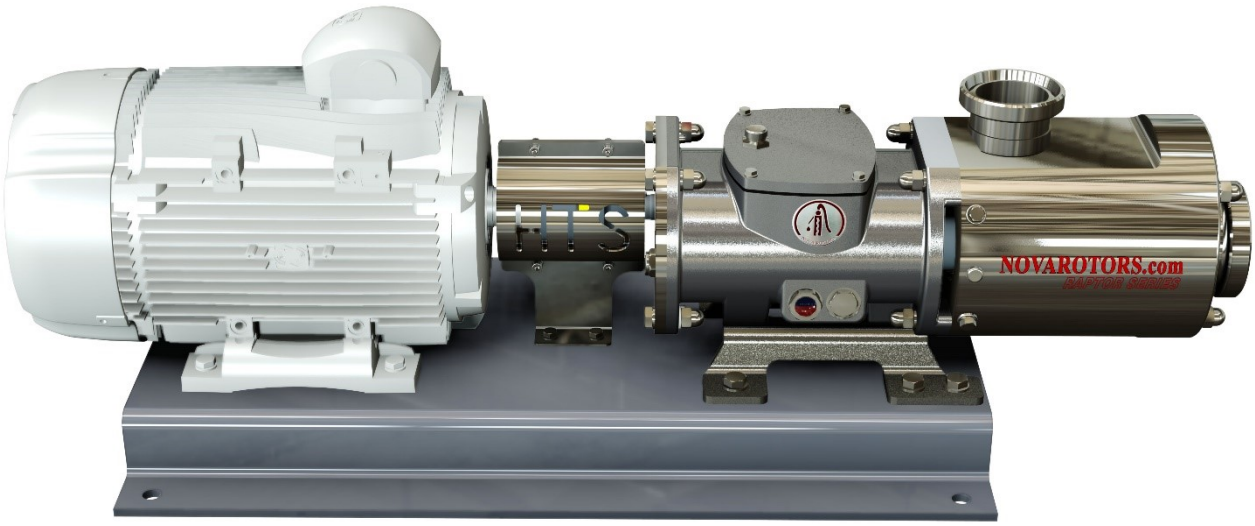
NOVA ROTORS®
Progressing cavity Pumps

OUR POWER, YOUR SATISFACTION



RAPTOR SERIES

Sanitary pumps

HTS series

HTS

05/10/2026

HTS Hygienic Twin Screw Series

The HTS is the new state-of-the-art of hygenic twin screw technology designed to achieve the maximum level of sanitation for food and pharmaceutical market.

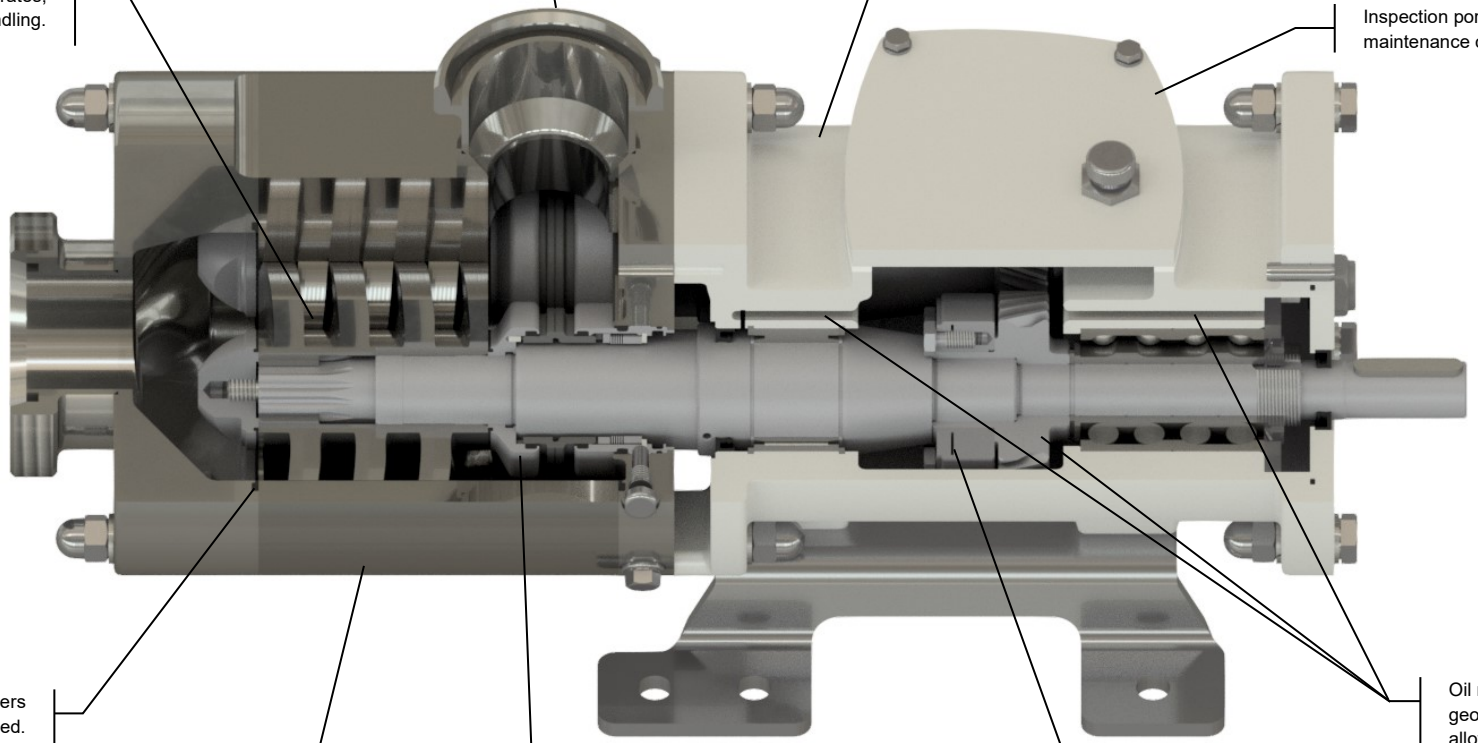
The pump design is extremely tough thanks to oversized shaft and bearing dimensions.
The main features of the twin screw pumps are:

- Gentle treatment and low pulsations do to axial conveing of product
- High suction capability with low NPSHr values
- The rotors and the pump casing are not in contact: dry run is possibile with flushed seals
- CIP and process with only one pump
- High pressure and high flow rate with a very compact pump
- Suitable for very viscous liquids (up to 1.000.000 cps)
- Suitable to handle solids and/or abrasive products
- Easy and quick maintenance



CE 1935/2004

Detailed characteristics



Wide range of fitting standards are available:
DIN 11851, DIN 11864 or Clamp ISO, ASME
and other upon request

Dynamically balanced Rotors for high speed.
Hardened for abrasive product.
Different pitches allow different flow rates,
pressure and solid handling.

Standard Stainless-Steel gear casing.
Extremely tough with smooth design to avoid pocket.
Allow the installation of 1 radial bearing and 4 angular
bearing per shaft, permit max pressure load at both
sense of rotation

Inspection port for easy and quick
maintenance check

Gasket available of different elastomers
FDA approved.
Hygenic Design to avoid dead zones

316L Casing material.
Pump casing hardening is optional for very abrasive products.
Low clearance to improve the suction capability.
Smooth design and wetted part surfaces with Ra<0.8µm

Special hygienic mechanical seal design:
single or double acting, depending on the application.
Possible to change from single to double with a rebuilt
kit, thanks to the modular design of the seals.
Special “knife edge” option for abrasive product
available with Ra<0.8µm

Advanced clamping system for locking the rotors,
consisting of a keyless locking device and specially
hardened gears to withstand high rotational speeds for
long periods of time

Oil recirculation channels and gear
geometries specially designed to
allow the correct lubrication of all the
rotating parts

CERTIFIED



3A SANITARY COMPARED TO THE STANDARD VERSION

1. Materials and product-contact surfaces
Guaranteed internal surface roughness (e.g. Ra ≤ 0.8 µm or according to 3A specification), with measurement certificates.
FDA / 3A compliant materials for all product-contact parts (gaskets, O-rings, elastomers).
2. Seals and gaskets
3A-compliant mechanical seals, often in the following configurations:
• flushed
• double mechanical seal
Front-facing gaskets without stagnation zones.
Complete absence of non-authorized or non-traceable elastomers.
3. Hygienic pump body design
Full drainage capability (short port or slopes allowing complete drain).
No dead zones / dead legs.
CIP/SIP compatible geometries, certified as such.
4. Motorization and external components
Wash-down or stainless-steel motor, or protective stainless-steel motor cover as required.
Hygienic ventilation or enclosures preventing the ingress of contaminants.
5. Markings and documentation
Full material traceability (FDA/EC 1935/2004).
Manuals and procedures compliant with 3A requirements, including CIP/SIP documentation.
Official 3A marking on the pump body.
6. Assembly and manufacturing processes
DIN 11864-1 / DIN 11864-2 hygienic fittings.
Hygienic baseplate with 3A-compliant adjustable feet.

GENERAL CHARACTERISTICS

VERSION AND OPTION

Casing material
Base materials:
AISI 316
Heat treatments:
Kolsterising

Materials of the sealing shaft
Base materials:
AISI 630
Duplex (F51) or Superduplex (F55) on request

Rotor materials
Base materials:
AISI 316
Duplex (F51) or Superduplex (F55) on request
Heat treatments:
Kolsterising

Gasket materials
Base materials:
H-NBR
EPDM
FPM
FFPM

Base plates
standard Baseplate
standard Baseplate with 3-A adjustable feet
Hygenic Base frame (meets hygenic recommendations)

Sealing system
Single acting Hygenic balanced mechanical seal (special design)
Double acting Hygenic balanced mechanical seal (special design)

Control devices
Control panel
Control panel with inverter
Drive with integrated inverter

Equipment and optional
Heating jacket
Quench Pot flushing
Drive Cover

Certifications
CE

EHDG comply, 3-A Sanitary Standard certificate

Connections
DIN 11851
DIN 11864-1 / DIN 11864-2 / DIN 11864-3
Clamp ISO 2852, Clamp ASME-3A, Clamp DIN 32676
RJT
SMS 1145
Macon

FEATURES OF USE

Operating range

Flow
Up to 300 m³/h
Pressure
Up to 25 bar
Temperature
from -40°C until to 150°C

Typical applications

Milk and Diary



Bakery



Beverages



Cosmetic and pharmacy



Breweries



Tomato industry



TABLE OF MODELS

Flow and pressure

Size	Model	Rotation	Max temperature	Max Flow rate at 0 bar [m³/h] *	Max rpm	Max Pressure [bar]	Max diameter of solid passage [mm]
HTS 2	2-1 2-2 2-3 2-4	CW and CCW	130°C for product 150°C for Cleaning (higher temperature on request)	27	3600	25	16
HTS 4	4-1 4-2 4-3 4-4			100	3600	25	24
	4-D						
HTS 6	6-1 6-2 6-3 6-4			150	3000	25	30
	6-D						
HTS 8	8-1 8-2 8-3 8-4 8-D			300	2500	25	40

***Based on largest Pitch**



HTS type 1



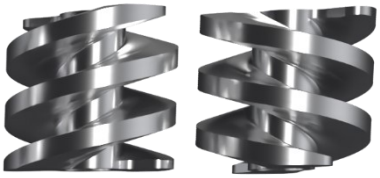
HTS type 2



HTS type 3



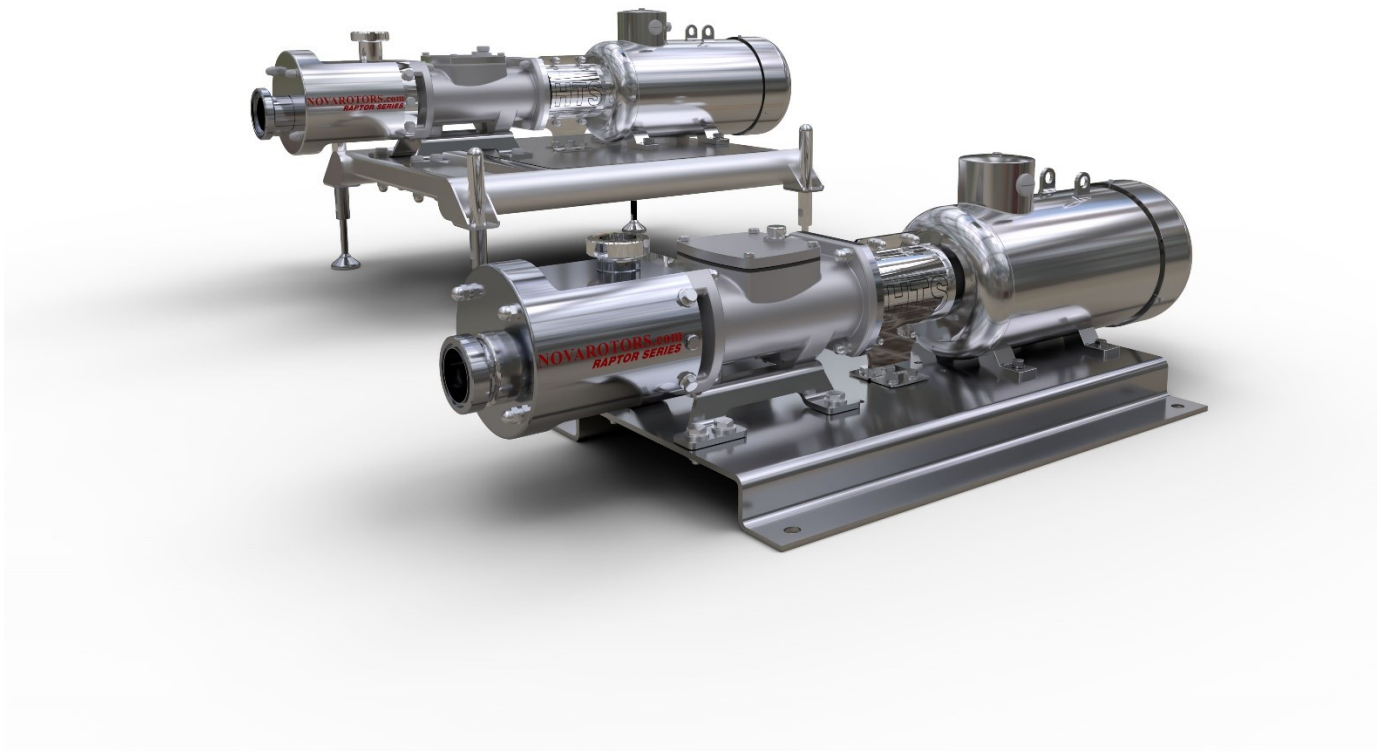
HTS type 4



HTS type D (Double-start screw rotors)

Available on request:

The HTS Raptor Series can also be supplied with standard baseplate or a baseplate featuring 3-A adjustable feet, combined with a stainless steel motor for an all-stainless-steel construction. This configuration ensures the highest standards of hygiene, cleanability, and sanitation.



NOVA ROTORS®
Progressing cavity Pumps

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No.:2010/915