NOVA ROTORS® srl

Progressing cavity Pumps

DN

Easy and versatile connection

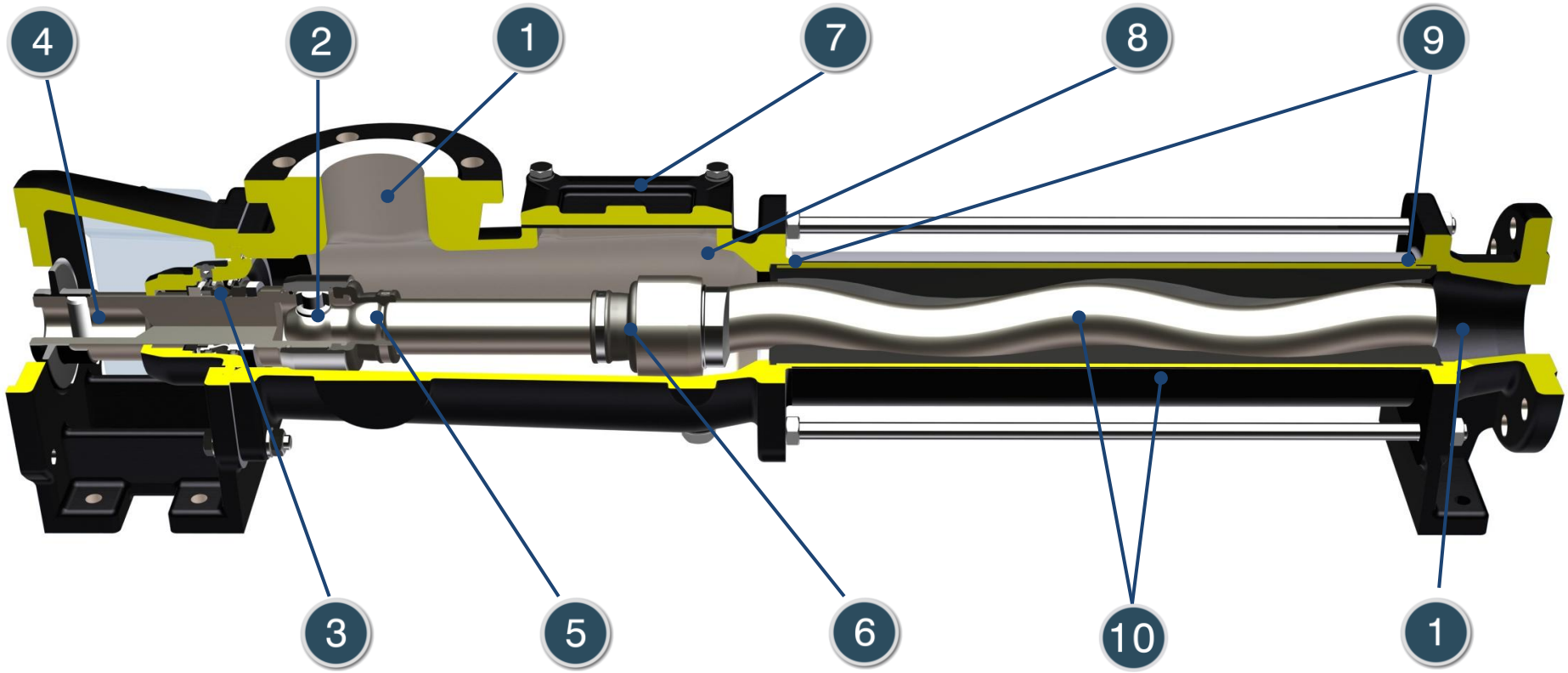
High performance universal joint

Large suction section

Large inspection port

Optimized geometry for smooth flow conductions

Integrated stator seal zone



Wide seal possibility

Stainless steel rotating unit

Durable joint sleeve

Rotor and stator highly resistant to corrosion and abrasion

Large discharge section

DIAMOND SERIES

www.novarotors.com

GENERAL FEATURES OF THE "DN" SERIES

The new "DN" pumps of the Diamond series can be used in a vast range of applications.

Their most impressive features include high flexibility of use, standard construction, modularity and efficiency.

The DIAMOND series boasts all those characteristics that make progressing cavity pumps indispensable in so many application sectors.
These characteristics include:
gentle, pulse-free pumping action
accurate dosing
pumping of high viscosity products, lubricant and abrasive, toxic and adhesive
resistance to corrosive environments and to chemically aggressive process fluids
sized to serve a wide range of capacity and pressure requirements
pumping of fluids with high solids content.

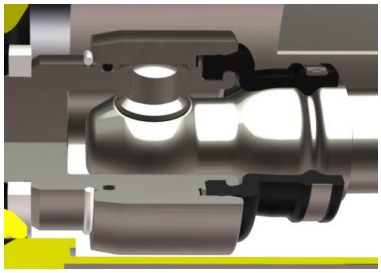
The DIAMOND series features a patented universal pin joint that ensures top performance and flexibility of use. The joint is designed for use in standard configurations which simplifies spare parts and maintenance management, without sacrificing reliability and long life.

"DN" SERIES COMPONENTS

1

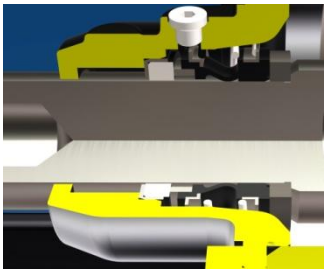
Large intake sections enable priming and improve pumping quality. This permits pumping products having up to 10-12% solids content with an extremely compact pump construction.
Pump body and outlet flange body are designed and built in compliance with API Standard 676, consequently they present resistance qualities that are far superior to standard products.

2



Patented high efficiency, robust, reliable pin joint.
Designed for easy and cost-effective part replacement; high strength bushes avoid costly parts replacement. The pin joints are constructed with a particular technology that guarantees long life, far exceeding the life of classic pin joints.

3



Standard construction with bi-directional single mechanical seal. The space between the shaft seal and the lantern is designed to house various types of seals such as single mechanical seals with quench, back-to-back or tandem double seals, gland packing systems with or without flushing.
The seals can also be balanced and made from a choice of materials to cover all applications.
In addition, single and double cartridge mechanical seals, also in compliance with API Standard 682, can be installed.

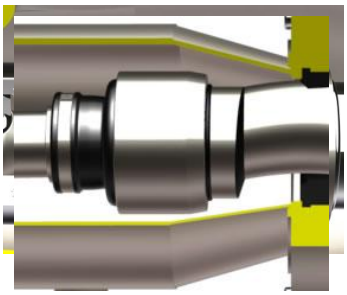
4

Connection to the motor drive system is through a coupling flange and pin coupled to the shaft. This system is the most economical, versatile and reliable, as it minimizes manufacturing costs and times. The pin on the shaft has the added advantage of presenting the same resistance qualities in both rotating directions yet without reducing the space available for the seal system.
The flanged coupling with oversized cross sections is unequalled in terms of compactness and ease of installation of the motor drive system.

5

Standard the rotating parts are in stainless steel. The production technology enables execution with various materials, according to application needs, with a margin on cost less impact than in the past, thanks to the attention to minimize the size and mechanical processing.
Furthermore, the choice of the material of the rotating part does not affect the life of the coupling due to the use of bushings for high resistance.

6

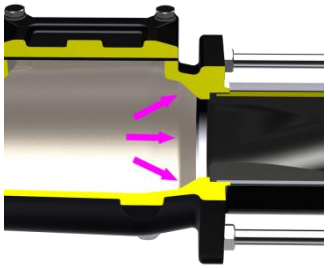


The joint protection sleeve has a minimal surface that comes into contact with the product and it is positioned so that it is only slightly exposed to any possible solid and/or sharp bodies.
The special technique of sealing with the stainless steel joint cover not only guarantees perfect tightness of the joint at high pressures, but it also eliminates the need for a second clamp which is typically very strained in the type of solutions that are normally adopted.

7

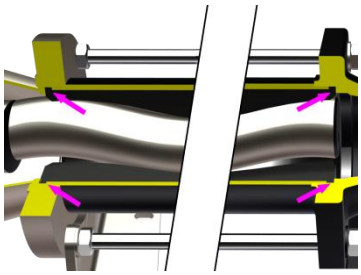
The pump housings in cast iron version have an inspection port with large dimensions, particularly useful in purification and biogas, cleaning and maintenance of the pump at the entrance to the stator.

8



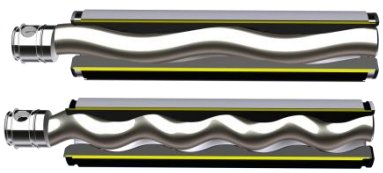
The inlet stator area is conical in shape with a large cross section. This, together with the compactness of the joint enables easy passage of the product, the NPSHr, and feed of products with large solids into the pumping part.

9



The two sides of the stator are fitted with integrated seal systems which avoid the use of additional O rings, and also prevent the body and flange from rotating if the rotor and stator jam during pump start up.

10



The rotors are manufactured with the utmost attention to finishing details and precision in order to achieve very low levels of roughness which maximizes pump efficiency by reducing the risk of jamming at start up. The rotors can be constructed from various materials and with different treatments and coatings to ensure the ideal solution for specific processing applications.
The stators are made of high quality elastomers and they are controlled according to strict parameters in order to guarantee optimal coupling with the rotor.
Long pitch geometry guarantees hydraulic performance that is not possible with traditional geometry, even while reducing axial load and thereby maximizing joint life.