

Year made

Serial No.



**WTSD – Cartridge Filter Housing**

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1. Description/Technical specification	.....	page 3, 4
2. Safety instructions	.....	page 5
3. Installation	.....	page 6
4. Operation	.....	page 7
5. Maintenance	.....	page 8
6. Filter exchange	.....	page 9, 10, 11
7. Spare parts	.....	page 12, 13
8. Notes	.....	page 14
8. CE Declaration	.....	page 15



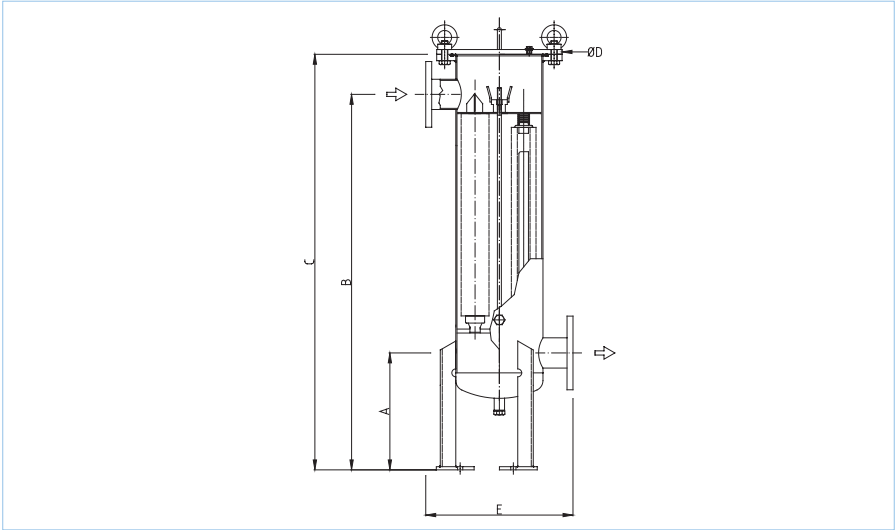
### Description

Universal Cartridge Filter Housing made from stainless steel for use in almost all industrial applications. The housing cover is designed with a flat cover and stud bolts with ring nuts. The dished bottom is curved to the outside and can be drained totally. The connections for inlet and outlet can be manufactured according to the customer needs in view of size, positions and type of connection. The internal parts of the WTSD Cartridge Filter Housings can be modified to accept cartridges with double open end (DOE) or for cartridges with adapter configuration code 0, code 5. The WTSD series are available in four sizes and four length to place 3, 6, 8 and 12 filter cartridges in the length of 10", 20", 30" or 40" into one housing. WTSD Cartridge Filter Housings are offered in stainless steel 1.4301 (AISI304) or 1.4571 (AISI316Ti). Three welded legs are provided to mount the housing to the floor, the length can be manufactured to the customers needs.

### Technical specification

Material:	Housing: 1.4301 (AISI 304) or 1.4571 (AISI 316Ti) Internal parts: 1.4301 (AISI 304) or 1.4571 (AISI 316Ti)
Gaskets:	Viton (optional EPDM, Buna, Silikon, Viton-FEP-ummantelt)
Inlet/Outlet:	see tabel dimensions
Drain:	03WTSD and 06WTSD: 2 x G ½" with plugs 08WTSD and 12WTSD: 2 x G 1" with plugs
Vent:	1 x G 3/8" with plug
Filter Cartridges:	Amount: 3, 6, 8 or 12 Length: 9 ¾"-10", 19 ½" - 20", 29 ¼"-30, 39"-40"
Max. op. pressure:	10 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.

## 1. Description/Technical specification



Typ	Cartridges	A (mm)	B (mm)	C (mm)	ØD (mm)	E (mm)	Inlet/Outlet	Drain
03WTKF10	3x10"	220	610	685	265	330	DN40	R ½"
03WTKF20	3x20"	220	865	940	265	330	DN40	R ½"
03WTKF30	3x30"	220	1120	1195	265	330	DN40	R ½"
03WTKF40	3x40"	220	1375	1450	265	330	DN40	R ½"
06WTKF20	6x20"	250	895	995	315	370	DN50	R ½"
06WTKF30	6x30"	250	1150	1250	315	370	DN50	R ½"
06WTKF40	6x40"	250	1405	1505	315	370	DN50	R ½"
08WTKF20	8x20"	280	945	1045	370	470	DN65	R1"
08WTKF30	8x30"	280	1200	1300	370	470	DN65	R1"
08WTKF40	8x40"	280	1455	1555	370	470	DN65	R1"
12WTKF20	12x20"	315	1040	1150	420	520	DN 80	R1"
12WTKF30	12x30"	315	1295	1405	420	520	DN 80	R1"
12WTKF40	12x40"	315	1550	1660	420	520	DN 80	R1"

## 2. Safety Instructions



### Fundamental and important instructions for your safety:

The cartridge filter housings type WTSD are determined for the filtration of liquids. Especially WTSD 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.

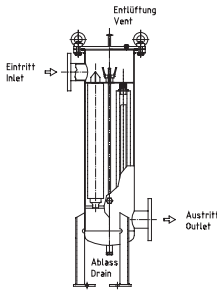
If you have to carry out maintenance services or repairs please notice the following instructions:



- 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.

### 3. Installation



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

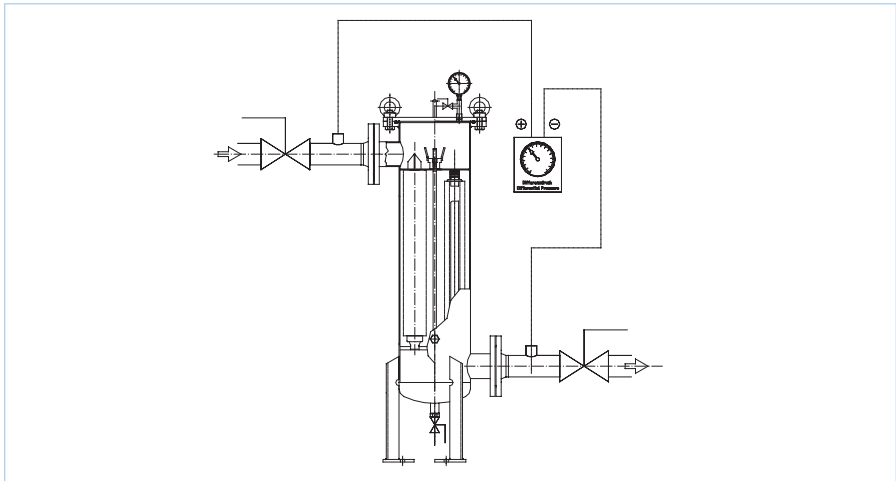
## 4. Operation



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.



## 5. Maintenance



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 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 an 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 therefor respect the company safety instructions and the regulations of the government when carrying out maintenance services or repairs at the filter housing.

## 6. 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.

## 6. Filter exchange



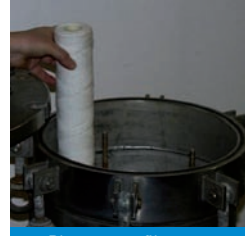
To exchange the filter element proceed as follows:

- 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 4.) Operation

## 6. Filter exchange



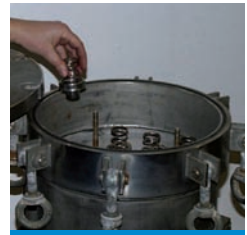
1. Remove compression plate



4. Place new filter elements on the centreposts



2. Remove spring seal kits



5. Put the spring seal kits on each element



3. Pull out filter elements



6. Place the compression plate on the elements

## 7. Spare parts

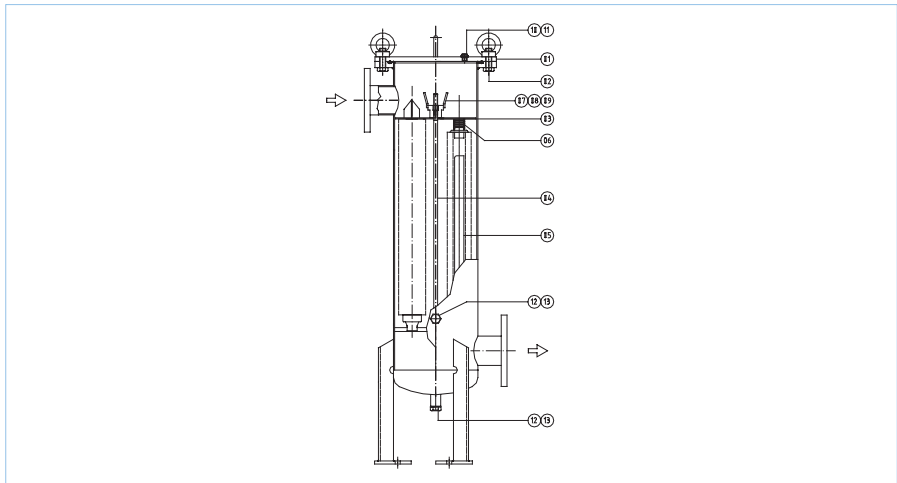


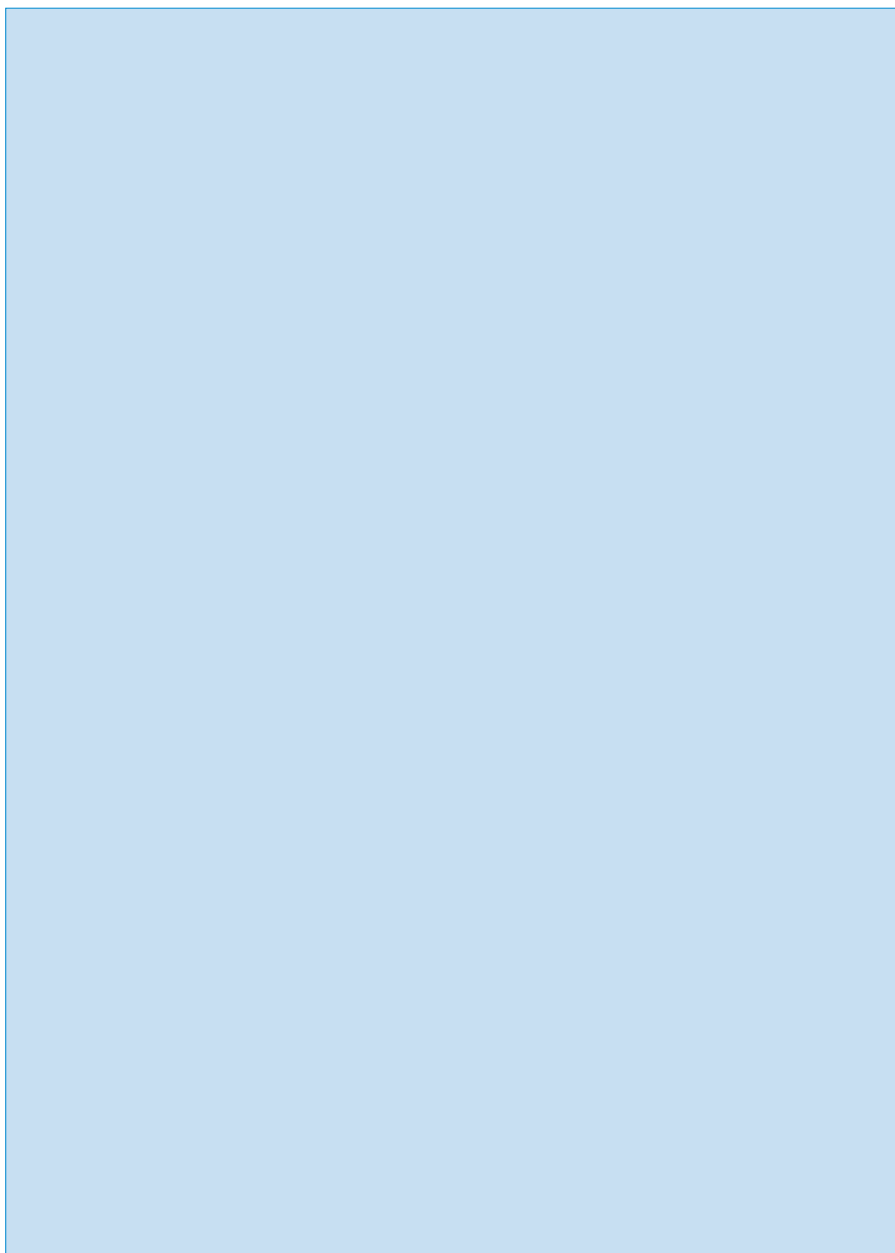
Pos.	Designation	Material	Order code	Order no.	
1	Cover	316Ti (1.4571): -T	03WTSD-Deckel-T	999991	
		304 (1.4301): -L	03WTSD-Deckel-L	999991	
			06WTSD-Deckel-T	999991	
			06WTSD-Deckel-L	999991	
			08WTSD-Deckel-T	999991	
			08WTSD-Deckel-L	999991	
			12WTSD-Deckel-T	999991	
			12WTSD-Deckel-L	999991	
2	O-ring for cover	Viton	03WTSD-ORVIT-GEH	999996	
			06WTSD-ORVIT-GEH	999996	
			08WTSD-ORVIT-GEH	999996	
			12WTSD-ORVIT-GEH	999996	
			Viton-FEP-encapsulated	03WTSD-ORFEP-GEH	999996
				06WTSD-ORFEP-GEH	999996
				08WTSD-ORFEP-GEH	999996
				12WTSD-ORFEP-GEH	999996
		EPDM	03WTSD-OREPDM-GEH	999996	
			06WTSD-OREPDM-GEH	999996	
			08WTSD-OREPDM-GEH	999996	
			12WTSD-OREPDM-GEH	999996	
		Buna	03WTSD-ORBUN-GEH	999996	
			06WTSD-ORBUN-GEH	999996	
			08WTSD-ORBUN-GEH	999996	
			12WTSD-ORBUN-GEH	999996	
		Silikone	03WTSD-ORSIL-GEH	999996	
			06WTSD-ORSIL-GEH	999996	
			08WTSD-ORSIL-GEH	999996	
			12WTSD-ORSIL-GEH	999996	
3	Compression plate-DOE		03WTKF-Andrückplatte-DOE	999991	
	Compression plate-222	316Ti (1.4571)	03WTKF-Andrückplatte-222	999991	
			06WTKF-Andrückplatte-DOE	999991	
			06WTKF-Andrückplatte-222	999991	
			08WTKF-Andrückplatte-DOE	999991	
			08WTKF-Andrückplatte-222	999991	
			12WTKF-Andrückplatte-DOE	999991	
			12WTKF-Andrückplatte-222	999991	

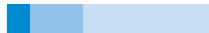
## 7. Spare parts



Pos.	Designation	Material	Order code	Order no.
4	Centre rod	316Ti (1.4571)	WTSD-Zugstange-10	999991
			WTSD-Zugstange-20	999991
			WTSD-Zugstange-30	999991
			WTSD-Zugstange-40	999991
5	Cartridge Centre post	316Ti (1.4571)	WTKF-FST-10	000795
			WTKF-FST-20	000796
			WTKF-FST-30	007086
			WTKF-FST-40	007087
6	Spring sealing kit	316Ti (1.4571)	WTKF-Federabdichtkappe	000177
7	Compression nut	316Ti (1.4571)	WTKF-Knebel	999991
8	Spring for nut	316Ti (1.4571)	WTKF-Knebel-Feder	999991
9	Nut	316Ti (1.4571)	M10 DIN932	999997
10	Vent Plug 3/8"	316Ti (1.4571)	WTSD-Stopfen-3/8-T	999997
11	Gasket for vent	PTFE	WTSD-DIPTFE-Entlüftung	999997
12	Drain Plug 1/2"	316Ti (1.4571)	WTSD-Stopfen-1/2"	999997
	Drain Plug 1"		WTSD-Stopfen-1"	999997
13	Gasket for drain plug	PTFE	WTSD-DIPTFE-Abluss-1/2"	999997
			WTSD-DIPTFE-Abluss-1"	999997







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

**WTSD 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 A

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

Weil der Stadt, den \_\_\_\_\_

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(Stempel, Unterschrift)

