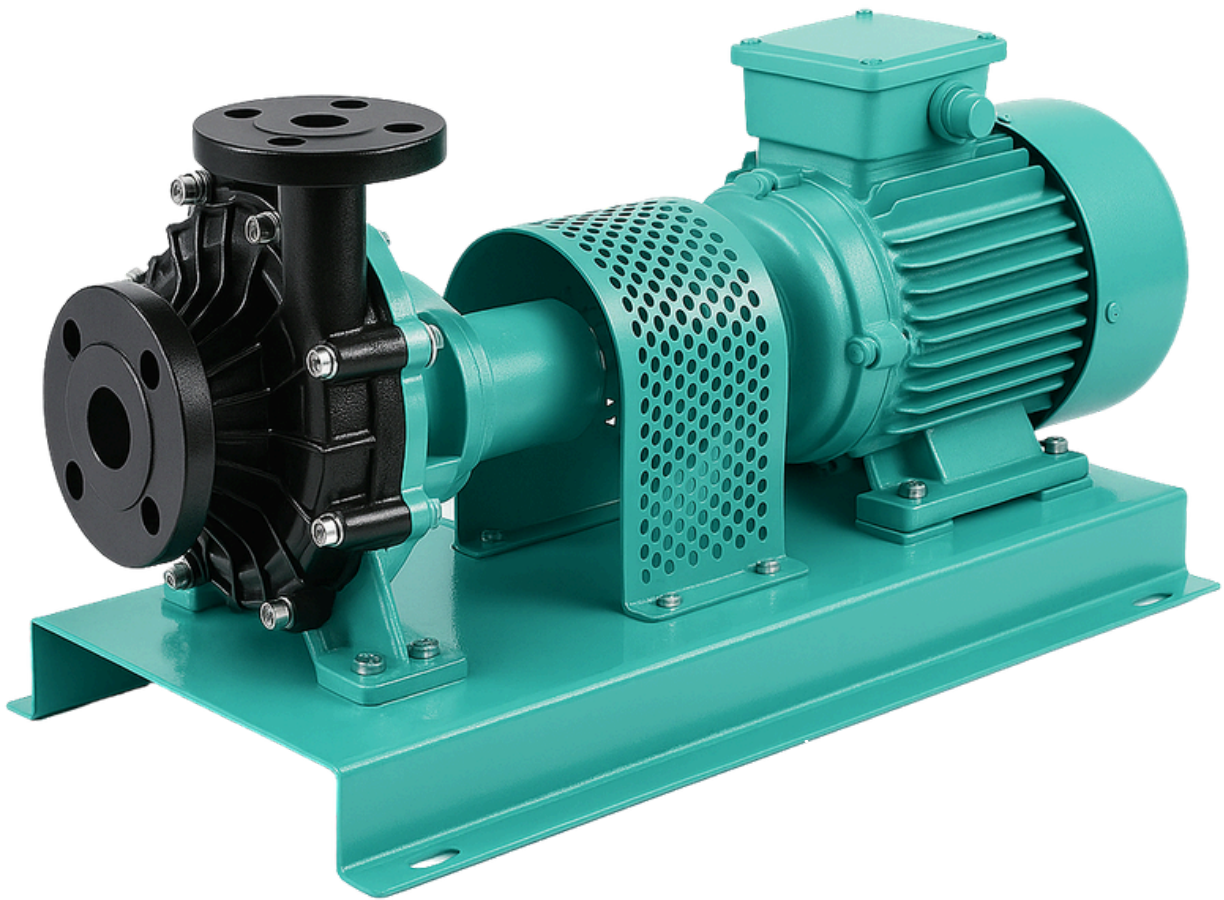




TranspumpServ  
GLOBAL PVT LTD

# CorroSafe (TcorroZ)



**Non Metallic Mechanical Seal Pumps**  
**GFRPP, CFRPVDF**

# Design Features

- Casing Cover**
- Sleeve Functionality**
- High-Performance Bearings**
- Bush**
- Impeller Insert**
- Sturdy Shaft**
- Efficient Impeller Performance**
- Bearing Pedestal**

The injection-moulded casing cover is precisely engineered to house both mechanical seals and packing arrangements, ensuring reliable containment and enhanced service life under chemical process conditions.

The stepped sleeve ensures reliable rear impeller sealing, minimizing leakage and extending seal life.

Bearings are engineered to withstand high dynamic loads, ensuring reliable operation beyond the standard ( 17500 ) hours lifetime.

Robust low-stiffness shaft limits deflection to  $<0.05$  mm at seal faces, maximizing mechanical seal life.

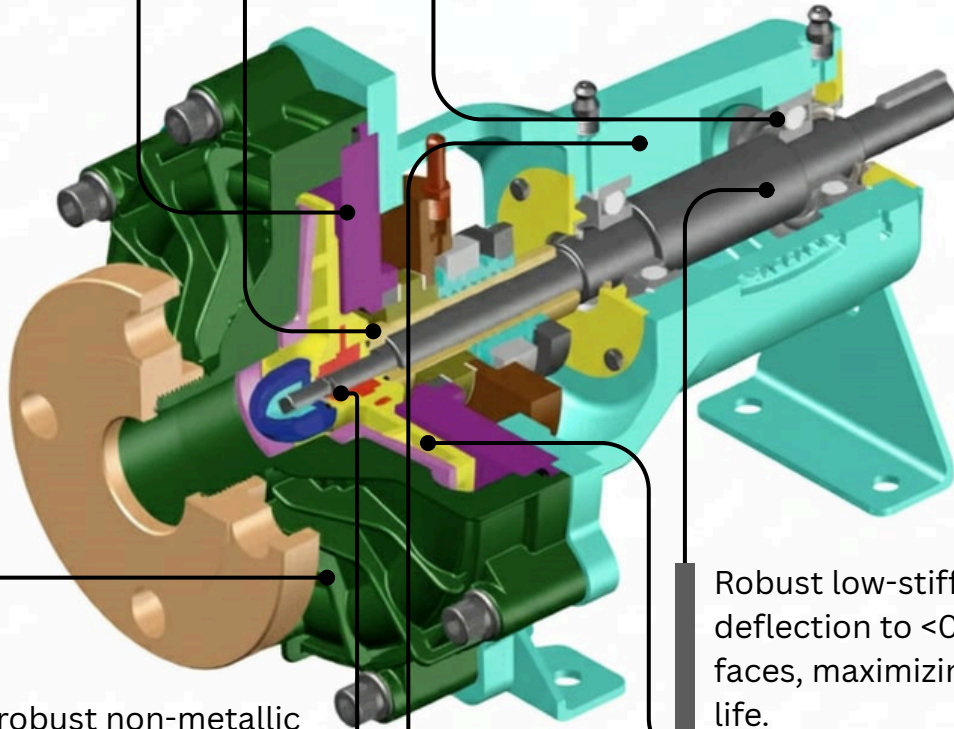
Lightweight, robust non-metallic volute casing ensures efficient hydraulic flow of process media.

Sleek, lightweight, and robust bearing bracket for stable support

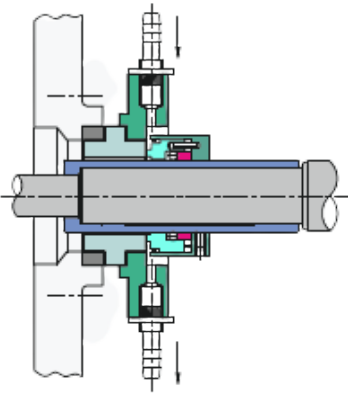
Hydrodynamically optimized, closed / semi-open radial impeller designed for Optimum suction behaviour with low NPSH requirement Low noise

Innovative positive locking methodology

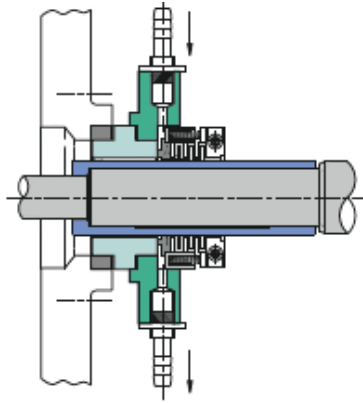
Positive locking design prevents failure from reverse rotation.



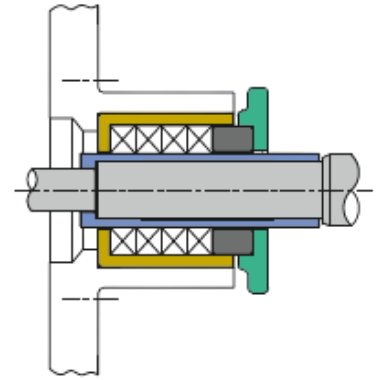
# MECHANICAL SEAL OPTIONS



**Single PTFE Bellows seal (TB)**



**Single Pusher Seal (RA)**



**Gland Packing (GP)**

- **Type TB** – A single, externally mounted seal utilizing PTFE bellows as the secondary sealing element. It offers broad-spectrum chemical resistance, making it suitable for both clean and corrosive process fluids.
- **Type RA** – A single, externally mounted seal with fluoroelastomer (FKM/FFKM) secondary sealing. Engineered to withstand highly corrosive fluids and homogeneous slurry applications.
- **Type GP** – A cost-effective sealing option using pure PTFE packing with lubrication, providing a reliable dynamic seal for general-duty applications.

## Robust Bearing Bracket Design :-

- High component interchangeability across models reduces spare-parts inventory requirements.
- The rugged construction enhances reliability, minimizes unplanned downtime, and allows easier assembly and maintenance.

## Lubrication :-

- The bearing bracket is grease-lubricated for continuous operation in applications up to 120 °C (250 °F).
- Grease nipples are provided at both the pump and drive ends for convenient servicing. Optional “greased-for-life” or “sealed-for-life” bearings can be supplied on request.

## Robust Shaft Design:-

### Shaft Design

CorroSafe Series shafts are available in both solid and sleeved configurations, engineered to maintain a low shaft stiffness ratio (L3/D4). This minimizes shaft deflection, thereby enhancing seal performance and extending bearing life. The design also accommodates the First Obstruction Length (FOB) requirements of standard, commercially available single mechanical seals.

### Operating parameters :-

Type		TB*	RA*	GP
Pressure	up to	5 bar (75 psi)	27.6 bar (400 psi)	10 bar (150 psi)
Temperature	up to	71°C (160°F)	204°C (400°F)	280°C (572°F)
Shaft Speed	up to	10 m/s (33 fps)	23 m/s (75 fps)	10 m/s (33 fps)

\*Values for Flowsolve seals. Other seals available on request.

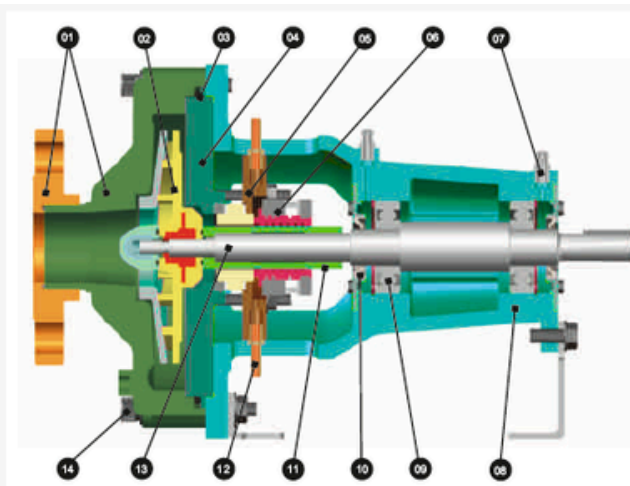
# PRODUCT SUMMARY

**CorroSafe Series pumps** are precision-engineered, injection-moulded, horizontal, side-discharge, back-pull-out, volute-casing, single-stage end-suction centrifugal pumps. Designed for robust chemical duty, the TcoroZ Series is optimized to handle a wide range of industrial process fluids with specific gravities up to **1.3**. Typical applications include **electroplating lines, chemical filtration systems, fume scrubbing units, and bulk chemical transfer operations such as loading and unloading**

## Technical Data :-

Operating Frequency		50 Hz [60 Hz]
Capacity [Q]	up to	30 m <sup>3</sup> /hr [132 US gpm]
Head [H]	up to	30 m [98 ft]
Motor Power [P]	up to	3.7 kW [5 hp]
Viscosity	up to	80 mPas [80 cP]
Suction Lift	up to	8 m [26 ft] with priming chamber*
Maximum Working Pressure		6 bar [87 psi]
Maximum Specific Gravity [SG]		1.3
Minimum Continuous Flow [MCF]		2 m <sup>3</sup> /hr [9 US gpm]
Maximum Temperature		PP : 82°C [180°F], GFRPP: 90°C [194°F], CFRPVDF: 110°C [230°F]
Suction & Delivery Connection		ANSI B16.5 - Class 150, DIN 2501, BS4504 - PN16, BSP or NPT*
Shaft Seal		Single Mechanical Seals & Gland Packing
Bearings		Rolling Element Bearings
Lubrication		Grease
Motor Compatibility		IS 1231, IEC 72-1, NEMA*

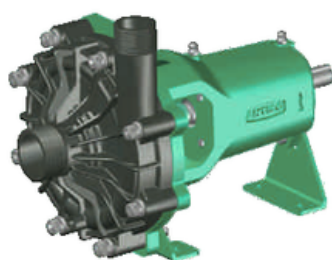
\*available on request



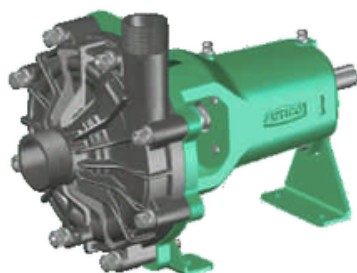
Casing & Flanges 01	PP <sup>1</sup> / GFRPP <sup>2</sup> / CFRPVDF <sup>3</sup>
Impeller 02	PP / GFRPP / CFRPVDF
O-Rings 03	FKM / FFKM / EPDM / TFE-P
Casing Cover 04	PP-H / GFRPP / CFRPVDF
Seal Cover 05	FRP <sup>4</sup>
Mechanical Seal (Stationary & Rotary) 06	Ceramic / SiC <sup>5</sup> / GFT <sup>6</sup> / Carbon
Grease Nipple 07	Stainless Steel
Bearing Bracket 08	Cast Iron*
Rolling Element Bearings 09	Carbon Chromium Steel
Oil Seals 10	Chlorobutadiene Rubber
Sleeve 11	Ceramic / SiC / FRP / Super Alloys
Male Hose Barb Nipple 12	Brass
Shaft 13	Stainless Steel
Fasteners 14	Stainless Steel

1 - Polypropylene, 2 - Glass Fibre-Reinforced PP, 3 - Carbon Fibre-Reinforced Polyvinylidene Fluoride, 4 - Fibre-Reinforced Plastic, 5 - Silicon Carbide, 6 - Glass Filled Polytetrafluoroethylene

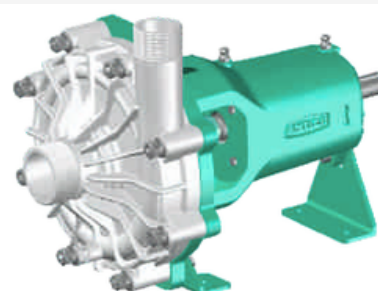
\* - with high grade 2C corrosion protection paint. Special coatings available on request



**GFRPP** : Suitable for Aggressive Media up to 90°C (194°F)

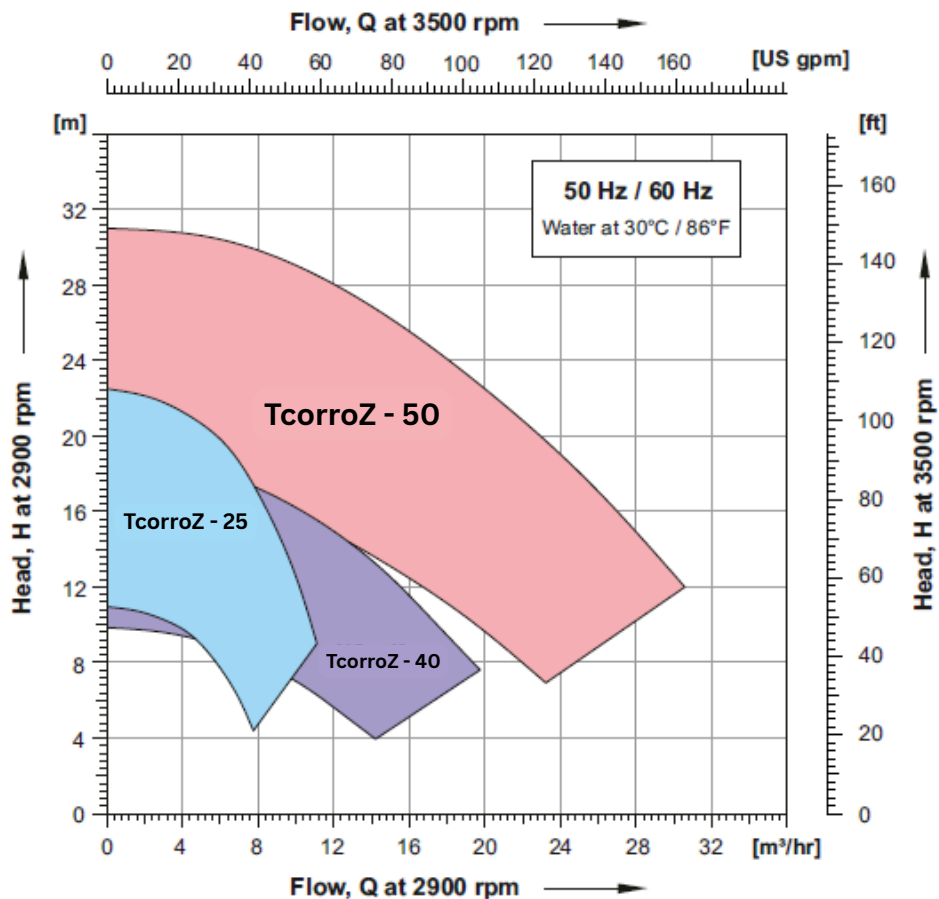
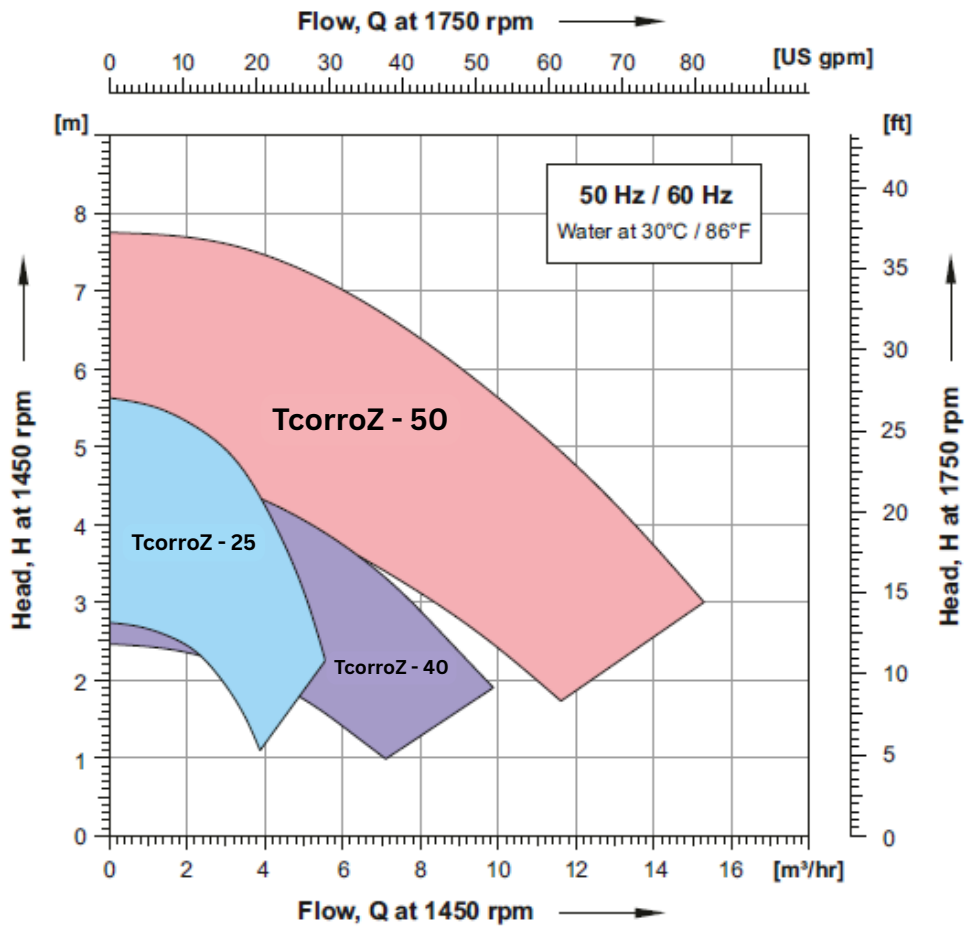


**CFRPVDF** : Suitable for Corrosive, Hazardous Media up to 110°C (230°F)



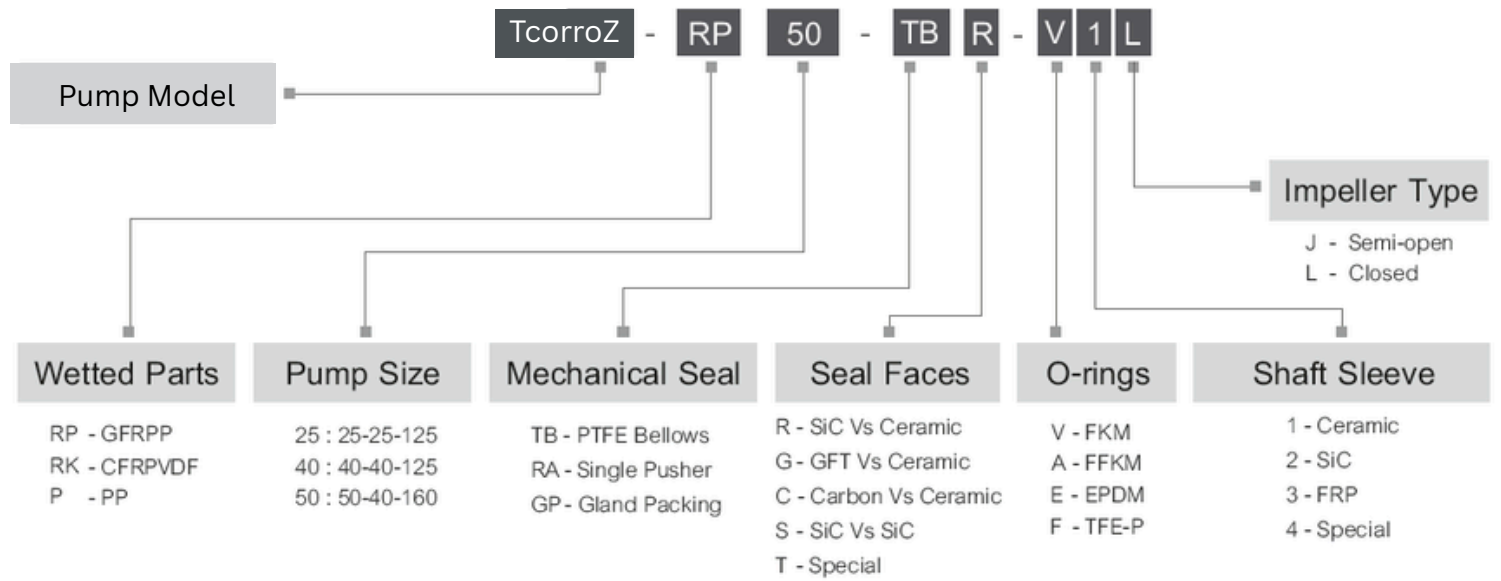
**PP** : Available on Request

# Hydraulic Performance

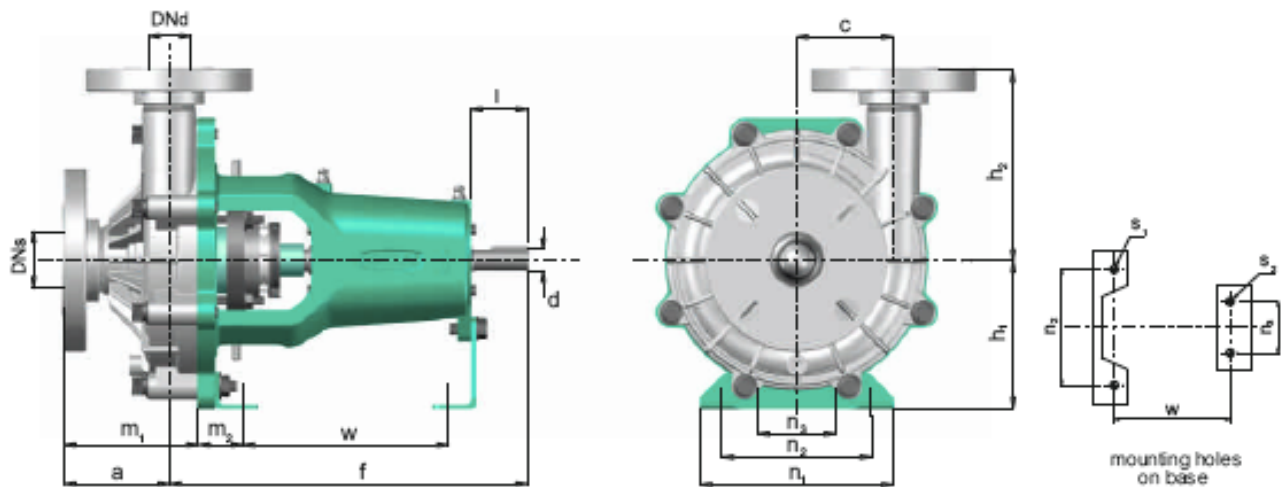


# PUMP IDENTIFICATION

## CorroSafe Series (TcorroZ)



## PUMP DIMENSION:-

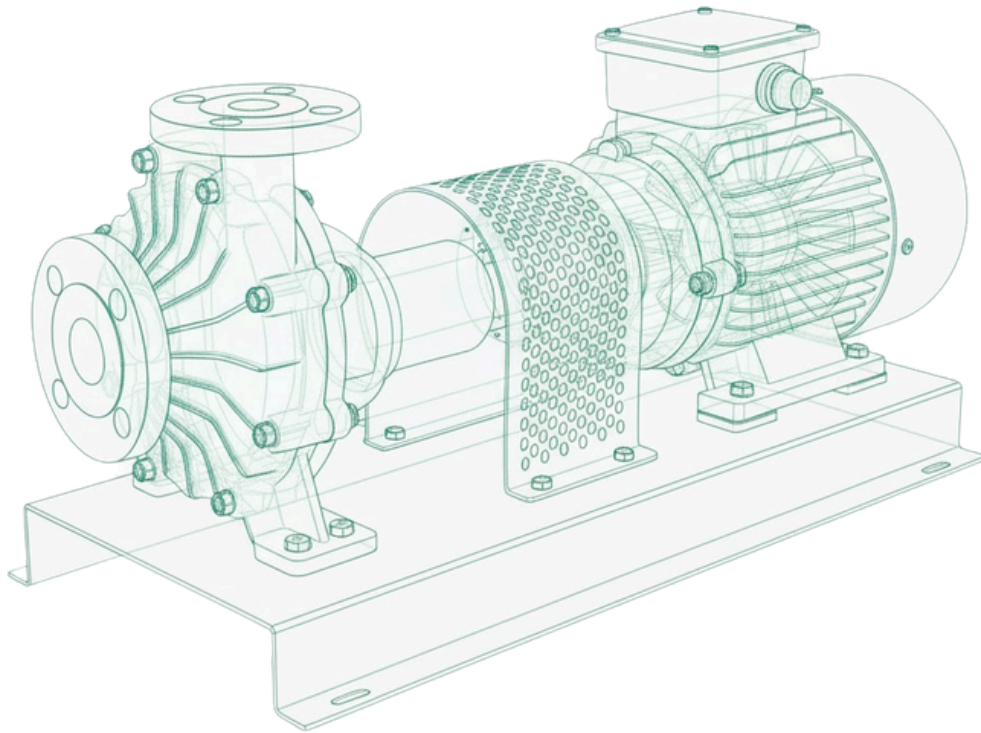


MODELS	PUMP DIMENSIONS																
	DNs	DNd	a*	f	c	h <sub>1</sub>	h <sub>2</sub> *	m <sub>1</sub> *	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	n <sub>3</sub>	w	S <sub>1</sub>	S <sub>2</sub>	d	l
TcorroZ - 25	25	25	85	315	70	120	140	110	37	170	130	80	185	M10	M10	19	50
TcorroZ - 40	40	40			85	130	160										
TcorroZ - 50	50	40			85	130	160										

All Dimensions in mm; \* - 8 mm more length for flanged connection



**TranspumpServ**  
GLOBAL PVT LTD



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