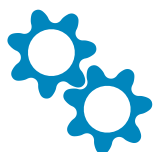




## No noise hydraulic pumps



Continuum ® helical rotor pumps



Screw pumps



Screw pumps for USA



Seal-less leakage free pumps



# Settima products

- *Settima* designs and manufactures hydraulic screw pumps and helical rotors pumps.
- *Settima* focused the production on no noise pumps
- *Settima* pumps can be used in every hydraulic applications and in systems of many types.
- *Settima* Screw pumps and helical rotor pumps are positive displacement rotary pumps. There are only few moving parts. There is only a **rolling** action between the drive screw and the idler ones, without oil encapsulations and trapping. **The rolling action eliminates noise and vibration.**



# The market proposal



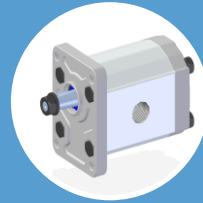
High flow



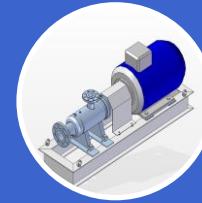
No Noise =  
Better  
environment



No-Pulsations  
= Longer Life-  
time



High pressure



High and low  
viscosity fluids



Metering

Settima solutions for many requests

## Settima product range



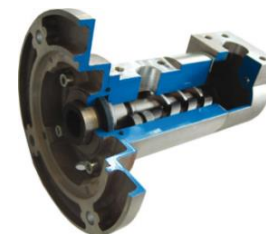
### Continuum® series

No noise no pulsation helical rotor pumps for Industrial and mobile applications up to 280 bar (small and medium flows)



### Screw pump series

Low noise low pulsation screw pumps for Industrial and mobile applications up to 100 bar (medium large flows)



### Flow meters series

High speed rotation volumetric metering devices (small medium and large flows)

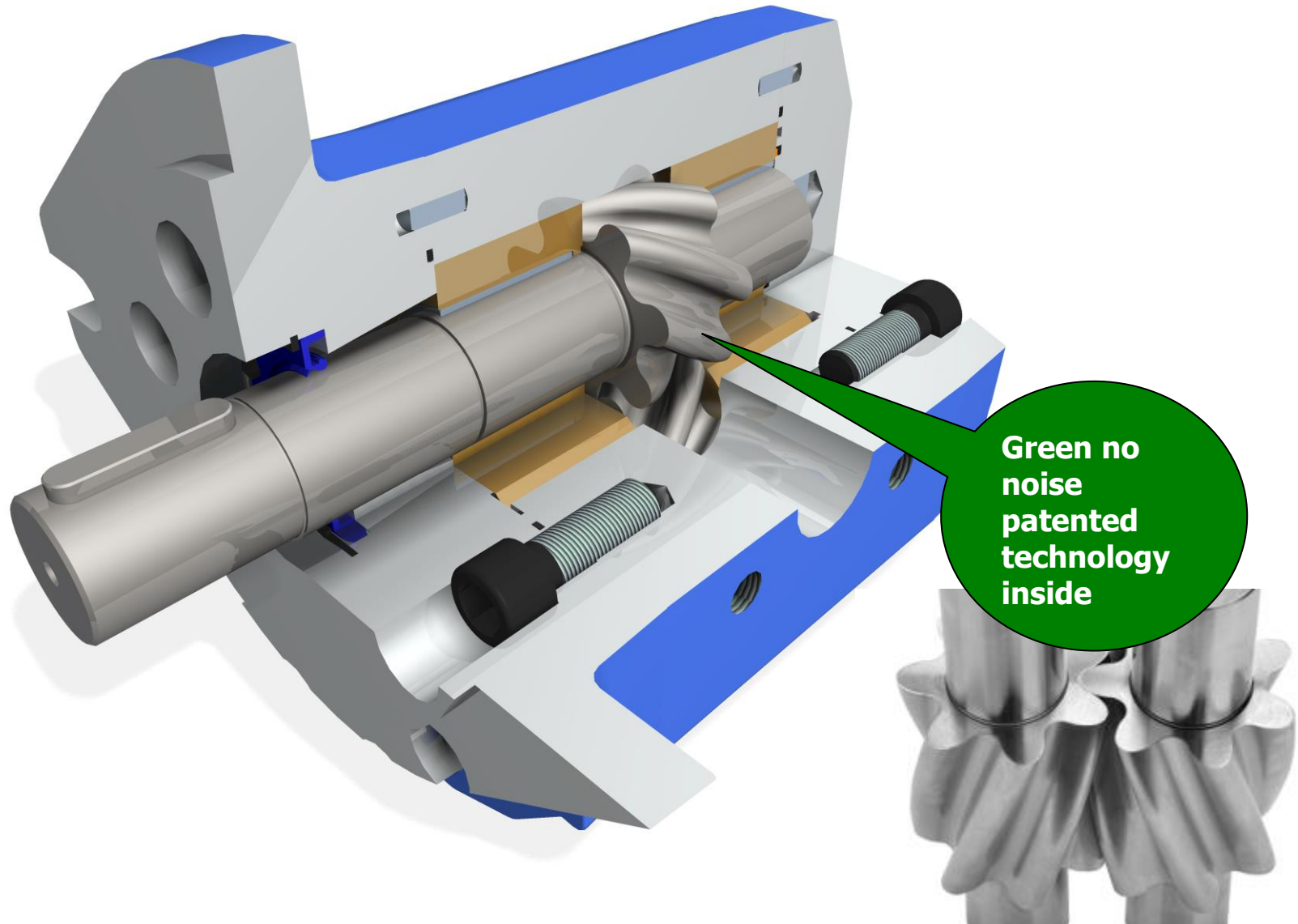


# Continuum<sup>®</sup> product range

## Special no noise helical rotor pump (2 helical rotors pump)

<b>Continuum<sup>®</sup> series</b>	Applications: Industrial application up to 280 bar (power hydraulic, mobile, high pressure lube, elevators) Range: 2cc → 220cc
<b>2VHL Continuum<sup>®</sup> series</b>	Industrial application up to 25 bar (very high viscosity lube services) Range: 28cc → 160cc

# How is done a Continuum<sup>®</sup> pump



Green no  
noise  
patented  
technology  
inside

Patents approved and pending

# Screws pump product range

## **SMT** series

Industrial application up to 100 bar

## **SMT16B** series

Industrial application up to 40 bar

## **SMT8B** series

Industrial application up to 15 bar

## **SFO** series

Marine & Industrial application up to 20 bar

## **FOTP** series

Marine & Industrial application up to 70 bar

## **SMAPI** series

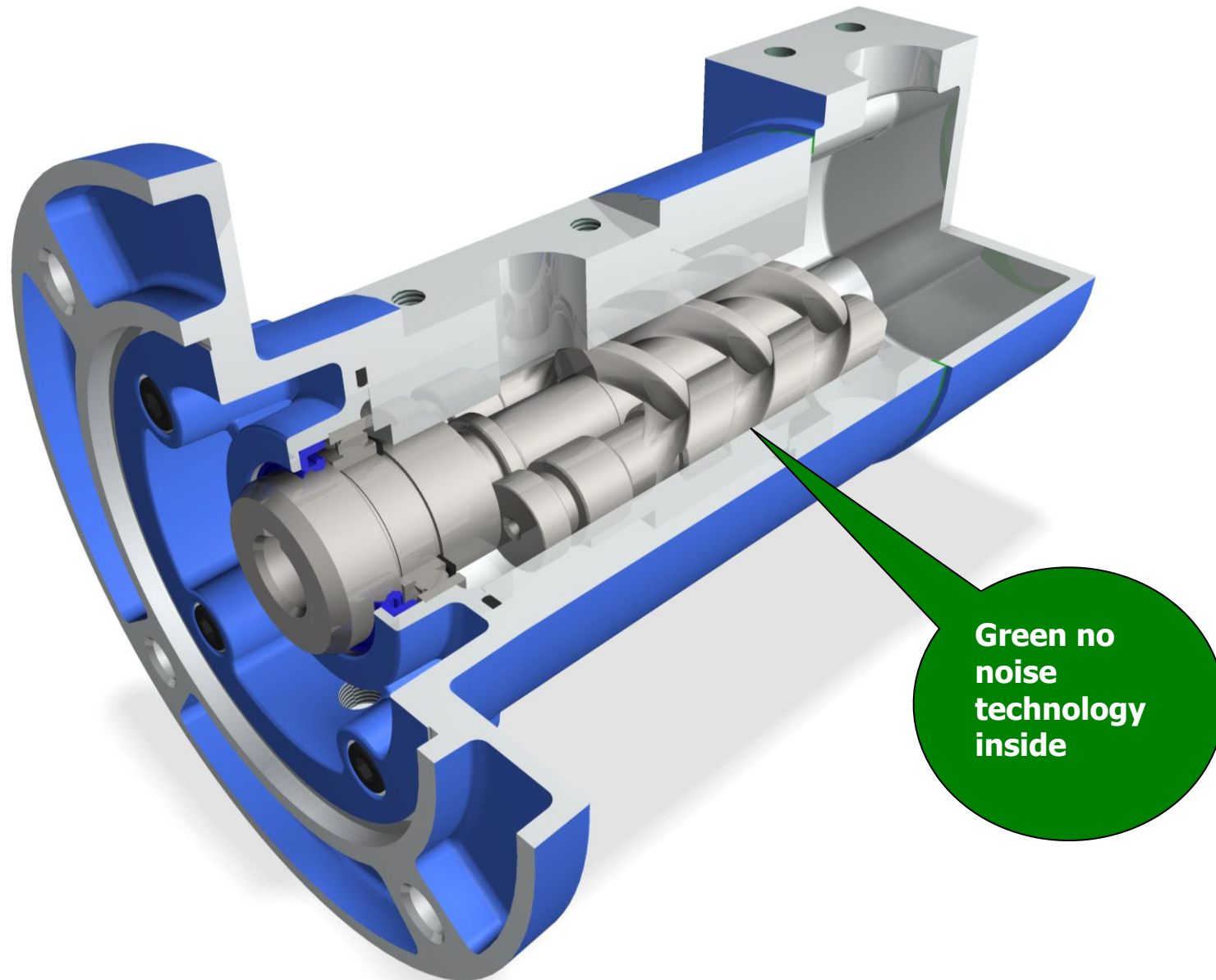
Industrial API676 & marine application up to 60 bar

## **SM** series / **SMU** series (USA market) / **SMTU** series (USA market)

Lift/elevators applications up to 80 bar



# How is done a 3 screws pump?



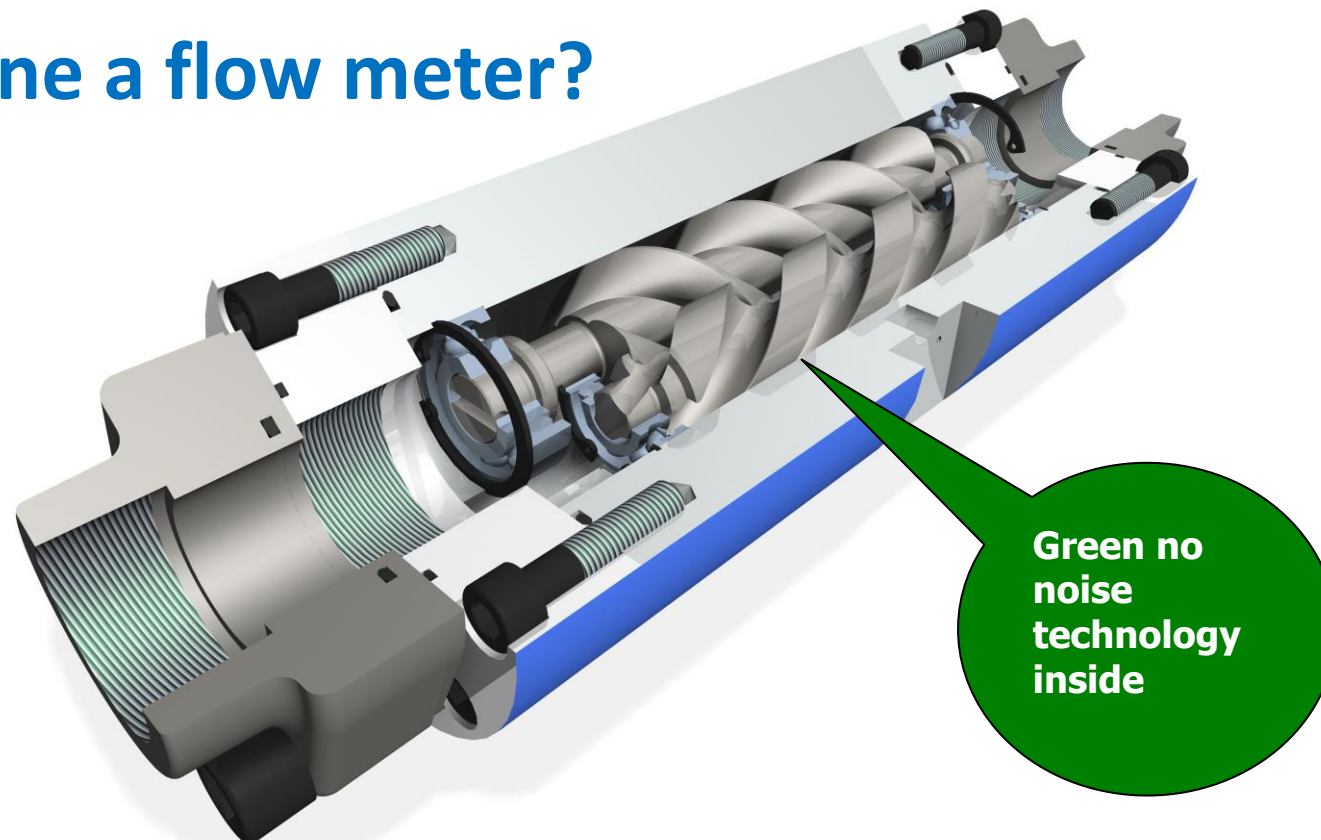
Green no  
noise  
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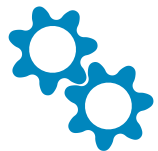


# Flowmeters Product range

<b>FL series</b> Flow meter	<b>FL32</b> (140 L/m, 26cc)
	<b>FL40</b> (350 L/m, 58cc)
	<b>FL55</b> (800 L/m, 144cc)
	<b>FL70</b> (1.500 L/m, 266cc)
	<b>FL80</b> (2.500 L/m, 478cc)

## How is done a flow meter?





Continuum ® helical  
rotor pumps

# The NO NOISE & NO PULSATION Continuum ® helical rotor pumps



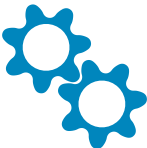
# Continuum<sup>®</sup> product range

## Special no noise helical rotor pump (2 helical rotors pump)

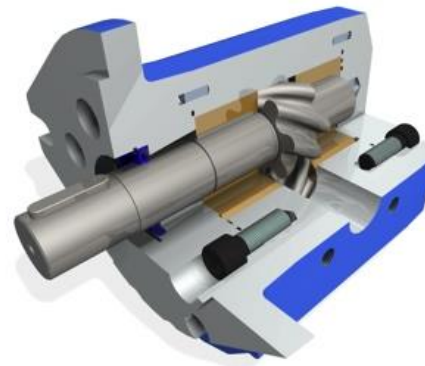
<b>Continuum<sup>®</sup> series</b>	Applications: Industrial application up to 280 bar (power hydraulic, mobile, high pressure lube, elevators) Range: 2cc → 220cc
<b>2VHL Continuum<sup>®</sup> series</b>	Industrial application up to 25 bar (very high viscosity lube services) Range: 28cc → 160cc

## Continuum<sup>®</sup> applications and main performances



TECHNOLOGY	DETAILED APP.	SIZE	CC	FLOWRATE (@1450rpm)	MAX PRESSURE	FLOW MEDIA
Continuum <sup>®</sup> helical rotors  	Marine power Hydraulic, Yacht building industry, Elevator, Lift, Hydraulics tyres lift, Power hydraulics, Injection moulding machines, Hydro power, Paper industry, Power units, Steering units, Forklift, Mobile compactors, Presses	GR28	2→13	3→18,6L	280bar  (Please contact Settima for single pressure data for each cc)	Mineral oils , Synthetic oils
		GR33	10→18	14,5→26,1		
		GR38	16→28	22,8→40,7		
		GR47	28→50	40,3→72,4		
		GR55	50→90	72,7→130,9		
		GR72	94→220	136→290		
		GR92*				
GR106*						

\* Available soon



Manufactured also according to USA standards

# The innovation behind the Continuum<sup>®</sup> pumps

Helical rotor pumps for high pressure low noise applications

Patents Approved and pending

One of the most important request from the industrial world is to create a better working environment, which is synonymous of better efficiency, production lower cost and better life quality of workers. The reduction of function noise goes with no doubt into that direction.

Hydraulic pumps, above all those for high pressure, entail noise and/or vibration level that are unacceptable for certain new applications. This is the main reason why *Settima* has designed a new gear pumps generation capable to eliminate acoustic emissions.

Parameters influencing emissions of hydraulic noise are:

- cavitation
- pressure peaks arising from trapping fluid between gear teeth
- ripple or flow pulsation

*Continuum*<sup>®</sup> is capable to eliminate those parameters causing noise.

## No noise *Continuum*<sup>®</sup> concept

Internationally patented:

- the rotors profile
- the screw step
- the inner force balancing

## Main *Continuum*<sup>®</sup> advantages

- average 15 db(A) less noise than standard external gear pump
- reduced noise level for the machine operator and the surroundings
- cost saving by eliminating second noise reduction measures
- easy to replace thanks to compatibility with all the external gear pumps
- helps meet legal noise limit requirements

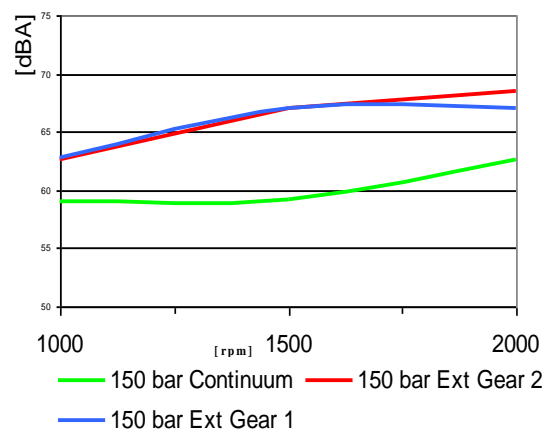
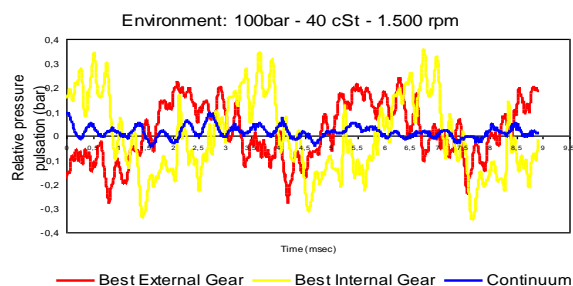
# GO SILENTLY



## The innovation behind

### KNOCK DOWN THE NOISE:

- The especially studied rotor profile does not trap any fluid volume (no encapsulation chambers).
- The helical course (there is just a single point of contact between rotors) of the Continuum rotor profile makes a gentle transmission of movement and minimization of the any pulsation. Internal hydrostatic mechanisms are put in place in order to avoid trade-off with efficiency.



### Pulsation is harmful

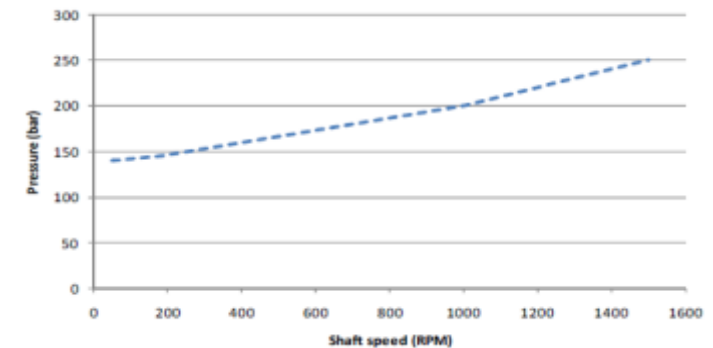
- In Hose and Pipe design is paramount pressure pulsation; in fact pressure pulsation affects the hydraulic system lifetime;
- Noise not only is generated by the pumps but in most cases the systems generated noise by amplifying the ripple. Consequent pressure drops are a noticeable energy consumption and reducing overall efficiency.



## Continuum<sup>®</sup> Main characteristics

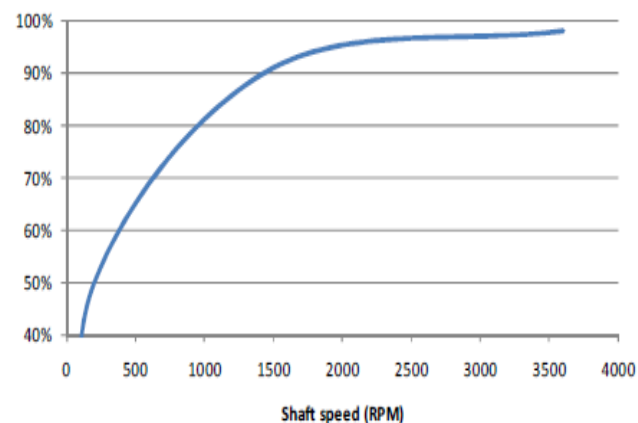
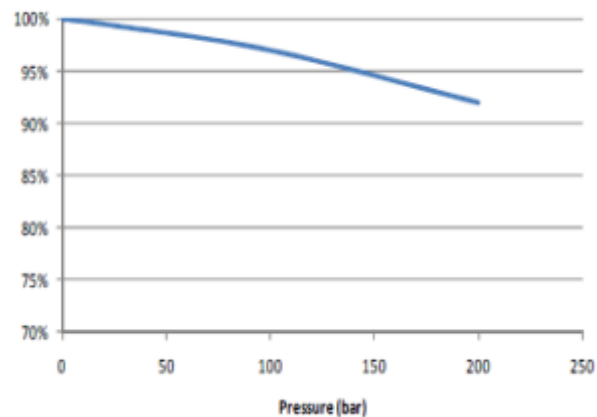
- Reduced energy requirement
- Lower noise levels
- High speed of operations: up to 6.500 rpm (only some models at special applications)
- Continuously variable flow rate: 0% to 100%
- Unidirectional pump to bi-directional pump/motor
- Intermittent operation at high pressure and low speed with no net flow is possible
- Driven by servo-motors and/or a variety of asynchronous motors
- Pressure up to 280 bar
- Can operate for some short time as reversible pump
- Fast reverse rpm is allowed: CCW max < 400 rpm
- Response time < 100ms due to very small internal mechanical inertia

Minimum speeds as a function of pressure



## Continuum<sup>®</sup> volumetric efficiency

The volumetric efficiency of Continuum<sup>®</sup> pumps is depending on both pressure and speed. Continuum<sup>®</sup> pumps achieve high volumetric efficiencies.

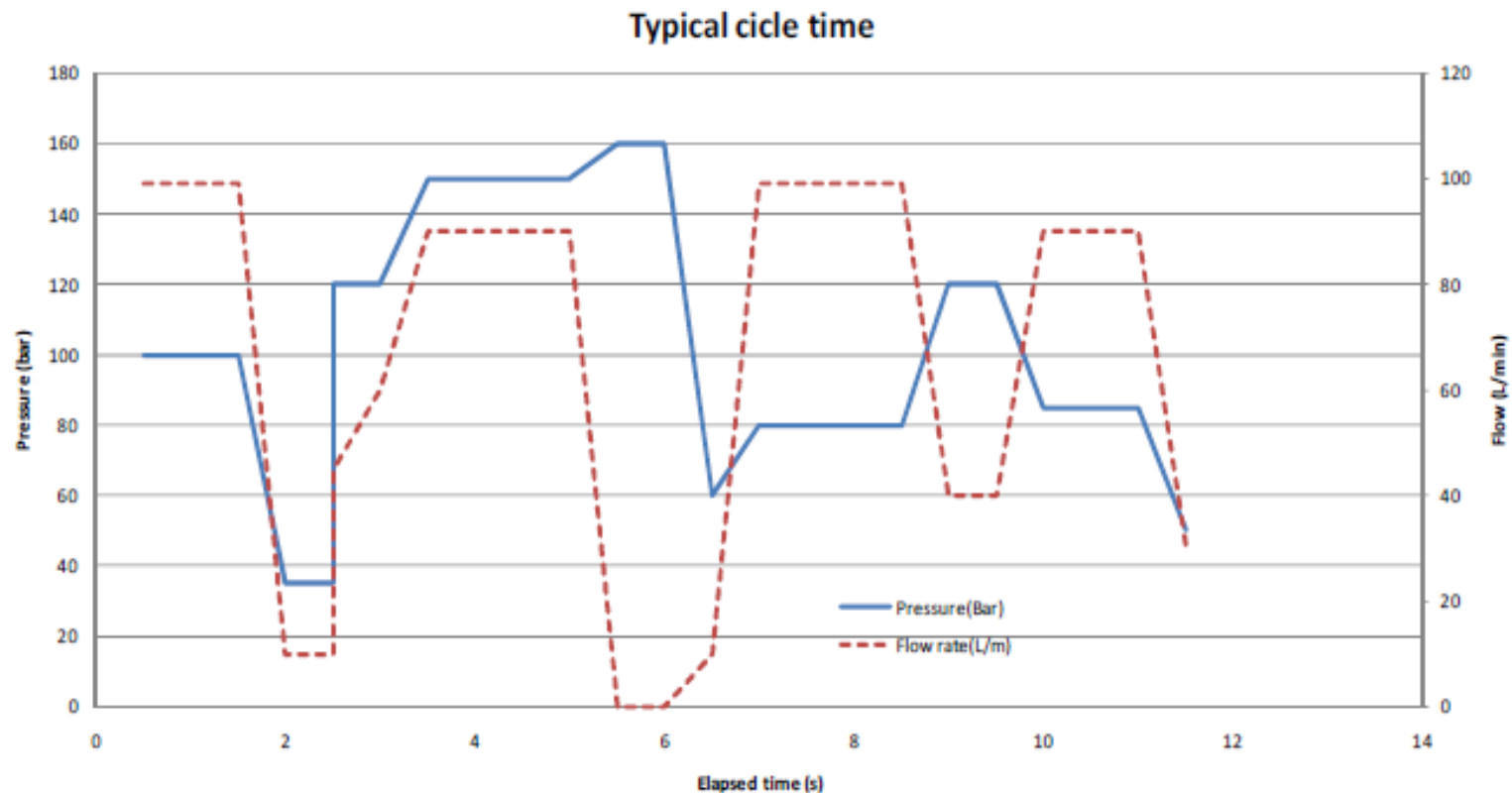




# Press application – an example

Example of a load cycle for a Continuum<sup>®</sup> pump with variable speed drive, used to control the pressure of the system

Maximum time for pressure holding duty (Q=0 l/min) is depending on pressure, duty cycle and pump type.



## Continuum<sup>®</sup> series – application sectors

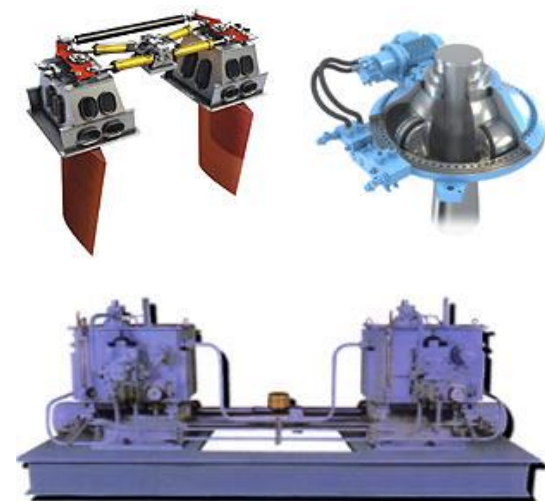
### Marine

- Marine power hydraulics
- Rudder actuators (tandem systems)
- Propeller pitch control
- Propeller drive (power transmissions from engine)
- Minipowerpacks (Dock operation, door control)
- Diesel pump
- Yacht building industry (Lifting systems: fly bridge cranes, tenderlift, elevators, walkways, transformers, automatic swimming ladders, side boarding ladders, pitch controls and operations)



### Building industry

- Elevator
- Lift
- Scissor lift
- Hydraulic tyres lift



## Continuum<sup>®</sup> series – application sectors

### Industrial

- Power hydraulics
- Injection moulding machines: servo drive systems, power
- Filtration-cooling
- Hydro power
- Energy, Steel, Paper industry
- Dosing/metering
- Presses, leather cutting syst.



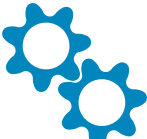
### Mobile

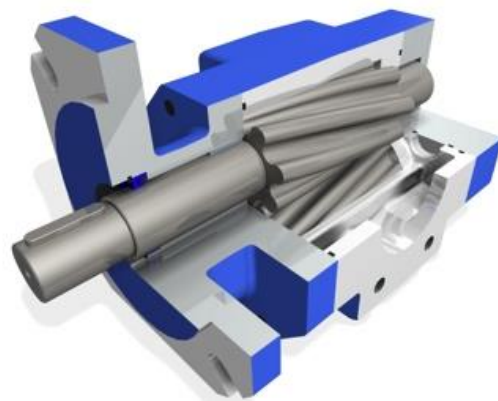
- Power Units
- Forklift
- Mobile compactors
- Steering units
- Parking systems
- Truck, Tractors



## 2VHL Continuum® series

### Product description

TECHNOLOGY	DETAILED APP.	SIZE	CC	FLOWRATE	MAX PRESSURE	FLOW MEDIA
Continuum® helical rotors 	Turbine & compressors (gear boxes, transmissions, bearings, shaft) Filtration Cooling Recirculation	GR47	28→63	40→90 L/min (@1450rpm)	25 bar (peak 40 bar)	Hydraulic fluids (mineral & synthetic), thermal oils, emulsions, polyglycol oil, heavy oil, other fluids upon request
		GR55	75→160	100→230 L/min (@1750RPM)		



## 2VHL Continuum<sup>®</sup> series – application sectors

### Power generation

- Oil filtration and cooling for turbine & compressors
- Turbine and compressors lubrication
- Filtration and cooling (gear boxes, transmissions, bearings, shafts)

### Marine

- Oil filtration
- Cooling
- Recirculation
- Transfer

### Wind energy

- Lubrication
- Filtration
- Cooling (gear boxes, transmissions, bearings, shafts)

### Industrial

- Lube services, Filtration & cooling



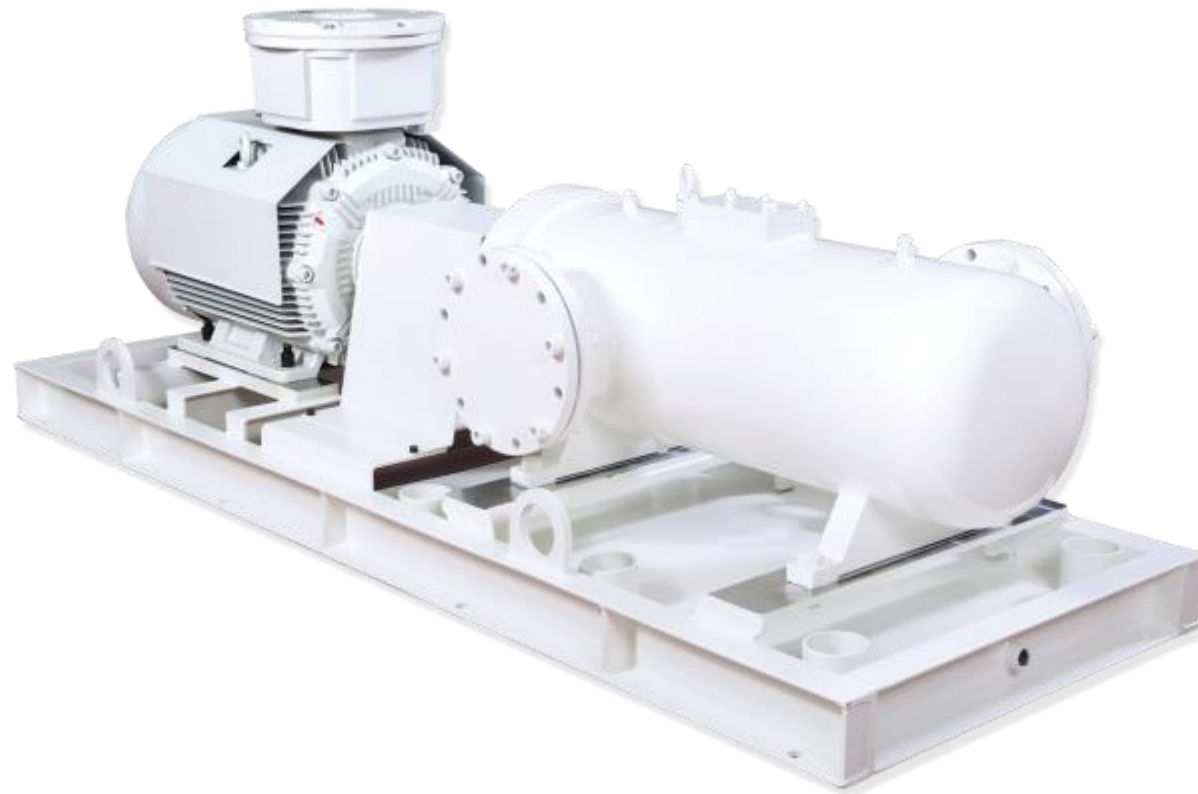




Screw pumps

Products

# The Screws pumps





# Screws pump product range

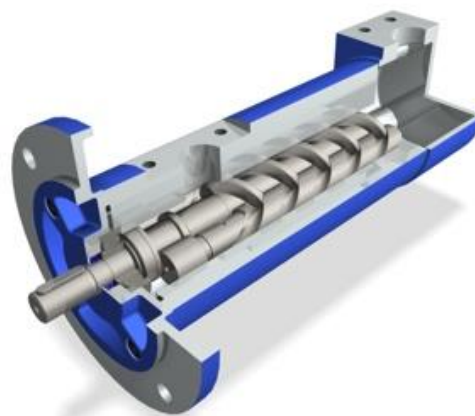
<b>SMT series</b> Industrial application up to 100 bar	4 → 1.700 LPM
<b>SMT16B series</b> Industrial application up to 40 bar	4 → 5.000 LPM
<b>SMT8B series</b> Industrial application up to 15 bar	10 → 190 LPM
<b>SFO series</b> Marine & Industrial application up to 20 bar	17 → 150 LPM
<b>FOTP series</b> Marine & Industrial application up to 70 bar	4 → 25 LPM
<b>SMAPI series</b> Industrial API676 & marine application up to 60 bar	4 → 5.000 LPM
<b>SM series / SMU series (USA market) / SMTU series (USA market)</b> Lift/elevators applications up to 80 bar	4 → 1.200 LPM



## SMT


### Dry & submersible screw pumps for industrial applications up to 100 bar

TECHNOLOGY	APPLICATIONS	SIZE	FLOWRATE	MAX PRESSURE	VISCOSITY & TEMPERATURE	FLOW MEDIA
<p>3 SCREW</p>  	<p><b>Industrial:</b> Lube service, Power hydraulics, Cooling, Heating, Driving &amp; filtering, chip conveyors, Gear box lube and filtration, etc.</p> <p><b>Power generation:</b> Lube oil service, Sealing oil service for gas turbine, Fuel transfer, Burner operations service etc.</p> <p><b>Marine:</b> Oil filtration &amp; cooling, Oil and fuel oil lubrication, Oil rigs, Refineries etc.</p> <p><b>Oil &amp; Gas:</b> Oil filtration &amp; cooling, Transport, Refineries, Off-shore platform etc.</p>	<p>GR20</p> <p>-</p> <p>GR110</p>	<p>4 → 1.700L</p>	<p>100 bar</p>	<p>0.2 cSt</p> <p>-</p> <p>100.000 cSt</p> <p>-40°</p> <p>-</p> <p>+350°</p>	<p>Mineral oil HLP and HLVP</p> <p>Ecologic fluids HETG, HEPG, HEE</p> <p>Synthetic fluid or emulsion: HFA oil-water emulsion, HFB water-oil emulsion 40% of vol., HFC water/glycole-water max 35 to 55%, HFDR phosphate ester</p> <p>Lubrication high viscosity oils</p> <p>Special synthetic fluid</p> <p>Fuel oil: MGO, MDO, Low sulfur MDO and HFO</p> <p>DMX (iso8217), DMA, DMB, DMC, DMZ</p> <p>Bunker oil, Furnace oil, Engine oil, Heating oil, Hydraulics oil.</p>



## SMT16B

Dry screw pumps for industrial & for API 676 applications up to 40 bar

TECHNOLOGY	APPLICATIONS	SIZE	FLOWRATE	MAX PRESSURE	VISCOSITY & TEMPERATURE	FLOW MEDIA
<p>3 SCREW</p> 	<p><b>Industrial:</b> Lube service, Power hydraulics, Cooling, Heating, Driving &amp; filtering, chip conveyors, Gear box lube and filtration, etc.</p> <p><b>Power generation:</b> Lube oil service, Sealing oil service for gas turbine, Fuel transfer, Burner operations service etc.</p> <p><b>Marine:</b> Oil filtration &amp; cooling, Oil and fuel oil lubrication, Oil rigs, Refineries etc.</p> <p><b>Oil &amp; Gas:</b> Oil filtration &amp; cooling, Transport, Refineries, Off-shore platform etc.</p>	<p>GR20</p> <p>-</p> <p>GR180</p>	<p>4 → 5.000L</p>	<p>40 bar</p>	<p>20 cSt</p> <p>-</p> <p>10.000 cSt</p> <p>-40°</p> <p>-</p> <p>+350°</p>	<p>Mineral oil HLP and HLVP</p> <p>Ecologic fluids HETG, HEPG, HEE</p> <p>Synthetic fluid or emulsion: HFA oil-water emulsion, HFB water-oil emulsion 40% of vol., HFC water/glycole-water max 35 to 55%, HFDR phosphate ester</p> <p>Lubrication high viscosity oils</p> <p>Special synthetic fluid</p> <p>Fuel oil: MGO, MDO, Low sulfur MDO and HFO</p> <p>DMX (iso8217), DMA, DMB, DMC, DMZ</p> <p>Bunker oil, Furnace oil, Engine oil, Heating oil, Hydraulics oil.</p>




Manufactured also according to USA standards

# SMT & SMT16B seal less configuration

The leakage free solution


Magnetic coupling: ultimate concept for total safety and no maintenance

TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE
3 SCREW 	Fuel transfer oil, corrosive liquids, high temperatures oil, chemicals and food	GR20 → GR60	4 → 1700L



# SMT & SMT16B: filtration pumps optionals G HD

Screw pumps for heavy duty filtration applications


TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE	MAX PRESSURE	FLOW MEDIA
3 SCREW 	Off-line filtration, off-line filtration cart/trolleys, filtration & oil transfer	GR20 → GR180	8→3.200L (@2950rpm)	40bar	Hydraulic oils, water-oil emulsions, water- glycol emulsions, diesel oils



# SMT & SMT16B: coolant & boiler pumps

## Optionals G/GZ HA TMK

High pressure coolant, fuel oil handling and filtration applications

TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE	MAX PRESSURE	FLOW MEDIA
3 SCREW 	Filtration systems, tool cooling, CNC machines, Chip conveyors	GR20 → GR80	4→1.800L (@2950rpm)	100bar	Cutting oils, water-oil emulsions, water-glycol emulsions, DMX, DMZ, fuel oils



# SMT & SMT16B series – application sectors

## Gear Box Lube oil

- High viscosity lube
- Air emulsion
- Heavy duty application

## Wind Energy

- High viscosity lubrication and filtration
- Cooling (gear boxes, transmissions, bearings, shaft)





# SMT & SMT16B series – application sectors

## Power generation

- Tandem solution for burner boosting systems
- Burners injection (power plants)
- Turbine & compressors lubrication (gear boxes, transmissions, bearing, shaft)
- Seal oil applications
- Jacking oil systems
- Filtration
- Lube service
- Seal oil services
- Oil transfer






## SMT & SMT16B series – applications sectors

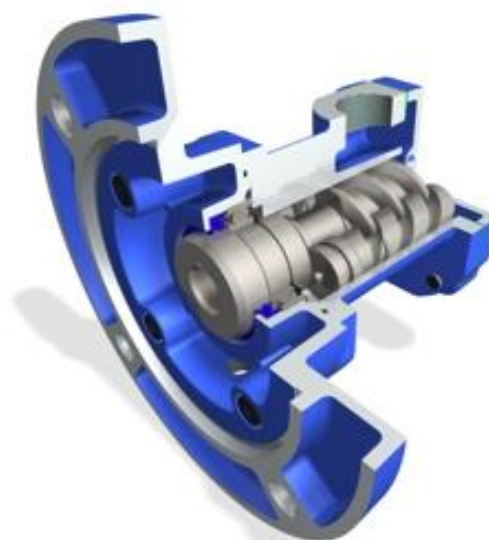
- **Power hydraulics**
  - Presses, machine tools, working machines, rolling mill, dumping equipment, elevators, carriage pitch propellers, hydraulic winches etc. Power unit, mini power packs.
- **Injection moulding machines / presses**
  - Cooling & filtration system
- **High & low pressure filtration systems**
  - Filtration systems, high pressure coolant, tool cooling, CNC machines (grinding machines, machine centers, deep hole drilling machines etc). Chip conveyors, Off-line filtration systems, off-line filtration cart/trolleys, filtration & oil transfer.
- **Hydro power**
  - Turbines & compressor lubrication power
- **Paper industry**
  - Lubrication, filtration



## SMT8B

Dry screw pumps for industrial applications – very compact design

TECHNOLOGY	APPLICATIONS	SIZE	FLOWRATE	MAX PRESSURE	VISCOSITY & TEMPERATURE	FLOW MEDIA
3 SCREW 	<b>Industrial:</b> Lube service, Cooling, Heating, Gear box lube and filtration, etc. <b>Power generation:</b> Lube oil service, Sealing oil service for gas turbine, <b>Marine:</b> Oil filtration & cooling, Oil and fuel oil lubrication, Oil rigs, Refineries etc. <b>Oil &amp; Gas:</b> Oil cooling.	GR32	15 → 190L	20 - 40 bar	10 cSt	Mineral oil HLP and HLVP Ecologic fluids HETG, HEPG, HEE Synthetic fluid or emulsion: HFA oil-water emulsion, HFB water-oil emulsion 40% of vol., HFC water/glycole-water max 35 to 55%, HFDR phosphate ester Lubrication high viscosity oils Special synthetic fluid, Hydraulics oil.
		-			1.000 cSt	
		GR60			-40° - +350°	



## SMT8B series – application sectors

### Wind energy

- Low pressure cooling
- Low pressure recirculation (pitch control)

### Industrial

- Low pressure cooling
- Off-line compact cooling systems
- Powerpacks cooling
- Chillers

### Mobile

- Mobile machines cooling
- Filtration
- Low pressure recirculation

### Cooling

- Off-line cooling system




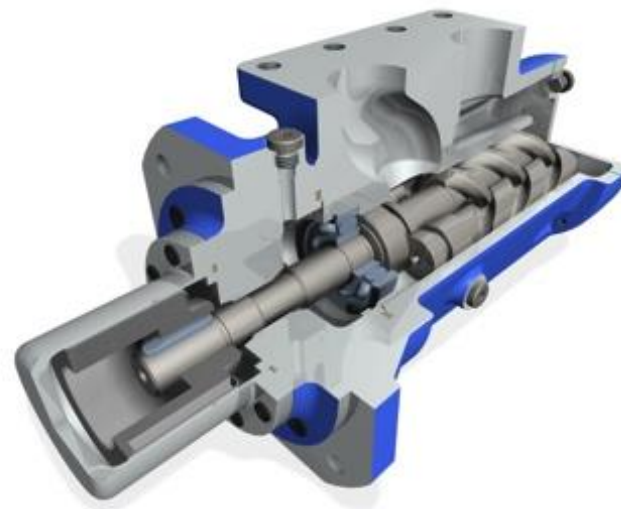
# SFO

## Fuel oil handling pump (marine – power generation)

In the SFO pumps the fluid has a uniform axial flow, which drives to a minimum of fluid pulsation and extremely quiet operation.


Designed to replace IMO ACE Series

TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE	MAX PRESSURE	FLOW MEDIA
3 SCREW 	Engine fuel filtration and boosting, burner boosting systems, burners injection	GR25 GR32 GR40	12→75L (@1450rpm)	20bar (40 bar intermittent)	Mineral oil, synthetic oil, oil water emulsions, fuels, marine distillate fuels, marine residual fuels.



## FOTP

Fuel oil handling pump (motor + pump + filter integrated)

TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE	MAX PRESSURE	FLOW MEDIA
3 SCREW 	Burner boosting systems, burners injection.	GR20 GR25 GR32 (*) GR40 (*)	8 → 30 LPM 35 → 150 LPM (*)	70bar	Fuels, marine distillate fuels, marine residual fuels, all fuels according to latest ISO 8217 (DMX, DMA, DMB, DMC, DMZ)

Designed also as solution for low viscosity and low sulphur content for new marine diesel fuels (MDO), according to latest ISO8217.





# SFO / FOTP – application sectors

## Fuel oil Handling – Marine & power generation

- Burner boosting systems
- Burners injection (shipyards and power plants)
- Feeder and circulation for fuels and lubricants in Marine environments
- Feeder, transfer and filling tank systems MDO, MGO, Low sulphur MDO, bunker oil
- Handling of DMX (according to latest ISO 8217), DMA DMB, DMC, DMZ


## Industrial

- Burners injection (cement, industrial combustion, ovens, furnaces)

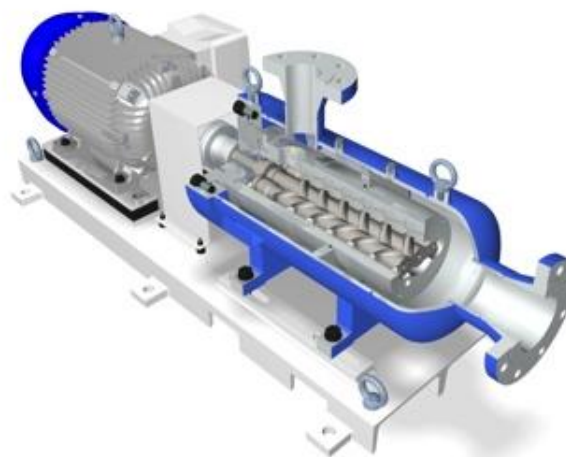


## SMAPI

Oil & gas, power generation, Fuel oil handling pump: **API676 compliant**

TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE	MAX PRESSURE	FLOW MEDIA
<p>3 SCREW</p> 	<p>Off-shore platform, refineries, petrochemical, turbine &amp; compressor, seal oil applications, jacking oil systems</p>	<p>GR20 → GR180</p>	<p>4 → 5.000 LPM</p>	<p>60 bar (80 bar intermittent)</p>	<p>Diesel fuel, HFO, MAZUT, bunker oil, furnace oil, engines oil, heating oil d&amp; mineral, oil-in-water emulsions HFA, polyglycol water HFC, hydraulic oils DIN 51524</p>

Smapi series HA designed for fuel compatibility with: SMX (ISO8217), DMA, DMB, DMC, DMZ





# SMAPI series – application sectors

## Oil & Gas

- Fuel oil pipe line
- Off-shore platform
- Refineries
- Petrochemical industry
- Off-line filters
- Transfer service

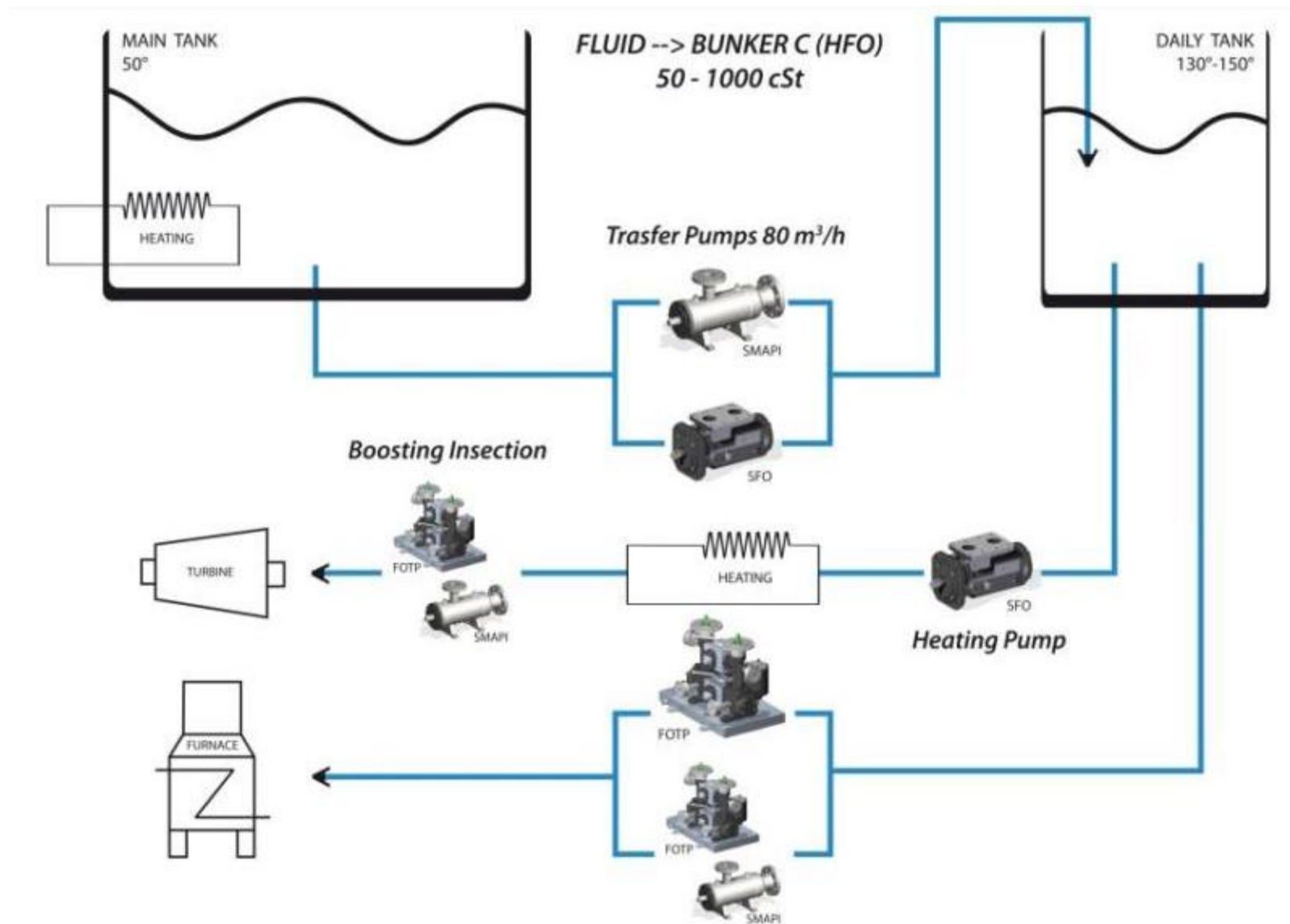
## Marine Industry

- High flow & pressure steam boiler ignition
- Burner / Boiler feeding
- Diesel engines feeding and ignition
- Fuel oil transfer (filtration, loading & unloading)
- Biodiesel applications




**ACCORDING TO API 676 REGULATION**

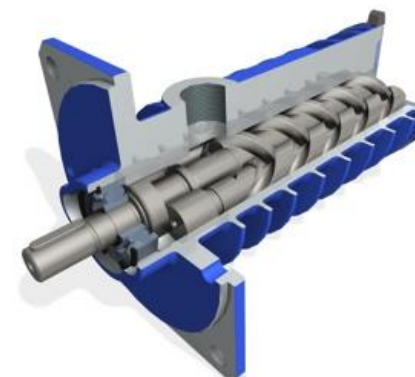
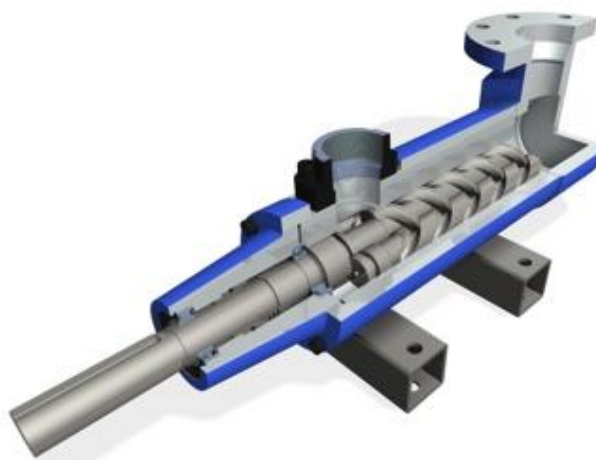
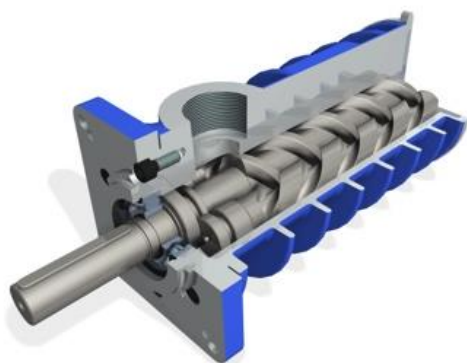
## SMAPI - FOTP - SFO fuel oil handling applications summary



## SM / SMU / SMTU

Elevators, Lift, Mini- & Home-lift and Handicap Lifting platforms

TECHNOLOGY	DETAILED APP.	SIZE	FLOWRATE	MAX PRESSURE	FLOW MEDIA
<p>3 SCREW</p> 	<p>Lift, Platforms, Minilift, Homelift, Hendicap lift, Goods platforms, Prking systmes</p>	<p>GR20 → GR80</p>	<p>4 → 1.200 LPM</p>	<p>60 bar (80 bar intermitten)</p>	<p>Hydraulic oils, Water glycole emulsions, HFC</p>





Flow meters

Products

# The flometers (volumeters)





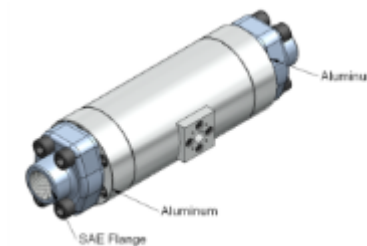
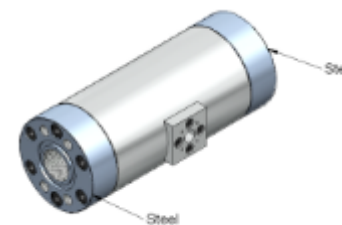
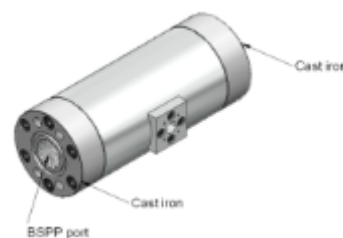
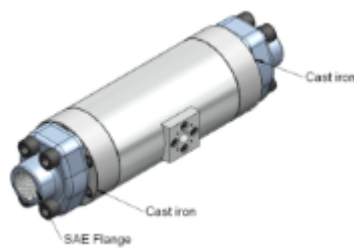
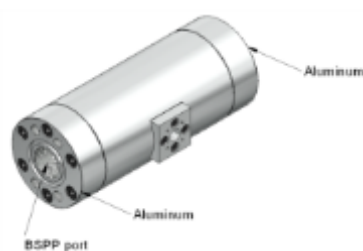
## FL - flow meters

**Applications:** The Settima Flow rate transmitter is especially designed for the metering of viscous fluids. The unit works volumetrically according to the principle of screw transmitters highly accurate and independent of viscosity

**Principle:** The medium passes a defined admission bore to get into the flow chamber and causes the revolution of the two screws mounted here. The revolutions are detected by a magnetically biased Hall sensor outside the flow chamber. Additional magnets in the flow chamber are not required. The volumetric function of the unit causes an operation independent of viscosity up to 40.000 cSt.

### Flow meter range:

Type	Q <sub>nom</sub> (L/min)	Q <sub>max</sub> (L/min)	∅screw (3)	∅screw (4)	cc	A	B	Fixing screw	BSPP port	SAE6000 port	RPM max (3)	Pulse / Liter	Sensor frequency (Hz)
FL32	140	200	32	24	26	220	88	6 x M8	1"	1"	7.600	76	254
FL40	350	500	40	30	58	285	103	8 x M8	1 1/4"	1 1/4"	8.600	34	287
FL55	800	1200	56	42	144	340	138	8 x M12	1 1/2"	1 1/2"	8.600	14	278
FL70	1500	2200	68	51	266	405	168	8 x M16	2"	2"	8.200	8	275
FL80	2500	3800	80	60	478	475	203	6 x M20	2 1/2"	2 1/2"	8.000	4	265



# Pump technology comparison

Information reported below is as basic scheme – for more information ask Settima

Pump type	Flow	Noise	Pressure / Flow pulsation	Pressure	Efficiency	Energy saving	Dirty particles insensitiveness
<b>Screw</b>	1	1	1	3	4	4	1
<b>Continuum</b>	2	1	1	4	2	1	2
<b>External gear</b>	4	5	5	4	2	3	3
<b>Internal gear</b>	4	3	4	5	1	2	4
<b>Vane</b>	2	3	4	3	3	4	5
<b>Piston</b>	3	4	5	1	1	4	5
<b>Vane - variable displacement</b>	2	3	4	3	3	2	5
<b>Piston - variable displacement</b>	3	4	5	1	1	1	5

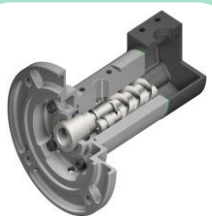


## Application summary

Information reported below is as basic scheme - For more information ask Settima

	SM	SMT	SMT	SMT	SMT	SMT	SMT8B	SMT16B	SMT16B	SMT16B	SMT16B	SMT16B	SMAPI	Continuum®
Basic														
Options			SN	G	GHA	KHA			S1, S2...S4	G	KHA			
Cooling								X						
Cooling (water & glycole)										X				
Cooling systems - compact							X							
Diesel boilers injection					X									
Diesel oil high pressure					X									
Elevators	X													
Filtration systems										X	X			
Filtration systems - offline/portable														
Lube services									X					
Lube services - Bearing			X						X			X		
Lube services - Bearing jacking, high pressure														X
Lube services - gear boxes / air emulsions			X											
Lube services - power generation/oil & gas industry			X									X		
Lube services - Turbines			X									X		
Lube services (wide viscosity range)			X											
Marine control - propeller drive, pitch control, actuators														X
Mobile hydraulics - forklift														X
Mobile hydraulics - steering systems														X
Oil transfer / Fluid transfer								X						X
Parking systems	X													X
Power Hydraulics		X		X										X
Power packs								X						X
Power packs - minipower packs														X
Presses / Compactors		X												X
Tool machines - Coolant fluid transfer										X				
Tool machines - Coolant systems											X			
Tool machines - Coolant systems - high pressure						X								
Tool machines - rotary joint jacking														X
Tool machines - tool handling / axis control & movements														X

## Product innovations by Settima



Hollow shaft pump – SMT / SMT16B



Very short / compact screw pumps – SMT8B



High pressure no noise pumps – Continuum®

# Product certification

- **ISO 9001 – DNV**
  - All the products of Settima are manufactured according to this standard
- Additional certification (free of charge under request)
  - **ATEX**: area CE eX II 2 GD ck T3
  - Material certification: **EN10204 3.1b**
  - Marine certifications
    - **ABS, BV, DNV, LLOYD, RINA, CCS, RS, GL, KR, NK**





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