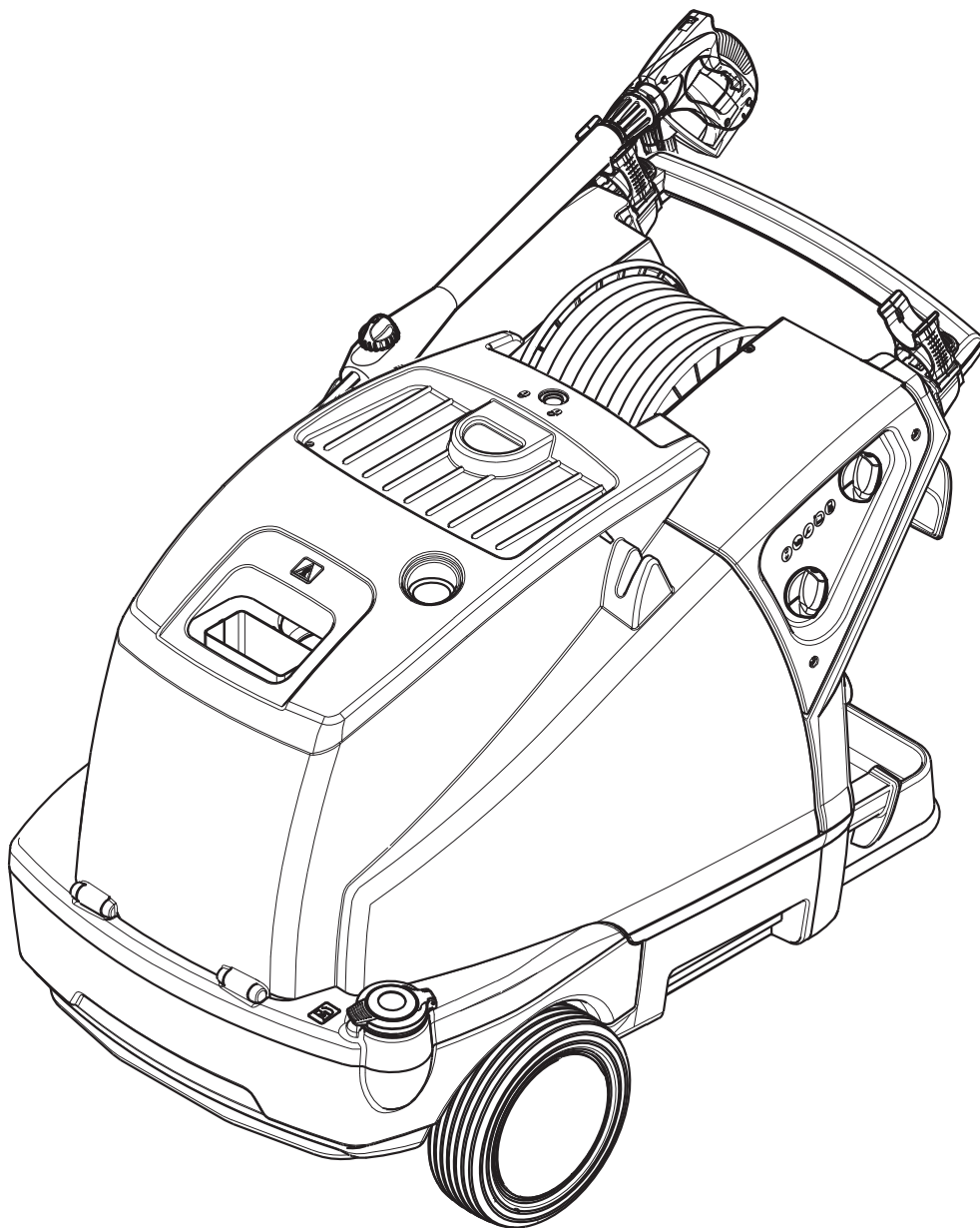
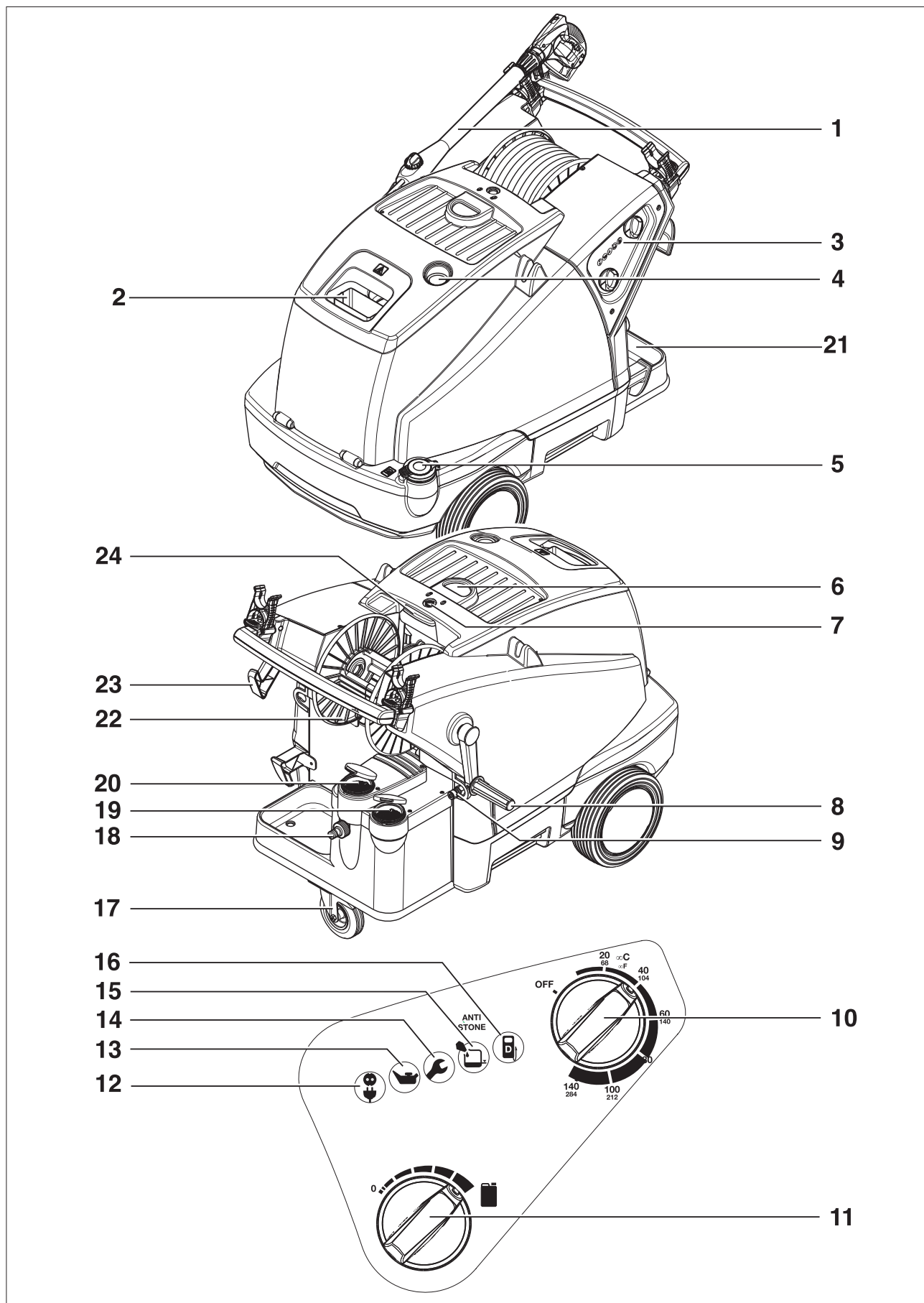


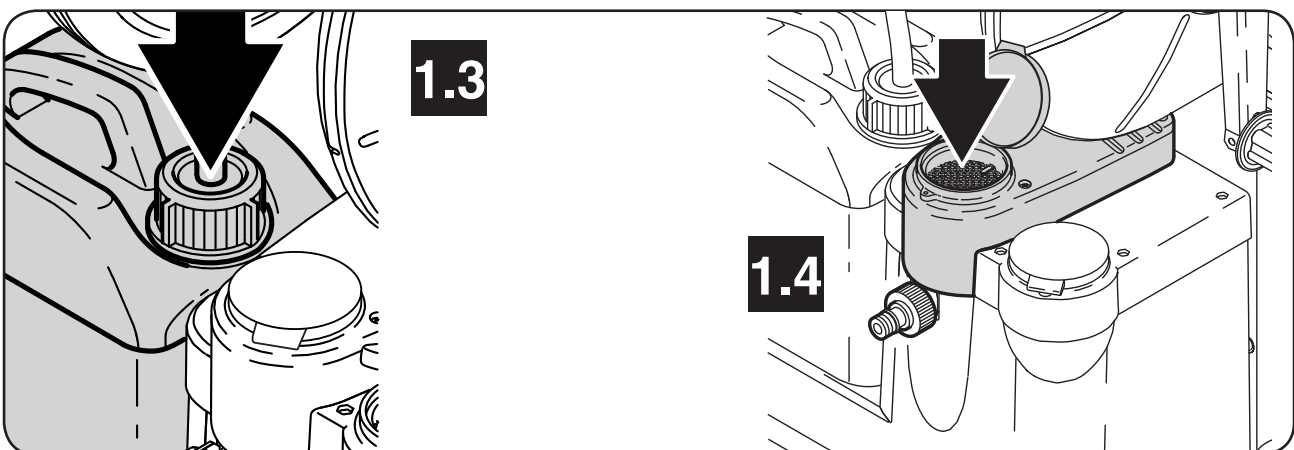
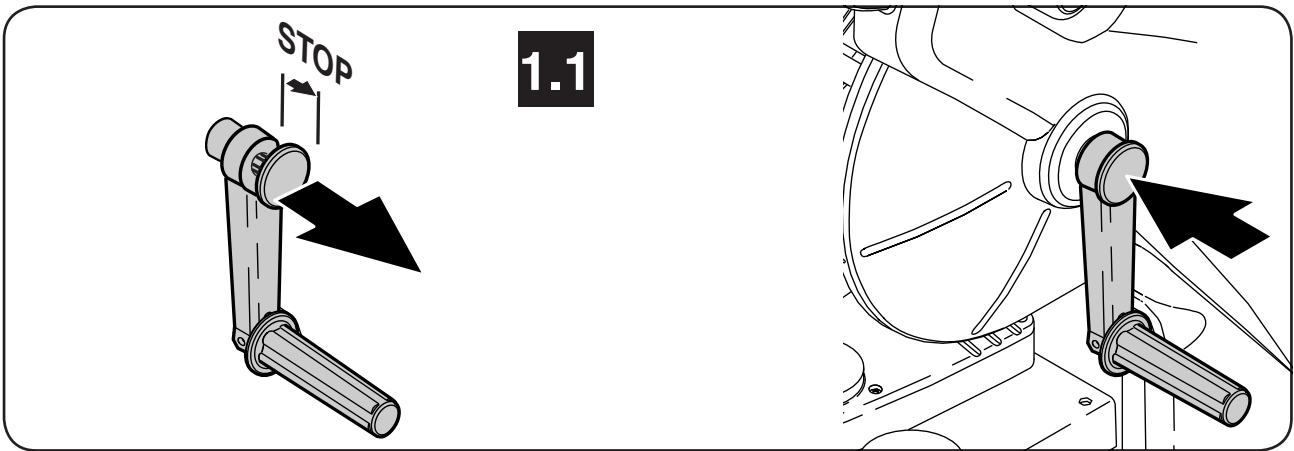
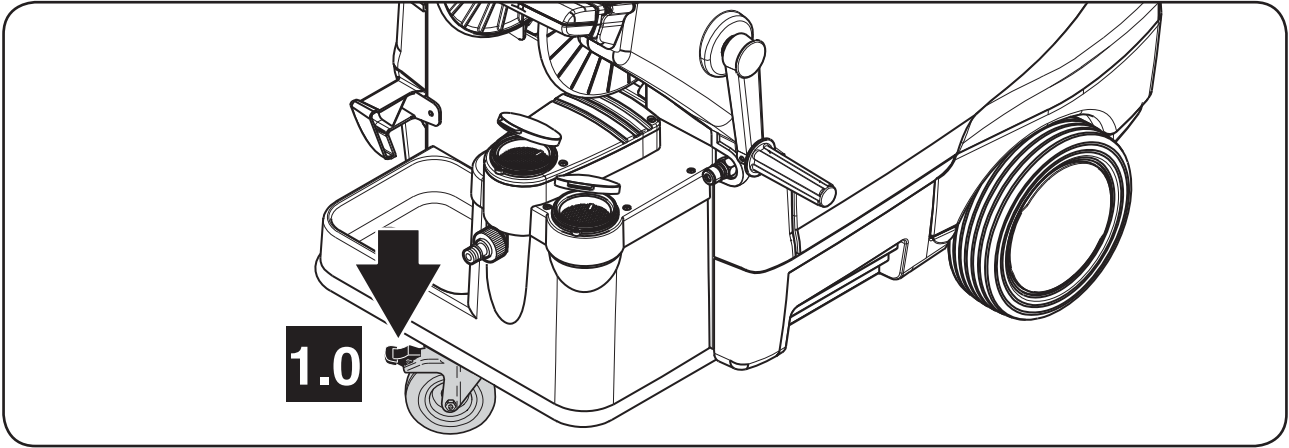
# MH 4M - Instructions for use

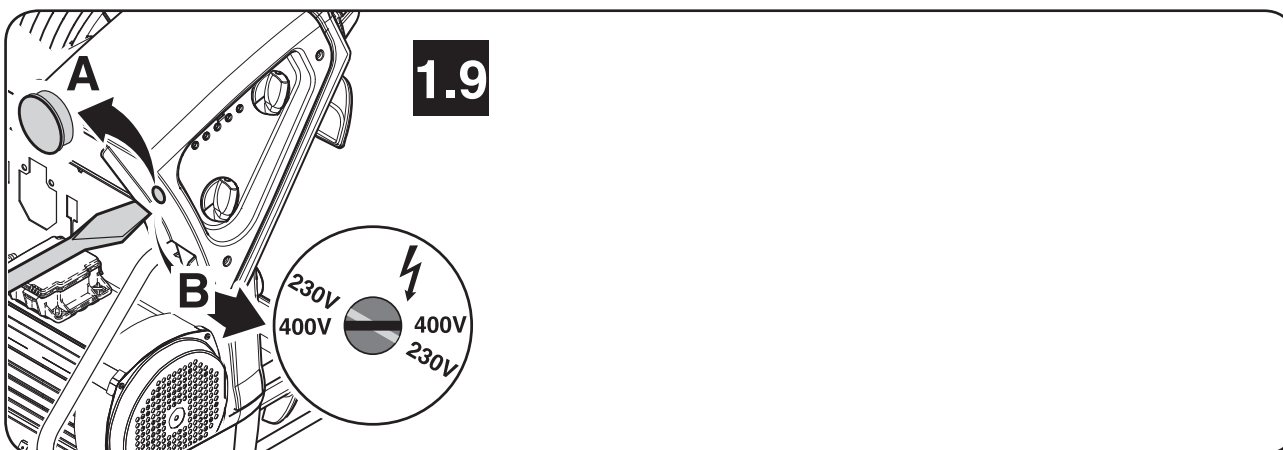
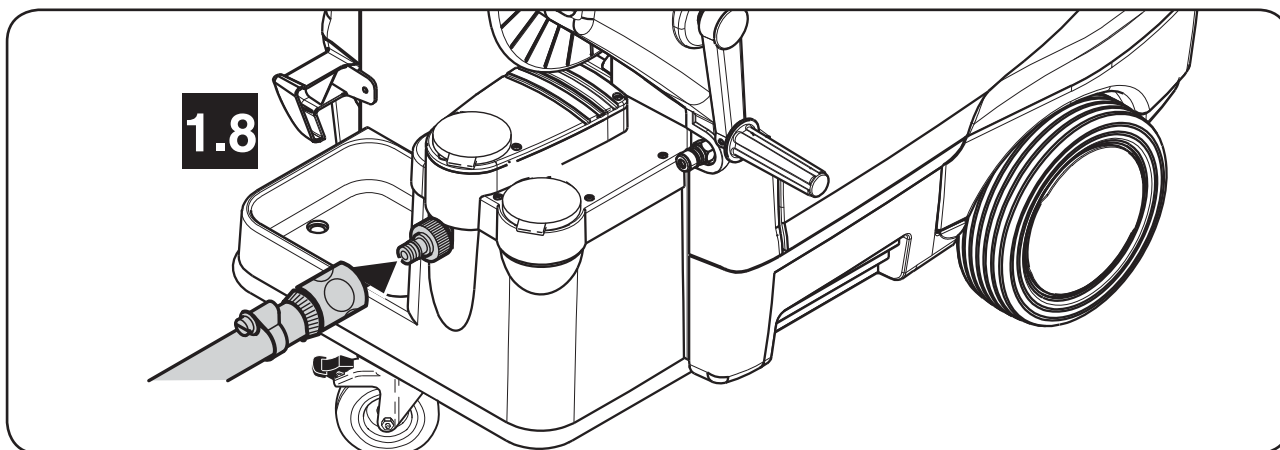
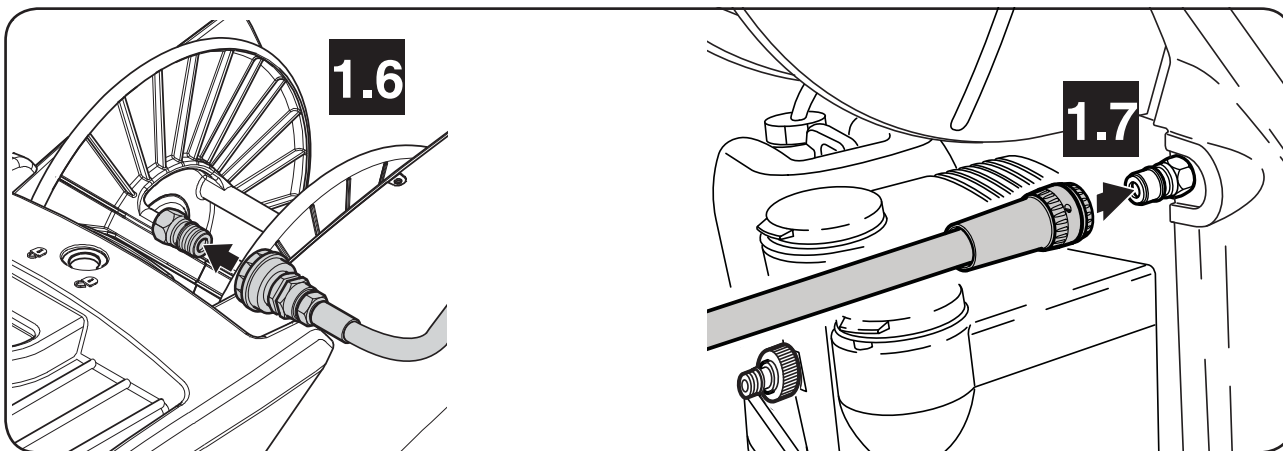
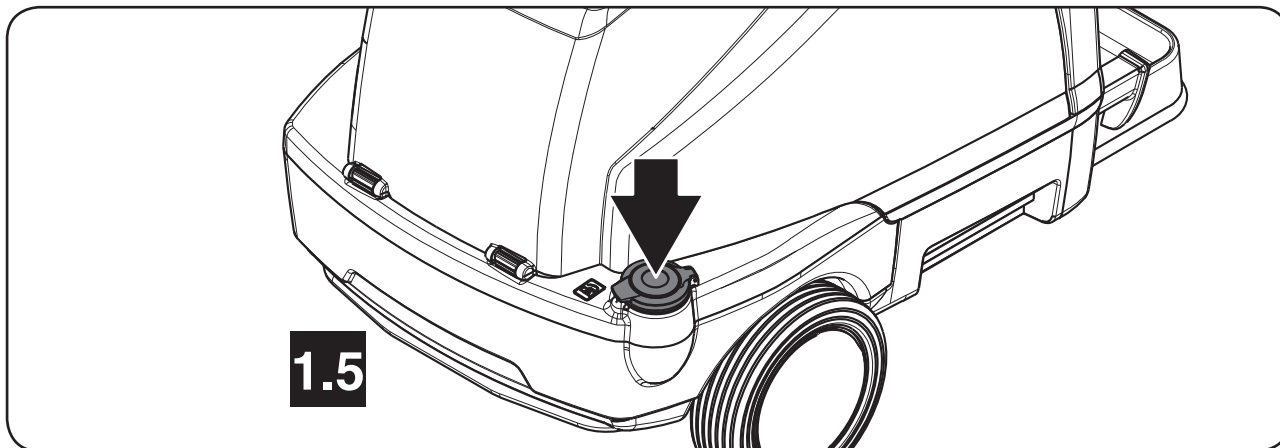


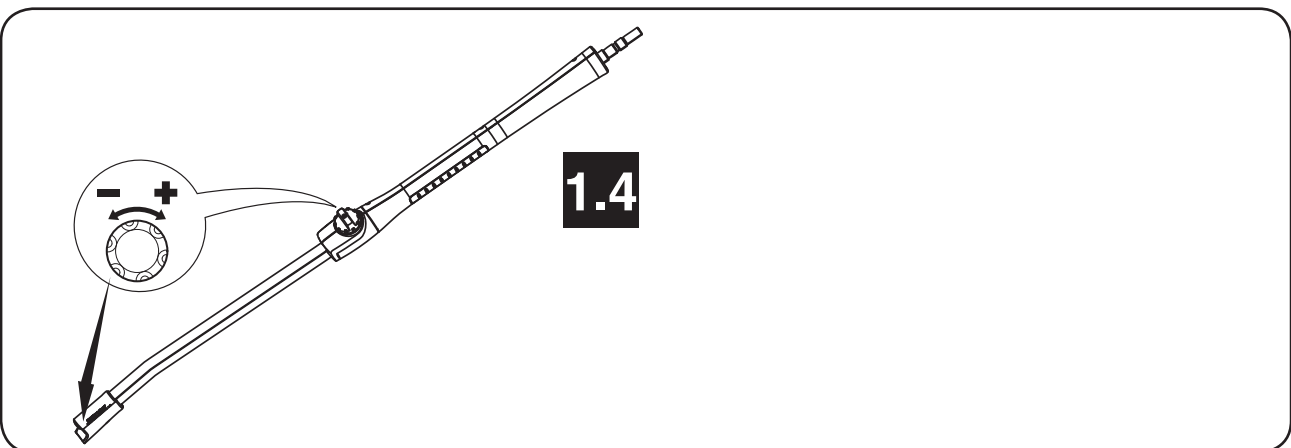
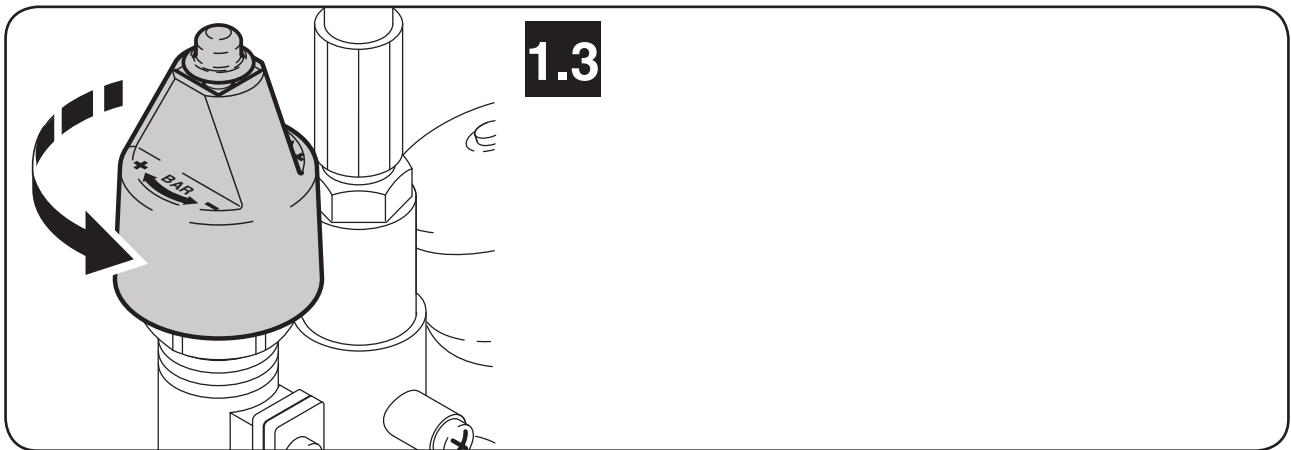
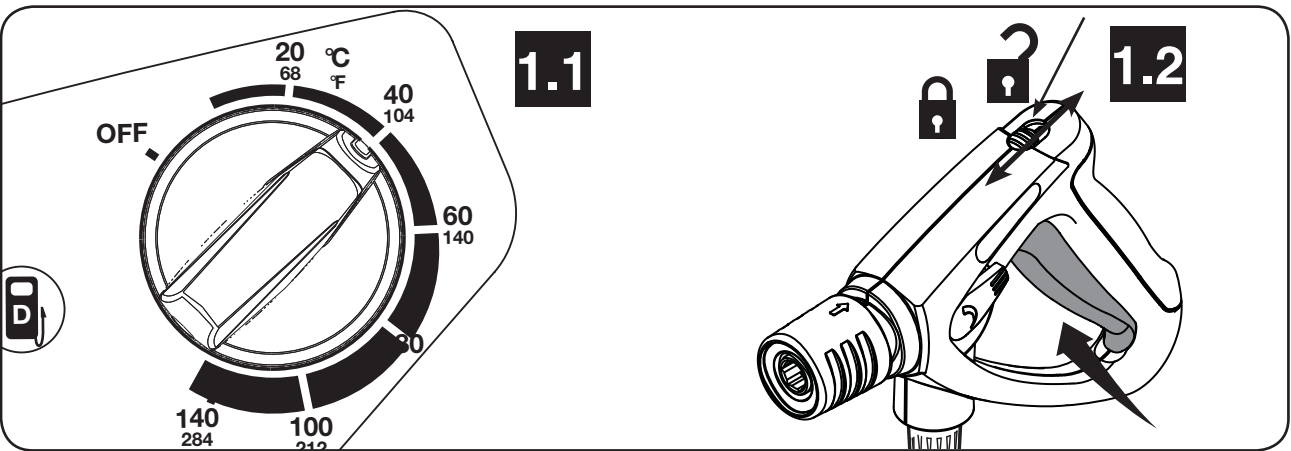
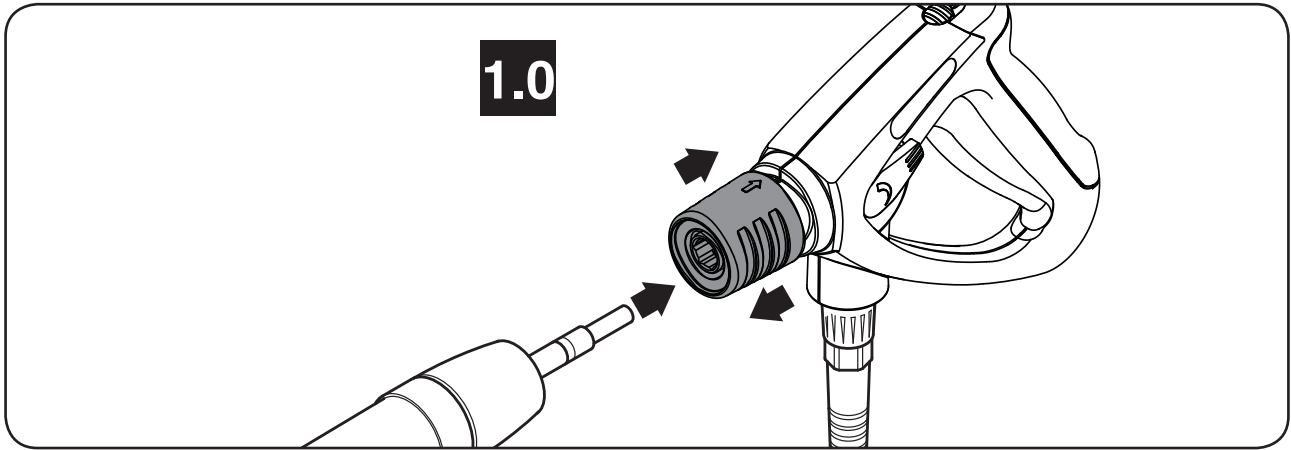
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# MH 4M

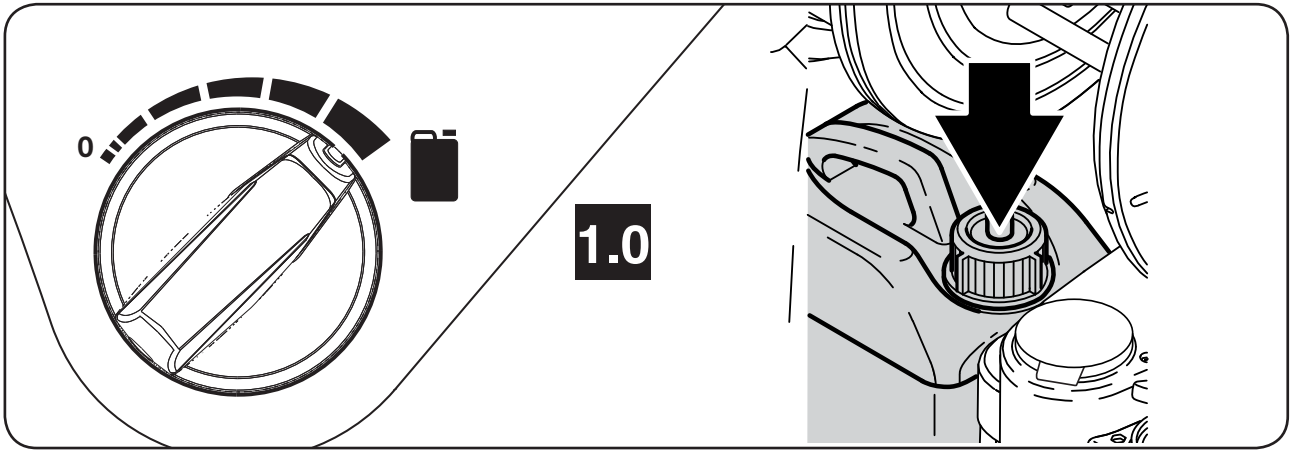




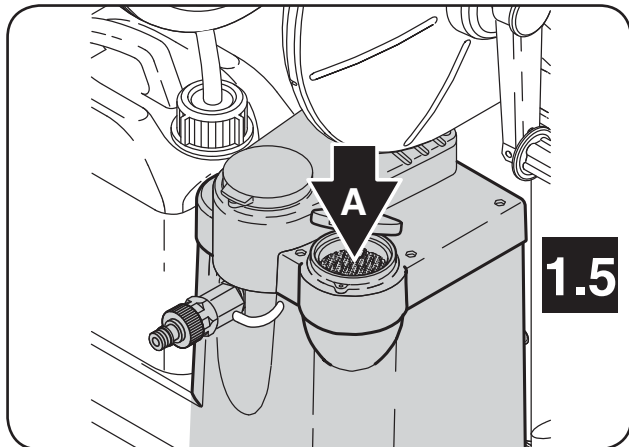
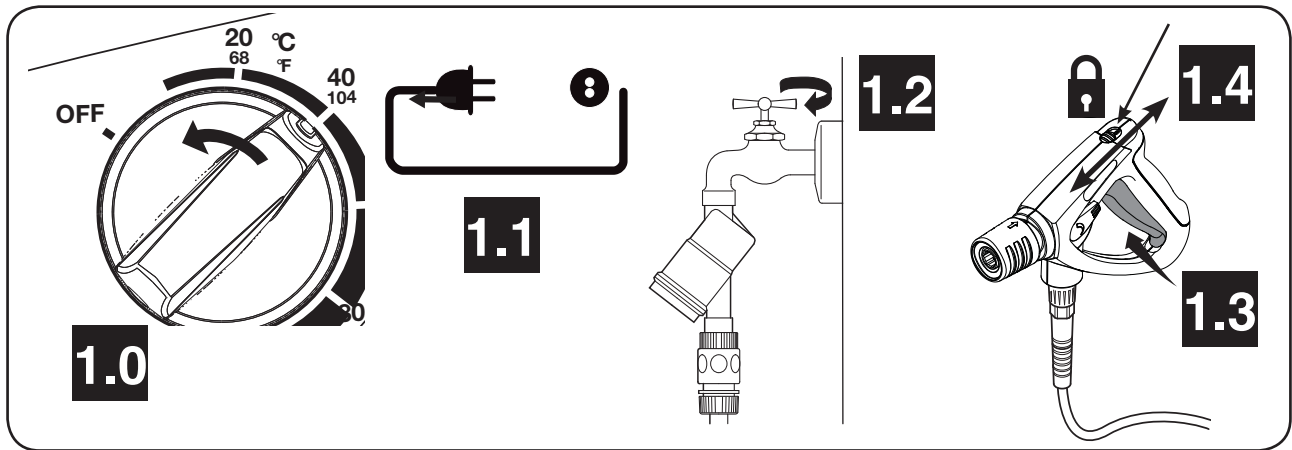


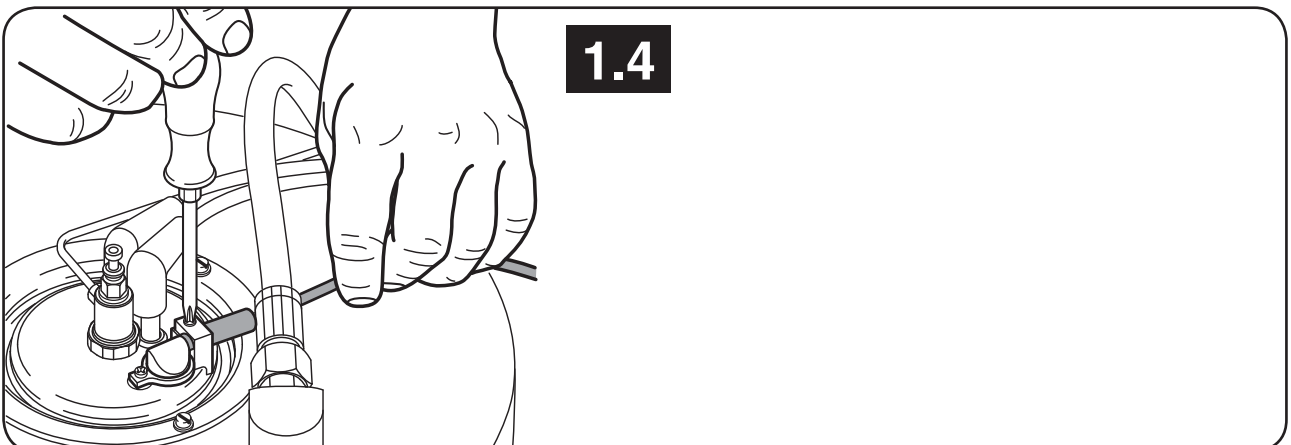
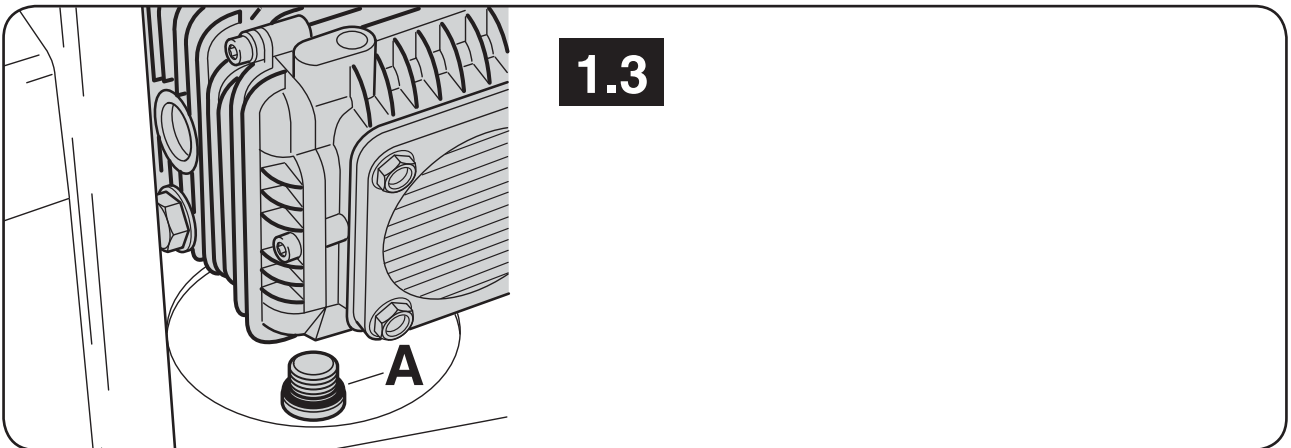
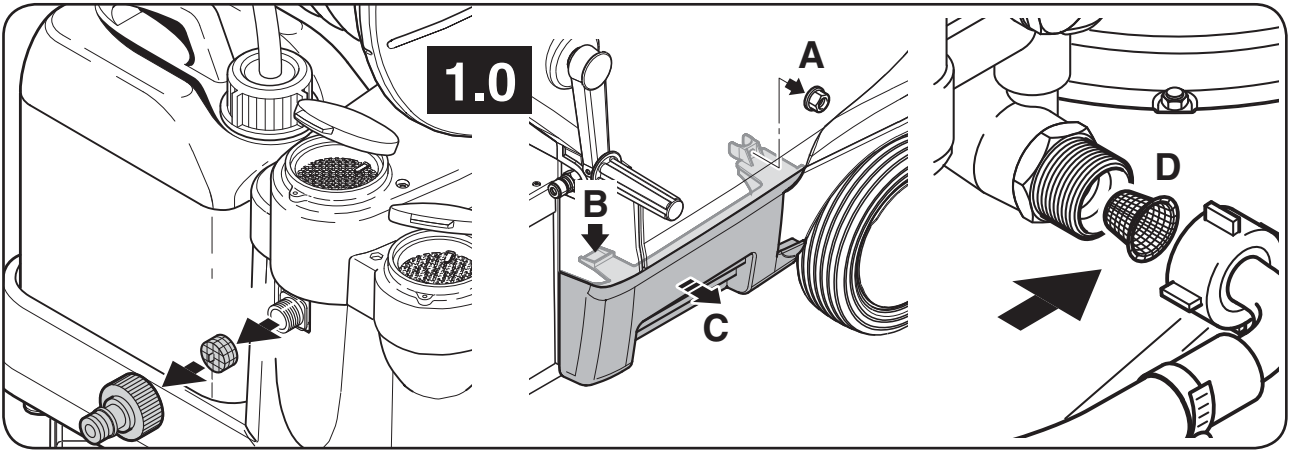


C - MH 4M



D - MH 4M





# Operating instructions

This high pressure washer has been designed for professional use typically in following cleaning applications:

Agriculture, industry, transport industry, automotive cleaning, municipal facilities, cleaning trade, construction industry, food industry etc.

## The pictorial quick reference guide

The pictorial quick reference guide is designed for helping you when starting up, operating and storing the unit. The guide is subdivided into 5 sections.

### A

#### Before starting

#### DO READ SAFETY INSTRUCTIONS BEFORE USE!

#### Operating elements:

1. Spray lance
2. Hot chimney
3. Control panel
4. Pressure gauge
5. Tank filler for fuel
6. Receptacle for service crane and lifting ring<sup>1)</sup>
7. Top cover release
8. Crank handle for High pressure hose reel (MH 4M)<sup>1)</sup>
9. High pressure hose connection for machines without hose reel<sup>1)</sup>
10. Main switch with temperature controller
11. Detergent metering knob<sup>1)</sup>
12. Power ON LED
13. Pump oil low<sup>1)</sup>LED
14. Service interval due/expired LED
15. Nilfisk AntiStone low<sup>1)</sup>LED
16. Fuel low<sup>1)</sup>LED
17. Castor with parking brake
18. Supply water connection
19. Tank filler for anti-freeze
20. Tank filler for Nilfisk AntiStone
21. Place for canister for detergent
22. High pressure hose reel (MH 4M)<sup>1)</sup>
23. Cable hook
24. Grip for top cover

#### Assembling the unit:

- 1.0 Set the brake
- 1.1 Install Crank handle for high pressure hose reel<sup>1)</sup>
- 1.2 Fit clamp for lance storage
- 1.3 Fill up detergent tank<sup>1)</sup>
- 1.4 Fill up tank for Nilfisk AntiStone
- 1.5 Fill up fuel tank. With the machine cold: Fill fuel tank from a clean container with a fresh fuel, heating oil, DIN 51603-1 (without bio diesel) or Diesel EN 590 (Diesel with a bio diesel content up to 7%). Diesel according to EN 590 (up to 7% bio diesel) can be used with the following restrictions: Maximum storage time in high pressure cleaner diesel tank: 1 month. Diesel stored externally for more than

6 months is not allowed to be filled into Nilfisk high pressure cleaners. Diesel EN 590 is not recommended for use in HPW's at an ambient temperature below 0°C. Diesel EN 590 from an open container must not be used.

- 1.6 Connecting the high pressure hose. Machines with high pressure hose reel
- 1.7 Connecting the high pressure hose. Machines without high pressure hose reel
- 1.8 Connecting the water supply
- 1.9 Check and set electrical configuration

### B

#### Switching on the unit

- 1.0 Connecting the spray lance to the spray gun
- 1.1 Switching on the cleaner. Cold water operation / Hot water operation (up to 100°C)
- 1.2 Release safety lock
- 1.3 Steam operation (over 100°C)<sup>1)</sup>
- 1.4 Pressure regulation (Tornado Lance)<sup>1)</sup>

### C

#### Control/operation

#### Using cleaning agents:

- 1.0 Set the desired concentration of cleansing agent at the cleansing agent dosing facility. Spray the object to be cleaned. Allow the cleaning agent to work, depending on the degree of soiling. Then rinse off with the high pressure spray jet.

### D

#### After using the unit

- 1.0 Switching off the cleaner. Turn the main switch to position „OFF“.
- 1.1 Disconnecting supply lines
- 1.2 Close water tap.
- 1.3 Squeeze the spray gun handle until the cleaner is depressurised.
- 1.4 Lock the safety catch on the spray gun.
- 1.5 Storing the cleaner (below 0°C). Remove the water inlet hose from the cleaner. Remove the spray lance. Switch on the cleaner with the main switch in position "Cold Water". Operate the spray gun. Gradually pour antifreeze (approx. 5 litres) into the water tank (A). During suction operate the spray gun two or three times. The machine is protected against frost when antifreeze solution emerges from the spray gun. Lock the safety catch on the spray gun. Switch off the cleaner. To avoid any risks, store the cleaner temporarily in a heated room before using it again. When the machine is put into service again, the antifreeze solution can be collected and stored for future use.

### E

#### Maintenance

- 1.0 Water filters: A water filter is fitted on the water inlet to prevent large particles of dirt

<sup>1)</sup> Optional accessories / Option depending on model  
Original instruction

from entering into the pump. Unscrew quick coupling. Remove filter with tool and clean it. Undo nut (A). Unlatch (B) and remove (C) cover. Clean or replace filter (D) in high-pressure pump inlet. Insert filter and fasten union nut. Reattach cover.

- 1.1 Oil filter. Clean filter: Unscrew Filter cap (1) Clean/replace oil filter (2). Dispose of cleaning solution/ damaged filter in accordance with the disposal regulations.
- 1.2 Checking the pump oil quality: Check colour of pump oil. If the oil has a grey or white shade, change the oil. Top up cold pump with fresh oil to MAX if necessary.
- 1.3 Changing the pump oil: Unscrew the oil drain plug (A) on the pump housing and dispose of the old oil in accordance with the disposal regulations. Check the drain plug gasket and screw in the plug again. Fill with oil and close the oil filler plug.
- 1.4 Flame sensor<sup>1)</sup>: Remove the sensor and clean with a soft cloth. Ensure that the sensor is correctly seated when installing again.

Hadsund 04-03-2015



Anton Sørensen  
Senior Vice President – Global R&D

### EU Declaration of conformity

We,  
Nilfisk A/S  
Kornmarksvej 1  
DK-2605 Broendby  
DENMARK

Hereby declare, that the  
Product: HPW - Professional - Mobile  
Description: 230V 1~, 400V 3~, 50/60Hz, IPX5  
Type: MH 4M \*







Are in compliance with the following standards:

EN 60335-1:2012  
EN 60335-2-79:2012  
EN 55014-1:2006+A1:2009+A2:2011  
EN 55014-2:1997+A1:2001+A2:2008  
EN 61000-3-2:2014  
EN 61000-3-11:2000  
EN 50581:2012

Following the provisions of:  
Machinery Directive 2006/42/EC  
EMC Directive 2004/108/EC  
RoHS Directive 2011/65/EC  
Noise Emission Directive 2000/14/EC – Conformity  
assessment  
procedure according to Annex V.  
- Measured noise level [dB]: 72-77  
- Guaranteed noise level [dB]: 88-93

## Troubleshooting MH 4M

Indication light	Cause	Remedy
Green LED  ON	> Appliance ready for operation. When switching on, all the LEDs light up once before the motor is switched on.	
Yellow LED  ON	> Fuel shortage	<ul style="list-style-type: none"> <li>• Top up fuel</li> <li>• Cold water operation possible</li> </ul>
Yellow LED  ANTI STONE flashing	> Nilfisk AntiStone shortage	<ul style="list-style-type: none"> <li>• Top up Nilfisk AntiStone</li> </ul>
Red LED  flashing	> Service interval: Service due in 20 hours	Contact Nilfisk Service
Red LED  ON	> Service interval expired	Contact Nilfisk Service
Red LED  ON	> Pump oil low	<ul style="list-style-type: none"> <li>• Top up pump oil</li> </ul>
Green LED  flashing	> Flow sensor fault	Contact Nilfisk Service Cold water operation possible
	> Water tap closed or water shortage	<ul style="list-style-type: none"> <li>• Required volume flow and pressure see Technical Data</li> </ul>
	> Detergent tank empty	<ul style="list-style-type: none"> <li>• Top up detergent tank or set detergent metering to „OFF“</li> </ul>
	> Pressure regulation on the safety control block or VarioPress-lance <sup>1)</sup> set to low water volume	<ul style="list-style-type: none"> <li>• Turn the twist grip on safety control block or VarioPress-lance<sup>1)</sup> to higher water volume</li> </ul>
	> Machine scaled	Contact Nilfisk Service
Green LED  and red LED  flash simultaneously	> Leakage or inadmissible operating condition by short-time operation	<ul style="list-style-type: none"> <li>• After three times of short-time operation the machine switches off. Reset: Turn main switch to position „OFF“, then start again. Keep spray gun pressed for longer than 3 seconds. If a leak occurs causing the machine to start and stop briefly 3 times, then the machine will switch off.</li> </ul>
	> Spray gun leaking	<ul style="list-style-type: none"> <li>• Check Spray gun</li> </ul>
	> High pressure hose, coupling or line system leaking	<ul style="list-style-type: none"> <li>• Replace high-pressure hose, retighten screw fittings</li> </ul>
	> Detergent tank empty	<ul style="list-style-type: none"> <li>• Top up detergent tank or set detergent metering to „OFF“</li> </ul>
	> Water inlet filter dirty	<ul style="list-style-type: none"> <li>• Clean filter</li> </ul>
	> High-pressure pump drawing in air	<ul style="list-style-type: none"> <li>• Repair leaks</li> </ul>

Indication light	Cause	Remedy
Green LED  and red LED  flash alternately	<ul style="list-style-type: none"> <li>&gt; Motor overheated</li> <li>&gt; Machine overheated</li> </ul>	<ul style="list-style-type: none"> <li>• Turn main switch in position „OFF“, let machine cool down</li> <li>• Remove/disconnect extension cable</li> <li>• Possible phase failure; have electrical connection checked</li> <li> Contact Nilfisk Service</li> </ul>
Green LED  flashes slowly red LED  flashes rapidly	<ul style="list-style-type: none"> <li>&gt; Flame sensor sooted</li> <li>&gt; Ignition or fuel system failure</li> </ul>	<ul style="list-style-type: none"> <li>• Clean flame sensor.</li> <li> Contact Nilfisk Service Cold water operation possible</li> </ul>

### Maintenance plan

	Weekly	After the first 50 operating hours	Every six months or 500 operating hours	As required
Water filters				●
Oil filter				●
Checking the pump oil quality	●			
Changing the pump oil		●	●	
Emptying the fuel oil tank				●

Machine flow L/h	Pump size ml/h	°dH	°f	°e	Dosage
800	35	0-12	0-21,5	0 - 15	1:1 = 17ml/h
800	35	12-30	21,5 - 53,7	15 - 37,5	Pure = 35ml/h
900	35	0-12	0-21,5	0 - 15	1:1 = 17ml/h
900	35	12-30	21,5 - 53,7	15 - 37,5	Pure = 35ml/h
1000	35	0-12	0-21,5	0 - 15	1:1 = 17ml/h
1000	35	12-30	21,5 - 53,7	15 - 37,5	Pure = 35ml/h

#### Antiscale:

The Nilfisk Antiscale dosing system is set by the factory.

To adjust the water hardness we recommend that the inlet water is tested accordingly. Use the schematic to find the right dosage of No Scale/anti stone and water, and add the mixture to the antiscale tank.

## Specifications

MH				
		4M-180/950 TROST	4M-200/1050 XP	4M-90/770 X 4M-90/770
Voltage 110 V / 1~ / 50 Hz				
Voltage 220 V / 1~ / 60Hz				
Voltage 230 V / 1~ / 50Hz				GB
Voltage 400 V / 3~ / 50Hz		EU	EU	
Voltage 230-400 V/ 3~ / 50Hz		NO,BE	NO,BE	
Voltage 220-460 V/ 3~ / 60Hz				
Fuse	A	16 EU 25 NO,BE	16 EU 25 NO,BE	13
Power rating	kW	6,9	7,9	3
Power consumption	A	21.7	24	13
Type of protection		IP X5		
Working pressure	bar (Mpa)	180 (18)	200 (20)	90
Permissible pressure	bar (Mpa)	135		
Volume flow (max)	l/h	950	1050	770
Volume flow $Q_{IEC}$	l/h	900	1000	720
High pressure nozzle		NT0550	NT0500	NT0650
Permissible temperature	°C	80 - 140		
Max. water inlet temperature	°C	40		
Max. water inlet pressure	bar (Mpa)	10 (1)		
Dimensions l x w x h	mm	1053 x 687 x 760		
Weight	kg	145		128/133
Noise level at a distance of 1 m EN 60704-1	dB(A)	76.6	76.9	72,4
Sound power level $LW_A$	dB(A)	93	93	88
Vibration ISO 5349	m/s <sup>2</sup>	≤ 2,5		
Recoil forces	N	49	56	27
Heating capacity	kW	70	70	55
Fuel tank	l	15		
Detergent tank A / B	l	10		
Oil quantity	l	1		
Oil type		SAE 15 W 40		



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