

BASKET FILTERS SERIES FS

INSTRUCTIONS MANUAL

WARNING!

The equipment must be used only for the utilization for which they have been designed, as shown in the technical documentation.

Read carefully this leaflet until the end before starting any operation.

Proceed strictly according to all directions included in this manual.

Basket filters series FS are designed to treat raw water supplied from municipalities or from well.

ANY OTHER APPLICATIONS OF THE EQUIPMENT DIFFERENT THAN THE MENTIONED ONES IS MADE UNDER THE ONLY RESPONSIBILITY OF THE USER.

For any assistance concerning the installations, maintenance or utilization of the equipment apply the NOBEL Service Center closest to you or directly:

**NOBEL S.r.l. via Monfalcone 8 - 20132 Milano ITALY
tel. +39 02 2827968 fax +39 02 2610839**

INDEX

1. Safety.....	3
1.1. General	3
1.2. How to displace the unit.....	3
1.3. Hydraulics	3
1.4. How to store and delivery.....	3
2. Principles of working.....	3
3. Technical characteristics	4
3.1. Raw water	4
3.2. General characteristics	4
3.3. Special characteristics for models.....	4
3.4. Weight & dimensions	4
4. Installation	5
4.1. Room & climate conditions.....	5
4.2. How to remove packaging and displace the filter.....	5
4.3. Placing	5
4.4. Hydraulic connections	5
5. Service & maintenance.....	6
5.1. How to clean and replace the basket.....	6
5.2. Disposal	6
6. Main components	6

1. Safety

1.1. General

Nobel plants are designed according to latest technology and carefully manufactured using first class material .

Installations, starting-up and current or special maintenance must be handled by skilled operators only.

1.2. How to displace the unit

Particular care and attention should be put in during moving and displacing of heavy items, in order to avoid injuries to persons or damage properties. (see § 0 pag. 4).

1.3. Hydraulics

All operations must be performed by and/or under direct supervision of skilled and authorized operators, using proper tools and personal protection devices if required (CE marked).

Before any operation of taking out pipes or part of hydraulic system, it is required, first, to release the pressure inside and empty the part of the system.

1.4. How to store and delivery

	t = °C	t = °F	humidity rel.	notes
• closed rooms	5÷45	41÷113	5÷95% without condensate	
• open space	5÷45	41÷113	5÷95% without condensate	protect from sun-light and rain.
• transport	5÷45	41÷113	5÷95% without condensate	protect from sun-light and rain.

2. Principles of working

Filters series FS are suitable to be used for the water treatment in residential and industrial applications. They can be safely used for drinking water, since all materials are suitable to get in touch with food stuff.

Filtration is a mechanical process allowing to remove from water suspended solids even of small size.

The filtering element is a basket made with a net of stainless steel AISI304 (50µ) welded on a frame made of same material. The filtration rate of the net is 50 µm.

The max allowable pressure drop across the filter is **0.8 bar (80kPa)**, after that the cleaning or the replacing of the filtering basket is required (see service & maintenance, page 6.)

This kind of filter **IS NOT** suitable to remove colloids (i.e. sludge, silt, clay), since these substances cause a very quick clogging of the basket and damage it.

3. Technical characteristics

3.1. Raw water

• Inlet water temperature (min÷max)	°C (°F)	5÷45 (41÷104)
• Inlet water pressure (min÷max)	bar (kPa)	1÷10 (100÷1000)

3.2. General characteristics

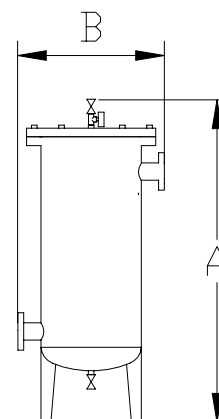
• Filtration	µm	50
• Δp	bar (kPa)	0.2 (20)
• max allowable Δp	bar (kPa)	0.8 (80)

3.3. Special characteristics for models

MODEL	connections	Flow rate m³/h	
	E/U Ø	normal	max
FS200	2-1/2"	20	30
FS300	DN80	30	40
FS400	DN100	40	50

3.4. Weight & dimensions

MODEL	WEIGHT			DIMENSIONS	
	Total	service	basket	A	B
	approx. kg	approx. kg	kg	approx. mm	approx. mm
FS200	42	70	1.5	1150	380
FS300	65	120	2	1400	450
FS400	80	160	3	1450	550



4. Installation

4.1. Room & climate conditions

- room temperature 5÷45°C (41÷113°F)
- humidity rel. 5÷95 % without condensate
- sun-light protection required
- rain, snow etc. protection required

4.2. How to remove packaging and displace the filter

The filter is packed inside a wooden crate.

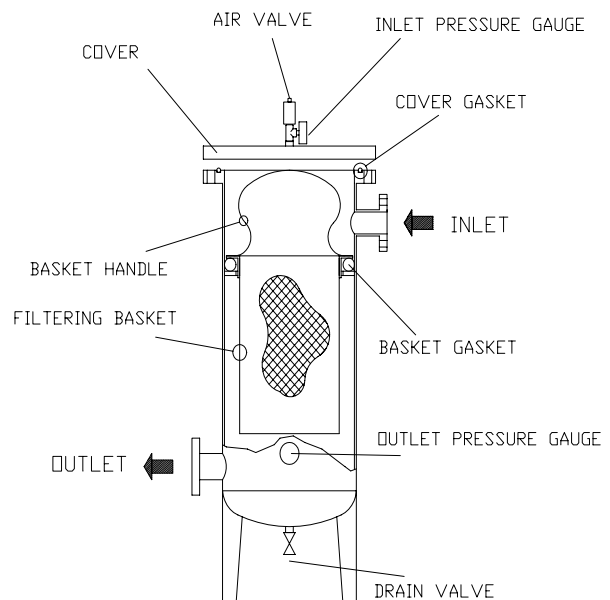
Open the crate removing, first, the side cover, then withdraw carefully the contents. The filtering basket is already mounted inside the filter; the pressure gauges are packed in a carton box, inside the crate as well.

Keep the cards and everything contained inside the packaging.

The filter can be displaced by hand or using suitable tools according to the weight. In displacing the filter, take care to avoid any damage to the external painting of the filter, the thread connections, if any, and the pressure gauges.

4.3. Placing

- Place the filter on a perfectly flat surface. Allow a free room of almost 1 meter over the filter, for withdrawing of the basket.
- Punt in the pressure gauges as shown on drawing.



4.4. Hydraulic connections

- Connect the inlet and outlet connections of the filters to the pipe of raw water; it is recommended to instal the filter with a by-pass line, for any maintenace operation without shut off the water supply.

5. Service & maintenance

The filters are equipments designed to filter raw water supplied from municipalities or from well.

ANY OTHER APPLICATIONS OF THE EQUIPMENT DIFFERENT THAN THE MENTIONED ONES IS MADE UNDER THE ONLY RESPONSIBILITY OF THE USER.

5.1. How to clean and replace the basket

Before any operations, close the shut-off valves mounted upstream and downstream of the filter. Empty the filter by opening the drain valve on bottom side.

To withdraw the basket, unscrew the bolts on the cover of the housing and open the filter. Take care to avoid any damage to the gaskets of the cover and the basket.

Withdraw the basket by its handle, rinse it carefully by using a brush under running water.

Although the filtering net is made in stainless steel, it is very thin; hence take care in handling and brushing it to avoid any damage.

Whether the basket is damaged, (i.e. after many cleaning), it is required to replace it, as follows.

Fit the basket inside the housing, check that the gasket of the basket (smooth type one) and the cover are not damaged, perfectly clean and placed.

Put on the cover again, screw on the bolts and close the bottom drain valve.

Open the shut off valves upstream and downstream of the filter, release air from the filter by opening the air valve.

CAUTION : It is recommended to clean the filter **BEFORE** that the pressure drop across the filter reaches the value of **0.8 bar** (80 kPa). Higher differential pressure cause the

5.2. Disposal

In case of disposal of the unit or parts of it, it must be made according to local laws concerning the waste of the materials.

6. Main components

Quantity	DESCRIPTION
1	Housing made in coated steel (see table DIMENSIONS)
1	Filtering basket made in AISI304 filtration 50µ
2	Pressure gauges 0-10 bar, rear connection 1/4"

FILTER	Basket (mod)
FS200	CSF200
FS300	CSF300
FS400	CSF400