

FK74CS/FKN74CS

Filter combination

with pressure reducing valve and reverse rinsing fine filter

APPLICATION

The filter combinations comprise reverse rinsing filter and pressure reducing valve in one appliance. They ensure a continuous supply of filtered water. The fine filter stops the ingress of foreign bodies, for example rust particles, strands of hemp and grains of sand and thus reduces the probability of corrosion. The pressure reducing valve prevents pressure damage and reduces water consumption.

The filter combinations are fitted in systems where a pressure reducing valve is required. Both horizontal and vertical installation is possible.

APPROVALS

- DVGW
- SVGW

approval for all filters with 100 µm mesh sizes and with rotatable connection piece

SPECIAL FEATURES

- Integral pressure reducing valve with balanced seat
- Inlet pressure balancing – no influence on outlet pressure by fluctuating inlet pressure
- Filtered water supplied even during reverse rinsing
- Patented reverse rinsing system - fast and thorough cleaning of the filter with small amount of water
- Memory ring indicates when next manual reverse rinsing is due
- Automatic reverse rinsing actuator with bayonet connector can be retrofitted
- Large filter surface
- Shock resistant clear synthetic material filter bowl enables easy checking of filter contamination
- Filter insert fully replaceable
- Standardised discharge connection
- All materials are ACS approved
- All materials are KTW approved
- Approved by TÜV LGA for low noise, Group 1 without limitations




TECHNICAL DATA

Media	
Medium:	Drinking water
Connections/Sizes	
Connection sizes:	1/2" - 1 1/4" (with rotatable connector piece)
Pressure values	
Max. operating pressure:	1.5 - 16.0 bar
Max. inlet pressure:	16 bar (up to 12.0 bar long*-term)
Outlet pressure:	1.5 - 6.0 bar adjustable
Operating temperatures	
Max. operating temperature medium:	5 - 30 °C
Specifications	
Installation position:	Horizontal or vertical, with filter bowl downwards

* For maintaining the measuring accuracy of the manometer, a continuous maximum pressure load of 12.0 bar is permitted.

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

CONSTRUCTION

Overview	Components	Materials	
	1	Adjustment handle with cover cap	High-quality synthetic material
	2	Spring bonnet with internal adjustment screw	High-quality synthetic material
	3	Housing with pressure gauge	High-quality synthetic material
	4	Rotatable connector piece, flange sealings, connecting nuts and fittings (FK74CS only)	Dezincification-resistant brass
	5	Clear filter bowl	Shock-resistant, clear transparent synthetic material
	6	Fine filter	Stainless steel
	7	Ball valve with drain connection	Brass (Ball Valve body), Stainless steel (ball), Plastic-durethan (drain adapter)
Not depicted components			
	Memory ring	Plastic	
	Allen key WS6	Stainless steel	
	Valve insert complete with diaphragm and valve seat	High-quality synthetic material	
	Wrench for filter bowl and spring bonnet	Plastic	
	Covers and reverse rinsing handle	Synthetic material	
	Diaphragm	Fibre-reinforced NBR	
	Sealing washers	EPDM	

METHOD OF OPERATION

The filter combination combines reverse rinsing filter and pressure reducing valve in one appliance.

The filter insert comprises an upper part and a lower combination section. When in the „filtering“ position, the small upper filter is closed so that the water can only pass through the main filter from outside to inside. When the ball valve is opened for reverse rinsing, the filter 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 sieve, the rotating impeller and the main filter from inside to outside. By this means, the filter is fully cleaned over its whole surface area at the full inlet pressure. The filter automatically switches over to the operating position when the ball valve is closed again.

The integral pressure reducing valve functions on a balanced force principle whereby the force exerted by a diaphragm is balanced against the force of an adjustment spring. The inlet pressure has no influence on opening or closing of the valve. Inlet pressure fluctuation does not therefore affect the outlet pressure.

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 % *

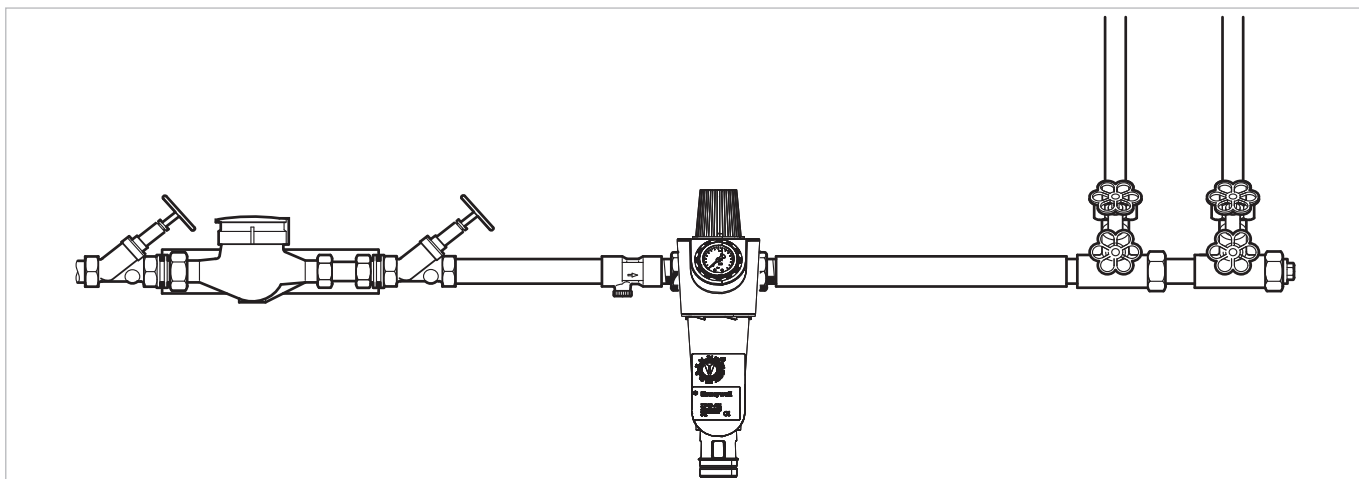
*non condensing

INSTALLATION GUIDELINES

Setup requirements

- The installation site has to be frost-proof and the protection of the device from chemicals, paints, detergents, solvents and their vapours and environmental influences must be guaranteed
- Install in horizontal or vertical 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
 - Degree of contamination can be easily seen with clear filter bowl
 - Simplifies maintenance and inspection
- It is recommended that a straight section of pipework at least five times the nominal valve size is provided after the filter (according to DIN EN 806-2)
- Fit immediately after water meter
- 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

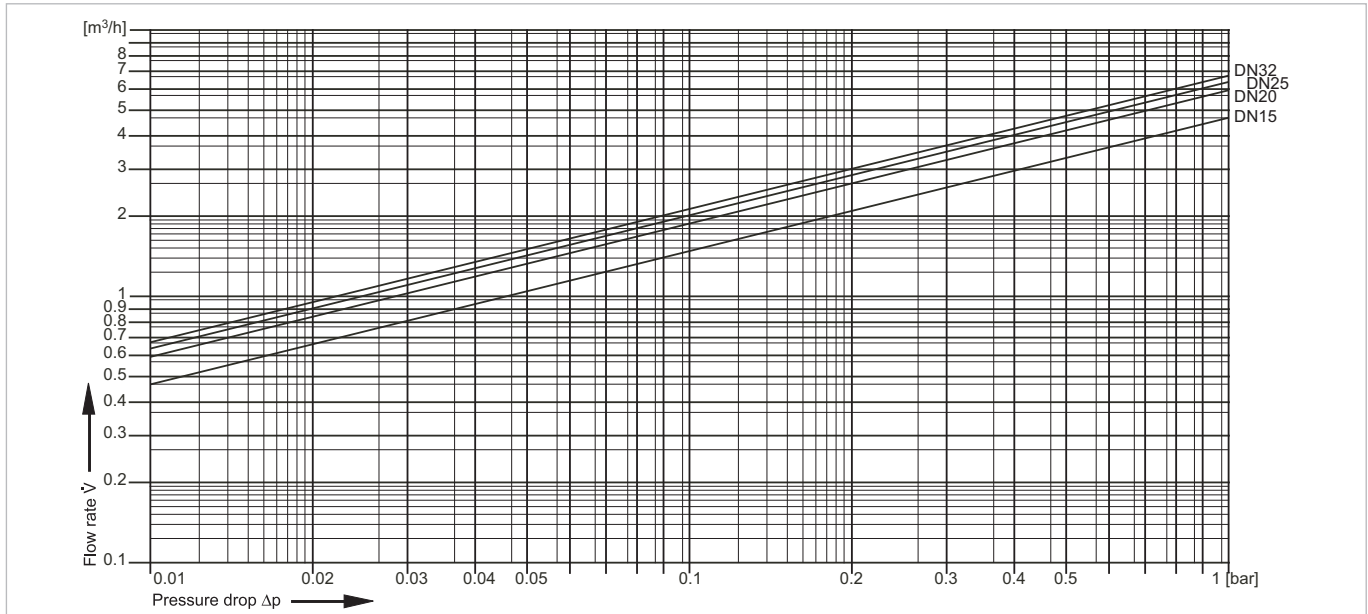


TECHNICAL CHARACTERISTICS

kvs-Values

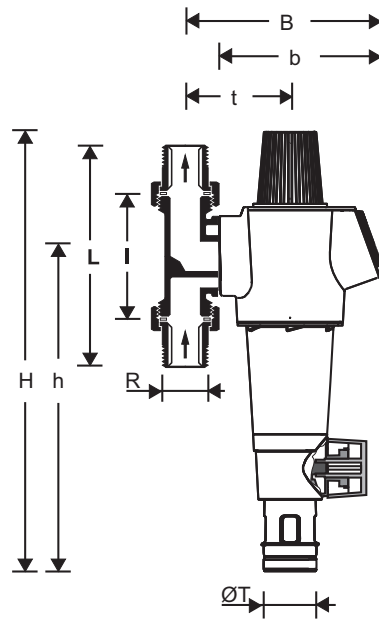
Connection sizes:	15	20	25	32
k_{VS} -value (m ³ /h):	4.5	5.8	6.2	6.5

Pressure drop characteristics



DIMENSIONS

Overview



Parameter	Values				
Connection sizes:	R	1/2"	3/4"	1"	1 1/4"
Nominal sizes:	DN	15	20	25	32
Weight:	kg	2.3	2.3	2.6	2.9
Dimensions:	H	415	415	415	415
	h	298	298	298	298
	L	150	158	179	197
	l	90	90	100	105
	B	178	178	178	182
	b	150	150	150	150
	t	92	92	92	96
	ØT	50	50	50	50
DVGW registration number:	NW-9311 CM 0032				

Note: All dimensions in mm unless stated otherwise.

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 combination is available in the following sizes: 1/2", 3/4", 1" and 1 1/4".

- standard
- not available

		FK74CS- ...AA	FK74CS- ...AC	FK74CS- ...AD	FKN74CS -1A	FKN74- 1C
Connection type:	With rotatable connector piece, filter mesh size 100 µm	•	-	-	-	-
	With rotatable connector piece, filter mesh size 50 µm	-	•	-	-	-
	With rotatable connector piece, filter mesh size 200 µm	-	-	•	-	-
	Retrofit version without rotatable connector piece, filter mesh size 100 µm	-	-	-	•	-
	Retrofit version without rotatable connector piece, filter mesh size 50 µm	-	-	-	-	•

Note: ... = space holder for connection size

Accessories

	Description	Dimension	Part No.
	DA74 Rotatable connector piece		
	For connection of retrofit filters and filter combinations		
	D74CS	1/2"	DA74CS-1/2A
	D74C	3/4"	DA74C-3/4A
	D74C	1"	DA74C-1A
D74C	1 1/4"	DA74C-11/4A	
	Z74S-AN Automatic reverse rinsing actuator		
	For automatic filter cleaning at presettable intervals		Z74S-AN
	VST06B Connection set		
	Solder connections		
		3/4"	VST06-3/4B
		1"	VST06-1B
	1 1/4"	VST06-11/4B	
	ZR74CS Double ring wrench for removing the filter bowl		
		1/2" + 1 1/4"	ZR74CS

Spare Parts

Filter combinations FK74CS / FKN74CS from 2010 onwards

Overview	Description	Dimension	Part No.
	1 Valve insert complete	1/2" - 1 1/4"	D06FA-1B
	2 Filter insert complete		
	100 µm	1/2" - 1 1/4"	AF74-1A
	50 µm	1/2" - 1 1/4"	AF74-1C
	200 µm	1/2" - 1 1/4"	AF74-1D
	3 Clear filter bowl		
		1/2" - 1 1/4"	KF74CS-1A
	4 Pressure gauge		
		0 - 16 bar	M74CS-A16
	5 Connection set threaded connection		
		3/4"	VST06-3/4A
		1"	VST06-1A
		1 1/4"	VST06-11/4A
	6 Union seal washer (10 pcs.)		
	3/4"	0901444	
	1"	0901445	
	1 1/4"	0901446	
7 Flange seal			
	3/4" - 1 1/4"	5975900	

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