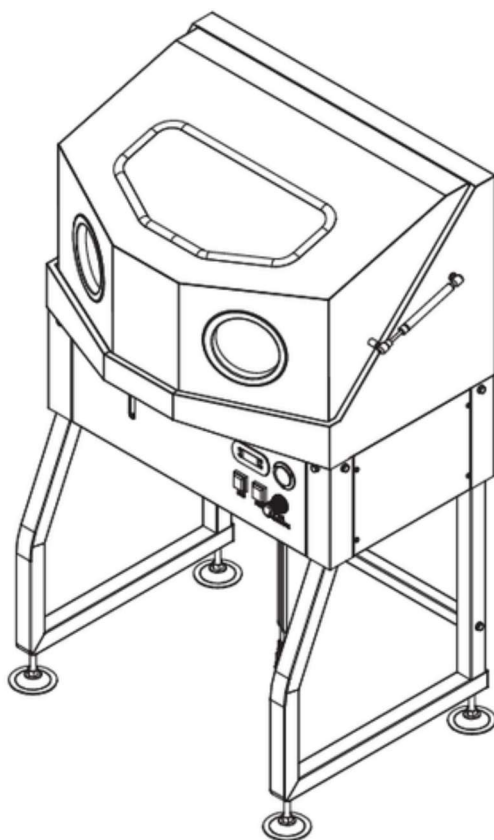




User Manual
Parts washer with Heating System
Type PW160



Read this manual carefully before using the parts cleaner.

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1. Introduction

The PW160 is a closed parts cleaner with an integrated heating system, designed for cleaning parts with a suitable cleaning fluid.

The device is equipped with an enclosed cleaning cabin that provides protection against splashing cleaning fluid and helps limit the spread of fumes. Thanks to the heating system, the cleaning fluid can be heated to a maximum of 50 °C, thereby improving the cleaning performance.

The PW160 features a pneumatic cleaning gun, a compressed air connection for drying parts, integrated LED lighting, and a fan. The cleaning process can be monitored through the transparent viewing window.

The built-in safety gloves make it possible to clean parts without opening the cabin during use.

1.1 Intended use

The PW160 is intended for cleaning parts in a closed cleaning cabinet using suitable cleaning fluids and compressed air.

The device may only be used within the specified technical specifications and according to the instructions in this manual.

1.2 Important information

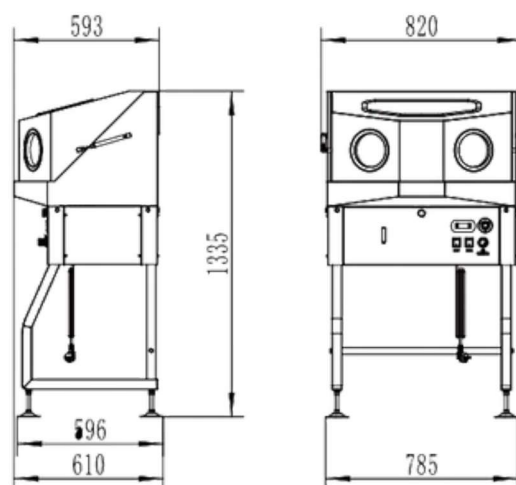
Read this manual carefully before assembling, connecting, or using the device.

Keep the manual in a safe and accessible place so that it can be consulted later.

Improper use or failure to follow safety instructions may result in personal injury, damage to the device, or property damage.

2. Technical data

Description	Specification
Model	PW160
Product type	Enclosed parts washer with heating system
Supply voltage	230–240 V AC
Frequency	50 Hz
Heating power	1200 W
Maximum fluid temperature	50 °C
Cleaning fluid capacity	8–14 litres
Cleaning fluid	Magic (water-based)
Mixing ratio	1:10
Operating pressure	4.8–8.3 bar
Required compressed air	4.8–8.3 bar at 142 l/min
Circulation flow rate	0.8 l/min
Compressed air connection	Ø 8 mm
Working chamber dimensions	736 × 559 × 452 mm
Overall dimensions	820 × 610 × 1335 mm
Grid dimensions	679 × 358 mm



3. Safety regulations

3.1 General safety instructions

Read all safety instructions before using the device.

- Place the device on a stable, flat, and firm surface. The deviation from horizontal must not exceed 2°.
- Keep the workplace clean, tidy, and free of obstacles.
- Keep children and unauthorized persons away from the device.
- Use the device exclusively for what it was designed for.
- Use only suitable cleaning fluids and associated hoses approved by the manufacturer.
- Check the built-in safety gloves before each use. Do not use the device if they are damaged.
- Switch off the device and disconnect the power supply before performing maintenance or repairs.
- Ensure that the heating switch is turned off before starting the device.
- Never switch on the heater when less than 8 liters of cleaning fluid are present.
- Do not use the device when the cleaning cabinet lid is open.
- Never set the cleaning temperature higher than 50 °C.

3.2 Safe use of cleaning fluids

Use only a water-based cleaner. We recommend Magic with a ratio of 1:10.

Before use, check whether the cleaning fluid is suitable for heated parts cleaners and follow the safety instructions of the cleaning fluid manufacturer.

Do not use liquids whose properties or suitability are unknown.

3.3 Safe use of the heating system

WARNING – Danger due to high temperatures

The cleaning fluid can reach a temperature of 50 °C during use.

Avoid direct contact with heated cleaning fluid and hot parts.

Check the fluid level before switching on the heater.

Do not use the heater when the fluid level is below the minimum.

Switch off the heating after use.

The PW160 is equipped with a liquid level switch designed to prevent the heating element from switching on when there is insufficient cleaning fluid.

3.4 Safe use of compressed air

WARNING – Danger from compressed air

- Use the device exclusively within the prescribed pressure range of 4.8 - 8.3 bar.
- Check the compressed air hoses and connections before use.
- Ensure that all connections are correctly secured.
- Never direct the compressed air jet at people.
- Disconnect the compressed air supply before performing maintenance.
- The device switches off when not in use.

3.5 Electrical safety

- Check whether the supply voltage corresponds to the data on the nameplate.
- Do not use the device if the power cable or plug is damaged.
- Prevent electrical connections from coming into contact with cleaning fluid.
- Switch off the device and unplug it from the power outlet before performing maintenance.
- Have work on electrical components carried out by expert personnel.

4. Symbols



ISO 7010 - M002

Read the manual



ISO 7010 - M009

Gloves required



ISO 7010 - M004

Eye protection required



ISO 7010 - M016

Face mask mandatory



ISO 7010 - M003

Ear protection required



ISO 7010 - M006

Unplug to perform maintenance



ISO 7010 - W001

General warning



Electrical hazard



ISO 7010 - W017

Hot surface



ISO 7010 - W002

Explosion hazard



ISO 7010 - W071

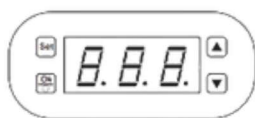
Hazardous substances / vapors

5. Product description and controls

The PW160 consists of an enclosed cleaning cabin with an integrated liquid tank and heating system.

- The main components are:
- Enclosed cleaning booth with transparent viewing window.
- Integrated safety gloves.
- Pneumatic cleaning gun.
- Compressed air connection for drying parts.
- Digitally adjustable temperature controller.
- Heating element for the cleaning fluid.
- LED lighting and fan.
- Liquid level indicator.
- Gas springs to support the cabin lid.
- Adjustable support legs.

5.2 Control Panel



Digital Temperature Controller: Adjust the setting temperature. (Details in temperature control instruction).



Air Regulator: Adjust appropriate air pressure based on the parts type you are washing.



Heating On/Off Switch
:Turn on the switch for solvent heating.

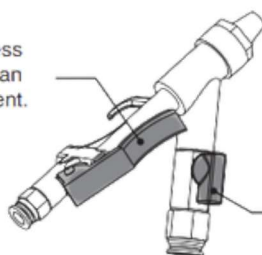


Power Supply On/Off Switch:
Turn on the switch for LED light & Ventilated fan electric supply



Air Pressure Gauge: indicate air inlet pressure.

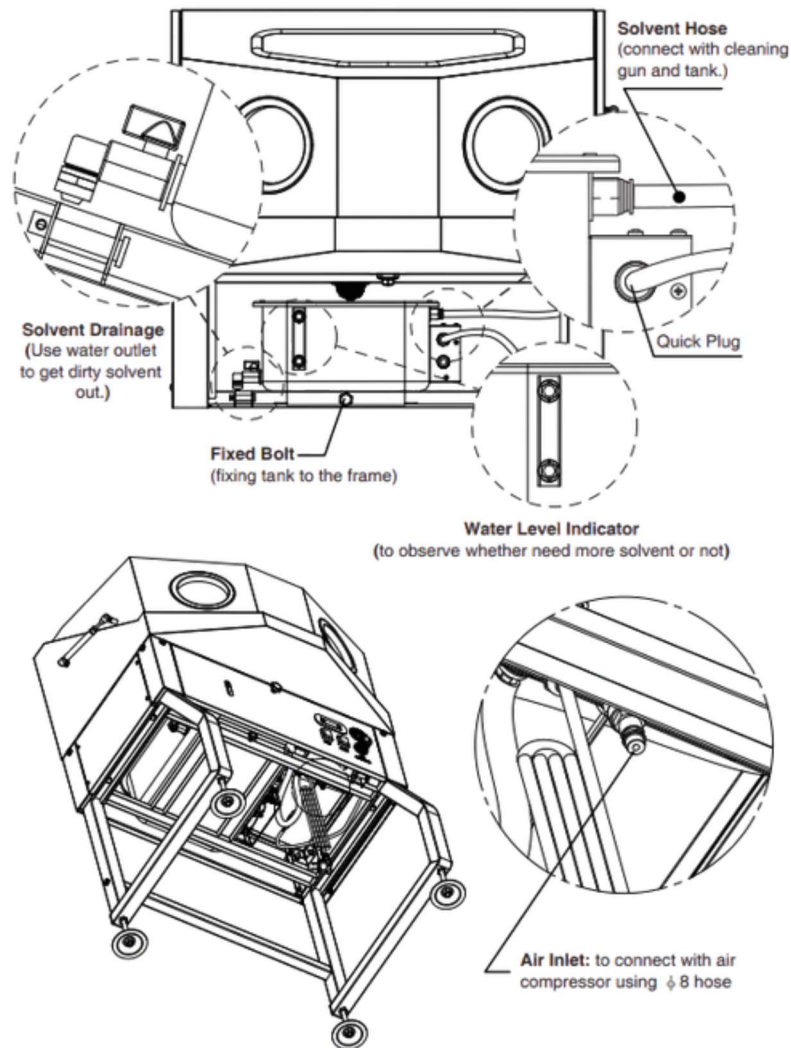
Cleaning Gun Switch: Press cleaning gun switch to clean parts with water/solvent.



Air On/Off Switch: Turn on the black switch for air drying.

Component	Function
Digital Temperature Controller	Sets and displays the temperature of the cleaning fluid.
Air Pressure Regulator	Adjusts the desired air pressure.
Pressure Gauge	Displays the incoming air pressure.
Heating On/Off Switch	Switches the heating system on and off.
Main Power Switch	Switches the power supply for the LED lighting and ventilation fan on and off.
Cleaning Gun Switch	Activates the cleaning function using cleaning fluid.
Air On/Off Switch	Activates the compressed air function for drying parts.

5.3 Connections and other parts



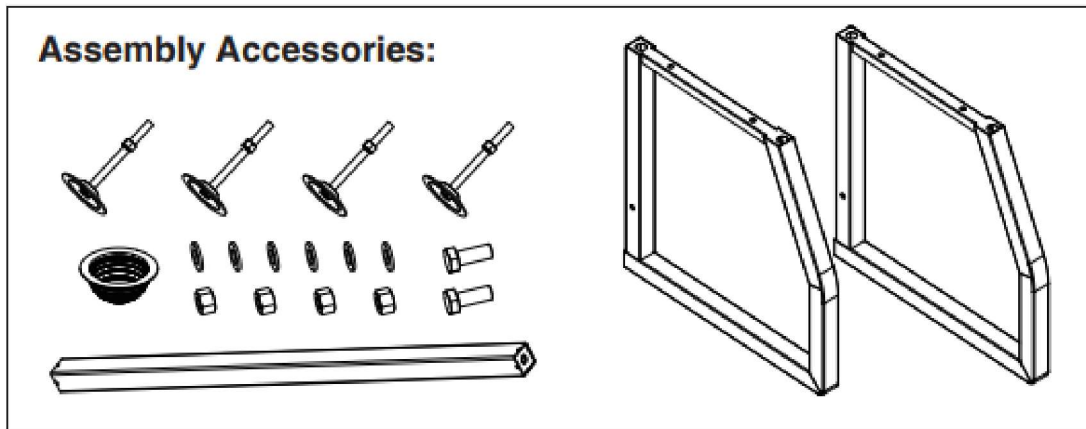
Component	Description
Cleaning Fluid Hose	Connects the fluid tank to the cleaning gun.
Fluid Drain	Used to drain used cleaning fluid.
Quick Connector	Connection as shown in the product illustration.
Fixing Bolt	Secures the fluid tank to the frame.
Fluid Level Indicator	Allows the fluid level to be checked.
Compressed Air Inlet	Connection for the air compressor using an Ø 8 mm hose.

6. Montage

6.1 Preparation

Before assembly, check that all parts and fasteners are present and undamaged. Perform the assembly on a stable surface and ensure sufficient workspace.

6.2 Assembly of the support legs



Step 1 – Mount support legs

Carefully lay the cleaning cabin on its side. Attach the left and right support legs (5 and 6) to the cabin with four M12 bolts and flat washers.

Step 2 – Mount reinforcement bracket

Attach the reinforcement bracket (7) between the support legs with two M10 bolts and flat washers.

Step 3 – Mount leveling feet

Mount the four leveling feet (15) on the underside of the support legs.

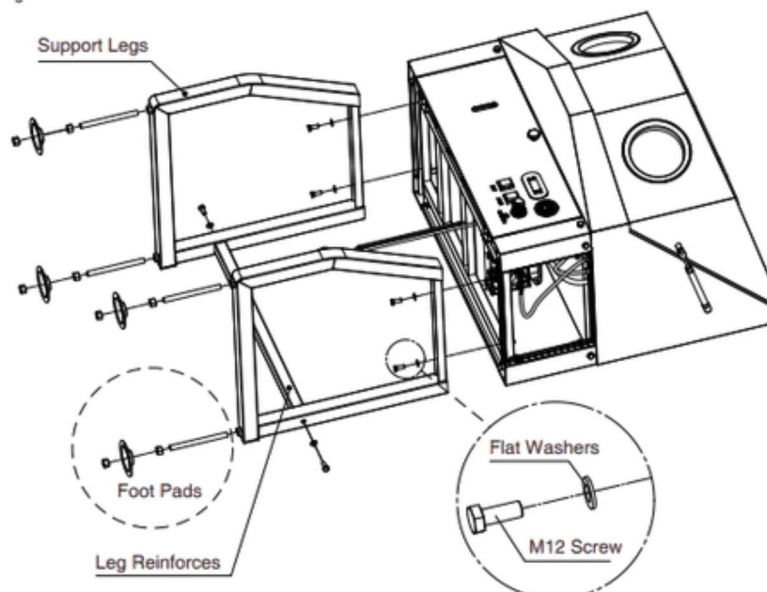
Step 4 – Place the device upright

Carefully set the device upright and adjust the height of the leveling feet.

- Ensure that the device is standing stably and that the deviation from the horizontal does not exceed 2°.

Step 5 – Check confirmations

Check all assembled parts and tighten the mounting bolts securely.



7. Preparation for use

7.1 Add cleaning fluid

1. Check if the device is switched off.
2. Open the lid of the cleaning cabin.
3. Fill the liquid tank with suitable cleaning fluid through the grate.
4. Fill the tank with a minimum of 8 liters and a maximum of 14 liters.
5. Check the fluid level using the level indicator.
6. Close the cabin lid.

CAUTION: Never switch on the heater when less than 8 liters of cleaning fluid are present.

7.2 Connecting compressed air

1. Check if the compressed air supply is switched off.
 2. Connect a compressed air hose with a diameter of 8 mm to the quick connector on the underside of the device.
 3. Check if the connection is securely fastened.
 4. Open the compressed air supply.
 5. Set the desired working pressure with the pressure regulator.
- The permissible working pressure is 4.8–8.3 bar.

7.3 Connecting the electrical power supply

1. Check if the main switch and heating switch are switched off.
 2. Check if the supply voltage matches the nameplate.
 3. Plug the plug into a suitable, grounded outlet.
 4. Switch on the main switch.
- The LED lighting and fan are supplied with electrical power in this way.

8. Ministry

8.1 Setting cleaning temperature

1. Switch on the power supply.
 2. Press SET briefly on the digital temperature controller.
 3. Use the arrow keys ▲ and ▼ to set the desired temperature.
 4. Press OK to confirm the set temperature.
 5. Switch on the heating with the heating switch.
- The current temperature is displayed on the screen.

NOTE: Never set the temperature higher than 50 °C.

8.2 Cleaning parts

1. Open the cabin lid.
2. Place the parts to be cleaned in the cleaning booth.
3. Close the lid completely.
4. Put your hands into the integrated safety gloves.
5. Activate the cleaning function with the switch on the cleaning gun.
6. Clean the parts using the cleaning gun.
7. Check the cleaning result through the viewing window.

WARNING: Do not use the cleaning gun when the cabin lid is open.

8.3 Drying parts

1. Turn off the cleaning function.
2. Activate the compressed air function using the designated switch.
3. Use the compressed air to remove residual cleaning fluid from the parts.
4. Switch off the compressed air function after drying.

8.4 Turn off device

1. Turn off the cleaning gun.
 2. Turn off the heating.
 3. Switch off the main switch.
 4. Shut off the compressed air supply.
 5. Unplug the device from the power outlet when it is no longer in use.
- Allow heated parts and cleaning fluid to cool sufficiently before touching or removing them.

9. Digital temperature controller

The PW160 is equipped with a digital temperature controller that allows the temperature of the cleaning fluid to be set and monitored.

The temperature controller features the following control buttons:

Key	Function
SET	Open the temperature setting or the programming menu.
▲	Increase a setting value or select a parameter.
▼	Lowering a setpoint or selecting a parameter.
OK	Confirm the temperature setting.

9.1 Setting the desired temperature

1. Press SET briefly.
 2. The temperature setting appears on the display.
 3. Use ▲ or ▼ to select the desired temperature.
 4. Press OK to save the setting.
- The temperature may not exceed 50 °C.

9.2 Open advanced settings

1. The temperature controller features a programming menu with parameters P0 through P8.
 2. Press and hold SET for a few seconds until P0 appears on the display.
 3. Use ▲ or ▼ to select the desired parameter.
 4. Press SET briefly again to open the selected parameter.
 5. The corresponding setting value appears on the display.
- The exact procedure for saving changed parameter values still needs to be confirmed.

9.3 Overview of parameter codes

Code	Function	Setting Range
P0	Heating or Cooling	H / C
P1	Temperature Differential for Restart	0.1–30
P2	Not Applicable	—
P3	Not Applicable	—
P4	Temperature Calibration	-10 to +10 °C
P5	Start-up Delay	0–10 minutes
P6	Overheating Alarm	-50 to +110 °C
P7	Settings Lock	ON / OFF
P8	Default Settings	ON / OFF

9.4 Explanation of the parameters

P0 – Heating or cooling function

The temperature controller supports two operating modes: H for heating and C for cooling. The PW160 has a heating function only. Therefore, P0 must remain set to H.

P1 – Temperature difference

This sets the temperature difference at which the heating is switched back on after the set temperature has been reached.

P2 and P3 – Not applicable

No function is specified for these parameters in the original manual.

P4 – Temperature calibration

This allows a discrepancy between the displayed and the actual temperature to be corrected.

P5 – Switching-on delay

This allows a delay to be set before the relevant control output is activated.

P6 – Overheating alarm

This sets the alarm temperature. The manufacturer's manual does not state how the alarm is displayed or what security action follows.

P7 – Lockout

This allows the settings to be locked or unlocked.

P8 – Default settings

According to the manufacturer's manual, this parameter relates to the default settings of the temperature controller. The exact operation is not described.

PLEASE NOTE: The advanced parameters are intended for configuring the temperature controller. Change these settings only when the function and consequences are known. Incorrect settings can affect the operation of the heating system.

10. Maintenance and cleaning

10.1 General maintenance instructions

Regular maintenance is necessary to maintain the proper functioning of the PW160.

WARNING: Switch off the device, unplug it from the power outlet, and disconnect the compressed air supply before performing maintenance or cleaning.

Allow the cleaning fluid and the device to cool down sufficiently before performing maintenance work.

10.2 Clean the filter

Clean the cleaning fluid filter regularly to prevent blockages.

1. Turn off the device.
2. Disconnect the electrical power supply and compressed air supply.
3. Check the filter for dirt and blockages.
4. Clean the filter if necessary.
5. Replace the filter correctly before using the device again.

10.3 Replace cleaning fluid

Replace the cleaning fluid when it is contaminated or has insufficient cleaning power.

1. Switch off the device and let the cleaning fluid cool down.
 2. Disconnect the electrical power supply and compressed air supply.
 3. Place a suitable drip tray under the liquid drain.
 4. Open the drain and let the used cleaning fluid drain from the tank.
 5. Close the drain after the tank has been emptied.
 6. Fill the tank with suitable, new cleaning fluid.
- Dispose of the used cleaning fluid in accordance with the applicable regulations.

10.4 Cleaning the liquid tank

The fluid tank can be removed for thorough cleaning.

1. Empty the fluid tank completely.
 2. Loosen the Ø 12 mm connection and the mounting bolt.
 3. Carefully remove the tank from the device.
 4. Clean the tank and remove any remaining dirt.
 5. Replace the tank and attach all connections and mounting materials.
- After installation, check that the tank is correctly secured and that the connections are not leaking.

11. Solving problems

Problem	Possible Cause	Solution
Cleaning gun delivers only air and no cleaning fluid.	Cleaning switch is turned off.	Switch on the cleaning function.
Cleaning gun delivers only air and no cleaning fluid.	Insufficient cleaning fluid.	Refill the fluid tank.
Cleaning gun delivers only air and no cleaning fluid.	Suction hose is blocked.	Check and clean the suction hose.
LED lighting does not work, but the fan operates.	LED lighting is defective.	Replace the LED lighting.
Fan does not work, but the LED lighting operates.	Fan is defective.	Check the connection and replace the fan if necessary.
Temperature controller displays an incorrect reading.	Connector is not properly connected.	Check the electrical connection.
Cleaning fluid does not reach the set temperature.	Insufficient cleaning fluid.	Refill the fluid tank.
Cleaning fluid does not reach the set temperature.	Heating switch is turned off.	Switch on the heating system.
Cleaning fluid does not reach the set temperature.	Heating element is defective.	Have the heating element inspected and replaced if necessary.

WARNING: Have repairs to electrical components and the heating system carried out exclusively by qualified personnel.

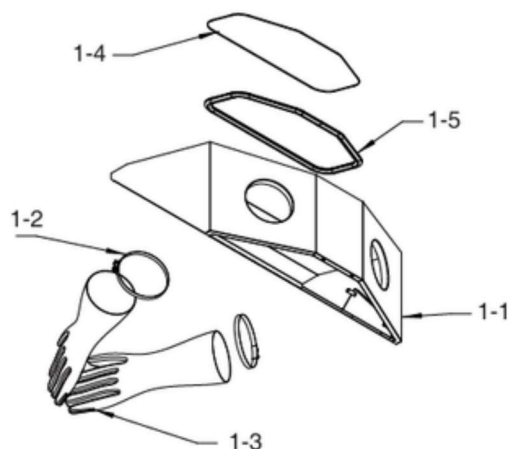
12. Parts list

No.	Code	Description	Qty
1	PPW160-01	Cabinet Cover Assembly	1
2	PPW160-02	Left Front Support	1
3	PPW160-03	Side Support	2
4	PPW160-04	Right Front Support	1
5	PPW160-05	Left Support Leg	1
6	PPW160-06	Right Support Leg	1
7	PPW160-07	Leg Reinforces	1
8	PPW160-08	Cabinet Holder	1
9	PPW160-09	Front Panel Assembly	1
10	PPW160-10	Upper Rod	2
11	PPW160-11	Lower Rod	2
12	PPW160-12	Right Protective Shield	1
13	PPW160-13	Left Protective Shield	1
14	PPW160-14	Back Protective Shield	1
15	PPW160-15	Foot Pad	4
16	PPW160-16	Short Pin	2
17	PPW160-17	M5×10 Knob Bolt	1
18	PPW160-18	M12×150 Fully Threaded Stud	4
19	PPW160-19	M8×18 Hexagon Bolt	18
20	PPW160-20	M12 Nut	12

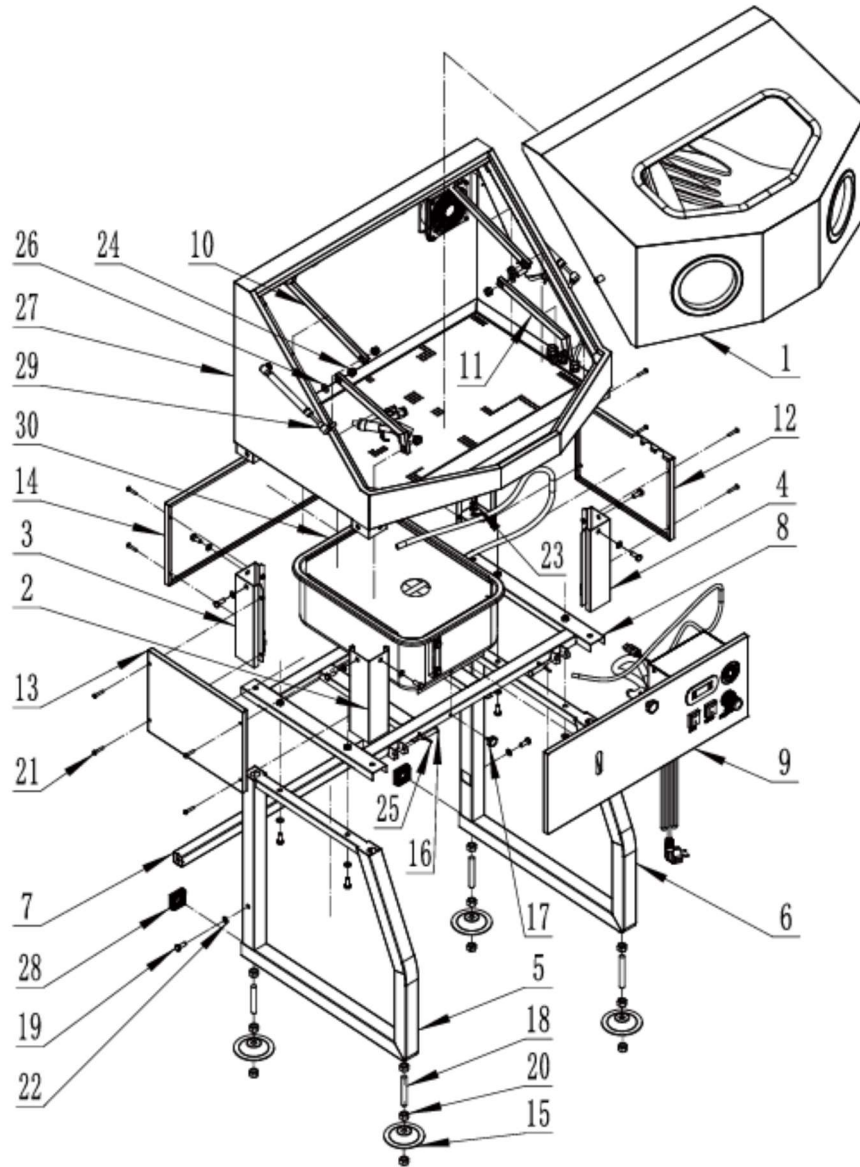
21	PPW160-21	M5×25 Screw	12
22	PPW160-22	Ø8×Ø16 Flat Washer	18
23	PPW160-23	M8 Washer	4
24	PPW160-24	M10 Lock Nut	8
25	PPW160-25	4×32 Cotter Pin	2
26	PPW160-26	Ø10×Ø20 Flat Washer	4
27	PPW160-27	Cabinet Assembly	1
28	PPW160-28	Tube Plug	2
29	PPW160-29	Air Spring	2
30	PPW160-30	Cleaning Tank Assembly	1

12.1 Components of the lid construction

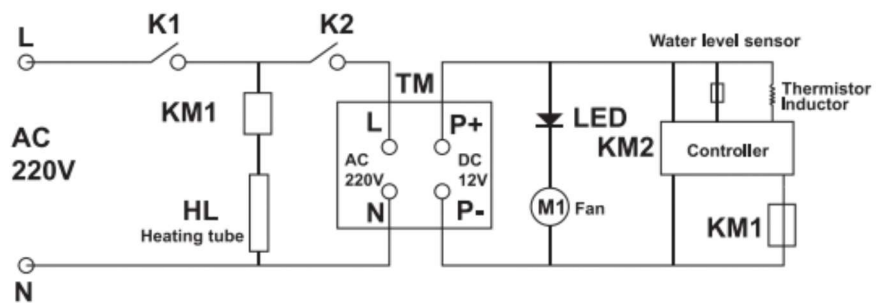
No.	Code	Description	Qty
1-1	PPW160-31	Cabinet Cover	1
1-2	PPW160-32	Ø140 Clamp	2
1-3	PPW160-33	Gloves	1
1-4	PPW160-34	Plexiglass	1
1-5	PPW160-35	Sealing Strip	1



13. Exploded view drawings



14. Wiring Diagram



15. Warranty

Warranty Terms and Conditions

1. This warranty shall enter into force on the date stated on the original purchase invoice and shall remain valid for a period of twelve (12) months.
2. This warranty is non-transferable unless prior written consent has been obtained from the supplier.
3. Warranty claims will not be accepted without presentation of the original purchase invoice.
4. This warranty shall apply exclusively provided that the product has been used in full compliance with the instructions contained in the user manual and solely for its intended purpose.
5. No alterations, modifications, or technical changes may be made to the product.
6. This warranty shall be void in the event of improper, negligent, or incorrect use of the product.
7. Transportation, shipping, and related costs are expressly excluded from this warranty.
8. Any repair work must be carried out exclusively by the supplier or an authorised service partner. Repairs performed by unauthorised third parties shall immediately void all warranty rights.
9. Repairs performed during the warranty period shall not result in an extension of the original warranty period. However, a separate warranty period of three (3) months shall apply to the repaired components, provided that the original warranty period has expired.
10. All maintenance and servicing operations described in the user manual must be performed in a timely and proper manner. Failure to do so may result in the warranty becoming void.
11. Warranty claims may only be submitted to the original point of sale at which the product was purchased.

16. EU Declaration

EU/EG-verklaring van overeenstemming EU/EC Declaration of Conformity

Mammuth PW160 - Onderdelenreiniger met verwarmingssysteem / Part washer with heat system

1. Fabrikant / Manufacturer

Valkenpower BV Haverkamp 11 6051 AC Maasbracht Nederland / The Netherlands	Verantwoordelijkheid / Responsibility Deze verklaring van overeenstemming wordt afgegeven onder de uitsluitende verantwoordelijkheid van de fabrikant. This declaration of conformity is issued under the sole responsibility of the manufacturer.
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2. Identificatie van de machine / Identification of the machinery

Merk / Brand	Mammuth	Model / Type	PW160
Omschrijving / Description	Onderdelenreiniger met verwarmingssysteem / Part washer with heat system	Serienummer / Serial number	_____

3. Verklaring / Declaration

Hierbij verklaren wij dat de hierboven beschreven machine, in de toestand waarin deze op de markt wordt gebracht, voldoet aan de toepasselijke bepalingen van de hieronder genoemde Europese harmonisatiewetgeving.

We hereby declare that the machinery described above, in the condition in which it is placed on the market, complies with the applicable provisions of the European Union harmonisation legislation listed below.

4. Toepasselijke wetgeving / Applicable legislation

2006/42/EG	Machinerichtlijn / Machinery Directive 2006/42/EC
2014/35/EU	Laagspanningsrichtlijn / Low Voltage Directive 2014/35/EU
2014/30/EU	EMC-richtlijn / Electromagnetic Compatibility (EMC) Directive 2014/30/EU
2011/65/EU	RoHS-richtlijn / RoHS Directive 2011/65/EU

Toegepaste normen / Applied standards

EN ISO 12100; EN 60204-1; EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019;

EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A2:2019+A14:2019+A15:2021

5. Ondertekening / Signature

Plaats en datum / Place and date Maasbracht, Nederland / The Netherlands 29-04-2026	Ondertekend voor en namens / Signed for and on behalf of Valkenpower BV
Naam / Name B.A.H. Valkenburg Functie / Function Directeur / Director	Handtekening / Signature 