



Flow Xtreme

FX 20" 250Lbs AG System w/ 1.5HP Pump



A. Safety Warnings

Read all Warnings and Cautions noted below. Failure to do so could result in serious or fatal injury.

- Prior to installation of this unit, carefully read and adhere to all CAUTION, ATTENTION, and ADVICE notices located throughout this manual. Failure to comply with these instructions can cause serious injury, death, or damage to the unit.
- RISK OF SUCTION ENTRAPMENT HAZARD, WHICH, IF NOT AVOIDED CAN RESULT IN SERIOUS INJURY OR DEATH. Do not block pump suction at the pump or in the pool as this can cause severe injury or death.
- Electrical wiring MUST be installed by trained professional and adhere to local code and regulations.
- Avoid electric shock. DO NOT USE power extension cords.
- Connect ONLY to a Ground-Fault Circuit Interrupter (GFCI) power outlet. Consult a qualified professional electrician for safe and proper installation of a qualified electrical outlet.
- Incorrectly installed equipment may fail, causing severe injuries or damage to the pump-filter system.
- Never submerge the filter and/or pump in water.
- Never place the pump or filter in your pool.
- Trapped air in the pump-filter system may cause the TANK COVER to be blown off which can result in death, serious injury, or damage to the pump-filter system. Ensure all air is out of system before operating.
- Never change the 7 Position Multi-Port Valve while the system is operating.
- ALWAYS unplug the system before changing the control valve.
- Install this product with sufficient safety margin from the pool to prevent children from using the system to access the pool.
- Never PLUG or UNPLUG this unit from an electrical source while standing in water.
- NEVER service this unit with electrical power cord connected.
- DO NOT operate the system while the pool is being used.
- KEEP CHILDREN AWAY from all electrical equipment.
- NEVER ALLOW CHILDREN TO OPERATE THIS EQUIPMENT.
- The Pool Owner should always exercise caution and common sense when utilizing their swimming pool and operating equipment.

B. General Information

This manual provides information relating to the installation, utilization and maintenance of our filtration system. We recommend that you read this manual in its entirety and keep it for future reference,

The pump included with the filtration system is a horizontal, self-priming centrifugal pump. For the pump to function correctly, the water temperature must not exceed 35°C/95°F. The materials used in the pump have undergone stringent hydraulic testing and electrical inspections.

The filter tank included in the filtration system consists of high-grade polypropylene (PP). It is manufactured as a single unit (absolutely corrosion resistant and resistant to

commercially available swimming pool chemicals). (Prerequisite: Compliance with the standard recommended specifications for the pH- and chlorine value). It is equipped with a tank drainage system, pressure gauge, built-in container components, e.g. bottom laterals for even water distribution. The filter tank comes ready to attach and is supplied with a user-friendly 7 Position Multi-Port Valve attached to the tank cover, an approved filter pump with hair and lint basket, and a plastic base for ready on- site mounting.

Read this manual carefully before installation. The filtration system and pump must be installed in accordance with all federal and local codes and standards in effect for the area of installation.

We decline all responsibility for the consequences of failure to comply with the installation instructions. We recommend that you comply with the power source instructions to avoid overloading the pump motor and/or electric shock.

This filtration system is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

Safety notes and information boxes should always be observed.

C. Safety Notes

Your filter pump was constructed and tested and left the manufacturing plant in technically operational condition. In order to maintain this condition and ensure safe operation, the user should observe the notes and product information contained in this technical manual. If there is any indication that safe operation is no longer possible, the device is to be disconnected from the power supply and secured against accidental use.

This is the case when:

- The device has visible damage.
- The device no longer appears functional.
- After long periods of storage in poor conditions.

If the power cord or other parts of this equipment are damaged, they have to be replaced by manufacturer or its service agent or a similarly qualified person in order to avoid danger.

D. Damage during delivery

Your filter system has been carefully and professionally packed for delivery. Please check to ensure that the package is undamaged and that all parts are in the box. If you purchased this product on order and the product was shipped to you, ensure that delivery is complete. Damage to product as a result of shipping is not the responsibility of the supplier and must be immediately reported to the shipper. The shipper assumes the liability for damages during delivery, the supplier is not responsible for it.

E. Implied Warranty

The manufacturer warrants safe operation and reliability only under the following conditions:

- The filter system is installed and operated according to the assembly and operating instructions.

- Only original replacement parts are used for repairs or replacements (consumable & expendable parts do not fall under the warranty).

Expendable parts that do not fall under the warranty include:

- All O-rings
- Pressure gauge
- Mechanical seal, complete
- Hoses and metal hose clamps

F. Resultant Damages

We cannot be responsible for damages to the product if the product is not used in accordance with the instructions provided.

G. Technical Data and Specifications

- The recommended filter run time is twice a day for 4 to 5 hours; regular backwashing time is 2-3 minutes at least once a week, and floor vacuum cleaning as needed are the basic pump requirement for maintaining clean swimming pool water!
- The major components for this model are: (Confirm you have all these components before starting installation)

The Tank lid with 7-way valve, filter pump, filter tank, 1 1/4"-1 1/2" hose connectors and base plate.

	NE4525
Flow rate:	6950 GPH
MAX Operating Pressure	22 psi
Related Voltage:	110V AC 60Hz
Power	1.5 HP
Amount of Sand:	Max 250lbs
Pool size:	Max 28000 US gal

H. Unpacking your filter system

Carefully remove the product and all component parts from the box. Cross reference all parts in the box with the parts list reference chart to make certain all parts are present before beginning assembly.

NOTE: Some parts may be located within the filter tank. To access these parts, you must remove the tank cover.

Refer to *page 12 for complete EXPLODED VIEW PARTS DIAGRAMS.

I. Power source instructions

1. The Above Ground filter pump system you have purchased is equipped with a standard electrical cord and plug which should only be connected to a power outlet protected by a 30 Amp Ground-Fault-Circuit-Interrupter (GFCI) that has been installed by a professional electrician and adheres to local codes and regulations.
2. To avoid electric shock, power cord extensions should not be used.

J. Positioning your filter system

- For the operation of this filter system with Above Ground pools, you need a skimmer installed in your pool. Either an integrated skimmer (built into the pool wall) or a suspended skimmer (attachment to the pool wall).
- The installation area must allow an adequate safety margin to the pool wall.
- We recommend putting the filter system on a concrete slab or similar. Be sure the installation is level.
- Additional installation accessories such as hoses, hoses clamps, and filter sand (not included) are available from your pool dealer.

K. Filter-Pump Assembly

1. Filter pump & Base Plate assembly

- a. Secure water pump to the base plate with the provided pump mounting hardware. Orient as shown. (Figure1)
 - b. Place the base plate and pump in the location where the Pump Filter System will be located for normal operation and within reach of the pool filter and return hoses but with a sufficient safety margin from the edge of the pool. Attach the filter tank to the base plate as shown. The feet on the bottom of the filter tank fit within the holes provided on the base plate (Figure2-3).
 - c. Filling sand chamber with sand (Figure 4)
 - Position the filter pump assembly to the location you have dedicated for its operation. NOTE: Do this before you fill the chamber with sand as the unit will become heavy and difficult to move around.
 - Check to ensure that the bottom strainer is correctly positioned.
 - Check to ensure that the tank separator plate is seated properly.
 - Fill the sand chamber half full with water.
 - Pour #20 Pool Filter Grade silica sand into the SAND FILTER CHAMBER being careful not to allow any sand to enter the FILTERED WATER CHAMBER. NE4525 requires 250lbs of #20 Pool Filter Sand. NOTE: Installation of sand other than #20 Pool Filter Sand will NOT function properly, and may void your warranty.
 - d. Secure the lid/valve to the filter tank (Figure 5)
 - Ensure the main tank seal around the top of the filter tank is in good condition and securely seated in the groove. Be sure groove is free of sand.
 - Carefully place the tank cover onto the filter tank. The tank cover should be oriented so that the notch on the cover is aligned with the matching tab on the filter tank-this ensures proper alignment.
 - Secure tank cover and filter tank with the tank cover lock ring assembly and tighten with the knob and bolt.
- ### **2. Pump hose connections (Figure 6-8)**
- a. Attach the 1¼"-1½" hose connector & collar onto the intake port of the filter pump. Ensure that O-ring is installed between the port and the connector.
 - b. Skimmers: Connect hose from pool skimmer to the intake fitting on the filter pump. Secure with a hose clamp.
 - c. Pressure line: Connect the pre-assembled hard PVC pipe from the upper discharge point on the top of the filter pump to the connector with designation

“PUMP” on the 7-way valve.

- d. Return line: Connect flexible hose or hard PVC pipe from the 7-way valve port with the designation “RETURN” to the connection for the pool location. Secure all connections with hose clamps or glue PVC pipe connections.

If using flexible hose: Lightly lubricate the pool return port on the tank cover with synthetic PTFE lubricant, available at any pool supply store or hardware store.

NOTE: Be careful not to secure return hose to the waste/backwash port.

Secure with a hose clamp.

- e. Backwash: Connect to “WASTE” using backwash hoses and clamps or glued PVC pipe. Backwash hose, clamps or PVC pipe are available from your local swimming pool retail professional.

- f. Connecting the filter system

This Pool filter system is designed to connect to pools with standard 1½” diameter hose connectors. If your pool has a hose connector size and/or type different than described here, you may need to purchase an adapter at your local pool supply store or hardware retailer.

Before you begin to connect hoses to the filter and pump, make certain that no water can flow through the intake or return hoses connected to the pool. Some pools have shut off valves in their intake and return ports, others do not. If you do not have a shut off valve, block the ports with a removable plug to prevent water from passing into and through the hoses.

These instructions assume that the pool is already assembled with hoses attached to the water intake and return ports on the pool.

L. Filter system start up

It is important that you read and follow the instructions on proper power supply sources.

Once the filter system has been properly assembled, the tank filled with sand and the hoses connected as described, you may begin filtration. However, we recommend that you first clean and prepare the new sand. Cleaning the sand prior to filtering your pool will remove most of the dust and tiny sand particles that may exist in the sand. If you move straight to filtering, these particles will end up in your pool. To clean the sand, please follow the instructions below.

Do not turn on the system until advised to do so.

Note: Do not back wash on initial installation if filter media is Cotton Tails. Follow the use instructions provided with Cotton Tails.

1. Make certain the pump is not plugged into a power supply.
2. Start with the multi-position valve in the 5 Closed position.
3. If you haven’t done so already, fill your pool with water. Ensure that the water level is at least 1”-2” above the top of the hose intake (Skimmer) and return ports in the pool.
4. Release the shut off valve at the intake port (Skimmer) in the pool. If you plugged the intake port (Skimmer), remove the plug to allow the water to flow into the intake hose.
5. With the filter-pump system installed in a location level lower than your pool’s water level-water will automatically flow into the pump-filter system.
6. Allow the filter tank to fill with water.
7. Check for leaks and make any adjustments needed to stop leaks found. It may be necessary to use "Teflon" tape, available at any plumbing or hardware store, wrapped around the hose fitting threads.

8. Follow the backwash process described below:

- Turn off the Motor/Pump at the Power Source.
- Attach backwash hose (not included) to backwash port.
- Place the Multi-Port Valve in the “4 – Backwash” position.
- Turn on the Pump
- Run filter in BACKWASH mode until discharge water is clear.
- Turn off the Motor/Pump at the Power Source.
- Place the Multi-Port Valve in the “2 – RINSE” position.
- Turn on the Pump.
- Allow filter to run for 60 seconds to remove any remaining sand or debris residue from pump and valve.
- Turn off the Pump at the Power Source.
- Place the Multi-Port Valve in the “1 – Filtration” position.
- Turn on the Pump.
- Your filtration system is running and ready for further operation.

M. Filter Valve Position Operation

Setting	Complete water flow/function
Filter Position 1 Picture 9	<u>Function:</u> Regular pool filter action & vacuuming. This is the setting the filter will be set to most of the time. In this position, water is directed through the top of the filter where it compresses and flattens down the sand. Contaminations are trapped by the sand as water makes it way to the bottom strainer, out of the filter and back to the pool.
Rinse Position 2 Picture 10	<u>Function:</u> Use after backwashing to clean the filter bed. This should always be done immediately after backwashing, new sand addition or filter start-up. In this position, water is directed to the top of the tank where it flushes the valve while sending water out the waste line.
Circulation Position 3 Picture 11	<u>Function:</u> Circulate water after chemical treatment. This position is used during certain pool cleanups and chemical treatments when you don't want the water contaminating the sand. In this position, water is only directed through the valve back to the pool and does not filter through the sand.
Backwash Position 4 Picture 12	<u>Function:</u> Clean filter of captured debris. This is the position needed to clean the filter & the sand. You'll know it is time to backwash when the pressure gauge shows more than 10 PSI above what it normally reads when the filter is clean. In this position, water is directed through the bottom strainer, reversing the flow through the tank. This causes the sand to separate and lift while releasing trapped debris out the waste port and backwash hose.
Closed	<u>Function:</u> Cleaning the hair and lint strainer. This position stops the flow of water into the pump and filter.

Position 5	CAUTION: Do not run pump with valve in this position.
Picture 13	
Purge/Drain	<u>Function:</u> Bypass the filter. This position is ideal for vacuuming pools with large amounts of debris or after an algae treatment. In this position, water bypassed the filter and sends all the water and contaminants out the waste line.
Position 6	
Picture 14	
Winterize	<u>Function:</u> Winterizing and storage. In this position, the valve lever is between positions which removes pressure from internal valve components for winter (off-season) storage.
Position 7	CAUTION: Do not run pump with valve in this position.
Picture 15	

N. Manual Vacuuming the Pool

1. For Above Ground Pools

Vacuuming is done in valve position #1, Filter, on the valve. The pool vacuum is connected by use of a pool vacuum hose and vacuum plate directly into the skimmer. Do not turn on the pump until the pool vacuum is connected and ready for operation.

Important: The pool vacuum hose must be fully filled with water so that the pump does not lose prime and fill the tank with air.

P. Winterize the system in cold weather climates

- Unplug the pump from the power source.
- Close the shut off valves or block the flow of water at the pool inlet and return ports.
- Disconnect the filtration system from the pool, drain the tank and hoses.
- Place the handle on the central valve in position 7- 'Winterize' to relieve the tension on the spring and internal valve components.
- Store the filter system in a location protected from frost and severely cold temperatures. In a garage or insulated storage shed is recommended.

Q. Important Do's & Don'ts

DO'S:

- Be aware and make note of the filter pressure when the sand is clean. Backwash when you see an increase of 10 PSI on the pressure gauge.
- Backwash long enough to clean the sand bed. Let the system backwash until the water leaving the waste line is clear. Note that backwashing can remove 50 – 300 gal of water from your pool so pay attention. Also, be aware of local codes regarding pool water disposal as some communities have rules or codes regarding pool water drainage.
- Protect bottom strainer while replacing or adding sand. Fill the tank with 8" – 12" (about 1/8 of tank height) of water. Cover the water chamber to avoid getting sand inside.

- Start filter in Backwash mode for about 3 minutes and then for about 1 minute in the rinse mode before initial startup or after adding new sand. By doing this you can avoid blowing small particles and impurities from the new sand into your pool. If some debris from new sand does go into your pool, vacuum it with the system in purge mode, otherwise you may send it back to the pool.

DON'TS:

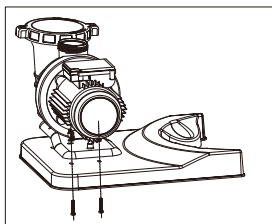
- Move valve handle while the pump is running. It will damage the valve and possibly other equipment as well.
- Backwash excessively. Sand filters operate more efficiently during mid-cycle. Some level of debris in the sand bed actually helps filtration and makes the filter more effective. Too much backwashing will reduce efficiency.
- Vacuum the pool in backwash mode. You can plug up the strainer at the bottom of the filter which will result in inefficient operation. Plus you may have to remove all of the sand to get it unclogged.
- Let filtration system run dry (without water)! If your pump runs dry too long non-warranty damage to the pump may occur. Damage to the pump caused by dry running is NOT covered by the warranty.

R. Trouble Shooting

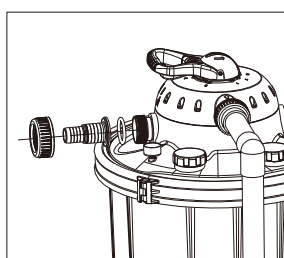
Malfunction	Cause	Solution
Pressure gauge has reading more than 10 PSI over the normal filtering pressure	Dirty filter bed	Backwash the filter (position 4)
Pressure is too low	Hair and lint strainer basket is dirty; Pump gets too little water	Clean the hair and lint strainer; check the suction line and the water level
Air in the pump	Poor seal on the intake side of pump	Tighten hose clamps and connecting fittings
Leaking filter	Seal Defective	Check the seal, replace if needed
Pump does not run	Not plugged in	Check the socket and power cord
	G.F.C.I./ or main circuit breaker tripped	Switch on the breaker. If it is immediately tripped again, there may be a defect in pump, pump controls, GFCI or the breaker
	Pump motor defective	Have the electrical system checked by a licensed electrical professional or replace motor or entire pump
Sand in Pool	If the sand is newly replaced, the undersized grains are still present	Backwash several times until the backwash water is clear (position 4)
	Sand in Central Valve (from backwash)	Purge into drainpipe for 30 seconds (position 6)
	Filter bottom strainer is damaged	Replace the filter bottom strainer
Air in system		Loosen, but do not re-move, one of the clear view port covers on the top of the filter tank to allow any trapped air to escape. Tighten the cover once all of the air has escaped.

S. Installation and Operation Illustration Figures

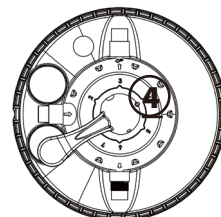
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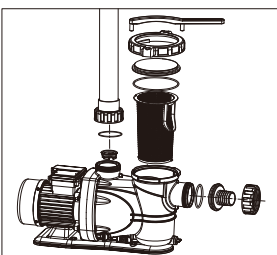
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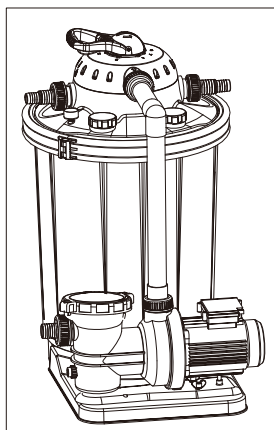
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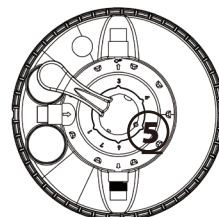
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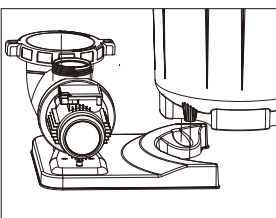
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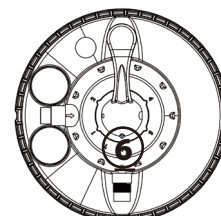
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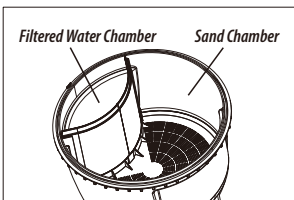
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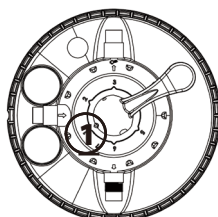
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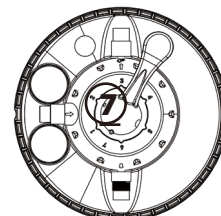
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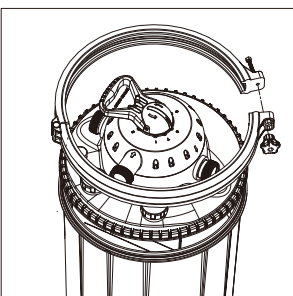
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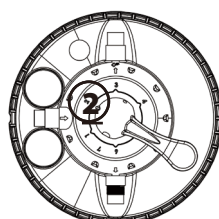
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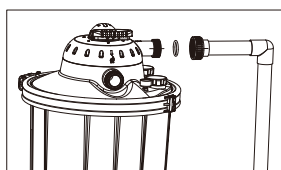
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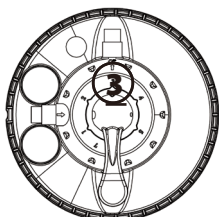
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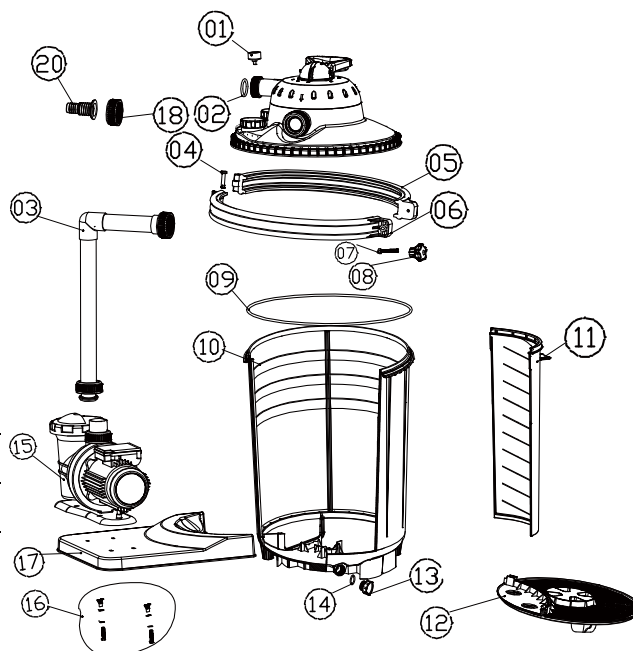
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T. Parts Breakdown

FX 20" AG SYSTEM NE4525 PARTS BREAKDOWN

Key	Part Name	Qty	Manf. No.	B.W. No.	For Model#
1	PRESSURE GAUGE	1	35001	NEP4103	NE4525
2	O-RING	3	35002	NEP4104	NE4525
3	CONNECTOR PIPE KIT	1	35003	NEP4105	NE4525
4	CLAMP PIN	1	35004	NEP4106	NE4525
5	LEFT CLAMP RING	1	35005	NEP4107	NE4525
6	RIGHT CLAMP RING	1	35006	NEP4108	NE4525
7	M8*80 BOLT	1	35007	NEP4109	NE4525
8	PLASTIC NUT	1	35008	NEP4110	NE4525
9	BIG O-RING	1	35009	NEP4111	NE4525
10	TANK	1	35010	NEP4112	NE4525
11	FLASH BOARD	1	35011	NEP4113	NE4525
12	FILTER PLATE	1	35012	NEP4114	NE4525
13	DRAIN VALVE	1	35013	NEP4115	NE4525
14	O-RING	1	35014	NEP4116	NE4525
15	WATER PUMP	1	35015	NEP4117	NE4525
16	Pump Bolt Wing Nut	2	P00175	NEP4261	NE4525
	PUMP MOUNTING HARDWARE				
	Pump Bolt Flat Washer	2	P00176	NEP4262	NE4525
	PUMP MOUNTING HARDWARE				
	Pump Bolt Lock Washer	2	P00177	NEP4263	NE4525
	PUMP MOUNTING HARDWARE				
16	Pump Bolt Nut	2	P00178	NEP4264	NE4525
	PUMP MOUNTING HARDWARE				
17	BASE PLATE	1	35020	NEP4118	NE4525
18	NUT	2	35021	NEP4119	NE4525
20	ADAPTER	2	35023	NEP4121	NE4525



FX PRIME SINGLE SPEED NE4524, NEP4271 PUMP SERIES PARTS BREAKDOWN

Key	Part Name	Qty	Manf. No.	B.W. No.	For Model#
1	WATER PUMP	1	SPS31600	NEP4272	NE4524 & NEP4271
2	VALUE BODY	1	3029S3	NEP4128	NE4524 & NEP4271
3	CONNECTOR O-RING	1	3030S3	NEP4129	NE4524 & NEP4271
4	PUMP CONNECTOR	2	3031S3	NEP4130	NE4524 & NEP4271
5	PUMP CONNECTOR NUT	2	3032S3	NEP4131	NE4524 & NEP4271
6	STRAINER BASKET	1	3033S3	NEP4132	NE4524 & NEP4271
7	O-SEALING RING	1	3034S3	NEP4133	NE4524 & NEP4271
8	TRANSPARENT COVER	1	3035S3	NEP4134	NE4524 & NEP4271
9	CIRCUMGYRATE COVER	1	3036S3	NEP4135	NE4524 & NEP4271
10	DRAIN VALVE O-RING	2	3037S3	NEP4136	NE4524 & NEP4271
11	PUMP DRAIN VALVE	2	3038S3	NEP4137	NE4524 & NEP4271
12	TRANSPARENT COVER CLOSING	1	3039S3		NE4524 & NEP4271

