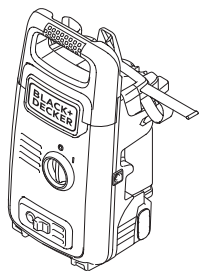
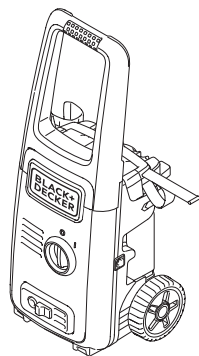


BLACK+ DECKER™

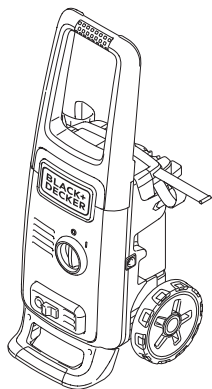
High Pressure Washer | 高压清洗机 | 고압 세척기 |
เครื่องฉีดน้ำแรงดันสูง | Mesin Pencuci Bertekanan |
Máy phun rửa áp lực



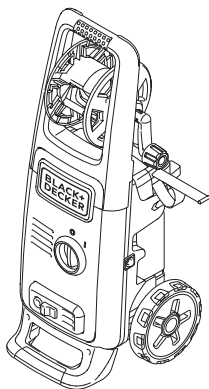
BW13



BW14, BW15



BW16



BW17

English	07	ภาษาไทย	26
简体中文	14	BAHASA INDONESIA	32
한국어	20	TIẾNG VIỆT	39

WARNING: READ INSTRUCTIONS MANUAL BEFORE USING PRODUCT.

警告! 未经阅读本说明书请勿使用本器具。

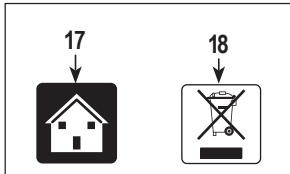
경고: 제품을 사용하기 전에 사용 설명서를 읽으십시오.

คำเตือน: อ่านคู่มือการใช้งานนี้โดยละเอียดก่อนที่จะใช้งานผลิตภัณฑ์

PERINGATAN: BACA PANDUAN PENGGUNAAN SEBELUM MENGGUNAKAN PRODUK.

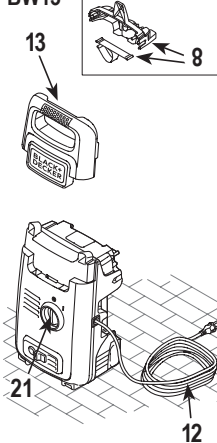
CẢNH BÁO: VUI LÒNG ĐỌC KỸ HƯỚNG DẪN NÀY TRƯỚC KHI SỬ DỤNG SẢN PHẨM

FIG. A / 图 A / 그림 A / รูปที่ A / GBR. A / HÌNH A

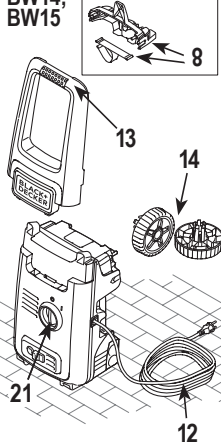


- For house hold use only
- 仅供居家使用
- 하우스 홀드 전용
- สำหรับใช้งานในครัวเรือนเท่านั้น
- Hanya untuk digunakan di rumah
- Chỉ dành cho các thiết bị gia dụng

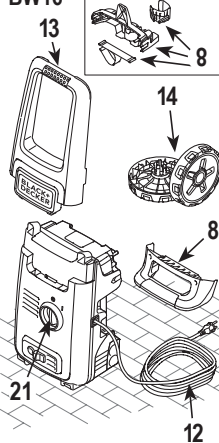
BW13



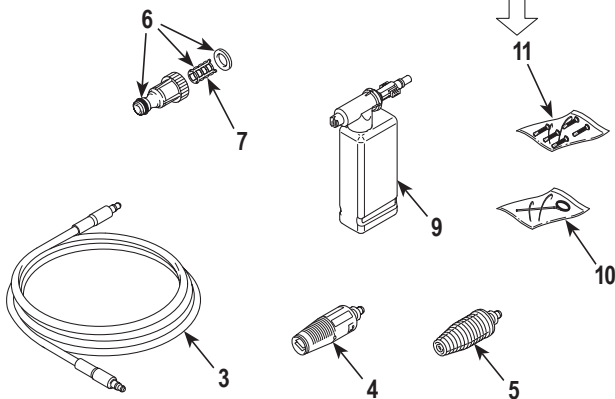
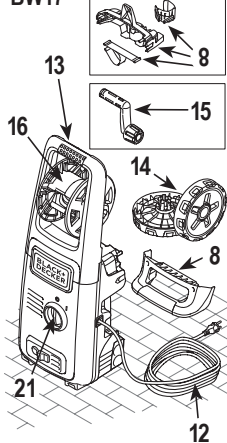
BW14,
BW15



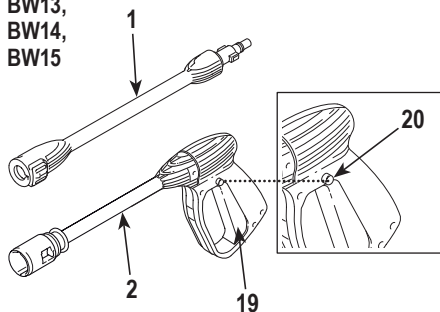
BW16



BW17



BW13,
BW14,
BW15



BW16,
BW17

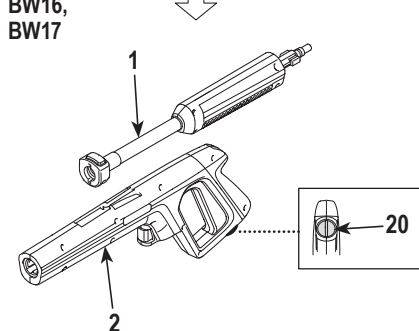
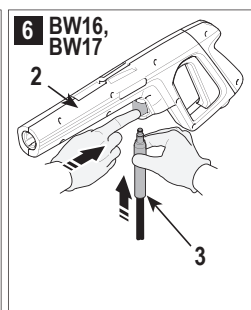
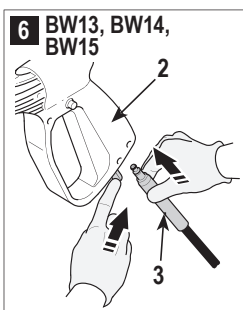
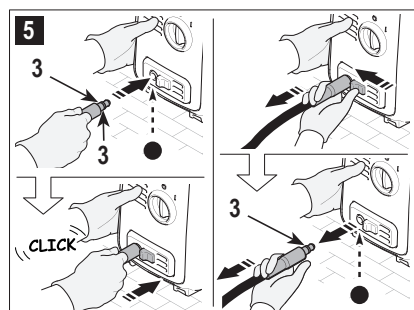
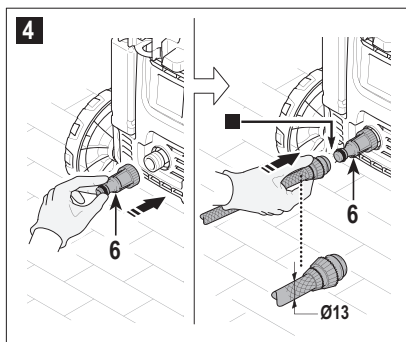
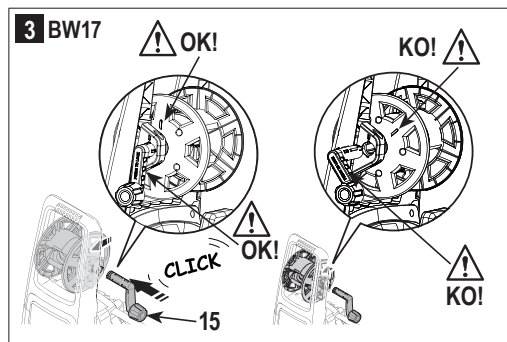
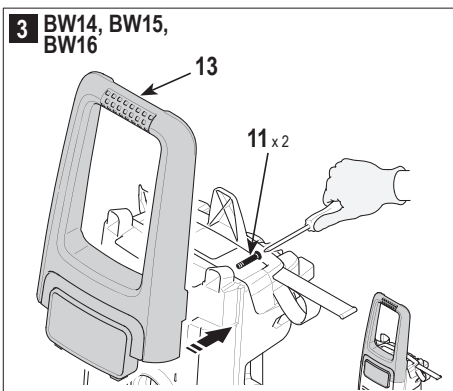
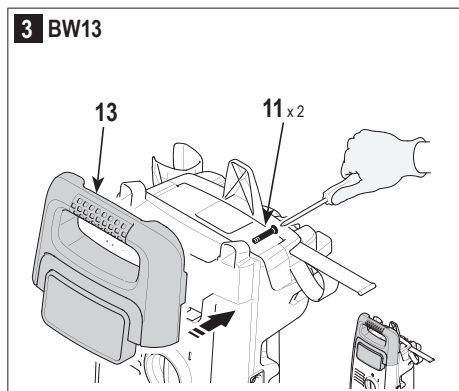
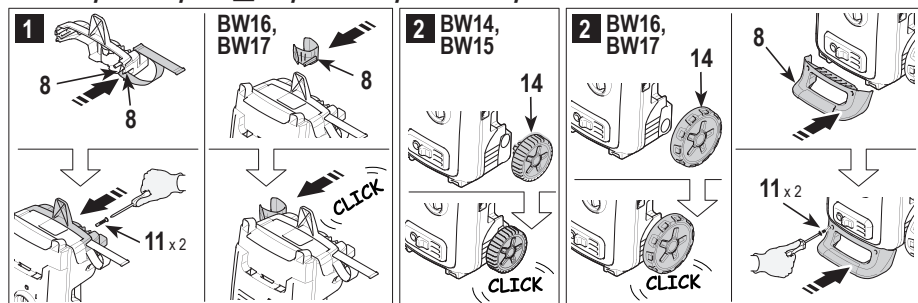


FIG. B / 图 B / 그림 B / รูปที่ B / GBR. B / HÌNH B



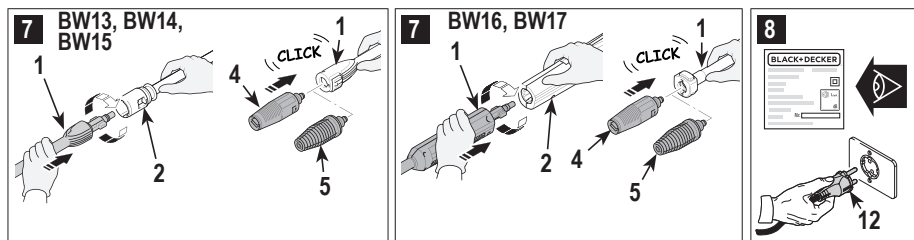


FIG. C / 图 C / 그림 C / รูปที่ C / GBR. C / HÌNH C

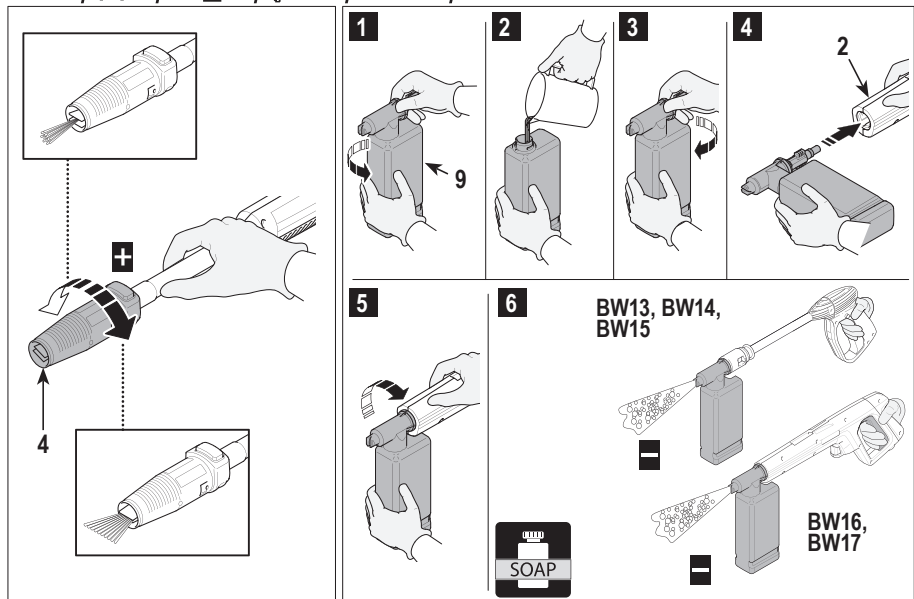


FIG. D / 图 D / 그림 D / รูปที่ D / GBR. D / HÌNH D

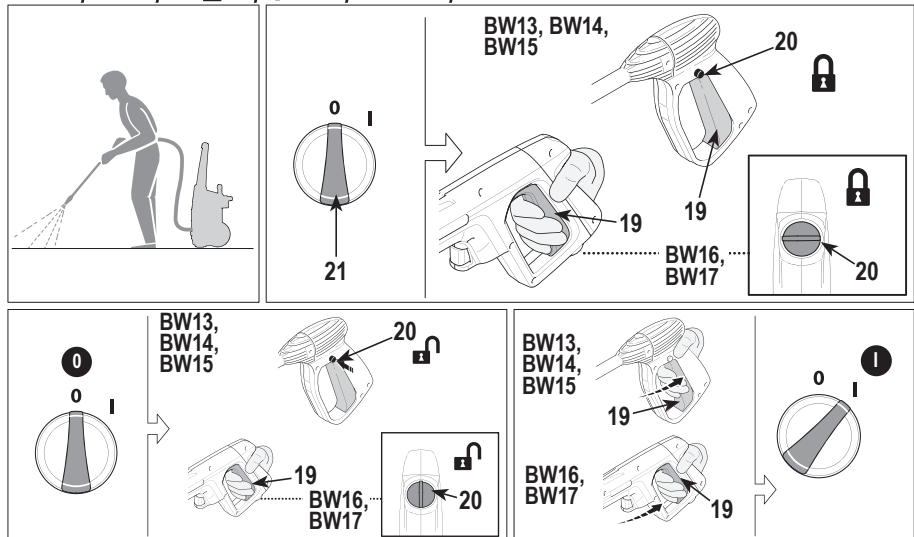
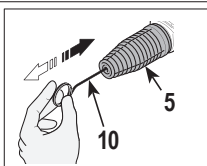
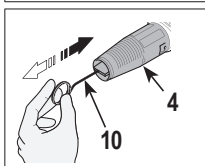
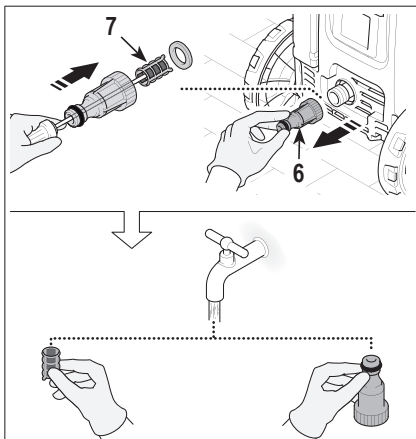


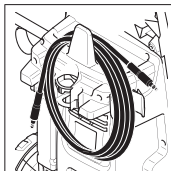
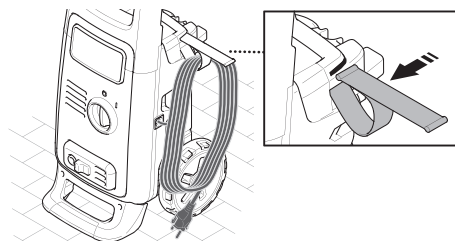
FIG. E / 图 E / 그림 E / รูปที่ E / GBR. E / HÌNH E



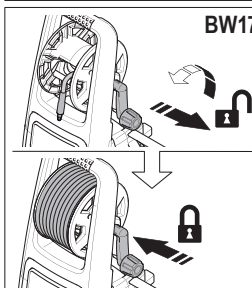
BW13



BW14, BW15,
BW16, BW17

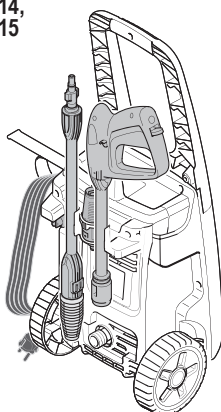


BW13,
BW14,
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BW16



BW17

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BW16,
BW17

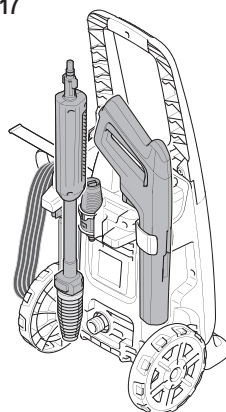
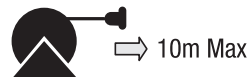
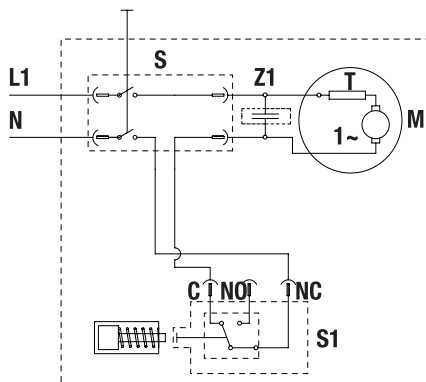


FIG. F / 图 F / 그림 F / รูปที่ F / GBR. F / HÌNH F



220-240 V~
220 V~

2 x 2,5mm²



S = Switch / 开关 / 스위치 / สวิตซ์ /
Sakelar / Công tắc

Z1 = Capacitor suppresor / 电容器抑制器 / 커패시터 서지 /
ตัวเก็บประจุ / Supresor kapasitor /
Tụ điện

T = Thermal protector / 热保护器 /
열 보호 장치 /
เครื่องป้องกันความร้อนเกิน /
Pelindung panas / Relay nhiệt độ

M = Motor / 电机 / 모터 / มอเตอร์ /
Motor / Động cơ

S1 = Pressure switch / 压力开关 /
압력 스위치 / สวิตซ์แรงดัน /
Sakelar tekan / Công tắc áp suất

Note: The diagrams are for reference, the product may change in appearance or specifications without notice.

注: 图表仅供参考。产品的外观或规格可能会出现变动。恕不另行通知。

참고: 다이어그램은 참조 용이며 제품의 외관이나 사양이 예고없이 변경 될 수 있습니다.

หมายเหตุ: แผนภาพต่างๆ เป็นเพียงแต่การอ้างอิงเท่านั้น ผลิตภัณฑ์อาจมีการเปลี่ยนแปลงได้ในส่วนของรูปลักษณ์ภายนอกหรือข้อมูลด้านเทคนิคโดยไม่จำเป็นต้องแจ้งให้ทราบ

Perhatian: Diagram ini hanya untuk referensi, penampilan atau spesifikasi produk dapat berubah tanpa pemberitahuan.

Lưu ý: Hình vẽ chỉ mang tính tham khảo, hình dáng và thông số sản phẩm có thể thay đổi mà không có thông báo trước.

SAVE THESE INSTRUCTIONS

The appliance you have purchased is a technologically advanced product designed by one of the leading manufacturers of high pressure pumps. To obtain the best performance from your unit, read this booklet carefully and follow the instructions each time you use it. We congratulate you on your choice and wish you successful operation.

GENERAL SAFETY RULES



SAFETY INSTRUCTIONS

General power tool safety warnings.

Warning! Read all safety warnings and all instructions. Failure to follow the warnings and instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

1. Safety "Must Nots"

- a. **Explosion or poisoning hazard.** Do not use the appliance with inflammable or toxic liquids, or any products which are not compatible with the correct operation of the appliance.
- b. **Injury hazard.** Do not direct the water jet towards people or animals.
- c. **Electric shock hazard.** Do not direct the water jet towards the unit itself, electrical parts or towards other electrical equipment
- d. **Short circuit hazard.** Do not use the appliance outdoors in case of rain.
- e. **Injury hazard.** This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. Children should be supervised to ensure that they do not play with the appliance.
- f. **Electric shock hazard.** Do not touch the plug and/or socket with wet hands.
- g. **Electric shock and short circuit hazard.** Do not use the appliance if the electrical cable is damaged.
- h. **Explosion hazard.** Do not use the appliance if the high pressure hose is damaged.
- i. **Accident hazard.** Do not jam the trigger in the operating position.
- j. **Accident hazard.** Check that the data plates are axed to the appliance, if not, inform your dealer. Units without plates must not be used as they are unidentifiable and potentially dangerous.
- k. **Explosion hazard.** Do not tamper with or alter the calibration of the safety valve.

- l. **Hazardous alteration of operating performance.** Do not alter the original diameter of the spray head nozzle.
 - m. **Accident hazard.** Do not leave the appliance unattended.
 - n. **Short circuit hazard.** Do not move the appliance by pulling on the electrical cable.
 - o. Make sure that cars do not drive over the high pressure hose.
- #### 2. Safety "Musts"
- a. **Short circuit hazard.** All electrical conductors must be protected against the water jet.
 - b. **Electric shock hazard.** The appliance must only be connected to an adequate power supply in compliance with all applicable regulations.
 - Use of a safety residual current circuit-breaker (R.C.C.B.) will provide additional protection for the operator (30mA).
 - c. **Injury hazard.** The high pressure may cause materials to bounce of surfaces at speed; therefore protective clothing and safety goggles, safety boots, safety gloves, safety helmets with visors, hearing protection must be worn.
 - d. **Accidental start-up hazard.** Before doing work on the appliance, remove the plug.
 - e. **Injury hazard.** Before pressing the trigger, grip the gun firmly to counteract the recoil.
 - f. **Contamination hazard.** Comply with the requirements of the local water supply company. According to DIN 1988, the appliance may only be connected to the mains drinking water supply if a backflow preventer valve with drain facility is installed in the supply hose. Water that has flowed through backflow preventers is considered to be non-potable.
 - g. **Accident hazard.** Maintenance and/or repair of electrical components must be carried out by qualified and Authorized BLACK+DECKER staff for the warranty to take effect. If the supply cord is damaged, it must be replaced by the manufacturer, an Authorized BLACK+DECKER service centre or an equally qualified person in order to avoid a hazard. If the supply cord is replaced by an equally qualified person, but not Authorized by BLACK+DECKER, the warranty will lose effect.
 - h. **Injury hazard.** Discharge residual pressure before disconnecting the unit hose.
 - i. **Accident hazard.** Before using the appliance, check every time that the screws are fully tightened and that there are no broken or worn parts.
 - j. **Explosion and electric shock hazard.** Only use detergents which will not corrode the coating materials of the high pressure hose/electrical cable.

8 • ENGLISH

k. Injury hazard. Ensure that all people or animals keep a minimum distance of 16yd. (15M) away.

3. Improper use

- ▶ Use by unskilled persons or those who have not read and understood the instructions in the manual is forbidden.
- ▶ The equipment is not designed to be used by people (including children) with physical, sensory or mental capabilities reduced or no experience or knowledge, unless they are supervised or instructed in the use by a person responsible for their safety.
- ▶ It will be monitored to ensure that children do not play with the appliance.
- ▶ The introduction of inflammable, explosive and toxic liquids into the appliance is prohibited.
- ▶ Use of the appliance in a potentially inflammable or explosive atmosphere is forbidden.
- ▶ The use of non-original spare parts and any other spare parts not specifically intended for the model in question is prohibited.

⚠ **Warning!** All modifications to the appliance are prohibited. Any modifications made to the appliance shall render the Declaration of Conformity null and void and relieve the manufacturer of all liability under civil and criminal law.

⚠ **Warning!** Inadequate extension cords can be dangerous. If an extension cord is used, it shall be suitable for outdoor use, and the connection has to be kept dry and off the ground. It is recommended that this is accomplished by means of a cord reel which keeps the socket at least 60mm above the ground.

⚠ **Warning!** This machine has been designed for use with the cleaning agent supplied or recommended by the manufacturer. The use of other cleaning agents or chemicals may adversely affect the safety of the machine.

⚠ **Warning!** High pressure jets can be dangerous if subject to misuse. The jet must not be directed at persons, live electrical equipment or the machine itself.

⚠ **Warning!** Do not use the machine within range of persons unless they wear protective clothing.

⚠ **Warning!** Do not direct the jet against yourself or others in order to clean clothes or foot-wear.

⚠ **Warning! Risk of explosion –** Do not spray flammable liquids.

⚠ **Warning!** High pressure cleaners shall not be used by children or untrained personnel.

⚠ **Warning!** High pressure hoses, fittings and couplings are important for the safety of the machine. Use only hoses, fittings and couplings recommended by the manufacturer.

⚠ **Warning!** To ensure machine safety, use only original spare parts from the manufacturer or approved by the manufacturer.

⚠ **Warning!** Water that has flowed through backflow preventers is considered to be nonpotable.

⚠ **Warning!** Do not use the machine if a supply cord or important parts of the machine are damaged, e.g. safety devices, high pressure hoses, trigger gun.

⚠ **Warning!** Incorrect fuels shall not be used as they may prove hazardous.

⚠ **Warning!** Do not use near people except that they use protective clothing.

⚠ **Warning!** Hearing protection must be used when using this equipment.

4. Service

a. Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

5. Electrical safety



Your tool is double insulated; therefore no earth wire is required. Always check that the main voltage corresponds to the voltage on the rating plate.



Warning! If the power cord is damaged, it must be replaced by the manufacturer, authorized BLACK+DECKER Service Center or an equally qualified person in order to avoid damage or injury. If the power cord is replaced by an equally qualified person, but not authorized by BLACK+DECKER, the warranty will not be valid.

⚠ **Warning!** Always switch off the mains disconnecting switch when leaving the machine unattended.

6. Labels on tool

The label on your tool may include the following symbols:



Read instructions manual



Explosion hazard



Danger of being beaten by objects that bounce



Poisoning hazard



Electric shock and short circuit hazard



Use eye protection



Injury hazard



Short circuit hazard



Wear proper clothing



Class II Construction



Safety Alert Symbol



Volts



Amperes



Hertz



minutes



Alternating Current



Danger sign, warns users not to direct the water jet at people, animals, electrical equipment or the product itself.



Not connect to potable water.

⚠ **Warning! Safety signs.** Comply with the instructions provided by the safety signs tied to the appliance. Check that they are present and legible; otherwise, replacements in the original positions.

TECHNICAL INFORMATION

ENVISAGED USE

This appliance has been designed for individual use for the cleaning of vehicles, machines, boats, masonry, etc, to remove stubborn dirt using clean water and biodegradable chemical detergents.

Vehicle engines may be washed only if the dirty water is disposed of as per regulations in force.

- ▶ **Intake water temperature:** See data plate on the appliance.
- ▶ **Intake water pressure:** Below 10 bar.
- ▶ **Operating ambient temperature:** Above 0 °C.

The machine complies with the IEC.

OPERATOR

The symbol on the front cover identifies the appliance's intended operator (professional or non-professional).

MAIN COMPONENTS (Fig. A)

The machine is delivered partially disassembled in a carton.

1. Lance
2. Gun with safety catch
3. High pressure hose
4. Nozzle
5. Rotating nozzle
6. Adapter
7. Water filter
8. Brackets
9. Detergent kit
10. Nozzle cleaning tool
11. Screws
12. Electric cable with plug
13. Handle
14. Wheels
15. Lever
16. Hose reel

⚠ **Caution! Safety devices:**

- ▶ **Starter device (21):** The starter device prevents accidental use of the appliance.

Do not tamper with or adjust the safety valve setting.

- ▶ **Safety valve and/or pressure limiting valve:**
The safety valve is also a pressure limiting valve. When the gun trigger is released, the valve opens and the water recirculates through the pump inlet or is discharged onto the ground.

▶ **Thermostat valve (where fitted):**

If the water temperature exceeds the temperature set by the manufacturer, the thermostat valve discharges the hot water and draws in an amount of cold water equal to the amount of water discharged, until the correct temperature is restored.

- ▶ **Safety catch (20):** Prevents accidental spraying of water
- ▶ **Overload cutout:** stops the appliance in case of overload.

INSTALLATION (Fig. B) ASSEMBLY

⚠ **Caution!** All installation and assembly operations must be performed with the appliance disconnected from the mains power supply.

The assembly sequence is illustrated in **Fig. B**.

Assembling the rotating nozzle

The rotating nozzle kit delivers greater washing power. Use of the rotating nozzle may cause a reduction in pressure of 25% compared to the pressure obtained with the adjustable nozzle. However, the rotating nozzle kit delivers greater washing power due to the rotation of the water jet.

Electrical connection

⚠ **Caution!** Check that the electrical supply voltage and frequency (V/Hz) correspond to those on the appliance data plate (Fig. B8).

The appliance should only be connected to a mains power supply equipped with an adequate earth connection and a differential security breaker (30mA) to cut off the electricity supply in the instance of a short circuit.

Use of extension cables: Use cables featuring "IPX5" protection level. The cross-section of the extension cable should be proportionate to its length; the longer it is, the greater its cross-section should be.

Water supply connection

⚠ **Caution!** Only clean or filtered water should be used for intake. The delivery of the water intake tap should be equal to that of pump capacity. Place the appliance as close to the water supply system as possible.

Connection points:

- Water outlet (OUTLET)
- Water inlet with filter (INLET)

Connection to the mains water supply

The appliance can be connected directly to the mains drinking water supply only if the supply hose is fitted with a backflow preventer valve as per current regulations in force. Make sure that the hose is at least Ø 13mm and that it is reinforced.

ADJUSTMENT INFORMATION (Fig. C)

- ▶ **Adjusting the spray nozzle:** Water flow is adjusted by regulating the nozzle (4).
- ▶ **Adjusting the detergent:** To deliver detergent at the correct pressure, set the nozzle (4) (where fitted) on "■" or fit the detergent kit (9) as shown.
- ▶ **Adjusting the pressure:** The regulator is used to adjust the working pressure. The pressure is shown on the pressure gauge (where fitted).

USE OF THE APPLIANCE (Fig. D) CONTROLS

Starter device (21)

Set the starter switch on (ON/I) to:

- a) start the motor (in models without TSS device);
 - b) set the motor ready to start (in models with TSS device). If there is a pilot light on the starter device, it should light up. Set the starter device switch on (OFF/O) to stop the appliance. If there is a pilot light on the starter device, it should go out.
- ▶ Water jet control lever (19).

⚠ Warning! - Danger!

During operation the appliance must be positioned as shown in Fig. D. on a firm, stable surface.

Start-up (Fig D)

1. Turn on the water supply tap fully.
2. Release the safety catch (20).
3. Depress the gun trigger for a few seconds and start up the appliance using the starter device (ON/I).

⚠ Warning! - Danger!

Before starting up the appliance check that it is receiving water correctly; use of the appliance without water will damage it. Do not cover the ventilation grilles when the appliance is in use.

TSS models - In TSS models

(with automatic delivery flow cut-off system):

- ▶ when the gun trigger is **released** the dynamic pressure automatically cuts out the motor;
- ▶ when the gun trigger is **depressed** the automatic drop in pressure starts the motor and the pressure is restored after a very slight delay;
- ▶ if the **TSS** is to function correctly, all gun trigger releasing and **depressing** operations must be at **least 4-5 seconds** apart.

To prevent damage to the appliance, do not allow it to operate dry and check that it is properly supplied with water. For models without TSS, to prevent damage to the appliance due to an increase in water temperature, do not cut off the jet of water for more than 5 minutes with the appliance running. Beware of kickback force when opening the trigger gun.

Stopping the appliance

1. Set the starter device switch on (OFF/O).
2. Depress the gun trigger and discharge the residual pressure inside the hoses.
3. Engage the gun safety catch (20).

Restarting

1. Release the safety catch (20).
2. Depress the gun trigger and discharge the residual air inside the hoses.
3. Set the starter device on (ON/I).

Storage

1. Switch the appliance off (OFF/O).
2. Remove the plug from the socket.
3. Turn off the water supply tap.
4. Discharge the residual pressure from the gun until all the water has come out of the nozzle.
5. Drain and wash out the detergent tank at the end of the working session. To wash out the tank, use clean water instead of the detergent.
6. Engage the gun safety catch (20).

Recommended cleaning procedure

Dissolve dirt by applying the detergent mixed with water to the surface while still dry.

When dealing with vertical surfaces work from the bottom upwards. Leave the detergent to act for 1-2 minute but do not allow the surface to dry. Starting from the bottom, use the high pressure jet at a minimum distance of 30 cm. Do not allow the rinse water to run onto unwashed surfaces. In some cases, scrubbing with brushes is needed to remove dirt. High pressure is not always the best solution for good cleaning results, since it may damage some surfaces. The finest adjustable nozzle jet setting or the rotating nozzle should not be used on delicate or painted parts, or on pressurised components (e.g. tyres, inflation valves, etc.). Effective cleaning depends on both the pressure and volume of the water used, to the same degree.

MAINTENANCE (Fig. E)

Any maintenance operations not covered by this chapter should be carried out by an Authorized Sales and Service Centre.

⚠ **Important!** To ensure product **SAFETY** and **RELIABILITY**, repairs, maintenance and adjustment (other than those listed in this manual) should be performed by authorized service centers or other qualified organizations, always using identical replacement parts. Unit contains no user serviceable parts inside.

⚠ **Caution!** Always disconnect the plug from the power socket before carrying out any work on the appliance.

Cleaning the nozzle

1. Disconnect the lance from the nozzle.
2. Remove any dirt deposits from the nozzle hole using the tool (10).

Cleaning the filter

Inspect the intake filter (7) and detergent filter (if fitted) before each use, and clean in accordance with the instructions if necessary.

Unjamming the motor (On models with this feature)

In case of lengthy stoppages, limescale sediments may cause the motor to seize. To unjam the motor, turn the drive shaft with a tool.

End-of-season storage

Treat the appliance with non-corrosive, non-toxic antifreeze and lubricate the o-rings using the lubricating grease tube (where supplied) as shown before storing it away for winter. Put the appliance in a dry place, protected from frost.

PROTECTING THE ENVIRONMENT



Separate collection. This product must not be disposed of with normal household waste. Should you find one day that your BLACK+DECKER product needs replacement, or if it is of no further use to you, do not dispose of it with household waste. Make this product available for separate collection.



Separate collection of used products and packaging allows materials to be recycled and used again. Re-use of recycled materials helps prevent environmental pollution and reduces the demand for raw materials. Local regulations may provide for separate collection of electrical products from the household, at municipal waste sites or by the retailer when you purchase a new product.

SERVICE INFORMATION

BLACK+DECKER offers a full network of company-owned and authorized service locations throughout Asia. All BLACK+DECKER Service Centers are staffed with trained personnel to provide customers with efficient and reliable power tool service. Whether you need technical advice, repair, or genuine factory replacement parts, contact the BLACK+DECKER location nearest to you.

NOTES

- ▶ BLACK+DECKER's policy is one of continuous improvement to our products and, as such, we reserve the right to change product specifications without prior notice.
- ▶ Standard equipment and accessories may vary by country.
- ▶ Product specifications may differ by country.
- ▶ Complete product range may not be available in all countries.
- ▶ Contact your local BLACK+DECKER dealers for range availability.

SPECIFICATIONS

	BW13	BW14	BW15	BW16
Power	1300W (1,3 kW)	1400W (1,4 kW)	1500W (1,5 kW)	1600W (1,6 kW)
Working Flow	5 l/min	5 l/min	5 l/min	5,3 l/min
Max water Flow	6,5 l/min	6,5 l/min	6,5 l/min	7 l/min
Pressure	6,7 MPa (67 bar)	7,4 MPa (67 bar)	8 MPa (67 bar)	8,5 MPa (67 bar)
Maximum Pressure	10 MPa (100 bar)	11 MPa (100 bar)	12 MPa (100 bar)	12,5 MPa (100 bar)
PSI	1450	1595	1740	1813
T° Input	50 °C	50 °C	50 °C	50 °C
Maximum Input Pressure	1 MPa	1 MPa	1 MPa	1 MPa
Repulsive Force of the Gun to the Maximum Pressure	9,6 N	10,1 N	10,5 N	11,6 N
Motor Insulation	Class F	Class F	Class F	Class F
Motor Protection	IPX5	IPX5	IPX5	IPX5
Weight	4,6 kg	4,9 kg	4,9 kg	5,5 kg

Problem	Possible Causes	Solution
Pump does not reach working pressure	Nozzle worn	Replace nozzle
	Water filter fouled	Clean filter (7) (Fig. E)
	Insufficient water supply	Turn on water supply tap fully
	Air being sucked into system	Check tightness of hose fittings
	Air in pump	Switch off the appliance and keep depressing and releasing the gun trigger until the water comes out in a steady flow. Switch the appliance back on again.
	Adjustable nozzle not positioned correctly	Set nozzle (4) (+) setting (Fig. C)
	Thermostatic valve tripped	Wait for correct water temperature to be restored
	Water being sucked from an open container from a height of more than 0.5 m.	Reduce the suction height.
Pump pressure drops during suddenly use	Water being sucked from an external tank	Connect appliance to the mains water supply
	Inlet water too hot	Reduce temperature
	Nozzle clogged	Clean nozzle (Fig. E)
	Inlet filter (7) fouled	Clean filter (7) (Fig. E)
Motor "buzzes" but fails to start	Power supply voltage too low	Check that the voltage of the mains power supply line is the same as that on the plate (Fig. B)
	Voltage drop due use of extension cable	Check characteristics of extension cable
	Appliance not used for a long period of time	Contact your nearest Authorised Service Centre
	Problems with TSS device	Contact your nearest Authorised Service Centre
Motor fails to start	No electrical power	Check that the plug is firmly in the socket and that the mains voltage supply is present (*)
	Problems with TSS device	Contact your nearest Authorised Service Centre
	Appliance not used for a long period of time	Using the tool unjam the motor through the hole at the rear of the appliance (in models with this feature)
Water leakages	Seals worn	Have the seals replaced at your nearest Authorised Service Centre
	Safety valve tripped and discharging	Contact an Authorised Service Centre
Appliance noisy	Water too hot	Reduce temperature (see technical data)
Oil leakages	Seals worn	Contact your nearest Authorised Service Centre
TSS versions only: appliance starts even with gun trigger released	High pressure system or pump circuit not watertight	Contact your nearest Authorised Service Centre
TSS versions only: no water delivery when gun trigger is depressed (with supply hose connected)	Nozzle clogged	Clean nozzle (Fig. E)

No detergent sucked in	Adjustable nozzle on high pressure setting	Set nozzle (4) on «  » setting (Fig. C)
	Detergent too dense	Dilute with water
	High pressure hose extension being used	Fit original hose
	Deposits or restriction in detergent circuit	Flush with clean water and eliminate any restrictions. If the problem persists, contact an Authorised Service Centre
Water escapes from thermostat valve	Water temperature inside pump head has exceeded max. rated value stated on nameplate	With appliance in operation, do not stop the water jet for more than 5 minutes at a time

* If the motor starts and does not restart during operation, wait 2-3 minutes before repeating the start-up procedure (overload cutout has been tripped).

If the problem recurs more than once, contact your nearest Authorized Service Centre.

妥善保管说明手册

您购买的产品技术先进，其设计出自一家领先的高压清洗机制造商。为达到最佳使用效果，请仔细阅读本手册，并始终按照说明使用设备。恭喜您选购本产品。希望您操作顺利。

一般安全规则



安全说明

电动工具通用安全警告

警告！请阅读所有安全警告和说明。如未能遵守以下警告和说明，可能会导致触电、火灾和/或严重伤害。

请保存所有警告和说明书以备查阅。

警告中的术语指示电驱动（有线）电动工具或电池驱动（无线）电动工具。

1. 安全“禁止”事项

- a. **爆炸或中毒危险。**请勿将本设备与易燃或有毒液体，或与正确使用该设备不相容的任何产品。
- b. **受伤危险。**请勿将射流对人或动物。
- c. **触电危险。**请勿将射流对准设备本身、电器零件或其他电气设备。
- d. **短路危险。**请勿在下雨时，在户外使用设备。
- e. **受伤危险。**本设备不适合身体、感官或心理能力较差，或缺乏经验和知识的人（包括儿童）使用。应该看管好儿童，避免他们误操作。
- f. **触电危险。**请勿用湿手触碰插头和/或插座。
- g. **触电和短路危险。**如果电线受损，请勿使用该设备。
- h. **爆炸危险。**如果高压管受损，请勿使用该设备。
- i. **事故危险。**请勿将扳机堵在运行的位置。
- j. **事故危险。**确保数据铭牌已被安装到设备上，如果没有，请告知您的经销商。不得使用没有铭牌的设备，因为它们无法识别而且存在潜在危险。
- k. **爆炸危险。**请勿随意改动或变更安全阀的校准情况。
- l. **对操作性能进行有害的变更。**请勿更改喷头的原始直径。
- m. **事故危险。**请勿让设备处于无人看管的状态。
- n. **短路危险。**请勿以拖拽电线的方式移动设备。
- o. **请勿让汽车压过高压管。**

2. 安全“须知”

- a. **短路危险。**必须保护所有导体不会被淋湿。
- b. **触电危险。**要遵守所有适用的规章制度，将该设备连接到充足的电源上。
 - ▶ 安全剩余电流断路器将为操作者提供额外保护（30mA）。
- c. **安全危险。**高压可能会让材料快速回弹；因此，必须穿戴保护性的服装和安全护目镜、安全靴、

安全手套、访客安全头盔、听力保护装置。

- d. **意外启动危险。**先拔出插头，然后再用设备进行操作。
- e. **受伤危险。**在按下扳机开关前，要紧握喷枪，以缓冲后坐力。
- f. **污染危险。**遵守当地供水公司的各项要求。根据DIN1988，如果供水管上安装有带排水装置的防回流阀，那么该设备只能连接到主要饮用水供水管道。流经防回流阀的水被视为不可饮用的。
- g. **事故危险。**电器组件的维护和/或维修必须由具备资质且获得授权的BLACK+DECKER人员进行，从而让担保生效。如果电源线受损，必须由制造商、获得授权的BLACK+DECKER维修中心或具备同等资质的人员负责更换，避免出现危险。如果电源线是由具备同等资质却未获得BLACK+DECKER授权的人员进行更换，那么该担保将失效。
- h. **受伤危险。**先拔出设备高压管，然后再释放多余压力。
- i. **事故危险。**每次先检查螺栓是否紧固，是否存在损坏或磨损的部件，然后再使用设备。
- j. **爆炸和触电危险。**仅使用不会腐蚀高压管/电线涂层的清洁剂。
- k. **受伤危险。**确保所有人员和动物均至少保持16码（15米）的距离。

3. 不当使用

- ▶ 禁止不熟练的人员，或没有阅读和理解使用手册的人员使用本设备。
- ▶ 本设备不适合身体、感官或心理能力较差，或缺乏经验和知识的人（包括儿童）使用，除非他们在有负责其安全的人员的监督或指导下使用。
- ▶ 监督设备使用情况，防止儿童误操作。
- ▶ 禁止向设备中加入易燃易爆和有毒液体。
- ▶ 禁止在存在易燃易爆可能性的环境中使用本设备。
- ▶ 禁止使用非原装部件以及非该型号专用的任何其他零部件。

▲ 警告！禁止对本设备进行任何改装。对本设备的任何改装均会使“一致性声明”失效，同时制造商也不再负有任何民事和刑事责任。

▲ 警告！延长线不足是很危险的。如果适用延长线，那么该延长线应该适合于户外环境，连接处应该保持干燥并离开地面。建议使用卷线盘，确保插座距离地面至少60毫米。

▲ 警告！本设备旨在与制造商提供或推荐的清洁剂搭配使用。使用其他清洁剂或化学品可能会对设备的安全性造成不利影响。

▲ 警告！如果使用延长软线，则插头与插座必须是防水结构的。

△ **警告!** 使用不当延长的软线可能是危险的。

△ **警告!** 如果适用者使用不当, 那么高压射流会变得十分危险。不得将射流对准人员、带电的电气设备或该设备本身。

△ **警告!** 请勿在人员所在范围内使用本设备, 除非他们均穿戴了防护服。

△ **警告!** 请勿为了清洁衣服和鞋子, 而将射流对准自己或他人。

△ **警告! 爆炸危险**——请勿喷射易燃液体。

△ **警告!** 高压清洁剂不应由儿童或未经培训的人员使用。

△ **警告!** 高压管, 管接头对器具的安全是重要的。只使用制造厂推荐的管与管接头。。

△ **警告!** 为确保设备安全, 仅使用由制造商提供或获得制造商批准的原装零部件。

△ **警告!** 流经防回流阀的水被视为是不可饮用的。

△ **警告!** 如果设备的电源线或重要零部件受损, 例如安全设备、高压管、触发枪, 请勿使用本设备。

△ **警告!** 不应使用不恰当的燃料, 因为它们可能会造成危险。

△ **警告!** 请勿在靠近人员的地方使用本设备, 除非他们均穿戴防护服。

△ **警告!** 在使用本设备时, 必须使用听力保护装置。

4. 维修

a. **让专业维修人员使用相同的备件维修电动工具。** 这将保证所维修的电动工具的安全。

5. 电气安全



本工具为双重绝缘, 因此无需接地线。请务必检查电源电压是否与铭牌上的电压一致。



警告: 如果电源线损坏, 必须让制造商或授权的BLACK+DECKER服务中心或同等资质的人员更换以避免发生危险。如果电源线是由具备同等资质却未获得BLACK+DECKER授权的人员进行更换, 那么该担保将失效。

△ **警告!** 如需离开设备, 无人照看, 请关闭主要切断开关。

6. 工具上的标签

您工具上的标签可能包含以下符号:



阅读说明手册



爆炸危险



被弹回物体击中的危险



中毒危险



触电和短路危险



佩戴护目设备



受伤危险



短路危险



穿戴适当服装



II级构造

V 伏特

W 瓦特



安全警告标志

A 安培

min 分钟



危险标志。警告用户请勿将射流对准人员、动物、电器设备或产品本身。

Hz 赫兹

~ 交流电



请勿连接饮用水。

△ **警告! 安全标志。** 请遵守设备上安全标志的说明。检查它们是否存在, 是否合法; 否则请在原来的位置进行更换。

技术信息

设计用途

此设备是专为清洗车辆、机器、小艇、砖石建筑等而设计, 可使用干净的水和可生物降解的化学洗涤剂去除顽固污垢。

只有按现行法规处理污水时, 才可以清洗车辆发动机。

▶ **注入水的温度:** 请参见设备上的铭牌。

▶ **注入水的压力:** 低于10巴。

▶ **工作环境温度:** 0°C以上。

本设备符合IEC标准。

操作人员

前盖上的符号标识了设备的预期操作人员 (专业人员或非专业人员)。

主要元件 (图 A)

本设备在部分被拆卸后, 装箱交付。

1. 高压水枪杆
2. 具有安全制动装置的喷枪
3. 高压管
4. 可调喷嘴
5. 旋转喷嘴
6. 适配器
7. 进水过滤器
8. 收纳架
9. 高压泡沫喷壶
10. 喷嘴清洁剂

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- 11. 螺钉
- 12. 带有插头的电源线
- 13. 手柄
- 14. 滚轮
- 15. 转动杆
- 16. 高压管收纳轴

△ 小心! 安全装置:

- ▶ **启动器设备 (21):** 启动器设备可防止意外使用设备。

请不要篡改或调整安全阀设置。

- ▶ **安全阀和/或压力限制阀。**安全阀也是压力限制阀。当喷枪扳机松开时, 阀门打开, 水循环通过泵入口或排向地面。
- ▶ **调温阀 (如果已安装):**
如果水温超过制造商设定的值, 调温阀将会释放热水并吸入等量冷水, 直至温度恢复正常。
- ▶ **安全制动装置(20):** 防止水意外喷射。
- ▶ **过载断路器:** 在过载时停止设备。

安装 (图 B) 组装

△ 小心! 所有安装和组装操作必须在此设备与主电源断开连接的情况下执行。

组装顺序如图B所示。

组装旋转喷嘴

旋转喷嘴套件可产生更大的清洗功率。
与可调节喷嘴相比, 使用旋转喷嘴可能会让所获得的压力降低25%。然而, 旋转喷嘴套装因射流的转动而具有更强的清洗能力。

电气连接

△ 小心! 请检查电源电压和频率 (伏-赫兹) 是否符合铭牌上指定的电压和频率 (图B8)。

本设备只能连接到充分接地的电源, 同时, 如果出现短路, 差动安全断路器 (30毫安) 会切断电源。

使用延长电缆: 使用“IPX5”防护等级的电缆和插头。延长电缆的横截面应与电缆长度成正比; 电缆越长, 其横截面应越大。

供水系统连接

△ 小心! 只应注入干净或经过滤的水入口水龙头的输出量应等于泵容量的输出量。请将设备放置在尽可能接近供水系统的位置。

连接点

- 出水口 (OUTLET)
- 带有过滤器的进水口 (INLET)

连接到自来水系统

只有按现行条例在供水高压管上安装了防回流阀后, 此设备才可以直接连接到饮用自来水系统上。请确保高压管的直径至少为13毫米, 且该高压管经过加固。

调节信息 (图 C)

- ▶ **可调喷嘴:** 通过可调喷嘴(4)调节水流。
- ▶ **调节洗涤剂:** 将喷嘴 (4) (如果已安装) 设置为“■”或如图所示安装洗涤剂 (9) (如果可用), 以正确的压力提供洗涤剂。
- ▶ **调节压力:** 调节器用于调节工作压力。压力显示在压力计上(如果已安装)。

设备使用 (图 D) 控件

启动器设备 (21)

将启动器开关设置为 (开/I), 以便:

- a. 启动电机 (在不带TSS设备的模型中);
- b. 设置电机以备启动 (在带 TSS 设备的模型中), 如果启动器设备上有指示灯, 则应亮起。将启动器设备开关设置为 (关/O) 以停止设备。如果启动器设备上有指示灯, 则应熄灭。
- ▶ 水射流控制杆 (19)。

△ 警告 - 危险!

操作期间, 必须按图D所示将设备放置在牢固且平稳的表面上。

启动 (图 D)

- 1. 完全打开水龙头。
- ▶ 释放安全制动装置 (20)。
- 2. 压下喷枪扳机几秒钟, 并使用启动器设备(开/I)启动设备。

△ 警告 - 危险!

启动设备前, 请检查其是否正常接水; 无水使用会使设备受损。请勿在设备使用时盖住通风格栅。

TSS模型 - 在TSS模型中

(带有自动输送流切断系统):

- ▶ 当喷枪扳机已松开时, 动态压力会自动关闭电机;
- ▶ 压下喷枪扳机时, 自动降低的压力会启动电机, 并且压力在非常短的延迟之后将恢复;
- ▶ 如果TSS正常运行, 则所有松开喷枪和压下喷枪的操作都必须相隔至少4-5秒执行。

为防止设备受损, 请禁止干燥运行并确认其适当供水。对于未配备TSS的模型, 要防止设备由于水温升高而受损, 请不要在设备运行时截断水射流5分钟以上。在打开触发枪时, 小心后坐力。

停止设备

1. 将启动器设备开关设置为**(关/0)**。
2. 压下喷枪扳机，并释放高压管内的剩余压力。
3. 啮合安全制动装置**(20)**。

重新启动

1. 释放安全制动装置**(20)**。
2. 压下喷枪扳机，并释放高压管内的剩余空气。
3. 将启动器设备开关设置为**(开/I)**。

存放

1. 关闭设备**(关/0)**。
2. 从插座上拔下插头。
3. 关闭水龙头。
4. 释放喷枪的剩余压力，直到设备中的水都已排出。
5. 收工时，请排空并清洁洗涤剂箱。请使用清水而非洗涤剂清洁洗涤剂箱。
6. 啮合安全制动装置**(20)**。

推荐的清洁过程

在仍然干燥的表面上涂抹混合有水的洗涤剂以溶解污垢。

处理垂直表面时，从底部向上进行处理。让清洁剂作用1-2分钟，但不要让表面干燥。从底部开始，在距表面至少30厘米处利用高压进行喷射。请勿让冲洗水流到未清洗的表面上。

在某些情况下，需要用刷子擦洗去除污垢。高压清洗方式并不一定是获得良好清洁效果的最佳解决方案，因为它可能会损坏某些表面。不应在精细或涂漆部件或充压组件（例如，轮胎、充气阀等）上使用最精细的可调节喷嘴喷射设置或旋转喷嘴。高效的清洁取决于压力和用水量，两者同样重要。

维护 (图 E)

本章未涉及的所有维护操作都应由经授权的销售和服务中心来执行。

▲ **重要!** 确保产品的**安全性和可靠性**，维修、保养和调整（除了本手册中列出的内容）应由授权维修中心或其他具备资质的组织负责完成，务必使用相同的更换部件。本设备中不包含可由用户自行维修的零部件。

▲ **小心!** 对设备执行任何操作之前，务必将插头从电源插座上拔下。

清洁喷嘴

1. 卸下喷嘴的喷管。
2. 使用工具**(10)**去除喷嘴孔中的污垢。

清洁过滤器

在每次使用前检查入口过滤器**(7)**和洗涤剂过滤器（如果已安装），根据需要，按照说明进行清洁。

排除电机阻塞 (适用在具有此功能的型号上)

如果电机长时间停止运行，石灰石沉淀物可能会导致电机堵塞。要排除电机堵塞，请使用工具转动驱动器轴。

季末存储

为设备使用不具有腐蚀性的无毒防冻剂，同时如图示，使用润滑脂管（如果提供）润滑O型圈，然后再将设备存储过冬。

将设备放置在干燥场所，注意防冻。

保护环境



分类回收。该产品 and 电池不得与普通家庭垃圾一起处理。

如果您发现需要更换 BLACK+DECKER 产品，或该产品对您再无用处，请勿将其与家庭垃圾一起处理。请务必将本产品送往分类收集处。



分类收集用过的产品和包装可使材料循环再生利用。重新使用回收的材料有助于防止环境污染，并降低对原材料的需求。当地法规可能要求由市政废物回收站，或由向您出售新产品的经销商来提供从家庭中分类收集电子产品的服务。

服务信息

BLACK+DECKER 的公司直属和授权服务点网络覆盖整个亚洲。所有 BLACK+DECKER 服务中心都具有训练有素的人员，为客户提供高效和可靠的电动工具服务。不论您是需要技术建议、维修或原厂替换部件，均可联系最靠近您的 BLACK+DECKER 服务点。

备注

- ▶ BLACK+DECKER 的政策是持续改进我们的产品，因此，我们保留随时更改产品规格的权利，恕不另行通知。
- ▶ 标准设备和附件可能会因国家（地区）而异。
- ▶ 不同国家（地区）的产品规格也可能会有所不同。
- ▶ 并非所有的国家（地区）都可提供完整的产品系列。
- ▶ 有关各产品系列的供货情况，请联系您当地的 BLACK+DECKER 代理商。

规格

	BW13	BW14	BW15	BW16
功率	1300W (1,3 kW)	1400W (1,4 kW)	1500W (1,5 kW)	1600W (1,6 kW)
工作流量	5 l/min	5 l/min	5 l/min	5,3 l/min
最大水流	6,5 l/min	6,5 l/min	6,5 l/min	7 l/min
压力	6,7 MPa (67 bar)	7,4 MPa (67 bar)	8 MPa (67 bar)	8,5 MPa (67 bar)
最大压力	10 MPa (100 bar)	11 MPa (100 bar)	12 MPa (100 bar)	12,5 MPa (100 bar)
PSI	1450	1595	1740	1813
T° 输入	50 °C	50 °C	50 °C	50 °C
最大输入压力	1 MPa	1 MPa	1 MPa	1 MPa
喷枪推斥力/最大压力	9,6 N	10,1 N	10,5 N	11,6 N
电机绝缘	F级	F级	F级	F级
电机保护	IPX5	IPX5	IPX5	IPX5
重量	4,6 kg	4,9 kg	4,9 kg	5,5 kg
电压	220V	220V	220V	220V
频率	50Hz	50Hz	50Hz	50Hz

问题	可能的原因	解决方案
泵无法达到工作压力	喷嘴磨损	更换喷嘴
	滤水器变脏	清洁滤水器 (7) (图E)
	供水不足	完全打开供水龙头
	空气被吸入系统内	检查高压管接头的紧密性
	空气进入泵中	关闭设备，松开喷枪的扳机开关，直到稳定出水。再次打开设备。
	可调节的喷嘴位置不对	设定喷嘴 (4) (+) 设置 (图C)
	恒温阀跳闸	等待达到适当水温后再重启
	从超过0.5米的高度，通过开口容器吸水	降低吸水高度
在突然使用期间，泵的压力下降	从外部水箱中吸水	将设备接到自来水供应系统
	进水过热	降低温度
	喷嘴阻塞	清洁喷嘴 (图E)
	入口过滤器 (7) 变脏	清洁过滤器 (7) (图E)
电机发出“嗡嗡”声，但无法启动	电源电压过低	检查电源线路的电压是否与铭牌上的一致 (图B)
	由于使用延长线，导致电压下降	检查延长线的各项特性
	设备长期未使用	联系距离您最近的授权维修中心
	TSS设备有问题	联系距离您最近的授权维修中心
电机无法启动	没电	检查插头是否插牢，是否有电源电压 (*)
	TSS设备有问题	联系距离您最近的授权维修中心
	设备长期未使用	用工具通过设备后方的孔洞 (在采用这种设计的型号上) 疏通电机

渗水	密封件磨损	联系距离您最近的授权维修中心更换密封件
	安全阀跳闸和漏气	联系授权的维修中心
设备噪音	水过热	降低温度（参见技术数据）
漏油	密封件磨损	联系距离您最近的授权维修中心
仅限于TSS版本：即使没有扣动扳机开关，设备依然启动	高压系统或泵的回路不防水	联系距离您最近的授权维修中心
仅限于TSS版本：按下扳机开关后不出水（已连接供水管）	喷嘴阻塞	清洁喷嘴 (图E)
没有吸入清洁剂	在高压设置上调整喷嘴	在设置上  设定喷嘴 (4) (图C)
	清洁剂过于浓稠	加水稀释
	正在使用高压管延长	安装原装高压管
	清洁剂回路中有沉积或限制	用清水冲洗，清除任何限制。如果问题依然存在，请联系授权维修中心。
恒温阀漏水	泵头内的水温已经超过铭牌上的最高额定值	让设备运行，同时每次让射流持续5分钟以上

***如果电机启动，而且在运行中不再重启，先等待2-3分钟，然后再重复启动流程（过载断路器已经跳闸）**
如果问题再次出现，请联系距离您最近的授权维修中心。

制造商：Annovi Reverberi S.p.A
地 址：Zona Industriale Torrazzi, Via Martin
Luther King 341122 MODENA MO, ITALY
地 址：浙江嘉兴

본 지침을 잘 보관해 두십시오

귀하께서 구입하신 제품은 주요 고압 펌프 제조업체가 설계 한 첨단 기술 제품입니다. 장치에서 최상의 성능을 얻으려면 이 지침서를 주의 깊게 읽고 사용할 때마다 지침을 따르십시오. 당사 제품 구입에 감사드리며 성공적인 운영을 기원합니다.

GENERAL SAFETY RULES



안전 지침

일반 전동 공구 안전 경고.

경고! 안전 경고와 지시사항을 모두 읽으십시오.

아래 나열된 경고와 지시 사항을 준수하지 않으면 감전, 화재 및/또는 심각한 부상을 초래할 수 있습니다.

항후 참고할 수 있도록 모든 경고 및 지시 사항을 보관해두십시오.

아래에 나열된 모든 경고의 용어는 주 전원 (유선) 전동 공구 또는 배터리의 작동 (무선) 전동 공구를 나타냅니다.

1. 안전 “주의 사항”

- 폭발 또는 중독 위험.** 불연성 또는 유독성 액체가 있는 기기 또는 기기의 올바른 작동과 호환되지 않는 제품을 사용하지 마십시오.
- 부상 위험.** 워터 제트를 사람이나 동물에게 향하게 하지 마십시오.
- 감전 위험.** 워터젯을 장치 자체, 전기 부품 또는 다른 전기 장비로 향하게 하지 마십시오.
- 단락 위험.** 비가 올 경우 야외에서 기기를 사용하지 마십시오.
- 부상 위험.** 이 기계는 신체적, 감각적 또는 정신적 능력이 저하되었거나 경험과 지식이 부족한 사람 (어린이 포함)이 사용하도록 설계되지 않았습니다. 어린이가 제품을 가지고 놀지 않도록 감독해야 합니다.
- 감전 위험.** 젖은 손으로 플러그 및 / 또는 소켓을 만지지 마십시오.
- 감전 및 단락 위험.** 전기 케이블이 손상된 경우 기기를 사용하지 마십시오.
- 폭발 위험.** 고압 호스가 손상된 경우 기기를 사용하지 마십시오.
- 사고 위험.** 작동 위치에서 트리거를 걸지 마십시오.
- 사고 위험.** 데이터 플레이트가 기기에 연결되어 있는지 확인하십시오. 그렇지 않은 경우 대리점에 문의하십시오. 플레이트가 없는 장치는 식별 할 수 없고 잠재적으로 위험하므로 사용해서는 안됩니다.
- 폭발 위험.** 안전 밸브의 캘리브레이션을 무단 변경하거나 변경하지 마십시오.
- 위험한 운영 성능 변경.** 스프레이 헤드 노즐의 기존 경경을 변경하지 마십시오.
- 사고 위험.** 기기를 방치하지 마십시오.
- 단락 위험.** 전기 케이블을 잡아 당겨 기기를 움직이지 마십시오.
- 자동차가 고압 호스 위로 주행하지 않도록하십시오.**

2. 안전 “주의사항”

- 단락 위험.** 모든 전기 도체는 워터젯으로부터 보호되어야 합니다.
- 감전 위험.** 기기는 모든 해당 규정에 따라 적절한 전원 공급 장치에만 연결해야 합니다.
▶ 안전 잔류 전류 회로 차단기 (R.C.C.B.)를 사용하면 작업자를 추가로 보호할 수 있습니다 (30mA).
- 부상 위험.** 고압으로 인해 재료가 표면에서 표면이 튀어 올 수 있습니다. 따라서 보호복과 안전 고글, 안전화, 안전 장갑, 바이저가있는 안전 헬멧, 청력 보호 장비를 착용해야 합니다.
- 우발적인 시동 위험.** 어플라이언스에서 작업하기 전에 플러그를 제거하십시오.
- 부상 위험.** 트리거를 누르기 전에 반동을 막기 위해 건을 단단히 잡으십시오.
- 오염 위험.** 현지 급수 회사의 요구 사항을 준수하십시오. DIN 1988 에 따르면, 배수 시설이있는 역류 방지 밸브가 공급 호스에 설치된 경우에만 기기를 주 식수 공급원에 연결할 수 있습니다. 역류 방지기를 통해 흐르는 물은 식수로 간주되지 않습니다.
- 사고 위험.** 전기 구성품의 유지 보수 및 / 또는 수리는 보증을 받으려면 자격을 갖춘 공인 된 BLACK + DECKER 직원이 수행해야 합니다. 전원 코드가 손상된 경우 위험을 피하기 위해 제조업체, 공인 BLACK + DECKER 서비스 센터 또는 동등한 자격을 갖춘 사람이 교체해야 합니다. 전원 코드가 동일한 자격을 갖춘 사람으로 교체되었지만 BLACK + DECKER 의 승인을 받지 않은 경우 보증이 적용되지 않습니다.
- 부상 위험.** 장치 호스를 분리하기 전에 잔류 압력을 배출하십시오.
- 사고 위험.** 기기를 사용하기 전에 나사가 완전히 조여졌으며 파손되거나 마모 된 부품이 없는지 점검하십시오.
- 폭발 및 감전 위험.** 고압 호스 / 전기 케이블의 코팅 재료를 부식시키지 않는 세제 만 사용하십시오.
- 부상 위험.** 모든 사람이나 동물이 최소 16yd (15M) 의 거리를 유지하도록하십시오.

3. 잘못된 사용

- ▶ 미숙한 사람 또는 사용 설명서의 설명 내용을 읽지 않고 이해하지 못 한 사람에 의한 제품 사용은 금지되어 있습니다.
- ▶ 안전을 담당하는 사람이 사용을 감독하거나 지시하지 않는 한 신체적, 감각적 또는 정신적 능력이 저하되었거나 경험이나 지식이없는 사람 (어린이 포함)이 장비를 사용하도록 설계되어 있지 않습니다.
- ▶ 어린이가 기기를 가지고 놀지 않도록 모니터링됩니다.
- ▶ 기기에 가연성, 폭발성 및 유독성 액체를 넣는 것은 금지되어 있습니다.
- ▶ 잠재적으로 가연성 또는 폭발성 환경에서 제품을 사용하는 것은 금지 되어 있습니다.
- ▶ 비정품 예비 부품과 해당 모델 전용이 아닌 기타 모든 예비 부품에 대 한 사용은 금지되어 있습니다.

▶ **△ 경고!** 제품에 대한 모든 개조는 금지되어 있습니다. 기기에 수행한 모든 개 조는 적합성 선언을 무효로 하고 제조업체로 하여금 민법 및 형법에 따른 모든 책임을 경감해 줍니다 .

△ 경고! 부적절한 연장 코드는 위험 할 수 있습니다. 연장 코드를 사용하는 경우 야외에서 사용하기에 적합해야 하며 연결은 건조한 상태로 유지해야 합니다. 소켓을 지면 위로 60mm 이상 유지하는 코드 릴을 사용하여야 작업을 수행하는 것이 좋습니다.

△ 경고! 이 기계는 제조업체에서 제공하거나 권장하는 세제와 함께 사용하도록 설계되었습니다. 다른 세제 사용 또는 화학 물질은 기계의 안전에 악영향을 줄 수 있습니다.

△ 경고! 고압 제트는 잘못 사용하면 위험 할 수 있습니다. 제트는 사람, 전기 장비 또는 기계 자체를 향하지 않아야 합니다.

△ 경고! 보호복을 착용하지 않으면 사람의 범위 안에서 기계를 사용하지 마십시오.

△ 경고! 옷이나 신발을 청소하기 위해 제트기를 자신이나 다른 사람에게 향하게 하지 마십시오.

△ 경고! 폭발 위험 -가연성 액체를 뿌리지 마십시오.

△ 경고! 어린이나 훈련받지 않은 사람은 고압 세척제를 사용해서는 안됩니다.

△ 경고! 고압 호스, 피팅 및 커플 링은 기계의 안전을 위해 중요합니다. 제조업체에서 권장하는 호스, 피팅 및 커플 링 만 사용하십시오.

△ 경고! 기계 안전을 위해 정품 예비 부품 만 사용하십시오. 제조업체로부터 또는 제조업체가 승인 한 것입니다.

△ 경고! 역류 방지기를 통해 흐르는 물은 식수로 간주되지 않습니다.

△ 경고! 전원 코드 또는 기기의 중요 부품이 손상된 경우 기기를 사용하지 마십시오. 예 : 안전 장치, 고압 호스, 트리거 건.

△ 경고! 위험한 연료는 위험 할 수 있으므로 사용해서는 안됩니다.

△ 경고! 보호 복을 착용한 자를 제외하여 이 제품을 사용하지 마십시오.

△ 경고! 이 장비를 사용할 때는 청력 보호 장치를 사용해야 합니다.

4. 정비

a. 자격을 갖춘 기술자가 동일 교체 부품을 사용하여 정비

작업을 수행해야 합니다. 그래야 전동 공구의 안전이 보장됩니다.

5. 전기 안전



이 청소기는 이중으로 절연되어 있으므로 접지선이 필요 없습니다. 전원이 전동기 라 벨에 기재된 전압과 일치하는지 항상 확인 하십시오.



경고! 전원 코드가 손상된 경우 손상이나 부상을 피하기 위해 제조업체, 공인 **BLACK + DECKER** 서비스 센터 또는 동등한 자격을 갖춘 작업자가 교체해야 합니다. 전원 코드를 동일한 자격을 갖춘 사람이 교체했지만 **BLACK + DECKER**의 승인을 받지 않은 경우 보증이 유효하지 않습니다.

△ 경고! 기계를 방치 할 때는 항상 전원 차단 스위치를 끄십시오.

6. 공구 라벨

공구의 라벨에는 다음과 같은 기호가 포함될 수 있습니다:



사용 설명서를 읽으십시오



폭발 위험



뒤는 물체에 맞을 위험



중독 위험



감전 및 단락 위험



눈 보호 사용



부상 위험



단락 위험



적절한 옷을 착용하십시오



...클래스 II 건물

V

볼트

W

시오

A

암페어

min

와트 분



...안전 경고 심볼

Hz

헤르츠

~

교류



위험 표시는 사용자에게 사람, 동물, 전기 장비 또는 제품 자체로 워터 제트를 향하지 말 것을 경고합니다.



식수에 연결하지 마십시오.

△ 경고! 안전 표지. 제품에 붙어 있는 안전 표지에서 제공하는 지침을 지키십시오 . 표지 가 존재하고 읽을 수 있는지 확인하십시오. 그렇지 않을 경우 원래 위치에 교체물을 장착하십시오.

기술 정보

예상되는 사용

본 기기는 깨끗한 물과 생분해성 화학 계면 활성제를 사용하여 얇은 기 헝든 얼룩을 제거하기 위해 차량, 기계, 보트, 석조 등의 청소를 위한 개별적 사용으로 고안되었습니다.

시행 중인 규정에 따라 더러운 물을 처리해야 하는 경우에만 차량 엔 진을 씻을 수 있습니다.

▶ **취수 온도:** 기기의 데이터 판 참조.

▶ **취수 압력:** 10 바 미만 .

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▶ 작동 주변 온도: 0°C 이상 .
기계는 IEC를 준수합니다.

작업자

앞면 커버의 기호는 기기의 대상 작업자를 확인하고 있습니다
(전문 가 또는 비전문가).

주요 구성품 (그림 A)

기계는 상자에 부분적으로 분해되어 배송됩니다.

1. 랜스
2. 안전 장치가 있는 건
3. 고압 호스
4. 노즐
5. 회전 노즐 키트
6. 어댑터
7. 물 필터
8. 브라켓
9. 세제 키트
10. 노즐 청소 공구
11. 나사
12. 플러그가 있는 전기 케이블
13. 핸들
14. 휠
15. 레버
16. 호스 감개

△ 주의! 안전 장치

- ▶ **스타터 장치 (21):** 스타터 장치는 기기의 우발적인 사용을 방지합니다.

안전 밸브 설정을 건드리거나 조정하지 마십시오.

- ▶ **안전 밸브 및 압력 제한 밸브.** 안전 밸브 또한 압력 제한 밸브입니다. 건 트리거를 풀면 밸브가 열 리고 물이 펌프 주입구를 통해 재순환됩니다. 또는 지상으로 배출됩니다.
- ▶ **온도 조절기 밸브 (장착 된 경우):**
수온이 제조업체가 설정 한 온도를 초과하면 온도 조절 밸브가 온수를 배출하고 올바른 온도가 회복 될 때까지 배출되는 물의 양과 동일한 냉수를 끌어냅니다.
- ▶ **안전 장치(20):** 실수로 물이 튀는 것을 방지함.
- ▶ **과부하 컷 아웃:** 과부하시 사용을 중지합니다.

설치 (그림 B)

조립

△ 주의! 모든 설치 및 조립 작업은 주 전원 공급이 차단된 제품으로 수 행되어야 합니다.

조립 순서는 **그림 B** 에 설명되어 있습니다.

회전 노즐 조립

회전 노즐 키트는 보다 나은 세척력을 제공합니다.
회전 노즐을 사용하면 조정 가능한 노즐로 얻은 압력에 비해 압력이 25 % 감소할 수 있습니다. 그러나, 회전 노즐 키트는 워터 제트의 회전으로 인해 더 큰 세척력을 제공합니다.

전기 접속

△ 주의! 전기 공급 전압과 주파수 (V-Hz) 가 제품 데이터 판

(그림 B8) 에 명시되어 것과 일치하는지 확인하십시오.

단락 시 전기 공급을 차단 하기 위해 적절한 접속 및 차등 보안 차단기 (30 mA) 가 장착되어 있는 주 전원 공급장치에 기기가 연결되어 있어야 합니다.

연장 케이블 사용: "IPX5" 보호 등급의 케이블을

사용하십시오. 연장 케이블의 단면은 길이에 비례해야 합니다. 길수록 단 면적이 더 커야 합니다.

물 공급 연결

△ 주의! 깨끗하거나 여과된 물만 취수용으로 사용되어야 합니다. 취 수 탭의 제공량은 펌프 용량과 동일해야 합니다. 가능한 한 급수 시스템 가까이에 제품을 놓으십시오.

연결 지점:

- 물 배출구 (출구)
- 필터가 있는 물 주입구 (입구)

주 급수 장치에 연결

시행 중인 현 규정에 따라 공급 호스가 역류 방지 밸브에 장착되어 있는 경우에만 기기를 주 식수 공급 장치에 연결할 수 있습니다. 호스 가 최소 Ø13 mm 이고 강화되어 있는지 확인하십시오.

조절 정보 (그림 C)

- ▶ **분사 노즐 조절:** 물 흐름이 노즐 (4) 을 조절하여 조절됩니다.
- ▶ **세제 조절:** 올바른 압력을 유지하려면 노즐 (4) (장착 된 경우) 을 "■" 또는 그림과 같이 세제 키트 (9) 를 장착하십시오.
- ▶ **압력 조절:** 조절 장치는 작동 압력을 조절하는 데 사용됩니다 . 압력은 압력 계에 표시되어 있습니다 (장착된 경우).

제품 사용에 대한 (그림 D)

컨트롤

스타터 장치 (21)

스타터 스위치 (ON/I) 를 커짐으로 설정 :

- a) 모터 시동 (TSS 장치가 없는 모델에서);
 - b) 모터를 시작 준비 상태로 설정 (TSS 장치가 있는 모델에서). 스타터 장치에 표시등이 있는 경우, 켜져야 합니다. 제품을 정지하려면 스타터 장치 스위치를 커짐 (OFF/O) 으로 설정함 니다. 스타터 장치에 표시등이 있는 경우, 꺼져야 합니다.
- ▶ 물 분사 컨트롤 레버 (19).

△ 경고! - 위험 !

작동 중에는 그림 D 같이 견고하고 안정된 표면 위에 제품 을 두어야 합니다.

시작 (그림 D)

1. 급수 공급 탭을 완전히 켭니다.
2. 안전 장치 (20) 를 놓습니다.
3. 몇 초간 건 트리거를 누르고 스타터 장치를 사용하여 기기를 시동 하십시오 (ON/I).

△ 경고! - 위험!

제품 작동을 시작하기 전에 급수 호스가 올바르게 연결되었는지 확인하십시오. 물 없이 제품을 사용하면 손상됩니다.

제품을 사용 할 때는 환기 안전망을 덮지 마십시오.

TSS 모델 - 자동 유량 차단 시스템이 있는 TSS 모델에서 :

- ▶ 건 트리거가 풀리면 자동으로 동압력이 모터를 멈춥니다.
- ▶ 건 트리거를 누르면, 압력 자동 하력으로 모터가 사용되고 약간의 지연 후 압력이 복원됩니다.
- ▶ TSS 가 정확하게 작동하는 경우, 모든 건 해제 및 누름 작동을 4-5초 미만의 간격으로 수행되어야 합니다.

기기 손상을 방지하려면, 마를때까지 작동시키지 마십시오

물이 제대로 공급되는지 확인하십시오. TSS가없는 모델의 경우 수온 상승으로 인한 기기 손상을 방지하려면 기기를 가능한 상태에서 5 분 이상 물 분사를 차단하지 마십시오. 트리거 건을 열 때 반동력에 주의하십시오.

제품 정지

1. 스타터 장치 스위치를 on (OFF/0) 으로 설정합니다.
2. 건 트리거를 누르고 호스 안쪽의 잔압을 방출합니다.
3. 건 안전장치 (20) 를 작동시킵니다 .

재시동

1. 안전 장치 (20) 를 놓습니다 .
2. 건 트리거를 누르고 호스 안쪽에 남아 있는 공기를 방출합니다.
3. 스타터 장치를 on (ON/I) 으로 설정합니다 .

보관

1. 제품 스위치를 끄십시오 (OFF/0).
2. 콘센트에서 플러그를 뽑니다.
3. 물 공급 탭을 끕니다.
4. 노즐에서 물이 전부 배출될 때까지 건에서 잔압을 배출합니다.
5. 작업 세션이 끝나면 세제 탱크를 비우고 세척하십시오. 탱크를 세척하려면 세제 대신 깨끗한 물을 사용하십시오.
6. 건 안전장치 (20) 를 작동시킵니다 .

권장되는 청소 순서

계속 건조되는 동안 물을 섞은 세제를 표면에 발라서 오염 물질을 녹입니다.

수직면을 처리할 때는 아래쪽에서 위쪽으로 작업하십시오. 1-2분 간 세제가 작용하도록 두되, 표면이 마르지 않도록 하십시오. 아래쪽부터 시작하고, 최소 30 cm 의 거리에서 고압 제트기를 사용 합니다. 행금물이 세척하지 않은 표면으로 흘러 들어가지 않도록 하십시오. 경우에 따라 먼지를 제거하기 위해 브러시로 문지르는 것이 필요합니다. 표면이 손상 될 수 있으므로 고압은 항상 좋은 청소 결과를 얻기위한 최상의 솔루션은 아닙니다. 미세 조정 가능한 노즐 분사 설정 또는 회전 노즐은 섬세하거나 도장 된 부품 또는 가압 된 부품 (예 : 타이어, 팽창 밸브 등)에 사용해서는 안됩니다. 효과적인 청소는 사용 된 물의 압력과 부피에 따라 동일하게 결정됩니다.

유지보수 (그림 E)

이 장에서 다루지 않는 모든 유지보수 작업은 공인 판매 및 서비스 센터에서 수행되어야 합니다 .

△ **중요한 사항!** 제품 안전 및 신뢰성을 보장하려면 수리, 유지 보수 및 조정 (이 설명서에 나와있는 것 이외)은 항상 동일한 교체 부품을 사용하여 공인 서비스 센터 또는 기타 자격을 갖춘 조직에서 수행해야 합니다. 내부에는 사용자가 수리할 수 있는 부품이 없습니다.

△ **주의!** 항상 제품에 어떠한 작업을 수행하기 전에 전원 콘센트에서 플러그를 뽑십시오.

노즐 청소

1. 노즐에서 분사용 노즐 연결을 분리합니다.
2. 공구 (10) 를 사용하여 노즐 구멍에서 모든 더러운 침전물을 제거 하십시오.

필터 청소

흡기 필터 (7) 및 세제 필터 (장착 된 경우)를 검사하십시오.

모터 걸림 해결 (이 기능이 있는 모델에서)

- ▶ 너무 길게 중단된 경우, 석회 자국 퇴적물이 모터를 멈추게 할 수 있습니다. 모터 걸림을 해결하려면, 공구 가 있는 구동 축을 돌립니다.

시즌 종료 보관

비 부식성, 무독성 부동액으로 기기를 취급하고 그림과 같이 윤활 그리스 튜브 (제공된 경우)를 사용하여 0- 링에 윤활유를 바르고 겨울 시즌에 적절하게 보관하십시오. 기기를 서리를 피하여 건조한 장소에 두십시오.

환경 보호



분리 수거. 이 제품은 일반 가정용 쓰레기와 함께 폐기해서는 안됩니다. BLACK + DECKER 제품을 교체해야하거나 더 이상 사용하지 않을 경우 가정용 쓰레기와 함께 폐기하지 마십시오. 이 제품을 별도로 수거 할 수 있도록 하십시오.



사용하던 제품과 포장을 분리 수거하면 자원을 재활용 및 재사용할 수 있습니다. 재활용 자원을 이용하면 환경 오염이 방지되고 고철 자원에 대한 수요를 줄일 수 있습니다. 지역에 따라 가정용 가전제품을 분리 수거하는 규정이 마련되어 있거나 새로운 제품을 구입할 때 판매점에서 폐 기 방법을 알려줄 수 있습니다.

서비스 정보

BLACK+DECKER 제품은 가까운 대우전자 서비스센터 (구 대우일렉서비스센터) 에서 받으실 수 있습니다. 모든 BLACK+DECKER 서비스 센터에는 교육을 이수한 전문 인원이 배치되어 있어 고객에게 효과적이고 믿을 수 있는 제품 서비스를 제공하고 있습니다. 기술 지원, 수리 또는 순정 교체 부품이 필요한 모든 경우에 가까운 BLACK+DECKER 연락하십시오.

참고

- ▶ BLACK+DECKER 는 제품을 지속적으로 개선시키기 때문에 사전 통지 없이 제품 사양이 변경될 수 있습니다.
- ▶ 기본 장비 및 액세서리 구성은 각 국가에 따라 다를 수 있습니다.
- ▶ 제품 사양은 국가에 따라 다를 수 있습니다.
- ▶ 국가에 따라 판매하지 않는 제품도 있을 수 있습니다.
- ▶ 제품 판매 여부는 해당 지역에 있는 BLACK+DECKER 판매점으로 문의하십시오.

사양

	BW13	BW14	BW15	BW16
전력	1300W (1,3 kW)	1400W (1,4 kW)	1500W (1,5 kW)	1600W (1,6 kW)
작업 흐름	5 l/분	5 l/분	5 l/분	5,3 l/분
최대 물 흐름	6,5 l/분	6,5 l/분	6,5 l/분	7 l/분
압력	6,7 MPa (67 bar)	7,4 MPa (67 bar)	8 MPa (67 bar)	8,5 MPa (67 bar)
최대 압력	10 MPa (100 bar)	11 MPa (100 bar)	12 MPa (100 bar)	12,5 MPa (100 bar)
PSI	1450	1595	1740	1813
T° 입력	50 °C	50 °C	50 °C	50 °C
최대 입력 압력	1 MPa	1 MPa	1 MPa	1 MPa
최대 압력까지의 건의 반발력	9,6 N	10,1 N	10,5 N	11,6 N
모터 절연	F 등급	F 등급	F 등급	F 등급
모터 보호	IPX5	IPX5	IPX5	IPX5
무게	4,6 kg	4,9 kg	4,9 kg	5,5 kg

문제	가능한 원인	해결책
펌프가 작동 압력에 도달하지 않음	노즐 마모	노즐 교체
	물 필터 오염	필터 청소 (7) (그림 E)
	물 공급 부족	물 공급 탭을 완전히 켜 것
	공기가 시스템에 빨려 들어오고 있음	호스 부품의 견고함 확인
	공기가 펌프에 있음	제품의 스위치를 켜고 물이 정상 유속으로 나올 때까지 건 트리거를 눌렀다가 놓으십시오. 제품의 스위치를 다시 켜 것.
	조절식 노즐 위치가 정확하지 않음	노즐 설정 (4) (+) 설정 (그림 C)
	온도 조절 밸브 트립	정확한 수온이 회복 될 때까지 기다리십시오
갑자기 사용하는 동안 펌프 압력이 떨어짐	개방 된 용기에서 물을 높이 이상으로 흡입 0.5 m	흡입 높이를 줄이십시오
	외부 탱크에서 흡입되는 물	기기를 주 급수에 연결
	취수가 너무 뜨거움	온도를 낮춤
	노즐이 막힘	노즐 청소 (그림 E)
	흡입 필터 (7) 가 오염되었습니다	필터 청소 (7) (그림 E)

모터 "buzzes" 시동되지 않음	전원 전압이 너무 낮습니다	주 전원 공급장치의 전압이 판의 전압과 동일한지 확인 (그림 B)
	연장 케이블 사용으로 인한 전압 강하	연장 케이블의 특성 확인
	장시간 사용하지 않은 기기	가까운 공인 서비스 센터에 문의
	TSS 장치에 문제	가까운 공인 서비스 센터에 문의
모터가 시동되지 않음	전력이 없음	플러그가 콘센트에 잘 끼워져 있고 주 전압 공급장치가 존재하는지 확인 (*)
	TSS 장치에 문제	가까운 공인 서비스 센터에 문의
	장시간 동안 제품을 사용하지 않음	공구 를 사용하여 제품 뒤쪽에 있는 구멍에서 모터 막힘을 푸십시오 (이 기능이 있는 모델에서)
누수	셀이 마모됨	가까운 공인 서비스 센터에서 셀을 교체 받으십시오
	안전 밸브 트립 및 배출	온도를 낮춤 (기술 데이터 참조)
제품 소음	물이 너무 뜨거움	온도를 낮춤 (기술 데이터 참조)
기름 유출	셀이 마모됨	가까운 공인 서비스 센터에 문의
TSS 버튼만 해당: 건 트리거를 놓아도 기기가 작동됩니다	방수되지 않는 고압 시스템 또는 펌프 수압 회로	가까운 공인 서비스 센터에 문의
TSS 버튼만 해당 : 건 트리거를 누르고 있으면 급수가 안됨 (공급 호스를 연결한 상태).	노즐이 막힘	노즐 청소 (그림 E)

เก็บรักษาคำแนะนำต่างๆ เหล่านี้ไว้

ผลิตภัณฑ์ที่คุณตัดสินใจซื้อชิ้นนี้มีมาพร้อมเทคโนโลยีที่ล้ำสมัย และเป็นผลมาจากการออกแบบจากหนึ่งในบริษัทผู้ผลิตชั้นนำของยุโรปด้านเครื่องตัดน้ำแรงดันสูงเพื่อให้คุณสามารถใช้งานเครื่องตัดสว่านได้อย่างมีประสิทธิภาพสูงสุดโปรดอ่านคู่มือนี้โดยละเอียดและปฏิบัติตามคำแนะนำต่างๆ ทุกครั้งที่ใช้งานเราขอแสดงความยินดีกับคุณสำหรับการเลือกของคุณและขอให้คุณใช้งานอุปกรณ์ได้อย่างมีประสิทธิภาพ

กฎความปลอดภัยทั่วไป



การติดตั้ง เพื่อความปลอดภัย

คำเตือนเพื่อความปลอดภัยโดยทั่วไปสำหรับอุปกรณ์ไฟฟ้า

คำเตือน อ่านคำเตือนเพื่อความปลอดภัยและคำแนะนำทั้งหมดการไม่ปฏิบัติตามคำเตือนและคำแนะนำต่างๆ ซึ่งแสดงไว้ที่ด้านล่างอาจก่อให้เกิดไฟฟ้าช็อต ไฟไหม้ และ/หรือการบาดเจ็บร้ายแรงได้

เก็บคำเตือนและคำแนะนำทั้งหมดไว้สำหรับกรอ้างอิงในอนาคต คำที่ใช้ในคำเตือนทั้งหมดที่ด้านล่างจะหมายถึงอุปกรณ์ไฟฟ้าซึ่งทำงานด้วยสายไฟฟ้าสายใหญ่ (มีสาย) หรืออุปกรณ์ไฟฟ้าซึ่งทำงานด้วยแบตเตอรี่ (ไร้สาย)

1. "สิ่งที่จะต้องไม่ทำ" เพื่อความปลอดภัย

a. อันตรายจากการระเบิดหรือการเป็นพิษ

ห้ามใช้เครื่องตัดน้ำกับของเหลวไวไฟหรือมีพิษหรือใช้ร่วมกับผลิตภัณฑ์ใดๆ ที่ไม่สอดคล้องกับข้อกำหนดการใช้งานเครื่องตัดน้ำที่ถูกต้อง

b. อันตรายจากการบาดเจ็บไหม้ ห้ามหันหัวฉีดไปยังตัวเครื่องตัดน้ำ

c. อันตรายจากไฟฟ้าช็อต ห้ามหันหัวฉีดไปยังตัวเครื่องตัดน้ำ

d. อันตรายจากไฟฟ้าลัดวงจร ห้ามใช้เครื่องตัดน้ำภายนอกอาคารขณะที่ฝนกำลังตก

e. อันตรายจากการบาดเจ็บ ห้ามบุคคล (รวมถึงเด็ก)

ซึ่งมีความบกพร่องทางกายภาพประสาทสัมผัสหรือสภาพจิตใจหรือผู้ที่ขาดประสบการณ์และความรู้ใช้เครื่องตัดน้ำ เด็กจะต้องได้รับการควบคุมดูแลเพื่อให้แน่ใจว่าจะไม่เล่นกับเครื่องตัดน้ำ

f. อันตรายจากไฟฟ้าช็อต ห้ามใช้มือที่เปียกสัมผัสกับปลั๊กและ/หรือเต้ารับ

g. อันตรายจากไฟฟ้าช็อตและไฟฟ้าลัดวงจร ห้ามใช้เครื่องตัดน้ำหากสายไฟชำรุดเสียหาย

h. อันตรายจากการระเบิด ห้ามใช้อุปกรณ์หากสายฉีดแรงดันสูงชำรุดเสียหาย

i. อันตรายจากอุบัติเหตุห้ามทำให้วัสดุติดขัดในตำแหน่งทำงาน

j. อันตรายจากอุบัติเหตุตรวจสอบว่ามีแผ่นป้ายข้อมูลติดอยู่ที่ตัวเครื่องหรือไม่หากไม่มีกรุณาติดต่อตัวแทนจำหน่ายของคุณ

ห้ามใช้งานเครื่องตัดน้ำที่ไม่มีแผ่นป้ายข้อมูลกำกับอยู่เนื่องจากจะไม่สามารถเข้าถึงข้อมูลและอาจก่อให้เกิดอันตรายได้

k. อันตรายจากการระเบิด ห้ามยุ่งเกี่ยวหรือปรับเปลี่ยนการ

ส้อมเทียบวาล์วนิรภัย

l. การปรับเปลี่ยนประสิทธิภาพการทำงานที่เป็นอันตรายห้าม

ปรับเปลี่ยนเส้นผ่านศูนย์กลางด้านเข้าของหัวฉีดสเปรย์

m. อันตรายจากอุบัติเหตุ ห้ามปล่อยปะละเลยเครื่องตัดน้ำ

n. อันตรายจากไฟฟ้าลัดวงจร ห้ามเคลื่อนย้ายเครื่องฉีดล้างโดยการลากดึงสายไฟ

o. ตรวจสอบให้แน่ใจว่าไม่มีรถขับบนสายฉีดแรงดันสูง

2. "ข้อต้องปฏิบัติ" เพื่อความปลอดภัย

a. อันตรายจากไฟฟ้าลัดวงจรต้องป้องกันตัวนำไฟฟ้าทั้ง

หมดให้ปลอดภัยจากหัวฉีดน้ำ

b. อันตรายจากไฟฟ้าช็อตเครื่องตัดน้ำจะต้องได้รับการ

เชื่อมต่อเข้ากับอุปกรณ์จ่ายไฟที่เพียงพอตามกฎข้อบังคับที่ใช้งาน

← การใช้เบรกเกอร์นิรภัยป้องกันไฟดูด (R.C.C.B.)

จะช่วยปกป้องผู้ใช้เครื่องตัดน้ำให้มีความปลอดภัยมากยิ่งขึ้น (30 มิลลิแอมแปร์)

c. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

d. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

e. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

f. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

g. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

h. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

i. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

j. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

k. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

l. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

m. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

n. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

o. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

p. อันตรายจากการบาดเจ็บก่อนการดำเนินงานกับเครื่องตัดน้ำ

คุณจะต้องตั้งปลั๊กออกก่อน

ความรู้ใช้เครื่องฉีดน้ำหากไม่ได้รับการควบคุมดูแลหรือได้รับการแนะนำการใช้งานโดยผู้ที่มีหน้าที่รับผิดชอบเพื่อความปลอดภัยของบุคคลดังกล่าวเอง

- ▶ ตรวจสอบให้แน่ใจว่าเด็กไม่ได้เล่นกับเครื่องฉีดน้ำ
- ▶ ห้ามใช้ช่องเหลวไวไฟของเหลวที่อาจก่อให้เกิดการระเบิดและของเหลวที่มีพิษกับเครื่องฉีดน้ำ
- ▶ ห้ามใช้เครื่องฉีดน้ำในสภาพแวดล้อมที่อาจติดไฟหรือระเบิด
- ▶ ห้ามใช้อะไหล่ที่ไม่ใช่ของแท้และอะไหล่อื่นใดก็ตามที่ไม่ได้รับการกำหนดสำหรับรุ่นของเครื่องฉีดน้ำนี้

⚠ **คำเตือน!** ห้ามทำการดัดแปลงใดๆกับเครื่องฉีดน้ำการดัดแปลงใดๆก็ตามที่ทำการกับเครื่องฉีดน้ำจะทำให้ค่าประกาศเรื่องความปลอดภัยกัน(Declaration of Conformity)กลายเป็นโมฆะและทำให้ผู้ผลิตพ้นจากการรับผิดชอบตามกฎหมายแพ่งและอาญา

⚠ **คำเตือน!** ปลั๊กพ่วงที่ไม่เพียงพอลาจเป็นอันตรายได้หากมีการใช้ปลั๊กพ่วงปลั๊กพ่วงดังกล่าวจะต้องเหมาะสมสำหรับการใช้งานภายนอกอาคารในขณะที่การเชื่อมต่อปลั๊กพ่วงดังกล่าวจะต้องแห้งสนิทและอยู่ในที่ที่ในการทำเช่นนั้นแนะนำให้ใช้สายไฟม้วนเก็บซึ่งจะช่วยให้ได้รับอยู่เหนือพื้นได้อย่างน้อยที่สุด 60 มม.

⚠ **คำเตือน!** เครื่องฉีดน้ำนี้ได้รับการออกแบบมาเพื่อใช้กับสารทำความสะอาดซึ่งได้รับการจัดหาให้หรือแนะนำโดยผู้ผลิตเท่านั้นการใช้สารทำความสะอาดอื่นๆหรือสารเคมีต่างๆอาจส่งผลกระทบต่อความปลอดภัยของเครื่องฉีดน้ำอย่างร้ายแรงได้

⚠ **คำเตือน!** การใช้หัวฉีดแรงดันสูงที่ไม่ถูกต้องอาจเป็นอันตรายได้ห้ามหันหัวฉีดเข้าหาผู้อื่นอุปกรณ์ไฟฟ้าที่กำลังเปิดใช้งานอยู่หรือหันเข้าหาตัวเครื่องฉีดน้ำเอง

⚠ **คำเตือน!** ห้ามใช้เครื่องฉีดน้ำใกล้กับผู้อื่นหากบุคคลดังกล่าวไม่ได้สวมใส่ชุดป้องกัน

⚠ **คำเตือน!** ห้ามหันหัวฉีดเข้าหาตัวคุณเองหรือผู้อื่นเพื่อหาความสะอาดเสื้อผ้าหรือรองเท้า

⚠ **คำเตือน!** ความเสี่ยงที่จะเกิดการระเบิด – ห้ามพ่นของเหลวไวไฟ

⚠ **คำเตือน!** ห้ามไม่ให้เด็กหรือผู้ที่ไม่ได้รับการฝึกอบรมในการใช้งานใช้งานเครื่องฉีดน้ำแรงดันสูง

⚠ **คำเตือน!** สายฉีดน้ำแรงดันสูงเครื่องประกอบและข้อต่อมีความสำคัญสำหรับความปลอดภัยของเครื่องฉีดน้ำ ใช้เฉพาะสายฉีดน้ำเครื่องประกอบและข้อต่อซึ่งได้รับการแนะนำโดยผู้ผลิตเท่านั้น

⚠ **คำเตือน!** เพื่อให้แน่ใจได้ถึงความปลอดภัยของเครื่องฉีดน้ำคุณจะต้องใช้เฉพาะอะไหล่ของแท้จากผู้ผลิตหรืออะไหล่ที่ได้รับการอนุญาตจากผู้ผลิตเท่านั้น

⚠ **คำเตือน!** น้ำที่ไหลผ่านอุปกรณ์ป้องกันการไหลย้อนกลับจะถือว่าเป็นน้ำที่ดื่มไม่ได้

⚠ **คำเตือน!** ห้ามใช้เครื่องฉีดน้ำหากสายจ่ายไฟฟ้าหรือชิ้นส่วนสำคัญของเครื่องฉีดน้ำชำรุดเสียหาย เช่น อุปกรณ์เพื่อความปลอดภัย สายฉีดน้ำแรงดันสูง ปืนฉีดฉีด

⚠ **คำเตือน!** ห้ามใช้น้ำมันเชื้อเพลิงที่ไม่ถูกต้องเนื่องจากอาจเป็นอันตรายได้

⚠ **คำเตือน!** ห้ามใช้เครื่องฉีดล้างใกล้กับผู้คนเว้นเสียแต่ส่วนบุคคลดังกล่าวสวมใส่ชุดป้องกัน

⚠ **คำเตือน!** จะต้องสวมใส่อุปกรณ์ป้องกันการได้ยินเมื่อใช้งานเครื่องฉีดน้ำ

4. การบำรุงรักษา

a. อุปกรณ์ไฟฟ้าของคุณจะต้องได้รับการบำรุงรักษาโดยช่างซ่อมผู้มีคุณสมบัติเหมาะสมซึ่งเฉพาะชิ้นส่วนของแท่นเท่านั้น การทำเช่นนี้จะทำให้แน่ใจได้ถึงการคงไว้ซึ่งความปลอดภัยของอุปกรณ์ไฟฟ้า

5. ความปลอดภัยทางไฟฟ้า



อุปกรณ์ของคุณเป็นแบบหุ้มฉนวนสองชั้นอยู่แล้ว ดังนั้นจึงไม่จำเป็นต้องมีการต่อสายดิน หมั่นตรวจสอบอยู่เสมอว่าแรงดันไฟฟ้าหลักของอุปกรณ์ตรงตามแรงดันไฟฟ้าที่ระบุไว้บนแผ่นป้ายบนอุปกรณ์



คำเตือน! หากสายไฟฟ้าชำรุดเสียหายสายไฟดังกล่าวจะต้องได้รับการเปลี่ยนโดยผู้ผลิต ศูนย์บริการ BLACK+DECKER ที่ได้รับการอนุญาตและผู้ที่มีคุณสมบัติเท่าเทียมกันเพื่อหลีกเลี่ยงไม่ให้เกิดความเสียหายหรือการบาดเจ็บ หากสายไฟฟ้าชำรุดเสียหายได้รับการเปลี่ยนโดยผู้ที่มีคุณสมบัติเท่าเทียมกันแต่ไม่ได้รับการอนุญาตจาก BLACK+DECKER การรับประกันสินค้าจะถือเป็นโมฆะ

⚠ **คำเตือน!** ปิดสวิตช์และดึงสวิตช์สายไฟออกเสมอเมื่อไม่มีการใช้งานเครื่องฉีดน้ำ

6. ฉลากบนเครื่องฉีดน้ำ

ฉลากบนเครื่องฉีดน้ำของคุณอาจมีสัญลักษณ์ดังต่อไปนี้:



อ่านคู่มือการใช้งาน



อันตรายจากการระเบิด



อันตรายจากการกระแทกโดยวัตถุที่ติดกระเด็น



อันตรายจากสารเป็นพิษ



อันตรายจากไฟฟ้าช็อตและไฟฟ้าลัดวงจร



ใช้อุปกรณ์ป้องกันดวงตา



อันตรายจากการบาดเจ็บ



อันตรายจากไฟฟ้าลัดวงจร



สวมใส่เสื้อผ้าที่เหมาะสม



ประเภท II โครงสร้าง



V โวลต์



W Watts



การแจ้งเตือนความปลอดภัยสัญลักษณ์



A แอมแปร์



min นาที



การแจ้งเตือนความปลอดภัยสัญลักษณ์



Hz เฮิร์ตซ์



~ กระแสสลับ



ป้ายเตือนภัยเตือนผู้ใช้งานไม่ให้หันหัวฉีดเข้าหาผู้คน สัตว์ อุปกรณ์ไฟฟ้าหรือตัวเครื่องฉีดล้างเอง



ห้ามต่อเข้ากับน้ำที่สามารถดื่มได้

⚠ **คำเตือน!** ป้ายความปลอดภัย ปฏิบัติตามคำแนะนำต่างๆ

ซึ่งระบุไว้ในป้ายความปลอดภัยที่มีต่อเครื่องฉีดล้างตรวจสอบว่ามีป้ายอยู่หรือไม่และป้ายดังกล่าวยังอ่านได้ชัดเจนหรือไม่ หากไม่ คุณจะต้องเปลี่ยนป้ายดังกล่าวให้อยู่ในสภาพเดิม

ข้อมูลทางเทคนิค

วัตถุประสงค์ในการใช้งาน

เครื่องฉีดน้ำนี้ถูกออกแบบมาเพื่อใช้ในการทำความสะอาดรถยนต์ เครื่องจักร เรือ งานก่อสร้าง และอื่น ๆ เพื่อขจัดคราบสกปรกที่ติดแน่นออกโดยใช้น้ำสะอาดและน้ำยาทำความสะอาดที่ย่อยสลายได้ทางชีวภาพ การล้างเครื่องยนต์ของรถยนต์จะสามารถทำได้เฉพาะในกรณีที่สามารถกำจัดน้ำสกปรกได้ตามข้อกำหนดที่บังคับใช้เท่านั้น

- ▶ **อุณหภูมิของน้ำที่เข้าเครื่อง:** อุณหภูมิของน้ำที่เข้าเครื่อง
- ▶ **แรงดันของน้ำที่เข้าเครื่อง:** ต่ำกว่า 10 บาร์
- ▶ **อุณหภูมิแวดล้อมในการใช้งาน:** สูงกว่า 0°C อุปกรณ์นี้ตรงตามมาตรฐาน IEC

ผู้ใช้งาน

สัญลักษณ์บนฝาด้านหน้าจะระบุผู้ใช้งานเครื่องฉีดน้ำ (ผู้เชี่ยวชาญและผู้ใช้งานทั่วไป)

ส่วนประกอบที่สำคัญ (รูปที่ A)

เครื่องฉีดน้ำจะได้รับการจัดตั้งโดยการถอดแยกเป็นส่วนต่าง ๆ มาในกล่อง

1. ปืนฉีดน้ำท่อนกลาง
2. ปืนฉีดน้ำพร้อมสลับนิรภัย
3. สายฉีดน้ำแรงดันสูง
4. ปลายเป็น
5. ปลายเป็นแบบหมุน
6. อะแดปเตอร์
7. ไส้กรองน้ำ
8. ตัวยึดตามจับ
9. ชุดกระบอกใส่น้ำยาทำความสะอาด
10. เครื่องมือทำความสะอาดปลายปืน
11. สกรู
12. สายไฟพร้อมปลั๊ก
13. ตั๋วจับ
14. วงล้อ
15. ก้าน
16. เครื่องม้วนสายยาว

⚠ ข้อควรระวัง! อุปกรณ์นิรภัย:

- ▶ **อุปกรณ์สแตนด์ออฟ (21):** อุปกรณ์สแตนด์ออฟจะช่วยให้มีการใช้งานเครื่อง ฉีดล้างโดยไม่ติดตั้งใจ

ห้ามยุ่งเกี่ยวหรือปรับเปลี่ยนการปรับตั้งวาล์วนิรภัย

- ▶ **วาล์วนิรภัยและ/หรือวาล์วจำกัดแรงดัน:** วาล์วนิรภัยจะทำหน้าที่เป็นวาล์วจำกัดแรงดันด้วยเมื่อคลายสวิตช์ปืนฉีดน้ำวาล์วจะเปิดออกและน้ำจะหมุนเวียนผ่านทางช่องทางเข้าของปั๊มหรือระบายออกมาที่พื้น
- ▶ **วาล์วเทอร์โมสแตท (ถ้ามีติดตั้งไว้)** หากน้ำมีอุณหภูมิสูงกว่าอุณหภูมิที่ตั้งไว้โดยผู้ผลิต วาล์วเทอร์โมสแตทจะระบายน้ำร้อนออก และดึงน้ำเย็นในปริมาณเท่ากับน้ำร้อนที่ระบายออกไปเข้ามาแทนที่จนกว่าน้ำจะมีอุณหภูมิที่ถูกต้อง
- ▶ **สลักนิรภัย (20):** ป้องกันการฉีดพ่นน้ำโดยไม่ตั้งใจ

▶ ตัวตัดการทำงานเมื่อมีการใช้งานเกินกำลัง:

จะหยุดการทำงานของเครื่องในกรณีที่มีการใช้งานเกินกำลัง

การติดตั้ง (รูปที่ B)

การประกอบ

- ▶ **ข้อควรระวัง!** การติดตั้งและประกอบตัวเครื่องทั้งหมดจะสามารถทำได้เฉพาะเมื่อถอดปลั๊กเครื่องฉีดล้างออกจากแหล่งจ่ายไฟหลักแล้วเท่านั้น
- ดูลำดับการประกอบเครื่องในรูปที่ B

การประกอบหัวฉีดหมุน

หัวฉีดหมุนจะให้พลังในการฉีดล้างที่มากกว่า การใช้หัวฉีดหมุนอาจทำให้แรงดันลดลง 25% เมื่อเทียบกับแรงดันที่ได้จากการใช้หัวฉีดแบบปรับได้อย่างไรก็ตามชุดหัวฉีดหมุนจะให้พลังในการฉีดล้างที่มากกว่าเนื่องจากการหมุนของหัวฉีดน้ำ

การเชื่อมต่อทางไฟฟ้า

- ▶ **ข้อควรระวัง!** ตรวจสอบแรงดันไฟฟ้าและความถี่ (V-Hz) ว่าตรงตามค่าที่ระบุไว้ในแผ่นป้ายข้อมูลของเครื่อง (รูปที่ 8) เครื่องฉีดล้างจะต้องได้รับการต่อเข้ากับแหล่งจ่ายไฟหลักซึ่งได้รับการต่อสายดินรวมถึงมีการติดตั้งเบรกเกอร์อย่างเหมาะสม (30 มิลลิแอมแปร์) เท่านั้นเพื่อตัดการจ่ายไฟฟ้าในกรณีที่เกิดไฟฟ้าลัดวงจร

การใช้สายต่อพ่วง: ใช้สายไฟและปลั๊กที่มีระดับการป้องกัน "IPX5" พื้นที่ติดตั้งของสายต่อพ่วงควรได้สัดส่วนกับความ ยาว หากสายต่อพ่วงยาวขึ้นพื้นที่ติดตั้งควรมากขึ้นด้วย เช่นกัน

การเชื่อมต่อกับแหล่งจ่ายน้ำ

- ▶ **ข้อควรระวัง!** ใช้เฉพาะน้ำสะอาดหรือน้ำที่กรองแล้วสำหรับช่องน้ำเข้าเท่านั้นการจัดส่งน้ำของก๊อกน้ำจะต้องเท่ากับการจัดส่งน้ำของปั๊มวาล์วเครื่องฉีดล้างให้อยู่ใกล้กับระบบจ่ายน้ำให้มากที่สุดเท่าที่จะเป็นไปได้

จุดเชื่อมต่อ

- ทางออกของน้ำ (ช่องน้ำออก)
- ทางเข้าของน้ำพร้อมไส้กรอง (ช่องน้ำเข้า)

การเชื่อมต่อเข้ากับแหล่งจ่ายน้ำหลัก

สามารถเชื่อมต่อเครื่องฉีดล้างเข้ากับอุปกรณ์จ่ายน้ำดื่มหลักได้โดยตรงเฉพาะเมื่อท่อจ่ายน้ำได้รับการติดตั้งพร้อมวาล์วป้องกัน การไหลย้อนกลับตามข้อกำหนดที่บังคับใช้ภายในปัจจุบันเท่านั้น รวมถึงจะต้องตรวจสอบให้แน่ใจว่าท่อมีขนาดเส้นผ่านศูนย์กลางอย่างน้อย 13 มม. และได้รับการเสริมแรงแล้ว

ข้อมูลการปรับ (รูปที่ C)

- ▶ **การปรับหัวฉีดสเปย์:** ปรับการไหลของน้ำได้ด้วยการควบคุมปลายปืน (4)
- ▶ **การปรับแรงดันของน้ำยาทำความสะอาด:** ปรับปลายปืน (4) (ถ้ามีติดตั้งไว้) ที่ด้าน "■" หรือติดตั้งชุดกระบอกใส่น้ำยาทำความสะอาด (9) ตามที่แสดงไว้เพื่อให้สามารถจ่ายน้ำยาทำความสะอาดด้วยแรงดันที่เหมาะสม
- ▶ **ปรับความดัน:** ตัวปรับ จะใช้เพื่อปรับแรงดันในการทำงาน ค่า แรงดันจะแสดงขึ้นที่เกจวัดแรงดัน (ถ้ามีติดตั้งไว้)

ข้อมูลเกี่ยวกับการใช้งานเครื่องฉีดน้ำ (รูปที่ D)

ปุ่มควบคุม

อุปกรณ์สาร์ทเตอร์ (21)

เปิดสวิตช์ของสาร์ทเตอร์ (ON/I) เพื่อ:

- สตาร์ทมอเตอร์ (สำหรับรุ่นที่ไม่มีอุปกรณ์ TSS)
 - ปรับตั้งมอเตอร์ให้พร้อมสำหรับการสาร์ท (สำหรับรุ่นที่มีอุปกรณ์ TSS)
- หากมีไฟนําร่องบนอุปกรณ์สาร์ทเตอร์ไฟดังกล่าวดูควรติดสว่านซึ่งเปิดสวิตช์ของอุปกรณ์สาร์ทเตอร์ (OFF/0) เพื่อปิดการทำงานของเครื่องฉีดล้างหากมีไฟนําร่องบนอุปกรณ์สาร์ทเตอร์ ไฟดังกล่าวดูควรดับลง

▶ ไกบินฉีดน้ำ (19)

△ คำเตือน - อันตราย!

ในระหว่างที่ใช้งานเครื่องฉีดล้างต้องวางเครื่องบนพื้นผิวที่มั่นคง แข็งแรงตามตำแหน่งที่แสดงในรูปที่ D

การสาร์ท (รูปที่ D)

- เปิดก๊อกน้ำจนสุด
- คลายสลักนิรภัย (20)
- กดสวิตช์ป็นฉีดน้ำค้างไว้สองสามวินาที แล้วสาร์ทเครื่องโดยใช้อุปกรณ์สาร์ทเตอร์ (ON/I)

△ คำเตือน - อันตราย!

ก่อนจะสาร์ทเครื่องฉีดล้างให้ตรวจสอบว่าเครื่องได้รับน้ำอย่างเหมาะสมหรือไม่ การเปิดเครื่องโดยไม่มีน้ำจะทำให้เครื่องได้รับความเสียหายขณะกำลังใช้งานเครื่องฉีดล้างต้องไม่มีสิ่งปิดคลุมช่องระบายอากาศ

รุ่น TSS - สำหรับรุ่น TSS ที่มีระบบตัดการจ่ายโดยอัตโนมัติ:

- ▶ เมื่อคลายสวิตช์ป็นฉีดน้ำแรงดันที่มีอยู่จะตัดการทำงานของมอเตอร์โดยอัตโนมัติ
 - ▶ เมื่อกดสวิตช์ป็นฉีดน้ำแรงดันที่ลดลงอัตโนมัติจะทำให้มอเตอร์เริ่มทำงานและแรงดันจะกลับสู่ภาวะปกติอีกครั้งหลังจากมีการหน่วงเวลาเล็กน้อย
 - ▶ TSS จะทำงานได้อย่างถูกต้องถ้าคลายและกดสวิตช์ป็นฉีดน้ำทุกครั้งเป็นเวลาห่างกันอย่างน้อย 4-5 วินาที
- ห้ามใช้งานเครื่องฉีดล้างโดยไม่มีน้ำและต้องตรวจเช็คว่ามี การจ่ายน้ำอย่างเหมาะสมทุกครั้งเพื่อให้เครื่องฉีดล้างชำรุดเสียหาย สำหรับรุ่นที่ไม่มี TSS ห้ามหยุดการฉีดน้ำเป็นเวลานานเกินกว่า 5 นาทีขณะที่เครื่องกำลังทำงานอยู่เพื่อให้เครื่องฉีดล้างชำรุดเสียหายเนื่องจากอุณหภูมิของน้ำที่เพิ่มสูงขึ้น

การหยุดใช้งานเครื่องฉีดล้าง

- ปิดสวิตช์ของอุปกรณ์สาร์ทเตอร์ (OFF/0)
- กดป็นฉีดน้ำและระบายแรงดันที่เหลืออยู่ในสายฉีด
- ล็อคสลักนิรภัยให้เข้าที่ (20)

การสาร์ทเครื่องใหม่

- คลายสลักนิรภัย (D)
- กดหัวฉีดและระบายอากาศที่เหลืออยู่ในสายฉีด
- เปิดอุปกรณ์สาร์ทเตอร์ (ON/I)

การจัดเก็บ

- ปิดสวิตช์เครื่อง (OFF/0)
- ถอดปลั๊กออกจากเต้ารับ
- ปิดก๊อกจ่ายน้ำ
- ระบายแรงดันที่เหลืออยู่จากป็นฉีดน้ำจนกระทั่งน้ำไหลออกมาจากหัวฉีด
- ระบายและล้างถังน้ำยาทำความสะอาดหลังสิ้นสุดการใช้งาน หากต้องการล้างถังให้ใช้น้ำสะอาดแทนน้ำยาทำความสะอาด
- ล็อคสลักนิรภัยของป็นฉีดน้ำ (20)

ขั้นตอนการทำความสะอาดที่แนะนำ

ขจัดคราบสิ่งสกปรกออกโดยใช้น้ำผสมน้ำยาทำความสะอาดเช็ดทำความสะอาดพื้นผิวขณะที่ยังแห้งอยู่

เมื่อทำความสะอาดพื้นผิวแล้วจึงให้ฉีดทำความสะอาดจากล่างขึ้นบน ปล่อยให้ยาทำความสะอาดอยู่บนพื้นผิว 1-2 นาที โดยต้องระวังไม่ให้พื้นผิวแห้งให้หัวฉีดแรงดันสูงเริ่มฉีดจากด้านล่างขึ้นมาโดยให้ระยะห่างอย่างน้อย 30 ซม.

น้ำที่ไหลล้างทำความสะอาดต้องไม่กระเซ็นไปโดนพื้นผิวที่ยังไม่ได้ทำความสะอาดในบางครั้ง อาจต้องใช้แปรงขัดเพื่อขจัดสิ่งสกปรกการทำความสะอาดด้วยน้ำแรงดันสูงไม่ใช่วิธีการทำความสะอาดที่ดีที่สุดเสมอไปเนื่องจากแรงดันที่สูงอาจทำให้พื้นผิวบางประเภทเสียหายได้ไม่ควรปรับหัวฉีดเป็นแบบเล็กสุดหรือปรับให้เป็นแบบหมุนในกรณีทำความสะอาดบริเวณที่ละเอียดอ่อนหรือชิ้นส่วนทาสี หรือใช้กับส่วนประกอบที่มีแรงดัน (เช่น ยางรถ ล้อล้อลม เป็นต้น)

ประสิทธิภาพการฉีดล้างจะขึ้นอยู่กับทั้งแรงดันและปริมาณน้ำที่ใช้ เมื่อเทียบจากระดับเดียวกัน

การบำรุงรักษา (รูปที่ E)

การบำรุงรักษาไดนอกเหนือจากที่ระบุไว้ในบทนี้ควรดำเนินการโดยตัวแทนขายและศูนย์บริการที่ได้รับอนุญาต

△ **สำคัญ!** เพื่อให้ง่ายใจได้ถึงความปลอดภัยและควมนานเชื่อถือของเครื่องฉีดล้าง การซ่อมแซม การบำรุงรักษาและการปรับ (นอกเหนือจากที่ระบุไว้ในคู่มือการใช้งานนี้) จะต้องได้รับการดำเนินการโดยศูนย์บริการหรือบริษัทอื่นที่มีคุณสมบัติเทียบเท่า ซึ่งได้รับการอนุญาตเท่านั้นเครื่องฉีดล้างไม่มีอะไหล่สำหรับผู้ใช้งานในภาคกลอง

△ **ข้อควรระวัง!** ถอดปลั๊กออกจากเต้ารับไฟฟ้าทุกครั้งก่อนที่จะดำเนินการใดๆ กับเครื่องฉีดน้ำ

การทำความสะอาดปลายป็น

- ถอดป็นฉีดน้ำตอนกลาง และ ปลายป็น ออกจากกัน
- นำสิ่งสกปรกที่สะสมอยู่ออกจากภายในปลายป็นโดยใช้เครื่องมือ (10)

การทำความสะอาดไส้กรอง

ตรวจสอบไส้กรองด้านทางเข้า (7) และไส้กรองน้ำยาทำความสะอาด (หากมีติดตั้งไว้) ก่อนการใช้งานแต่ละครั้ง และถ้าจำเป็น ให้ทำความสะอาดไส้กรองตามคำแนะนำ

การนำสิ่งอุดตันออกจากรวมอเตอร์

(สำหรับรุ่นที่มีคุณสมบัตินี้)

ในกรณีที่เกิดการอุดตันเป็นเวลานานตะกอนคราบหินปูนดังกล่าวอาจทำให้มอเตอร์หยุดทำงานให้น้ำล้นอุดตันออกจากมอเตอร์โดนหมุนแกนขับเคลื่อนด้วยเครื่องมือ

การจัดเก็บเพื่อใช้งานในครั้งต่อไป

ดูแลเครื่องฉีดล้างด้วยสารป้องกันการแข็งตัวของน้ำที่ไม่เป็นพิษและไม่มีฤทธิ์กัดกร่อน หล่อลื่นโอริงโดยใช้จารบีหล่อลื่น (หากมีการจัดหาให้) ตามที่แสดงในรูปก่อนจัดเก็บเครื่องฉีดน้ำ ในช่วงฤดูหนาว วางเครื่องไว้ในที่แห้ง และมีการป้องกันการเกิดน้ำค้างแข็ง

การกำจัดทั้งผลิตภัณฑ์



การเก็บรวบรวมแบบคัดแยกห้ามทั้งผลิตภัณฑ์นี้รวมกับขยะในครัวเรือนปกติหากเมื่อใดก็ตามที่จำเป็นต้องเปลี่ยนผลิตภัณฑ์ BLACK & DECKER หรือถ้าเครื่องมือนี้ไม่เป็นประโยชน์อีกต่อไปอย่าทิ้งผลิตภัณฑ์นี้รวมกับขยะในครัวเรือนจัดการกับผลิตภัณฑ์นี้เพื่อให้พร้อมสำหรับการเก็บรวบรวมแบบคัดแยก



การเก็บรวบรวมแบบคัดแยกสำหรับบรรจุภัณฑ์และผลิตภัณฑ์ที่ใช้แล้วทำให้สามารถรีไซเคิลวัสดุและนำมาใช้งานอีกครั้ง การนำวัสดุรีไซเคิลมาใช้อีกครั้งจะช่วยป้องกันมลพิษต่อสิ่งแวดล้อมและลดความต้องการวัตถุดิบตามกฎระเบียบท้องถิ่นอาจมีการจัดเตรียมสถานที่สำหรับการเก็บรวบรวมแบบคัดแยกอุปกรณ์ไฟฟ้าที่ใช้ภายในครัวเรือนไว้ ณ แหล่งรับขยะของเทศบาลหรืออาจมีการรับอุปกรณ์ใช้แล้วที่ร้านค้าปลีกในกรณีที่ท่านซื้อผลิตภัณฑ์ชิ้นใหม่

ข้อมูลการบริการ

BLACK+DECKER มีเครือข่ายศูนย์บริการเต็มรูปแบบทั้งที่เป็นเจ้าของเองและศูนย์บริการที่ได้รับอนุญาตกระจายอยู่ทั่วประเทศ ศูนย์บริการBLACK+DECKER ทุกแห่งมีพนักงานที่ผ่านการฝึกอบรมเพื่อให้บริการเกี่ยวกับเครื่องมือไฟฟ้าอย่างมีประสิทธิภาพและเชื่อถือได้ไม่ว่าคุณจะต้องการคำแนะนำด้านเทคนิคการซ่อมแซมหรืออะไหล่แ่จากโรงงาน โปรดติดต่อศูนย์ BLACK+DECKER ใกล้บ้านคุณ

หมายเหตุ

- ▶ BLACK+DECKER มีนโยบายที่จะพัฒนาปรับปรุงผลิตภัณฑ์อย่างต่อเนื่องด้วยเหตุนี้เราจึงขอสงวนสิทธิ์ในการเปลี่ยนแปลงข้อมูลจำเพาะของผลิตภัณฑ์โดยไม่ต้องแจ้งให้ทราบล่วงหน้า
- ▶ อุปกรณ์มาตรฐานและอุปกรณ์เสริมในแต่ละประเทศอาจแตกต่างกัน
- ▶ ข้อมูลจำเพาะของผลิตภัณฑ์อาจแตกต่างกันในแต่ละประเทศ
- ▶ ตัวเลือกผลิตภัณฑ์อาจมีจำหน่ายไม่ครบทุกรายการในบางประเทศ
- ▶ โปรดสอบถามรุ่นผลิตภัณฑ์ที่มีจำหน่ายจากตัวแทนจำหน่ายของ BLACK+DECKER ในประเทศของคุณ

ข้อมูลด้านเทคนิค

	BW13	BW14	BW15	BW16
กำลังไฟ	1300W (1,3 kW)	1400W (1,4 kW)	1500W (1,5 kW)	1600W (1,6 kW)
การไหลใช้งาน	5 l/นาทื	5 l/นาทื	5 l/นาทื	5,3 l/นาทื
การไหลของน้ำสูงสุด	6,5 l/นาทื	6,5 l/นาทื	6,5 l/นาทื	7 l/นาทื
แรงดัน	6,7 MPa (67 bar)	7,4 MPa (67 bar)	8 MPa (67 bar)	8,5 MPa (67 bar)
แรงดันสูงสุด	10 MPa (100 bar)	11 MPa (100 bar)	12 MPa (100 bar)	12,5 MPa (100 bar)
PSI	1450	1595	1740	1813
T° ขาเข้า	50 °C	50 °C	50 °C	50 °C
แรงดันขาเข้าสูงสุด	1 MPa	1 MPa	1 MPa	1 MPa
แรงผลักของปืนฉีดน้ำที่มีต่อแรงดันสูงสุด	9,6 N	10,1 N	10,5 N	11,6 N
จนวนมอเตอร์	ประเภท F	ประเภท F	ประเภท F	ประเภท F
การป้องกันมอเตอร์	IPX5	IPX5	IPX5	IPX5
น้ำหนัก	4,6 kg	4,9 kg	4,9 kg	5,5 kg

ปัญหา	สาเหตุที่เป็นไปได้	วิธีแก้ปัญหา
แรงดันปั๊มไม่ถึงค่าแรงดันในการทำงาน	ปลายปืนลึก	เปลี่ยนปลายปืน
	ไส้กรองน้ำสกปรก	ทำความสะอาดไส้กรอง (7) (รูปที่ E)
	การจ่ายน้ำไม่เพียงพอ	เปิดก๊อกน้ำจนสุด
	อากาศถูกดูดเข้าไปในระบบ	ตรวจสอบความแน่นหนาของจุดเชื่อมต่อสายยาง
	มีอากาศในปั๊ม	ปิดสวิตช์เครื่องฉีดล้าง จากนั้นกดแล้วปล่อยไก ปืนฉีดน้ำอย่างต่อเนื่องจนกว่าน้ำจะไหลอย่างสม่ำเสมอ เปิดสวิตช์เครื่องฉีดล้างอีกครั้ง
	หัวฉีดแบบปรับได้ไม่ได้อยู่ในตำแหน่งที่เหมาะสม	ปรับตั้งหัวฉีด (4) ไว้ที่การตั้งค่า (+) (รูปที่ C)
	วาล์วเทอร์โมสแตตทำงานสะดวก	รอกจนกระทั่งน้ำมีอุณหภูมิที่ถูกต้อง
แรงดันปั๊มลดลงในระหว่างที่มีการใช้งานอย่างกะทันหัน	น้ำถูกดูดจากถังเก็บน้ำภายนอก	ต่อเครื่องฉีดล้างเข้ากับแหล่งจ่ายน้ำหลัก
	น้ำเข้าร่อนเกินไป	ลดอุณหภูมิลง
	ปลายปืนอุดตัน	ทำความสะอาดปลายปืน (รูปที่ E)
	ไส้กรองด้านทางเข้า (L) สกปรก	ทำความสะอาดไส้กรอง (7) (รูปที่ E)
มอเตอร์ "ส่งเสียงดัง" แต่สตาร์ทไม่ติด	แรงดันไฟฟ้าจ่ายต่ำเกินไป	ตรวจสอบว่าแรงดันไฟฟ้าของสายจ่ายไฟหลักตรงกับที่ระบุไว้ในป้ายแสดงข้อมูล (รูปที่ B)
	แรงดันไฟฟ้าลดลงเนื่องจากใช้สายต่อพ่วง	ตรวจสอบคุณสมบัติเฉพาะของสายต่อพ่วง
	ไม่มีการใช้งานเครื่องฉีดล้างเป็นเวลานาน	ตรวจสอบคุณสมบัติเฉพาะของสายต่อพ่วง
มอเตอร์สตาร์ทไม่ติด	ปัญหาเกี่ยวกับอุปกรณ์ TSS	ติดต่อศูนย์บริการที่ได้รับอนุญาตที่ใกล้ที่สุด
	ไฟไม่เข้าเครื่อง	ตรวจสอบว่าเสียบปลั๊กเข้ากับเต้ารับจนแน่นแล้ว และมีแหล่งจ่ายไฟหลัก (*)
	ปัญหาเกี่ยวกับอุปกรณ์ TSS	ติดต่อศูนย์บริการที่ได้รับอนุญาตที่ใกล้ที่สุด
น้ำรั่ว	ไม่มีการใช้งานเครื่องฉีดล้างเป็นเวลานาน	ใช้เครื่องมือ เพื่อแก้ปัญหามอเตอร์อุดตันที่รูดานหลังของเครื่องฉีดล้าง (สำหรับรุ่นที่มีคุณสมบัตินี้)
	ซีลขาด	ควรให้ศูนย์บริการที่ได้รับอนุญาตซึ่งอยู่ใกล้ที่สุดทำการเปลี่ยนซีลใหม่
เครื่องมือส่งเสียงดัง	วาล์วนิรภัยขัดและกำลังระบายน้ำออก	ติดต่อศูนย์บริการที่ได้รับอนุญาต
น้ำมีนํ้า	น้ำร่อนเกินไป	ลดอุณหภูมิลง (ดูข้อมูลทางด้านเทคนิค)
น้ำมีนํ้า	ซีลขาด	ติดต่อศูนย์บริการที่ได้รับอนุญาตที่ใกล้ที่สุด
สำหรับรุ่น TSS เท่านั้น: เครื่องฉีดล้างเริ่มสตาร์ทแม้ว่าจะคลายสวิตช์กระบอกฉีดแล้ว	ระบบแรงดันสูงหรือวงจรของปั๊มไม่สามารถกันน้ำได้	ติดต่อศูนย์บริการที่ได้รับอนุญาตที่ใกล้ที่สุด
สำหรับรุ่น TSS เท่านั้น: ไม่มีการจ่ายน้ำเมื่อกดสวิตช์กระบอกฉีด (หลังจากต่อสายฉีดน้ำแรงดันสูงแล้ว)	ปลายปืนอุดตัน	ทำความสะอาดปลายปืน (รูปที่ E)
น้ำยาทำความสะอาดไม่ถูกดูดเข้าไป	ปลายปืนแบบปรับได้ถูกปรับตั้งไว้ที่แรงดันสูง	ปรับตั้งปลายปืน (4) ไว้ที่การตั้งค่า "■" (รูปที่ C)
	น้ำยาทำความสะอาดเข้มข้นเกินไป	เจือจางด้วยน้ำ
	มีการใช้ท่อต่อกับสายฉีดน้ำแรงดันสูง	นำท่อที่นำมาต่อออก ใช้เฉพาะสายฉีดน้ำแรงดันสูงเท่านั้น
	มีสิ่งสกปรกสะสมหรือสิ่งอุดตันในวงจรน้ำยาทำความสะอาด	ใช้น้ำสะอาดฉีดล้างและแก้ไขการอุดตันอื่นใด ถ้ายังคงมีปัญหาเกิดขึ้น โปรดติดต่อศูนย์บริการที่ได้รับอนุญาต
มีน้ำไหลออกจากวาล์วเทอร์โมสแตท	อุณหภูมิภายนอกในเขตของปั๊มสูงเกินค่าที่กีดสูงสุดที่ระบุไว้บนป้ายแสดงข้อมูล	ขณะที่เครื่องฉีดล้างกำลังทำงานอยู่ ห้ามกดหยุดหัวฉีดนานเกิน 5 นาทีต่อครั้ง

* ถ้ามอเตอร์หยุดทำงานและสตาร์ทไม่ติดในระหว่างที่มีการใช้งาน ให้รอ 2-3 นาที ก่อนจะทำตามขั้นตอนการสตาร์ทเครื่องซ้ำอีกครั้ง (การตัดการทำงานเนื่องจากใช้งานเกินกำลังถูกขัดขวาง)
หากเกิดปัญหานี้มากกว่าหนึ่งครั้ง โปรดติดต่อศูนย์บริการที่ได้รับอนุญาตที่อยู่ใกล้ที่สุด

SIMPAN PETUNJUK INI

Peralatan yang Anda beli adalah produk berteknologi tinggi yang dirancang oleh salah satu produsen terkemuka untuk pencuci bertekanan tinggi. Untuk mendapatkan kinerja terbaik dari unit Anda, membaca buku ini dengan hati-hati dan ikuti petunjuk setiap kali Anda menggunakannya. Kami mengucapkan selamat atas pilihan Anda dan semoga pengoperasian Anda berhasil.

ATURAN KESELAMATAN UMUM



PETUNJUK KESELAMATAN

Peringatan umum untuk keselamatan perkakas listrik.

Peringatan! Baca semua peringatan keselamatan dan semua petunjuk. Kegagalan mematuhi peringatan dan petunjuk di bawah dapat mengakibatkan sengatan listrik, kebakaran, dan/atau luka serius.

Simpan semua peringatan dan petunjuk untuk referensi di masa mendatang.

Istilah dalam semua peringatan yang tercantum di bawah merujuk pada alat listrik beroperasi listrik induk (berkabel) atau alat listrik beroperasi baterai (nirkabel).

1. Larangan Demi Keselamatan

- a. **Bahaya ledakan atau keracunan.** Jangan gunakan perangkat dengan cairan yang mudah terbakar atau beracun, atau produk apa pun yang tidak kompatibel dengan pengoperasian perangkat yang benar.
- b. **Bahaya cedera.** Jangan arahkan semburan air ke arah orang atau binatang.
- c. **Bahaya sengatan listrik.** Jangan arahkan semburan air ke arah unit sendiri, komponen listrik, atau ke arah peralatan listrik lainnya.
- d. **Bahaya korsleting.** Jangan gunakan peralatan di luar ruangan jika hujan turun.
- e. **Bahaya luka.** Mesin ini tidak dimaksudkan untuk digunakan oleh orang-orang (termasuk anak-anak) yang memiliki hambatan fisik, indera, atau mental, atau kurang berpengalaman dan pengetahuan. Anak-anak harus diawasi untuk memastikan bahwa mereka tidak bermain dengan perangkat ini.
- f. **Bahaya sengatan listrik.** Jangan sentuh stopkontak dan/atau colokan dengan tangan basah.
- g. **Bahaya sengatan listrik dan korsleting.** Jangan gunakan perangkat jika kabel listriknya rusak.
- h. **Bahaya ledakan.** Jangan gunakan perangkat jika selang bertekanan tinggi rusak.
- i. **Bahaya kecelakaan.** Jangan menyumbat pemicu dalam posisi sedang dioperasikan.
- j. **Bahaya kecelakaan.** Periksa bahwa pelat data terpasang pada perangkat, jika tidak, beri tahu dealer

Anda. Unit tanpa pelat tidak boleh digunakan dalam keadaan demikian karena tidak teridentifikasi dan berpotensi bahaya.

- k. **Bahaya ledakan.** Jangan mengutak atik atau mengubah kalibrasi katup keselamatan.
 - l. **Pengubahan performa operasi yang berbahaya.** Jangan mengubah diameter nosel kepala semprotan.
 - m. **Bahaya kecelakaan.** Jangan tinggalkan peralatan tanpa pengawasan.
 - n. **Bahaya korsleting.** Jangan pindahkan peralatan dengan menarik pada kabel listrik.
 - o. Pastikan bahwa mobil tidak menggilas selang bertekanan tinggi.
2. **"Kewajiban" Keselamatan**
 - a. **Bahaya korsleting.** Semua penghantar listrik harus dilindungi dari semburan air.
 - b. **Bahaya sengatan listrik.** Perangkat hanya boleh disambungkan ke pasokan listrik yang memadai sesuai dengan peraturan yang berlaku.
 - Penggunaan pemutus tenaga arus residu keamanan (R.C.C.B.) akan menyediakan perlindungan tambahan untuk operator (30 mA).
 - c. **Bahaya cedera.** Tekanan tinggi dapat menyebabkan benda-benda di atas permukaan terpelantak dalam kecepatan tinggi; karena itu pakaian dan kaca mata pelindung, sepatu but pengaman, sarung tangan pengaman, helm pengaman dengan penutup mata, pelindung pendengaran harus dikenakan.
 - d. **Bahaya penyalaaan tidak sengaja.** Sebelum bekerja menggunakan alat, lepaskan stopkontak.
 - e. **Bahaya cedera.** Sebelum menekan pemacu, genggam gagang kuat-kuat untuk menahan sentakan.
 - f. **Bahaya kontaminasi.** Patuhi ketentuan perusahaan air minum setempat. Menurut DIN 1988, perangkat hanya dapat dihubungkan ke pasokan air minum utama jika katup pencegah aliran balik dengan fasilitas penguras terpasang pada selang pasokan. Air yang telah mengalir melalui pencegah aliran balik dianggap tidak bisa diminum.
 - g. **Bahaya kecelakaan.** Pemeliharaan dan/atau perbaikan komponen listrik harus dilakukan oleh staf berkualifikasi dan Resmi dari BLACK+DECKER agar garansinya berlaku. Jika kabel suplai rusak, kabel harus diganti oleh produsen, pusat servis resmi BLACK+DECKER atau orang yang memiliki kualifikasi yang sama untuk mencegah bahaya. Jika kabel suplai diganti oleh orang yang memiliki kualifikasi yang sama, namun tidak diotorisasi oleh BLACK+DECKER, maka garansi tidak berlaku.
 - h. **Bahaya cedera.** Buang tekanan residu sebelum melepas selang unit.
 - i. **Risiko kecelakaan.** Sebelum menggunakan perangkat, selalu periksa bahwa sekrup-sekrup terpasang erat dan tidak ada bagian yang patah atau aus.

- j. **Bahaya ledakan dan sengatan listrik.** Hanya gunakan detergen yang tidak akan membuat bahan pelapis selang bertekanan tinggi/kabel listrik menjadi berkarat.
- k. **Bahaya cedera.** Pastikan bahwa semua orang atau binatang menjaga jarak minimum sebesar 15 m.

3. Penggunaan yang tidak sesuai

- ▶ Penggunaan oleh orang yang tidak terlatih atau orang yang belum membaca dan memahami petunjuk di dalam panduan adalah terlarang.
- ▶ Peralatan ini tidak dirancang untuk digunakan oleh orang-orang (termasuk anak-anak) yang memiliki hambatan fisik, indera, atau mental, atau kurang berpengalaman dan pengetahuan, kecuali mereka diawasi atau diberi petunjuk oleh orang yang bertanggung jawab atas keselamatan mereka.
- ▶ Peralatan akan dipantau untuk memastikan bahwa anak-anak tidak bermain-main dengan peralatan.
- ▶ Dilarang menggunakan cairan yang mudah terbakar, mudah meledak, dan beracun pada perangkat.
- ▶ Penggunaan perangkat pada lingkungan yang berpotensi mudah terbakar atau meledak adalah terlarang.
- ▶ Penggunaan suku cadang yang bukan asli dan suku cadang lainnya yang tidak secara spesifik ditujukan untuk model yang terkait adalah terlarang.

⚠ **Peringatan!** Semua modifikasi pada perangkat adalah terlarang. Setiap modifikasi membuat Pernyataan Pemenuhan perangkat menjadi tidak berlaku dan membuat produsen melepaskan semua tanggung jawab berdasarkan undang-undang pidana dan perdata.

⚠ **Peringatan!** Kabel ekstensi yang tidak cukup panjang bisa berbahaya. Jika kabel ekstensi digunakan, maka kabel itu harus cocok untuk digunakan di luar ruangan, dan bahwa sambungannya harus tetap kering dan tidak berada di atas permukaan tanah. Sebaiknya gunakan penggulung kabel yang membuat soket sekurang-kurangnya berada 60 mm di atas tanah.

⚠ **Peringatan!** Mesin ini telah dirancang untuk digunakan dengan bahan pembersih yang disediakan atau direkomendasikan oleh produsen. Penggunaan bahan pembersih atau bahan kimia dapat mempengaruhi keselamatan mesin.

⚠ **Peringatan!** Semburan bertekanan tinggi bisa berbahaya jika disalahgunakan. Semburan tidak boleh diarahkan pada orang, peralatan yang dialiri listrik, atau ke mesin itu sendiri.

⚠ **Peringatan!** Jangan gunakan mesin di dekat orang kecuali mereka memakai pakaian pelindung.

⚠ **Peringatan!** Jangan arahkan semburan pada diri sendiri atau orang lain untuk membersihkan baju atau alas kaki.

⚠ **Peringatan! Risiko ledakan** – Jangan semburkan cairan yang mudah terbakar.

⚠ **Peringatan!** Pembersih bertekanan tinggi dilarang digunakan oleh anak-anak atau orang yang tidak terlatih.

⚠ **Peringatan!** Selang bertekanan tinggi, fitting, dan kopling penting bagi keselamatan penggunaan mesin. Gunakan hanya selang, fitting, dan kopling yang direkomendasikan oleh produsen.

⚠ **Peringatan!** Untuk memastikan keselamatan penggunaan mesin ini, hanya gunakan suku cadang dari produsen atau disetujui oleh produsen.

⚠ **Peringatan!** Air yang mengalir melalui pencegah aliran balik dianggap tidak bisa diminum.

⚠ **Peringatan!** Jangan gunakan mesin bila kabel suplai listriknya atau bagian penting dari mesin rusak, misalnya alat keselamatan, selang bertekanan tinggi, gagang pemicu.

⚠ **Peringatan!** Bahan bakar yang tidak boleh digunakan karena terbukti lebih berbahaya.

⚠ **Peringatan!** Jangan gunakan di dekat orang kecuali mereka memakai pakaian pelindung.

⚠ **Peringatan!** Alat pelindung pendengaran harus dipakai saat memakai alat ini.

4. Service

- a. **Alat listrik sebaiknya diservis oleh teknisi yang berkualifikasi dan hanya menggunakan komponen pengganti yang persis sama.** Hal ini akan membuat keamanan alat listrik selalu terjaga.

5. Keselamatan kelistrikan



Alat Anda memiliki isolasi ganda; sehingga kabel pembumian (arde) tidak diperlukan. Periksa selalu apakah catu daya sesuai dengan nilai tegangan yang terdapat pada pelat nilai.



Peringatan! Jika kabel daya rusak, kabel harus diganti oleh produsen atau Pusat Servis BLACK+DECKER resmi atau orang yang berkualifikasi setara untuk menghindari kerusakan atau cedera. Jika kabel daya diganti oleh orang yang berkualifikasi setara, tetapi tidak namun bukan resmi dari BLACK+DECKER, maka garansi menjadi tidak berlaku.

⚠ **Peringatan!** Selalu matikan saluran utama listrik yang akan memutuskan sakelar ketika meninggalkan mesin tanpa pengawasan.

6. Label pada alat

Label pada alat dapat berisi simbol-simbol berikut:



Baja panduan petunjuk



Bahaya ledakan



Bahaya terkena benda yang memantul



Bahaya keracunan



Bahaya sengatan listrik dan korsleting



Pakai pelindung mata



Bahaya cedera



Bahaya korsleting



Pakai pakaian yang sesuai



... Konstruksi Kelas II

VVolts

WWatt

AAmperes

minmenit



...Simbol Peringatan Keselamatan

HzHertz

~Arus AC



Tanda bahaya, memperingatkan pengguna untuk tidak mengarahkan semburan air pada orang, binatang, peralatan listrik atau produk itu sendiri.



Jangan sambungkan ke air yang dapat diminum.

△ **Peringatan! Tanda keselamatan.** Patuhi petunjuk yang diberikan tanda keselamatan untuk perangkat. Periksa bahwa tanda keselamatan terpasang pada perangkat, ada dan terbaca; jika tidak ada, ganti dan pasang di posisi awalnya.

INFORMASI TEKNIS

PREDIKSI PENGGUNAAN

Peralatan ini telah didesain bagi penggunaan perorangan untuk membersihkan kendaraan, mesin, kapal, bangunan tembok, dsb.guna menghilangkan kotoran yang membandel dengan menggunakan air dan detergen kimia terurai hayati.

Mesin kendaraan boleh dicuci hanya jika air kotor dibuang sesuai dengan peraturan yang berlaku.

▶ **Suhu air masuk:** lihat pelat data pada peralatan.

▶ **Tekanan air masuk:** Below 10 bar.

▶ **Suhu lingkungan pengoperasian:** di atas 0°C.

Mesin ini sesuai dengan IEC.

OPERATOR

Simbol pada sampul depan menunjukkan operator yang harus menggunakan peralatan (profesional atau non-profesional).

KOMPONEN UTAMA (GBR. A)

Mesin ini diserahkan dengan bagian-bagian yang terpisah sebagian dalam karton.

1. Pipa penyalur
2. Pistol dengan kunci pengaman
3. Selang bertekanan tinggi
4. Nosel
5. Nosel yang berputar

6. Adaptor

7. Filter air

8. Braket

9. Kit detergen

10. Alat pembersih nosel

11. Sekrup

12. Kabel listrik dengan steker

13. Gagang

14. Roda

15. Tuas

16. Gulungan selang

△ **Caution! Perangkat pengaman:**

▶ **Perangkat starter (21):** Perangkat starter mencegah penggunaan peralatan tanpa disengaja.

Jangan merusak atau mengatur setelah katup pengaman.

▶ **Katup pengaman dan/atau katup pembatasan tekanan.** Katup pengaman juga merupakan katup pembatasan tekanan. Ketika pemunc pistol dilepaskan, katup terbuka dan air disirkulasikan kembali melalui lubang masuk pompa atau dilepaskan ke tanah.

▶ **Katup termostat (bila dipasang):**

Jika suhu air melebihi suhu yang ditetapkan oleh produsen, katup termostat akan membuang air panas dan menarik air dingin dalam jumlah yang sama dengan jumlah air yang dibuang, hingga kembali ke suhu yang benar.

▶ **Kunci pengaman (20):** mencegah penyemprotan air secara tidak sengaja.

▶ **Pemotongan kelebihan beban:** menghentikan peralatan jika terjadi kelebihan beban.

PEMASANGAN (GBR. B) PERAKITAN

△ **Caution!** Semua pemasangan dan perakitan harus dilakukan pada saat peralatan sudah dicabut dari sumber daya listrik.

Urutan perakitan diilustrasikan dalam **gbr. B**.

Merakit nosel berputar

Kit nosel berputar menghasilkan kekuatan membersihkan yang lebih tinggi. Menggunakan nosel berputar dapat mengurangi 25% tekanan dibandingkan tekanan yang diperoleh dengan nosel yang dapat disesuaikan. Namun demikian, kit nosel berputar memberikan kekuatan pembersihan lebih besar karena semburan air yang berputar.

Sambungan listrik

△ **Caution!** Periksa apakah voltase pasokan listrik dan frekuensi (V-Hz) sesuai dengan yang ditentukan pada pelat data (**gbr. B8**).

Perangkat harus dihubungkan hanya dengan colokan

listrik utama yang dilengkapi dengan koneksi arde yang memadai dan pemutus diferensial pengamanan atau sekering (30 mA) untuk memutus listrik jika terjadi korsleting.

Penggunaan kabel sambungan: Gunakan kabel dan steker dengan tingkat perlindungan "IPX5". Penampang melintang kabel harus proporsional dengan panjangnya; semakin panjang kabel; semakin besar penampang lintangnya.

Sambungan persediaan air

△ **Perhatian!** Hanya gunakan air bersih atau disaring sebagai sumber masukan. Pasokan air asupan harus sama dengan kapasitas pompa. Tempatkan perangkat sedekat mungkin dengan pasokan air.

Titik sambungan:

- Keluaran air (**KELUARAN**)
- Lubang masuk air dengan filter (**LUBANG MASUK**)

Sambungan ke persediaan air induk

Peralatan ini hanya dapat dihubungkan secara langsung ke persediaan air minum induk hanya jika peralatan dipasang katup pencegah arus balik sesuai dengan 25 BAHASA INDONESIA peraturan yang berlaku. Pastikan selang setidaknya berdiameter Ø 13 mm dan sudah diperkuat.

INFORMASI PENYESUAIAN (GBR. C)

- ▶ **Menyetel nosel penyemprot:** Aliran air disetel dengan mengatur nosel (4).
- ▶ **Menyetel detergen:** Untuk menghantarkan detergen pada tekanan yang benar, atur nosel (4) (bila sudah terpasang) pada "■" atau pasang kit detergen (9) seperti yang ditunjukkan.
- ▶ **Menyesuaikan tekanan:** Regulator digunakan untuk menyetel tekanan kerja. Tekananditampilkan pada pengukur tekanan (bilamana terpasang).

TENTANG PENGGUNAAN PERALATAN (GBR. D) KONTROL

Perangkat starter (21)

Setel sakelar starter ke (**ON/I**) untuk:

- a) memulai motor (pada model tanpa perangkat TSS);
- b) menyetel motor siap untuk dinyalakan (pada model dengan perangkat TSS). Jika ada lampu pilot pada perangkat starter, lampu itu akan mati. Setel perangkat starter pada (**OFF/O**) untuk mematikan peralatan ini. Jika ada lampu pilot pada perangkat starter, lampu itu akan mati.
- ▶ Tuas kontrol pancaran air (19).

△ **Peringatan! - Bahaya!**

Selama pengoperasian, peralatan ini harus diletakkan di atas permukaan yang stabil dan kokoh seperti terlihat pada gambar D.

Menyalakan (GBR. D)

1. Putar keran persediaan air secara penuh.
2. Lepaskan kunci pengamanan (20).
3. Tekan pemicu pistol selama beberapa saat dan jalankan peralatan ini dengan menggunakan perangkat starter (**ON/I**).

△ **Peringatan! - Bahaya!**

Sebelum memulai alat, pastikan bahwa alat ini menerima air dengan benar; menggunakan alat tanpa air akan merusak alat tersebut. Jangan menutupi kisi-kisi ventilasi bila alat sedang digunakan.

Model TSS - pada model TSS dengan sistem pemutusan aliran penghantaran otomatis:

- ▶ ketika pemicu pistol **dilepaskan**, tekanan dinamis secara otomatis
- ▶ ketika pemicu pistol **ditekan**, tekanan otomatis yang turun secara otomatis memulai motor dan tekanan dipulihkan setelah waktu tunda yang sangat singkat;
- ▶ jika TSS berfungsi dengan benar, semua pengoperasian **pelepasan** dan **penekanan** pemicu pistol harus dilakukan pada interval **setidaknya** 4-5 detik.

Untuk mencegah kerusakan alat, jangan biarkan alat beroperasi dalam keadaan kering dan pastikan bahwa alat sudah diisi dengan air secukupnya. Untuk model tanpa TSS, untuk mencegah kerusakan alat akibat peningkatan suhu air, jangan memotong pancaran air selama lebih dari 5 menit dengan alat yang sedang berjalan. Beware of kickback force when opening the trigger gun.

Mematikan perangkat

1. Setel sakelar perangkat starter ke (**OFF/O**).
2. Lepaskan pemicu gagang yang ditekan dan buang tekanan sisa di dalam selang.
3. Pasang kunci pengamanan gagang (20).

Memulai ulang

1. Lepaskan kunci pengamanan (20).
2. Lepaskan pemicu gagang yang ditekan dan buang tekanan sisa di dalam selang.
3. Setel perangkat starter ke (**ON/I**).

Penyimpanan

1. Matikan peralatan (**OFF/O**).
2. Cabut steker dari stopkontak.
3. Matikan keran pasokan air.
4. Buang tekanan sisa dari gagang sampai semua air keluar dari nosel.
5. Kuras dan cuci tangki detergen setelah selesai bekerja. Untuk membersihkan tangki, gunakan air bersih dan bukan air yang mengandung detergen.
6. Pasang kunci pengamanan pistol (20).

Prosedur pembersihan yang dianjurkan

Larutkan kotoran dengan menggunakan detergen yang dicampur dengan air ke permukaan saat masih kering. Ketika bekerja dengan permukaan vertikal, kerjakan mulai dari bagian bawah ke atas. Biarkan detergen bekerja selama 1-2 menit tapi jaga jangan sampai permukaannya mengering. Dengan mulai dari bawah, gunakan pancuran bertekanan tinggi pada jarak minimal 30 cm. Jangan biarkan air bilasan masuk ke permukaan kotor. Dalam beberapa kasus, menggosok dengan sikat perlu dilakukan untuk membersihkan kotoran. Tekanan tinggi tidak selalu jadi solusi terbaik untuk mendapat hasil cuci yang baik, karena kemungkinan dapat merusak beberapa permukaan. Pengaturan pancaran nosel yang paling sesuai atau nosel yang berputar tidak boleh digunakan pada bagian permukaan yang halus atau bercat, atau pada beberapa komponen bertekanan (misalnya ban, katup pemompa, dll.). Pembersihan yang efektif tergantung pada tekanan dan volume air yang digunakan, pada tingkatan yang sama.

PEMELIHARAAN (GBR. E)

Segala operasi pemeliharaan yang tidak dicakup dalam bab ini sebaiknya dilaksanakan oleh Pusat Penjualan dan Servis Resmi.

⚠ **!Penting!** Untuk memastikan **KEAMANAN** dan **KEANDALAN** produk, perbaikan, pemeliharaan dan penyesuaian (selain dari yang tercantum dalam panduan ini) harus dilakukan oleh pusat servis resmi atau organisasi lainnya yang berkualifikasi, selalu gunakan suku cadang pengganti yang sama. Unit ini tidak berisi suku cadang yang bisa diservis pengguna di dalamnya.

⚠ **!Perhatian!** Selalu cabut stopkontak dari colokan listrik sebelum melakukan pekerjaan apa pun pada perangkat.

Membersihkan nosel

1. Cabut pipa penyalur air dari nosel.
2. Buang segala kotoran yang mengendap dari lubang nosel dengan menggunakan alat (10).

Membersihkan filter

Periksa filter lubang masuk (7) dan filter detergen (jika terpasang) setiap kali akan digunakan, dan bersihkan sesuai dengan petunjuk jika perlu.

Memperbaiki kemacetan motor (pada model dengan fitur ini)

Jika tidak digunakan dalam waktu yang lama, sedimen kapur dapat menyebabkan motor macet. Untuk memperbaiki kemacetan motor, putar poros penggerak dengan alat.

Penyimpanan di akhir musim

Treat the appliance with non-corrosive, non-toxic antifreeze and lubricate the o-rings using the lubricating grease tube (where supplied) as shown before storing it away for winter. Tempatkan alat di tempat yang kering dan terlindung dari embun beku.

PEMBUANGAN LIMBAH



Pengumpulan terpisah. Produk ini tidak boleh dibuang bersama limbah rumah tangga biasa. Jika produk Black & Decker Anda perlu diganti, atau tidak lagi digunakan, jangan buang bersama sampah rumah tangga. Pisahkan pengumpulan produk ini.



Pengumpulan produk dan kemasan bekas secara terpisah memungkinkan material untuk didaur ulang dan digunakan lagi. Penggunaan kembali bahan yang didaur ulang akan membantu mencegah pencemaran lingkungan serta mengurangi kebutuhan akan bahan baku. Undang-undang setempat mungkin memfasilitasi pengumpulan produk-produk listrik terpisah dari sampah rumah tangga, di tempat pembuangan sampah kota atau oleh peritel pada saat Anda membeli produk baru.

INFORMASI SERVIS

BLACK+DECKER menawarkan jaringan lengkap milik perusahaan dan lokasi servis resmi di seluruh Asia. Semua Pusat Servis BLACK+DECKER memiliki personel terlatih untuk menyediakan layanan alat listrik yang efisien dan dapat diandalkan oleh pelanggan. Jika Anda membutuhkan nasihat teknis, perbaikan, atau penggantian komponen pabrik asli, hubungi kantor BLACK+DECKER yang terdekat dengan Anda.

CATATAN

- ▶ BLACK & DECKER memiliki kebijakan untuk terus meningkatkan produk dan karenanya, kami berhak mengubah spesifikasi produk tanpa pemberitahuan sebelumnya.
- ▶ Perlengkapan dan aksesoris standar mungkin akan berbeda di setiap negara.
- ▶ Spesifikasi produk mungkin akan berbeda di setiap negara.
- ▶ Pilihan produk lengkap mungkin tidak tersedia di semua negara.
- ▶ Untuk mengetahui ketersediaan produk, hubungi dealer BLACK+DECKER setempat Anda.

SPESIFIKASI

	BW13	BW14	BW15	BW16
Daya	1300W (1,3 kW)	1400W (1,4 kW)	1500W (1,5 kW)	1600W (1,6 kW)
Aliran Kerja	5 l/mnt	5 l/mnt	5 l/mnt	5,3 l/mnt
Aliran Air Maksimum	6,5 l/mnt	6,5 l/mnt	6,5 l/mnt	7 l/mnt
Tekanan	6,7 MPa (67 bar)	7,4 MPa (67 bar)	8 MPa (67 bar)	8,5 MPa (67 bar)
Tekanan Maksimum	10 MPa (100 bar)	11 MPa (100 bar)	12 MPa (100 bar)	12,5 MPa (100 bar)
PSI	1450	1595	1740	1813
Suhu (T°) Input	50 °C	50 °C	50 °C	50 °C
Tekanan Input Maksimum	1 MPa	1 MPa	1 MPa	1 MPa
Daya Tolak Gagang terhadap Tekanan Maksimum	9,6 N	10,1 N	10,5 N	11,6 N
Insulasi Motor	Kelas F	Kelas F	Kelas F	Kelas F
Perlindungan Motor	IPX5	IPX5	IPX5	IPX5
Berat	4,6 kg	4,9 kg	4,9 kg	5,5 kg

Masalah	Kemungkinan penyebab	Solusi
Pompa tidak mencapai tekanan kerja	Nosel aus	Ganti nosel
	Filter air terlalu kotor	Bersihkan filter (7) (GBR. E)
	Pasokan air tidak memadai	Putar penuh keran persediaan air
	Udara terhisap ke dalam sistem	Periksa keketatan pemasangan selang
	Udara di dalam pompa	Matikan peralatan dan terus menekan, lalu melepaskan pemicu pistol sampai air keluar dengan aliran yang konstan. Hidupkan lagi peralatan.
	Nosel yang dapat disetel tidak diposisikan dengan benar	Setel nosel (4) (+) pada pengaturan (GBR. C)
	Katup termostatik tersandung	Tunggu suhu air yang benar dipulihkan
	Air disedot dari sebuah wadah yang terbuka dari ketinggian lebih dari 0,5 m.	Kurangi ketinggian isapan.
Tekanan pompa menurun saat digunakan tiba-tiba	Air terisap dari tangki eksternal	Sambungkan peralatan ke persediaan air induk
	Air masuk terlalu panas	Turunkan suhu
	Nosel tersumbat	Bersihkan nosel (GBR. E)
	Filter lubang masuk (7) terlalu kotor	Bersihkan filter (7) (GBR. E)
Motor "berdengung" tetapi tidak bisa jalan	Voltase sumber daya listrik terlalu rendah	Periksa apakah voltase sumber daya listrik sama dengan voltase yang tertera pada pelat (GBR. B)
	Voltase menurun karena penggunaan kabel ekstensi	Periksa karakteristik kabel ekstensi
	Alat tidak digunakan untuk jangka waktu yang lama	Hubungi Pusat Servis Resmi terdekat Anda
	Masalah dengan perangkat TSS	Hubungi Pusat Servis Resmi terdekat Anda

Motor tidak bisa jalan	Tidak ada daya listrik	Periksa apakah steker terpasang erat di soket dan apakah ada arus listriknya (*)
	Masalah dengan perangkat TSS	Hubungi Pusat Servis Resmi terdekat Anda
	Alat tidak digunakan untuk jangka waktu yang lama	Dengan menggunakan alat, perbaiki kemacetan motor melalui lubang di bagian belakang alat (pada model dengan fitur ini)
Kebocoran air	Segel aus	Gantilah segel di Pusat Servis Resmi terdekat Anda
	Katup pengaman tersandung dan lepas	Hubungi Pusat Servis Resmi
Peralatan berisik	Air terlalu panas	Turunkan suhu (lihat data teknis)
Kebocoran minyak	Segel aus	Hubungi Pusat Servis Resmi terdekat Anda
Khusus versi TSS: peralatan menyala bahkan dengan pemunc pistol yang dilepaskan	Sistem bertekanan tinggi atau sirkuit pompa tidak	Hubungi Pusat Servis Resmi terdekat Anda
Khusus versi TSS: air tidak mengalir ketika pemunc pistol ditekan (dengan selang pasongan yang tersambung)	kedap air	Bersihkan nosel (GBR. E)
Tidak ada detergen yang terisap	Nosel yang dapat disetel pada pengaturan bertekanan tinggi	Setel nosel (4) ke pengaturan  (GBR. C)
	Detergen terlalu padat	Encerkan dengan air
	Ekstensi selang bertekanan tinggi digunakan	Pasang selang asli
	Endapan atau pembatasan di sirkuit detergen	Siram dengan air bersih dan hilangkan pembatasan apa pun. Jika masalah terus berlanjut, hubungi Pusat Servis Resmi
Air mengucur dari katup termostat	Suhu air di dalam kepala pompa telah melebihi nilai rating maksimum yang tertera pada pelat nama	Ketika menjalankan alat, jangan hentikan pancaran air selama lebih dari 5 menit sekali waktu.
* Jika motor berhenti dan tidak memulai ulang selama operasi, tunggu 2-3 menit sebelum mengulangi prosedur menyalakan (Pemotong kelebihanbeban tersandung). Jika masalah berulang lebih dari sekali, hubungi Pusat Servis Resmi terdekat Anda.		

Di Impor oleh: PT. Stanley Black & Decker
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LƯU Ý HƯỚNG DẪN

Thiết bị bạn vừa mua là một sản phẩm công nghệ tiên tiến do một trong các nhà sản xuất máy phun rửa áp lực cao hàng đầu ở châu Âu thiết kế. Để đạt được hiệu suất tốt nhất khi sử dụng, hãy đọc sách nhỏ hướng dẫn sử dụng này cẩn thận và làm theo hướng dẫn mỗi lần sử dụng. Chúng tôi chúc mừng quý khách hàng đã lựa chọn đúng sản phẩm và chúc bạn vận hành thành công sản phẩm.

QUY TẮC AN TOÀN CHUNG



HƯỚNG DẪN AN TOÀN

Cảnh báo an toàn thiết bị điện chung.

Cảnh báo! Đọc tất cả các cảnh báo an toàn và tất cả các hướng dẫn. Việc không tuân thủ các cảnh báo và hướng dẫn được liệt kê dưới đây có thể dẫn đến điện giật, hỏa hoạn và / hoặc các thiệt hại nghiêm trọng khác.

Lưu giữ tất cả các cảnh báo và hướng dẫn để tham khảo trong tương lai. Thuật ngữ trong tất cả các cảnh báo được liệt kê dưới đây đề cập đến thiết bị điện được vận hành chính xác (có dây) hoặc thiết bị điện hoạt động bằng pin (không dây).

1. QUY TẮC AN TOÀN “KHÔNG NÊN”

- Nguy cơ cháy nổ hoặc độc hại.** Không sử dụng thiết bị với dung dịch độc hại hoặc dễ cháy hay bất kỳ sản phẩm nào không tương thích với hoạt động chính xác của thiết bị.
- Nguy cơ sát thương.** Không phun tia nước vào người hoặc động vật.
- Nguy cơ điện giật.** Không phun tia nước vào thiết bị, các bộ phận có điện hoặc thiết bị điện khác.
- Nguy cơ đoản mạch.** Không sử dụng thiết bị ngoài trời khi mưa.
- Nguy cơ sát thương.** Thiết bị này không được sử dụng cho người (bao gồm cả trẻ em) không đủ năng lực, thể chất, giác quan hoặc tinh thần, hoặc thiếu kinh nghiệm và kiến thức. Phải giám sát trẻ để đảm bảo trẻ không chơi đùa với thiết bị.
- Nguy cơ điện giật.** Không chạm vào phích cắm và / hoặc ổ điện khi tay ướt.
- Nguy cơ điện giật và đoản mạch.** Không sử dụng thiết bị nếu dây điện bị hỏng.
- Nguy cơ cháy nổ.** Không sử dụng thiết bị nếu ống mềm áp lực cao bị hỏng.

- Nguy cơ tai nạn.** Không để công tắc khởi động kẹt ở vị trí vận hành.
- Nguy cơ tai nạn.** Kiểm tra xem bảng thông số có được gắn trên thiết bị không, nếu không có, hãy thông báo cho đại lý của bạn. Không được sử dụng thiết bị nếu không có bảng thông số vì có thể gây nguy hiểm tiềm ẩn và không thể xác định.
- Nguy cơ cháy nổ.** Không chỉnh sửa hoặc điều chỉnh cài đặt của van an toàn.
- Thay đổi nguy hiểm của hiệu suất hoạt động.** Không thay đổi đường kính ban đầu của vòi phun.
- Nguy cơ tai nạn.** Phải luôn đặt thiết bị trong tình trạng được giám sát.
- Nguy cơ đoản mạch.** Không di chuyển thiết bị bằng cách kéo dây điện.
- Phải đảm bảo không để các phương tiện đi lên ống mềm áp lực cao.

2. QUY TẮC AN TOÀN “NÊN”

- Nguy cơ đoản mạch.** Phải bảo vệ dây dẫn điện khỏi tia nước.
- Nguy cơ Điện giật.** Thiết bị sẽ chỉ được kết nối với nguồn điện phù hợp tuân thủ theo tất cả các quy định hiện hành.
 - Việc sử dụng thiết bị chống dòng điện dư (RCCB) sẽ cung cấp biện pháp bảo vệ bổ sung cho người vận hành (30mA)
- Nguy cơ sát thương.** Áp suất cao có thể khiến các bộ phận bị bật ngược lại; do đó, quần áo bảo hộ và kính bảo hộ, ủng an toàn, găng tay an toàn, mũ bảo hộ có kính che, bảo vệ thính giác phải được đeo.
- Nguy cơ sự cố khi khởi động.** Trước khi thực hiện bất kỳ công việc gì trên thiết bị, hãy rút phích.
- Nguy cơ sát thương.** Trước khi ấn công tắc khởi động, nắm chặt súng để tránh bị giật ngược.
- Nguy cơ ô nhiễm.** Tuân theo các quy định của cơ quan cấp nước tại địa phương. Theo DIN 1988, thiết bị chỉ có thể được kết nối với nguồn cấp nước sinh hoạt chính nếu van chống chảy ngược có hệ thống xả được lắp đặt trong ống cấp nước. Nước đã chảy qua van chống chảy ngược không được coi là nước sạch.
- Nguy cơ tai nạn.** Bảo trì và / hoặc sửa chữa các thiết bị điện phải được thực hiện bởi nhân viên BLACK + DECKER đủ năng lực và được ủy quyền để bảo hành có hiệu lực. Nếu dây cung cấp bị hỏng, nó phải được thay thế bởi nhà sản xuất, trung tâm

dịch vụ ủy quyền BLACK + DECKER hoặc một người có trình độ tương đương để tránh nguy hiểm. Nếu dây cung cấp được thay thế bởi một người có trình độ tương đương, nhưng không được ủy quyền bởi BLACK + DECKER, bảo hành sẽ mất hiệu lực.

- h. Nguy cơ sát thương.** Xả hết áp suất dư trước khi tháo ống mềm khỏi thiết bị.
- i. Nguy cơ tai nạn.** Trước mỗi lần sử dụng thiết bị, cần kiểm tra xem ốc vít được siết chặt hoàn toàn hay chưa và có bộ phận bị hỏng hoặc mòn hay không.
- j. Nguy cơ nổ và điện giật.** Chỉ sử dụng chất tẩy rửa không ăn mòn vật liệu phủ của ống cao áp / dây điện.
- k. Nguy cơ sát thương.** Đảm bảo rằng tất cả mọi người và động vật giữ khoảng cách tối thiểu là 16 thước. (15M).

3. Sử dụng không đúng cách

- ▶ Không để người không đủ năng lực hoặc những người chưa đọc và hiểu rõ chỉ dẫn sử dụng thiết bị này.
- ▶ Thiết bị này không được sử dụng cho người (bao gồm cả trẻ em) không đủ năng lực, thể chất, giác quan hoặc tinh thần, hoặc thiếu kinh nghiệm và kiến thức, trừ khi họ được giám sát hoặc hướng dẫn sử dụng bởi người chịu trách nhiệm an toàn.
- ▶ Phải giám sát trẻ để đảm bảo trẻ không chơi đùa với thiết bị.
- ▶ Cấm đưa dung dịch dễ cháy, nổ và độc hại vào thiết bị.
- ▶ Nghiêm cấm sử dụng thiết bị trong môi trường dễ cháy hoặc nổ.
- ▶ Nghiêm cấm sử dụng các phụ kiện không chính hãng và bất kỳ phụ tùng nào khác không dành cho kiểu máy cụ thể nào đó.

⚠ **Cảnh báo!** Nghiêm cấm mọi hình thức sửa đổi thiết bị. Mọi sửa đổi sẽ làm vô hiệu Tuyên bố Tuân thủ và nhà sản xuất sẽ không còn bất kỳ trách nhiệm nào đối với sản phẩm theo luật dân sự và hình sự.

⚠ **Cảnh báo!** Dây nối dài không phù hợp có thể gây nguy hiểm. Nếu sử dụng dây nối dài, dây nối dài phải phù hợp để sử dụng ngoài trời và các điểm nối phải khô ráo và không chạm đất. Đặc biệt nên sử dụng tang dây có thể giữ ổ cắm cách mặt đất tối thiểu 60mm.

⚠ **Cảnh báo!** Thiết bị này được thiết kế để sử dụng cùng với chất tẩy rửa được nhà sản xuất

cung cấp hoặc khuyến cáo. Việc sử dụng các chất tẩy hoặc hóa chất khác có thể ảnh hưởng không tốt đến sự an toàn của thiết bị.

⚠ **Cảnh báo!** Vòi phun áp lực cao có thể gây nguy hiểm nếu sử dụng không đúng. Không phun tia nước vào thiết bị, các bộ phận có điện hoặc thiết bị điện khác.

⚠ **Cảnh báo!** Không sử dụng thiết bị trong phạm vi có người trừ khi họ mặc quần áo bảo hộ.

⚠ **Cảnh báo!** Không phun tia nước vào chính bạn hoặc người khác để làm sạch quần áo hoặc giày dép.

⚠ **Cảnh báo!** **Nguy cơ nổ** - Không sử dụng thiết bị để phun các loại chất lỏng dễ cháy.

⚠ **Cảnh báo!** Máy phun rửa áp lực cao không được sử dụng cho trẻ em hoặc người chưa được đào tạo.

⚠ **Cảnh báo!** Ống mềm áp lực cao, phụ tùng và khớp nối là các bộ phận rất quan trọng để đảm bảo an toàn của thiết bị. Chỉ sử dụng ống mềm, phụ tùng và khớp nối do nhà sản xuất khuyến dùng.

⚠ **Cảnh báo!** Để đảm bảo an toàn cho thiết bị, chỉ sử dụng phụ tùng chính hãng từ nhà sản xuất hoặc các phụ tùng khác do nhà sản xuất phê duyệt

⚠ **Cảnh báo!** Nước đã chảy qua van chống chảy ngược không được coi là nước sạch.

⚠ **Cảnh báo!** Không sử dụng thiết bị nếu dây nguồn hoặc các bộ phận quan trọng như thiết bị an toàn, ống mềm hoặc súng áp lực cao bị hỏng.

⚠ **Cảnh báo!** Không sử dụng Nhiên liệu không chính xác vì chúng có thể gây nguy hiểm.

⚠ **Cảnh báo!** Không sử dụng thiết bị trong phạm vi có người trừ khi họ mặc quần áo bảo hộ.

⚠ **Cảnh báo!** Đeo thiết bị bảo vệ tai khi sử dụng thiết bị này.

4. Bảo dưỡng

- a. Hãy để nhân viên bảo dưỡng có chuyên môn tiến hành bảo dưỡng máy điện cầm tay cho bạn và chỉ sử dụng các bộ phận thay thế chính hãng.** Điều này giúp đảm bảo độ an toàn của máy điện đồ.

5. An toàn điện



Sản phẩm có lớp cách điện cấp II; điều đó có nghĩa là sản phẩm không trang bị dây nối đất an toàn. Luôn kiểm tra xem điện áp chính có tương ứng với điện áp trên bảng thông số không.



Cảnh báo! Nếu dây điện bị hỏng, việc thay thế phải do nhà sản xuất, một trong các Trung Tâm dịch vụ ủy quyền của BLACK+DECKER hoặc người có đủ chuyên môn thực hiện để tránh gây nguy hiểm. Nếu việc thay thế được thực hiện bởi một người có đủ chuyên môn, nhưng không được ủy quyền bởi BLACK+DECKER, việc bảo hành sẽ bị vô hiệu lực.

⚠ **Cảnh báo!** Luôn tắt công tắc ngắt kết nối nguồn điện khi không giám sát thiết bị.

6. Nhãn trên công cụ

Nhãn trên thiết bị của bạn có thể bao gồm các ký hiệu sau:



Đọc hướng dẫn sử dụng



Nguy cơ nổ



Nguy cơ tai nạn do thiết bị bật ngược lại



Nguy cơ nhiễm độc



Nguy cơ giật điện và đoản mạch



Đeo thiết bị bảo vệ mắt



Sát thương



Nguy cơ đoản mạch



Mặc quần áo bảo hộ



...Lớp học II Xây dựng

VVolts

WWatts

AAmperes

minphút



...Ký hiệu cảnh báo an toàn

HzHertz

~Dòng điện xoay chiều



Biển báo nguy hiểm, cảnh báo người dùng không được phun tia nước vào người, động vật, thiết bị điện hoặc vào chính sản phẩm.



Cắm kết nối sản phẩm với hệ thống cấp nước sinh hoạt.

⚠ **Cảnh báo! Quy tắc an toàn.** Tuân thủ các hướng dẫn được cung cấp trong quy tắc an toàn cho thiết bị. Kiểm tra xem các biểu tượng và ký hiệu có được gắn trên thiết bị không và chúng có dễ đọc hay không; nếu không, hãy bổ sung vào vị trí ban đầu.

THÔNG TIN KỸ THUẬT

MỤC ĐÍCH SỬ DỤNG

Thiết bị này được thiết kế để sử dụng cho các mục đích cá nhân như vệ sinh phương tiện,

máy móc, tàu thuyền, công trình, v.v. để loại bỏ các vết bẩn cứng đầu bằng nước sạch và chất tẩy rửa hóa học có thể phân hủy sinh học.

Chỉ có thể rửa động cơ của phương tiện nếu tháo rửa nước bẩn theo quy định hiện hành.

- ▶ **Nhiệt độ nước đầu vào:** xem bảng thông số trên thiết bị.
- ▶ **Áp suất nước đầu vào:** Dưới 10 bar.
- ▶ **Nhiệt độ xung quanh khi vận hành:** trên 0°C. Thiết bị tuân thủ tiêu chuẩn IEC.

NGƯỜI VẬN HÀNH

Biểu tượng được minh họa trên mặt trước của thiết bị xác định người vận hành chủ định của thiết bị (chuyên nghiệp hay không chuyên nghiệp).

CÁC BỘ PHẬN CHÍNH (HÌNH A)

Thiết bị được giao thành từng phần trong thùng carton.

1. Vòi phun
2. Súng có chốt an toàn
3. Ống mềm áp lực cao
4. Vòi hút
5. Vòi quay
6. Ống nối
7. Bộ lọc nước
8. Giá đỡ
9. Bộ chất tẩy
10. Dụng cụ vệ sinh vòi
11. Ốc vít
12. Dây điện có phích cắm
13. Tay cầm
14. Bánh xe
15. Cần
16. Trống quần ống

⚠ Thận trọng! Thiết bị an toàn

- ▶ **Thiết bị khởi động (21):** Thiết bị khởi động ngăn chặn việc vô tình sử dụng thiết bị.

Không chỉnh sửa hoặc điều chỉnh thiết lập van an toàn.

- ▶ **Van an toàn và/hoặc van giới hạn áp suất:** Van an toàn cũng là một van giới hạn áp suất. Khi nhả công tắc khởi động súng, van này sẽ mở và nước sẽ chảy qua ống dẫn nước vào cửa bơm hoặc xả nước ra mặt đất.
- ▶ **Van hằng nhiệt (nếu có):** Nếu nhiệt độ nước vượt quá nhiệt độ do nhà sản xuất thiết lập, van hằng nhiệt sẽ xả nước nóng ra và lấy một lượng nước mát tương ứng với lượng nước nóng đã xả ra cho đến khi khôi phục được nhiệt độ chính xác..

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- ▶ **Chốt an toàn (20):** phòng trường hợp phun nước do sơ ý.
- ▶ **Ngắt khi quá tải:** dừng thiết bị trong trường hợp quá tải.

LẮP ĐẶT (HÌNH B) LẮP RÁP

⚠ **Thận trọng!** Phải ngắt thiết bị khỏi nguồn điện chính khi lắp đặt và vận hành các cụm lắp ráp.

Thứ tự lắp ráp như được minh họa trong hình B.

Lắp vòi quay

Bộ vòi quay giúp xịt rửa mạnh mẽ hơn. Sử dụng vòi quay có thể khiến áp suất giảm 25% so với áp suất đạt được khi sử dụng vòi có thể điều chỉnh. Tuy nhiên, bộ vòi quay giúp xịt rửa mạnh mẽ hơn do có tia nước quay.

Đấu nối điện

⚠ **Thận trọng! Kiểm tra xem điện áp nguồn và tần số (V-Hz) có bằng điện áp và tần số trên bảng thông số không (hình B8).**

Thiết bị chỉ nên được kết nối với nguồn điện chính được trang bị tiếp đất thích hợp và bộ ngắt an ninh vi sai (30mA) để cắt nguồn điện trong trường hợp đoản mạch.

Sử dụng dây nối dài: Sử dụng dây và phích cắm có cấp độ bảo vệ "IPX5". Mặt cắt của dây nối dài phải tỷ lệ với chiều dài; dây càng dài thì mặt cắt càng lớn.

Kết nối nguồn nước

⚠ **Thận trọng!** Chỉ được cấp nước sạch hoặc nước đã được lọc cho thiết bị. Lưu lượng vòi cấp nước phải tương đương với lưu lượng bơm. Đặt thiết bị càng gần hệ thống cấp nước càng tốt.

Các điểm kết nối:

- Ống thoát nước (**THOÁT**)
- Ống cấp nước có bộ lọc (**CẤP NƯỚC**)

Kết nối vào nguồn cấp nước chính

Chỉ được nối thiết bị trực tiếp vào nguồn cấp nước sinh hoạt chính khi đã lắp đặt van chống chảy ngược vào ống cấp nước theo quy định hiện hành. Đảm bảo ống mềm có đường kính tối thiểu 13mm và đã được gia cố chắc chắn.

THÔNG TIN ĐIỀU CHỈNH (HÌNH C)

- ▶ **Điều chỉnh vòi phun:** Dòng nước được điều chỉnh bằng cách điều tiết vòi phun (4).

- ▶ **Điều chỉnh chất tẩy rửa:** Để cung cấp chất tẩy rửa ở áp suất chính xác, đặt vòi phun (4) (nếu có) trên "■" hoặc lắp bộ chất tẩy (9) như được minh họa.
- ▶ **Điều chỉnh áp suất:** Bộ điều tiết được dùng để điều chỉnh áp suất vận hành. Áp suất được hiển thị trên áp kế (nếu có).

VỀ SỬ DỤNG THIẾT BỊ (HÌNH D) ĐIỀU KHIỂN

Thiết bị khởi động (21)

Bật công tắc thiết bị khởi động (**BẬT/I**) để:

- a) khởi động động cơ (trong các kiểu máy không có thiết bị TSS);
 - b) đặt động cơ ở chế độ sẵn sàng khởi động (trong các kiểu máy có thiết bị TSS). Nếu có đèn thử nghiệm trên thiết bị khởi động thì đèn này phải sáng lên. Tắt công tắc thiết bị khởi động (**TẮT/O**) để tắt thiết bị. Nếu có đèn thử nghiệm trên thiết bị khởi động thì đèn này phải tắt đi.
- ▶ Cần điều khiển tia nước (19).

⚠ Cảnh báo! - nguy hiểm!

Trong khi vận hành, thiết bị phải được đặt trên bề mặt chắc chắn, ổn định như minh họa trong hình D.

Khởi động (HÌNH D)

1. Mở hết cỡ vòi cấp nước.
2. Nhả chốt an toàn (20).
3. Ấn công tắc khởi động súng trong vài giây và khởi động thiết bị bằng thiết bị khởi động (**BẬT/I**).

⚠ Cảnh báo! - nguy hiểm!

Trước khi khởi động thiết bị, phải kiểm tra để đảm bảo thiết bị nhận được nước phù hợp; việc sử dụng không có nước sẽ gây hư hỏng thiết bị. Không che lưới thông khí khi đang sử dụng thiết bị.

Kiểu máy TSS - trong kiểu máy TSS với hệ thống cắt dòng cấp nước tự động:

- ▶ khi công tắc khởi động súng được **nhả** áp suất động tự động ngắt động cơ;
- ▶ khi công tắc khởi động súng được **ấn** áp suất bị giảm tự động sẽ khởi động động cơ và áp suất được khôi phục sau một khoảng trễ vô cùng ngắn;
- ▶ nếu TSS hoạt động chính xác, tất cả thao tác **nhả** và **ấn** công tắc kích hoạt súng phải được thực hiện trong khoảng thời gian **tối thiểu 4-5 giây**.

Để tránh hư hỏng thiết bị, không để thiết bị vận hành khô và kiểm tra để đảm bảo nước được

cấp phù hợp. Đối với các kiểu máy không có TSS, để tránh hư hỏng thiết bị do nhiệt độ nước tăng, không tắt tia nước trong quá 5 phút khi thiết bị đang chạy. Cần thận với lực giật ngược khi ấn công tắc kích hoạt súng.

Dùng thiết bị

1. Tắt công tắc thiết bị khởi động (**TẮT/0**).
2. Ấn công tắc khởi động súng và xả hết áp suất dư bên trong các ống.
3. Bật chốt an toàn (**20**).

Khởi động lại

1. Nhả chốt an toàn (**20**).
2. Ấn công tắc khởi động súng và xả hết áp suất dư bên trong các ống.
3. Bật thiết bị khởi động (**BẬT/I**).

Bảo quản

1. Tắt thiết bị (**TẮT/0**).
2. Rút phích cắm ra khỏi ổ cắm.
3. Tắt vòi cấp nước.
4. Xả hết áp suất dư bên trong súng cho đến khi không còn nước trong thiết bị.
5. Xả và rửa sạch thùng đựng chất tẩy rửa khi kết thúc ca làm việc. Để rửa thùng, sử dụng nước sạch chứ không dùng chất tẩy rửa.
6. Bật khóa an toàn của súng (**20**).

Quy trình vệ sinh được khuyến nghị

Đánh tan bụi bẩn bằng cách phun chất tẩy rửa pha với nước lên bề mặt còn khô.

Trên các bề mặt thẳng đứng, phun từ dưới lên. Để chất tẩy ngấm trong 1-2 phút, nhưng không để bề mặt bị khô. Bắt đầu từ dưới lên, sử dụng tia áp lực cao ở khoảng cách tối thiểu 30 cm. Không để nước rửa chảy trên các bề mặt không mong muốn. Trong một số trường hợp, cần phải chà cọ bằng bàn chải để đánh bật vết bẩn.

Áp suất cao không phải lúc nào cũng là giải pháp tốt nhất để vệ sinh hiệu quả vì cách này có thể phá hủy một số bề mặt. Không được sử dụng vòi quay hoặc thiết bị đặt đầu vòi phun có thể điều chỉnh trên các bộ phận mỏng hoặc bộ phận sơn hoặc chịu áp lực (như lốp, van thổi, v.v.). Vệ sinh hiệu quả phụ thuộc vào cả áp suất và lượng nước sử dụng.

BẢO TRÌ (HÌNH E)

Mọi hoạt động bảo trì không được đề cập trong chương này phải được thực hiện bởi Trung tâm Dịch vụ và Bán hàng được ủy quyền.

⚠ **Quan trọng!** Để đảm bảo sự **AN TOÀN** và **ĐỘ TIN CẬY** của sản phẩm, việc sửa chữa, bảo

trì và sửa đổi (trừ những sản phẩm được liệt kê trong hướng dẫn này) phải được thực hiện bởi một trong các trung tâm dịch vụ ủy quyền hoặc các tổ chức đủ điều kiện khác, và luôn luôn sử dụng các phụ tùng thay thế chính hãng. Đơn vị không chứa các bộ phận dịch vụ cho người dùng bên trong.

⚠ **Thận trọng!** Luôn rút phích cắm khỏi ổ cắm điện trước khi thực hiện bất kỳ công việc nào trên thiết bị.

Vệ sinh vòi phun

1. Rút ống phun ra khỏi vòi.
2. Loại bỏ chất bẩn tích tụ trong vòi bằng dụng cụ (**10**).

Vệ sinh bộ lọc

Kiểm tra bộ lọc nước vào (**7**) và bộ lọc chất tẩy rửa (nếu có) trước mỗi lần sử dụng và vệ sinh theo hướng dẫn nếu cần thiết.

Vệ sinh mô tơ (trên kiểu máy có tính năng này)

Trong trường hợp không sử dụng dài ngày, các chất lắng đọng có thể khiến mô tơ không chuyển động được. Để giúp mô tơ chuyển động, hãy quay trục bơm bằng dụng cụ.

Bảo quản khi không sử dụng

Sử dụng chất chống đông không độc/không ăn mòn và bôi trơn các vòng chữ O bằng cách sử dụng ống mỡ bôi trơn (nếu được cung cấp) trước khi bảo quản cho mùa đông. Bảo quản thiết bị ở nơi khô ráo, tránh sương.

BẢO VỆ MÔI TRƯỜNG



Thu gom riêng. Không được vứt bỏ sản phẩm này cùng với rác thải sinh hoạt thông thường.

Nếu sản phẩm BLACK+DECKER của bạn cần phải thay thế, hoặc bạn không sử dụng nó trong tương lai nữa, đừng vứt bỏ cùng với rác thải sinh hoạt. Sản phẩm này phải được thu gom riêng.



Thu gom riêng sản phẩm và hộp đóng gói đã qua sử dụng sẽ cho phép tái chế và tái sử dụng vật liệu. Tái sử dụng vật liệu tái chế giúp ngăn chặn ô nhiễm môi trường và giảm nhu cầu vật liệu thô. Luật lệ địa phương có thể quy định việc thu gom riêng các sản phẩm điện gia dụng, tại các bãi rác thải đô thị hoặc bởi những người bán lẻ khi bạn mua sản phẩm mới.

THÔNG TIN DỊCH VỤ

BLACK+DECKER có sẵn một mạng lưới các trung tâm trực thuộc và ủy quyền trên toàn Châu Á. Tất cả các Trung tâm dịch vụ của BLACK+DECKER đều có đội ngũ nhân viên lành nghề nhằm cung cấp cho khách hàng dịch vụ về dụng cụ điện hiệu quả và tin cậy. Khi cần tư vấn kỹ thuật, sửa chữa hoặc phụ tùng thay thế chính hãng, vui lòng liên hệ với cơ sở BLACK+DECKER gần nhất.

LƯU Ý

- ▶ Chính sách của BLACK+DECKER là không ngừng cải tiến sản phẩm và do đó, chúng tôi có quyền thay đổi thông số kỹ thuật sản phẩm mà không cần báo trước.
- ▶ Các thiết bị và phụ kiện chuẩn có thể khác nhau tùy theo từng quốc gia.
- ▶ Thông số kỹ thuật của sản phẩm có thể khác nhau tùy theo từng quốc gia.
- ▶ Danh mục sản phẩm hoàn chỉnh có thể không có mặt tại tất cả các quốc gia.
- ▶ Liên hệ với các đại lý của BLACK+DECKER tại quốc gia bạn để được cung cấp danh mục sản phẩm.

THÔNG SỐ KỸ THUẬT

	BW13	BW14	BW15	BW16
Công suất	1300W (1,3 kW)	1400W (1,4 kW)	1500W (1,5 kW)	1600W (1,6 kW)
Lưu lượng hoạt động	5 l/phút	5 l/phút	5 l/phút	5,3 l/phút
Lưu lượng nước tối đa	6,5 l/phút	6,5 l/phút	6,5 l/phút	7 l/phút
Áp suất	6,7 MPa (67 bar)	7,4 MPa (67 bar)	8 MPa (67 bar)	8,5 MPa (67 bar)
Áp suất Tối đa	10 MPa (100 bar)	11 MPa (100 bar)	12 MPa (100 bar)	12,5 MPa (100 bar)
PSI	1450	1595	1740	1813
Đầu vào T°	50 °C	50 °C	50 °C	50 °C
Áp suất Đầu vào Tối đa	1 MPa	1 MPa	1 MPa	1 MPa
Lực đẩy của súng ở áp suất tối đa	9,6 N	10,1 N	10,5 N	11,6 N
Cách điện động cơ	Lớp F	Lớp F	Lớp F	Lớp F
Bảo vệ động cơ	IPX5	IPX5	IPX5	IPX5
Trọng lượng	4,6 kg	4,9 kg	4,9 kg	5,5 kg

Sự cố	Nguyên nhân có thể	Giải pháp
Bơm không đạt được công suất vận hành	Vòi phun bị hỏng	Thay vòi phun
	Bộ lọc nước bị tắc	Vệ sinh bộ lọc (7) (hình E)
	Nguồn nước không đủ	Mở hết vòi cấp nước
	Không khí bị hút vào trong hệ thống	Kiểm tra độ kín của các phụ tùng ống
	Có không khí trong bơm	Tắt thiết bị và ấn và nhả công tắc khởi động súng cho đến khi nước chảy thành dòng ổn định. Bật lại thiết bị.
	Lắp sai vị trí vòi phun có thể điều chỉnh	Đặt vòi hút (4) (+) đến thiết lập (hình C)
	Van hằng nhiệt bị ngắt	Đợi cho đến khi khôi phục được nhiệt độ nước chính xác
	Nước được hút từ một thùng chứa mở ở độ cao trên 0,5 m.	Giảm độ cao hút.
Sút áp máy bơm đột ngột trong khi sử dụng	Nước được hút từ thùng chứa bên ngoài	Kết nối thiết bị vào nguồn cấp nước chính
	Nước đầu vào quá nóng	Giảm nhiệt độ
	Vòi bị tắc	Vệ sinh vòi (hình E)
	Bộ lọc đầu vào (7) bị tắc	Vệ sinh bộ lọc (7) (hình E)
Động cơ có “kêu” nhưng không khởi động được	Điện áp nguồn điện quá thấp	Kiểm tra xem điện áp nguồn có bằng với điện áp ghi trên bảng thông số không (hình B)
	Điện áp giảm do sử dụng cáp nối dài	Kiểm tra đặc tính của cáp nối dài
	Không sử dụng thiết bị trong thời gian dài	Liên hệ với Trung tâm Dịch vụ Ủy quyền gần nhất
	Sự cố với thiết bị TSS	Liên hệ với Trung tâm Dịch vụ Ủy quyền gần nhất
Không khởi động được động cơ	Không có điện	Kiểm tra xem phích cắm có cắm chắc chắn vào ổ điện và có nguồn điện hay không (*)
	Sự cố với thiết bị TSS	Liên hệ với Trung tâm Dịch vụ Ủy quyền gần nhất
	Không sử dụng thiết bị trong thời gian dài	Sử dụng dụng cụ để vệ sinh mô tơ qua lỗ ở phía sau thiết bị (trên kiểu máy có tính năng này)
Rò rỉ nước	Phớt bơm bị mòn	Thay phớt tại Trung tâm Dịch vụ Ủy quyền gần nhất
	Van an toàn bị ngắt và xả	Liên hệ với Trung tâm Dịch vụ Ủy quyền
Thiết bị phát ra tiếng ồn	Nước quá nóng	Giảm nhiệt độ (xem dữ liệu kỹ thuật)
Rò rỉ dầu	Phớt bơm bị mòn	Liên hệ với Trung tâm Dịch vụ Ủy quyền gần nhất
Chỉ phiên bản TSS: thiết bị khởi động ngay cả khi nhà công tắc khởi động súng	Mạch của bơm hoặc hệ thống cao áp không có kết cấu chống nước	Liên hệ với Trung tâm Dịch vụ Ủy quyền gần nhất

Chỉ phiên bản TSS: không cấp nước khi ấn công tắc khởi động súng (đã nối ống cấp nước)	Vòi bị tắc	Vệ sinh vòi (hình E)
Chất tẩy rửa không được hút vào	Vòi có thể điều chỉnh ở thiết lập áp suất cao	Đặt vòi hút (4) «  » đến thiết lập (hình C)
	Chất tẩy rửa quá đặc	Pha loãng với nước
	Sử dụng ống nối dài áp suất cao	Lắp ống được cung cấp
	Chất lỏng đông hoặc cản trở trong dòng chất tẩy rửa	Rửa bằng nước sạch và loại bỏ mọi cản trở. Nếu sự cố vẫn tiếp diễn, liên hệ với Trung tâm Dịch vụ Ủy quyền
Nước thoát ra từ van hàng nhiệt	Nhiệt độ nước bên trong cột áp bơm đã vượt quá giá trị định mức tối đa trên biển thông số.	Khi thiết bị đang vận hành, không tắt tia nước trong thời gian quá 5 phút mỗi lần
* Nếu động cơ dừng hoạt động và không khởi động lại trong khi vận hành, hãy đợi 2-3 phút trước khi lắp lại quy trình khởi động (Thiết bị dừng khi quá tải đã được ngắt). Nếu sự cố tái diễn hơn một lần, hãy liên hệ với Trung tâm Dịch vụ Ủy quyền gần nhất.		

