

DIAMOND SERIES

edition 2017 rev 1



All about your flow

Tapflo is a leading pump manufacturer with the ambition to provide a wide range of premium products for various industrial applications. We focus on delivering the best fluid processing solutions and support on all stages of the process, worldwide.



About Tapflo

Tapflo is an independent, Swedish, family owned, manufacturer and global supplier of air operated diaphragm pumps, centrifugal pumps and other industrial process equipment. The company was founded in Kungälv, Sweden in 1980 and has since then been working with design and manufacture of thermoplastic, metal and sanitary series diaphragm pumps and also with complete range of centrifugal pumps and industrial equipment. After years of dynamic development the company evolved into Tapflo Group with worldwide operations. Tapflo Group is represented by own companies and independent distributors all over the world on 6 continents.

Quality certified

At Tapflo we believe that quality is one of the highest values, both for our customers as well as our employees. As a result, we comply with various globally recognised certification and quality control institutions. Many of our products comply with EC ATEX directives for equipment intended for use in explosion hazardous environments.

The aseptic series is EHEDG certified (European Hygienic Engineering & Design Group), the pharmaceutical series has USP VI and EC 1935/2004 approval.

All our products are obviously CE marked and followed by our comprehensive instruction manuals. Tapflo manufacturing process is certified according to ISO 9001:2015.



Our values

■ Long term engagement is our core

Our aim is to continuously provide premium products according to evolving needs of our customers. That is why we see each customer relationship as a long term commitment.

■ Local means on your terms

Tapflo is your global partner providing local support. No matter where your plant is located you can expect us to support you locally.

■ Flexibility the foundation of good service

We are prepared to deal with reality, knowing that in practice this means answering questions, offering solutions and supplying spare parts with a minimal loss of time.

■ Customizing to bring the product to the needs

Our intention is always to help our clients find the most cost effective solutions to increase their company's efficiency. If this means changing the design of the pump we see it as a challenge - not a problem.

■ To produce is to develop

When you are actively involved in the manufacturing of a product, it is almost impossible not to discover ways to improve it. This allows us to frequently offer solutions that are even more sustainable and efficient.

DIAMOND SERIES

A modular and versatile product

The Diamond Series pumps were designed to represent the most flexible product in the international use of single screw pumps.

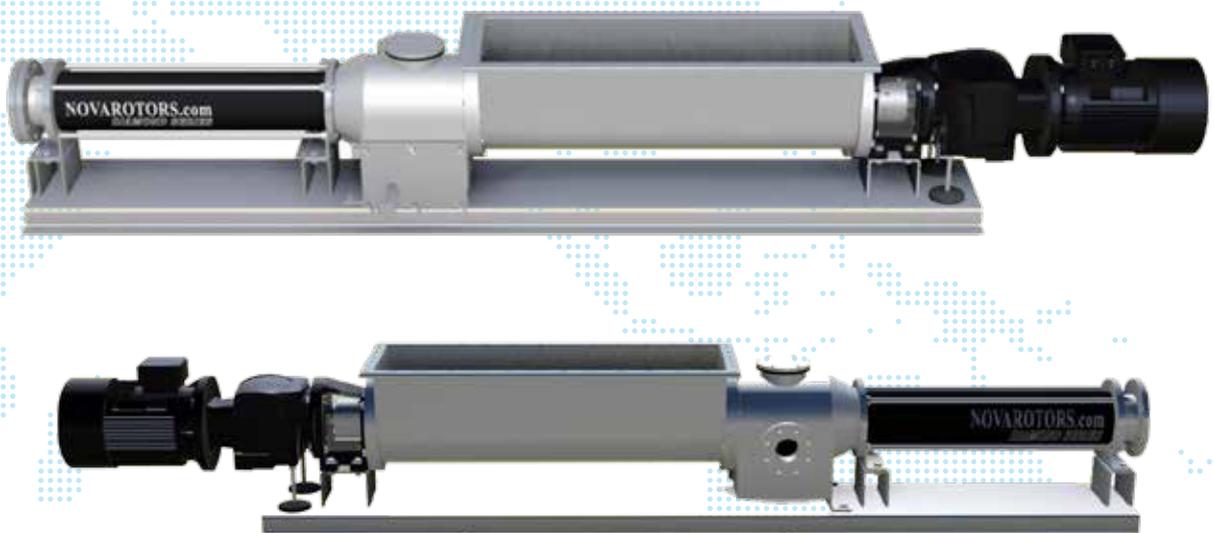
We have developed a complete range to meet the most broadest needs in the industry and satisfy specific requirements with dedicated products.

The Diamond Series is highly modular, each element can be selected specifically based on the application.

In fact, the basic elements were designed for easy and convenient customisation.

This fully enables us to offer clients a complete service and, if the pump use varies, adapt it to renewed process specifications

This gives a complete range of optionals and accessories whose particular combinations define set-up dedicated to a particular sector.



DHS-T

Pump with hopper supplied to pump silage and liquid injection (slurry or digestate).

Set-up for Biogas sector



DX-E

Typical set-up for oenological use with by-pass and trolley

Base plates:

Options available to support, fasten, install or move the pump.

- Standard base for the Diamond series, for block pumps. Eases installation and guarantees better rigidity and robustness to the pump

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » R - RF, RL - RJL - RFL



- Base API 676. Used as standard for pumps API 676 or on request. Planned waste water drainage surface. Lifting devices. Raised sections with processed surfaces.

Available in Series:

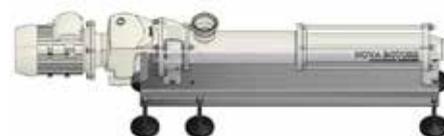
- » DN - JN



- Base with hygienic, anti-adjustable feet. Suitable to space the base from the floor enabling cleaning. Fixes any irregularities. The feet dampen vibrations.

Available in Series:

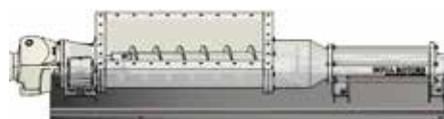
- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » R - RF, RL - RJL - RFL



- Base with raised sections. Allows you to change the axis height of the pump. Eases access to the drains. For pumps with bearing support, pump axis adapts to the drive.

Available in Series:

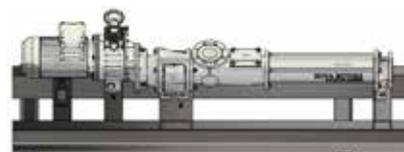
- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » R - RF, RL - RJL - RFL



- Skid with lifting devices. Base with lifting devices and pump raised sections. Can be manufactured to client specifications.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » R - RF, RL - RJL - RFL



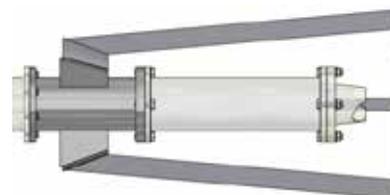
- Well foundation stand with locking cone. Locks the DV series vertical pumps reducing oscillations and vibrations to a minimum.

Available in Series:

- » DV Short

Standard on Series:

- » DV Long



■ Trolley for industrial sector. Trolley whose strength is its greatest asset. Reinforces the structure of the pump and enables its use even in heavy applications.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHP - JHP
- » RL - RJL - RFL

■ Trolley for the foodstuff/oenological sector. Trolley that enables movement of the pump even on disconnected floors. The greatest asset is its easy handling thanks to the single front wheel and its reduced weight.

Available in Series:

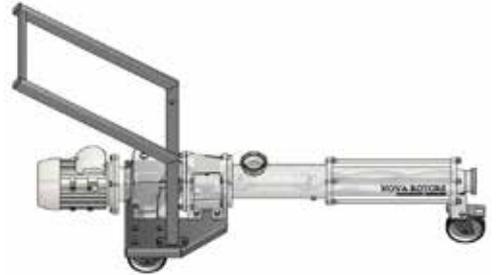
- » DN - JN
- » DX - JX
- » R - RFRL - RJL - RFL

Built in Series:

- » DHE

Standard for set-ups

- » DN - E



Options for drive shaft

Options available for drive shaft The functions vary based on the device selected and according to the application and operating requirements.

■ Protective casing for the pin. Option of fundamental importance for fluid pumping with hard content. Protects the sleeve from wear or breakage due to abrasive products and sharp solids. If is fundamental for the sleeve to be intact for the duration of the pin which is lubricated with high pressure oil, breakage drastically reduces its duration. The particularity of this device is the seal which is created thanks to calibrated compression on the sleeve that completely avoids solids entering the chamber that is created by the shell, sleeve and tie.



Available in Series:

- » DN - JN
- » DXC - JXC
- » DH - JH, DHP - JHP
- » DV Long – DV Short

Built into Series:

- » DHS - JHS, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB

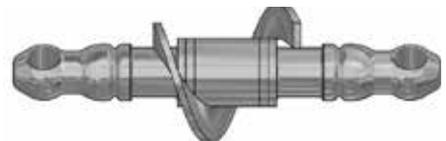
■ Drive shaft with auger feed screw. Improves transfer of dry, fibrous and non-sliding products in the body of the pump to improve the supply in the hydraulic part of the pump.

Available in Series:

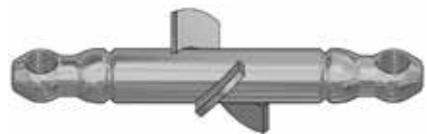
- » DN – JN
- » DX - JX

Built into Series:

- » DH - JH, DHE, DHS - JHS, DHP - DHP, DHB - JHB, DHS-T - JHS-T, DHSB – JHSB



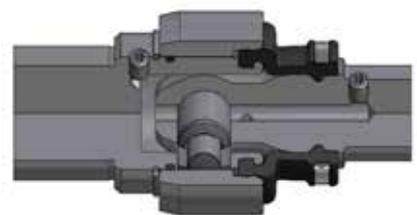
■ Anti-sedimentation panes. Prevents sedimentation in the pump casing and mixing the product, avoiding accumulated dry or fibrous substances and clogging of the body causing pump blockage.



Available in Series:

- » DN - JN
- » DX - JX

■ Hydraulic balancing of the pin. It allows the sleeve to resist pressure over standard pressure (3 bar). The channels enable total filling of oil and bleeding the air. If is fundamental for the sleeve to be intact for the duration of the pin which is lubricated by high performance oil. Breakage of the sleeve drastically reduces its duration.



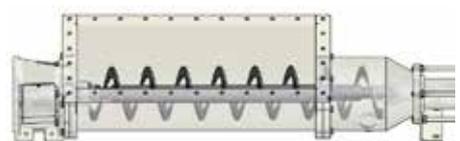
Available in Series:

- » DN - JN
- » DXC - JXC

Standard on Series:

- » DV Long - DV Short

■ Cavity auger feed screw, reduces bridge formation in the pump of products with a tendency to plasticizing. Improves the hydraulic power supply for heavy product loads over the hopper, as for installation under a silos. Improves sanitation of the transmission for the series that includes protection of the sleeve built into the auger (DHS, DHB, DHSB, DHS-T, etc).



Available in Series:

- » DHS - JHS, DHB - JHB, DHSB - JHSB, DHS-T - JHS-T

Protection devices

Devices and parts protecting the pump from functioning off specification, such as overpressure, excessively high temperatures or dry functioning.

- Temperature probe against dry running (standard in the ATEX version). Positioned and fastened directly on the stator to detect the internal temperature of the material in the stator.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB

- Flow switch. Device that detects the presence of suction fluid to avoid dry running

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - DHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB,
- » DV Long - DV Short

- Pressure switch. Device used in delivery to detect pressure in the plant to avoid excessively high working pressures.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - DHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB,
- » DV Long - DV Short

- Overpressure valve flanged or with threaded couplings GAS BSP. This part discharges the overpressure that generates in delivery to the pump and transfers the flow outwards. Usable up to 40 bar. Particularly strong and suitable for heavy use with viscous fluids or containing abrasive solids. It is used in the bypass to re-integrate the fluid in the body of the pump.

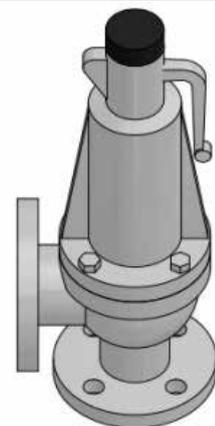
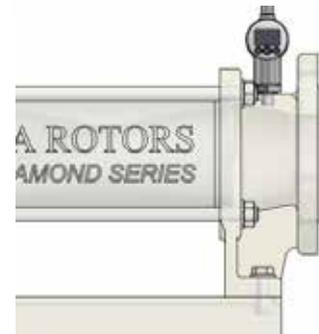
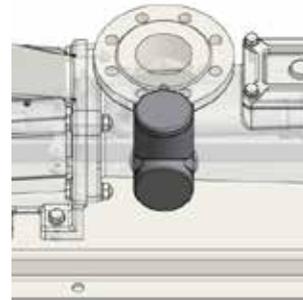
Available in Series:

- » DN - JN
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » DV Long - DV Short
- » R - RF, RL - RJL - RFL

- Hygienic overpressure valve. This part discharges the overpressure that generates in delivery to the pump and transfers the flow outwards. The hygienic couplings make it ideal for use in hygienic environments. Suitable for low viscosity flows containing low percentages of solids. It is used in the bypass to re-integrate the fluid in the body of the pump.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » DV Long - DV Short
- » R - RF, RL - RJL - RFL



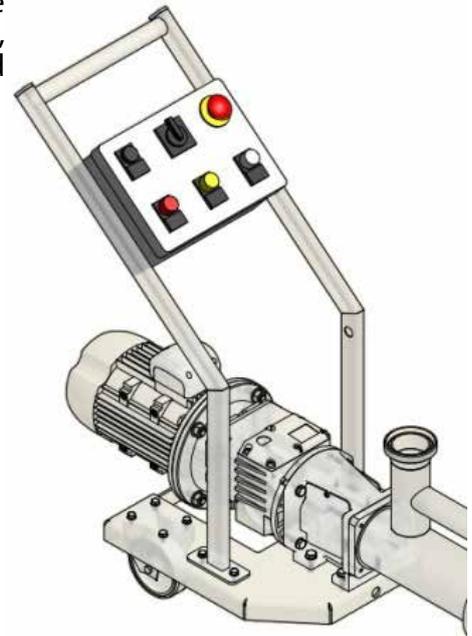
Control devices

Devices and parts enabling direct or remote control of the pump. Can be integrated with certain safety devices, enabling simple management since it is integrated with the pump itself.

- Electric panel: available both to power single and three phase motors. Available with the inverter running, motor protection, emergency and start pump button, with voltage present light and flow switch activation light, where present.

Available in Series:

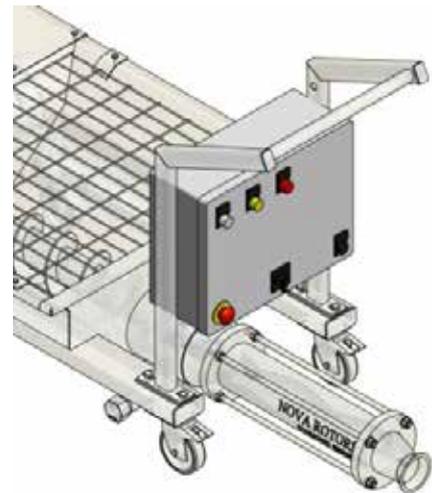
- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
DV Long - DV Short
- » R - RF, RL - RJL - RFL



- Electric panel with inverter. Available with the inverter running, motor protection, emergency and start pump button, with voltage present light and flow switch activation light, where present, fuses and key for inverter exclusion.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
DV Long - DV Short
- » R - RF, RL - RJL - RFL



- Motor with built in inverter. The inverter is positioned directly over the motor, guaranteeing reduced size and avoiding use of other electric panels for integration.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
DV Long - DV Short
- » R - RF, RL - RJL - RFL



Optionals and set-ups

Options available, select based on operating needs. Each of these and their combination combine to create specific set-ups for use in certain sectors.

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Available in Series:

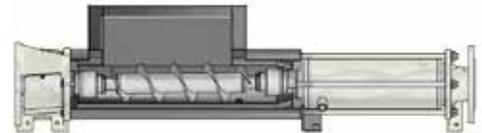
- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB



- Heating jacket (sleeve) for the body of the pump. It is possible to flow the jacket with hot fluid to maintain the temperature of the body of the pump.

Available in Series:

- » DN - JN
- » DX - JX



- Heating jacket (sleeve) for the hopper. It is possible to flow the jacket with hot fluid to maintain the temperature of the hopper.

Available in Series:

- » DH - JH
- » DHS - JHS



- Stator covers in stainless steel: eliminates the need to use tie rods. Completely covers the stator avoiding its contact with the environment, useful for use in particularly aggressive environments or if the hydraulic part is emerged in the pumping product.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB

Standard sulle Serie:

- » DV Long - DV Short (nelle versioni in acciaio inossidabile)



- CIP connection built into pump body. This option enables introduction of washing fluid in the pump body to clean the pump as much as possible, useful in a hygienic environment. Manufactured tangential to the body, it avoids stagnation and enables efficient drainage of the fluids.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHP - JHP



- Eccentric outlet flange: it eliminates from pump delivery any stagnation or deposit of product, making cleaning much more efficient.

Available in Series:

- » DN - JN
- » DH - JH, DHP - JHP

Standard per le serie:

- » DX - JX, DHE



■ Bypass built into the pump construction. Reduces dead zones due to connections. Reduces the number of parts necessary simplifying use of the device. Optimal system for the foodstuff sector. Available with foodstuff coupling.

Available in Series:

- » DN - JN
- » DX - JX
- » R - RF-RL-RFL

Standard per le serie:

- » DN-E
- » DX-E



■ Industrial bypass flanged or with threaded couplings. The modularity enables its installation afterwards on the pump. Also for use in a foodstuff environment with the relevant connections.

Available in Series:

- » DN - JN
- » R - RF - RL - RFL - RJL

Standard per le serie:

- » DN-Y



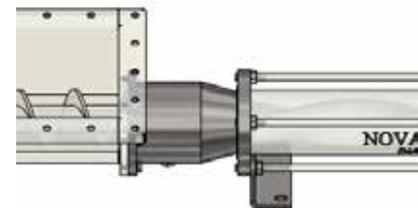
■ Separate funnel very useful to reduce rotor maintenance times if the pump is big or has complex system installation. It enables dismantling of the rotor without disconnecting the pump from the system and without removing the body of the pump.

Available in Series:

- » DH - JH, DHE, DHP - JHP,
- » DV Short

Standard per le serie:

- » DHS - JHS, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » DV- Long



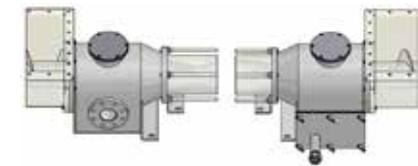
■ Separate funnel with solid collection, injection flange, upper inspection door, door to remove solids and drainage tangential section. This system is ideal in the biogas sector where the load of the hopper is not controlled. The solid removal door uses a rapid release system requiring no tools. The flanged connection enables liquid phase injection and activates a mix on the funnel that considerably reduces delivery pressure enabling transport also on long sections with reduced costs.

Available in Series:

- » DHS - JHS

Standard per le serie:

- » DHS-T - JHST



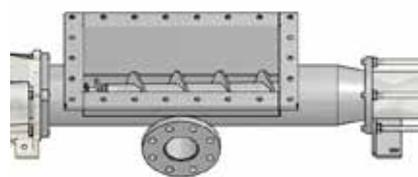
■ Tangential coupling flanged or with threaded coupling for fluid drainage in the body or hopper. The tangential structure avoids product residue and stagnation.

Available in Series:

- » DN - JN
- » DH - JH, DHS - JHS, DHP - JHP, DHSB - JHSB

Standard per le serie:

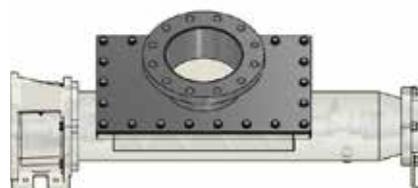
- » DHE, DHB - JHB, DHS-T - JHS-T



■ Hopper cover: fixed directly to the hopper. It enables fastening to a plant tubing thanks to the flanged or threaded connection with which it is supplied.

Available in Series:

- » DH - JH, DHS - JHS



■ Module “B” arch breaker device. The module includes a particular wheeled device that powers the auger avoiding bridge formation and makes plastic or pseudo-plastic substances more flowing, suitable for pumping unflowing substances with up to 40% dry substance that tends to form bridges or blockages.

Available in Series:

- » DHS - JHS

Standard per le serie:

- » DHSB – JHSB

■ Flow adaptor. This device enables flow of the seal. It is installed directly on the base and enables monitoring of the flowing liquid pressure.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB – JHSB
- » DV Long - DV Short

■ Block housing manufactured in stainless steel. Available for all constructions whose use is recommended for particularly abrasive products that could seep through the seal.

Available in Series:

- » DN - JN
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB – JHSB
- » DV Long - DV Short

Built into Series:

- » DX – JX
- » R - RF - RL - RFL – RJL (in stainless steel versions).

■ Hermetic block housing. This particular sealed block is equipped with gaskets on the covers to isolate the outer part of the seal, the compartment and the hollow shaft.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB – JHSB
- » DV Long - DV Short

■ Protective casing for the drive. Available for use in dusty environments or to avoid the drive coming in contact with corrosive liquids.

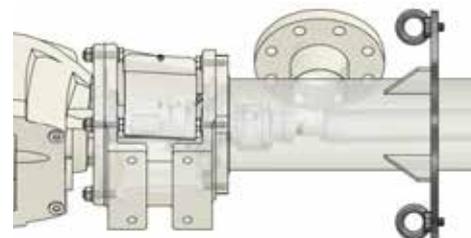
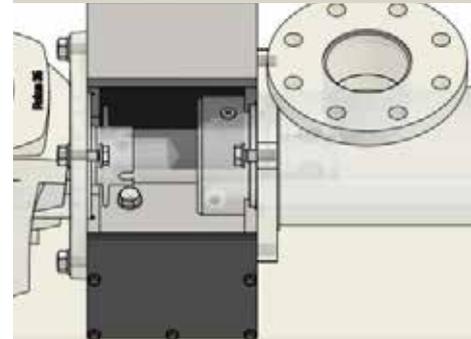
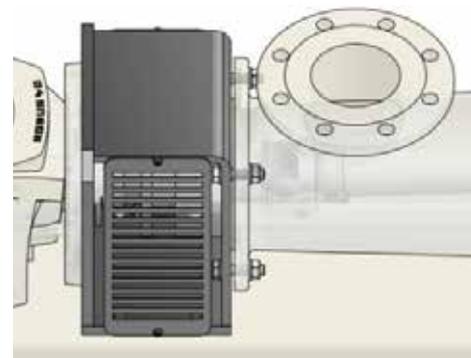
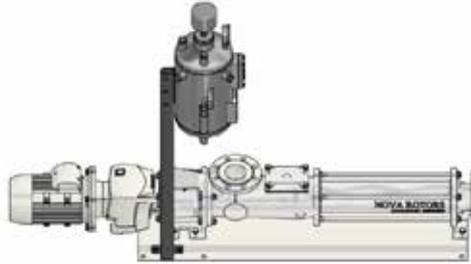
Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB – JHSB
- » R - RF - RL - RFL - RJL

■ Lifting eyebolts for direct connection to the anchorage plate of the pump, the base or the pump itself. Enable easy positioning of the pump.

Available in Series:

- » DN - JN
- » DX - JX
- » DH - JH, DHE, DHS - JHS, DHP - JHP, DHB - JHB, DHS-T - JHS-T, DHSB - JHSB
- » DV Long - DV Short
- » R - RF, RL - RJL - RFL



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Tapflo products and services are available in 75 countries on 6 continents.

Tapflo is represented worldwide by own Tapflo Group Companies and carefully selected distributors assuring highest Tapflo service quality for our customers' convenience.

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