

Year made

Serial No.



WD – Cartridge Filter Housing

Wolftechnik Filtersysteme GmbH
Malsheimerstraße 67
71263 Weil der Stadt
Germany

Telefon: +49(0)7033-7014-0

Fax: +49(0)7033-7014-20

E-Mail: vertrieb@wolftechnik.de

Internet: www.wolftechnik.de



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1. Description



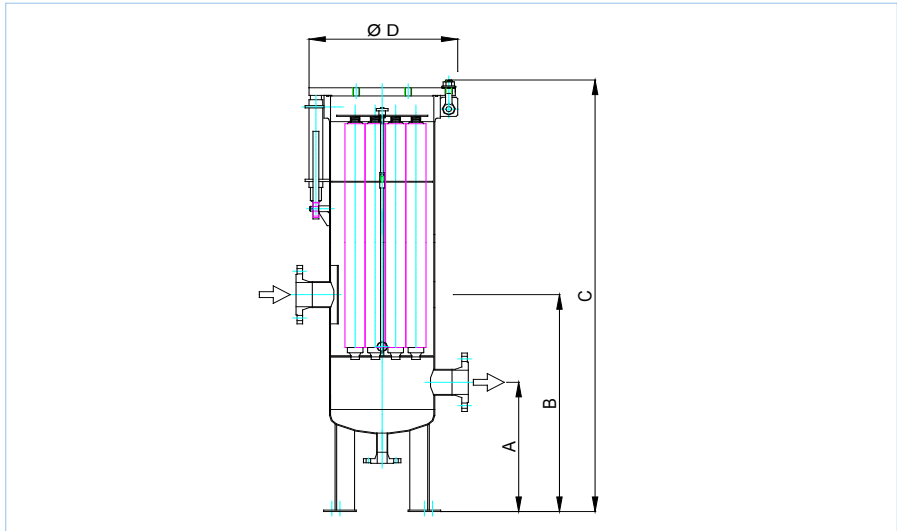
Description

WD housings are stainless steel housings manufactured according to AD data sheets and adhere to the Pressure Equipment Directive 97/23/EG Class IV. The housings hold between three to 40 filter cartridges in the lengths of 9" to 40". The connectors for the in-/outlet range from DN40 to DN200. From the 12WD onwards, WD housings are equipped with a cover-lift and swing-device. With the installation of center posts and spring seal caps, depth filter elements with double open ends (DOE) can be inserted into the housings. Versions with the adapter Code 0, Code 5 and Code 7 can be delivered. An additional intermediate plate secures the filter element from becoming unbalanced and in this way makes it easier to exchange the filter elements. WD housings are universal filter housings and can be used for all industrial applications.

2. Technical specification

Material:	Housing: 1.4301 (AISI 304)1 or 1.4571 (AISI 316Ti) or C-steel Internal parts:1.4301 (AISI 304)1 or 1.4571 (AISI 316Ti) or C-Steel
Gaskets:	Viton (optional EPDM, Buna, Silikon, Viton-FEP-encapsulated)
Inlet/Outlet:	see tabel dimensions
Drain:	DN25
Vent:	G 1/2" with plug
Filter Cartridges:	Code 0: 10", 20", 30" or 40" Code 5: 10", 20", 30" or 40" Code 7: 10", 20", 30" or 40" DOE: 9", 10", 19", 20", 29", 30" or 40" Cover-lift and swivel device from 12WD housing onwards
Max. op. pressure:	10 bar (special version for 16 bar)
Max. op. temperature:	95°C (depends on cartridges)
Flow rate:	The flow rate depends on the medium, the particle load, connection size of inlet and outlet and the amount, length and flow characteristic of the installed filter cartridges.

2. Technical specification



Typ	Cartridges	A (mm)	B (mm)	C (mm)	ØD (mm)	Inlet/Outlet
03WD20	3x20"	470	610	1150	245	DN 40
03WD30	3x30"	470	610	1400	245	DN 40
03WD40	3x40"	470	610	1650	245	DN 40
05WD20	5x20"	470	610	1160	320	DN 50
05WD30	5x30"	470	610	1410	320	DN 50
05WD40	5x40"	470	610	1660	320	DN 50
07WD20	7x20"	470	610	1170	330	DN 65
07WD30	7x30"	470	610	1420	330	DN 65
07WD40	7x40"	470	610	1670	330	DN 65
12WD30	12x30"	540	840	1520	450	DN 80
12WD40	12x40"	540	840	1770	450	DN 80
19WD30	19x30"	540	840	1530	550	DN 100
19WD40	19x40"	540	840	1780	550	DN 100
22WD30	22x30"	540	840	1540	600	DN 125
22WD40	22x40"	540	840	1790	600	DN 125
27WD30	27x30"	540	840	1540	600	DN 150
27WD40	27x40"	540	840	1790	600	DN 150
40WD30	40x30"	540	840	1550	810	DN 200
40WD40	40x40"	540	840	1800	810	DN 200

3. Safety Instructions



Fundamental and important instructions for your safety:

The cartridge filter housings type WTSD are determined for the filtration of liquids. Especially WD cartridge filter housings should not be used for:



- Liquids whose chemical resistance against the used materials is not guaranteed
- Liquids whose operation temperature is exceeding the maximum operation temperature shown in the technical specification.
- Liquids, whose operation pressure is exceeding the maximum operation pressure shown in the technical specification

A different use or use over it has to be considered as not to be made under the arrangements. For damages resulting out of this the manufacturer does not accept the responsibility.

If you have to carry out maintenance services or repairs please notice the following instructions:



- The filter housing is a pressure vessel and can be under pressure.
- Before opening the filter housing please make sure, that the vessel is not under pressure and that all inlet and outlet lines to the vessel are closed.
- Protect all inlet and outlet lines against unintentional or unauthorised opening.
- When opening the housing take notice of all instructions which have to be observed when handling the hauling product (e.g. protection clothes, no smoking).
- Before restart of operation make sure, that all mechanical and other protection instruments are mounted tidy and that the vessel is closed orderly.

Please always think about your safety and therefore respect the company safety instructions and the regulations of the government when carrying out maintenance services or repairs at the filter housing.



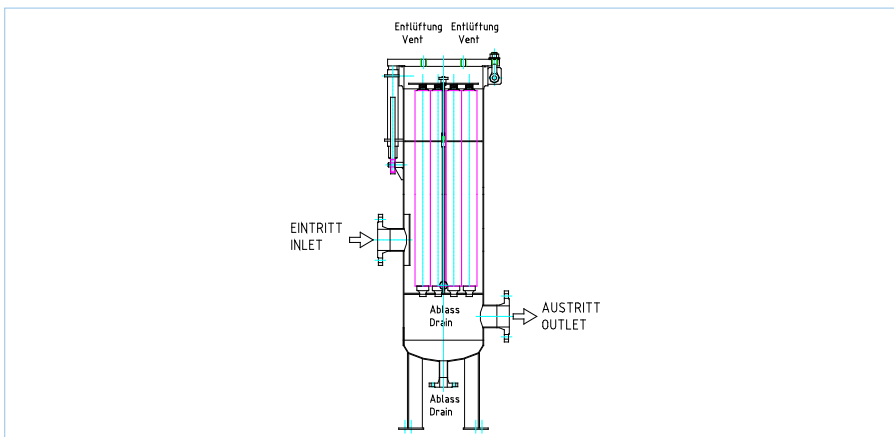
The filter housing has to be installed in a standing position, so that the pipe connections for inlet and outlet are located horizontal and the cover with the ring nuts is at the top.

The upper connection is the inlet, the lower connection is the outlet. The inlet line has to be connected to the inlet, the outlet line to the outlet. For tight sealing we recommend a PTFE sealing tape or a sealing paste suitable for medium and application. The versions with flanged connections have to be installed with a gasket suitable for pressure temperature and medium.

For controlling and monitoring the filter pressure drop for filter exchange it is recommended to install pressure gauges and shut off valves in front of and behind the filter housing. For draining the filter housing the drain plugs can be replaced by suitable ball valves. The vent plugs of the housing can also be replaced by suitable ball valves.

Filter housings are delivered without filter elements! The selection of the filter elements depends on the application and a precise specification can not be made in advance. The first equipment and exchange of filter cartridges should only be made with filter cartridges recommended by us, or with filter cartridges suitable for medium, pressure, temperature and application

Installation of filter cartridges ==> see 7.) filter exchange



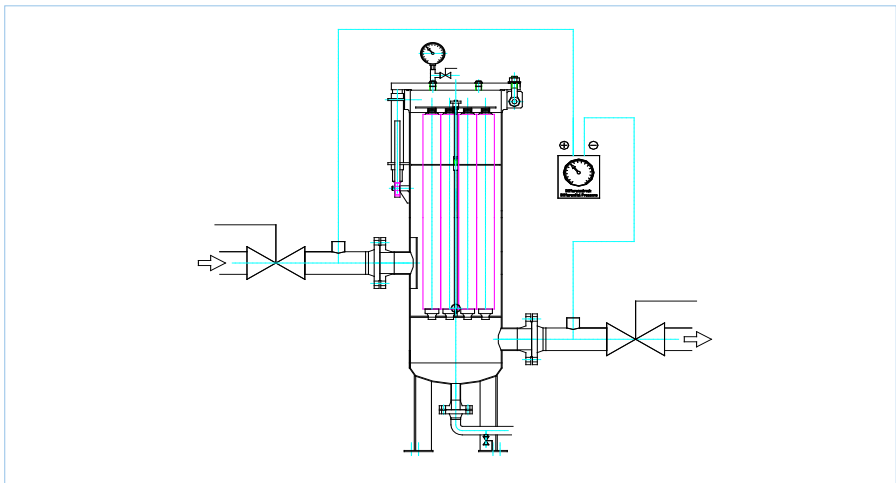
5. Operation



For start of operation and filter exchange proceed as follows:

- Open vent
- Slightly open outlet
- Slightly open inlet to fill up the vessel
- Close vent after filling
- The filter will be set under pressure now
- Check the filter housing for leakage
- In case of leakage close inlet and outlet again, open vent to discharge the pressure in the filter housing. Drain the liquid. Check the filter housing for damaged parts and replace them. Restart operation again.
- If there is no leakage when setting under pressure first the outlet and then the inlet can be opened completely.
- The filter housing is now ready for operation.
- Slightly open and close the vent of the filter housing to release air out of the system if necessary.

Life time of the filter element is depending on the application. Generally the exchange of the filter element is recommended, if the maximum pressure drop of the filter cartridge is achieved. Generally the differential pressure for filter exchange is at 1.5 bar. In other cases the filter element should be replaced at least once a year.





During operation please take care of the following:

- max. operating pressure and max. operating temperature do not exceed.
- pressure shocks should be avoided.
- slightly open and close the vent of the filter housing to release air out of the system if necessary.
- max. differential pressure does not exceed and that the exchange of the filter cartridges takes place in time
- no leakage is to be found.
- the inspections are made according to instructions.
- the company safety instructions and the regulations of the government are kept.

If you have to carry out maintenance services or repairs please notice the following instructions:



- The filter housing is a pressure vessel and can be under pressure.
- Before opening the filter housing please make sure, that the vessel is not under pressure and that all inlet and outlet lines to the vessel are closed.
- Protect all inlet and outlet lines against unintentional or unauthorised opening.
- When opening the housing take notice of all instructions which have to be observed when handling the hauling product (e.g. protection clothes, no smoking).
- Before restart of operation make sure, that all mechanical and other protection instruments are mounted tidy and that the vessel is closed orderly.

Please always think about your safety and therefore respect the company safety instructions and the regulations of the government when carrying out maintenance services or repairs at the filter housing.

7. Filter exchange



If you have to replace the filter element please take notice of the safety instructions on page 4 and as follows:



- The filter housing is a pressure vessel and can be under pressure.
- Before opening the filter housing please make sure, that the vessel is not under pressure and that all inlet and outlet lines to the vessel are closed.
- Protect all inlet and outlet lines against unintentional or unauthorised opening.
- When opening the housing take notice of all instructions which have to be observed when handling the hauling product (e.g. protection clothes, no smoking).
- Before restart of operation make sure, that all mechanical and other protection instruments are mounted tidy and that the vessel is closed orderly.

7. Filter exchange



To exchange the filter element proceed as follows:

- Close inlet and outlet
- Slightly open vent
- The pressure will release now
- Open drain
- Open filter housing by removing the ring nuts and lift the cover.
- Unscrew the nut of the compression plate.
- Remove spring sealing kits
- (not for filter elements code 0 and code 5)
- Pull out the filter elements
- Clean housing if necessary
- Check all parts, especially gaskets and sealing
- Place new filter cartridges on the centre posts (filter elements code 0 and code 5 have to be fit directly into the adapters in the bottom plate of the housing).
- Place the spring sealing kits on each open end of the elements (not for filter elements code 0 and code 5).
- Put the compression plate on the filter elements and screw down the springs to half of their length
- Close the cover by tightening the ring nuts
- Close drain
- Restart of operation ==> see 5.) Operation

7. Filter exchange



1. Open Housing



4. Pull out filter cartridges



7. Put Compression plate on and screw down



2. Unscrew comprssion plate with knurled nut



5. Install new filter cartridges



8. Place spring sealing kits



3. Remove spring sealing kits



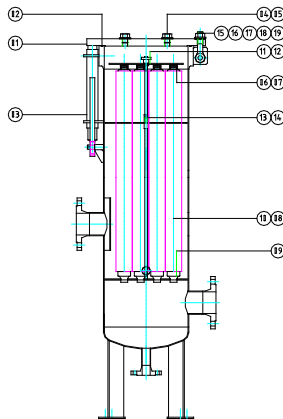
6. Place spring sealing kits

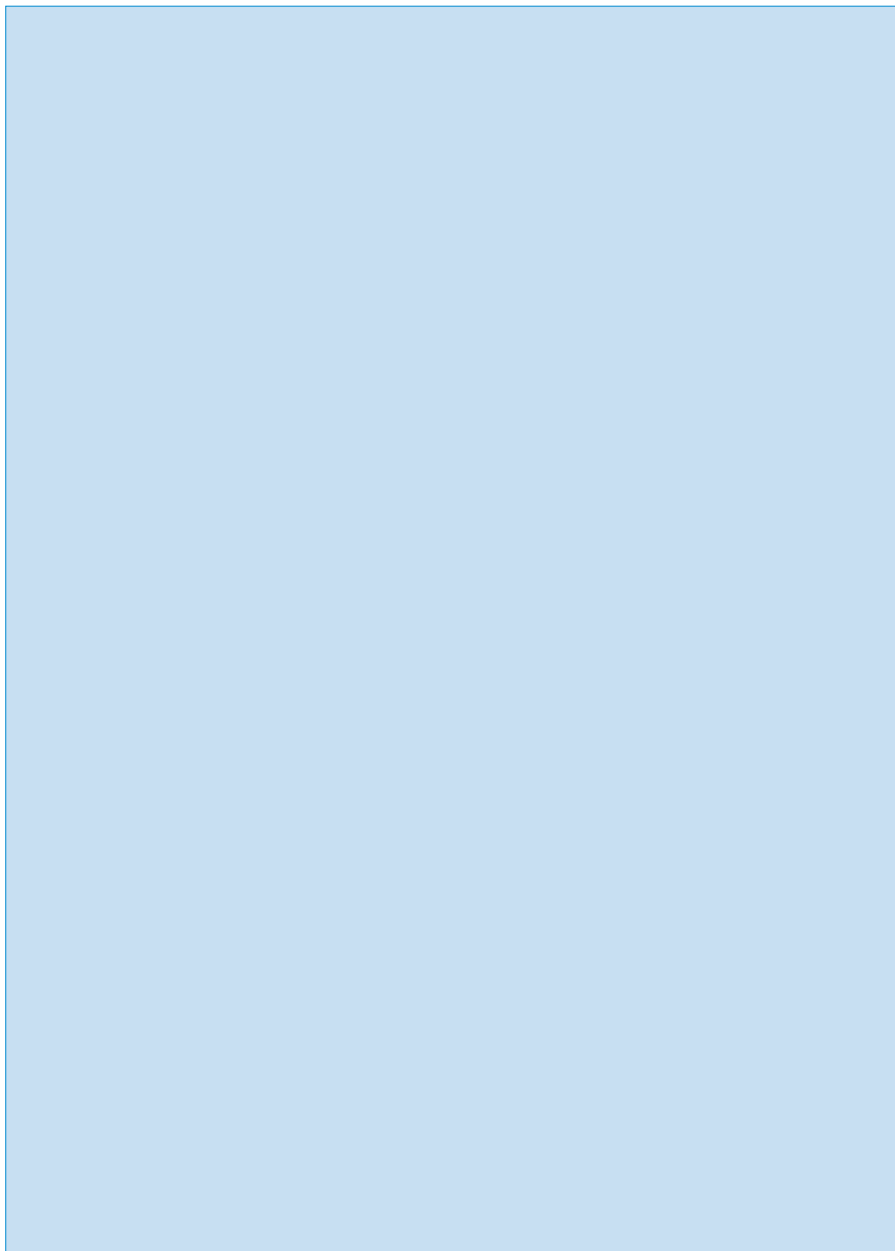
8. Spare parts

Pos.	Designation	Material	Order code
1	Cover	Edelstahl	03WD-Deckel-L /-T/-C
		304: -L	05WD-Deckel-L /-T/-C
		316L: -T	07WD-Deckel-L /-T/-C
		C-steel: -C	12WD-Deckel-L /-T/-C
			19WD-Deckel-L /-T/-C
			22WD-Deckel-L /-T/-C
			27WD-Deckel-L /-T/-C
2	O-ring	Viton	03WD-ORVIT-GEH
		Options	05WD-ORVIT-GEH
		EPDM	07WD-ORVIT-GEH
		Silikone	12WD-ORVIT-GEH
		Viton-FEP-encapsulated	19WD-ORVIT-GEH
			22WD-ORVIT-GEH
			27WD-ORVIT-GEH
3	Cover lift and swing device (from 12WD-housing onwards)	Stainless steel	WD-Schwenk-Exzenterhebel
			WD-Schwenk-Bolzen
			WD-Schwenk-Splint
			WD-Schwenk-Führungsrohr
		Buna	WD-Schwenk-Führungsstange
			WD-Schwenk-Halblech, unten
			WD-Schwenk-Halblech, oben
4	Vent plug	Stainless steel	WD-ESTOP-1/2-T
5	Vent gasket	PTFE	WD-DI-PTFE-ENTL
6	Spring extension	Stainless steel	WTKF-Feder-Verlängerung
7	Spring seal kit	Stainless steel	WTKF-Federabdichtkappe
8	Center post 10"	Stainless steel	WTKF-FST10
	Center post 20"		WTKF-FST20
	Center post 30"		WTKF-FST30
	Center post		WTKF-FST40
9	Pedestal	Stainless steel	WTKF-Einschlagteil
10	Stop ring	Stainless steel	WTKF-Stopring
11	Press-on-Plate	Stainless steel	03WD-Andrückplatte-DOE
			05WD-Andrückplatte-DOE
			07WD-Andrückplatte-DOE

8. Spare parts

Pos.	Designation	Material	Order code
11			12WD-Andrückplatte-DOE
			19WD-Andrückplatte-DOE
			22WD-Andrückplatte-DOE
			27WD-Andrückplatte-DOE
			40WD-Andrückplatte-DOE
12	Knurled nut	Stainless steel	WD-Rändelmutter
13	Centring plate	Stainless steel	03WD-Zentrierplatte-DOE
			05WD-Zentrierplatte-DOE
			07WD-Zentrierplatte-DOE
			12WD-Zentrierplatte-DOE
			19WD-Zentrierplatte-DOE
			22WD-Zentrierplatte-DOE
			27WD-Zentrierplatte-DOE
			40WD-Zentrierplatte-DOE
14	Rod 10"	Stainless steel	WD-Zugstange-10, zweiteilig
	Rod 20"		WD-Zugstange-20, zweiteilig
	Rod 30"		WD-Zugstange-30, zweiteilig
	Rod 40"		WD-Zugstange-40, zweiteilig
15	Swinging bolt	Stainless steel A2	DIN444
16	Hex nut	Stainless steel A2	DIN934
17	Washer	Stainless steel A2	DIN125
18	Bolt	Stainless steel A2	DIN7 mit Nut für Sicherungsring
19	Retaining ring	Stainless steel A2	DIN471







Declaration of Conformity
According to Annex VII of Directive 97/23/EC

We,

Wolftechnik Filtersysteme GmbH
Malsheimerstraße 67
71263 Weil der Stadt

declare, that our product

WD Cartridge Filter Housing

to which this declaration is referring to, is in compliance with the directive 97/23/EC and was subjected to the following conformity assessment procedure

Module A1

The monitoring is performed by
TÜV Südwest, CE-0036
bzw.
TÜV Hessen, CE-0091

Weil der Stadt, den _____

(Stempel, Unterschrift)

