

# DISCSTAR® ST



## DEPTH FILTER MODULE HOUSING

For food and industrial applications



### Characteristics

The DISCSTAR® ST is a high precision stainless steel filter housing for lenticular depth filter modules, designed and manufactured for heavy duty use – 24/7. The enclosed system allows high capacity depth filtration with no drip loss (no edge leaking). A broad variety of options will promote the ideal solution for your depth filtration process.

### Applications

DISCSTAR® ST series filters are made for a broad field of solid liquid separation applications, with a solid content up to approx. 1 %. Higher solid contents need precoat filtration or other technology as prefiltration. The technology is designed for high service life of filter media and equipment. Its high filtration performance and top manufacturing quality meet the high standards of beverage filtration such as;

- Wine filtration
- Beer filtration
- Juice filtration
- Tea filtration
- Distilled products (spirits, such as vodka, cognac, brandy, whisky, ...)

### Function principle

Depth filter module(s) are placed in a sealed housing. The inside of the module core is connected to the filtrate side and the void volume between module and dome is filled with unfiltrate.

A differential pressure between the unfiltrate and filtrate side pushes the liquid in a constant flow through depth filter sheets inside the modules. When the modules are exhausted, the sheets are plugged with solid particles resulting in a differential pressure increase. This is the right time to regenerate or replace the module(s).

### Module sizes / filter areas

Both DISCSTAR® ST 30 and 40 are available in different heights dependent upon the desired number of modules. The size (see below) indicates the maximum module capacity for each housing.

Filter Area	Size 1	Size 2	Size 3	Size 4
DISCSTAR® ST 30	1.8 m <sup>2</sup> (16 sq ft)	3.6 m <sup>2</sup> (38 sq ft)	5.4 m <sup>2</sup> (57 sq ft)	n.a.
DISCSTAR® ST 40	n.a.	7.2 m <sup>2</sup> (76 sq ft)	10.8 m <sup>2</sup> (114 sq ft)	14.4 m <sup>2</sup> (152 sq ft)

### Technical data

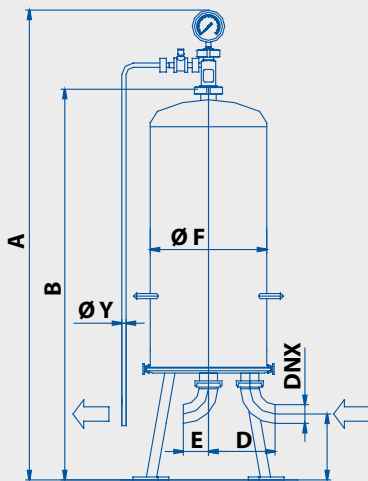
DISCSTAR® ST	30	40
Module diameter	12"	16"
Max. operating pressure (Liquids)	6 bar/87 psi	
Max. operating pressure (Gas/Steam)	0.5 bar/7 psi	
Max. operating temp. (Water)	95 °C (203 °F)	
Max. operating temp. (Gas/Steam)	140 °C (284 °F)	
Inlet/outlet connection: DIN (diary)	DN 50	DN 50
Module interlock	flat gasket (Double-o-ring upon request)	
Closing mechanism	Clamp ring for quick release	

Limiting factor for the  $\Delta p$  of a module filtration is the sheet grade and the application.

### Material

DISCSTAR® ST	30	40
Stainless steel material (product contact)	AISI 316 L	
Other stainless steel parts	AISI 304	
Surface finish (inside)	Electro-polished, Ra<0.8 $\mu$ m All welds ground smooth	
Surface finish (outside)	Electro polished Ra<1.2 $\mu$ m	
Gaskets	EPDM	

## Dimensions



[mm]	DISCSTAR® ST 30			DISCSTAR® ST 40		
	Size 1	Size 2	Size 3	Size 2	Size 3	Size 4
A	995	1305	1555	1332	1582	1862
B	775	1085	1335	1112	1362	1642
C	183					
D	185			415		
E	70					
F	324			450		
DNX	DN 50, DIN (dairy)					
DNY	DN 10, DIN (dairy)					

Vol./ weight (approx.)	DISCSTAR® ST 30			DISCSTAR® ST 40		
	Size 1	Size 2	Size 3	Size 2	Size 3	Size 4
Void Vol. [l]	25	50	75	105	148	192
Empty [kg]	40	60	80	70	90	110
Full [kg]	65	110	155	175	238	302
Dome [kg]	10	16	21	15	24	31

### FILTROX quality assurance

FILTROX assures the best quality control according to international standards:

- ISO 9001 (Quality management)
- The pressure vessel is manufactured according to DGR 97 / 23 / EG Art. 3 Abs. 3
- Vessel and equipment fulfill the requirements according to AD-2000
- The module housings are manufactured according to good engineering practice

### Certificates and special documentation

For filter housings that require further certification, we recommend the DISCSTAR® PV version.

### Options

The typical setup requires gauges and valves, as well as a check valve.

DISCSTAR® ST is available in many options:

- Pharma version (please refer to special literature)
- Double-o-ring sealing and bayonet interlock to ensure highest integrity at easy handling.
- For higher pressure and/or temperatures closing mechanism can be a single bolt clamp ring with pressure vessel certificate (only 12") or swing bolts (12" and 16" versions).
- Connections can be triclamp (sanitary), or dairy (DIN).
- Housings with a higher edge at the base plate help avoiding spillage of hazardous liquids.
- For filtrations with controlled temperature (cooling or heating) we recommend a double shell dome for temperature controlled liquid.
- For larger filter area, DISCSTAR® ST is also available as a multistack housing. (Up to 4 stacks, 4 high, 16" under one dome).
- Gaskets: EPDM (Standard), silicone, viton® or teflon® encapsuled silicone.

### Converter adaptors

Converters from «double-o-ring» to «flat gasket» adaptors are available for both directions. They can be quickly and easily applied.

