



TITAN®

OPERATING MANUAL

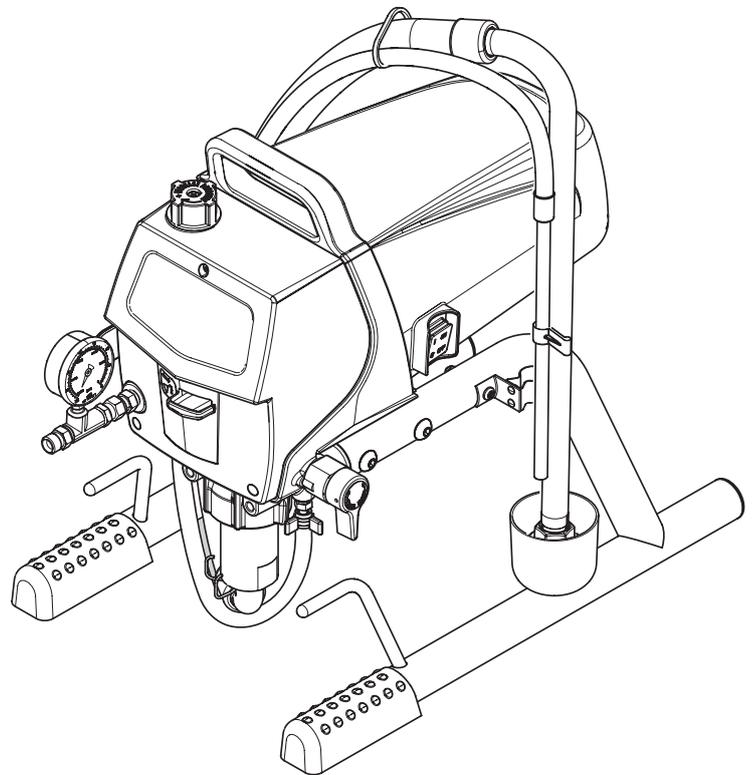
- EN

OPERATING MANUAL

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IMPACT™ 400

AIRLESS, HIGH-PRESSURE
SPRAYING UNIT



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1 GENERAL SAFETY INSTRUCTIONS

WARNING! *Read all safety information, instructions, illustrations and technical data provided with this power tool. Failure to observe the following instructions may cause electric shock, fire and/or severe injuries. Keep all safety information and instructions for future reference. The term "power tool" used in this safety information refers to mains-operated power tools (with power cable) and to battery-powered power tools (without power cable).*



1. Safety at the workplace

- a) **Keep your workplace clean and well lit.** *Disorder or unlit workplaces may result in accidents.*
- b) **Do not work with the power tool in potentially explosive environments where there are flammable fluids, gases or dust.** *Power tools generate sparks that can ignite the dust or vapors.*
- c) **Keep children and other persons away when using the power tool.** *If distracted, you may lose control of the power tool.*

2. Electrical Safety

- a) **The connection plug of the power tool must fit in the socket. The plug may not be modified in any form.** *Verwenden Sie keine Adapterstecker gemeinsam mit schutzgeerdeten Elektrowerkzeugen. Unmodified plugs and suitable sockets reduce the risk of an electric shock.*
- b) **Avoid physical contact with earthed surfaces such as pipes, heating elements, stoves and refrigerators.** *The risk through electric shock increases if your body is earthed.*
- c) **Keep power tools away from rain or moisture.** *Water penetrating into a power tool increases the risk of an electric shock.*
- d) **Do not misuse the power cord to carry the power tool, hang up the power tool or pull the plug out of the socket. Keep the power cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled power cords increase the risk of an electric shock.*
- e) **If the power tool must be used in a moist environment, use a ground fault circuit interrupter.** *Using a residual current operated circuit-breaker avoids the risk of electric shock.*

3. Safety of Persons

- a) **Be attentive. Pay attention to what you are doing and work sensibly with a power tool. Do not use the power tool if you are tired or under the influence of drugs, alcohol or medication.** *One moment of carelessness when using the power tool may cause serious injuries.*

b) **Wear personal safety equipment and always wear safety goggles.** *Wearing personal protective equipment, such as dust mask, non-slip safety shoes, safety helmet or ear protection, depending on the type of power tools, reduces the risk of injury.*

c) **Avoid accidental starting-up. Make sure that the power tool is switched off before you connect it to the power tool and/or battery, pick it up or carry it.** *Accidents may happen if you have your finger on the switch while carrying the power tool or if the device is switched on when you connect it to the power supply.*

d) **Remove setting tools or wrenches before switching on the power tool.** *A tool or key in a rotating part of the power tool can cause injuries.*

e) **Avoid an unnatural posture. Ensure that you are standing securely and have your balance at all times.** *This allows you can better control the power tool in unexpected situations.*

f) **Wear suitable clothing. Do not wear wide clothing or jewellery. Keep your hair, clothes and gloves away from moving parts.** *Loose clothing, jewellery or long hair can be caught in moving parts.*

g) **Do not lull yourself into a false sense of security and do not think yourself above the safety rules for electric tools, even if you are familiar with the electric tool following extensive practical experience.** *Careless use can lead to serious injuries in fractions of a second.*

4. Usage and treatment of the electric tool

a) **Do not overload the power tool. Use the power tool designed for the work that you are doing.** *You work better and safer in the specified performance range if you use the suitable power tool.*

b) **Do not use power tools whose switch is defective.** *A power tool that cannot be switched on or off is dangerous and has to be repaired.*

c) **Disconnect the plug from the socket and/or take out a removable battery before you make device adjustments, change accessories or put the power tool away.** *This precautionary measure prevents the power tool from starting unintentionally.*

d) **Store unused power tools so that they are inaccessible to children. Do not let persons use the tool who are not familiar with it or who have not read these instructions.** *Power tools are dangerous when they are used by inexperienced persons.*

e) **Maintain the power tool and insertion tools with care. Check whether moving device parts are working flawlessly and are not jamming, whether parts are broken or damaged so that as to impair the function of the power tool. Have damaged parts repaired before using the power tool.** *Many accidents have their origin in power tools that have been maintained badly.*

f) Use the power tool, accessories, insert tools, etc. in accordance with these instructions and in a fashion specified for this special tool type. Take the working conditions and the activity to be carried out into consideration. The use of power tools for purposes other than the intended ones can lead to dangerous situations.

g) Keep the handles and grip surfaces dry, clean and free of oil and grease. Slippery handles and grip surfaces hamper safe operation and control of the electric tool in unforeseen situations.

5. Service

a) Only have your power tool repaired by a qualified specialist and only use original spare parts. This ensures that the tool safety is maintained.

b) If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a safety hazard.

2 SAFETY REGULATIONS FOR AIRLESS SPRAYING

All local safety regulations in force must be observed. The following safety regulations are to be observed in order to ensure safe handling of the Airless high-pressure spraying unit.

2.1 FLASH POINT

 Danger	<p>Only spray coating materials with a flash point of 21 °C or higher.</p> <p>The flash point is the lowest temperature at which vapors develop from the coating material. These vapors are sufficient to form an inflammable mixture over the air above the coating material.</p>
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2.2 EXPLOSION PROTECTION

 Danger	<p>Do not use the unit in work places which are covered by the explosion protection regulations. The unit is not designed to be explosion protected. Do not operate the device in explosive areas (zone 0, 1 and 2). Explosive areas are, for example, places where paints are stored and locations in direct proximity to the object being sprayed. Keep the device at least 3 m from the object you are spraying.</p>
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2.3 DANGER OF EXPLOSION AND FIRE FROM SOURCES OF IGNITION DURING SPRAYING WORK

 Danger	<p>There must be no sources of ignition such as, for example, open fires, lit cigarettes, cigars or tobacco pipes, sparks, glowing wires, hot surfaces, etc. in the vicinity.</p>
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2.4 DANGER OF INJURY FROM THE SPRAY JET

 Danger	<p>Attention, danger of injury by injection! Never point the spray gun at yourself, other persons or animals.</p> <p>Only use the spray gun with spray jet touch protection.</p> <p>The spray jet must not come into contact with any part of the body.</p> <p>In working with Airless spray guns, the high spray pressures arising can cause very dangerous injuries. If contact is made with the spray jet, coating material can be injected into the skin. Do not treat a spray injury as a harmless cut. In case of injury to the skin by coating material or solvents, consult a doctor for quick and correct treatment. Inform the doctor about the coating material or solvent used.</p>
	

2.5 SECURE SPRAY GUN AGAINST UNINTENDED OPERATION

Always secure the spray gun when mounting or dismantling the tip and in case of interruption to work.

2.6 RECOIL OF SPRAY GUN

 Danger	<p>When using a high operating pressure, pulling the trigger guard can effect a recoil force up to 15 N.</p> <p>If you are not prepared for this, your hand can be thrust backwards or your balance lost. This can lead to injury.</p>
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2.7 BREATHING EQUIPMENT AS PROTECTION AGAINST SOLVENT VAPORS

Wear breathing equipment during spraying work.

2.8 PREVENTION OF OCCUPATIONAL ILLNESSES

Wear safety goggles.

Wear hearing protection.

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.

2.9 MAX. OPERATING PRESSURE

The permissible operating pressure for the spray gun, spray gun accessories, unit accessories and high-pressure hose must not fall short of the maximum operating pressure of 20.7 MPa (207 bar).

2.10 HIGH-PRESSURE HOSE



Danger

Attention, danger of injury by injection! Wear and tear and kinks as well as usage that is not appropriate to the purpose of the device can cause leakages to form in the high-pressure hose. Liquid can be injected into the skin through a leakage.

- 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 Titan original-high-pressure hoses in order to ensure functionality, safety and durability.

2.11 ELECTROSTATIC CHARGING (FORMATION OF SPARKS OR FLAMES)



Danger

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.

2.12 USE OF UNITS ON BUILDING SITES AND WORKSHOPS

The unit may only be connected to the mains network via a special feeding point with a residual-current device with INF ≤ 30 mA. An upstream circuit breaker (fuse) with 16 A (B or C characteristics) is required.

2.13 VENTILATION WHEN SPRAYING IN ROOMS

Adequate ventilation to ensure removal of the solvent vapors has to be ensured.

2.14 SUCTION INSTALLATIONS

The are to be provided by the unit user in accordance with the corresponding local regulations.

2.15 EARTHING OF THE OBJECT

The object to be coated must be earthed. (Building walls are usually earthed naturally)

2.16 COATING MATERIAL

Caution against dangers that can arise from the sprayed substance and observe the text and information on the containers or the specifications given by the substance manufacturer.

Do not spray any liquid of unknown hazard potential.

2.17 CLEANING THE UNIT

When cleaning the gun, only rinse when the nozzle is removed and rinse at low pressure.



Danger

When cleaning the unit with solvents, the solvent should never be sprayed or pumped back into a container with a small opening (bung hole). An explosive gas/air mixture can arise. Only use an earthed container made from metal. To earth the gun, hold it firmly on the edge of the container.



Danger of short-circuits caused by water ingress!
Never spray down the unit with high-pressure or high-pressure steam cleaners.

2.18 WORK OR REPAIRS AT THE ELECTRICAL EQUIPMENT

These may only be carried out by a skilled electrician. No liability is assumed for incorrect installation. Unplug the power plug from the outlet before carrying out any repair work.

2.19 MAINTENANCE WORK AND BREAKS

Before carrying out any work on the device and during any work break, release the pressure in the spray gun and high-pressure hose. Secure the spray gun's trigger guard and switch off the device.

2.20 SETUP ON AN UNEVEN SURFACE

The front end must always point downwards in order to avoid sliding away.
If possible do not use the unit on an inclined surface since the unit tends to wander through the resulting vibrations.

2.21 OSCILLATION LEVEL

The specified oscillation level has been measured according to a standard test procedure and can be used to compare against electric tools. The oscillation level is also for determining an initial assessment of the vibrational strain.

Attention! The vibration emission value can differ from the specified value when the electric tool is actually in use, depending on how the electric tool is being used. It is necessary to specify safety measures to protect the operating personnel. These measures are based on an estimated shutdown during the actual conditions of use (all parts of the operating cycle are taken into consideration here, for example periods when the electric tool is switched off, and, when it is switched on but running without any load).

3 GENERAL VIEW OF APPLICATION

3.1 APPLICATION

The unit performance is conceived so that its use is possible on building sites for small- to middle-area dispersion work. The Impact 400 must only be used indoors.

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

3.2 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 Titan'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

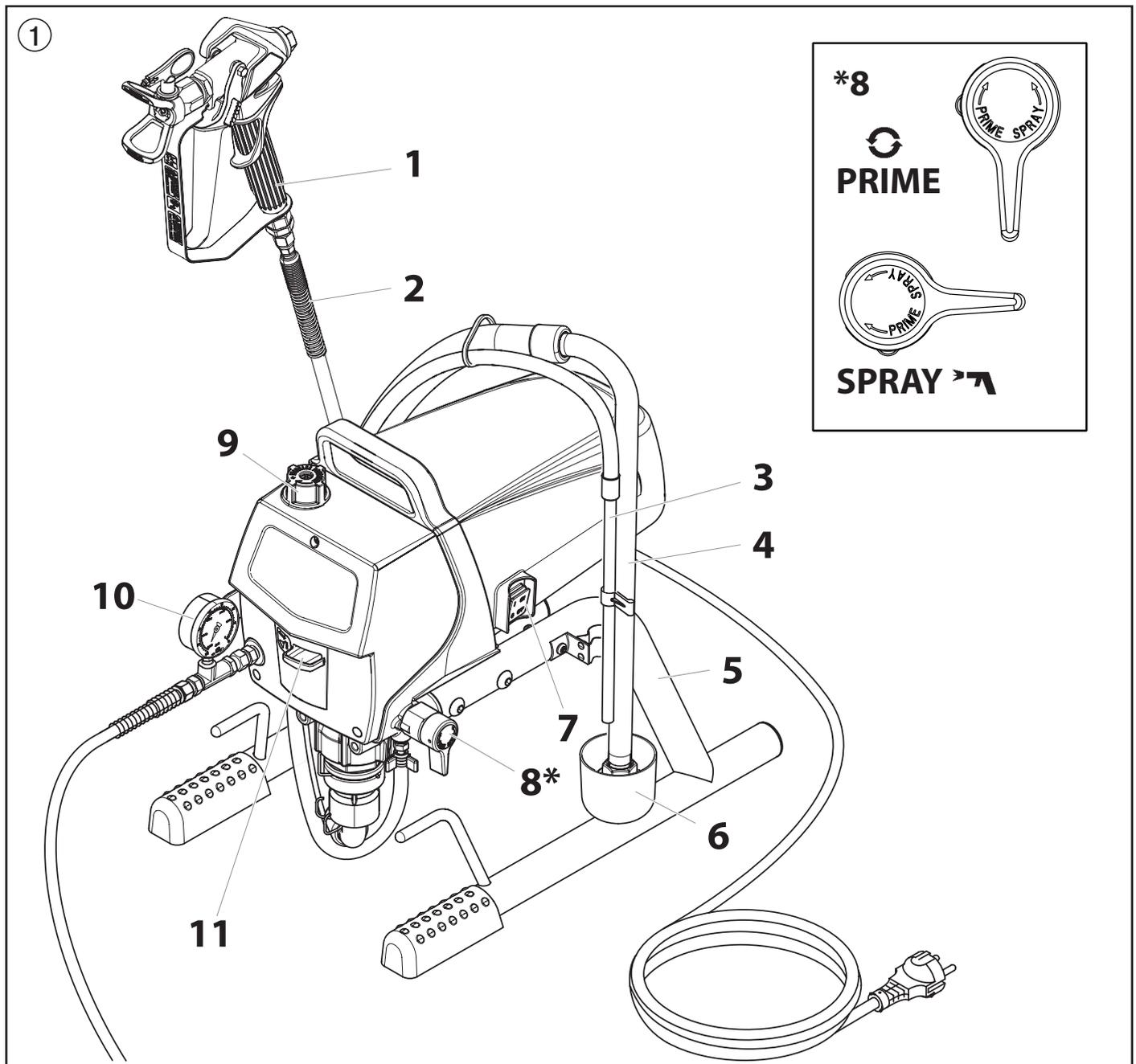
These have a strong wear and tear effect on valves, high-pressure hose, spray gun and tip. The durability of these parts can be reduced appreciably through this.

4 DESCRIPTION OF UNIT

4.1 LEGEND FOR EXPLANATORY DIAGRAM IMPACT 400

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Spray gun 2. High-pressure hose 3. Return hose 4. Suction hose 5. Frame 6. Drip cup 7. ON/OFF switch | <ul style="list-style-type: none"> 8. Relief valve
Lever position vertical – PRIME ( circulation) Lever position horizontal – SPRAY () 9. Pressure control knob 10. Pressure gauge 11. Oil cup for Piston Lube (Piston Lube prevents increased wear of the packings) |
|---|--|

4.2 EXPLANATORY DIAGRAM IMPACT 400



4.3 TECHNICAL DATA

Voltage	
	100-110 VAC~, 50/60 Hz or 220-240 VAC~, 50/60 Hz
Max. current consumption	
100 VAC~	10.5 A
110 VAC~	12.0 A
220-240 VAC~	5.3 A
Rated input of device	
100-110 VAC~	1000 W
220-240 VAC~	1000 W
Power Cord	
	6 m long, 3 x 1.5 mm ²
Max. operating pressure	
	207 bar (20.7 MPa)
Max. volume flow	
	2.0 l/min
Volume flow at 12 MPa (120 bar) with water	
	1.60 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
Sound pressure level*	
	80 dB (A); Uncertainty K = 4 dB
Sound pressure output*	
	93 dB (A); Uncertainty K = 4 dB
Oscillation level*	
	< 2.5 m/s ² ; Uncertainty K = 1.5 m/s ²

* Measured in accordance with EN 62841-1

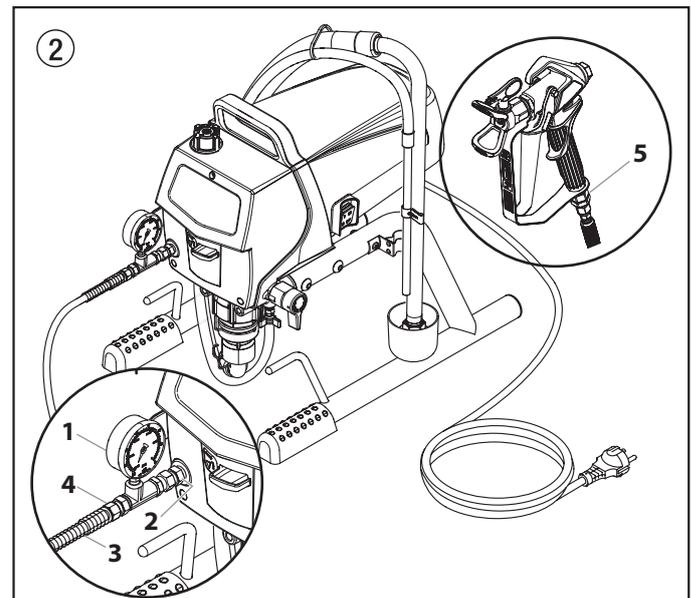
4.4 TRANSPORTATION IN VEHICLE

Secure the unit with a suitable fastening.

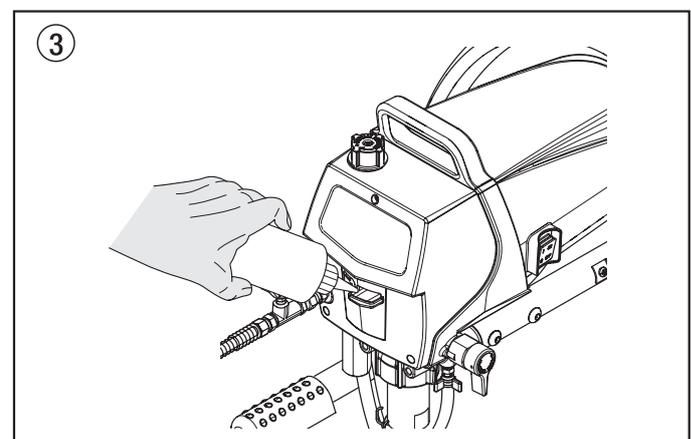
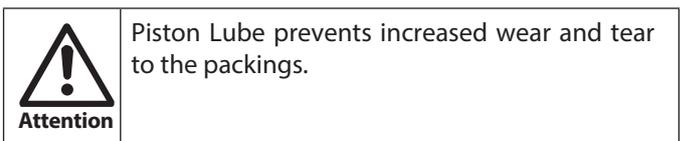
5 STARTING OPERATION

5.1 HIGH-PRESSURE HOSE, SPRAY GUN AND SEPARATING OIL

1. If equipped, 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 (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 Piston Lube (Fig. 3). Do not use too much Piston Lube, i.e. ensure that no Piston Lube drips into the coating material container.



5.2 CONNECTION TO THE MAINS NETWORK



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.

When connecting to the public low-voltage network, it is possible that approval of the network operator will be required. Check the regulations in force in your country and contact your network operator.

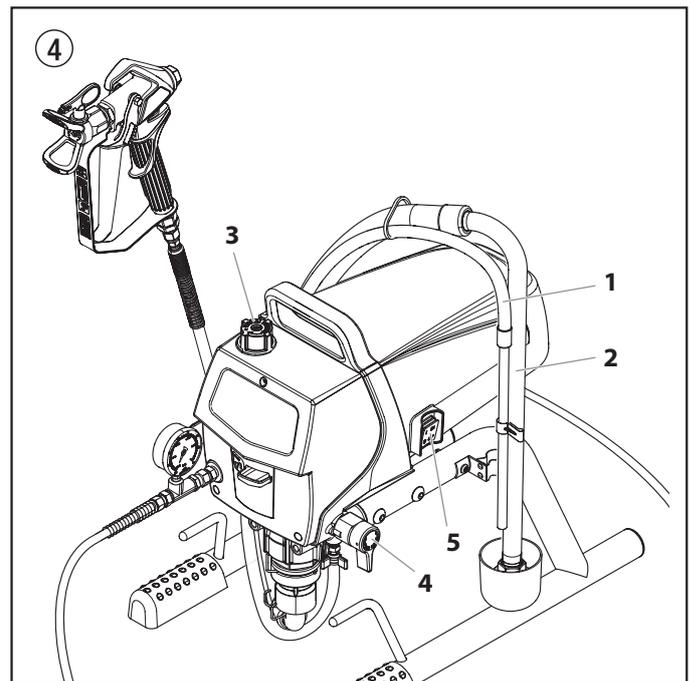
The connection must be equipped with a residual current protective device with $INF \leq 30 \text{ mA}$.



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

5.3 CLEANING PRESERVING AGENT WHEN STARTING-UP OF OPERATION INITIALLY

1. Immerse the suction tube (Fig. 4, Item 2) and 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.



5.4 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.

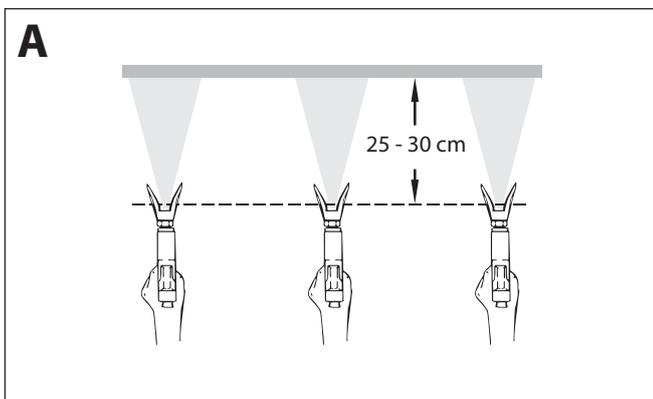
9. The unit is ready to spray.

6 SPRAYING

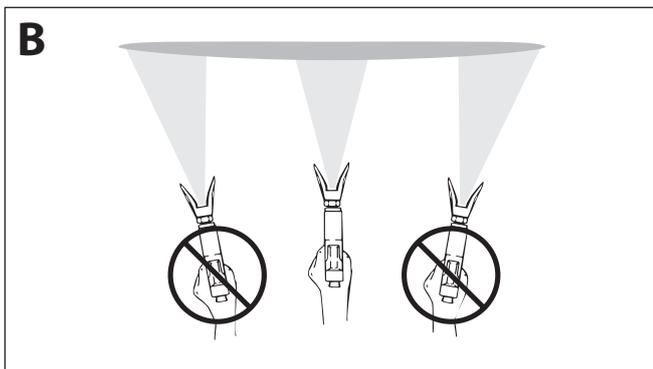


Injection hazard. Do not spray without the tip guard in place. NEVER trigger the gun unless the tip is completely turned to either the spray or the unclog position. ALWAYS engage the gun trigger lock before removing, replacing or cleaning tip.

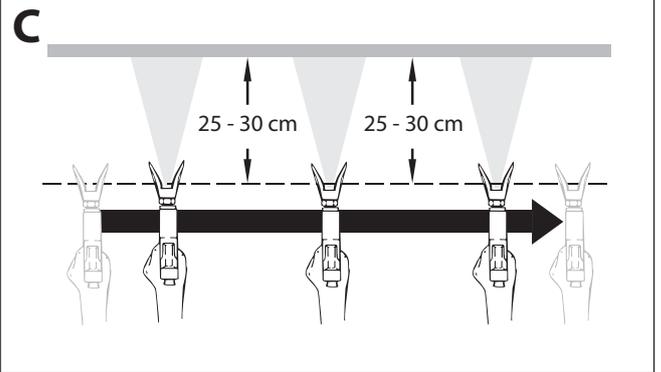
- A)** The key to a good paint job is an even coating over the entire surface. Keep your arm moving at a constant speed and keep the spray gun at a constant distance from the surface. The best spraying distance is 10-12 inches (25 to 30 cm) between the spray tip and the surface.



- B)** 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.



- C)** 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.

7 HANDLING THE HIGH-PRESSURE HOSE

	<p>The unit is equipped with a high-pressure hose specially suited for piston pumps.</p>
	<p>Danger of injury through leaking high-pressure hose. Replace any damaged high-pressure hose immediately. Never repair defective high-pressure hoses yourself!</p>

The high-pressure hose is to be handled with care. Avoid sharp bends and folds: the smallest bending radius is about 8" (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 Titan spray gun with a swivel joint and a hose system.

	<p>When using the high-pressure hose while working on scaffolding, it is best to always guide the hose along the outside of the scaffolding.</p>
	<p>The risk of damage rises with the age of the high-pressure hose. Titan recommends replacing high-pressure hoses after 6 years.</p>
	<p>Use only Titan original-high-pressure hoses in order to ensure functionality, safety and durability.</p>

8 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 Section 13.2.
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	<p>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.</p>
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9 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 21 °C) must be suitable for the coating material used.
	<ul style="list-style-type: none"> • Secure the spray gun, refer to the operating manual of the spray gun. • Clean and remove tip. • For a standard tip, refer to 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)!

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.

9.1 CLEANING UNIT FROM OUTSIDE

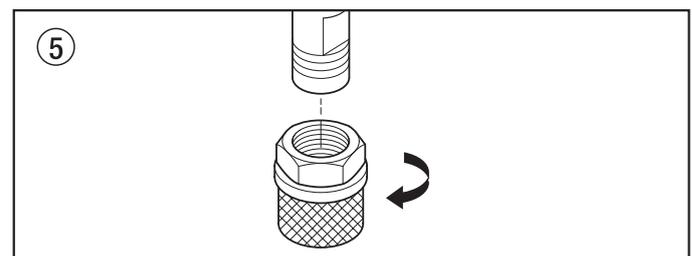
	First of all pull out mains plug from socket.
 Attention	<p>Danger of short circuit through penetrating water!</p> <p>Never spray down the unit with high-pressure or high-pressure steam cleaners.</p> <p>Do not put the high-pressure hose into solvents. Use only a wet cloth to wipe down the outside of the hose.</p>

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

9.2 SUCTION FILTER

	A clean suction filter always guarantees maximum feed quantity, constant spraying pressure and problem-free functioning of the unit.
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1. Screw off the filter (Fig. 5) from suction tube.
 2. Clean or replace the filter.
- Carry out cleaning with a hard brush and an appropriate cleaning agent.



9.3 CLEANING THE HIGH-PRESSURE FILTER



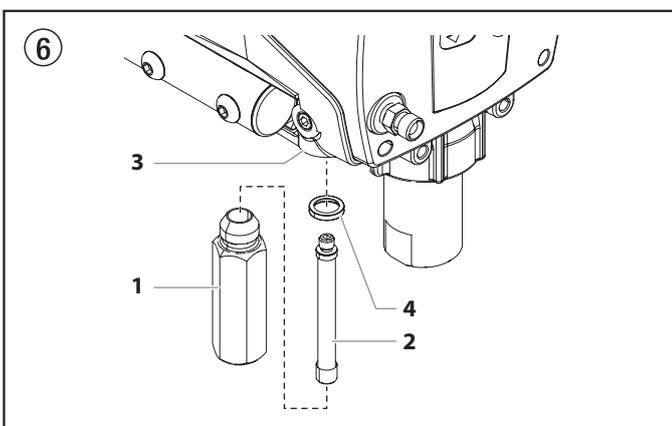
A high-pressure filter is available as an optional accessory that can be ordered separately. Clean the filter cartridge regularly. A soiled or clogged high-pressure filter can cause a poor spray pattern or a clogged tip.

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.



9.4 CLEANING AIRLESS SPRAY GUN

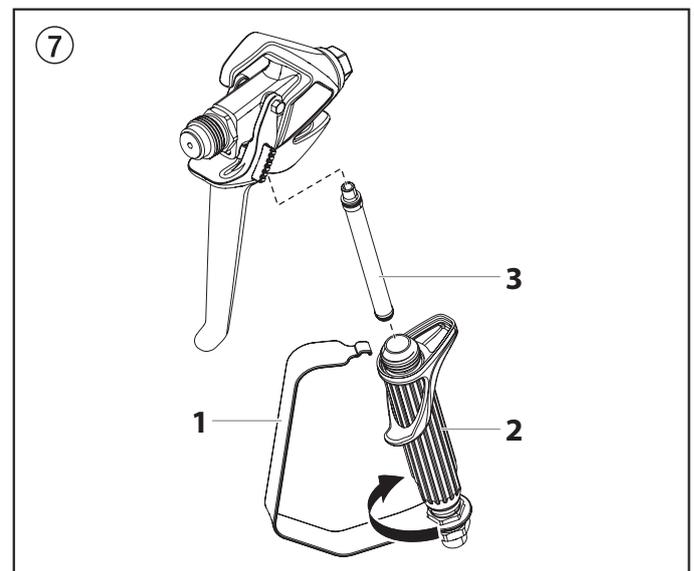


Clean the spray gun after each use.

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)

1. Unclip the top of the trigger guard (1) from the gun head.
2. Using the bottom of the trigger guard as a wrench, loosen and remove the handle assembly (2) from the gun head.
3. Pull the old filter (3) out of the gun head. Clean or replace.
4. Slide the new filter, tapered end first, into the gun head.
5. Thread the handle assembly into the gun head. Tighten with the trigger wrench.
6. Snap the trigger guard back onto the gun head.



10 REMEDY IN CASE OF FAULTS

Type of malfunction	Possible cause	Measures for eliminating the malfunction
A. Unit does not start	<ol style="list-style-type: none"> 1. No voltage applied. 2. Pressure setting too low. 3. ON/OFF switch defective. 	<ol style="list-style-type: none"> 1. Check voltage supply. 2. Turn up pressure control knob. 3. Replace.
B. Unit does not draw in material	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Upper packing is worn. 2. Piston is worn. 	<ol style="list-style-type: none"> 1. Remove and replace packing. 2. Remove and replace piston.
E. Increased pulsation at the spray gun	<ol style="list-style-type: none"> 1. Incorrect high-pressure hose type. 2. Tip worn or too large. 3. Pressure too high. 	<ol style="list-style-type: none"> 1. Only use TITAN 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Pressure setting too low. 	<ol style="list-style-type: none"> 1. Turn pressure control knob clockwise to increase.
H. Pump over-pressurizes and will not shut off.	<ol style="list-style-type: none"> 1. Pressure switch defective. 2. Transducer defective. 	<ol style="list-style-type: none"> 1. Take unit to a Titan authorized service center. 2. Take unit to a Titan authorized service center.

11 SERVICING

11.1 GENERAL SERVICING

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

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

11.2 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. Titan recommends replacing high-pressure hoses after 6 years.

12 REPAIRS AT THE UNIT



Switch the unit OFF.

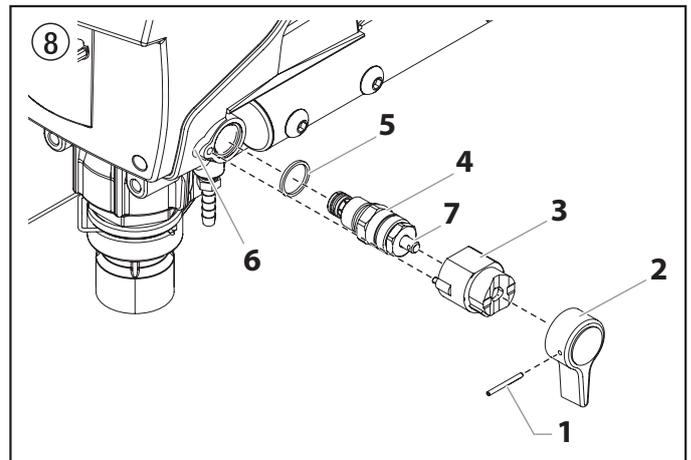
Before all repair work: Unplug the power plug from the outlet.

12.1 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 (Fig. 8, Item 1) 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.

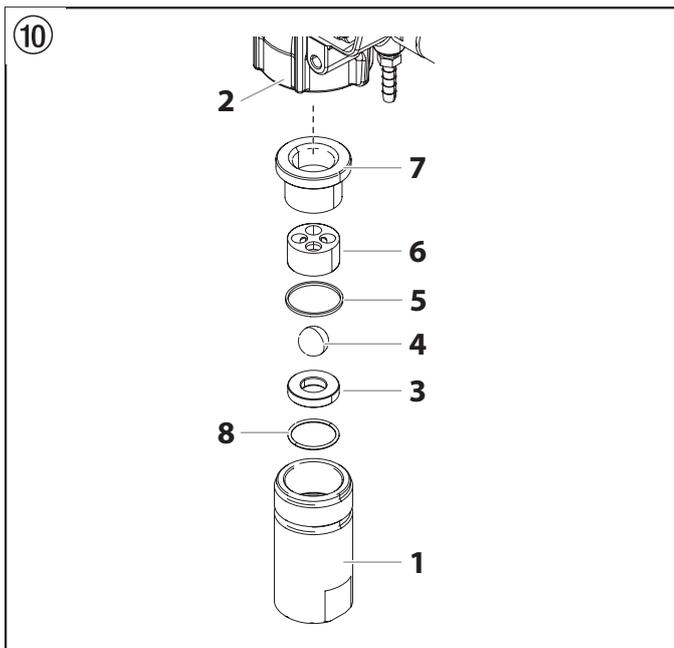
12.2 INLET AND OUTLET VALVE

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.



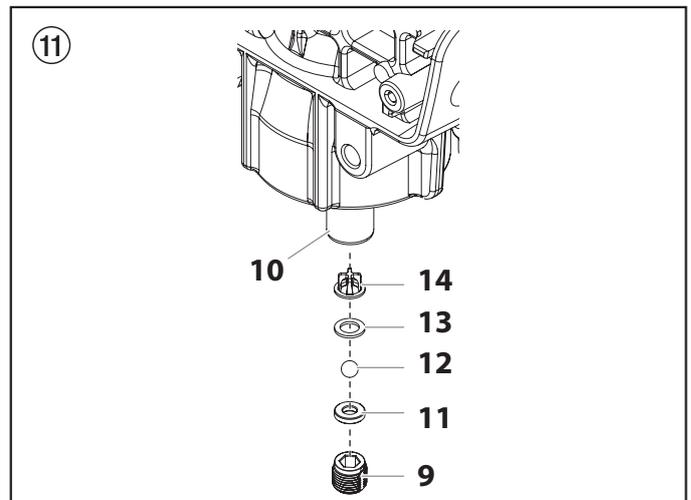
Danger of crushing - do not reach with the fingers or tool between the moving parts.

2. Switch the unit ON and then OFF so that the piston rod is positioned in the lower stroke position.
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. Unscrew the inlet valve housing (Fig. 10, Item 1) from the pump manifold.
8. Remove the lower ball guide (6), lower seal (5), inlet valve ball (4), inlet valve seat (3) and O-ring (8).
9. 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.
10. Unscrew outlet valve housing (Fig. 11, Item 9) from the piston (10) with adjusting wrench.

11. Remove the upper ball guide (14), crush washer (13), outlet valve ball (12), and outlet valve seat (11).
12. 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.
13. 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).



TESTING OF THE UNIT

For safety reasons, we would recommend having the device checked by an expert as required but at least every 12 months to ensure that it can continue to operate safely.

In the case of unused devices, the check can be postponed until they are next started up.

All (potentially deviating) national inspection and maintenance regulations must also be observed.

If you have any questions, please contact the customer service team at Titan.

IMPORTANT INFORMATION ON PRODUCT LIABILITY

According to an EU directive, the manufacturer is only liable without limitation for faults in the product if all parts come from the manufacturer or have been approved by the manufacturer and have been mounted to the device and are operated properly. If third-party accessories or spare parts are used, the manufacturer is exonerated wholly or partly from his/her liability if use of the third-party accessories or spare parts have caused a defect in the product. In extreme cases, the relevant authorities can completely prohibit using the entire device.

With original Titan accessories and spare parts, compliance with all safety regulations is guaranteed.

NOTE ON DISPOSAL

In observance of the European Directive 2012/19/EU 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!



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

EU Declaration of conformity

We declare under sole responsibility that this product conforms to the following relevant stipulations:

2006/42/EC, 2014/30/EU, 2011/65/EU, 2012/19/EU

Applied harmonised norms:

EN 62841-1, EN 1953, EN IEC 55014-1, EN IEC 55014-2, EN IEC 61000-3-2, EN 61000-3-3

The EU declaration of conformity is enclosed with the product. If required, it can be re-ordered using order number **2389923**.

3 + 2 YEAR GUARANTEE ON THIS TITAN PRODUCT

(Status 03.03.2022)

TITAN exclusively provides the commercial buyer who has purchased the product from an authorised specialist dealer (hereinafter referred to as the „Customer“) with a guarantee for the products listed on the Internet at <https://go.titan-tool-international.com/warranty> in addition to the statutory warranty regulations, unless there is a guarantee exclusion.

The warranty period for TITAN products (devices) is 36 months and begins with the date of purchase of the initial purchase. This guarantee period is extended by a further 24 months if the product is registered within 28 days of purchase on the Internet at <https://go.titan-tool-international.com/registration>.

In cases of commercial rental, industrial use (e.g. use in shift operation) or equivalent use, the guarantee period is 12 months due to the significantly higher load. We reserve the right to carry out a check in individual cases and refuse the guarantee where necessary.

If any material, machining or performance defects are identified in the device within the guarantee period, then the guarantee claims must be made immediately and within a period of no more than 2 weeks following discovery of the defect.

The detailed guarantee conditions can be obtained on request from our authorised TITAN partners (see website or operating instructions) or in text form on our website:

<https://go.titan-tool-international.com/warranty-conditions>



Subject to modifications

UKCA Declaration of conformity

We declare under sole responsibility that this product conforms to the following relevant regulations:

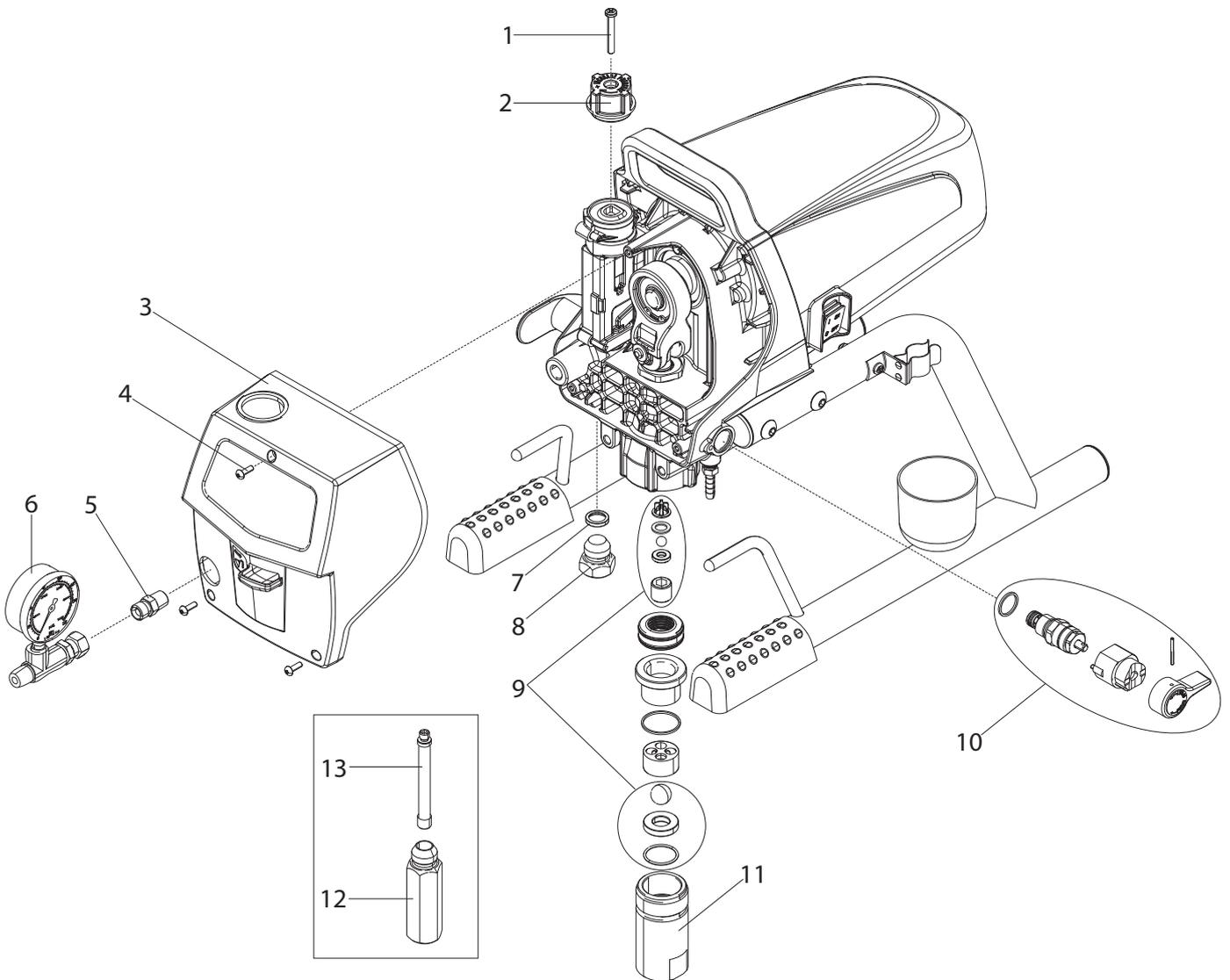
Supply of Machinery (Safety) Regulations 2018
Electromagnetic Compatibility Regulations 2016
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
The Waste Electrical and Electronic Equipment Regulations 2013

Applied harmonised standards

BS EN 62841-1, BS EN 1953, BS EN IEC 55014-1,
BS EN IEC 55014-2, BS EN IEC 61000-3-2, BS EN 61000-3-3

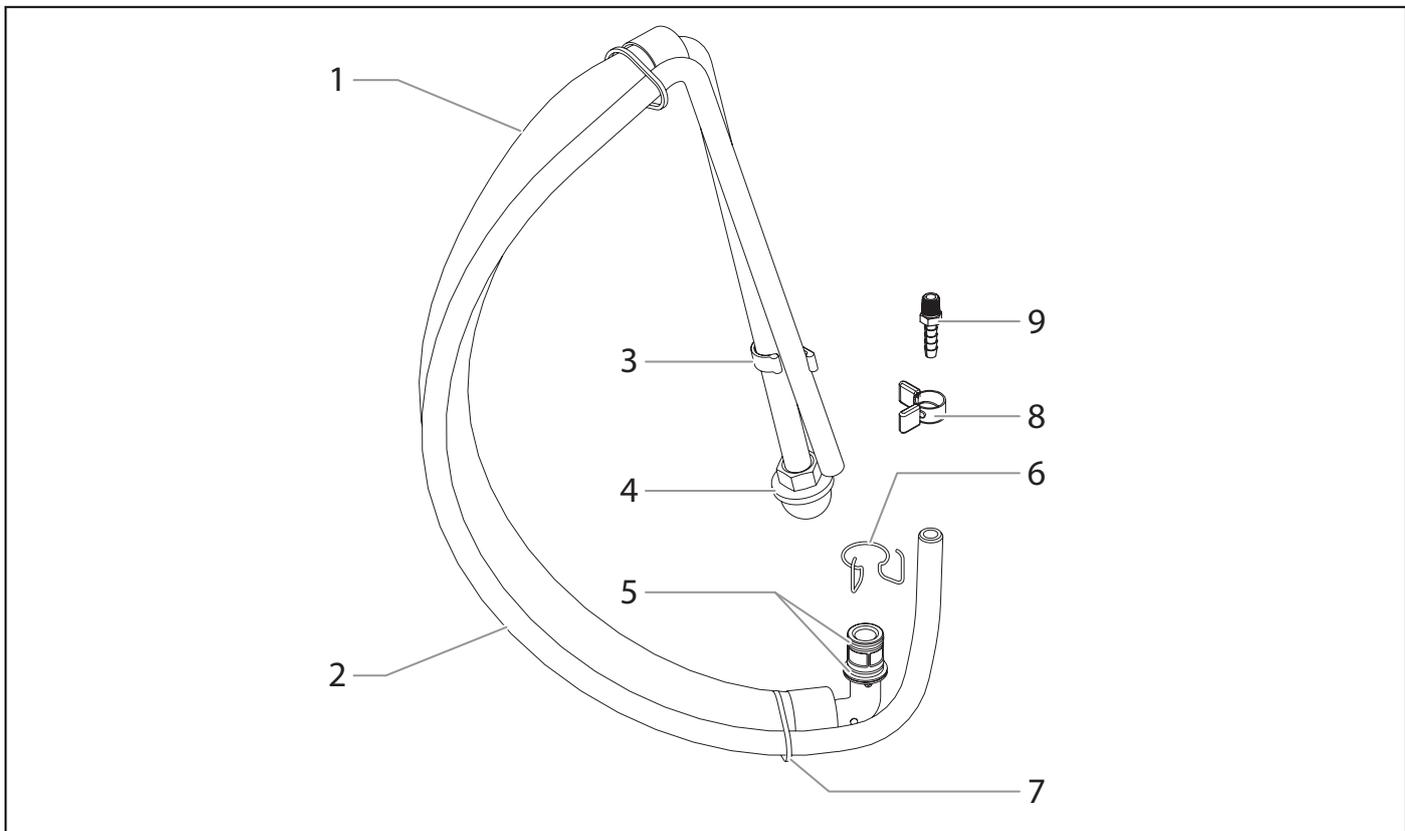
PART NO.	DESCRIPTION		
SPRAY GUNS			
0538005	RX-80 with TR-1 517 Tip		
0538020	RX-Pro with TR-1 517 Tip		
0550060	S-3 spray gun		
0550070	S-5 spray gun		
0289013	M-4 spray gun		
0538217	RX-Pro, small grip		
0538218	RX-Pro, medium grip		
0538219	RX-Pro, large grip		
SPRAY TIPS AND ACCESSORIES			
662-XXX	SC-6+ Tip*		
330-XXX	TR-1 HEA Tip*		
695-XXX	TR-1 Tip*		
692-XXX	TR-2 Tip*		
671-XXX	Fine Finish Tip*		
0289228	Tip Guard		
651-139	Tip Swivel		
661-020	Tip seat and seal kit (5 pack)		
FILTERS			
0089957	Coarse Mesh Filter (Green)		
0089958	Medium Mesh Filter (White)		
0089959	Fine Mesh Filter (Yellow)		
0089960	Extra Fine Mesh Filter (Red)		
EXTENSIONS			
651-070	6" (15 cm) Tip Extension		
651-071	12" (30 cm) Tip Extension		
651-072	18" (45 cm) Tip Extension		
651-073	24" (60 cm) Tip Extension		
310-390	3' (1 m) Extension Pole		
310-391	6' (2 m) Extension Pole		
AIRLESS HOSE AND ACCESSORIES			
286498	1/4"x 15 m Airless Hose		
316-506	3/16" x 1.5 m Whip Hose		
490-012	1/4" x 1/4" hose connector		
0508239	High Pressure Fluid Gauge		
LUBRICANTS AND CLEANERS			
2412657	Liquid Shield™ 946 ml		
314-480	Piston Lube™, 240 ml		
700-926	Piston Lube™, 946 ml		
0297055	Pump Shield™, 355 ml		
*	Go to www.titantool-international.com for tip sizes		

EN MAIN ASSEMBLY



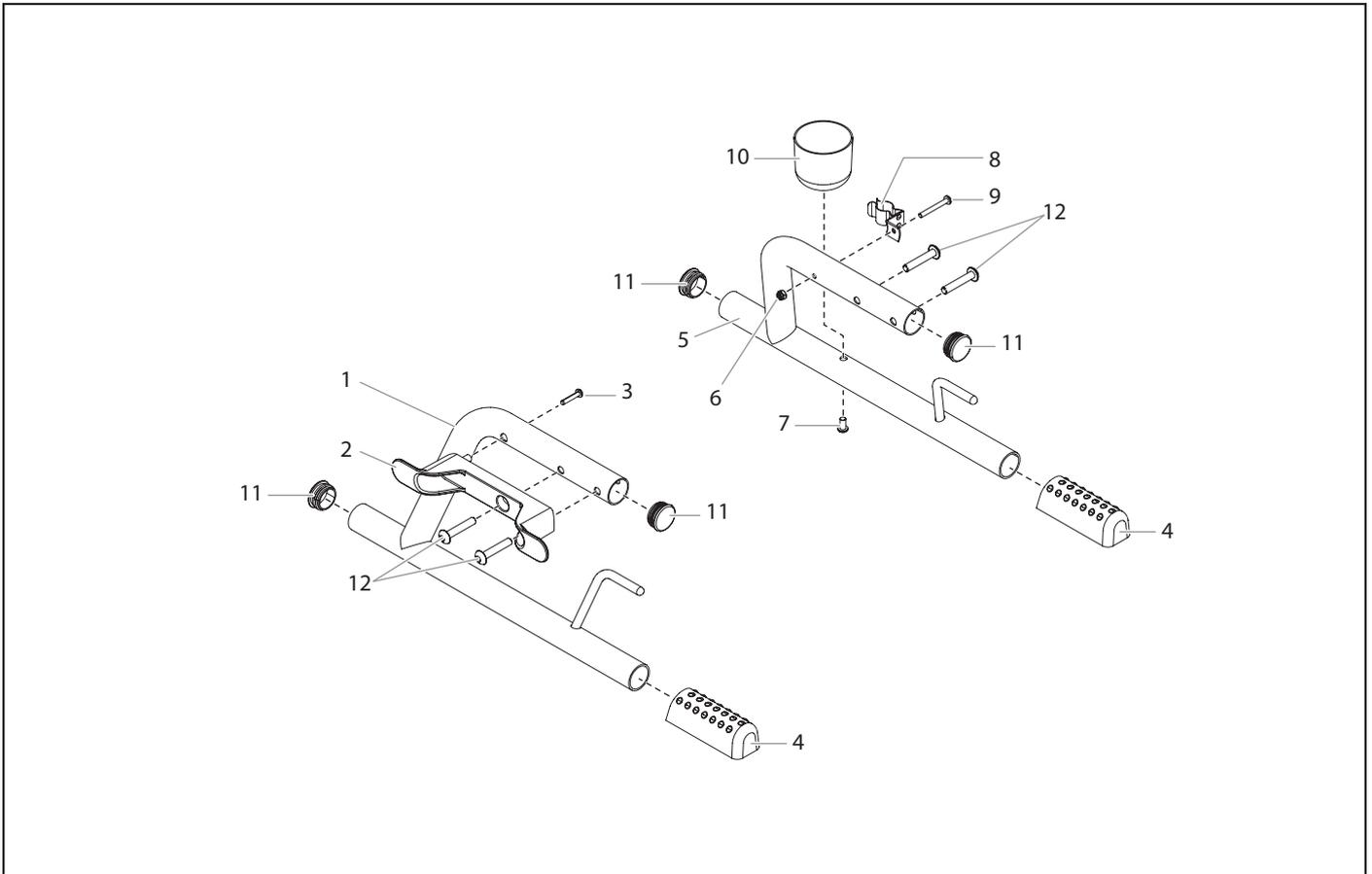
Pos.	PS 3.20	Description		
1	9805300	Screw		
2	0532355A	Pressure control knob		
3	0532222A	Front cover		
4	0509218	Screw (3)		
5	227-006	Outlet fitting		
6	2383995 340257	Pressure gauge Pressure gauge (Australia)		
7	560-038	Seal		
8	0532357	Plug		
9	0532917	Valve seat kit		
10	0507254	PRIME/SPRAY valve assembly		
11	704-054	Inlet valve housing		
Optional • Optional • Optioneel				
12	0532360A	Filter housing		
13	540-030	Filter		

EN SUCTION SYSTEM



Pos.	PS 3.20	Description		
1	0551706	Siphon tube assembly (includes items 1-8)		
2	0558659A	Return tube		
3	0279459	Clip		
4	0295565	Inlet screen		
5	9871105	O-ring		
	704-109	O-ring (for hot solvents, optional)		
6	9822526	Retaining clip		
7	9850638	Tie wrap		
8	0327226	Return tube clamp		
9	0551530	Return tube fitting		

EN STAND ASSEMBLY



Pos.	PS 3.20	Description		
1	0532238A	Leg, right		
2	0532356	Cord wrap		
3	700-642	Screw		
4	805-342	Foot (2)		
5	0532239A	Leg, left		
6	0509856	Nut		
7	9805230	Screw		
8	806-216	Clip		
9	704-243	Screw		
10	700-1041	Drip cup		
11	0294635	Plug (4)		
12	9805348	Screw (4)		



TITAN[®]

IMPACT[™] 400

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