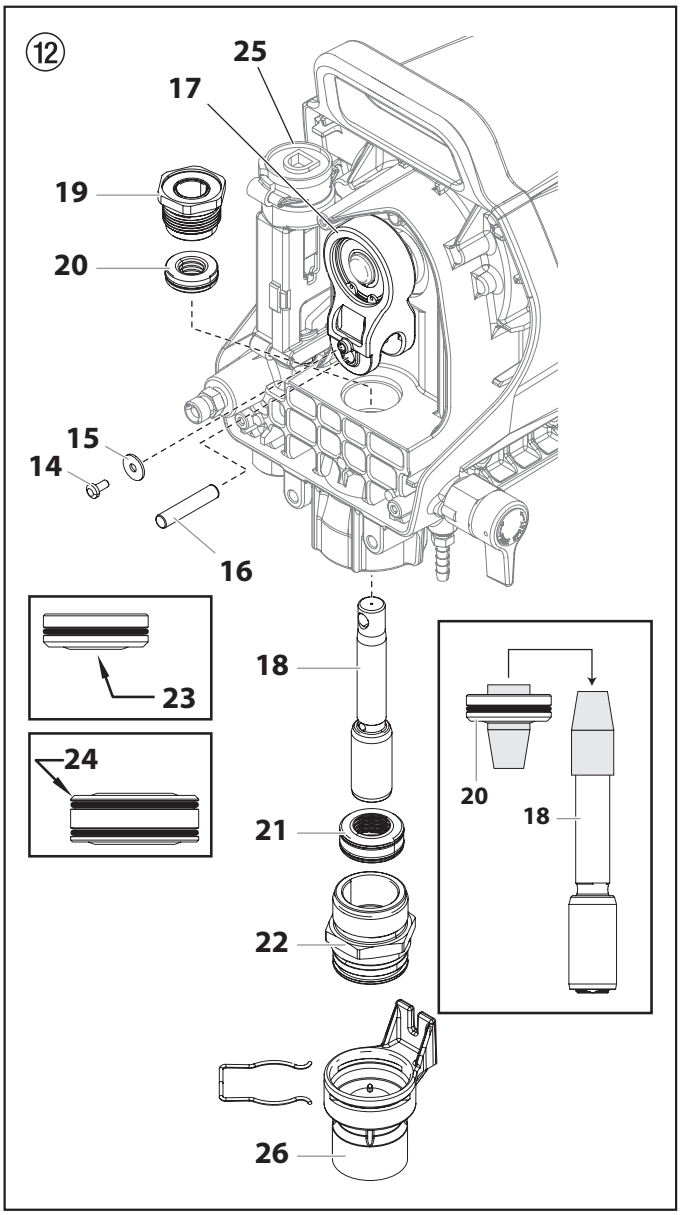
6. Place the grey insertion tool over the top of the piston assembly (18). Coat the piston guide tool and the piston rod with grease before inserting them into the pump housing.
7. Insert the piston assembly into the bottom of the pump block and push upward until the hole in the piston is aligned with the hole in the yoke (17). Discard insertion tool.

Attention

Make sure the piston is inserted precisely through the middle of the upper and lower packing. Coming in at an angle will bump the piston into the sides of the packings and cause damage.

8. Apply any type of household grease to the piston and yoke area to prolong life. Apply to the holes in the yoke where the dowel (16) is inserted.
9. Install the dowel pin (16) to connect the yoke (17) to the piston (18). The piston may have to be moved up or down to do this.
10. Install the yoke screw (14) and washer (15) to secure the dowel pin.
11. Turn pump right side up and apply a few drops of EasyGlide or light household oil between the top nut (19) and piston (18). This will prolong the seal life.
12. Reinstall the inlet valve assembly (22). Tighten by hand until it cannot be tightened further, and then tighten another 1/2 turn with a wrench. This will automatically secure the lower packing (21) into place.
13. If equipped, replace pusher assembly (26) onto inlet valve assembly.
14. Install front cover and three screws.
15. Reinstall the pressure control knob. Secure with the screw.
16. Reinstall the suction tube and return tube.

If the knob bottom (25) has been removed from the pressure switch assembly, it must be re-calibrated prior to reinstallation. Follow the "Resetting the Pressure Switch Timing" instructions.



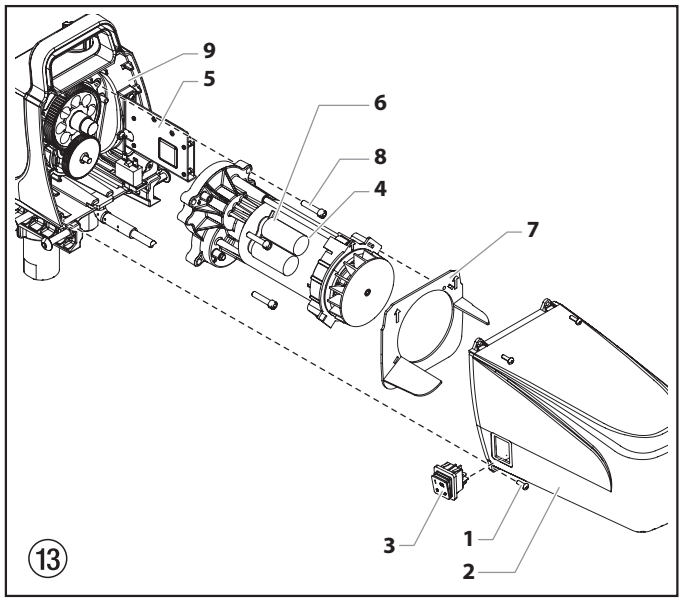
11.4 Replacing the Motor

The following procedure must only be performed by a Wagner Authorized Service Center.

1. Open the relief valve, valve position PRIME (↻ circulation). Switch the unit OFF. Unplug the power plug from the outlet.
2. Loosen and remove the four motor cover screws (1). Remove the motor cover (2).

The ON / OFF switch (3) is housed inside the motor cover. In order to remove the motor cover completely, you must disconnect all of the wires at the rear of the switch. Note the position of the wires before disconnecting.

3. On the back of the motor (4), disconnect the two wires (black and red) coming from the circuit board (5). Remove the ground wire from the motor housing.
4. Slide the motor baffle (7) off the rear of the motor.
5. Loosen and remove the four motor mounting screws (8).
6. Pull the motor (4) out of the pump housing (9).
7. With the motor removed, inspect the gears in the pump housing (9) for damage or excessive wear. Replace the gears, if necessary.
8. Install the new motor (4) into the pump housing (9).
9. Secure the motor with the four motor mounting screws (8).
10. Reconnect the wires (Refer to the Connection Diagram, section 11.9).
11. Slide the motor baffle (7) onto the rear of the motor. The arrows on the baffle should be pointed up.
12. Slide the motor cover (2) over the motor. Secure the motor cover with the four motor cover screws (1).



11.5 Replacing the Gears

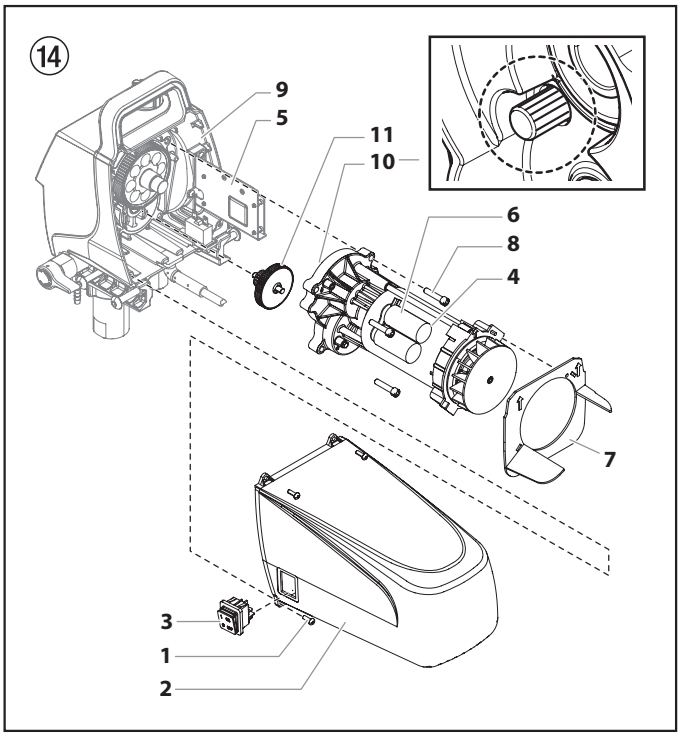
The following procedure must only be performed by a Wagner Authorized Service Center.

1. Open the relief valve, valve position PRIME (↻ circulation). Switch the unit OFF. Unplug the power plug from the outlet.
2. Loosen and remove the four motor cover screws (1). Remove the motor cover (2).

The ON / OFF switch (3) is housed inside the motor cover. In order to remove the motor cover completely, you must disconnect all of the wires at the rear of the switch. Note the position of the wires before disconnecting.

3. On the back of the motor (4), disconnect the two wires (black and red) coming from the circuit board (5). Remove the ground wire from the motor housing.
4. Slide the motor baffle (7) off the rear of the motor.
5. Loosen and remove the four motor mounting screws (8).
6. Pull the motor (4) out of the pump housing (9).
7. Inspect the armature gear (10) on the end of the motor for damage or excessive wear. If this gear is completely worn out, replace the entire motor.
8. Remove and inspect the 2nd stage gear (11) for damage or excessive wear. Replace if necessary.
9. If the armature gear (10) or 2nd stage gear (11) are damaged, the pump housing (9) must be cleaned of any debris caused by damaged gears.
10. Reassemble the pump by reversing the above steps.

Refill the gear box in the pump housing with five ounces of Lubriplate (P/N 314-171).



11.6 Replacing the Pressure Switch / Transducer

The following procedure must only be performed by a Wagner Authorized Service Center.

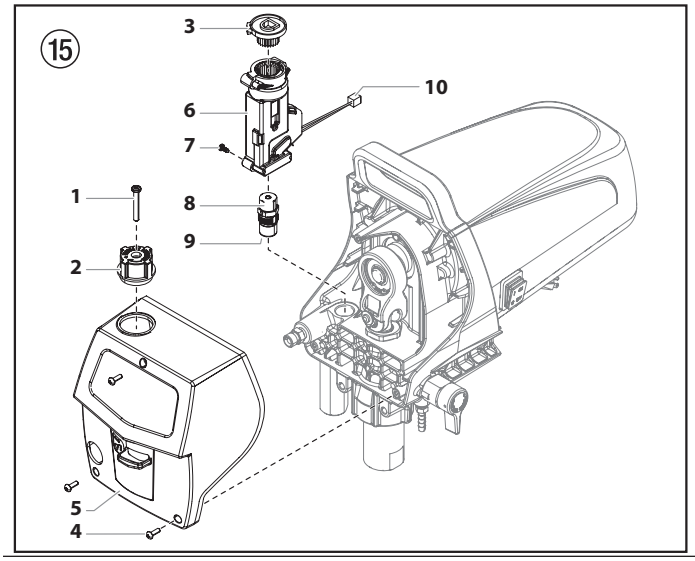
If the sprayer loses all pressure adjustment, or there is paint leakage from the front of the sprayer, the pressure switch and/or transducer may need to be replaced.

1. Open the relief valve, valve position PRIME (↻ circulation). Switch the unit OFF. Unplug the power plug from the outlet.
2. Remove the screw (1) that secures the pressure control knob (2) to the bottom of the pressure control knob (3). Remove the knob (2).
3. Loosen and remove the three front cover screws (4). Remove the front cover (5).
4. Remove the screw (7) from the side of the pressure switch. Remove the bottom of the pressure control knob (3) from the top of the pressure switch.
5. Remove the pressure switch assembly (6) from the top of the transducer (8).
6. Unplug the pressure switch (6) from the wire connector (10).

Attention

Do not attempt to pull wires from the inside of the pressure switch assembly. If the pressure switch wire connector (10) is not exposed from through the opening in the pump housing, pull gently on the wires until the connector is shown through the opening.

7. Check pressure switch continuity at the connector. If the switch is bad replace with a new pressure switch assembly.
8. Inspect the transducer (8) for the presence of paint. If there is paint, replace the transducer. If there is no paint, skip to step 9, below.
   a. Using a wrench on the hex head of the transducer, loosen and remove the transducer assembly.
   b. Apply a generous amount of grease to the transducer O-ring (9). Reinstall the transducer assembly and torque to 70-75 in/lbs.
9. Reconnect the wires (Refer to the Connection Diagram, section 11.9).
10. Push pressure switch assembly (6) back onto the transducer until it bottoms out on the transducer hex head.
11. Replace the screw (7) into the side of the pressure switch.
12. See "Resetting the Pressure Switch Timing", section 11.7.



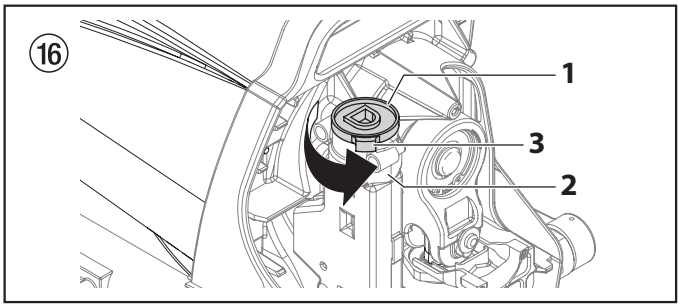
11.7 Resetting the Pressure Switch Timing

The following procedure must only be performed by a Wagner Authorized Service Center.

The components of the pressure switch must be properly reassembled and adjusted in order for the pump to operate at the correct maximum pressure.

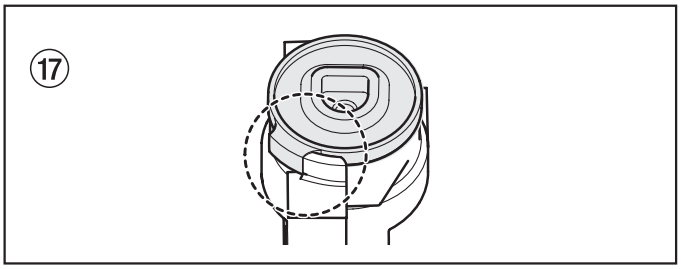
Perform this procedure using pressure gauge P/N 0521229.

1. Make sure the knob bottom (1) is installed in the pressure switch (2).
2. Viewing from the top, turn the knob bottom (1) counter-clockwise as far as the teeth inside the pressure switch will allow.



If the stop (3) on the pressure switch prevents the knob bottom from continuing to turn, remove the knob bottom, re-orient it on the teeth and continue to turn it counterclockwise until it stops.

3. Re-orient the knob tab against the pressure switch tab stop.



4. Replace the front cover and secure with the three screws.
5. Replace the pressure control knob into the knob bottom but do not secure with the screw. Turn the knob fully clockwise to maximum.
6. Connect the pressure gauge to the outlet fitting.
7. Connect a high-pressure hose and gun to the pressure gauge.
8. Using water as a media, follow the steps in section 4.4. It is not necessary to attach a spray tip to the gun. Leave the pressure set to maximum.
9. The sprayer should now be pressurized at maximum pressure. The pressure gauge should be reading between 193-207 bar.
10. If the pressure reading is below or above this reading, the set screw down inside the pressure switch will have to be adjusted. Adjust it per the guidelines below using a long hex wrench.
    a. If the pressure reading is below 193 bar, turn the set screw counterclockwise until the pressure gauge reads between 193-207 bar.
    b. If the pressure reading is above 207 bar, relieve pressure by turning the valve handle to PRIME (↻ circulation). While the sprayer is circulating, turn the set screw clockwise slightly and then turn the valve handle to SPRAY (spray). Repeat this until the pressure reading decreases to a range of 193-207 bar.
11. When the pressure gauge reads between 193-207 bar, the pressure control knob is now set. Secure the pressure control knob with the pressure control knob screw.

11.8 Replacing the Circuit Board

The following procedure must only be performed by a Wagner Authorized Service Center.

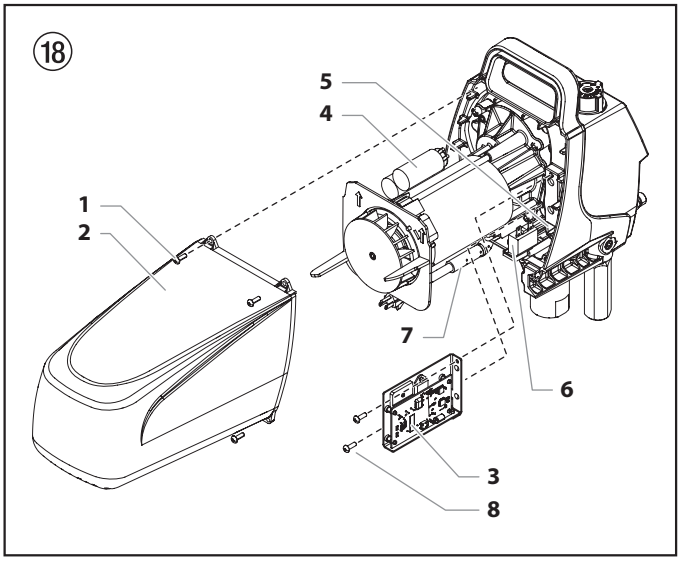
Perform this procedure using Circuit Board Kit.

1. Open the relief valve, valve position PRIME (↻ circulation). Switch the unit OFF. Unplug the power plug from the outlet.
2. Loosen and remove the four motor cover screws (1). Remove the motor cover (2).
3. Disconnect the red and black wires that connect the circuit board (3) to the motor assembly (4).
4. Disconnect the white wires that connect the circuit board to the pressure switch.

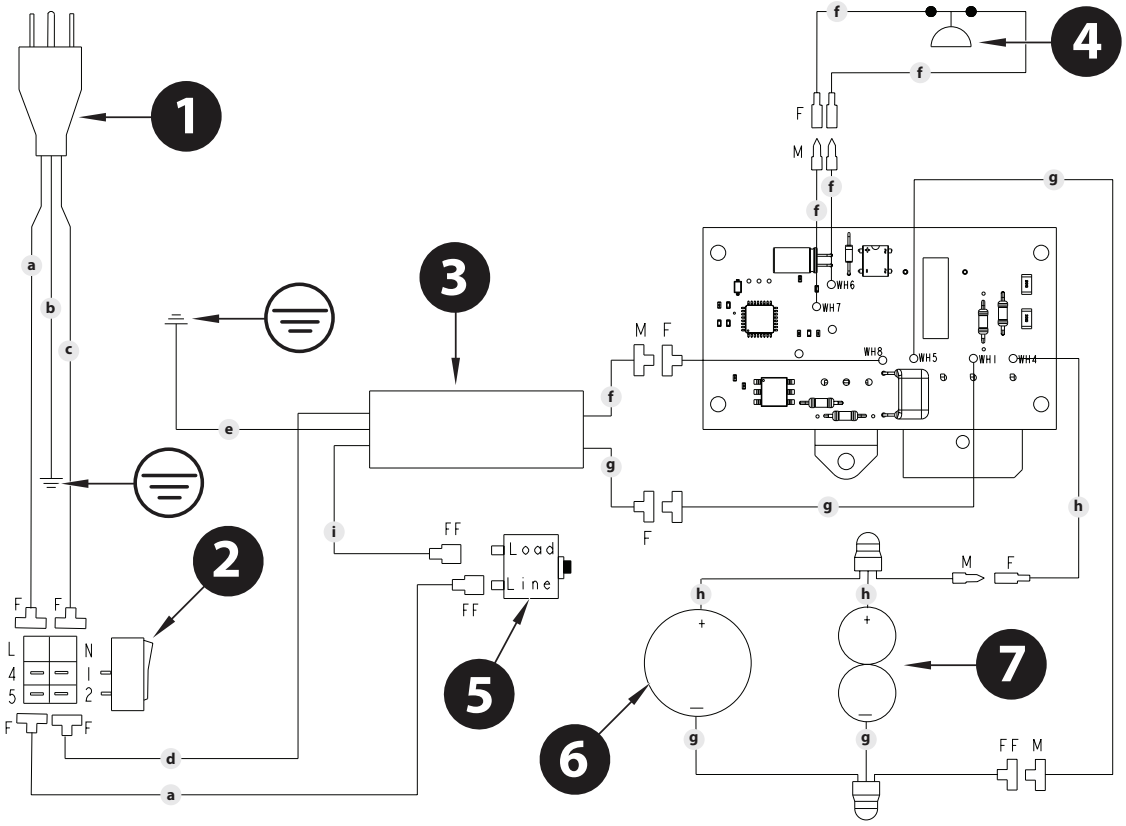
Attention

Do not attempt to pull wires from the inside of the pressure switch assembly. If the pressure switch wire connector is not exposed from through the opening in the pump housing, pull gently on the wires until the connector is shown through the opening.

5. Disconnect the black wire that connects the circuit board to the circuit breaker (6).
6. Disconnect the white wire that connects the circuit board to the power switch.
7. Loosen and remove the two circuit board screws (8). Remove the circuit board (3).
8. Install the new circuit board (3) and secure with the two circuit board screws (8).
9. Reconnect the wires that were disconnected in steps 3-6 (Refer to the Connection Diagram, section 11.9).
10. Slide the motor cover over the motor. Secure the motor cover with the four motor cover screws.



11.9 PS 3.20 connection diagram



Pos.	Description
1	Power cord
2	Power switch
3	EMI filter
4	Pressure switch
5	Circuit breaker
6	Motor
7	Capacitors

Pos.	Description
a	Black / brown
b	Green
c	White / blue
d	Blue
e	Green / yellow
f	White
g	Brown
h	Red
i	Brown

12. Appendix

12.1 Selection of tip

To achieve faultless and rational working, the selection of the tip is of the greatest importance.
In many cases the correct tip can only be determined by means of a spraying test.

Some rules for this:
The spray jet must be even.
If streaks appear in the spray jet the spraying pressure is either too low or the viscosity of the coating material to high.

Remedy: Increase pressure or dilute coating material. Each pump conveys a certain quantity in proportion to the size of the tip:
The following principle is valid: large tip = low pressure
small tip = high pressure

There is a large range of tips with various spraying angles.

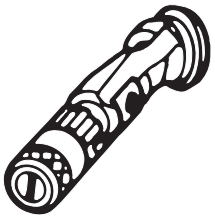
12.2 Servicing and cleaning of Airless hard-metal tips

Standard tips
If a different tip type has been fitted, then clean it according to manufacturer's instructions.
The tip has a bore processed with the greatest precision. Careful handling is necessary to achieve long durability. Do not forget the fact that the hard-metal insert is brittle! Never throw the tip or handle with sharp metal objects.

The following points must be observed to keep the tip clean and ready for use:

1. Turn the relief valve handle fully counterclockwise (↻ Circulation).
2. Switch off the gasoline engine.
3. Dismount the tip from the spray gun.
4. Place tip in an appropriate cleaning agent until all coating material residue is dissolved.
5. If there is pressure air, blow out tip.
6. Remove any residue by means of a sharp wooden rod (toothpick).
7. Check the tip with the help of a magnifying glass and, if necessary, repeat points 4 to 6.

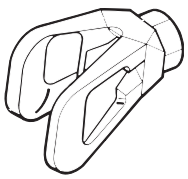
12.3 Spray gun accessories



Flat jet adjusting tip
up to 250 bar (25 MPa

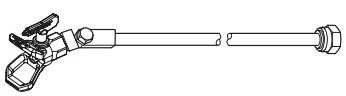
Tip marking	Bore mm	Spray width at about 30 cm removal of spray object Pressure 100 bar (10 MPa)	Use	Flat jet adjusting tip Order No.
15	0.13 - 0.46	5 - 35 cm	Paints	**0999 057**
20	0.18 - 0.48	5 - 50 cm	Paints, fillers	**0999 053**
28	0.28 - 0.66	8 - 55 cm	Paints, dispersions	**0999 054**
41	0.43 - 0.88	10 - 60 cm	Rust protection paints - dispersions	**0999 055**
49	0.53 - 1.37	10 - 40 cm	Large-area coats	**0999 056**

Contact protection
for the flat jet adjustment tip



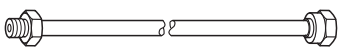
Order No. **0097 294**

Tip extension with slewable knee joint (without tip)



Length: 100 cm Order no. **0096 015**
Length: 200 cm Order no. **0096 016**
Length: 300 cm Order no. **0096 017**

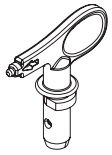
Tip extension



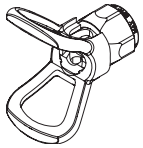
15 cm, F-thread, Order no. **0556 051**
30 cm, F-thread, Order no. **0556 052**
45 cm, F-thread, Order no. **0556 053**
60 cm, F-thread, Order no. **0556 054**

15 cm, G-thread, Order no. **0556 074**
30 cm, G-thread, Order no. **0556 075**
45 cm, G-thread, Order no. **0556 076**
60 cm, G-thread, Order no. **0556 077**

12.4 Airless tip table



Wagner TradeTip 3 tip
up to 270 bar
(27 MPa)



without tip
F thread (11/16 - 16 UN)
for Wagner spray guns
Order no. 0289391

without tip
G thread (7/8 - 14 UN)
for Graco/Titan spray guns
Order no. 0289390

All of the tips in the table below are supplied together with the appropriate gun filter.

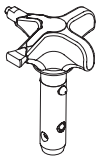
Application	Tip marking	Spray angle	Bore inch / mm	Spraying width mm 1)	Gun filter	Order no.
Water-thinnable and solvent-based paints and varnishes, oils, separating agents	107	10°	0.007 / 0.18	100	red	0553107
	207	20°	0.007 / 0.18	120	red	0553207
	307	30°	0.007 / 0.18	150	red	0553307
	407	40°	0.007 / 0.18	190	red	0553407
	109	10°	0.009 / 0.23	100	red	0553109
	209	20°	0.009 / 0.23	120	red	0553209
	309	30°	0.009 / 0.23	150	red	0553309
	409	40°	0.009 / 0.23	190	red	0553409
	509	50°	0.009 / 0.23	225	red	0553509
	609	60°	0.009 / 0.23	270	red	0553609
Synthetic-resin paints PVC paints	111	10°	0.011 / 0.28	100	red	0553111
	211	20°	0.011 / 0.28	120	red	0553211
	311	30°	0.011 / 0.28	150	red	0553311
	411	40°	0.011 / 0.28	190	red	0553411
	511	50°	0.011 / 0.28	225	red	0553511
	611	60°	0.011 / 0.28	270	red	0553611
Paints, primers Fillers	113	10°	0.013 / 0.33	100	red	0553113
	213	20°	0.013 / 0.33	120	red	0553213
	313	30°	0.013 / 0.33	150	red	0553313
	413	40°	0.013 / 0.33	190	red	0553413
	513	50°	0.013 / 0.33	225	red	0553513
	613	60°	0.013 / 0.33	270	red	0553613
	813	80°	0.013 / 0.33	330	red	0553813
Fillers Rust protection paints	115	10°	0.015 / 0.38	100	yellow	0553115
	215	20°	0.015 / 0.38	120	yellow	0553215
	315	30°	0.015 / 0.38	150	yellow	0553315
	415	40°	0.015 / 0.38	190	yellow	0553415
	515	50°	0.015 / 0.38	225	yellow	0553515
	615	60°	0.015 / 0.38	270	yellow	0553615
	715	70°	0.015 / 0.38	300	yellow	0553715
	815	80°	0.015 / 0.38	330	yellow	0553815
Rust protection paints Latex paints Dispersions	117	10°	0.017 / 0.43	100	yellow	0553117
	217	20°	0.017 / 0.43	120	yellow	0553217
	317	30°	0.017 / 0.43	150	yellow	0553317
	417	40°	0.017 / 0.43	190	yellow	0553417
	517	50°	0.017 / 0.43	225	yellow	0553517
	617	60°	0.017 / 0.43	270	yellow	0553617
	717	70°	0.017 / 0.43	300	yellow	0553717
	817	80°	0.017 / 0.43	330	yellow	0553817
Rust protection paints Latex paints Dispersions	219	20°	0.019 / 0.48	120	white	0553219
	319	30°	0.019 / 0.48	150	white	0553319
	419	40°	0.019 / 0.48	190	white	0553419
	519	50°	0.019 / 0.48	225	white	0553519
	619	60°	0.019 / 0.48	270	white	0553619
	719	70°	0.019 / 0.48	300	white	0553719
	819	80°	0.019 / 0.48	330	white	0553819
	919	90°	0.019 / 0.48	385	white	0553919
Flame retardant	221	20°	0.021 / 0.53	120	white	0553221
	321	30°	0.021 / 0.53	150	white	0553321
	421	40°	0.021 / 0.53	190	white	0553421
	521	50°	0.021 / 0.53	225	white	0553521
	621	60°	0.021 / 0.53	270	white	0553621
	721	70°	0.021 / 0.53	300	white	0553721
	821	80°	0.021 / 0.53	330	white	0553821

1)Spray width at about 30 cm to the object and 100 bar (10 MPa) pressure with synthetic-resin paint 20 DIN seconds.

Application	Tip marking	Spray angle	Bore inch / mm	Spraying width mm 1)	Gun filter	Order no.
Roof coatings	223	20°	0.023 / 0.58	120	white	0553223
	323	30°	0.023 / 0.58	150	white	0553323
	423	40°	0.023 / 0.58	190	white	0553423
	523	50°	0.023 / 0.58	225	white	0553523
	623	60°	0.023 / 0.58	270	white	0553623
	723	70°	0.023 / 0.58	300	white	0553723
	823	80°	0.023 / 0.58	330	white	0553823
Thick-film materials, Corrosion protection Spray filler	225	20°	0.025 / 0.64	120	white	0553225
	325	30°	0.025 / 0.64	150	white	0553325
	425	40°	0.025 / 0.64	190	white	0553425
	525	50°	0.025 / 0.64	225	white	0553525
	625	60°	0.025 / 0.64	270	white	0553625
	725	70°	0.025 / 0.64	300	white	0553725
	825	80°	0.025 / 0.64	330	white	0553825
	227	20°	0.027 / 0.69	120	white	0553227
	327	30°	0.027 / 0.69	150	white	0553327
	427	40°	0.027 / 0.69	190	white	0553427
	527	50°	0.027 / 0.69	225	white	0553527
	627	60°	0.027 / 0.69	270	white	0553627
	827	80°	0.027 / 0.69	330	white	0553827
	229	20°	0.029 / 0.75	120	white	0553229
	329	30°	0.029 / 0.75	150	white	0553329
	429	40°	0.029 / 0.75	190	white	0553429
	529	50°	0.029 / 0.75	225	white	0553529
	629	60°	0.029 / 0.75	270	white	0553629
	231	20°	0.031 / 0.79	120	white	0553231
	331	30°	0.031 / 0.79	150	white	0553331
	431	40°	0.031 / 0.79	190	white	0553431
	531	50°	0.031 / 0.79	225	white	0553531
	631	60°	0.031 / 0.79	270	white	0553631
	731	70°	0.031 / 0.79	300	white	0553731
	831	80°	0.031 / 0.79	330	white	0553831
	233	20°	0.033 / 0.83	120	white	0553233
	333	30°	0.033 / 0.83	150	white	0553333
	433	40°	0.033 / 0.83	190	white	0553433
	533	50°	0.033 / 0.83	225	white	0553533
	633	60°	0.033 / 0.83	270	white	0553633
	235	20°	0.035 / 0.90	120	white	0553235
	335	30°	0.035 / 0.90	150	white	0553335
	435	40°	0.035 / 0.90	190	white	0553435
	535	50°	0.035 / 0.90	225	white	0553535
	635	60°	0.035 / 0.90	270	white	0553635
	735	70°	0.035 / 0.90	300	white	0553735
	439	40°	0.039 / 0.99	190	white	0553439
	539	50°	0.039 / 0.99	225	white	0553539
	639	60°	0.039 / 0.99	270	white	0553639
Heavy duty applications	243	20°	0.043 / 1.10	120	green	0553243
	443	40°	0.043 / 1.10	190	green	0553443
	543	50°	0.043 / 1.10	225	green	0553543
	643	60°	0.043 / 1.10	270	green	0553643
	445	40°	0.045 / 1.14	190	green	0553445
	545	50°	0.045 / 1.14	225	green	0553545
	645	60°	0.045 / 1.14	270	green	0553645
	451	40°	0.051 / 1.30	190	green	0553451
	551	50°	0.051 / 1.30	225	green	0553551
	651	60°	0.051 / 1.30	270	green	0553651
	252	20°	0.052 / 1.32	120	green	0553252
	455	40°	0.055 / 1.40	190	green	0553455
	555	50°	0.055 / 1.40	225	green	0553555
	655	60°	0.055 / 1.40	270	green	0553655
	261	20°	0.061 / 1.55	120	green	0553261
	461	40°	0.061 / 1.55	190	green	0553461
	561	50°	0.061 / 1.55	225	green	0553561
	661	60°	0.061 / 1.55	270	green	0553661
	263	20°	0.063 / 1.60	120	green	0553263
	463	40°	0.063 / 1.60	190	green	0553463
	565	50°	0.065 / 1.65	225	green	0553565
	665	60°	0.065 / 1.65	270	green	0553665
	267	20°	0.067 / 1.70	120	green	0553267
	467	40°	0.067 / 1.70	190	green	0553467

1)Spray width at about 30 cm to the object and 100 bar (10 MPa) pressure with synthetic-resin paint 20 DIN seconds.

12.5 2Speed Tip table



The innovative changeover nozzle from WAGNER combines two nozzle cores into one nozzle.

2 Speed Tip holder
Order no. 0271065

Tip table

Object size	**Painting material**		
	Lacquer (L)	**Emulsion (D)**	**Filler (S)**
Small		D5 Nozzles: 111 / 415 **Order no. 0271 062**	S5 Nozzles: 225 / 629 **Order no. 0271 064**
		D7 Nozzles: 113 / 417 **Order no. 0271 063**	
	L10 Nozzles: 208 / 510 **Order no. 0271 042**	D10 Nozzles: 111 / 419 **Order no. 0271 045**	S10 Nozzles: 527 / 235 **Order no. 0271 049**
Medium	L20 Nozzles: 210 / 512 **Order no. 0271 043**	D20 Nozzles: 115 / 421 **Order no. 0271 046**	S20 Nozzles: 539 / 243 **Order no. 0271 050**
Large	L30 Nozzles: 212 / 514 **Order no. 0271 044**	D30 Nozzles: 115 / 423 **Order no. 0271 047**	S30 Nozzles: 543 / 252 **Order no. 0271 051**
X-Large		D40 Nozzles: 117 / 427 **Order no. 0271 048**	
Recommended gun filter	**red**	**white**	**-**

12.6 Nozzle Cases

Nozzle cases are a perfect addition to your paint spraying equipment, with everything safely stowed away and with project-specific equipment. Ideally matched to meet your particular application, there are four different versions available.

		Part No.
1	**Nozzle case TradeTip 3 Emulsion**	**2344154**
	• 3x gun filter white, 50 MA, 0.31 mm MW, medium	0034 377
	• Gun filter yellow, 1 piece, 100 MA, 0.14 mm MW, fine	0043 235
	• Nozzle extension complete, 15 cm, F-thread	0556 051
	• TradeTip 2 FineFinish nozzle 312	0554 312
	• TradeTip 3 nozzle 629	0553 629
	• TradeTip 3 nozzle 419	0553 419
	• TradeTip 3 nozzle 423	0553 423
2	**Nozzle case TradeTip 3 Lacquer**	**2344155**
	• 3x gun filter red, 180 MA, 0.084 mm MW, extra fine	0034 383
	• Gun filter yellow, 1 piece, 100 MA, 0.14 mm MW, fine	0043 235
	• Nozzle extension complete, 15 cm, F-thread	0556 051
	• TradeTip 3 FineFinish nozzle 308	0554 308
	• TradeTip 3 FineFinish nozzle 410	0554 410
	• TradeTip 3 FineFinish nozzle 412	0554 412
	• TradeTip 3 FineFinish nozzle 510	0554 510
3	**Nozzle case 2SpeedTip Emulsion**	**2344156**
	• 3x gun filter white, 50 MA, 0.31 mm MW, medium	0034 377
	• Gun filter yellow, 1 piece, 100 MA, 0.14 mm MW, fine	0043 235
	• Nozzle extension complete, 15 cm, F-thread	0556 051
	• TradeTip 3 FineFinish nozzle 312	0554 312
	• 2SpeedTip nozzle D10 111/419	0271 045
	• 2SpeedTip nozzle D20 115/421	0271 046
	• 2SpeedTip nozzle D30 115/423	0271 047
4	**Nozzle case 2SpeedTip Lacquer**	**2344157**
	• 3x gun filter red, 180 MA, 0.084 mm MW, extra fine	0034 383
	• Gun filter yellow, 1 piece, 100 MA, 0.14 mm MW, fine	0043 235
	• Nozzle extension complete, 15 cm, F-thread	0556 051
	• TradeTip 3 FineFinish nozzle 308	0554 308
	• TradeTip 3 FineFinish nozzle 410	0554 410
	• 2SpeedTip nozzle L20 210/512	0271 043
	• 2SpeedTip nozzle L30 212/514	0271 044

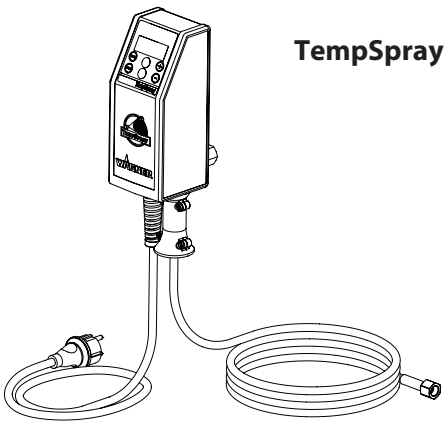
12.7 TempSpray

The paint material is heated to the required temperature uniformly by an electric heating element, which is located inside the hose (regulated from 20°C to 60°C).

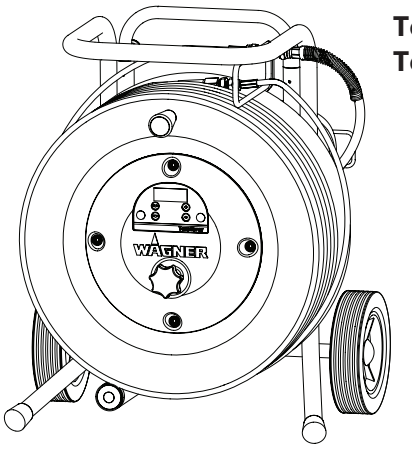
Advantages:

- Constant paint temperature even at low outside temperatures
- Considerably better working of high viscosity coating materials
- Increased application efficiency
- Savings in solvents due to reduction in viscosity
- Adaptable to all airless units

Order No.	Description
2311659 2311852	**TempSpray H 126 (ideal for lacquer jobs)** Basic unit 1/4“ incl. stainless steel hose, DN6, 1/4“, 10m Spraypack consisting of: basic unit (2311659), Airless gun AG 14 NPS 1/4“, incl. Trade Tip 2 nozzle holder (F-thread) and Trade Tip 2 Fine Finish 410
2311660 2311853	**TempSpray H 226 (ideal for dispersions/materials with high viscosity)** Basic unit 1/4“ incl. Hose reel, heated hose DN10, 15m, hose 1/4“ DN4, 1m Spraypack consisting of: Basic unit (2311660), Airless gun AG 14 NPS 1/4“, incl. Trade Tip 2 nozzle holder (F-thread) and Trade Tip 2 nozzle 419
2311661 2311854	**TempSpray H 326 (ideal for dispersions/materials with high viscosity)** Basic unit 1/4“ incl. Hose reel, heated hose DN10, 30m, hose 1/4“ DN4, 1m Spraypack consisting of: Basic unit (2311661), Airless gun AG 14 NPS 1/4“, incl. Trade Tip 2 nozzle holder (F-thread) and Trade Tip 2 nozzle 421



TempSpray H 126



TempSpray H 226
TempSpray H 326

A J. Wagner Ges.m.b.H.
Ottogasse 2/20
2333 Leopoldsdorf
Österreich
Tel. +43/ 2235 / 44 158
Telefax +43/ 2235 / 44 163
office@wagner-group.at

B WSB Finishing Equipment
Veilinglaan 56-58
1861 Wolvertem
Belgium
Tel. +32/2/269 46 75
Telefax +32/2/269 78 45
info@wagner-wsb.nl

CH Wagner International AG
Industriestrasse 22
9450 Altstätten
Schweiz
Tel. +41/71 / 7 57 22 11
Telefax +41/71 / 7 57 22 22
wagner@wagner-group.ch

D J. Wagner GmbH
Otto-Lilienthal-Straße 18
D-88677 Markdorf
Postfach 11 20
Deutschland
Tel. +49 / 75 44 / 505-1664
Telefax +49 / 75 44 / 505-1155
wagner@wagner-group.com
www.wagnergroup.com

DK Wagner Spraytech
Scandinavia A/S
Helgeshøj Allé 28
2630 Taastrup
Denmark
Tel. +45/43/ 27 18 18
Telefax +45/43/ 43 05 28
wagner@wagner-group.dk

E Makimport Herramientas, S.L.
C/ Méjico nº 60
Pol. El Descubrimiento
28806 Alcalá de Henares (Madrid)
Tel. 902 199 021/ 91 879 72 00
Telefax 91 883 19 59
ventas@grupo-k.es
info@grupo-k.es

F Wagner France
12 Avenue des Tropiques
Z.A. de Courtaboeuf,
91978 Les Ulis Cedex
France
Tel. 0 825 011 111
Telefax +33 (0) 69 81 72 57
division.batiment@wagner-france.fr

CZ Wagner, spol. s r.o.
Nedasovská str. 345
155 21 Praha 5 -Zlicín
Czechia
Tel. +42/ 2 / 579 50 412
Telefax +42/ 2 / 579 51 052
info@wagner.cz

GB Wagner Spraytech (UK) Limited
The Coach House
2 Main Road
Middleton Cheney OX17 2ND
Great Britain
UK-Helpline 0844 335 0517
5 p per minute (landline)

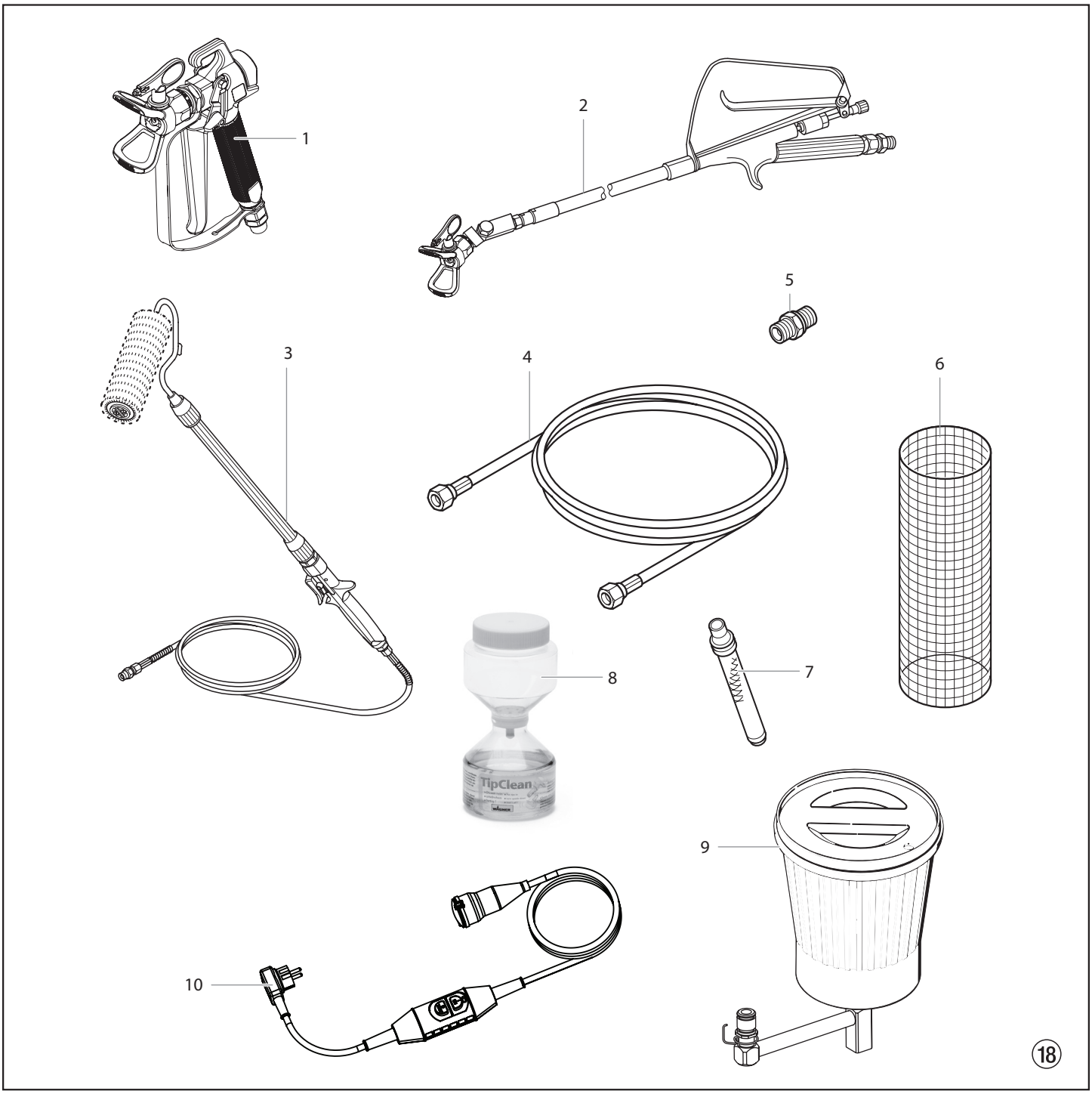
I Wagner Colora Srl
Via Italia 34
20060 Gessate - MI
Italia
Tel. +39 02.9592920.1
Telefax +39 02.95780187
info@wagnercolora.com

NL WSB Finishing Equipment BV
De Heldinnenlaan 200
3543 MB Utrecht
Netherlands
Tel. +31/ 30/241 41 55
Telefax +31/ 30/241 17 87
info@wagner-wsb.nl

S Wagner Spraytech
Scandinavia A/S
Helgeshøj Allé 28
2630 Taastrup
Denmark
Tel. +45/43/ 21 18 18
Telefax +45/43/ 43 05 28
wagner@wagner-group.dk

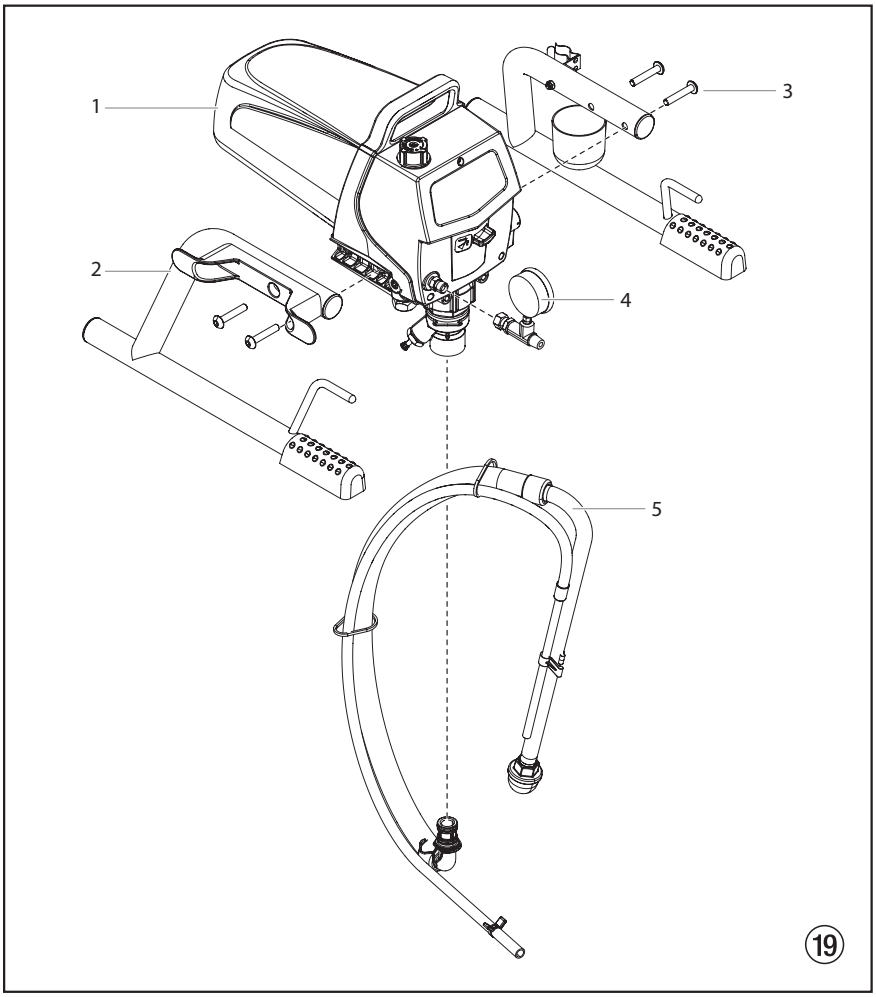
www.wagner-group.com

Accessories illustration



Pos.	PS 3.20	Description
1	0296 388	Spray gun AG 08, F-thread
	0296 386	Spray gun AG 08, G-thread
	0502 166	Spray gun AG 14, F-thread
	0502 119	Spray gun AG 14, G-thread
2	0296 441	Pole gun 120 cm, G-thread 7/8″
	0296 443	Pole gun 120 cm, F-thread 11/16″
	0296 442	Pole gun 200 cm, G-thread 7/8″
	0296 444	Pole gun 200 cm, F-thread 11/16″
3	0345 010	In-line roller IR-100
4	9984 573	High-pressure hose DN 4 mm, 7.5 m with stainless steel nipple, 1/4″
	9984 574	High-pressure hose DN 6 mm, 15 m for dispersion, 1/4″
	9984 575	High-pressure hose DN 6 mm, 30 m for dispersion, 1/4″
5	0034 038	Double socket for coupling high-pressure hoses (1/4″ x 1/4″)
6	0034 950	Metex-Reuse Reuse for pre-filtering of coating material in vessel. Place suction pipe in the reuse.
	0034 952	Sieve package (5 pcs) for paint
	0034 951	Sieve package (5 pcs) for dispersion
7	0034 383	Gun filter, red, 1 piece; 180 mesh extra fine
	0097 022	Gun filter, red, 10 pieces; 180 mesh extra fine
	0043 235	Gun filter, yellow, 1 piece; 100 mesh fine
	0097 023	Gun filter, yellow, 10 pieces; 100 mesh fine
	0034 377	Gun filter, white, 1 piece; 50 mesh medium
	0097 024	Gun filter, white, 10 pieces; 50 mesh medium
	0089 323	Gun filter, green, 1 piece; 30 mesh coarse
	0097 025	Gun filter, green, 10 pieces; 30 mesh coarse
8	0097 108	TipClean Cleaning Set for easy cleaning and conservation of nozzles
	0508 619	EasyGlide, special oil (118ml)
	0508 620	EasyClean, cleaning and conservation agent (118 ml)
9	0551 969	Hopper kit
10	2312 909	Personel protection switch (PRCD) 230V / 16A (3 m)

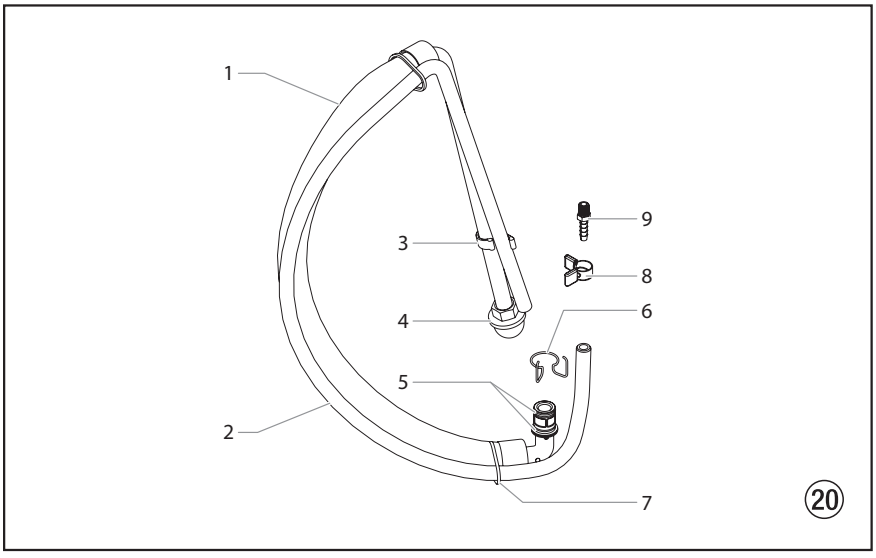
Main Assembly



Pos.	PS 3.20	Description
1*	-------	Drive assembly
2*	-------	Stand assembly
3	9805348	Screw (4)
4	0521229	Pressure gauge
5*	0558672A	Siphon assembly

* See separate listing

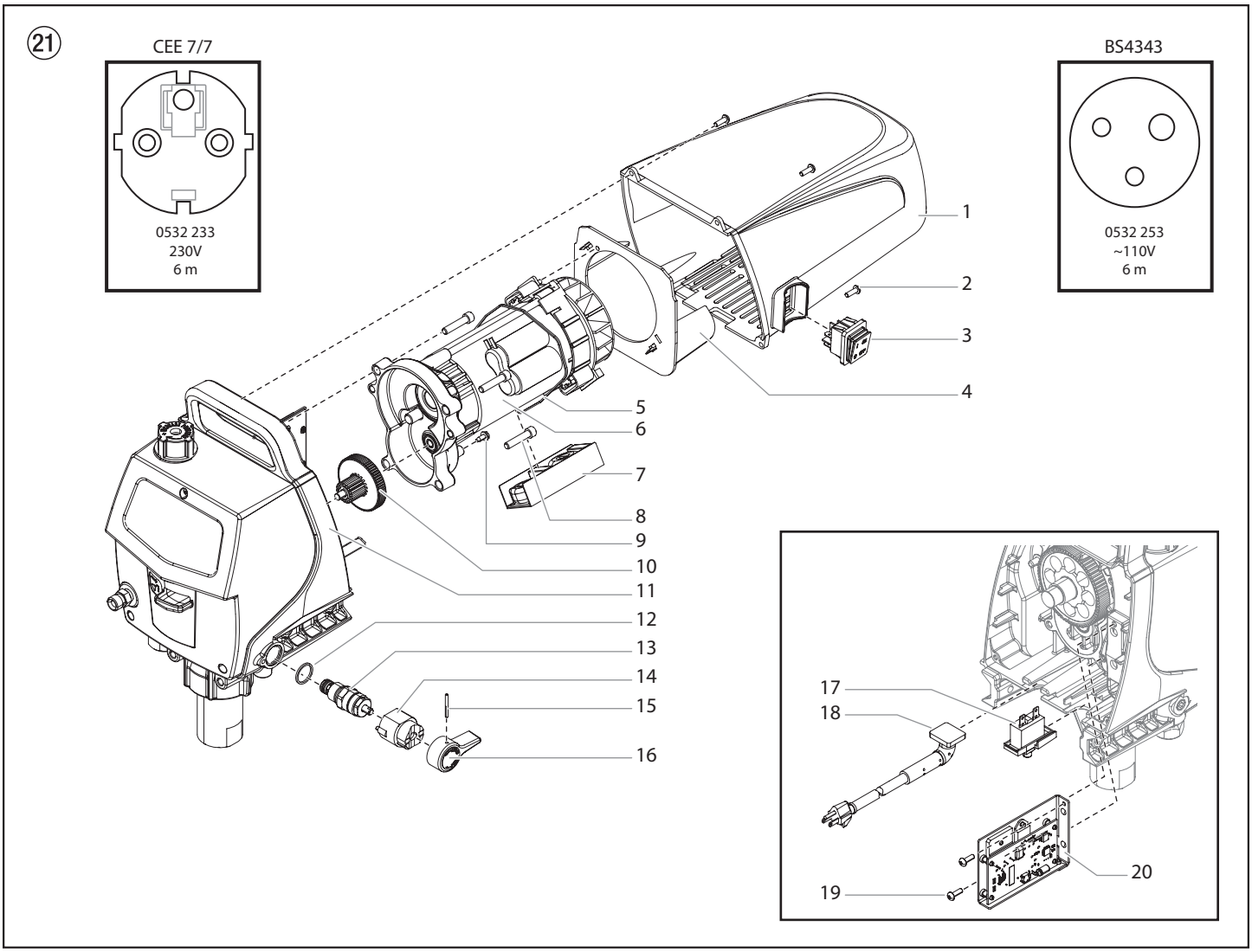
Suction system for stand



Pos.	PS 3.20	Description
1	0551706	Siphon tube assembly (includes items 1 and 3-6)
2	0558659A	Return tube
3	0279459	Clip
4	0295565	Inlet screen
5	9871105	O-ring (2)
	0508606	O-ring (for hot solvents, optional) (2)
6	9822526	Retaining clip
7	9850638	Tie wrap
8	0327226	Return tube clamp
9	0551530	Return tube fitting

Spare parts diagram

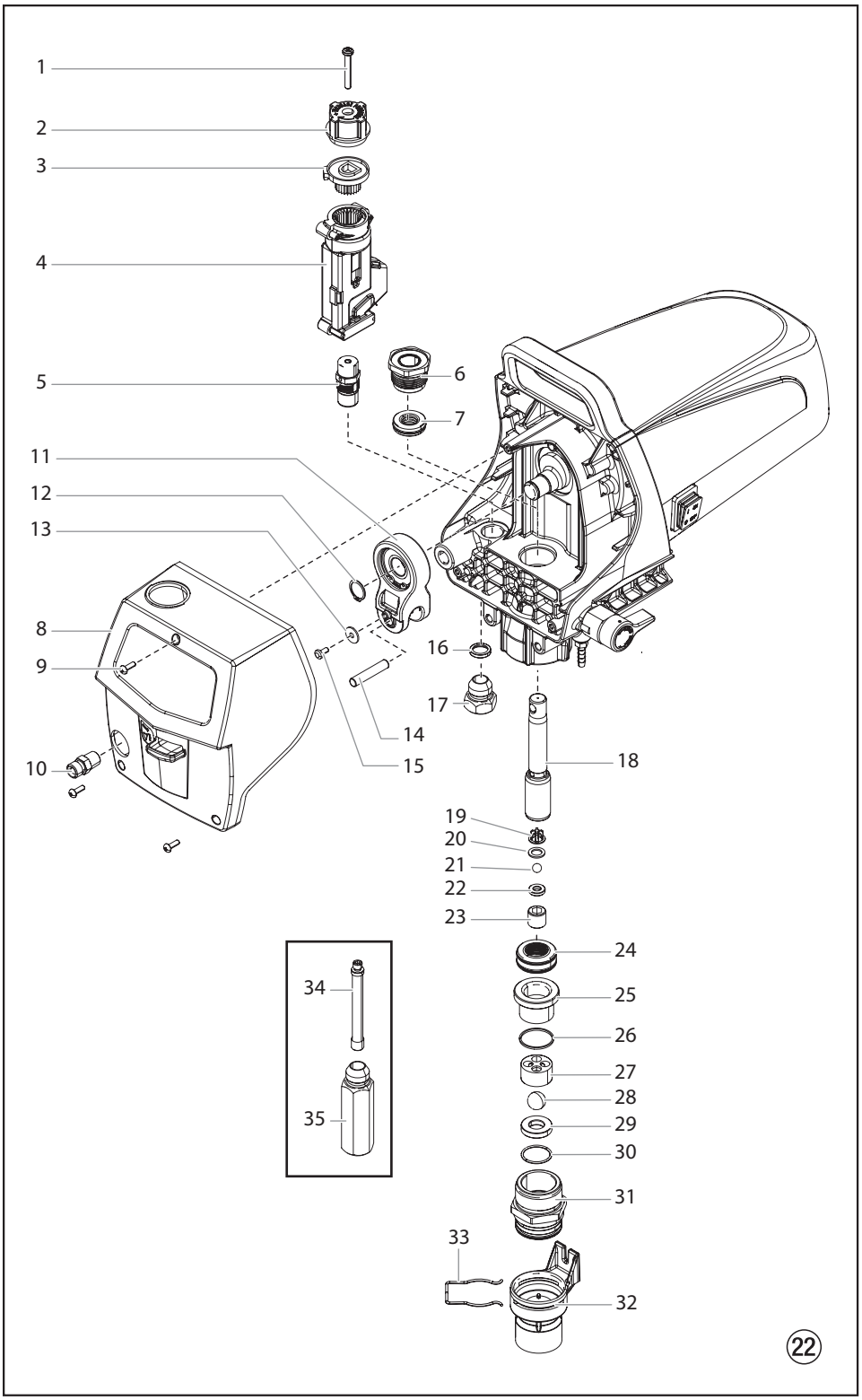
Drive Assembly I



Pos.	PS 3.20	Description
1	0532920	Motor cover
2	0509278	Screw (4)
3	9850936	ON/OFF switch
4	0532326	Motor baffle
5	770-099	Tie wrap
6	0532812	Motor assembly, 110V (includes item 5)
	0532813	Motor assembly, 230V (includes item 5)
7	0532234A	EMI filter
8	9800341	Screw (4)
9	9800340	Ground screw (2)
10	0512213	2nd stage gear assembly
11	0519001	Main housing assembly

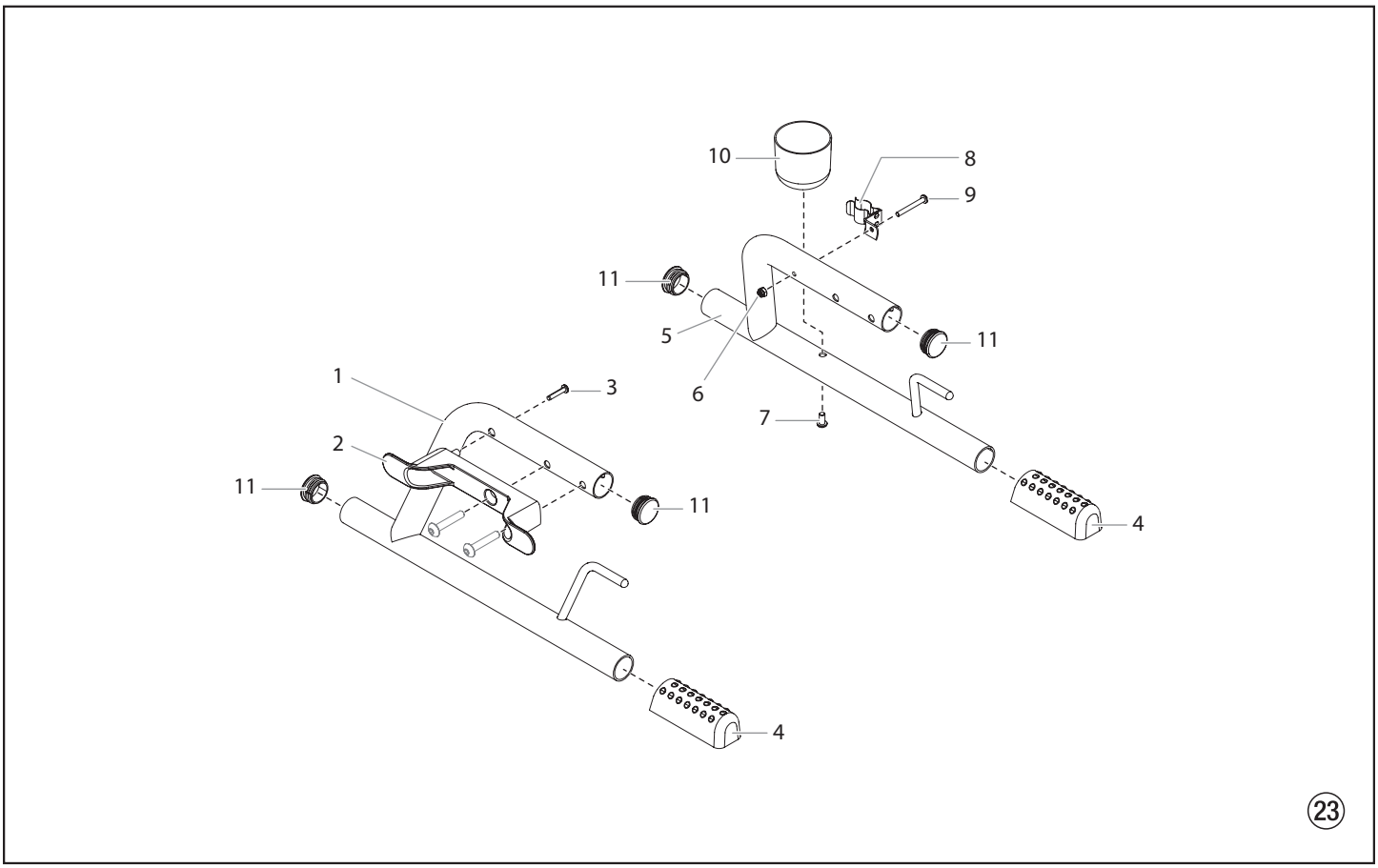
Pos.	PS 3.20	Description
12	0507745	Gasket
13	0507254	PRIME/SPRAY valve assembly (includes items 12-16)
14	0507931	Cam base
15	5006543	Groove pin
16	0508744	Valve handle
17	0532206A	Circuit breaker assembly, 110V
	0532235A	Circuit breaker assembly, 230V
18	--------	Power cord assembly
19	0509278	Screw (2)
20	0532237A	Circuit board assembly with EMI filter

Drive Assembly II



Pos.	PS 3.20	Description
1	9805300	Screw
2	0532355A	Pressure control knob
3	0532334A	Pressure control knob bottom
4	0532216A	Pressure switch
5	0532223A	Transducer assembly
6	0532215	Upper bushing
7	0532914	Upper packing
8	0532222A	Front cover
9	0509278	Screw (3)
10	0509873	Outlet fitting
11	0532203A	Yoke assembly
12	9822529	Retainer ring
13	9822600	Washer
14	9832128	Dowel pin
15	0293395	Screw
16	0296289	Seal
17	0532357	Plug
18	0532254A	Piston assembly (includes items 18-23)
19	0551262	Upper cage
20	0551263	Washer
21	50164	Outlet valve ball
22	0551620	Outlet valve seat
23	0512342	Outlet valve retainer
24	0532915	Lower packing
25	0552489	Bushing
26	0509581	Inlet valve seal
27	0509591	Inlet valve cage
28	0509583	Inlet valve ball
29	0532345	Inlet valve seat
30	0509582	O-ring, PTFE
31	0290216	Inlet valve housing
32	0532242A	Pusher assembly (includes item 33)
33	805-350	Clip
Optional		
34	0532360A	Filter housing
35	540-030	Filter
	0532912	Fluid section repacking kit (includes items 6-7, 20-21, 24, 26, 28 and 30)
	0532917	Valve seat kit (includes items 19-22, and 28-30)

Stand Assembly



Pos.	PS 3.20	Description
1	0532238A	Leg, right
2	0532356	Cord wrap
3	0508660	Screw
4	805-342	Foot (2)
5	0532239A	Leg, left
6	0509856	Nut
7	9805230	Screw
8	806-216	Clip
9	0551732	Screw
10	0508381	Drip cup
11	0294635	Plug (4)

Important notes on product liability

As a result of an EC regulation being effective as from January 1, 1990, the manufacturer shall only be liable for his product if all parts come from him or are released by him, and if the devices are properly mounted and operated.

If the user applies outside accessories and spare parts, the manufacturer´s liability can fully or partially be inapplicable; in extreme cases usage of the entire device can be prohibited by the competent authorities (employer´s liability insurance association and factory inspectorate division).

Only the usage of original WAGNER accessories and spare parts guarantees that all safety regulations are observed.

3+2 years guarantee for professional finishing

Wagner professional guarantee

(Status 01.02.2009)

1. Scope of guarantee

All Wagner professional colour application devices (hereafter referred to as products) are carefully inspected, tested and are subject to strict checks under Wagner quality assurance. Wagner exclusively issues extended guarantees to commercial or professional users (hereafter referred to as "customer") who have purchased the product in an authorised specialist shop, and which relate to the products listed for that customer on the Internet under www.wagner-group.com/profi-guarantee.

The buyer's claim for liability for defects from the purchase agreement with the seller as well as statutory rights are not impaired by this guarantee.

We provide a guarantee in that we decide whether to replace or repair the product or individual parts, or take the device back and reimburse the purchase price. The costs for materials and working hours are our responsibility. Replaced products or parts become our property.

2. Guarantee period and registration

The guarantee period amounts to 36 months. For industrial use or equal wear, such as shift operations in particular, or in the event of rentals it amounts to 12 months.

Systems driven by petrol or air are also guaranteed for a 12 month period.

The guarantee period begins with the day of delivery by the authorised specialist shop. The date on the original purchase document is authoritative.

For all products bought in authorised specialist shops from 01.02.2009 the guarantee period is extended to 24 months providing the buyer of these devices registers in accordance with the following conditions within 4 weeks of the day of delivery by the authorised specialist shop.

Registration can be completed on the Internet under www.wagner-group.com/profi-guarantee. The guarantee certificate is valid as confirmation, as is the original purchase document that carries the date of the purchase. Registration is only possible if the buyer is in agreement with having the data being stored that is entered during registration.

When services are carried out under guarantee the guarantee period for the product is neither extended nor renewed.

Once the guarantee period has expired, claims made against the guarantee or from the guarantee can no longer be enforced.

3. Handling

If defects can be seen in the materials, processing or performance of the device during the guarantee period, guarantee claims must be made immediately, or at the latest within a period of 2 weeks.

The authorised specialist shop that delivered the device is entitled to accept guarantee claims. Guarantee claims may also be made to the service centres named in our operating instructions. The product has to be sent without charge or presented together with the original purchase document that includes details of the purchase date and the name of the product. In order to claim for an extension to the guarantee, the guarantee certificate must be included.

The costs as well as the risk of loss or damage to the product in transit or by the centre that accepts the guarantee claims or who delivers the repaired product, are the responsibility of the customer.

4. Exclusion of guarantee

Guarantee claims cannot be considered

- for parts that are subject to wear and tear due to use or other natural wear and tear, as well as defects in the product that are a result of natural wear and tear, or wear and tear due to use. This includes in particular cables, valves, packaging, jets, cylinders, pistons, means-carrying housing components, filters, pipes, seals, rotors, stators, etc. Damage due to wear and tear that is caused in particular by sanded coating materials, such as dispersions, plaster, putty, adhesives, glazes, quartz foundation.
- in the event of errors in devices that are due to non-compliance with the operating instructions, unsuitable or unprofessional use, incorrect assembly and/or commissioning by the buyer or by a third party, or utilisation other than is intended, abnormal ambient conditions, unsuitable coating materials, unsuitable operating conditions, operation with the incorrect mains voltage supply/frequency, over-operation or defective servicing or care and/or cleaning.
- for errors in the device that have been caused by using accessory parts, additional components or spare parts that are not original Wagner parts.
- for products to which modifications or additions have been carried out.
- for products where the serial number has been removed or is illegible
- for products to which attempts at repairs have been carried out by unauthorised persons.
- for products with slight deviations from the target properties, which are negligible with regard to the value and usability of the device.
- for products that have been partially or fully taken apart.

5. Additional regulations.

The above guarantees apply exclusively to products that have been bought by authorised specialist shops in the EU, CIS, Australia and are used within the reference country.

If the check shows that the case is not a guarantee case, repairs are carried out at the expense of the buyer.

The above regulations manage the legal relationship to us concludingly. Additional claims, in particular for damages and losses of any type, which occur as a result of the product or its use, are excluded from the product liability act except with regard to the area of application.

Claims for liability for defects to the specialist trader remain unaffected.

German law applies to this guarantee. The contractual language is German. In the event that the meaning of the German and a foreign text of this guarantee deviate from one another, the meaning of the German text has priority.

J. Wagner GmbH
Division Professional Finishing
Otto Lilienthal Strasse 18
88677 Markdorf
Federal Republic of Germany

Note on disposal:

In observance of the European Directive 2002/96/EC on waste electrical and electronic equipment and implementation in accordance with national law, this product is not to be disposed of together with household waste material but must be recycled in an environmentally friendly way!

Wagner or one of our dealers will take back your used Wagner waste electrical or electronic equipment and will dispose of it for you in an environmentally friendly way. Please ask your local Wagner service centre or dealer for details or contact us direct.