

# F78TS

Reverse rinsing fine filter with flanges



## APPLICATION

F78TS flanged reverse rinsing filters are for installations with high water demand. They can be used in large residential buildings, for central water supply and in commercial or industrial applications.

F78TS flanged filters have the same highly efficient reverse rinsing filtering system as the range of household fine filters. The F78TS can be retrofitted with the Z11AS fully automatic reverse rinsing actuator and the DDS76 differential pressure switch.

The fine filter prevents the ingress of foreign bodies, for example rust particles, strands of hemp and grains of sand and thus reduces the probability of corrosion.

## APPROVALS

- DVGW (for connection sizes DN65-DN100 with 100 µm mesh size)
- WRAS

## SPECIAL FEATURES

- Filtered water supplied even during reverse rinsing
- Filter insert fully replaceable
- Patented reverse rinsing system - fast and thorough cleaning of the filter
- Fully automatic reverse rinsing with retrofittable automatic reverse rinsing actuator
- Differential pressure switch can be retrofitted
- Memory ring indicates when next manual reverse rinsing is due
- Polyamide coating gives high level of corrosion protection
- Forced flow provides optimal water exchange in the filter bowl
- All materials are ACS approved
- All materials are KTW approved
- DM174 conform
- Discharge of the reverse rinsed water according EN 1717



## TECHNICAL DATA

<b>Media</b>	
Medium:	Drinking water
<b>Connections/Sizes</b>	
Flange connection	PN16 acc. to EN 1092-2
Single filter:	DN65 - DN100 DN125 with 2 extension flanges EXF125-A
2 filters parallel:	2 x DN80, 2 x DN100
<b>Pressure values</b>	
Max. operating pressure:	1.5 - 16.0 bar
Nominal pressure:	PN16
<b>Operating temperatures</b>	
Max. operating temperature medium:	40 °C 65 °C (max. operating pressure 6.0 bar)
<b>Specifications</b>	
Installation position:	Horizontal, with filter bowl downwards

Note: The filter is constructed for drinking water installations. In case of a process water application the filter has to be proven individually.

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## CONSTRUCTION

Overview	Components	Materials	
	<b>1</b>	2 pressure gauges (1x inlet, 1x outlet including memory indicator)	Metal
	<b>2</b>	Housing with pressure gauge ports (1x inlet, 2x outlet)	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
	<b>3</b>	Filter bowl	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
	<b>4</b>	Ball valve with lever and drain funnel	Ball Valve body: Brass chrome plated Ball: Brass chrome plated Drain adapter: Plastic
	<b>5</b>	Extension flanges for the connection size DN125	Ductile Cast Iron
<b>Not depicted components</b>			
	Inner parts	Stainless steel, red bronze, brass and plastic	
	Fine filter	Stainless steel	

\* Extension flanges for the connection size DN125: F78TS DN125 = 1 pcs.F78TS-100FA/FB/FC/FD + 2 pcs. EXF125-A.  
The extension flanges have to be ordered separately.

## METHOD OF OPERATION

The filter insert is divided into two parts. In the „filtering“ position, only the lower, larger section is used for filtering. The small upper section does not come in contact with unfiltered water. An oscillating flap integrated in the sieve prevents the deposition of dirt particles on the upper part of the filter. When the ball valve is opened for reverse rinsing, then the whole filter insert is pushed downwards until the water supply to the outer side of the main filter is stopped. Simultaneously, the water flow is opened to the upper part of the filter. The water needed for cleaning the filter passes through the upper filter section, then the rotating impeller with jets and the main filter from inside to outside, i.e. the filter is reverse rinsed with filtered water. The filter automatically switches back to the operating position when the ball valve is closed again.

## TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	5 °C
Max. ambient temperature:	55 °C
Min. ambient relative humidity:	25 % *
Max. ambient relative humidity:	85 % *

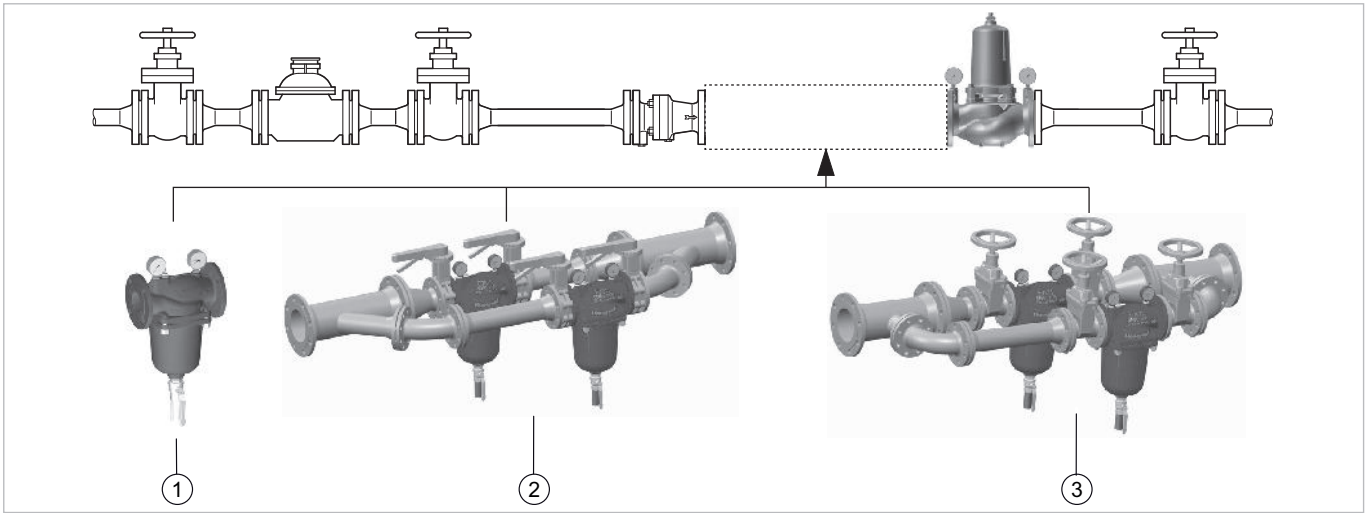
\*non condensing

## INSTALLATION GUIDELINES

### Setup requirements

- Install in horizontal pipework with filter bowl downwards
  - This position ensures optimum filter efficiency
- Install shut-off valves
- These filters are armatures which need to be maintained regularly
- Ensure good access
  - Pressure gauge can be read off easily
  - Simplifies maintenance and inspection
- The installation location should be protected against frost
- Related to the EN 806-2 it is recommended to install the filter immediately after the water meter
- In order to avoid flooding, it is recommended to arrange a permanent, professionally dimensioned wastewater connection

**Installation Example**



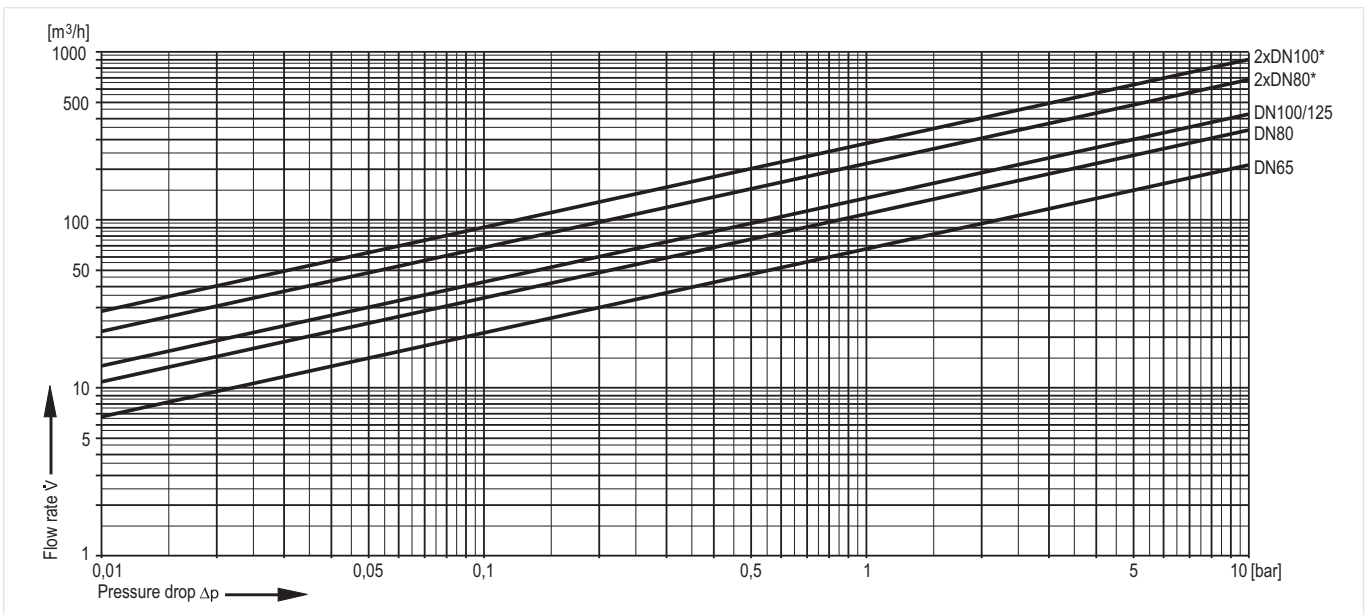
- 1 Single filter
- 2 2 filters parallel 45°
- 3 2 filters parallel 90°

**TECHNICAL CHARACTERISTICS**

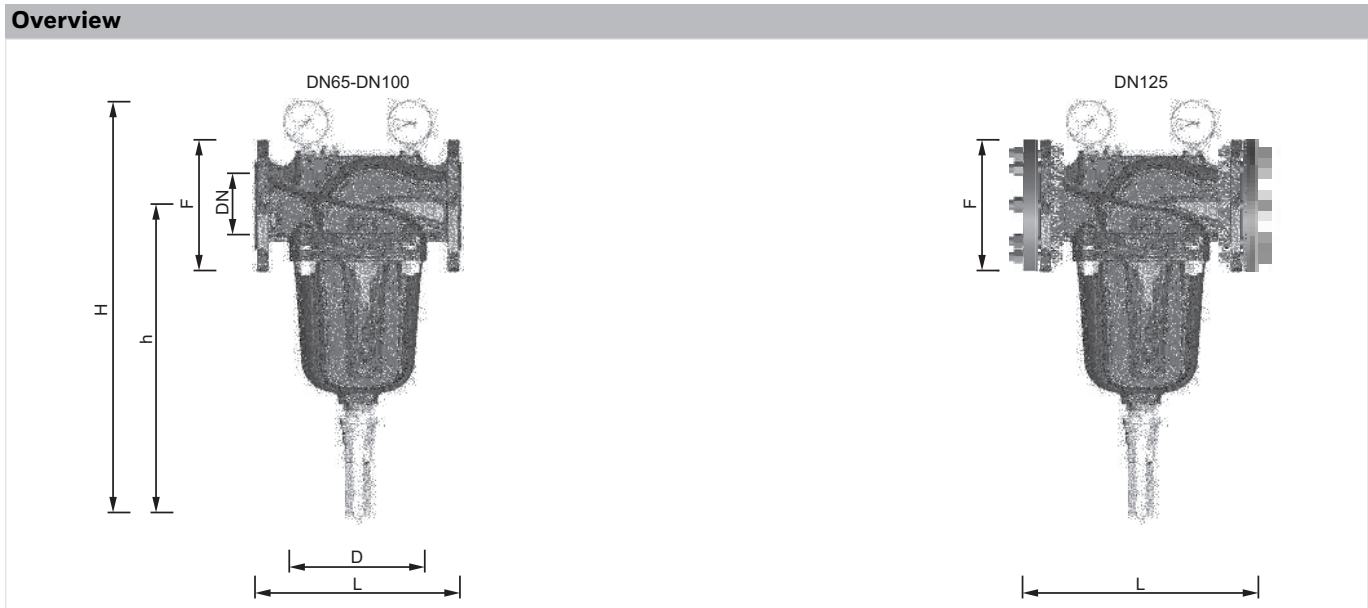
**kvs-Values**

Connection sizes:	Single filter				2 filters parallel	
	65	80	100	125	80	100
k <sub>VS</sub> -value (m <sup>3</sup> /h):	69	113	145	145	226	290

**Pressure drop characteristics**



## DIMENSIONS



Parameter	Values						
	DN	Single filter*				2 filters parallel	
		65	80	100	125	80	100
Nominal sizes:	DN						
Weight:	kg	25	35	43	65	n.a	n.a
Dimensions DN65-DN100:	L	290	310	350	420	n.a	n.a
	H	581	665	767	767	n.a	n.a
	h	434	508	610	610	n.a	n.a
	D	193	230	247	247	n.a	n.a
	F	185	200	220	250	n.a	n.a
Flow value at $\Delta p=0.2$ bar:	m <sup>3</sup> /h	30	48	60	60	96	120
Flow value at $\Delta p=0.5$ bar:	m <sup>3</sup> /h	48	78	100	100	156	200
DVGW registration number:		NW-9301CR0186			-	-	-

Note: All dimensions in mm unless stated otherwise.

\* DN125 with 2 pcs. extension flanges (2 x EXF125-A to be ordered separately)

## ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

### Options

The filter is available in the following sizes: DN65, DN80 and DN100.

- standard
- not available




		F78TS-...FA	F78TS-...FB	F78TS-...FC	F78TS-...FD
Connection type:	Filter mesh size 100 $\mu\text{m}$	•	-	-	-
	Filter mesh size 20 $\mu\text{m}$	-	•	-	-
	Filter mesh size 50 $\mu\text{m}$	-	-	•	-
	Filter mesh size 200 $\mu\text{m}$	-	-	-	•

Note: ... = space holder for connection size

Note: Ordering number example for DN65 and type FA valve: F78TS-65FA

Note: Filters with other mesh widths available on request

## Accessories

	Description	Dimension	Part No.
	<b>Z11AS Automatic reverse rinsing actuator</b>		
	For automatic reverse rinsing of the filter at presettable intervals		
	230 V, 50/60 Hz, 10 W with moulded Schuko electrical plug		Z11AS-1A
	24 V, 50/60 Hz, 10 W without electrical plug		Z11AS-1B
	230 V, 50/60 Hz, 10 W with moulded Type 12 electrical plug for Switzerland		Z11AS-1Z
	<b>DDS76 Differential pressure switch</b>		
		DN65/80/100	DDS76-1
	<b>EXF125-A Extension flange DN125</b>		
	Adapter flanges DN100 to DN125 Ductile iron, PN16 acc. ISO 7005-2 and EN1092-2. Overall length with adapter flanges (without bolts) DN125 L=416mm, DVGW approved, including bolts, nuts and the seal disc.		
			EXF125-A

**Spare Parts**

F78TS Fine Filters with Flanges from 2015 onwards

Overview	Description	Dimension	Part No.
	<b>1 Filter insert complete</b>		
	Filter mesh 100 µm	DN65	AF78TS-065A
	Filter mesh 100 µm	DN80	AF78TS-080A
	Filter mesh 100 µm	DN100	AF78TS-100A
	Filter mesh 50 µm	DN65	AF78TS-065C
	Filter mesh 50 µm	DN80	AF78TS-080C
	Filter mesh 50 µm	DN100	AF78TS-100C
	Filter mesh 200 µm	DN65	AF78TS-065D
	Filter mesh 200 µm	DN80	AF78TS-080D
	Filter mesh 200 µm	DN100	AF78TS-100D
	<b>2 Replacement sieve only</b>		
	Filter mesh 100 µm	DN65	ES78TS-065A
	Filter mesh 100 µm	DN80	ES78TS-080A
	Filter mesh 100 µm	DN100	ES78TS-100A
	Filter mesh 20 µm	DN65	ES78TS-065B
	Filter mesh 20 µm	DN80	ES78TS-080B
	Filter mesh 20 µm	DN100	ES78TS-100B
	Filter mesh 50 µm	DN65	ES78TS-065C
	Filter mesh 50 µm	DN80	ES78TS-080C
	Filter mesh 50 µm	DN100	ES78TS-100C
	Filter mesh 200 µm	DN65	ES78TS-065D
	Filter mesh 200 µm	DN80	ES78TS-080D
	Filter mesh 200 µm	DN100	ES78TS-100D
	Filter mesh 500 µm	DN65	ES78TS-065F
	Filter mesh 500 µm	DN80	ES78TS-080F
Filter mesh 500 µm	DN100	ES78TS-100F	
<b>3 Pressure gauge</b>			
	0 - 16 bar, G <sup>1</sup> / <sub>4</sub> "	M78M-A16	
	0 - 16 bar, G <sup>1</sup> / <sub>4</sub> " with memory indicator	M78M-A16MR	
<b>4 Seal set complete</b>			
	DN65	SOS78TS-065	
	DN80	SOS78TS-080	
	DN100	SOS78TS-100	
<b>5 Ball valve</b>			
		5622100	

