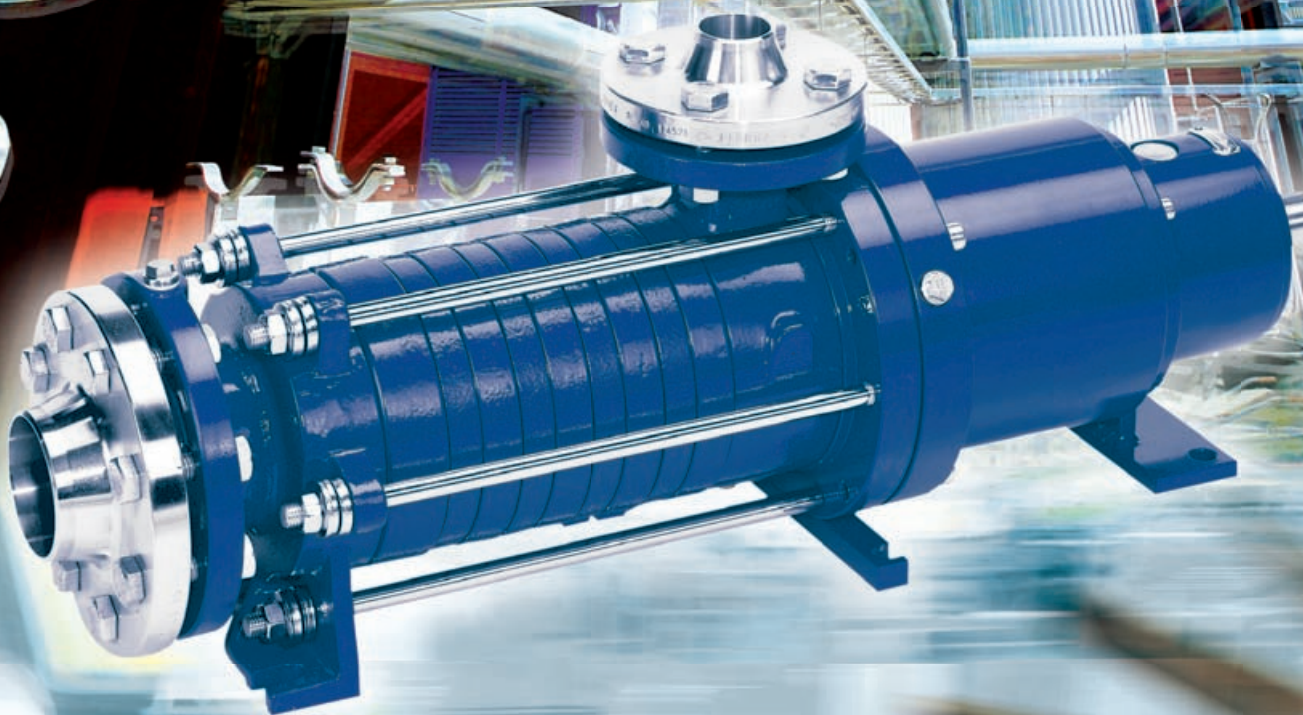


**Sealless  
Low temperature pump PN 25/PN 40**

for temperatures down to  $-60^{\circ}\text{C}$

SEMA-S...TT



**SERO is the optimal technological  
solution for transporting media which  
contain gas or which vaporize readily**

## Operating Data

SEMA-S...TT	Typical	Full operating rate
Flow rates:	0,3 up to 20 m <sup>3</sup> /h	up to 24 m <sup>3</sup> /h
Heads:	5 up to 250 m	up to 430 m
Speed:	1450 1/min (50 Hz)	1150 1/min – 1750 1/min
Temperature:	-60 °C up to +40 °C	up to +120 °C
Rated pressure:	25 bar	40 bar
Viscosity:	0,3 up to 230 mPas	0,1 up to 230 mPas
Gas entrainment:	max. 50 %	max. 50 %
Max. motor:	24 kW	24 kW
NPSHR:	> 0,4 m	> 0,4 m

## Construction

Nominal pressure:	PN 25 / PN 40
Nozzle position:	End suction / Top discharge
Flanges:	acc. DIN EN 1092, PN 40 suction: DN 40 – DN 100 discharge: DN 20 – DN 50
Bearing arrangement:	suction end: metal-jacketed carbon stages: resin impregnated carbon graphite mag drive: media-lubricated axial-radial bearing unit in solid silicon carbide drive end (atmospheric): two robust single-row radial ball bearings
Direction of rotation:	counterclockwise (=left as seen from drive end)
Shaft seal:	Magnetic coupling with stainless steel or Hastelloy® containment shell (can)
Low temperature design (TT features):	- All pressurized parts made from high-impact stainless steel - Ball bearings filled with special grease (subject to ambient temp) - Reduced bearing fits (external clearance) - Coupling lantern sealed to prevent can icing - Individually configured spring assemblies (cup spring packs) equalizing thermal contraction of the multi stage pump hydraulics - Wear discs for extended operational safety - Thermal expansion inserts to avoid excess tensioning

## Design

Side channel pump, gas-entraining, without shaft seal, in segmented construction, with open self balancing impellers, single-stage or multi-stage, with intake NPSH suction impeller and with permanent-magnet drive.

## Areas of use

- Industrial refrigeration
- Chemical industry / Petrochemical industry
- Oil & Gas industry
- Process engineering

## Advantages for you

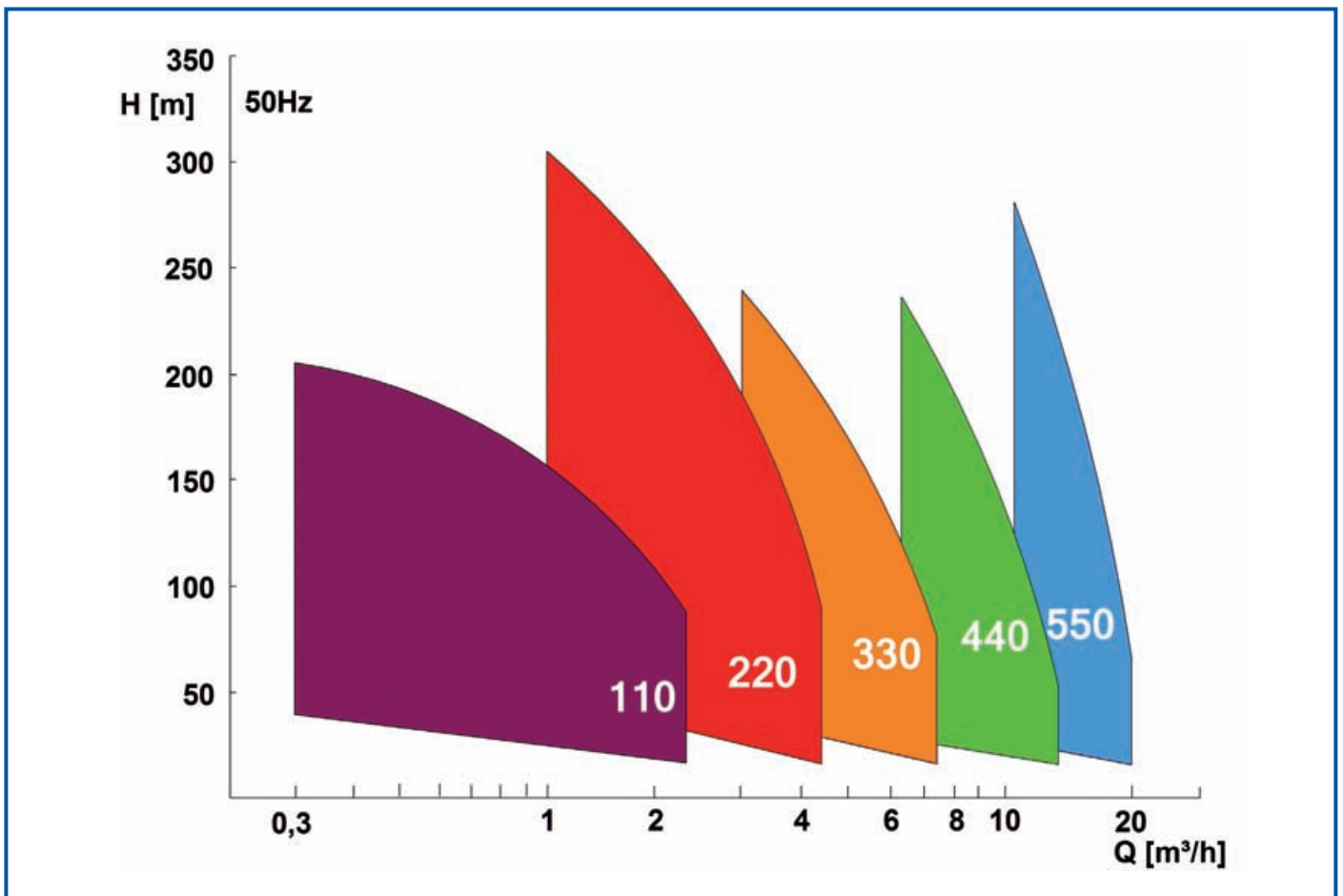
- Low flow with high head generation
- Maintenance-free
- Low NPSH requirements
- Entrained gas capability

## Liquids to be pumped

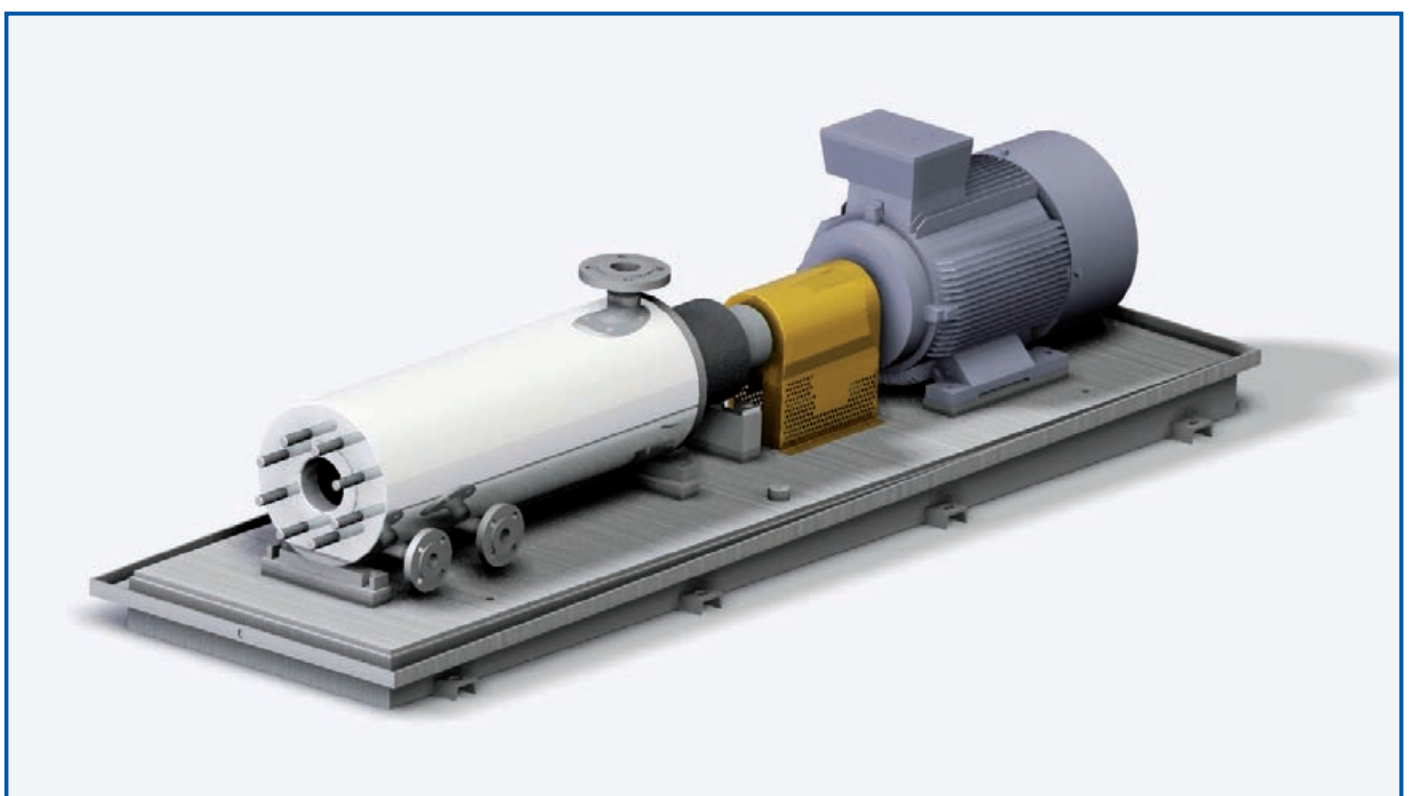
- Hydrocarbon condensate
- LPG's & NGL's
- Liquefied gases
- Ammonia / Industrial refrigerants



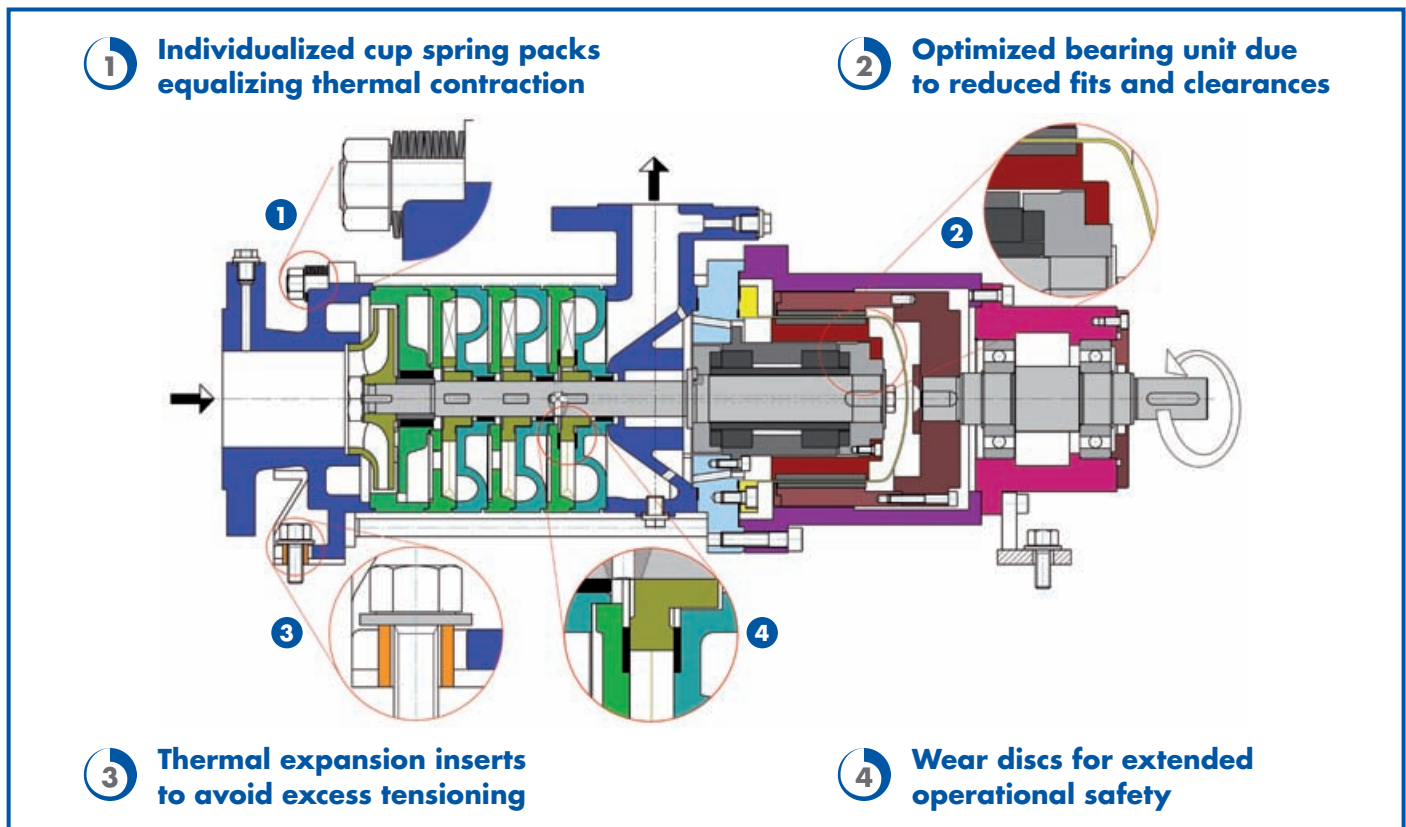
## Performance Range $n = 1450 \text{ rpm}$ (50 Hz)



## Optional shell casing (Barrel)



## SEMA-S...TT - features



## Material Specification

SEMA-S...TT	Material version 32
Casing:	1.4408
Side channel casing/ discharge stage casing:	1.4470
Shaft:	1.4571
Impeller:	1.4581
Suction impeller:	1.4581
Sleeve bearing:	SiC-SiC / Carbon-SiC
Gaskets:	PTFE, fibre-glass filled
Shaft sleeve:	SiC
Bearing bush:	Carbon graphite, Resin impregnated
Shell Casing:	1.4571
Split can:	2.4610 / 1.4571

## Pump Designation (Example)

SEMA-S...TT	
Pump series:	SEMA-S
Size:	33
Number of stages:	5
Magnet size:	110-6
Low temperature design:	TT
Material version:	32

Materials subject to change.