

» VANE AND ECCENTRIC DISC PUMPS



Tapflo is a renowned provider of Positive Displacement Pumps, Vacuum Pumps and Drum Pumps with a strong focus on delivering fully integrated and customised solutions. Our core offering consists of Vane Pumps, Mechanically Sealed Eccentric Disc Pumps, Sealless Eccentric Disc Pumps and Barrel Emptying Solutions based on a venturi principle.

Capable of flows up to 140 m<sup>3</sup>/hr, pressures up to 12 Bar and available in materials ranging from Ductile Cast Iron to Stainless Steel AISI 316L, Tapflo's range of Rotary Positive Displacement Pumps are ideally suited to a wide range of applications for thin to semi-viscous fluids within a plethora of industries. Thanks to our innovative and versatile designs, Tapflo Pumps are ideally suited to the following industries and markets.

Market	Applications & Benefits
Food	<p>Transfer, Mixing &amp; Dosing of Beverages, Dairy Products, Baked Goods (doughs, creams, chocolates etc...), Sauces, Pet Care Foods &amp; Meat, Fish &amp; Poultry Processing.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Low shearing &amp; pulsation of process fluids – preserves integrity &amp; texture of ingredients</li> <li>• Sealless offerings for high hygienic compliance &amp; CIP friendly</li> <li>• Ability to transfer &amp; mix process fluids with high solids content</li> <li>• Simple &amp; innovative design facilitates reduced maintenance times and increased reliability</li> </ul>
Winery	<p>Blending, Filling, Fining, Transfer, Breeding &amp; Bottling of Wines, Lees, Juices, Musts &amp; Cleaning Agents.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Multi-functional Eccentric Disc Design which can be used for all transfer applications in the wine industry</li> <li>• Taste &amp; Aroma remain unchanged</li> <li>• Constant Flow with Low Pulsation &amp; Low Shear Rate</li> <li>• Easy control of Oxygen Dissolution</li> <li>• Strong Suction &amp; Compression Capabilities facilitate Pipe Stripping</li> <li>• Mobile Unit with On-Board Controls with Remote Touch Interface</li> </ul>

Market	Applications & Benefits
<b>Chemical</b>	<p>Transfer, Mixing &amp; Dosing of Solvents, Polymers, Acids, Paints, Plastics, Resins &amp; Dyes</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• ATEX Rated</li> <li>• Innovative Seal Front Pull Out Disassembly System facilitates quick maintenance without the need for disassembling the Drive Assembly or Pipework</li> <li>• Wide Material Options</li> <li>• No Retention Zones in the Pump – Easy Cleaning</li> <li>• Constant Flow, Low Pulsation, suitable for Shear Sensitive Fluids</li> </ul>
<b>Cosmetic &amp; Pharmaceutical</b>	<p>Transfer, Mixing &amp; Dosing of Creams, Lotions, Soaps, Shampoos, Gels, Mascaras, Perfumes, Syrups, Vitamins, Ointments, Glycerines &amp; Pastes</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Sealless Design Free of Retention Zones – Leak Free &amp; Hygienic</li> <li>• CIP &amp; SIP Suitable</li> <li>• High Vacuum &amp; Compression Capabilities enable complete stripping of pipework</li> </ul>
<b>Water &amp; Waste Water Treatment &amp; Mining</b>	<p>Transfer of Waste Waters, Sludges, Foams &amp; Scums as well as Metering or Dosing of Treatment Additives</p> <p><b>Benefits for safe, reliable as well as more efficient &amp; effective treatment:</b></p> <ul style="list-style-type: none"> <li>• ATEX Rated</li> <li>• High Volumetric Efficiency</li> <li>• Very Low Shear Rates</li> <li>• Constant Flow &amp; Low Pulsation</li> <li>• High Vacuum &amp; Compression Capabilities</li> <li>• Solids Handling</li> </ul>
<b>Oil &amp; Gas</b>	<p>Loading, Unloading, Transfer &amp; Metering of Hydrocarbons &amp; constituent components such as Oils &amp; Lubricants, Light &amp; Heavy Oils, Diesel, Ethanol, Methanol &amp; Kerosene</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• ATEX Rated</li> <li>• High Volumetric Efficiency</li> <li>• Very Low Shear Rates</li> <li>• Constant Flow &amp; Low Pulsation</li> <li>• High Vacuum &amp; Compression Capabilities – Stripping of lines to reduce loss of product &amp; increase profitability</li> </ul>

## JV SERIES SLIDING VANE PUMPS



Specifications & Material Options	
Capacity Range	Up to 140 m <sup>3</sup> /hr
Pressure Range	Up to 12 Bar
Temperature	-10°C to +250°C
Speed Range	Up to 1000 rpm
Connections	Flanged, Clamp, SMS, Macon, RJT, CAM Lock, DIN, Threaded
By-Pass	Integrated Double By-Pass Optional
Heating Jacket	Optional
Pump Body, Cover, Foot, By-Pass & Shaft	Ductile Iron Steel Stainless Steel AISI 316L
Rotor	Ductile Iron Stainless Steel AISI 316L
Vaness	Ductile Iron, PEEK, Bronze, Steel
Bearings	Carbon, Bronze, Ductile Iron, PEEK
Seals (DIN 24 960 / EN 12 756)	FKM, FEP/FKM, EPDM, NBR

Available in 6 different sizes, the number in the size denotes the Max Flow Rate:

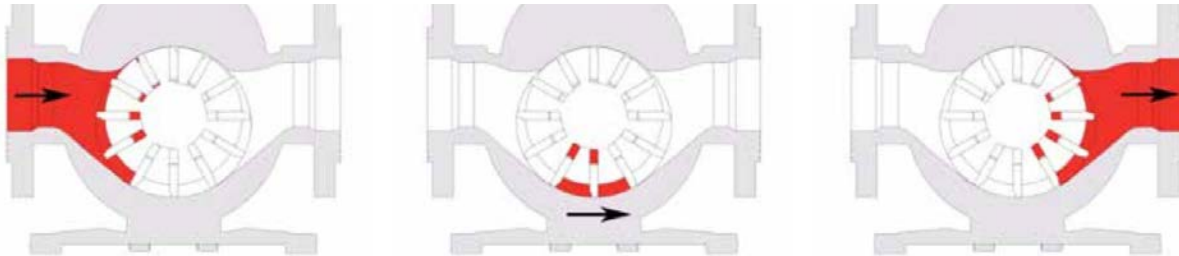
Model	JV15	JV25	JV40	JV60	JV100	JV140
Cylinder Capacity, Litres	0.25	0.42	0.67	1.00	1.67	2.34
Max Speed, rpm	1000	1000	1000	1000	1000	1000
Max Flow Rate, m <sup>3</sup> /hr	15	25	40	60	100	140

### Features & Benefits of JV Sliding Vane Pumps:

- Excel at handling low viscosity liquids such as LP gas (propane), ammonia, solvents, alcohol, fuel oils, gasoline, and refrigerants.
- No internal metal-to-metal contact and self-compensate for wear, enabling them to maintain peak performance.
- Though efficiency drops quickly, they can be used up to 500 cPs
- Front Pull Out Seal Replacement
- Dry priming & Reversible
- Optional Integrated Double By-Pass & Heating Jacket
- Temperatures up to 250°C
- Differential pressures up to 12 Bar
- FDA Approved & ATEX Rated

**Key Fluids:** Excel at handling low viscosity liquids such as LP gas (propane), ammonia, solvents, alcohol, fuel oils, gasoline, and refrigerants & low viscosity aqueous solutions.

**Operating Principle:**



The Sliding Vane Pump Operation is characterised by an eccentrically mounted, slotted rotor rotating within a stator (pump body). Thanks to the mounting of the rotor within the stator a crescent shaped cavity forms at the base of the stator. As the rotor turns, the sprung loaded vanes, which are mounted into the slots of the rotor, slide in and out, trapping fluid between themselves and moving them through the crescent cavity towards the pump discharge under pressure. The tight seal and tolerances between the vanes, stator & side plates facilitate excellent suction capabilities.

**Example of delivered product:**



<b>Application:</b>	Used Cooking Oil Tanker Offloading
<b>Model supplied:</b>	JV60c
<b>Specification:</b>	Horizontal, Long Coupled, Vane Pump with
<b>Fluid:</b>	Used Cooking Oil
<b>Temperature:</b>	30-70°C
<b>Density:</b>	0.87
<b>Viscosity:</b>	~17 cPs
<b>Rated Capacity:</b>	20, 40 & 50 m <sup>3</sup> /hr
<b>Rated Speeds:</b>	356, 659 & 810 rpm
<b>Rated Frequencies:</b>	25, 50 & 63 Hz
<b>Differential Pressure:</b>	9 Bar
<b>By-Pass Set Pressure:</b>	10 Bar
<b>Connections:</b>	DN100 (PN16) Flanged
<b>Construction:</b>	Cast Iron
<b>Vanes:</b>	6 x PEEK w/ Push Rods, without holes
<b>Ball Bearings:</b>	Standard
<b>Bushings:</b>	Bronze
<b>Friction Bushings:</b>	Cast Iron
<b>Shaft Sealing:</b>	Single Mechanical Seal, TC/TC/FKM (DIN24960-EN12756)
<b>Baseplate:</b>	Steel
<b>Geared Motor:</b>	22 kW / 4 Pole / 400-690V / 3 Ph / 50-60 Hz / IP55 / Cass F / IE3 Premium Efficiency Class / 3 x PTC Thermistors & Anti-Condensation Heater (Preheat resistance at shutdown)

**JE SERIES ECCENTRIC DISC PUMPS**



Available in 6 different sizes with 3 models per size, the number in the size denotes the Max Flow Rate:

Specifications & Material Options	
Capacity Range	Up to 96 m <sup>3</sup> /hr
Pressure Range	Up to 10 Bar
Temperature	-10°C to +250°C
Max Viscosity	~15000 cPs
Speed Range	Up to 1000 rpm
Connections	Flanged, Clamp, SMS, Macon, RJT, CAM Lock, DIN, Threaded, Hose Tailed
By-Pass	Integrated Double By-Pass Optional
Heating Jacket	Optional
Pump Body, Cover, Foot, By-Pass & Shaft	Ductile Iron, Steel, Stainless Steel AISI 316L, Stainless Cast Iron
Piston	Ductile Iron, Stainless Cast Iron
Cylinder	Ductile Iron, Stainless Steel AISI 316L Steel
Bearings	Carbon, Bronze, Ductile Iron, PEEK
Seals (DIN 24 960 / EN 12 756)	FKM, PTFE, FEP/FKM, EPDM, NBR

Model	Size 1			Size 2			Size 3		
	JE1	JE3	JE5	JE6	JE9	JE12	JE16	JE20	JE24
Cylinder Capacity, Litres	0.02	0.036	0.053	0.016	0.24	0.32	0.53	0.65	0.78
Max Speed, rpm	1000	1000	1000	650	650	650	550	550	550
Max Flow, m <sup>3</sup> /hr	1	3	5	6	9	12	16	20	24

Model	Size 4			Size 5			Size 6		
	JE30	JE36	JE42	JE50	JE58	JE66	JE76	JE86	JE96
Cylinder Capacity, Litres	1.19	1.38	1.57	2.51	2.82	3.13	4.45	4.99	5.54
Max Speed, rpm	450	450	450	350	350	350	300	300	300
Max Flow, m <sup>3</sup> /hr	30	36	42	50	58	66	76	86	96

## Features & Benefits of JE Eccentric Disc Pumps:

- Efficient alternative to Lobe Pumps – don't slip with low viscosity fluids
- Better for shear sensitive & low viscosity fluids
- Strong Compression & Vacuum Capabilities – Excellent for line stripping
- Capable of precise dosing & accurate volumetric metering
- Front Pull Out Seal Replacement
- Dry priming & Reversible
- Optional Integrated Double By-Pass & Heating Jacket
- Temperatures up to 250°C
- Differential pressures up to 10 Bar
- FDA Approved & ATEX Rated

**Key Fluids:** Yoghurts, Creams, Mousses, Doug Oih, ntments & Lotions, Polymers, Paints & Oils.

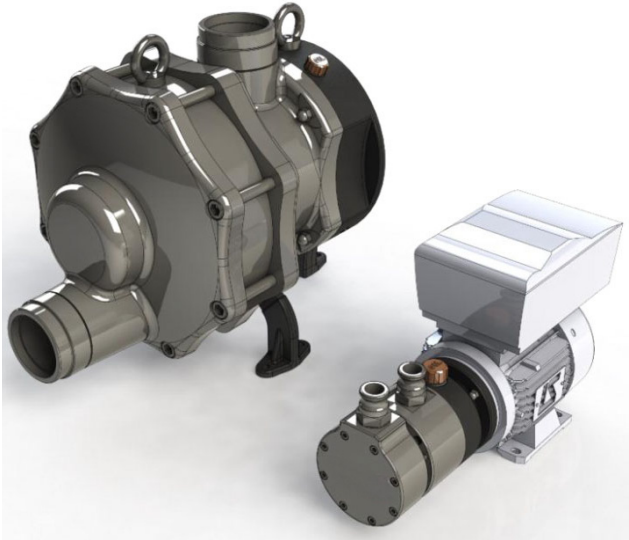
## Operating Principle:



The Eccentric Disc Pump Operation is characterised by a disc eccentrically rotating within a cylindrical pumping body. As the disc moves within the body, 2 distinct alternating chambers are created which form a vacuum at the inlet area and a compression effect at the discharge of the pump. This alternating action is repeated twice per rotation of the disc, once for the inner and once for the outer pumping chamber, as displayed in the above image. As the chambers are rotating in a pair, 180° apart, suction compression and discharge pressure are generated in unison. This enables a constant flow rate and discharge pressure during operation.

This unique operating principle provides a reliable alternative to Gear & Lobe Pump technologies which suffer when pumping non lubricating fluids. Furthermore, as there is no internal wear interference over time, volumetric efficiency is retained over time. Constant wear within Gear & Lobe Pumps also mean that there is higher product shear as a result of internal slip, this is avoided in Eccentric Disc Pumps which makes them ideally suited for low viscosity products which are susceptible to shearing, such as yoghurts.

**JEB SERIES SEALLESS ECCENTRIC DISC PUMPS CAPACITY RANGE**



Specifications & Material Options	
Capacity Range	Up to 42 m <sup>3</sup> /hr
Pressure Range	Up to 10 Bar
Temperature	-5°C to +150°C
Speed Range	Up to 1000 rpm
Connections	Flanged, Clamp, SMS, Macon, RJT, CAM Lock, DIN, Threaded, Hose Tailed
By-Pass	Integrated Double By-Pass Optional
Heating Jacket	Optional
Construction	Stainless Steel AISI 316L


















Standard range is available in 3 different sizes with between 3 - 5 models per size, the number in the size denotes the Max Flow Rate, and larger units are available on request: Rate:

	Size 1					Size 2			Size 3		
Model	JEB01	JEB02	JEB05	JEB08	JEB1.1	JEB1	JEB3	JEB5	JEB6	JEB9	JEB12
Cylinder Capacity, Litres	2.3	4.5	9.5	15	18.8	20	36	53	160	240	320
Max Speed, rpm	1000	1000	1000	1000	1000	1000	1000	1000	650	650	650
Max Flow, m <sup>3</sup> /hr	0.1	0.2	0.5	0.8	1.1	1	3	5	6	9	12

**Features & Benefits of JEB Sealless Eccentric Disc Pumps:**

- Efficient alternative to Lobe Pumps – don't slip with low viscosity fluids
- Better for shear sensitive & low viscosity fluids
- Strong Compression & Vacuum Capabilities – Excellent for line stripping
- Capable of precise dosing & accurate volumetric metering
- Sealless
- No Sealing Gasket & Free of Retention Zones
- CIP & SIP compatible
- Dry priming
- Optional Integrated Double By-Pass & Heating Jacket
- Various adjustable porting options

Porting Options:

Position No.	1. Top Facing	2. Left Facing	3. Bottom Facing	4. Right Facing
Suction Port (Red)			N/A	
Discharge Port (Red)				
Position No.	1. Top Facing	2. Left Facing	3. Bottom Facing	4. Right Facing
Suction Port (Red)				
Discharge Port (Red)				



**JAF SERIES BARREL FILLING & EMPTYING PUMPS & KIT**



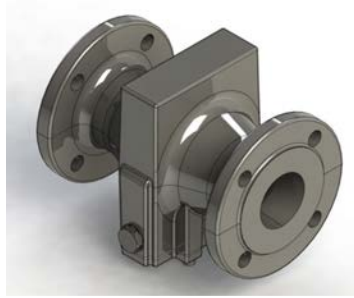
Features & Benefits
Emptying or Filling or 200 Litre Barrel in <3 Minutes
Compressed Air Driven & based on Venturi Principle
Self-Priming
Pump Element has no contact with Process Fluid = No Mechanical Wear. Parts in contact are in AISI 316L
ATEX Rated
Low Noise Level <78 dB(A)
JAF1 Pump = Barrel Filling
JAF2 Pump = Barrel Filling & Emptying
Customisable Kit can comprises:
<p><b>JAF 1 or 2 Pump</b></p> <ul style="list-style-type: none"> <li>Integrated Pressure Regulator &amp; Safety Valve (JAF 2 Pump)</li> <li>Jump Trolley with Integrated Drainer &amp; High Level Valve</li> <li>Hose Reel &amp; Hose</li> <li>Quick Release Couplings, Connectors &amp; Lances</li> </ul> <ul style="list-style-type: none"> <li>Kit can easily be manoeuvred through doorways thanks to compact foot print of 85 x 70 cm</li> </ul>

JAF1 – Barrel Filling Pump	JAF2 – Barrel Filling & Emptying Pump
<p><i>Both Pumps are provided with Quick Release Couplings &amp; Lances to facilitate product transfer</i></p>	

**Area of Application:**

- Safe handling & transfer of volatile & aggressive fluids with limited to no maintenance requirements
- Removal of waste fluids from sumps & trays

**JPF SERIES DOUBLE GRID  
SUCTION FILTERS**

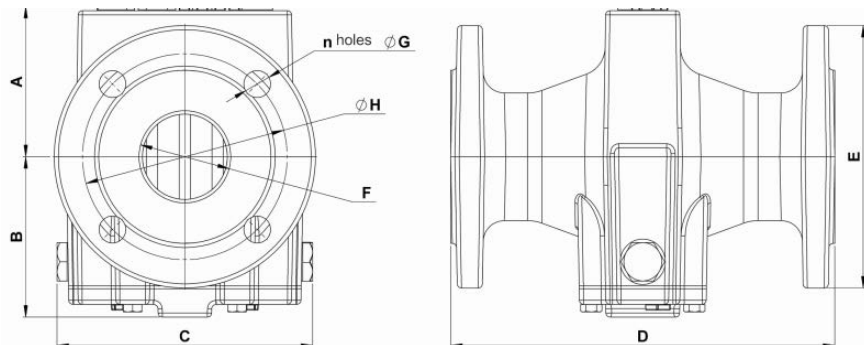


**JPFB  
Basket  
Strainer**



Features & Benefits
Protection of Pumps & Installations from damage caused by foreign bodies & suspended solids in process media
Minimal Pressure Drop
Facilitates reduced Pump Maintenance & Cleaning
Double Filtering Grids comprising a 4 mm ø Fixed Lid Screen & 1 mm ø Removable Screen
Grids in Steel or Stainless Steel AISI 316
Filter Bodies in Ductile Cast Iron or Stainless Steel AISI 316L
Adaptable Connections:
<ul style="list-style-type: none"> <li>Flanged (DIN or ANSI)</li> <li>Food Grade (SMS, Tri-Clamp etc...) CAM Lock</li> <li>Threaded (BSP or NPT)</li> <li><b>Counter Connections available on request</b></li> </ul>
Can be purchased individually or pump mounted
Also available in JPFB Basket Strainer Form with 4 mm ø Screens (Std.)

Available in 7 different sizes to fit any & all JE Eccentric Disc & JV Sliding Vane Pumps:



Size	JPF1.1	JPF5-10	JPF12-25	JPF24-40	JPF42-60	JPF66-100	JPF96-140
Max Flow Rate, m <sup>3</sup> /hr	1.1	10	25	40	60	100	140
Max Pressure, Bar	10						
Temperature Range, °C	-10 to +250°C						
Weight, Kg	N/A	13.5	18.5	23	27	35.7	N/A
Dimensions	A	86	106	116	126	138	N/A
	B	93	113	125	135	145	
	C	151	181	212	227	252	
	D	220	272	319	319	329	
	E	165	185	200	220	250	
Flanges PN16	F	50	65	80	100	125	N/A
	n	4	4	8	8	8	
	G	19	19	19	19	19	
	H	125	145	160	180	210	