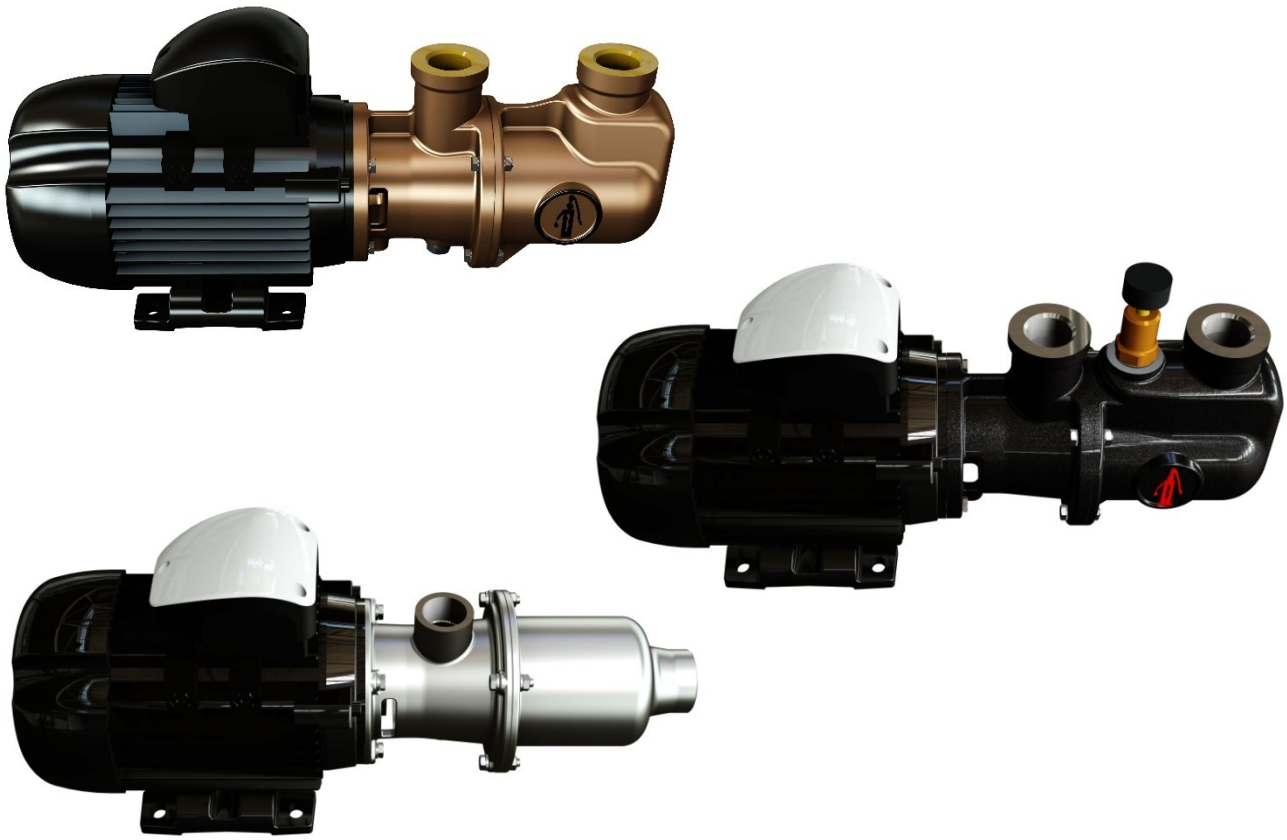
NOVA ROTORS®
Progressing cavity Pumps

OUR POWER, YOUR SATISFACTION



WOBBLE PUMPS

Industrial pumps

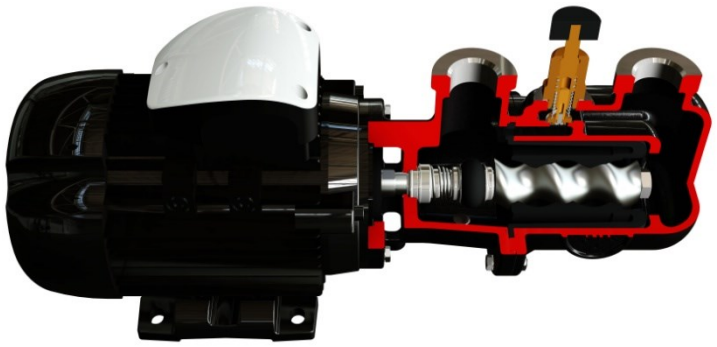
R / RF series

R

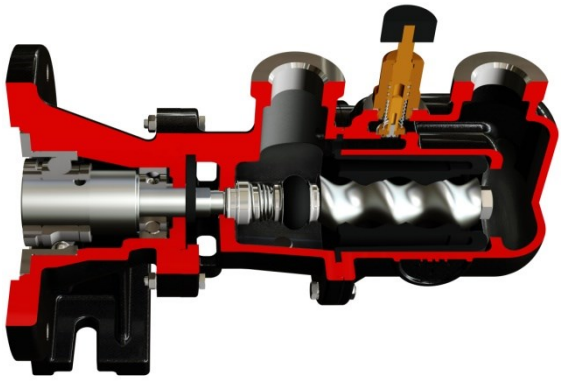
Wobble pumps

Our range of wobble pumps is the ideal solution for those seeking a highly compact and versatile product. They are particularly easy and economical to maintain, due to the very small number of component parts. They can be used in a variety of industrial applications due to their ability to pump products which are viscous, which have solids in the fluid or which are mildly abrasive. Perfect for those seeking a highly efficient, economical product, these offer an unparalleled cost/benefit advantage. Even at high rpms, they pump without pulsating and there is virtually no centrifugal effect. They are also suitable for use within the food industry, as there are no dead zones within the pump.
The R series range of pumps all have solidly constructed housings in cast iron, bronze and stainless steel (AISI Type 304 and AISI Type 316), manufactured using lost wax casting technology.
Threaded GAS BSP connections are available as standard, but we can also supply DIN 11851 type adaptors upon request.

- R Series: a highly compact product due to its integrated construction between pump and electric motor. The use of cross-joints ensures a high degree of reliability and a smaller footprint. The support between the pump housing and the drive has been removed to offer the benefit of a product which is compact and easy to maintain.



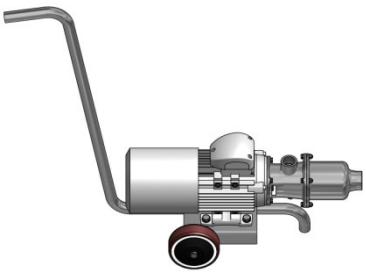
- RF Series: this is based on the same technology as the R Series, but in contrast uses support bearings with a plug-in shaft at the inlet. The RF Series can be directly connected to the drive via a flange. The ideal solution to supply as a bare shaft pump, while still maintaining a compact size and easy installation. The bearings ensure maximum reliability in all operating conditions.



Joints: Cross-type joints, the true heart of the wobble pump, offer the best solution currently available on the market. Cast-manufactured, highly durable and reliable, due to the high degree of engineering being achieved. Its special construction allows the axial loads and torques on the two axes of rotation to be split, ensuring only rotary movements of the pins that compose it. Its smaller dimensions mean that it can be replaced quickly.



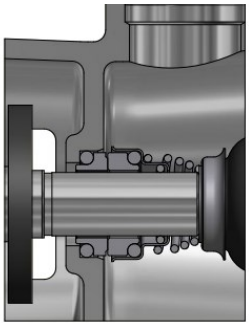
Stands: The pump can be installed without a stand. This helps to reduce the overall dimensions and avoids additional costs. When necessary, stands, customized skids and trolleys can be provided, allowing the pump to be moved.



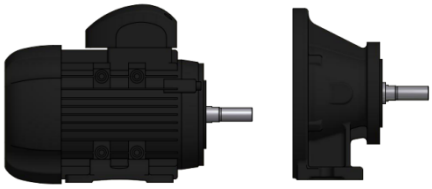
Materials: The parts in contact with the product can be manufactured from different materials in the R Series pumps, from the cast iron version (GG25) to stainless steel (AISI Type 304 and AISI Type 316) to bronze. However, the cast iron and bronze versions still have the rotating parts made from AISI Type 304 and AISI Type 316 stainless steel.

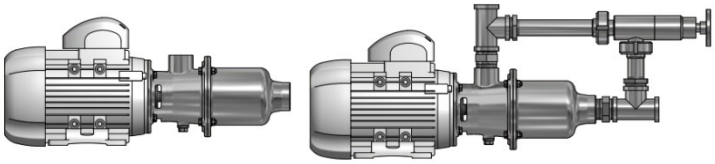
Low pulsation: Very low pulsation and tensional stress. The centrifugal effect is reduced to a minimum, due to its special design and the predominantly axial pump system.

Shaft seals: The pump uses internal single mechanical seals as standard. The seal is located inside the pump housing. This solution ensures the maximum heat exchange between the surface of the seal and the product being pumped, which gives the benefit of increased durability. Moreover, the position of the seal makes it much easier to keep clean, thus avoiding product residues that could negatively affect operating conditions. The housings are suitable for the installation of seals manufactured in accordance with ISO EN 12756.



Modular Design: The R Series is based on a modular concept in every single feature: hydraulic parts, casings, seals, stands, supports and drive shafts. Each component can be constructed in a number of variants without modifying the structure of the machine, thus maintaining standard key replacement components.





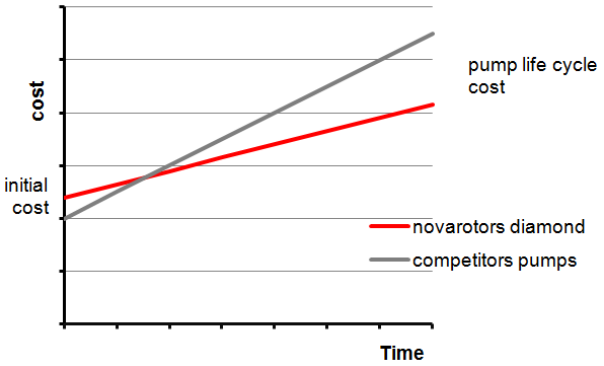
Performance: Durability, reliability and low energy consumption. The R series successfully combines a compact size with high performance in one single product.

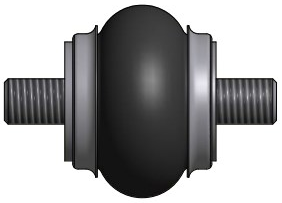
Efficiency: The highest possible standards, exceptional operating efficiency due to its excellent volumetric efficiency, even at high pressures, and minimal energy consumption. All the hydraulics on the R series have been calculated to ensure the best you can find anywhere on the market today.

Versatility: The R Series is designed to be versatile in all of its applications, which is why it can be arranged with options and accessories that are suitable for every application. In addition to this, there are the benefits that the special characteristics of a cavity pump can naturally offer in pumping various kinds of fluids, fluids with low to very high viscosity, fluids free from or containing solids of various types and sizes.

Drives: All the drives installed on the R Series have been endurance-tested and have been subjected to strict and stringent technical testing. We can install either electrical or hydraulic motors.
All models of electrical motor reducers and variators have certain features in terms of robustness, dimensions of the bearings and quality of the gears.

Quality: Each component is manufactured to very stringent quality specifications. The finishing and the precision of each component are the starting point for every single pump built. All components are subject to specific controls according to their features and their functionality.





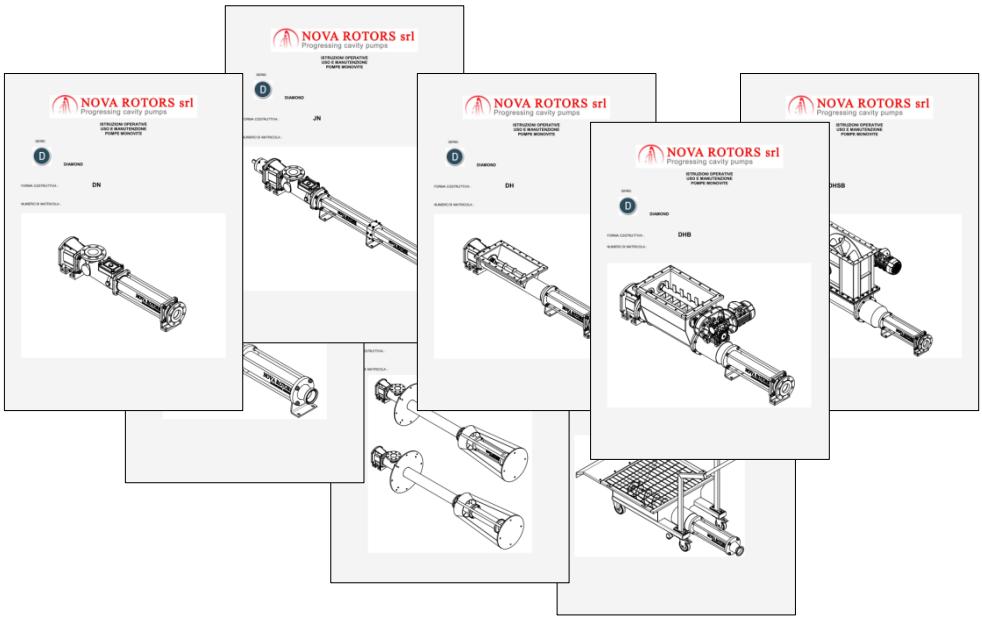
Maintenance: The R Series is designed to ensure easy maintenance, with only a minimum number of replacement parts necessary. In particular the cross-joint is easy to replace due to its reduced dimensions, enabling it to be completely replaced without having to replace shafts and rotors. Maintenance costs are thus reduced. The cost of the machine is also highly competitive, considering its entire life-cycle.

Cost / Benefit: Due to the compact size of its components, the RL Series successfully combines incomparable technical features with very competitive costs. Its modular design enables the right solution to be offered for each specific application, which avoids having to pay for any unnecessary features. All of which increases competitivity.

Priming abilities: The special features of the hydraulic parts of the wobble pump allow excellent priming abilities (up to 4m). The pumps in the RL Series are designed to create the lowest possible pressure drop in the pump housing, due to the wide sections, a compact joint and its fluid dynamic design.

Easy installation: The RL Series pumps are easy to install, due to their compact size, their simplicity of operation and their operational flexibility, and the various fittings available.

Detailed documentation: Each pump comes supplied with clear and detailed operating instructions. All orders are handled by expert, qualified staff who, as part of each order, include detailed and specific documentation for the product supplied.



Features in detail

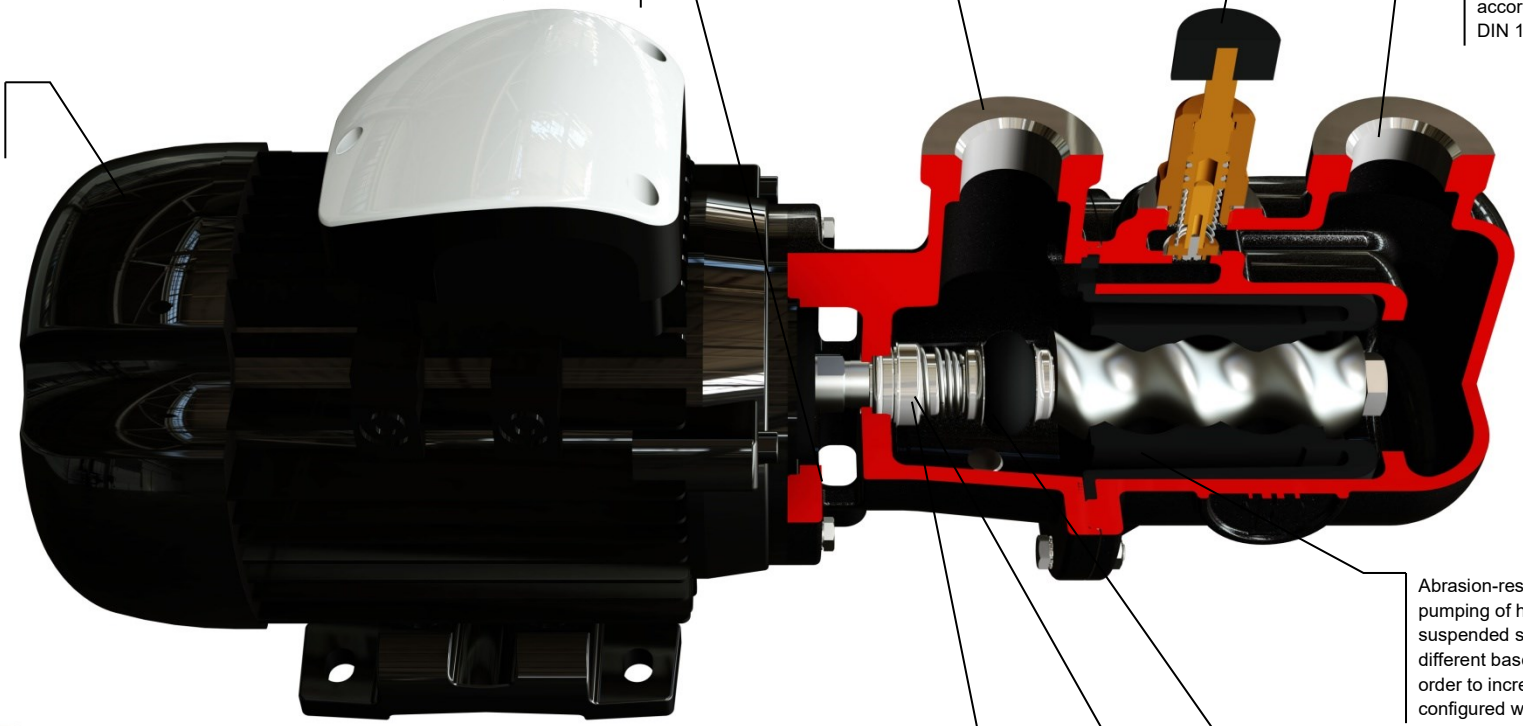
Outlet sections designed to reduce pressure loss.
The pump housing can be manufactured
in different metals, according to requirements.
GAS BSP and DIN 11851 Connections Available.

Safety valve integrated into the pump construction, for protection against excess pressure. Adjustment is fast and simple. The special construction of this by-pass system allow overall dimensions and costs to be reduced.

The seal works directly on the drive shaft. Manufactured in AISI Type 316. This solution eliminates coupling, allowing the seal to work more precisely and giving greater rigidity; it also further facilitates quick and easy maintenance.

Wide suction sections enable excellent priming abilities and the efficient pumping of viscous substances. The inlet port can be manufactured in different metals, according to requirements. GAS BSP and DIN 11851 Connections Available.

Electric motor integrated
into the pump construction.
Direct coupled.

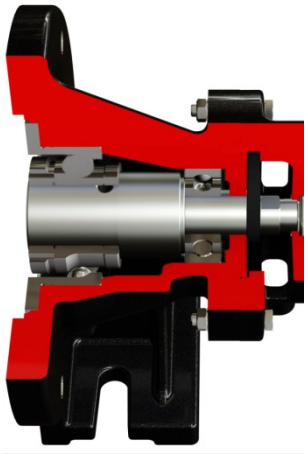


Abrasion-resistant rotors and stators enable the pumping of highly viscous fluids and fluids with suspended solids. The rotor can be supplied in different base metals and heat-treated or coated in order to increase durability. The stators can be configured with various types of elastomers.

Cross-joint. Supplied as a ready-assembled and lubricated KIT.
Replacement is therefore extremely quick and easy.
Highly durable, with excellent reliability.

Rotating parts made from stainless steel as standard, even for cast iron or bronze pumps. Various metals available, depending on the application.

Single mechanical seal inside the pump housing.
A conical spring seal is used as standard.
Highly reliable and easy to install.
Its simple construction enables easy cleaning.



RF SERIES
Modular bearing supports
Exceptionally high-performance bearings
for maximum reliability.
Plug-in shaft for direct flange coupling.
Ideal for coupling with reducers and variators.

VERSIONS AND OPTIONS

Casing Material
Base materials:
GG25, CF8 (AISI Type 304), CF8M (AISI Type 316), Bronze

Shaft seal material
Base materials:
AISI Type 316

Rotor materials
Base materials:
AISI Type 304, AISI Type 316
Coatings:
Hard chrome plating (HCP)

Stator materials
Base materials:
NBR, food-grade NBR, white food-grade NBR
EPDM, food-grade EPDM, white food-grade EPDM
FPM

Stands
Standard base
Base with hygienic, anti-vibration, adjustable feet
Base with risers
Trolley for food industry
(For details of construction, please refer to the brochure for options, accessories and fittings)

Connections
Threaded GAS BSP connections
DIN 11851

Seal systems
Single mechanical seal

Protection devices
Flow switch
Pressure switch
(For details of construction, please refer to the brochure for options, accessories and fittings)

Control devices
Electrical panel
Electrical panel with inverter
Motor with integrated inverter

Options and fittings
By-pass integrated into the pump construction
Stainless steel support block
Protective drive casing
(For details of construction, please refer to the brochure for options, accessories and fittings)

Certification
CE

FEATURES OF USE

Operating range

Flow rate
Up to 6m³/h
Pressure
4 bar (6 bar for intermittent use)
Temperature
From -40°C up to 80°C

Typical applications

Discharge of waste water containing surfectants for car washes
Dosing of polyelectrolytes, flocculants and polymers
Transfer of cleaned emulsifiable oils and used vegetable and mineral oils
Transfer of gas oil, combustible oils and diesel
Food-grade oils: extra-virgin olive oil, seed oils, sunflower oil
Bottling of wine, beer, juice and drinks
Transfer of juices, syrups, vegetable oils
Wax for citrus fruits
Discharge of dirty water, sewage, biological sludge, oil sludge for the marine industry
Water treatment

SUMMARY TABLE OF THE RANGE

R Series flow rates and pressures

Size	Nr Poles	Qmax 1 bar [m³/h]	rpm	P max [bar]	P inst (KW)
R24	4	0.55	1400	4	0.25
	6	0.35	900	4	0.18
R28	4	0.33	1400	4	0.25
	6	0.21	900	4	0.18
R45	4	2.7	1400	4	0.55
	6	1.7	900	4	0.55
	8	1.3	700	4	0.25
R49	4	1.05	1400	4	0.55
	6	0.67	900	4	0.55
	8	0.52	700	4	0.25
R64	4	3.5	1400	4	1.1
	6	2.25	900	4	0.75
	8	1.75	700	4	0.55
R68	4	3	1400	4	1.1
	6	1.9	900	4	0.75
	8	1.5	700	4	0.55
R84	4	5.9	1400	4	2.2
	6	3.8	900	4	1.5
	8	2.9	700	4	0.75
R88	4	4.2	1400	4	2.2
	6	2.7	900	4	1.5
	8	2.1	700	4	0.75

R Series flow rates and pressures (Bronze version only)

Size	Nr Poles	Qmax 1 bar [m³/h]	rpm	P max [bar]	P inst (KW)
R44	4	2.5	1400	4	0.55
	6	1.7	900	4	0.55
	8	1.3	700	4	0.25
R48	4	0,87	1400	4	0.55
	6	0,56	900	4	0.55
	8	0,44	700	4	0.25

NOVA ROTORS®
Progressing cavity Pumps

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