

ECO-FRIENDLY  
**FILTER PREHEATER**  
**HVF-V**

SUITABLE FOR UP TO 30% H<sub>2</sub> FEED INTO THE GAS NETWORK

## Preheating filter

- Filter and preheater in welded steel construction combined into one pressure device
- For cleaning and preheating of gases in reducer stations upstream of gas pressure regulators
- Suitable for natural gas, related combustible gases, hydrogen and non-aggressive gases
- Pipe bundle tubes made of seamless carbon steel tubes

## Benefits

- Suitable for up to 30% H<sub>2</sub> feed into the gas network
- The compact design enables smaller station sizes when compared to typical standard devices
- Stable fine cartridges guarantee high separation rates – the same as in the HPF cartridge filter
- Customised design with free nozzle position, selectable gas rail axis, etc.
- Lower differential pressure when compared to separately constructed filter and heat exchanger
- Minimised effort for regular pressure device monitoring
- Optional pre-pressure-resistant water chamber design – also with hot water SSV
- Tube bundle complete or heat exchanger tubes only optionally available in stainless steel
- Removable tube bundle for cost-effective maintenance and tests
- Standard bundle sealing on the tube plate with O-ring, optionally available with flat seal
- Special design also for hot water and gas temperatures of up to 120°C

## Functional description

- Cleaning of dry gases with solid particle impurities through the cartridge insert
- Compensation for the Joule/Thompson effect by the heat exchanger – upstream of the gas pressure regulator
- Filter cartridge with galvanised outer and inner support cage, with impregnated, reinforced and folded cellulose, cartridge sealing reliably released by upper and lower perbunan ring
- Cleaning solids: 99.6% > 2 µm                      99.9% 3 µm
- Differential pressure, clean cartridge: 10 - 20 mbar                      Cartridge change at max: 800 mbar
- Bursting differential pressure of the cartridge: min. 2.0 bar

## Design and calculation

- Design in accordance with PED2014/68/EU, EN13445, AD2000; with CE marking
- Optional design in accordance with ASME Section VIII, with/without U-stamp, further specific country codes
- Continuous application of ISO9001 with regularly audited quality system
- Process-engineering design in accordance with own adapted calculation programmes
- TEMA design applicable as standard
- NACE design possible as an option
- Low temperature and maximum pressure design available according to customer requirements
- Preliminary examination/construction testing, material testing, non-destructive material testing in accordance with design standard
- Customer-specific acceptance requirements optionally selectable, e.g. helium leak test
- Acceptance by experts such as TÜV, Lloyd, etc., also by a customer expert

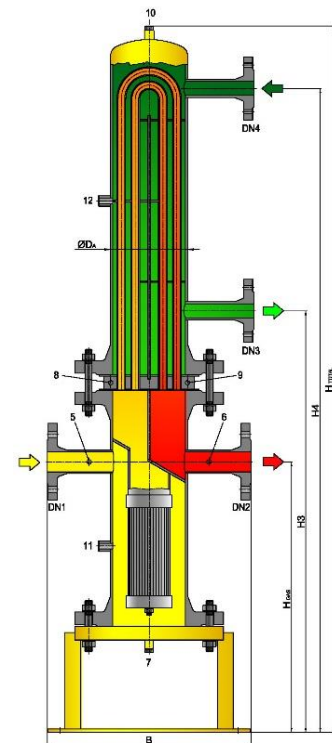
## Optional accessories

- Hot water SSV SV422 in conjunction with the pre-pressure-resistant water jacket
- Pressure safety valves for gas and water, pressure gauges, thermometers
- Drain and vent cocks G1/2" for gas and water
- Temperature control of the natural gas outlet temperature, blanking discs, insulation

## Technical data

HVF-V Ø D <sub>a</sub> / Druck <sub>min</sub>	Bm³/h <sub>max</sub> at p <sub>min</sub> [bar(ü)]					
	0-4	5-10	11-16	17-25	26-40	41-50
100	55	55	55	55	53	48
125	55	55	55	55	53	48
150	98	98	98	98	98	98
200	220	220	220	220	190	170
250	610	610	540	440	280	255
300	785	785	735	595	470	425
400	1320	1000	810	655	525	470

DN 1, 2 Gas flanges also in different nominal widths  
 DN 3, 4 Hot water flange lengths according to insulation  
 Connections 5, 6, 7 + 10,11,12 optional G ½" internal  
 Connections 8, 9 from Ø Da 200 G ½" internal/pipe 12 mm



## Standard sizes Customised solutions available - detailed design always in accordance with quote

HVF-V Type	DN <sub>Gas</sub> 1,2	DN <sub>WW</sub> 3,4	Ø D <sub>a</sub> mm	B minimum overall length per pressure level						H <sub>total</sub> mm	H <sub>Gas</sub> mm	H <sub>3</sub> mm	H <sub>4</sub> mm	Heating area m²	Filter cartridge 1pc m²	D/d *L
				PN100	A600RF	PN40	A300RF	PN16	A150RF							
100	25	25	114,3	380	380	320	1470	600	870	1270	0,21	0,31	75/45 *194			
							1720			1520	0,30					
							1920			1770	0,39					
125	50	25	139,7	440	440	360	1490	600	880	1280	0,37	0,31	75/45 *194			
							1740			1530	0,53					
							1990			1780	0,68					
							2240			2030	0,84					
150	50	25	168,3	470	470	390	1540	600	920	1320	0,70	1,00	122/60 *200			
							1790			1570	0,98					
							2040			1820	1,27					
							2290			2070	1,55					
							2540			2320	1,84					
200	80	50	219,1	550	520	460	1550	600	950	1320	1,52	1,00	152/90 *200			
							1800			1570	2,14					
							2050			1820	2,75					
							2300			2070	3,37					
							2550			2320	3,98					
250	100	50	273	650	590	530	1660	650	1050	1420	2,71	1,50	212/150 *200			
							1910			1670	3,79					
							2160			1920	4,57					
							2410			2170	5,95					
							2660			2420	7,02					
300	100	50	323,9	770	650	610	1910	800	1200	1650	2,71	2,51	232/170 *300			
							2160			1900	3,79					
							2410			2150	4,57					
							2660			2400	5,95					
							2910			2650	7,02					
400	150	80	406,4	900	780	740	2100	900	1260	1810	2,71	2,77	280/220 *300			
							2350			2060	3,79					
							2600			2310	4,57					
							2850			2560	5,95					
							3100			2810	7,02					

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GAS AND OIL EQUIPMENT

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