

# ETS



ETS 50  
WITH MOTOR

Metallic Magnetic drive Horizontal - Single Stage - Centrifugal pumps  
Sub-ISO designed  
Materials : AISI 316 (1.4408)  
Close-coupled execution



Comply to :  
2006/42/CE

Design to :  
Sub-ISO 2858



ATEX 100  
Directive 2014/34/EC

Flanged  
UNI 1092-1 (ISO 7005-2 )  
PN16RF type B  
slotted ANSI 150RF



Pompe S.r.l.

## Mag drive concept

The synchronous drive configuration is based on an outer magnet ring assembly built to magnetically couple with an inner magnet ring assembly.

These two magnet rings are locked together by the flux of attracting magnet poles flowing through the containment isolation shell.



ETS 30  
with Motor



ETS 50  
without Motor

### Versatility

With smaller plants come smaller hydraulic requirements, which lend themselves to sub-ISO sized pump units to offer optimum pump efficiency and longer MTBF (Mean time Between Failure).

### Reliability

Suitable for handling aggressive, toxic and hazardous liquids (low viscosity, clean or slightly contaminated) in the chemical, petrochemical and pharmaceutical industries, where the need of high safety standards is the first requirements.

### Design

Modular \ Interchangeable configuration components with UTS series. Convenience for parts and maintenance, reduce parts needed in inventory stock.

## Application Fields

Basic chemical



Thermoregulation



Detergents Processing



Batch Chemical Processing



Pharmaceutical Industry



# 3D VIEW

Inner and Outer magnets are equipped with NdFeB (neodymium iron boron) or SmCo (samarium cobalt) permanent magnets.

Patented cage magnet attachment guarantees stability during the operation of the pump.

## Sealless design

Total containment, essential for hazardous, aggressive or valuable product.

Metallic Sealless Magnetic Drive Pumps suitable for service up to 140 °C (optional execution available to reach 180 °C). The ETS series is designed with a rotating metallic shaft supported by single static bushing.

## Minimal downtime / fast maintenance

The clever execution allow the end user to easy repair easily the pump in case of failure.

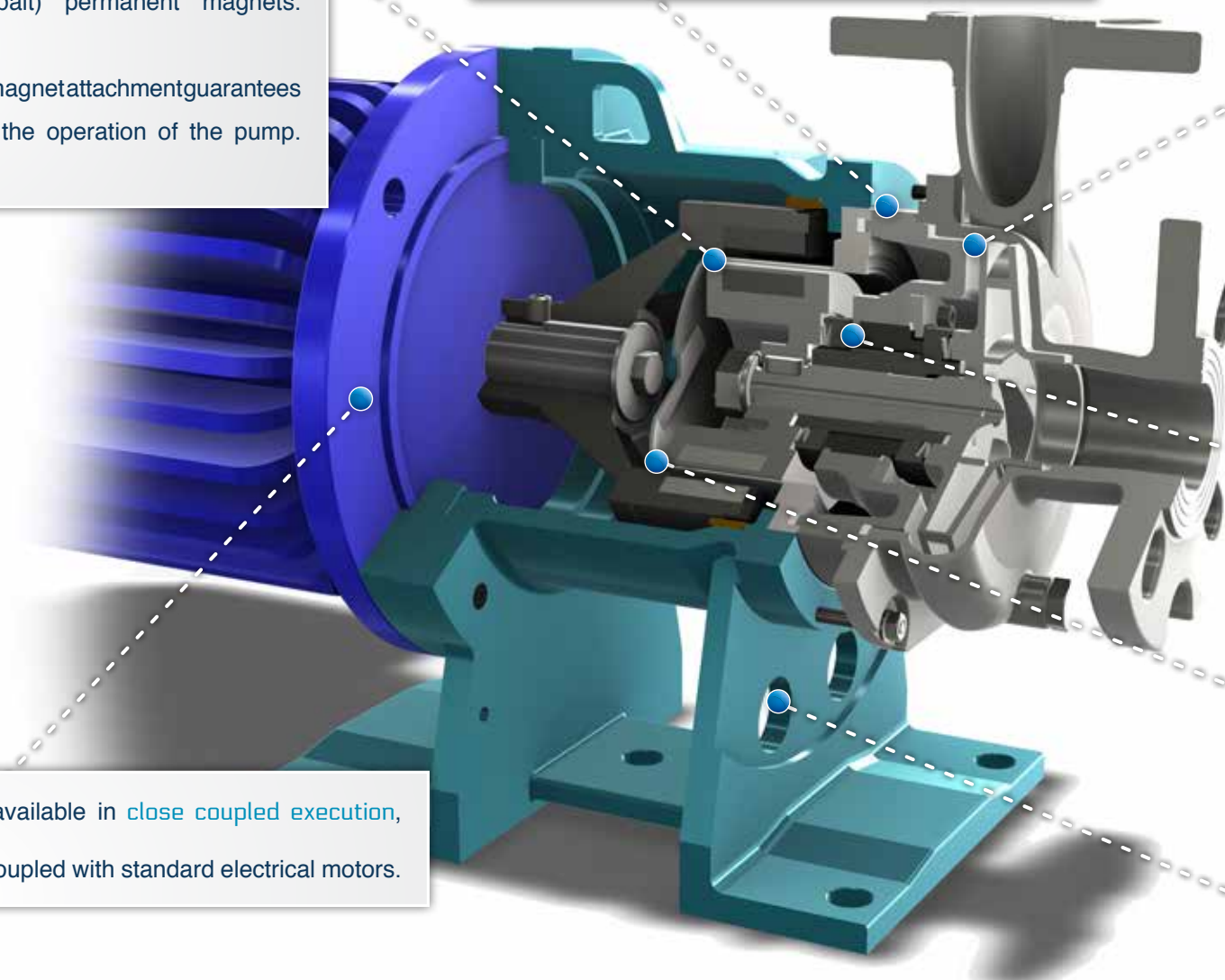
The design allows to the Isolation Shell to be self-venting.

The standard execution made by Hastelloy C276 reduces drastically the Eddy Current Losses.

## Dimensions

Meets ISO2858:1975, BSEN22858:1993 dimensions for flange and foot position.

The ETS are available in close coupled execution, suitable to be coupled with standard electrical motors.



# FEATURES



## CASING

- Bonus casing thickness made by AISI 316 (CF8M) minimum 3 mm corrosion allowance maximizes casing life against corrosion and erosion
- Standard casing drain for a complete and fast draining of the casing



## IMPELLER

- One piece solid cast stainless steel AISI 316 (CF8M) construction
- The problem of reverse rotation during start-up has been eliminated thanks to the key driven system



## ISOLATION SHELL

- The design allows to the Isolation Shell to be self-venting and fully drainable
- The rib on the bottom is a perfect vortex breaker which increases the lifetime
- Isolation shell temperature probe connection provided as a standard



## INNER MAGNET

- Magnets fully encapsulated with tough AISI 316L (1.4404) sheath
- Coupled to impeller by key, dome nut and locking tab washer



## BUSHINGS

Large SSiC Rotating and Static Bushings, reliable SiC Static Axial Thrust offer ruggedness even under heavy duty conditions. The execution is also improved by Compensating rings particularly designed to take up axial forces.

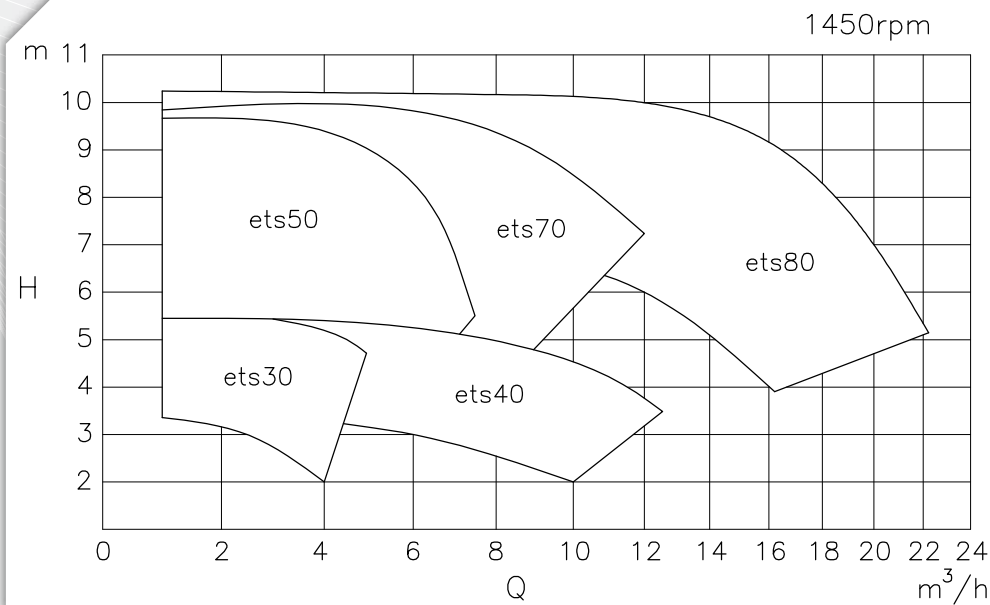
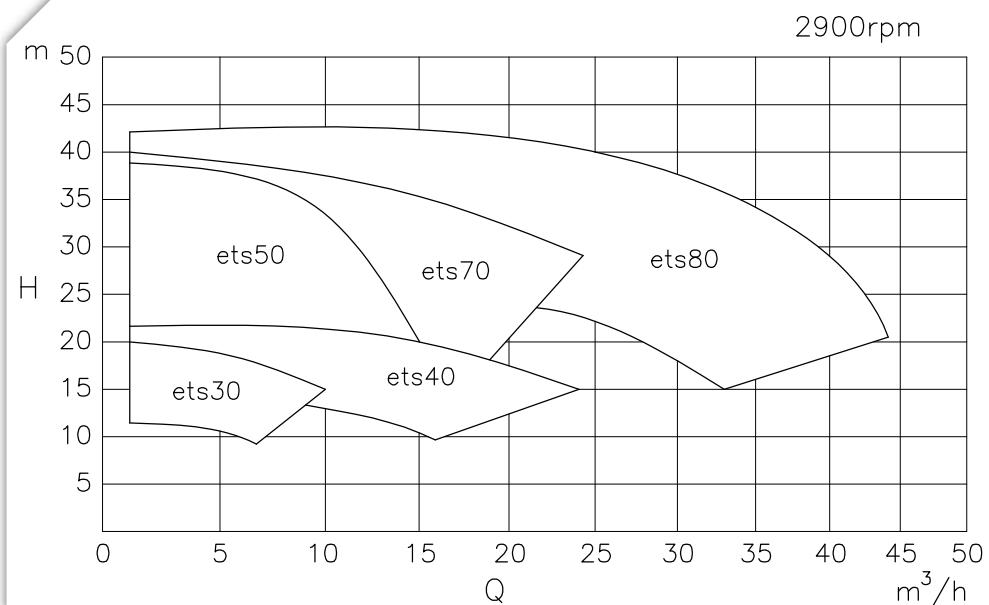


## BUSHING SUPPORT

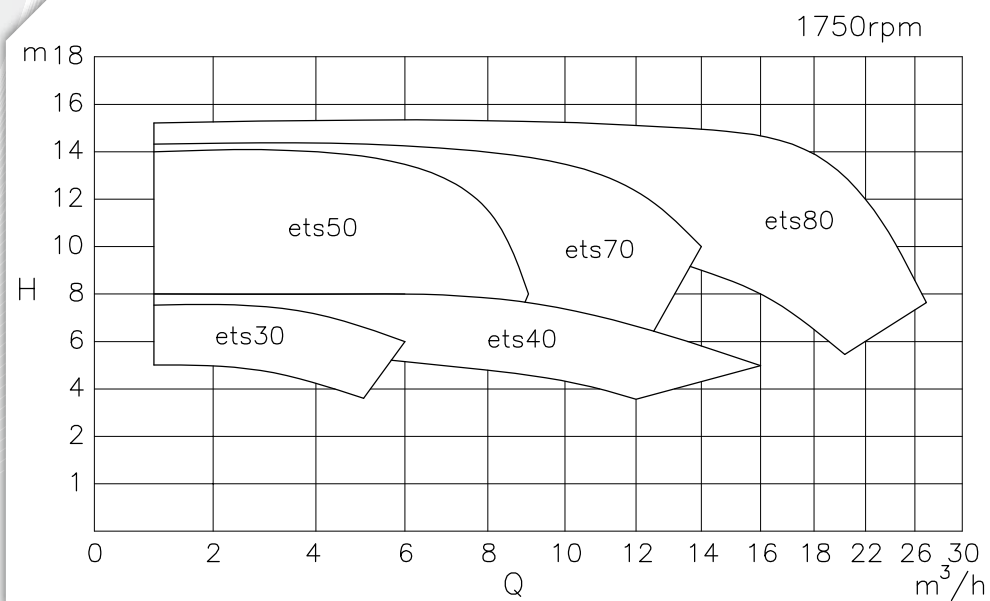
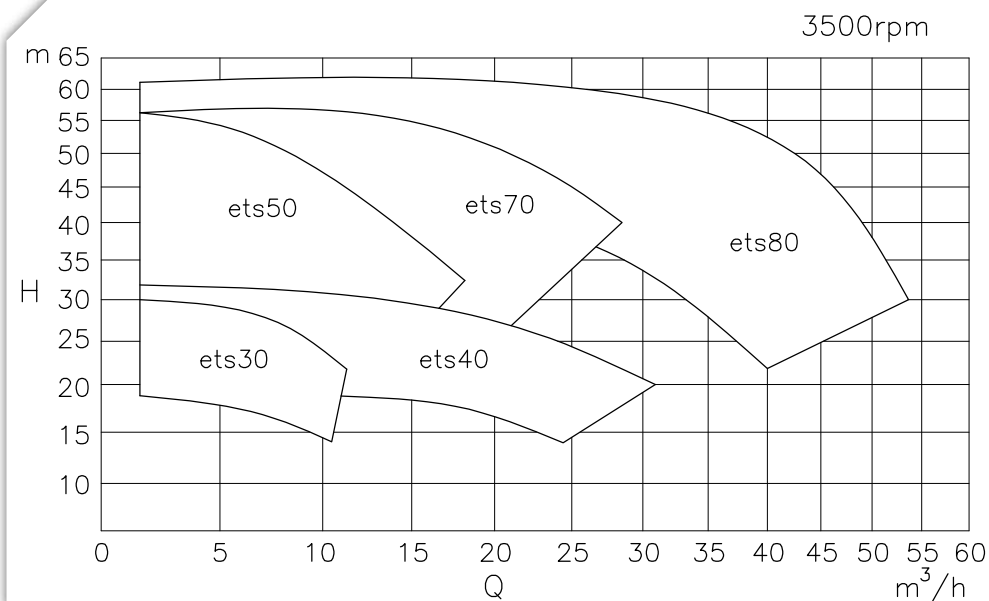
Clever bushing support design with locking flange to prevent static bushing rotation and to enhance the performance and lifetime of the static bushing in case of hard duties

# PERFORMANCE FIELDS

50Hz



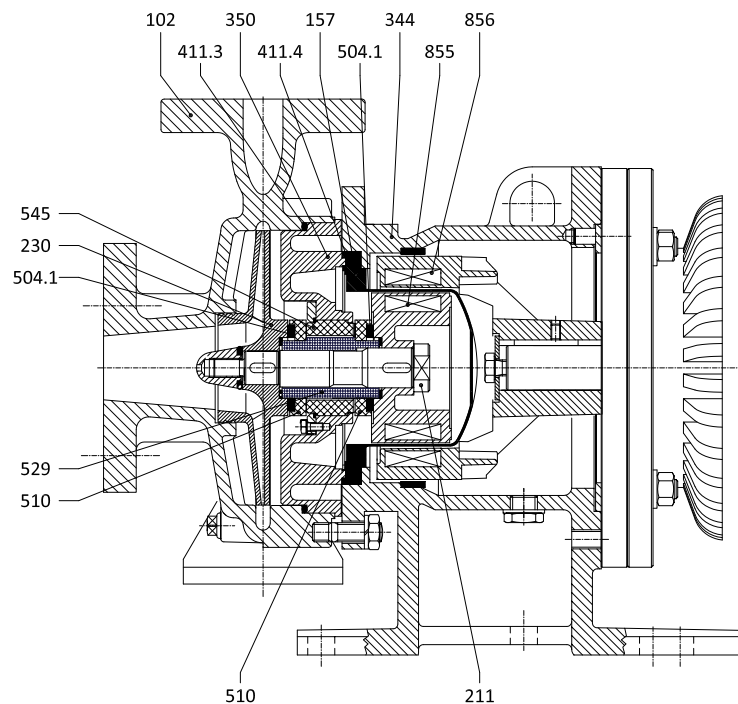
60Hz



Not binding data refers to water at room temperature. For specific performance curve contact CDR Pompe S.r.l.

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# SECTIONAL DRAWING



DIN	Component	Material
102	Casing	AISI 316 (1.4408-CF8M)
157	Isolation Shell	Hastelloy C + AISI 316L
211	Shaft	AISI 316 (1.4401)
230	Impeller	AISI 316 (1.4408-CF8M)
344	Lantern	GS400 ( C40*- AISI316* ) * special execution
350	Bushings Support	AISI 316L (1.4409-CF3M)
411.3/4	Joint Ring (Casing)	PTFE/Armored Grafoil
504.x	Spacer Ring	PTFE/Armored Grafoil
510	Thrust Bearing	SSiC
529	Bearing Sleeve	SSiC
545	Bearing Bush	SSiC/Graphite
855	Inner Magnet	AISI 316L (1.4404)
856	Outer Magnet	GS400

Part list

## PAINTING COATING QUALITY

The metal surfaces are protected by a high performance three coating layers (240 micron)

- Epoxy zinc paint
- Epoxy amidic modified vinyl
- Epoxy enamel paint or aliphatic acrylic polyurethane

Available upon request :

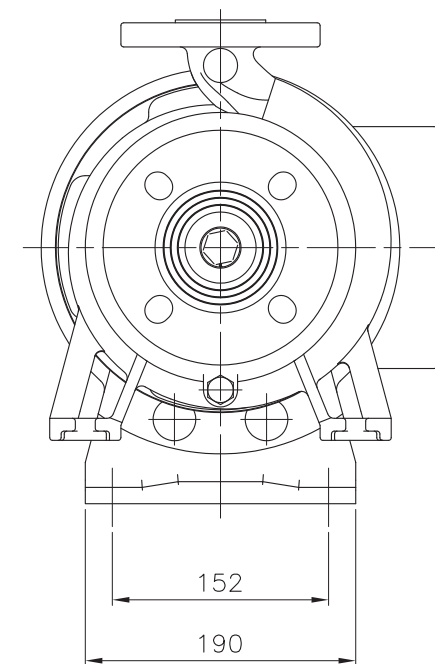
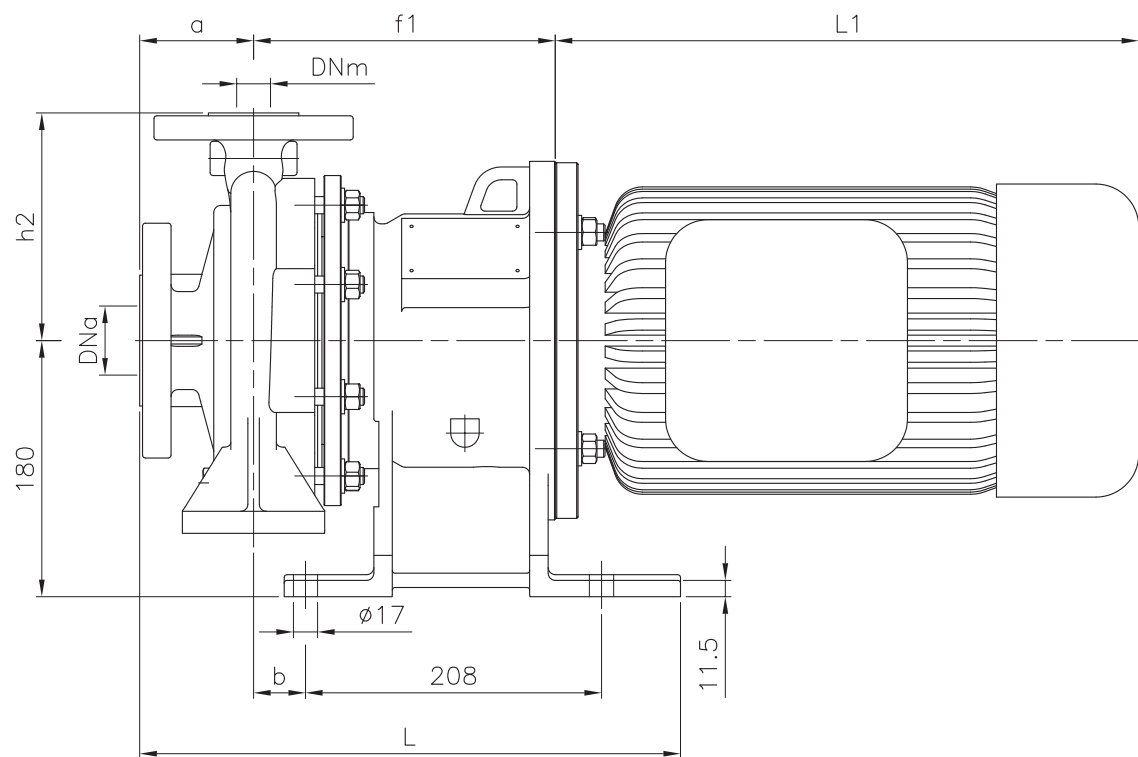
EN ISO 12944-5 C5M and C5I protecting paint system grades

Painting Coating Quality

Technical Specifications

Performances 2900 rpm	Q max = 42 m <sup>3</sup> /h -> H max = 43 mcl
Electric Motors	0.75 kW (motor size 80) -> 7,5 kW (motor size 132)
Temperature range	-30 °C -> +140 °C (as option -60 °C -> +180 °C)
Allowable Pressure Range	<ul style="list-style-type: none"> <li>• ETS 30/40 : 6 bar (20°C)</li> <li>• ETS 50/70/80 : 16 bar (20°C)</li> </ul>
Suction / Delivery	<ul style="list-style-type: none"> <li>• ETS 30 : DN32/DN25    ETS 40 : DN40/DN32</li> <li>• ETS 50 : DN40/DN25    ETS 70 : DN50/DN32    ETS 80 : DN65/DN40</li> </ul>
Connections	<ul style="list-style-type: none"> <li>• ETS 30/40 Flanged ISO 1092-1 PN10RF slotted ANSI 150 RF</li> <li>• ETS 50/70/80 Flanged ISO 1092-1 PN16RF slotted ANSI 150 RF</li> </ul>
Viscosity	1cSt min - 100 cSt max
Allowable Solids	Max concentration 2 % by weight Max particle size 0,10 mm

# OVERALL DIMENSIONS



Model	DNa**	DNm**	a (mm)	b (mm)	h2 (mm)	L (mm)
ETS 30	32	25	52	20	121	335
ETS 40	40	32	78	22	146	361
ETS 50	40	25	100	36.5	165	400
ETS 70	50	32	80	36.5	160	380
ETS 80	65	40	80	36.5	160	380

\* L1 dimension is according to installed motor manufacturer

\*\* Flanges dimensions according to UNI 1092-1 ISO \ 7005-1 PN16 type B - slotted ANSI 150 RF

Model	B5 Motor Frame	f1
ETS 30	80/90	196
	100/112	212
ETS 40	80/90	198
	100/112	214
ETS 50 / ETS 70 / ETS 80	90	212
	100/112	212
	132	230



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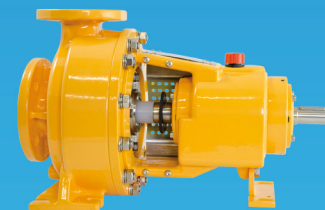
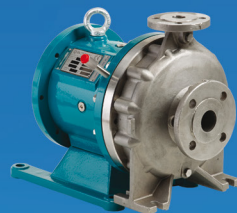
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TB - ETS 2018.11



For further info, please visit  
**[www.cdrpompe.com](http://www.cdrpompe.com)**

#### Technical Characteristics

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