

Hot water high pressure washers



شریف صنعت پارسا



**Nilfisk
ALTO**
works for you

High efficiency EcoPower Boilers for lower fuel costs & environmental responsibility

Nilfisk-ALTO was the first supplier of high pressure washers to integrate revolutionary high efficiency boilers in hot water pressure washers in line with European legislation. Our focus is on providing you the perfect mix of high heating power, high outlet water temperature even at full water flow, reduced fuel consumption, cost and low pollution levels. By using the EcoPower boiler you save money in several ways – lower fuel costs and reduced cleaning time through hotter water – whilst fully respecting the environment. EcoPower boilers offer efficiency levels of up to 92-93% and heating power up to a staggering 115 kW capable of generating high temperatures even at full water flow – a unique combination that really works for you!

The EcoPower boiler automatically runs most economically at temperature settings of around 60°C on the thermostat, providing the ideal combination of hot water and low costs. But even at higher temperature settings, it offers efficient and low cost heating. For heavy degreasing tasks requiring higher temperature levels, the EcoPower boiler still achieves lower running costs than many other products. Water temperature will naturally be limited – as will the consumption of fuel is reduced by as much as 20%. Ideal for applications where high temperatures are not required – such as car cleaning.

Safety levels are unique for standard boilers with 4 significant safety features:

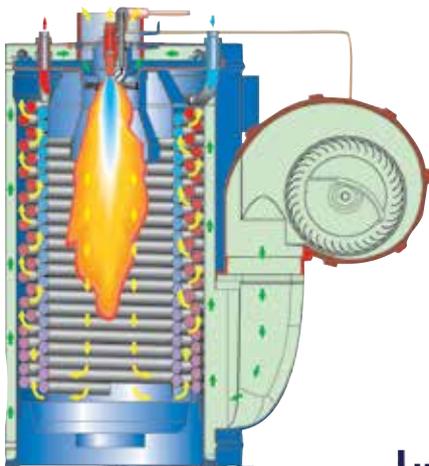
- Flame sensor standard in order to ensure that a flame is indeed present when fuel is injected into the burning tube.
- Exhaust gas temperature sensor: disconnects the heating system in cases of anomaly in the temperature of the exhaust gas before the coil is damaged – for example in cases where the coil is clogged by scale.
- Flow sensor safety – ensures the boiler is only running when water is present in the coil.
- Low fuel safety – ensures that the boiler will only run when there is fuel in the fuel tank, thus preventing damage to fuel pump caused by dry-run.

The double pass, labyrinth coil system ensures that Nilfisk-ALTO can offer high outlet water temperatures at low running cost. A double saving for the user! Low fuel consumption saves money – but higher water temperatures also reduce cleaning time: and thus overall cost in terms of water, fuel, electricity and labor.

Service life of the coil can be prolonged in cases of aggressive water conditions by use of special protective chemicals:

- Protection against hard water conditions by use of AntiStone scaling protection agent.
Prevents clogging of the coil caused by the buildup of lime scale deposit on the coil walls.
- Descaling of a coil clogged up by lime scale using Stone Ex.
- Protection of steel coils against aggressive, acidic soft water conditions by Machine Protector.

Alternatively, stainless steel coils can be mounted for these extreme conditions.



EcoPower Boiler

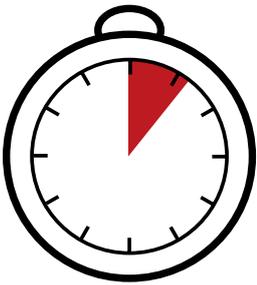


EasyClean Coil



EasyClean and QuickService - quick, easy and reduced maintenance

EasyClean



EasyClean is more than just a clever name. It is evolution in boiler technology.

The EcoPower boiler was the first on the market with such low running costs. Because a high efficiency boiler burns more efficiently, less soot build-up means less maintenance. Its high efficiency level means that less of the money spent on fuel goes to waste as hot air. Savings of up to 6% in fuel costs compared to current conventional technology. The EcoPower boiler is powered by the DuoMotor system which avoids functional problems due to inversion of electrical phases. Not only does clean combustion ensure that the boiler stays cleaner and efficient for longer, but the coil can be removed in record time thanks to the optimal positioning of connections.

The EasyClean feature means reduced maintenance costs because the coil can be removed by a single technician in less than 6 minutes. The latest evolution in boiler technology comes from Nilfisk-ALTO. Lower fuel consumption benefits the environment.

QuickService

Access is the Key

Fast and thorough maintenance keeps your machine efficient and reliable. Pump oil changes do not require a special pan or funnel as easy access is provided. The unloader valve service is positioned right at the front of the cabinet for ease of service. Water and fuel filters are also easily accessible and both can be cleaned or replaced in minutes. If the pump valves and seals require attention, the cylinder head is immediately behind the service door. Cleaning or draining the fuel tank is accomplished by simply removing the drain plug. The boiler coil and burner head service will keep your machine operating at maximum efficiency and minimise fuel costs.

Duo Motor system for ventilator fan. A separate motor for the ventilator fan means that the fan will always provide air to the boiler system, even if the machine has been connected with inversed phases by mistake. In addition, key components such as fan and fuel pump will then only be in operation in hot water mode, avoiding unnecessary wear and tear and prolonging the service life.

Exhaust gas temperature sensor – safe running of the boiler.

Flame Sensor as standard – safe running of the boiler



Double-pass, oxidation free and robust coil with patented spacer system between inner and outer coils to ensure optimal contact between hot air in burner tube and coil surface, offering greater efficiency and reduced fuel consumption.

Interchangeable bottom plate in refractory material for optimal channeling of heat inside the boiler.

Burner head with optimized flame tube to create efficient flame form and avoid contact between flames and coil which would cause soot and loss of efficiency.

Inlet and Outlet on the top of the boiler for easy access and quick service. No need to go under the machine to release the coil from its fittings.



The NEPTUNE line – constant hot water innovation

The NEPTUNE line was the first hot water range to implement an EcoPower boiler system with higher efficiency, reduced emissions and fuel costs. A system that since has been copied.

The **NEPTUNE 1, 2 and 2 SPECIAL** entry level compact hot water units combine ground breaking design with efficient performance, low emission and reduced running costs. Ideal for craftsmen and small garages, the vertical design gives a reduced footprint and makes transport and storage easier. The EcoPower boiler continues to give fuel savings in comparison to many other models on the market. Whether it is a single or a three phase machine, the NEPTUNE 1, 2 and 2 SPECIAL offer great cleaning efficiency.



NEPTUNE 1



NEPTUNE 2



NEPTUNE 2 SPECIAL



NEPTUNE 4



NEPTUNE 5

The **NEPTUNE 4 and 5** are both powerful and robust medium range units. Whether the need is for a more compact machine such as the NEPTUNE 4, or a more powerful and feature-packed NEPTUNE 5, optimal handling, cleaning efficiency, low emission, and low running costs are still part of the package. The NEPTUNE 4 and 5 are equipped with the new NA5H pump, slow running motor and unique flow activated unloader system for even more improved user comfort.

The **NEPTUNE 7** combines award-winning design, 4 piston pump technology and a hugely powerful EcoPower boiler system to offer some of the best performances on the market. Now equipped with the unique flow unloader system FA it is an ideal unit for heavy duty industrial use.

In addition to these core models, Nilfisk-ALTO also offers the high flow **NEPTUNE 8** – a full range, whatever the application. And at last, **NEPTUNE E**, is adapted for use in the food industry or hazardous areas and benefits from many of the same features as the NEPTUNE 5, including WDK dual chemical system, robust steel chassis and frame.



NEPTUNE 7



NEPTUNE 8



NEPTUNE E

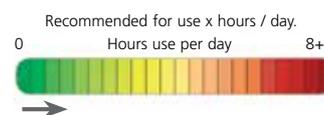
Very mobile hot water machine, with a unique vertical design

Designed for use by garages, car dealers, tradesmen and small construction companies. Compact hot water unit with an innovative design – ideal for vehicles, trade and small-scale agriculture. Combines robust design with some of the traditional features of larger machines. Offers compactness, ease of storage, reliability and low running costs and is ideal for irregular and low intensity use.

The most service-intense components are connected by simple plugs, making their servicing child's play. The service lamp will also indicate to the user when it is time to make regular maintenance on the product, ensuring longer working life.



NEPTUNE 1



TECHNICAL DATA	NEPTUNE 1-22
Pump pressure (bar/MPa)	110/11
Cleaning impact (kg/force)	2.2
Water flow Qmax/Qiec (l/h)	600/540
Max. inlet temperature (°C)	40
Pump (RPM)	2800
Water temperature (water/steam) (°C)	80/
Fuel consumption, ΔT=45°C (kg/h)	2.4
Fuel tank (l)	17
Dimensions L x W x H (mm)	607 x 688 x 1000
Weight (kg)	94
Power consumption (kW)	2.8
Voltage/phase/frequency/current (V~/Hz/A)	230/1/50/12
El cable (m)	5
Nozzle size	0400
FEATURES	
Pistons / number of pistons	Stainless / 3
Automatic start/stop	●
Flame sensor	●
Low fuel cut off	●
Detergent tank (l)	5
STANDARD EQUIPMENT	
HP hose (DN6)	301002275 [10 m]
Ergo 2000 gun with swivel	106403122
Ergo coupling	101119496
Water inlet coupling*	32541
FlexoPower Plus lance without HP nozzle	106402281
Tornado Plus nozzle	101119738
ITEM NO.	107145000

● Standard feature
* Universal brass coupling

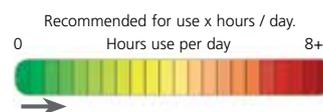
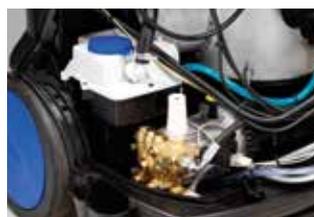
Ideal for everyday, low frequency cleaning tasks in many segments

Compact hot water unit with innovative design – ideal for vehicles, trade and small-scale agriculture. The NEPTUNE 2 series combines robust design with the traditional features of larger machines. EcoPower boiler, DuoMotor, flame sensor, low fuel sensor and ceramic pistons.

The vertical design of NEPTUNE 2 reduces machine footprint considerably, making storage and transport less of a problem. The ideally placed transport handle makes the product easy to push and pull. The NEPTUNE 2 will fit easily into the corner of a workshop, a commercial vehicle, or can even be hung conveniently on a wall, well out of harm's way.



NEPTUNE 2



TECHNICAL DATA	NEPTUNE 2-26	NEPTUNE 2-26 X	NEPTUNE 2-33	NEPTUNE 2-33 X	NEPTUNE 2-41	NEPTUNE 2-41 X
Pump pressure (bar/MPa)	145/14.5	145/14.5	170/17	170/17	190/19	190/19
Cleaning impact (kg/force)	2.6	2.6	3.3	3.3	4.1	4.1
Water flow Qmax/Qiec (l/h)	600/530	600/530	690/630	690/630	780/730	780/730
Max. inlet temperature (°C)	40	40	40	40	40	40
Pump (RPM)	2800	2800	2800	2800	2800	2800
Water temperature (water/steam) (°C)	80/150	80/150	80/150	80/150	80/150	80/150
Fuel consumption, ΔT=45°C (kg/h)	2.4	2.4	2.8	2.8	3.3	3.2
Fuel tank (l)	17	17	17	17	17	17
Dimensions L x W x H (mm)	607 x 688 x 1000	607 x 688 x 1071	607 x 688 x 1000	607 x 688 x 1071	607 x 688 x 1000	607 x 688 x 1071
Weight (kg)	110	112	110	112	110	112
Power consumption (kW)	3.4	3.4	4.1	4.1	5.1	5.1
Voltage/phase/frequency/current (V~/Hz/A)	230/1/50/14.5	230/1/50/14.5	400/3/50/8	400/3/50/8	400/3/50/9	400/3/50/9
El cable (m)	5	5	5	5	5	5
Nozzle size	0340	0340	0370	0370	0400	0400
FEATURES						
Pistons / number of pistons	Ceramic coated / 3					
Automatic start/stop	●	●	●	●	●	●
Flame sensor	●	●	●	●	●	●
Low fuel cut off	●	●	●	●	●	●
Detergent tank (l)	5	5	5	5	5	5
Hose reel and extra hose		●		●		●
STANDARD EQUIPMENT						
HP hose (DN6)	301002275 [10 m]	101117763 [15 m]	301002275 [10 m]	101117763 [15 m]	301002275 [10 m]	101117763 [15 m]
Ergo 2000 gun with swivel	106403122	106403122	106403122	106403122	106403122	106403122
Ergo coupling	101119496	101119496	101119496	101119496	101119496	101119496
Water inlet coupling*	32541	32541	32541	32541	32541	32541
Hose reel		107145197		107145197		107145197
Universal Plus lance without HP nozzle	106403036	106403036	106403036	106403036	106403036	106403036
Tornado Plus nozzle	101119735	101119735	101119737	101119737	101119738	101119738
ITEM NO.	107145003	107145004	107145004	107145010	107145013	107145014



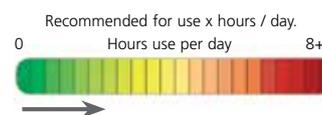
Long lifetime reduce your overall cleaning costs

NEPTUNE 2 SPECIAL is equipped with a new strong 1450 rpm motor pump unit. This ensures longer lifetime together with low noise. Furthermore, the NEPTUNE 2 Special is produced with a pressure activated unloader, allowing a more flexible use of varying nozzle sizes.

The good level of serviceability also reduces maintenance cost and thus, overall cost of cleaning.



NEPTUNE 2 SPECIAL



TECHNICAL DATA	NEPTUNE 2-26 SPECIAL	NEPTUNE 2-26 X SPECIAL	NEPTUNE 2-30 SPECIAL	NEPTUNE 2-30 X SPECIAL
Pump pressure (bar/MPa)	140/14	140/14	155/15.5	155/15.5
Cleaning impact (kg/force)	2.6	2.6	3.0	3.0
Water flow Qmax/Qiec (l/h)	600/560	600/560	660/600	660/600
Max. inlet temperature (°C)	40	40	40	40
Pump (RPM)	1450	1450	1450	1450
Water temperature (water/steam) (°C)	80	80	80	80
Fuel consumption, ΔT=45°C (kg/h)	2.5	2.5	2.7	2.7
Fuel tank (l)	17	17	17	17
Dimensions L x W x H (mm)	607 x 688 x 1000	607 x 688 x 1000	607 x 688 x 1000	607 x 688 x 1000
Weight (kg)	97	99	97	99
Power consumption (kW)	3.4	3.4	3.8	3.8
Voltage/phase/frequency/current (V~/Hz/A)	230/1/50/14.5	230/1/50/14.5	400/3/50/8	400/3/50/8
El cable (m)	5	5	5	5
Nozzle size	0350	0350	0350	0350
FEATURES				
Pistons / number of pistons	Ceramic / 3	Ceramic / 3	Ceramic / 3	Ceramic / 3
Automatic start/stop	●	●	●	●
Flame sensor	●	●	●	●
Low fuel cut off	●	●	●	●
Detergent tank (l)	5	5	5	5
Hose reel		●		●
STANDARD EQUIPMENT				
HP hose (DN6)	301002275 [10 m]	101117763 [15 m]	301002275 [10 m]	101117763 [15 m]
Ergo 2000 gun with swivel	106403122	106403122	106403122	106403122
Ergo coupling	101119496	101119496	101119496	101119496
Water inlet coupling*	32541	32541	32541	32541
Universal Plus lance without HP nozzle	106403036	106403036	106403036	106403036
Tornado Plus nozzle	101119736	101119736	101119736	101119736
ITEM NO.	107145024	107145025	107145026	107145027

● Standard feature
* Universal brass coupling

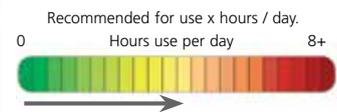
Offers you high productivity, easy and comfortable use

NEPTUNE 4 FA delivers high performance, ease of use, low noise and high cleaning efficiency. The flow activated control system contributes to even more comfortable use, and assures durability and reliability. The EcoPower boiler offers >92% efficiency for significantly reduced fuel consumption and running costs.

When transport or storage are important, but maximum cleaning power and long lifetime are needed, the NEPTUNE 4 FA is the ideal solution. The NEPTUNE 4 FA line is ideal for users with routine, tough cleaning tasks, including vehicles, farming areas or equipment or within industrial environments.



NEPTUNE 4 FA



TECHNICAL DATA	NEPTUNE 4-25 FAX	NEPTUNE 4-39 FAX	NEPTUNE 4-43 FAX	NEPTUNE 4-50 FA	NEPTUNE 4-50 FAX	NEPTUNE 4-55 FA	NEPTUNE 4-55 FAX
Pump pressure (bar/MPa)	140/14	165/16.5	180/18	190/19	190/19	200/20	200/20
Cleaning impact (kg/force)	2.5	3.9	4.3	5.0	5.0	5.5	5.5
Water flow Qmax/Qiec (l/h)	560/520	820/760	860/800	960/900	960/900	1010/960	1010/960
Max. inlet temperature (°C)	40	40	40	40	40	40	40
Pump (RPM)	1450	1450	1450	1450	1450	1450	1450
Water temperature (water/steam) (°C)	90/150	90/150	90/150	90/150	90/150	90/150	90/150
Fuel consumption, ΔT=45°C (kg/h)	2.3	3.3	3.5	4.0	4.0	4.2	4.2
Fuel tank (l)	15	15	15	15	15	15	15
Dimensions L x W x H (mm)	1053 x 685 x 760						
Weight (kg)	136	150	150	136	150	141	150
Power consumption (kW)	3.6	4.7	5.2	6	6.1	6.3	6.4
Voltage/phase/frequency/current (V~/Hz/A)	230/1/50/15.8	400/3/50/9.2	400/3/50/9.7	400/3/50/12.2	400/3/50/12.3	400/3/50/12.5	400/3/50/12.6
El cable (m)	5	5	5	5	5	5	5
Nozzle size	0340	0450	0450	0500	0500	0500	0500
FEATURES							
Pistons / number of pistons	Ceramic / 3						
Automatic start/stop	●	●	●	●	●	●	●
Flame sensor	●	●	●	●	●	●	●
Additional hose	●	●	●		●		●
Hose reel	●	●	●		●		●
STANDARD EQUIPMENT							
HP hose (DN8)	301001100 [15 m]	301001100 [15 m]	301001100 [15 m]	101405770 [10 m]	301001100 [15 m]	101405770 [10 m]	301001100 [15 m]
Ergo 2000 gun with swivel	106403122	106403122	106403122	106403122	106403122	106403122	106403122
Ergo coupling	101119496	101119496	101119496	101119496	101119496	101119496	101119496
Water inlet coupling*	32541	32541	32541	32541	32541	32541	32541
Hose reel	301001688	301001688	301001688		301001688		301001688
Universal Plus lance without HP nozzle	106403033	106403033	106403033				
Tornado Plus lance without HP nozzle				106403010	106403010	106403010	106403010
Tornado Plus nozzle	101119735	101119740	101119740	101119741	101119741	101119741	101119741
ITEM NO.	107146608	107146600	107146600	107146602	107146611	107146614	107146615

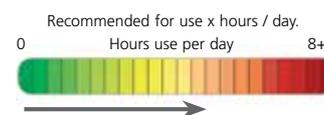
High performance, ease of use, low noise and great cleaning efficiency

The NEPTUNE 5 FA series combine low running costs, ease of use, low sound and high cleaning efficiency. The flow activated control system offers great comfortable use and assures durability and reliability. The EcoPower boiler system offers >92% efficiency, significantly reduced fuel consumption and lower running costs.

The NEPTUNE 5 FA means faster cleaning combined with long service life, reducing overall cleaning costs. The NA5H wobble disc pump unit is not only robust and cost-effective – it is also quiet, making cleaning more comfortable. No compromise has been made on quality materials and lifetime.



NEPTUNE 5 FA



TECHNICAL DATA	NEPTUNE 5-50 FA	NEPTUNE 5-50 FAX	NEPTUNE 5-61 FA	NEPTUNE 5-61 FAX
Pump pressure (bar/MPa)	190/19	190/19	210/21	210/21
Cleaning impact (kg/force)	5.0	5.0	6.1	6.1
Water flow Qmax/Qiec (l/h)	960/900	960/900	1110/1050	1110/1050
Max. inlet temperature (°C)	40	40	40	40
Pump (RPM)	1450	1450	1450	1450
Water temperature (water/steam) (°C)	90/150	90/150	90/150	90/150
Fuel consumption, ΔT=45°C (kg/h)	4	3.9	4.6	4.6
Fuel tank (l)	35	35	35	35
Dimensions L x W x H (mm)	1190 x 702 x 987			
Weight (kg)	160	165	160	165
Power consumption (kW)	6	6.1	7.6	7.8
Voltage/phase/frequency/current (V~/Hz/A)	400/3/50/12.2	400/3/50/12.2	400/3/50/15.4	400/3/50/15.8
El cable (m)	5	5	5	5
Nozzle size	0500	0500	0550	0550
FEATURES				
Pistons / number of pistons	Ceramic / 3	Ceramic / 3	Ceramic / 3	Ceramic / 3
Automatic start/stop	●	●	●	●
Flame sensor	●	●	●	●
Detergent tank (l)	A:15 + B:10	A:15 + B:10	A:15 + B:10	A:15 + B:10
Additional hose		●		●
Hose reel		●		●
STANDARD EQUIPMENT				
HP hose (DN8)	101405770 [10 m]	301001101 [20 m]	101405770 [10 m]	301001101 [20 m]
Ergo 2000 gun with swivel	106403122	106403122	106403122	106403122
Ergo coupling	101119496	101119496	101119496	101119496
Water inlet coupling*	61369	61369	61369	61369
Hose reel		301001131		301001131
Tornado Plus lance without HP nozzle	106403010	106403010	106403010	106403010
Tornado Plus nozzle	101119741	101119741	101119743	101119743
ITEM NO.	107146650	107146651	107146653	107146654

● Standard feature
* Universal brass coupling

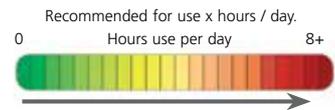
The most effective tool for heavy duty, hot water cleaning in any sector

The tough and robust NEPTUNE 7 FA series combines low running costs, ease of use, low noise and high cleaning efficiency. The most effective tool for heavy duty, industrial hot water cleaning in any sector.

The NEPTUNE 7 FA is equipped with the premium class C3 pump, and is ideal for the toughest applications. The FA version adds a new level of reliability and comfort with the flow activated unloader system, in which the flow of water over a sensor sends the start-stop impulses to the motor.



NEPTUNE 7 FA



TECHNICAL DATA	NEPTUNE 7-63 FA	NEPTUNE 7-63 FAX2
Pump pressure (bar/MPa)	175/17.5	175/17.5
Cleaning impact (kg/force)	6.3	6.3
Water flow Qmax/Qiec (l/h)	1260/1170	1260/1170
Max. inlet temperature (°C)	40	40
Pump (RPM)	1450	1450
Water temperature (water/steam) (°C)	90/150	90/150
Fuel consumption, ΔT=45°C (kg/h)	5.3	4.6
Fuel tank (l)	35	35
Dimensions L x W x H (mm)	1190 x 702 x 987	1190 x 702 x 987
Weight (kg)	224	224
Power consumption (kW)	8.3	8.3
Voltage/phase/frequency/current (V~/Hz/A)	400/3/50/15	400/3/50/13.5
El cable (m)	5	10
Nozzle size	0680	0680
FEATURES		
Pistons / number of pistons	Ceramic / 4	Ceramic / 4
Automatic start/stop	●	●
Flame sensor	●	●
Detergent tank (l)	A:15 + B:10	A:15 + B:10
Hose reel and extra hose		●
Cable reel		●
STANDARD EQUIPMENT		
HP hose (DN10)	6101766 [10 m]	1402072 [20 m]
Ergo 2000 gun with swivel	106403122	106403122
Ergo coupling	101119496	101119496
Water inlet coupling*	61369	61369
Hose reel		301001130
Tornado Plus lance without HP nozzle	106403010	106403010
Tornado Plus nozzle	101119747	101119747
ITEM NO.	301001731	107146212

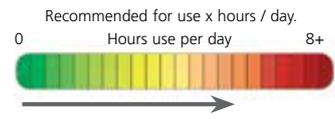
Tough, robust and effective tool for heavy duty use - requiring high water flow

The high power premium class NEPTUNE 8, combining high water flow and high pressure levels for routine cleaning in the agriculture, construction, and transport industries. The NEPTUNE 8 offers two user applications.

The EasyClean boiler reduces the difficult and timeconsuming task of cleaning the coil to the level of routine maintenance. In some regions, legislation requires that the boiler is completely serviced annually, even if there are no apparent faults. The EasyClean coil can be removed for cleaning in less than 6 minutes by a single technician.



NEPTUNE 8



TECHNICAL DATA

NEPTUNE 8-103

Pump pressure (bar/MPa)	180/18
Cleaning impact (kg/force)	10.3
Water flow Qmax/Qiec (l/h)	2000/1950
Max. inlet temperature (°C)	40
Pump (RPM)	1450
Water temperature (water/steam) (°C)	70-150
Fuel consumption, ΔT=45°C (kg/h)	9.1
Fuel tank (l)	35
Dimensions L x W x H (mm)	1190 x 702 x 987
Weight (kg)	230
Power consumption (kW)	12
Voltage/phase/frequency/current (V~/Hz/A)	400/3/50/21
El cable (m)	5
Nozzle size	1200
FEATURES	
Pistons / number of pistons	Ceramic / 3
Automatic start/stop	●
Detergent tank (l)	A:15 + B:10
STANDARD EQUIPMENT	
HP hose (DN10)	6101766 [10 m]
Ergo 2000 gun with swivel	106403122
Ergo coupling	101119496
Water inlet coupling*	61369
Tornado Plus lance without HP nozzle	106403010
Tornado Plus nozzle	101119758
ITEM NO.	301001786

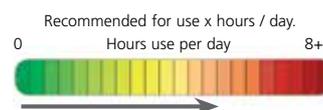
Ideal for use in areas where exhaust gases must be avoided

The NEPTUNE E is adapted for use in the food industry or hazardous areas and benefits from many of the same features as the NEPTUNE 5, including WDK dual chemical system, robust steel chassis and frame.

Three separate water tanks give precise temperature and fast heating.



NEPTUNE E



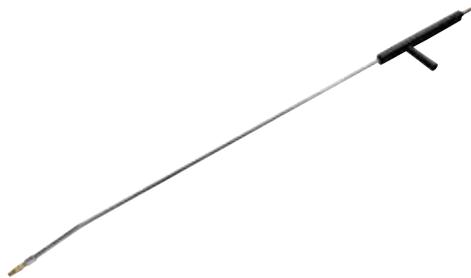
TECHNICAL DATA	NEPTUNE E 12	NEPTUNE E 24
Pump pressure (bar/MPa)	150/15	150/15
Cleaning impact (kg/force)	3.6	3.6
Water flow Qmax/Qiec (l/h)	750/720	750/720
Max. inlet temperature (°C)	70	70
Pump (RPM)	1450	1450
Max. temperature (°C)	30-80	30-80
Dimensions L x W x H (mm)	1190 x 685 x 987	1190 x 685 x 987
Weight (kg)	132	135
Voltage/phase/frequency/current (V~/Hz/A)	400-415/3/50/24.3/16	400/3/50/42/28
El cable (m)	5	5
Nozzle size	0435	0435
FEATURES		
Pistons / number of pistons	Ceramic / 3	Ceramic / 3
Automatic start/stop	●	●
Detergent tank (l)	A:35 + B:10	A:35 + B:10
STANDARD EQUIPMENT		
HP hose (DN8)	101405770 [10 m]	101405770 [10 m]
Ergo 2000 gun with swivel	106403122	106403122
Ergo coupling	101119496	101119496
Water inlet coupling	1602945	1602945
Universal Plus lance without HP nozzle	106403035	106403035
Tornado Plus nozzle	101119739	101119739
ITEM NO.	301002020	301002021

Increase the productivity of your pressure washer

Optimize your pressure washer to your specific cleaning task with our various accessories and attachments. Many cleaning applications can be solved quicker and easier with the right accessory. Certain special lances are designed to solving specific cleaning tasks – for example, reaching into high or hard-to-access places. Equipment and surfaces get damaged or need renewing. Graffiti, rust or just old paint needs removing. Nilfisk-ALTO's pressure washers and this extra equipment will ensure that your old or damaged surfaces are quickly as good as new!



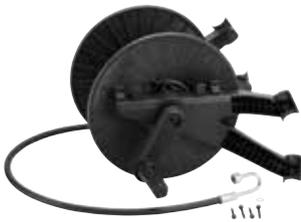
Simple Short Lance & Short Double Lance
These lances allow you to control the water flow and pressure when working close to the dirt.



Long reach lance
The Long Reach Lance is a special lance that projects a concentrated water stream to up to 3-4 meters from the nozzle.



Armex Softblasting
The Armex Softblasting kit makes it easy to remove paint, such as graffiti, without damaging the surface. It can also be applied when cleaning smoke damage or other dirt before repainting walls. is ideal for removing graffiti or rust from glass, metal or concrete and the renovation of more delicate surfaces - Ecological.



Hose Reel
Ease the storage of your hose and protect it against damage by using a hose reel kit.
Item number: 106403143



Sand Filter
An additional sand filter is a must in construction and agriculture to protect the pump against damage from sand and dirt particles. The Sand Filters are an essential piece of equipment to protect the pump from sand and dirt in the water. Sand Filters are a must when cleaning in sectors like construction and agriculture.



PowerSpeed Plus lance
The Powerspeed Plus lance offers multiple benefits and effects. The rotary jet increases cleaning performance over larger surfaces. The pressure adjustment ensures that you can clean with high pressure but also rinse and apply detergent with one lance



Drain cleaning kit
Unblocking drains, toilets and pipes is child's play with our easy to use drain cleaning kits



Sandblasting
The Softblasting Kit is ideal for removing graffiti or rust from wood, glass, metal or concrete and the renovation of more delicate surfaces or rusted surfaces- Ecological.



Water suction kit
The Water Suction Kit is ideal for emptying flooded basements, tanks or pools. It can extract stones up to 20 mm, sludge, dirt, sand, algae and sediments



Improve your efficiency with our Ergo 2000 Spray gun and Plus lances

We believe that a critical element of any pressure washer is the spray equipment – the lance, the spray gun and the nozzles. These contribute massively to the overall appreciation of the machine – but more importantly are critical in determining the level of tiredness and strain felt by the user and the overall cleaning efficiency of the unit. It is thus a key development area for us and one in which we have been setting new standards for many years. The Ergo 2000 equipment maintains this tradition.

Intensive studies and investigations into the use of the spray equipment have led to the latest updates of our spray gun and lances. The Ergo 2000 spray gun reaches new standards for low activation and holding forces of the trigger. Activation force is the force needed to pull the trigger. It can be especially felt for applications where the customer often makes stops and starts – such as vehicle cleaning.

Holding force is the force required to maintain the trigger open. This can be especially critical in applications where the customer is spraying for a long period between pauses – such as stable cleaning. An ideal solution will have both low activation and holding forces. The Ergo 2000 achieves a winning combination of low forces previously unseen on the market and sets new standards for comfort and ease of use.

Key features for the Ergo 2000 Spray Gun:

- Comfortable SoftGrip solution – rubber grip on trigger guard for more comfortable posture and cushioning of vibrations
- Famous quick coupling system for accessories – quicker to connect and disconnect, reducing downtime
- Direct access to parts for easy maintenance
- New unique VarioPress solution for an easy adjustment of pressure and water flow from the trigger

Efficiency and productivity with the Tornado Plus Nozzle

All our pressure washers are equipped with our patented Tornado Plus nozzle. The nozzle's special geometry provides a highly concentrated water jet with less dispersion than with other nozzles. As such, the cleaning effect and productivity are increased by up to 75%. Once again, we have shown that we can and will be at the forefront of development and innovation in the field of ergonomic design and easier cleaning.



Increase the productivity of your pressure washer - our awarded Ergo 2000 Spray Gun

Quick connection function for accessory changeover – reduced downtime and increased productivity

Innovative new VarioPress function can be activated without releasing the main trigger – ease of use. For pressure activated high pressure washers: Adjustment of water and pressure.

Overall ergonomic design conceived for best fit to arm and hand – reduces strain

SoftGrip for more comfortable fit to hand – reduces strain from vibrations

Easy disconnection of hose and access to internal parts – reduced downtime and easy service



Our range of lances have been updated with new design and SoftGrip function to further decrease user tiredness

- Universal Plus lance – with simple high pressure function
- FlexoPower Plus lance with high and low pressure adjustment at nozzle head and new improved low pressure nozzle
- Tornado Plus lance with 2 pipes and separate high and low pressure functions for optimal pressure cleaning and rinsing effect
- Turbohammer Plus lance – simple rotary jet lance
- Powerspeed Vario Plus lance – double pipe rotary jet lance with adjustable cleaning angle from 0 to 20° and both high pressure and low pressure functions.



Universal Plus



FlexoPower Plus



Tornado Plus



TurboHammer Plus



Powerspeed Vario Plus



The NEPTUNE line – constant hot water innovation

The Nilfisk-ALTO brand is owned by Nilfisk-Advance A/S, one of the world's leading manufacturers and suppliers of professional cleaning equipment.

With global company headquarters in Denmark, the company has developed professional cleaning equipment for over 100 years. Nilfisk-Advance has production facilities in North America, South America, Europe, and China, and has an extensive network of sales entities in 43 countries and is represented in more than 100 countries around the world.

The company currently has around 5400 employees worldwide, with global sales of approx. Euro 847 million in 2011.

We supply quality high pressure washers, vacuum cleaners and floor care equipment to agriculture, automotive and industrial companies, cleaning contractors and private consumers.

We are committed to the highest level of Corporate Responsibility. We develop cleaning solutions that provide you with cleaning efficiency while using less energy, less water and less detergent, so that you can focus on doing your job.

**green
meets
clean**

With the Nilfisk-ALTO brand we focus on innovation and growth. We believe in developing and main-taining long lasting relationships with our customers, suppliers and employees

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