

>APV®



VT / HT ORIGIN SERIES

Scraped Surface Heat Exchanger



SPXFLOW®

SIMPLE. VERSATILE. DEPENDABLE.



Combining knowledge from three experienced brands to develop an optimized light duty scraped surface heat exchanger.



The APV VT / HT Origin Series is designed to provide powerful results for light duty, low-to-medium viscosity applications that demand high productivity. Its modular design enables flexible adaptation to your specific processing needs.

To enable process customization with either stainless steel or duplex stainless steel, there are three rotor diameters available, with a self-loading hinged scraper blade as a standard offering and a floating flat blade for various products including particulates. Additional options include rotor heating, insulation, and double mechanical seals.

APV VT / HT Origin Series complies with 3-A sanitary design and fabrication standards. Available certifications include PED, CE and CRN. The design is to EHEDG standards however a certificate was not pursued.

Heating/cooling media

Depending on the application and available utilities the APV VT / HT Origin Series is suitable for a range of media including: steam, hot water, glycol, brine, cold water.

Wide range of configurations

The APV VT / HT Origin Series is designed for use at -10 to 150°C (14 to 302°F) with a design pressure of up to 20 bar (290 psi) in the standard version and comes optional in a 25 bar (362 psi) version.

Material options enable the processing of difficult fluids such as acidic products. The flow-design creates a low pressure drop and enables processing of products with particles and solids.

Benefits of the APV VT / HT Origin Series Scraped Surface Heat Exchanger:

- Customization, configuration flexibility
- Vertical and horizontal orientations
- Application adaptability
- Easy and quick maintenance
- New hinged scraper blade design
- Single and double mechanical cartridge seal options
- Support by skilled and experienced engineers

TYPICAL PRODUCT APPLICATIONS



For challenging applications, the following options are available:

- Self-sintered silicon carbide seal components
- Double mechanical seals
- Rotor heating
- Clip-on insulation
- Smaller rotor diameter (for particles)
- Larger rotor diameter (less residence time)
- Duplex stainless steel

Aftermarket Flexibility

Many of these options such as mechanical seals, rotor heating, and clip-on insulation can be selected at time of purchase or as a retrofit.



Dairy

- Cream Cheese
- Milk Concentrates
- Quark
- Yogurt
- Baby Food



Bakery

- Chocolate Products
- Custards
- Light fat sugar cremes



Fats & Oils

- Remelt of margarine



Fruit & Vegetable Preparation

- Jam / Marmalade
- Fruit pulps
- Vegetable purré



Fine Foods

- Starch Cooking
- Ketchup
- Chili Sauce
- Dressings
- Mayonnaise



Convenience Food

- Salsa
- Soups
- Sauces

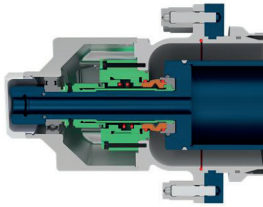


Cosmetics

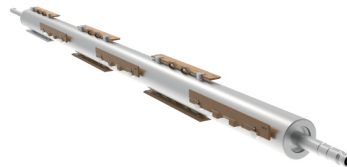
- Facial cremes
- Hair wax
- Gels



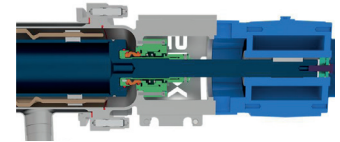
DESIGN FEATURES AND OPTIONS



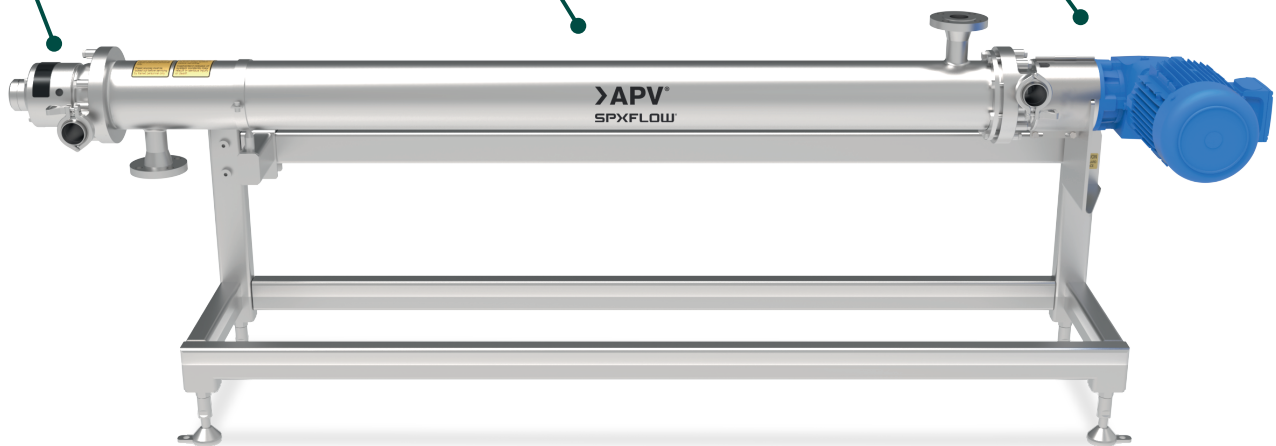
Opposite drive end with a roller bearing and cartridge seal. Designed for ease of maintenance, thermal expansion, and tube removal.



Rotor and blade system selection based on application needs to optimize heat transfer.



Direct drive rotor assembly with precise alignment and smaller footprint.



Single and double mechanical cartridge seal options for various process and hygienic requirements.

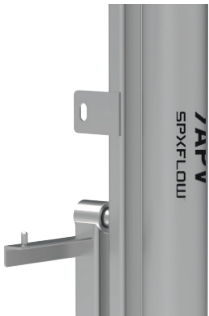


Unique scraper blade designs including floating or hinged designs for efficient blade positioning.

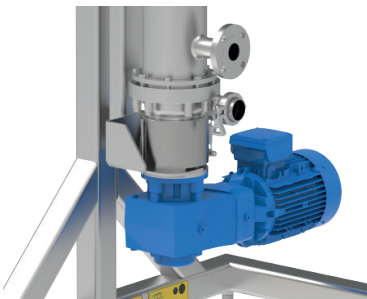
DESIGN FEATURES AND OPTIONS



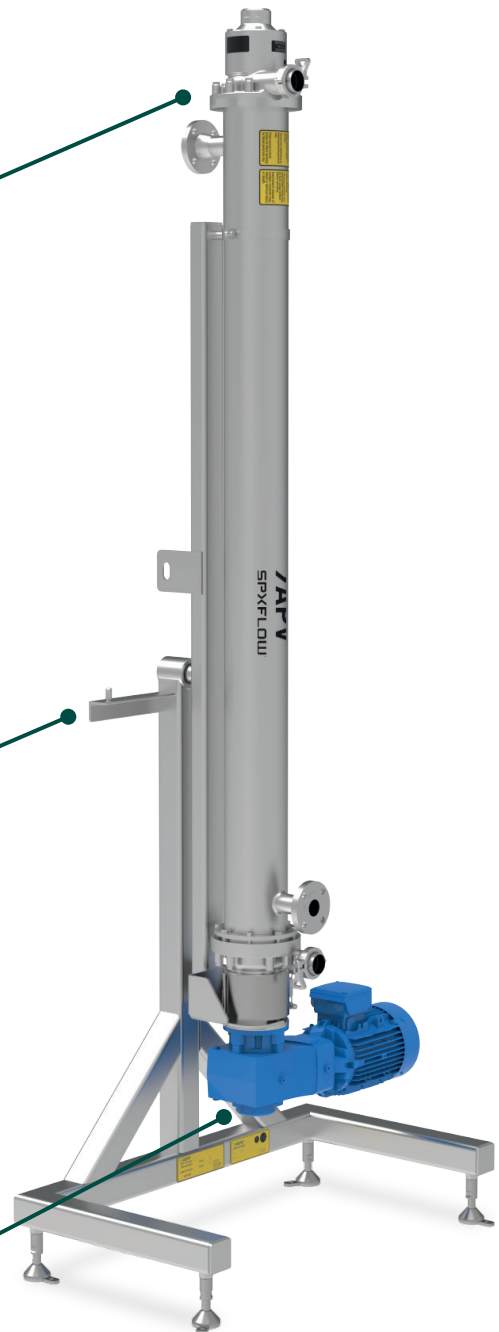
Tangential product port and bearing housing to provide gentle product flow path and multiple positioning.



Manual pivot point for ergonomic positioning to service the seals, tube, rotor, and blades.



One-piece drive end head and pedestal for a simplistic and sturdy design.



Horizontal and vertical frame orientations fully-welded with elevated feet for a sanitary design.

Technical Data

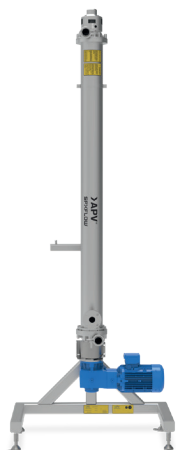
DESCRIPTION	VT / HT 520	VT / HT 540	VT / HT 580
Heat exchange surface / cyl.	0.2 m ² (2.1 ft ²)	0.4 m ² (4.3 ft ²)	0.8 m ² (8.6 ft ²)
Inner cyl. diameter	134 mm (5.26")	134 mm (5.26")	134 mm (5.26")
Rotor diameter - Blade style	72 mm (2.84") - Floating		
	97 mm (3.8") - Hinged or Flotaing		
	112 mm (4.4") - Floating		
PRODUCT			
Product volume - 72 mm (2.84") rotor	5.0 ltr (1.32 gal)	1 0 ltr (2.64 gal)	19.9 ltr (5.26 gal)
97 mm (3.8/) rotor	4.2 ltr (1.11 gal)	7.3 ltr (1.92 gal)	13.5 ltr (3.56 gal)
112 mm (4.5") rotor	2.1 ltr (0.56 gal)	4.2 ltr (1.11 gal)	8.4 ltr (2.22 gal)
Annular space - 72 mm (2.84") rotor	31 mm (1.2")		
97 mm (3.8") rotor	17.5 mm (0.7")		
112 mm (4.5") rotor	11 mm (0.4")		
Max. working pressure standard	20 bar (290 psi)		
Max. working pressure option	25 bar (362 psi)		
Working Temperature	-10 to 150°C (14 to 302°F)		
Product connection in / out	51 mm (2" S-Line Clamp)		
MEDIA			
Working pressure	-1 to 7 bar (-14 to 101 psi)		
Working Temperature	-20 to 170°C (-4 to 338°F)		
Media pipe in / out	48.6 mm (1.5" 150# RF flange)		
HEIGHT X LENGTH X WIDTH			
Horizontal version 1 cyl.	1,189 mm x 851 mm x 735 mm (47" x 33.5" x 29")	1,689 mm x 851 mm x 735 mm (66.5" x 33.5" x 29")	2,689 mm x 851 mm x 735 mm (106" x 33.5" x 29")
Vertical version	1,560 mm x 750 mm x 620 mm (61.4" x 29.5" x 24.5")	2,060 mm x 750 mm x 620 mm (81.1" x 29.5" x 24.5")	3,060 mm x 750 mm x 620 mm (120.5" x 29.5" x 24.5")

GEAR MOTOR SPECIFICATIONS			
50 Hz / 400V motor - power	2.2 kW (3.0 hp)	3 kW (4.0 hp)	4 kW (5.4 hp)
Standard rotor speed	176 rpm	278 rpm	142 rpm
Rated rotor torque	119 Nm (88 ft-lb)	103 Nm (76 ft-lb)	270 Nm (199 ft-lb)
60 Hz / 460V or 575V motor - power	2.2 kW (3.0 hp)	3 kW (4.0 hp)	3.7 kW (5 hp)
Standard rotor speed	213 rpm	328 rpm	181 rpm
Rated rotor torque	99 Nm (73 ft-lb)	87 Nm (64 ft-lb)	195 Nm (144 ft-lb)

**Additional output speeds are available upon request. Change in output speed will also impact the torque rating.*

CERTIFICATIONS*	
CE, PED, 3A, CRN (on request)	
*The equipment is engineered in accordance with the CE Pressure Equipment Directive, and is exempt from the requirements of ASME Section VIII, Unfired Pressure Vessels due to it's diameter. The design is to EHEDG standards, but a certificate was not pursued.	

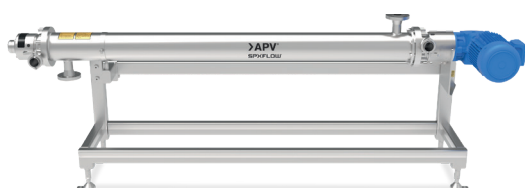
ADAPTABILITY



Vertical Frames
Available for 1 to 4 cylinders



Horizontal Frames
Available for 1 to 6 cylinders



Global Service and Support

SPX FLOW offers a broad range of genuine spare parts and service plans that extend the lifecycle of our products. The SPX FLOW Genuine Spare Parts Service includes access to our full engineering capabilities and regular equipment service audits. Our experienced team has the engineering expertise

necessary to ensure reliable, effective, and optimized solutions for any equipment-based issue. Featuring detailed equipment service audits, this parts service can predict and prevent productivity loss, unexpected downtime, and reduced process output. Additionally, SPX FLOW offers certification, safety and training designed for

Spare Parts Kits Available:

- Service seal kit
- Overhauling seal kits
- Opposite drive end head seal kit
- Drive end head seal kit
- Rotor seal kit
- Drive assembly service kit
- Heat exchange section service kit
- Tool kits



SPX FLOW, Inc. reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. The green "➤" is a trademark of SPX FLOW, Inc.

For more information, visit www.spxflow.com.

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