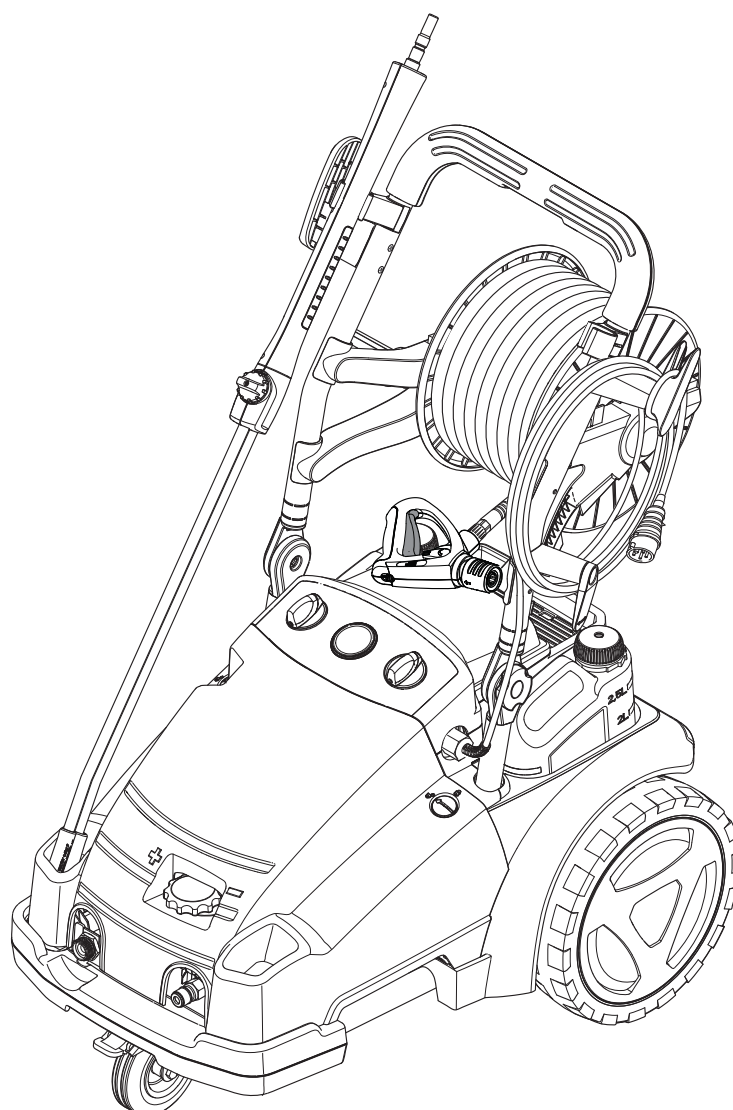


MC 5M - MC 6P - MC 7P - Instructions for use



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Symbols used to mark instructions

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Safety instructions in these operating instructions which must be observed to prevent risks to persons are marked with this danger symbol.



This indicates tips and instructions to simplify work and to ensure safe operation.

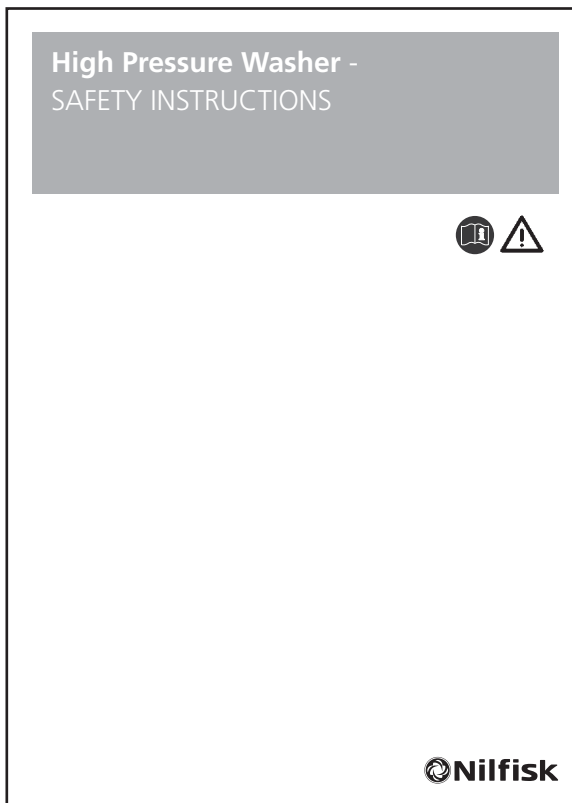


Before starting up your high-pressure washer for the first time, this instruction manual must be read through carefully. Save the instructions for later use.



This symbol is used to mark safety instructions that must be observed to prevent damage to the machine and its performance.

1 Safety instructions



2 Description

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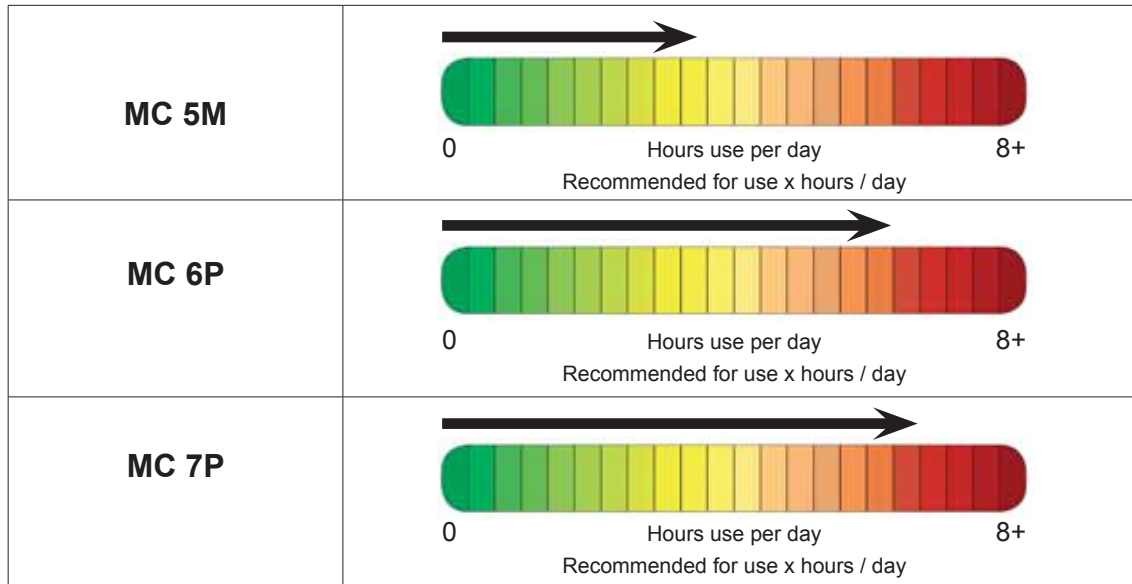
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2.1 Use per day

We recommend these products for an optional use of approx. X-hours use per day.



2.2 Purpose

This high-pressure cleaner has been designed for professional use in:

- agriculture
- industry
- transport industry
- automotive cleaning
- municipal facilities
- cleaning trade
- construction industry
- food industry
- etc.

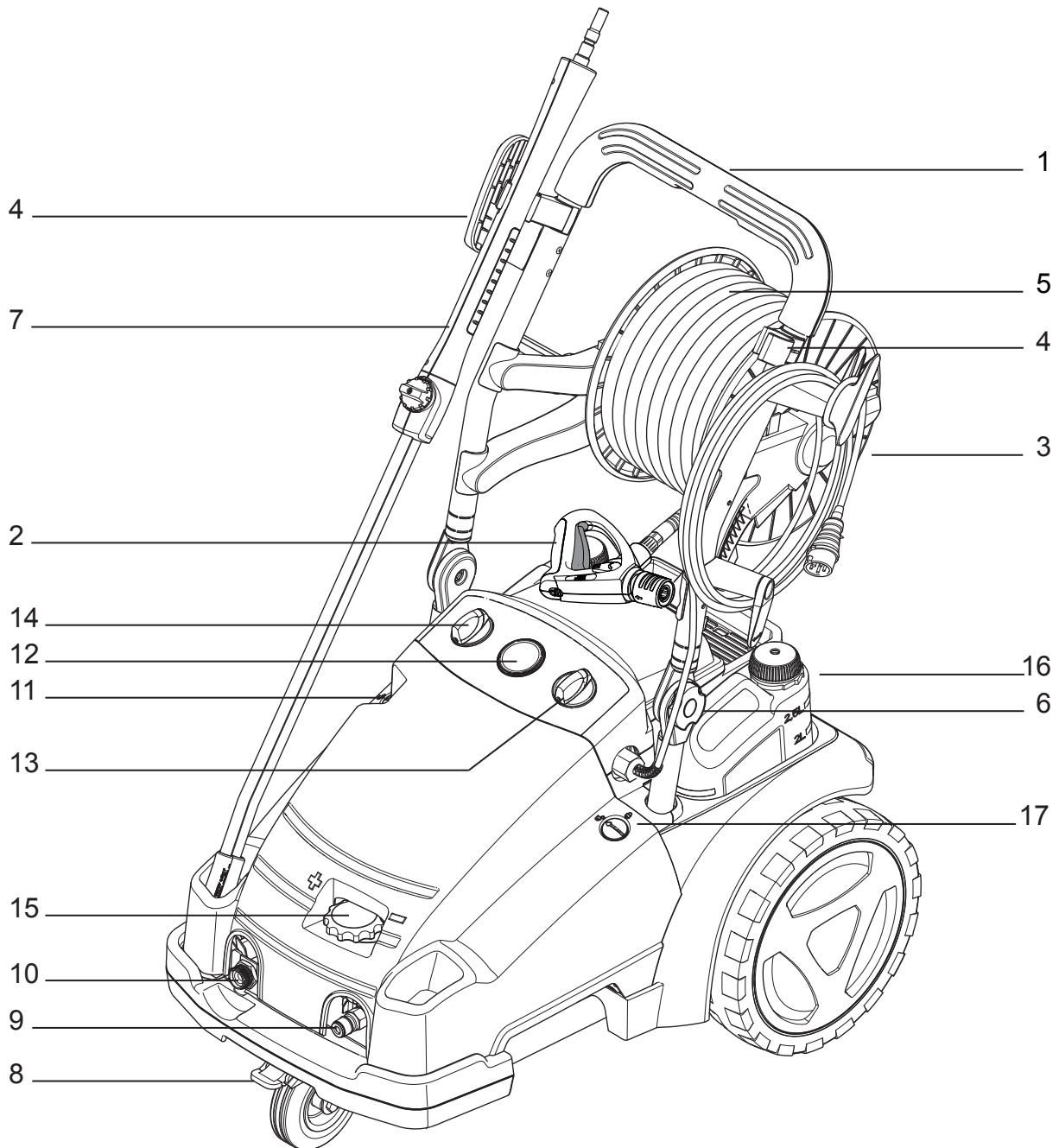
Chapter 5 describes the use of the high-pressure cleaner for various cleaning jobs.

Always use the cleaner as described in these operating instructions. Any other use may damage the cleaner or the surface to be cleaned or may result in severe injury to persons.

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2.3 Operating elements

1. Push/pull handle
2. Spray gun
3. Electrical lead
4. Holder for high pressure hose
5. High-pressure hose
6. Fastening screw
7. Lance¹⁾
8. Parking brake¹⁾
9. High-pressure hose connection (on standard models without hose reel)¹⁾
10. Water connection and water inlet filter
11. Oil inspection slide
12. Pressure gauge¹⁾
13. Main switch
14. Chemical dosing regulation¹⁾
15. Water flow regulation¹⁾
16. Chemical tank¹⁾
17. Cover lock



3 Before starting the cleaner

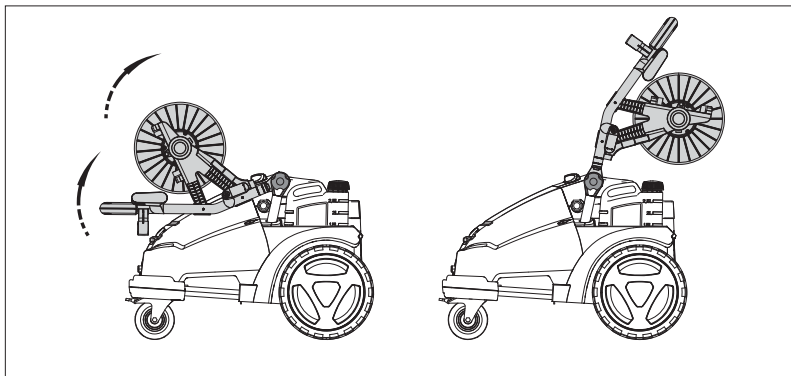
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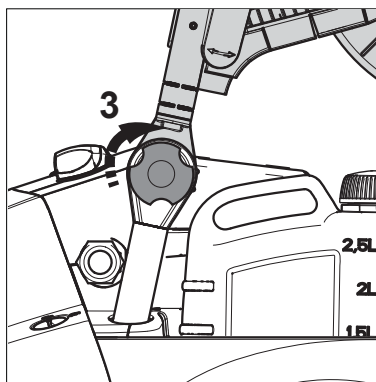
3.1 Setting up the cleaner



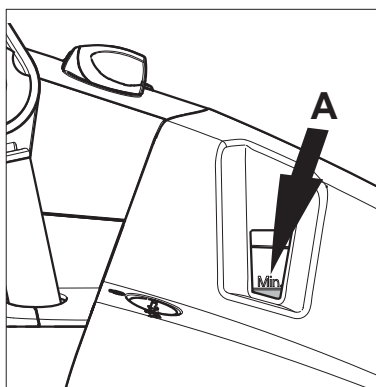
CAUTION!

Never lift the cleaner alone.
Always ask a second person to help.

1. Before using the cleaner for the first time, check it carefully to detect any faults or damage.
2. In the event of any damage contact your Nilfisk dealer immediately.
3. Unfold and lock the handle in working position.



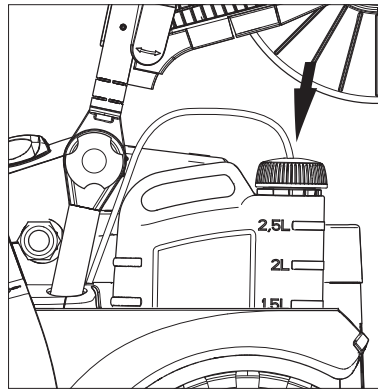
3.2 Check the oil level



4. Check the oil level.
On level ground, the oil should be above MIN level (A), when the oil is cold.

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3.3 Fill up detergent tank¹⁾



1. Fill up detergent tank with prediluted Nilfisk detergent.
2. Pull detergent hose and filter out of the storage and put it through the opening of the detergent tank filler cap.

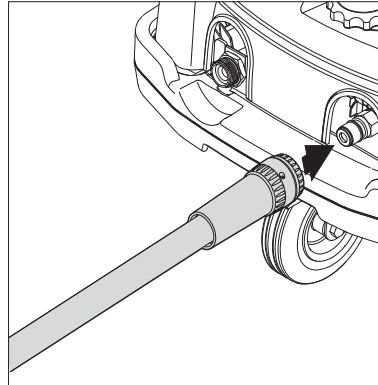
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3.4 Connecting the high pressure hose

3.4.1 Machines without high pressure hose reel



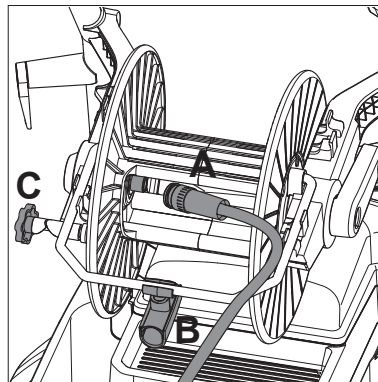
1. Put the quick connector of the high pressure hose onto the nipple on the cleaner.



NOTE!

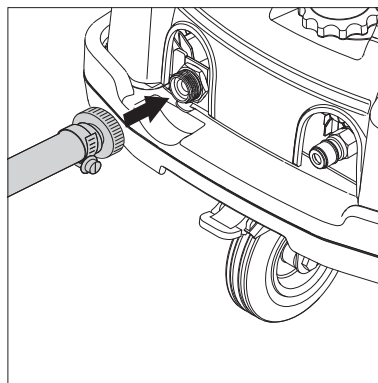
The maximum length of high pressure hose is 50 m.

3.4.2 Machines with high pressure hose reel



1. Put the quick connector of the high pressure hose (A) onto the nipple on the axle.
2. Put the high pressure hose into the hose guide (B) and fix it with the clip¹⁾.
3. Release the brake (C) on the hose reel guide¹⁾ and wind up the high pressure hose.

3.5 Connecting the water supply



1. Rinse the water supply hose briefly in order to prevent sand and other dirt particles entering into the machine.
2. Connect water supply hose to the machine.
3. Open water tap.



**NOTE!**

In the case of poor water quality (sand, etc.), we recommend that a fine water filter is fitted to the machine. Max 50 Micron filter.

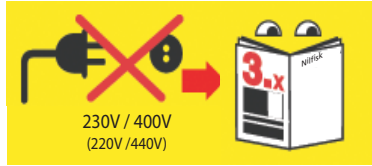
We recommend the use of a textile-reinforced water hose with a nominal diameter of min. **3/4" (19 mm)**.

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3.6 Electrical connection**CAUTION!**

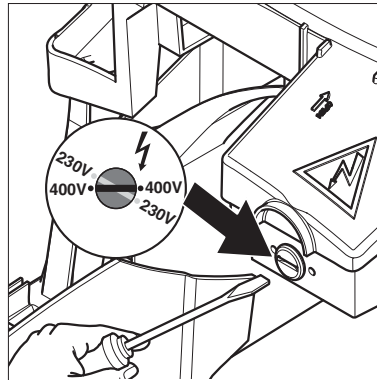
Before connecting devices with voltage changeover: Check that the pre-selected voltage on the machine corresponds with the voltage of the electrical installation. Otherwise the electrical devices of the machine can be destroyed ¹⁾.

CAUTION!

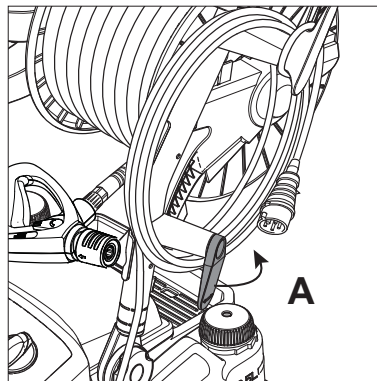
When using a cord reel: Unwind the cord completely.

CAUTION!

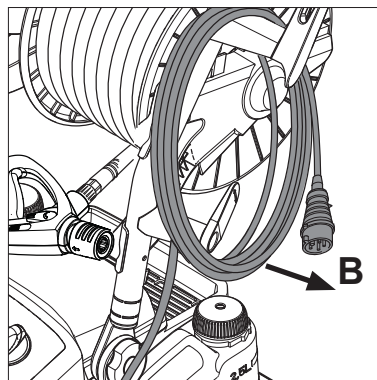
The cleaner may only be connected to a correctly installed electrical installation.



1. Observe safety instructions in chapter 1.
2. Put the plug into the electrical socket.

3.6.1 Releasing the cable

1. Turn the cable hook (A).



2. Release the cable (B).
3. Turn back the cable hook.



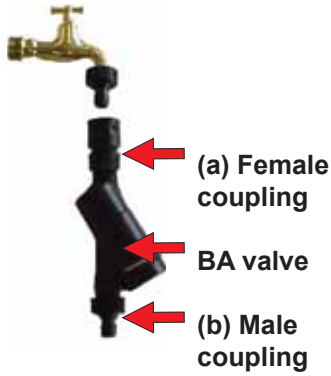
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3.7 BA valve

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This high pressure washer/cleaner is only allowed to be connected with the drinking water mains, when an appropriate backflow preventer has been installed, Type BA according to EN 60335-2-79.

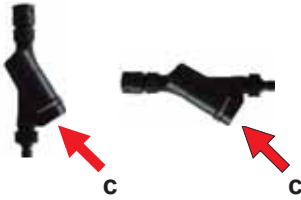
The BA valve can be ordered under number:

- BA valve including GARDENA couplings: 106411177
- BA valve including NITO couplings: 106411178
- BA valve including GEKA couplings: 106411179
- BA valve without couplings: 106411184

The couplings can be ordered under number:

- 3/4" GARDENA (a): 1608629
- 3/4" GARDENA (b): 32541
- 3/4" NITO (a): 1602945
- 3/4" NITO (b): 1600659
- 1/2" NITO (b): 1604669
- 3/4" GEKA (a): 1718
- 3/4" GEKA (b): 1311

Installation guide



1. Mount a male coupling on the water tap.
2. Connect (a) on the BA valve to the water tap.
3. Mount a female coupling on the water inlet hose.
4. Connect (b) on the BA valve to the water inlet hose.
5. Connect the water inlet hose to the high pressure washer.
6. Turn on the water and start the machine.

CAUTION

- The backflow preventer can be mounted either vertically or horizontally, and the drain opening (c) must be mounted pointing downwards.
- Water flowing from the drain opening (c) must be able to flow freely.
- If there is a risk of running sands in the inlet water (i.e. from your own well), an additional filter should be mounted between the water tap and backflow preventer.
- The length of the hose between the backflow preventer and the high pressure washer must be at least 12 metres (min diameter 3/4 inch) to absorb possible pressure peaks.
- As soon as water has flown through the BA valve, this water is not considered to be drinking water any more.
- Protect the backflow preventer to any exposure to frost.
- Keep the backflow preventer clean, and free of dirt.

Maintenance

At least once a year, check the function as follows:

1. After work, switch off the high pressure cleaner.
2. Close the water tap valve.
3. Release the pressure in water the supply hose by triggering the spray pistol.
4. Dismount the backflow preventer. Water has to come out of the drain opening (c) (max. 100ml) to ensure separation of the potable water.
5. If this is not the case, try cleaning the BA valve or contact your Nilfisk representative.

4 Control / Operation

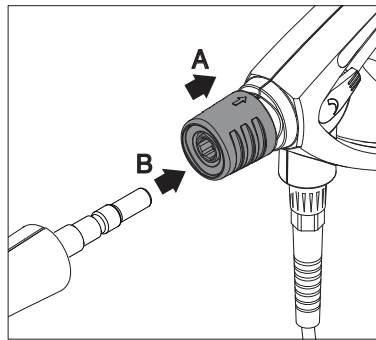
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4.1 Connecting the spray lance to the spray gun



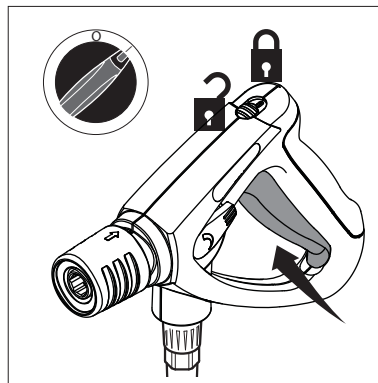
1. Pull back the blue quick-release grip (A) of the spray gun.
2. Insert the nipple of the spray lance (B) into the quick-release connection and release the coupling (A).
3. Pull the spray lance (or other accessory) forwards to check that it is securely attached to the spray gun.



NOTE!

Always remove any dirt from the nipple before connecting the spray lance to the spray gun.

4.2 Switching on the cleaner when it is connected to a water supply



1. Main switch
Turn the switch to position "I".
2. Unlock the spray gun and operate it.
3. Lock the spray gun even during short pauses.



NOTE!

Operate the spray gun several times at short intervals to vent the system.

The cleaner switches off automatically after the spray gun has been closed. To start the cleaner again, operate the spray gun. DSS-models switch off with a delay of 20 seconds¹⁾.



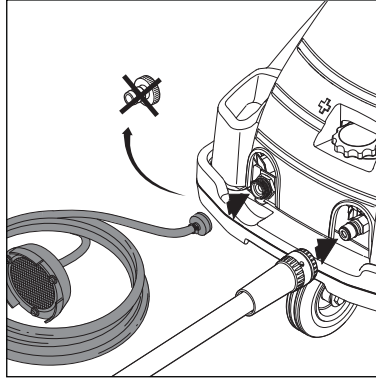
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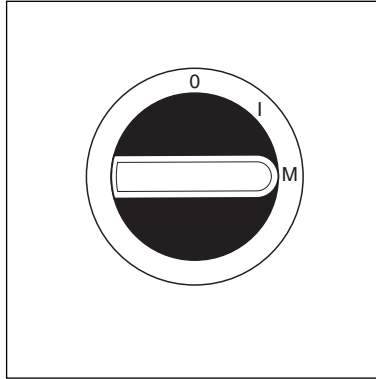
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4.2.1 Switching on the cleaner when it is connected to open tanks in suction mode¹⁾ (Pressure activated model)



1. Before connecting the suction set: 61256 to the cleaner, fill the hose with water.
2. Turn the main switch to position " I ".
3. Unlock the spray gun and operate it.

4.2.2 Switching on the cleaner when it is connected to open tanks in suction mode¹⁾ (Flow activated model)



1. Before connecting the suction set: 61256 to the cleaner, fill the hose with water.
2. Turn the main switch to position " M ".
3. Unlock the spray gun and operate it.
4. To start the cleaner again, operate the main switch again.

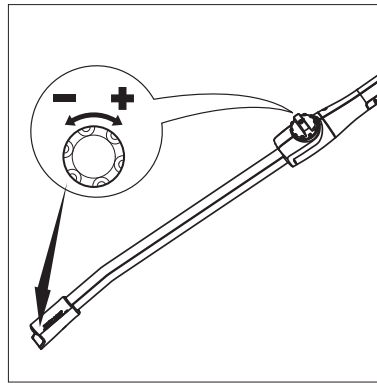


NOTE!

The cleaner automatically switches off after more than 5 minutes of inactivity.
See chapter 9.4 for max. suction height.



4.3 Pressure regulation with Tornado Plus lance and PowerSpeedVario Plus lance.



1. Turn the twist grip on the lance:

– **High pressure** = clockwise (+)

– **Low pressure** = anticlockwise (-)

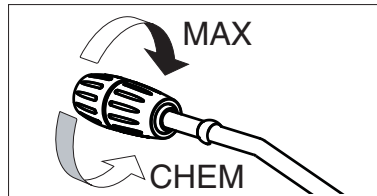
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4.4 Pressure regulation with the FlexoPowerPlus nozzle head and the PowerSpeedVario Plus lance.

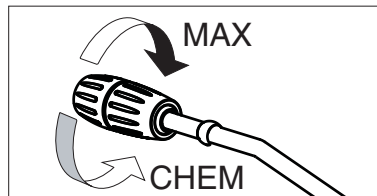


1. Twist cap of the FlexoPowerPlus nozzle head:

– **High pressure** = MAX.

– **Low pressure** = MIN. (CHEM)

4.5 Using cleaning agents



Cleaning agent can be drawn in via the injector installed as standard only in low-pressure mode:

1. Dilute cleaning agent according to the manufacturer's instructions.

2. Tornado Plus lance and PowerSpeedVario Plus lance¹⁾: Set pressure regulation on spray lance to low pressure (-), or FlexoPowerPlus nozzle head¹⁾:

Turn cap of the FlexoPowerPlus nozzle head towards „CHEM“ up to the stop.

3. The intaken volume of cleaning agent can be regulated by turning the metering valve.

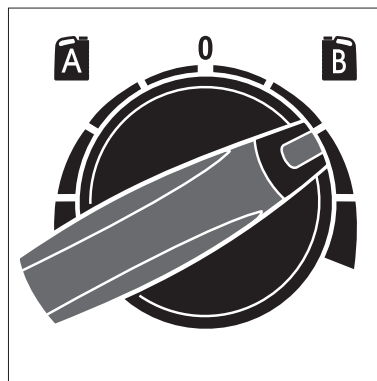
4. Select tank A by turning the merering valve on "A-side". Select tank B by turning the metering valve on "B-side"

5. Main switch
Turn the switch to position "I".

6. Operate the spray gun.



NOTE!
Never allow cleaning agent to dry on the surface to be cleaned. The surface may be damaged.



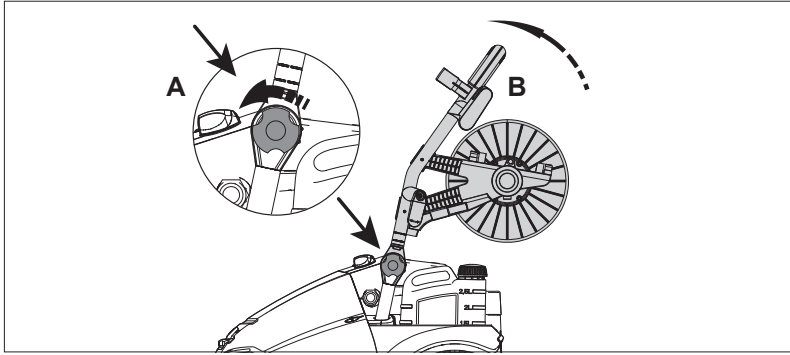
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4.6 Lifting with crane

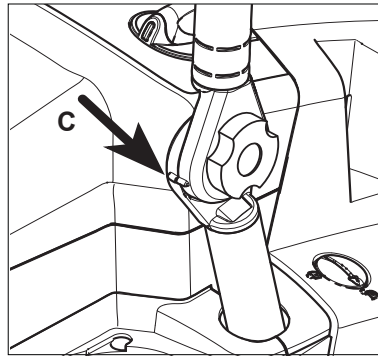
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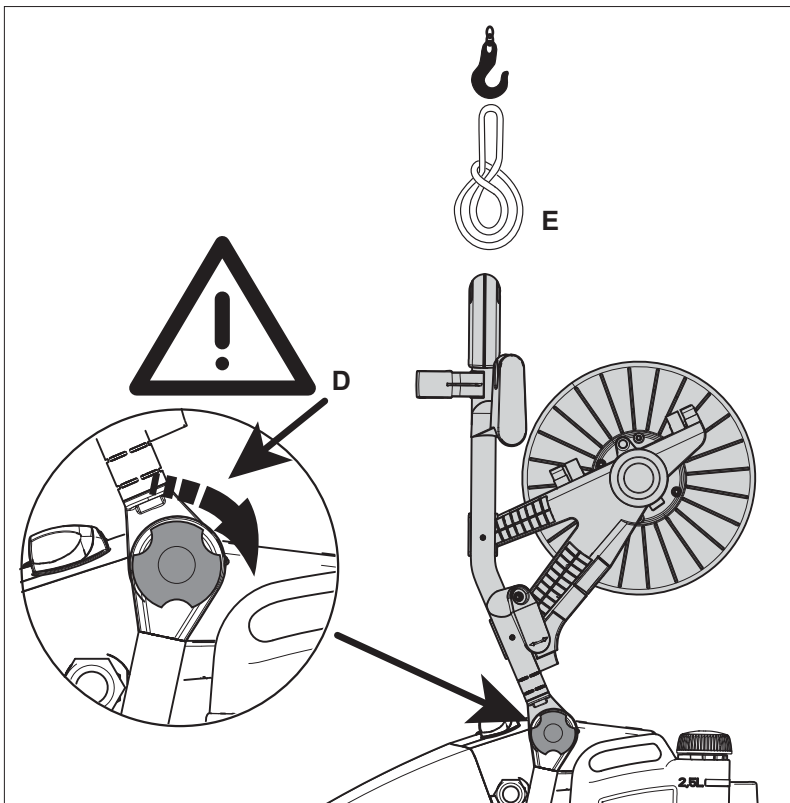
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1. Before crane lifting the machine should be in balance. Loosen the screw (A), push the handle (B) a little forward.



2. When the two marks are aligned (C), the handle is in crane-lifting -position.



3. Be careful to fasten the screw (D) in the lifting position.
4. Wrap a belt stop around center of the handle (E) for the crane to hook in.



WARNING!

Do not stand under the machine hanging in the air.





5 Applications and methods

5.1 Techniques

Efficient high pressure cleaning is achieved by following a few guidelines, combined with your own personal experience of specific cleaning tasks. Accessories and detergents, when correctly chosen, can increase the efficiency of your pressure washer. Here is some basic information about cleaning.

5.1.1 Soaking

Encrusted or thick layers of dirt can be loosened or softened up by a period of soaking. This is for example an ideal method within agriculture – for example, within pig sties. The ideal soaking method can be achieved via use of foam or simple alkaline detergent. Let the product lie on the dirty surfaces for around 10 - 30 minutes before pressure washing. The result will be a much quicker high pressure cleaning process.

5.1.2 Detergent and Foam

Foam or detergent should be applied onto dry surfaces so that the chemical product is in direct contact with the dirt. Detergents are applied from bottom to top, for example on a car bodywork, in order to avoid “super clean” areas, where the detergent collects in higher concentration and streams downwards. Let the detergent work for several minutes before rinsing but never let it dry on the surface being cleaned.

5.1.3 Temperature

Detergents are more effective at higher temperatures. Greases, oils and fats can be broken down more easily at higher temperatures also. Proteins can be cleaned at temperatures of around 60°C. Oils, traffic film around 70°C, and grease can be cleaned at 80°C - 90°C.

5.1.4 Mechanical Effect

In order to break down tough layers of dirt, additional mechanical effect may be required. Special lances and rotary or wash brushes offer this supplementary effect that cuts through dirt.

5.1.5 High Water Flow or High Pressure

High pressure is not always the best solution and high pressure may damage surfaces. The cleaning effect also depends upon water flow. Pressure levels of around 100 bar may be sufficient for vehicle cleaning (in association with hot water). Higher flow levels give the possibility to rinse and flush away large amounts of dirt easily.

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5.2 Some typical cleaning tasks

5.2.1 Agriculture

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Task	Accessories	Method
Stables Pig Pens, Sties	Chemical Foam Injectors Foam lance	<ol style="list-style-type: none"> 1. Soaking – apply foam to all surfaces (bottom to top) and wait for approx. 10 - 30 minutes. 2. Remove the dirt from surfaces with the high pressure lance or chosen accessory. Again, clean from bottom to top on vertical surfaces. 3. To flush away large quantities of dirt, change to low pressure mode and use the higher flow to push away the dirt. 4. Use recommended disinfectant products and methods to ensure hygiene. Apply DES 3000 disinfectant once the surfaces are perfectly clean.
Cleaning of walls, floors and equipment. Detergents	Powerspeed lance Floor Cleaner Universal Alkafoam Disinfectant DES 3000 DES 4000	
Machinery Tractors ploughs etc.	Detergent injection Powerspeed lances Curved lances and underchassis washers Brushes	<ol style="list-style-type: none"> 1. Apply detergent to vehicle or equipment surfaces in order to soften up dirt and grime. Apply from bottom to top. 2. Proceed with cleaning using the high pressure lance. Clean again from bottom to top. Use accessories to clean in difficult to reach places. 3. Clean fragile areas such as motors, rubber at lower pressure levels to avoid damage.

5.2.2 Vehicle

Task	Accessories	Method
Vehicle bodywork	Standard lance Detergent injection Curved lances and underchassis washers brushes	<ol style="list-style-type: none"> 1. Apply detergent to vehicle or equipment surfaces in order to soften up dirt and grime. Apply from bottom to top. In cases of particularly dirty vehicles, pre-spray with a product such as Allosil in order to remove traces of insects etc, then rinse at low pressure and apply normal car cleaning detergent. Let detergents settle for 5 minutes before cleaning off. Metallic surfaces can be cleaned using RimTop. 2. Proceed with cleaning using the high pressure lance. Clean again from bottom to top. Use accessories to clean in difficult to reach places. Use brushes in order to add a mechanical cleaning effect. Short lances can help for cleaning of motors and wheel arches. Curved lances or undercarriage washers can be valuable for the cleaning of car underchassis and wheel arches. 3. Clean fragile areas such as motors, rubber at lower pressure levels to avoid damage. 4. Apply a liquid wax using the pressure washer in order to protect the bodywork from pollution.
Detergents	Aktive Shampoo Aktive Foam Sapphire Super Plus Aktive Wax Allosil RimTop	



5.2.3 Buildings and Equipment

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Task	Accessories	Method
General surfaces Metallic equipment Detergents	Foam injectors Standard lance Curved lances Tank cleaning head Intensive J25 Multi Combi Aktive Alkafoam Disinfectant DES 3000	<ol style="list-style-type: none"> 1. Apply thick foam over the surfaces to be cleaned. Apply on dry surfaces. Apply from top to bottom on vertical surfaces. Let the foam act for up to 10 - 30 minutes for the optimal effect. 2. Proceed with cleaning using the high pressure lance. Use applicable accessories. Use high pressure to dislodge large amounts of incrustated dirt or grime. Use lower pressure and high water volume in order to rapidly flush away loose dirt and rinse surfaces. 3. Apply DES 3000 disinfectant once the surfaces are perfectly clean. <p>Areas covered by amounts of loose dirt, such as animal remains in slaughterhouses, can be removed by using high water flow to flush away the dirt to evacuation pits or drains.</p> <p>Tank cleaning heads can be used to clean barrels, vats, mixing tanks etc. Cleaning heads may be hydraulically or electrically powered and give the possibility for automatic cleaning without a constant user.</p>
Rusted or damages surfaces prior to treatment	Wet Sandblasting equipment	<ol style="list-style-type: none"> 1. Connect the sandblasting lance to the pressure washer and place the suction tube in the sand. 2. Always wear protective equipment during sandblasting. 3. Spray the surfaces to be treated with the mix of water and sand. Rust, paint etc will be stripped off.

These are merely several examples of cleaning tasks that can be solved by a pressure washer in association with accessories and detergents. Each cleaning task is different. Please consult your local dealer or Nilfisk representative in order to discuss the best solution for your own cleaning tasks.

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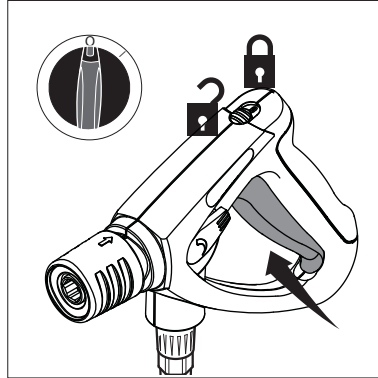
6 After using the cleaner

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6.1 Switching off the cleaner

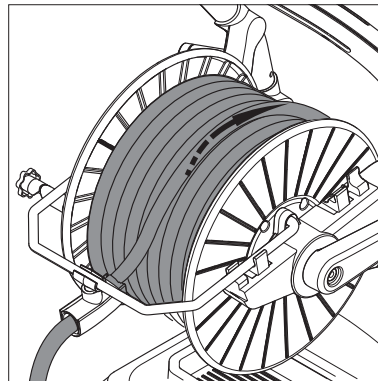


1. Turn the main switch to position „OFF“.
2. Close water tap.
3. Squeeze the spray gun handle until the cleaner is depressurised.
4. Lock the safety catch on the spray gun.

6.2 Disconnecting supply lines

1. Remove the water hose from the cleaner.
2. Pull out the plug from the electrical socket.

6.3 Rolling up the hose and storing of lance

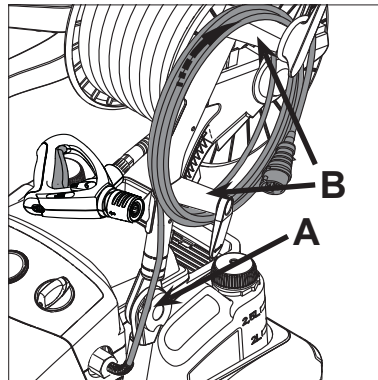


Risk of tripping!

To prevent accidents, always carefully roll up the hose.

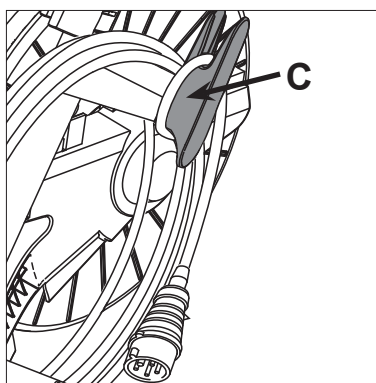
1. Wind up the hose as illustrated.
2. Place the spray lance into the spray lance storage.

6.4 Winding up the cable



1. Winding up the cable from front over the fastening screw (A) and clock-wise around the cable hooks (B).





2. At last turn, lock the cable end in the cable lock (C).

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6.5 Storing the cleaner (below 0°C)

Store the cleaner in a dry room without danger of frost or protect as below:

CAUTION!

If the high-pressure cleaner is stored in a room with temperatures around or below 0°C, anti-freeze should be drawn into the pump beforehand:



1. Remove the water inlet hose from the cleaner.
2. Remove the spray lance.
3. Switch on the cleaner with the main switch in position "I" and activate trigger on the spray gun.
Switch off the cleaner after max. 3 minutes.
4. Connect the suction hose to the water inlet of the cleaner and place it in a tank containing anti-freeze.
5. Switch on the cleaner with the main switch in position "I".
6. Hold the spray gun over the tank containing anti-freeze and operate it to start suction.
7. During suction operate the spray gun two or three times.
8. Lift the suction hose from the tank containing anti-freeze and operate the spray gun to pump off the remaining antifreeze.
9. Switching off the cleaner
10. To avoid any risks, store the cleaner temporarily in a heated room before using it again.

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7 Maintenance

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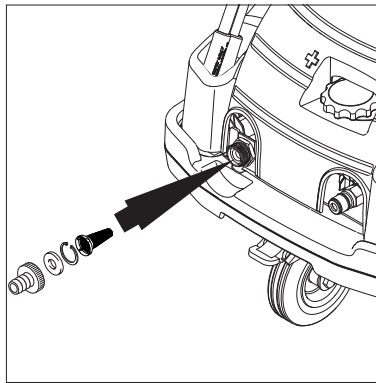
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7.1 Maintenance plan

	Weekly	First time after 50 operating hours	Every 500 operating hours	As required
7.2.1 Cleaning water inlet filter	●			●
7.2.2 Checking pump oil level	●			
7.2.3 Changing pump oil			●	
7.2.4 First change - and cleaning of magnet on drain plug		●		

7.2 Maintenance work

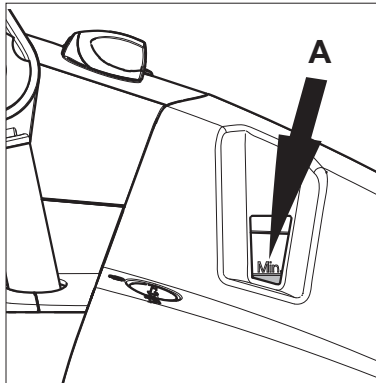
7.2.1 Cleaning water inlet filter



A water filter is fitted on the water inlet to prevent large particles of dirt from entering into the pump.

1. Unscrew the quick-release connection if mounted.
2. Remove the filter and rinse it. Replace damaged filter.

7.2.2 Checking the pump oil level



1. Check the oil level. On level ground, the oil should be above MIN. level (A), when the oil is cold.

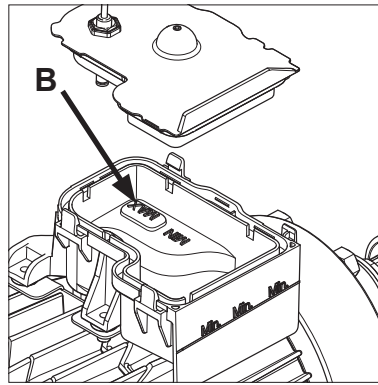


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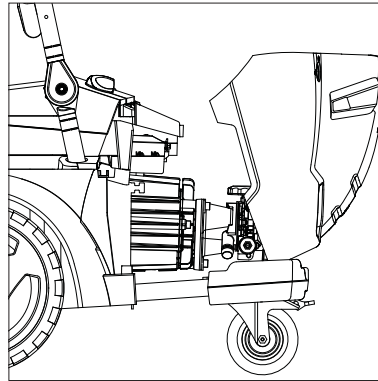
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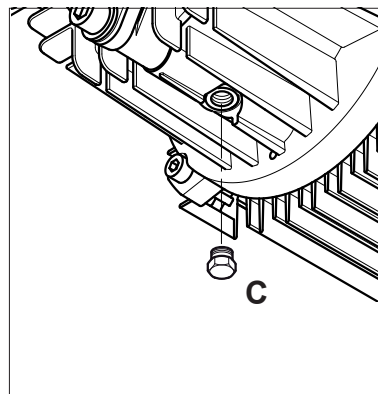


2. If necessary, add oil. Fill to MAX level (B).

7.2.3 Changing the pump oil



1. Before changing the oil, allow the cleaner to become warm.
2. Remove cabinet.



3. Loosen and remove drain plug (C). The plug magnet has to be cleaned with a piece of cloth/napkin to remove metal particles. Drain the oil into a suitable container (min. 1 litre) and dispose the oil in compliance with regulations.
4. Fit drain plug and refill with oil according to chapter 9.4 Technical Data.
5. Oil should be over the MIN. level in the oil container at level ground. Fill to MAX (B).
6. Fit the cabinet again.



NOTE!

Special pump oil is required if the cleaner is used near food. Please consult your Nilfisk dealer.



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8 Troubleshooting

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Fault	Cause	Remedy
Pressure drop	<ul style="list-style-type: none"> Air in the system High pressure nozzle blocked worn Detergent tank empty 	<ul style="list-style-type: none"> Vent the system by operating the spray gun several times at short intervals. If necessary, operate the cleaner for a short time without the high-pressure hose connected. Clean/replace the high pressure nozzle Top up detergent tank or set detergent to "0"
Pressure fluctuations	<ul style="list-style-type: none"> Pump draws in air (only possible in suction mode) Lack of water Water inlet hose is too long or its cross-section too small Lack of water caused by blocked water filter Lack of water because max. permissible suction height has not been heeded 	<ul style="list-style-type: none"> Check that the suction set is air-tight Open water tap Use a water inlet hose that can provide the water flow (Q_{max}) defined for the machine Clean the water filter in the water connection (never work without water filter) See instructions
The motor does not start when the cleaner is switched on	<ul style="list-style-type: none"> The plug is not inserted properly, i.e. there is no current Oil level too low The mains fuse is switched off The overload protection has been activated due to overheating or overloading of the motor 	<ul style="list-style-type: none"> Check the plug, lead and switch and if necessary have them replaced by a skilled electrician Check oil/add oil Switch on the mains fuse Check that the mains voltage and the cleaner voltage are the same. Switch off the cleaner and allow it to cool for at least 3 minutes
When the cleaner is switched on the motor buzzes without starting	<ul style="list-style-type: none"> The mains voltage is too low or there is a phase failure. The pump is blocked or frozen Incorrect cross-section or length of the extension lead 	<ul style="list-style-type: none"> Have the electrical connection checked Contact the Nilfisk customer service Use lead with correct cross section or length
The motor switches off	<ul style="list-style-type: none"> The overload protection has been activated due to overheating or overloading of the motor High-pressure nozzle is dirty 	<ul style="list-style-type: none"> Check that the mains voltage and the cleaner voltage are the same. Switch off the cleaner and allow it to cool for at least 3 minutes Change the high-pressure nozzle

Fault	Cause	Remedy
No detergents drawn in	<ul style="list-style-type: none"> Detergent tank empty The cap on the FlexoPower-Plus nozzle head is not set to low pressure Double lance are not adjusted to low pressure. Injector is dirty or suction hose is blocked. 	<ul style="list-style-type: none"> Top up detergent tank Set to low pressure Set to low pressure Clean

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9 Further information

9.1 Recycling the cleaner

Make the old cleaner unusable immediately.

- 1. Unplug the cleaner and cut the power cord.

Do not discard of electrical appliances with household waste.



As specified in European Directive 2012/19/EU on old electrical and electronic appliances, used electrical goods must be collected separately and recycled ecologically. Contact your local authorities or your nearest dealer for further information.

9.2 Guarantee

Our general conditions of business are applicable with regard to the guarantee.

Subject to change as a result of technical advances.

9.3 EU Declaration of Conformity

 EU Declaration of Conformity	
Product:	High Pressure Washer
Type:	MC 5M - MC 6P - MC 7P
The design of the unit corresponds to the following pertinent regulations:	EC Machine Directive 2006/42/EC EC Low-voltage Directive 2006/95/EC EC EMC Directive 2004/108/EC EC RoHS Directive 2011/65/EC
Applied harmonised standards:	EN ISO 12100-1, EN ISO 12100-2, EN 60335-2-79, EN 55014-1(2002), EN 55014-2(2001), EN 61000-3-2 (2006)
Applied national standards and technical specifications:	IEC 60335-2-79
Name and address of the person authorised to compile the technical file:	Anton Sørensen Senior Vice President – Global R&D Nilfisk A/S Kornmarksvej 1 DK-2605 Broendby DENMARK
Identity and signature of the person empowered to draw up the declaration on behalf of the manufacturer:	 Anton Sørensen Senior Vice President – Global R&D Nilfisk A/S Kornmarksvej 1 DK-2605 Broendby DENMARK
Place and date of the declaration:	Hadsund 25-06-2015



9.4 Technical Data



MC	5M-180/840	5M-180/840 XT	5M-200/1000	5M-200/1000 XT	5M-200/1050 FA	5M-200/1050
Country variant	EU	EU	EU	EU	EU	EU
Possible voltage, V/ph/Frez.	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz
Fuse	16	16	16	16	16	16
Power rating	4,8	4,8	6,1	6,1	6,1	6,1
Working pressure p _{IEC}	180 (18)	180 (18)	200 (20)	200 (20)	200 (20)	200 (20)
Water flow Q _{IEC}	760	760	940	940	960	960
Max. water pressure p _{max}	250 (25)	250 (25)	250 (25)	250 (25)	250 (25)	250 (25)
Water flow Q _{max}	840	840	1000	1000	1050	1050
Max. water inlet temperature Intake-Pressure operation	60 (140)	60 (140)	60 (140)	60 (140)	60 (140)	60 (140)
Max. water inlet pressure	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	1	1	1	1	1	1
Dimensions, l x w x h	735x570x1020	890x570x1020	735x570x1020	890x570x1020	735x570x1020	735x570x1020
Weight of cleaner	66	72	71	76	73	73
Sound pressure level L _{PA} at a distance of 1 m	75	75	76	76	76	76
Guaranteed sound power level L _{WA}	88	88	89	89	89	89
Vibration ISO 5349	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1
Recoil forces, lance1 / lance 2	34,4 / 36	34,9 / 36,5	44,7 / 46,7	45,4 / 47,4	46 / 46,7	46 / 46,7
Oil quantity	0,73	0,73	0,73	0,73	0,73	0,73
Oil type	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220

Specifications and details are subject to change without prior notice.



MC	5M-200/1050 XT	5M-220/1130 FA	5M-220/1130	5M-220/1130 XT	5M-170/980	5M-170/980
Country variant	EU	EU	EU	EU	JP	JP
Possible voltage, V/ph/Frez.	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	200V/3ph/50Hz	200V/3ph/60Hz
Fuse	16	16	16	16	20	20
Power rating	6,1	7,4	7,4	7,4	4,9	4,9
Working pressure p_{IEC}	200 (20)	220 (22)	220 (22)	220 (22)	170 (17)	170 (17)
Water flow Q_{IEC}	960	1040	1040	1040	890	890
Max. water pressure p_{max}	250 (25)	250 (25)	250 (25)	250 (25)	250 (25)	250 (25)
Water flow Q_{max}	1050	1130	1130	1130	980	980
Max. water inlet temperature Intake-Pressure operation	60 (140)	60 (140)	60 (140)	60 (140)	60 (140)	60 (140)
Max. water inlet pressure	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	1	1	1	1	1	1
Dimensions, l x w x h	890x570x1020	735x570x1020	735x570x1020	890x570x1020	735x570x1020	735x570x1020
Weight of cleaner	78	79	78	85	71	71
Sound pressure level L_{PA} at a distance of 1 m	76	75	75	75	75	75
Guaranteed sound power level L_{WA}	89	88	88	88	88	88
Vibration ISO 5349	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1
Recoil forces, lance1 / lance 2	46,5 / 47,2	52,8 / 53,6	52,8 / 53,6	54 / 54,8	39,6 / 40,2	39,6 / 40,2
Oil quantity	0,73	0,73	0,73	0,73	0,73	0,73
Oil type	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alpha SP 220

Specifications and details are subject to change without prior notice.





MC		5M-200/1050	5M-200/1050 XT	5M-100/770	5M-100/770 XT	5M-160/840
Country variant		NO, BE	NO, BE	UK	UK	exp
Possible voltage, V/ph/Frez.	V/ph/Hz	230/400V/3ph/50Hz	230/400V/3ph/50Hz	230V/1ph/50Hz	230V/1ph/50Hz	220/440V/3ph/60Hz
Fuse	A	25	25	13	13	30
Power rating	kW	6,1	6,1	2,6	2,6	4,8
Working pressure p_{IEC}	bar (MPa)	200 (20)	200 (20)	100 (10)	100 (10)	180 (18)
Water flow Q_{IEC}	l/h	960	960	640	640	760
Max. water pressure p_{max}	bar (MPa)	250 (25)	250 (25)	150 (15)	150 (15)	250 (25)
Water flow Q_{max}	l/h	1050	1050	770	770	840
Max. water inlet temperature Intake-Pressure operation	°C (°F)	60 (140)	60 (140)	60 (140)	60 (140)	60 (140)
Max. water inlet pressure	bar (MPa)	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	m	1	1	1	1	1
Dimensions, l x w x h	mm	735x570x1020	890x570x1020	735x570x1020	890x570x1020	735x570x1020
Weight of cleaner	kg	75	80	68	73	69
Sound pressure level L_{PA} at a distance of 1 m	dB(A)	76	76	68	68	75
Guaranteed sound power level L_{WA}	dB(A)	89	89	82	82	88
Vibration ISO 5349	m/s ²	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1
Recoil forces, lance1 / lance 2	N	46 / 46,7	46,5 / 47,2	21,5 / 21,8	21,8 / 22,2	33,9 / 35,4
Oil quantity	l	0,73	0,73	0,73	0,73	0,73
Oil type		Castrol Alpha SP 220	Castrol Alpha SP 220	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alpha SP 220

Specifications and details are subject to change without prior notice.



MC		5M-200/1050	5M-220/1130
Country variant		exp	exp
Possible voltage, V/ph/Frez.	V/ph/Hz	220/440V/3ph/60Hz	220/440V/3ph/60Hz
Fuse	A	20	30
Power rating	kW	6,1	7
Working pressure p_{IEC}	bar (MPa)	200 (20)	220 (22)
Water flow Q_{IEC}	l/h	960	1040
Max. water pressure p_{max}	bar (MPa)	250 (25)	250 (25)
Water flow Q_{max}	l/h	1050	1130
Max. water inlet temperature Intake-Pressure operation	°C (°F)	60 (140)	60 (140)
Max. water inlet pressure	bar (MPa)	10 (1)	10 (1)
Max. dry suction height	m	1	1
Dimensions, l x w x h	mm	735x570x1020	735x570x1020
Weight of cleaner	kg	74	80
Sound pressure level L_{PA} at a distance of 1 m	dB(A)	76	75
Guaranteed sound power level L_{WA}	dB(A)	89	88
Vibration ISO 5349	m/s ²	<1,5 +/- 1	<1,5 +/- 1
Recoil forces, lance1 / lance 2	N	45,6 / 46,3	52,8 / 53,6
Oil quantity	l	0,73	0,73
Oil type		Castrol Alpha SP 220	Castrol Alpha SP 220

Specifications and details are subject to change without prior notice.



MC		6P-250/1100	6P-180/1300 FA	6P-180/1300 FA	6P-170/1600 FA
Country variant		EU	EU	exp	EU
Possible voltage, V/ph/Frez.	V/ph/Hz	400V 3ph/50Hz	400V 3ph/50Hz	220/440V 3ph/60Hz	400V 3ph/50Hz
Fuse	A	16	16	30	16
Power rating	kW	8,5	7,4	8,2	8,8
Working pressure p_{IEC}	bar (MPa)	250 (25)	180 (18)	180 (18)	170 (17)
Water flow Q_{IEC}	l/h	1000	1200	1200	1500
Max. water pressure p_{max}	bar (MPa)	250 (25)	250 (25)	250 (25)	250 (25)
Water flow Q_{max}	l/h	1100	1300	1300	1600
Max. water inlet temperature Intake-Pressure operation	°C (°F)	80 (176)	80 (176)	80 (176)	80 (176)
Max. water inlet pressure	bar (MPa)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	m	1	1	1	1
Dimensions, l x w x h	mm	775x570x1020	775x570x1020	775x570x1020	775x570x1020
Weight of cleaner	kg	89	86	87	89
Sound pressure level L_{PA} at a distance of 1 m	dB(A)	80	77	77	77
Guaranteed sound power level L_{WA}	dB(A)	93	90	90	90
Vibration ISO 5349	m/s ²	<1,5 ±1	<1,5 ±1	<1,5 ±1	<1,5 ±1
Recoil forces, lance1 / lance 2	N	54,1 / 54,9	56,4 / 57,3	58 / 58,9	68,2 / 69,2
Oil quantity	l	0,95	0,95	0,95	0,95
Oil type		Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150

Specifications and details are subject to change without prior notice.



MC		6P-250/1100 FAXT	6P-180/1300 FAXT	6P-180/1300 FAXT	6P-170/1600 FAXT	6P-100/1600 FFA
Country variant		EU	EU	NO, BE	EU	EU
Possible voltage, V/ph/Frez.	V/ph/Hz	400V/3ph/50Hz	400V/3ph/50Hz	230/400V 3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz
Fuse	A	16	16	25	16	16
Power rating	kW	8,8	7,7	7,7	9	5,7
Working pressure p_{IEC}	bar (MPa)	250 (25)	180 (18)	180 (18)	170 (17)	100 (10)
Water flow Q_{IEC}	l/h	1000	1200	1200	1500	1500
Max. water pressure p_{max}	bar (MPa)	250 (25)	250 (25)	250 (25)	250 (25)	150 (15)
Water flow Q_{max}	l/h	1100	1300	1300	1600	1600
Max. water inlet temperature Intake-Pressure operation	°C (°F)	80 (176)	80 (176)	80 (176)	80 (176)	80 (176)
Max. water inlet pressure	bar (MPa)	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	m	1	1	1	1	1
Dimensions, l x w x h	mm	930x570x1020	930x570x1020	930x570x1020	930x570x1020	775x570x1020
Weight of cleaner	kg	96	93	93	96	80
Sound pressure level L_{PA} at a distance of 1 m	dB(A)	80	77	77	77	68
Guaranteed sound power level L_{WA}	dB(A)	93	90	90	90	82
Vibration ISO 5349	m/s ²	<1,5 ±1	<1,5 ±1	<1,5 ±1	<1,5 ±1	<1,5 ±1
Recoil forces, lance1 / lance 2	N	54,6 / 55,4	57,4 / 58,3	57,4 / 58,3	68,9 / 70	54,8 / 55,6
Oil quantity	l	0,95	0,95	0,95	0,95	0,95
Oil type		Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150

Specifications and details are subject to change without prior notice.



MC	7P-195/1280 FA	7P-195/1280 FA	7P-195/1280 FA	7P-195/1280 FAXT	7P-195/1280 FBFA	7P-195/1280 FFA
Country variant	EU,DK	EU	EU	EU	EU	EU
Possible voltage, V/ph/Frez.	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz	400V/3ph/50Hz
Fuse	16	16	16	16	16	16
Power rating	8	8	8	8	8	8
Working pressure p_{IEC}	195 (19,5)	195 (19,5)	195 (19,5)	195 (19,5)	195 (19,5)	195 (19,5)
Water flow Q_{IEC}	1180	1180	1180	1180	1180	1180
Max. water pressure $p_{r,max}$	250 (25)	250 (25)	250 (25)	250 (25)	250 (25)	250 (25)
Water flow Q_{max}	1280	1280	1280	1280	1280	1280
Max. water inlet temperature Intake-Pressure operation	85 (185)	85 (185)	85 (185)	85 (185)	85 (185)	85 (185)
Max. water inlet pressure	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	1	1	1	1	1	1
Dimensions, l x w x h	775x570x1020	775x570x1020	930x570x1020	775x649x1020	775x570x1020	775x570x1020
Weight of cleaner	89	89	95	94	89	89
Sound pressure level L_{PA} at a distance of 1 m	75	75	75	75	75	75
Guaranteed sound power level L_{WA}	88	88	88	88	88	88
Vibration ISO 5349	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1
Recoil forces, lance1 / lance 2	57,8 / 58,7	57,8 / 58,7	58,6 / 59,5	57,8 / 58,7	57,8 / 58,7	57,8 / 58,7
Oil quantity	1,1	1,1	1,1	1,1	1,1	1,1
Oil type	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150

Specifications and details are subject to change without prior notice.

MC		7P-195/1280 FA	7P-195/1280 FA	7P-195/1280 FA	7P-195/1280 FA
Country variant		JP	JP	NO, BE	exp
Possible voltage, V/ph/Frez.	V/ph/Hz	200V 3ph/50Hz	200V 3ph/60Hz	230/400V 3ph/50Hz	220/440V 3ph/60Hz
Fuse	A	28	28	25	30
Power rating	kW	8	8	8	8
Working pressure p_{IEC}	bar (MPa)	195 (19,5)	195 (19,5)	195 (19,5)	195 (19,5)
Water flow Q_{IEC}	l/h	1180	1180	1180	1180
Max. water pressure p_{max}	bar (MPa)	250 (25)	250 (25)	250 (25)	250 (25)
Water flow Q_{max}	l/h	1280	1280	1280	1280
Max. water inlet temperature Intake-Pressure operation	°C (°F)	85 (185)	85 (185)	85 (185)	85 (185)
Max. water inlet pressure	bar (MPa)	10 (1)	10 (1)	10 (1)	10 (1)
Max. dry suction height	m	1	1	1	1
Dimensions, l x w x h	mm	775x570x1020	775x570x1020	775x570x1020	775x570x1020
Weight of cleaner	kg	91	91	90	93
Sound pressure level L_{PA} at a distance of 1 m	dB(A)	75	75	76	75
Guaranteed sound power level L_{WA}	dB(A)	88	88	89	88
Vibration ISO 5349	m/s ²	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1	<1,5 +/- 1
Recoil forces, lance1 / lance 2	N	57,8 / 58,7	58,4 / 59,3	57,8 / 58,7	60 / 60,9
Oil quantity	l	1,1	1,1	1,1	1,1
Oil type		Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150	Castrol Alphasyn 150

Specifications and details are subject to change without prior notice.



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