



GARBARINO

PUMPS SINCE 1932



COMPANY & PRODUCTION

Centrifugal and positive displacement pumps for marine, naval and industrial fields

Company profile

Shipyards, ship owners, navies, engineering companies, chemical and petrochemical plants, desalination plants, power stations, steelworks, etc., in Italy and all over the world: these are the customers of Pompe Garbarino SpA, worldwide leading company which specializes in the production of centrifugal and positive displacement pumps for marine, naval and industrial fields.

Founded in 1932 by Paolo Garbarino, Pompe Garbarino has two factories in Acqui Terme (AL), Piedmont, Italy, and, from 1994 a sales branch in Milan.

The company maintains its “core business” in the marine and naval fields and has diversified its production facing also the industrial field.

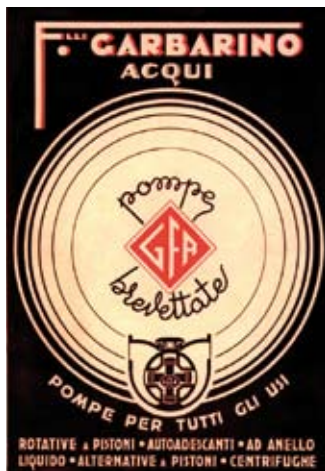
Instead of adopting mass production methods, Pompe Garbarino has chosen the technological search in sophisticated and demanding fields. The attention is focused on the constant improvement of the products designed according to the customer's requirements and selecting the most suitable materials for the different applications. Pompe Garbarino always puts the customer's needs first thanks to the highly flexible approach and the capability to produce more than 450 different models of pumps.

Pompe Garbarino offers an excellent service to customers in terms of technical consultancy and after sales service ensuring the availability of engineers on site. Spares delivery and product replacement can be guaranteed in very short time thanks to the huge capacity of the warehouse, one of the best features of the company.



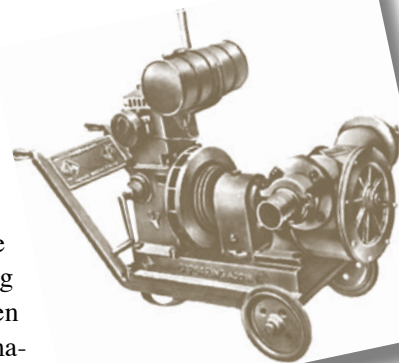
Company history

Pompe Garbarino was founded in Acqui Terme in the province of Alessandria, Piedmont in Italy in 1932 to address the growing demands for pumping technology of the local wine industry and aqueducts. After the war Paolo Garbarino, the founder, decided



to enter into new markets and, at the beginning of the 1950's, forged close ties with the Italian Navy enabling expansion into the field of the marine pumps. Since then Pompe Garbarino has grown to become a supplier to major shipyards in Europe and Asia, ship owners worldwide, the Italian Navy since 1950 (official supplier) as well as several other foreign navies and to become the world's leading company in the supply of pumps to the cruise shipbuilding industry (more than 80 cruise vessels supplied).

The decision to diversify the firm's market base by entering the industrial field (including engineering companies, chemical and petrochemical plants, desalination plants, power stations, steel mills, etc.) dates back to the beginning of the 1980's and, in 1994, Pompe Garbarino opened a sales branch in Milan in order to increase the market share in the industrial field.



Quality Control System

Pompe Garbarino is certified ISO 9001:2000 by RINA and ABS since 1994, NATO AQAP 2110 by the Italian Ministry of Defence since 1987, ISO 14001:2004 by Lloyd's Register since 2009.

Pompe Garbarino complies with the very strict NATO specifications in terms of shock proof, noise proof, vibration proof, and non-magnetic executions. The obligation to provide long guarantees has imposed severe controls on materials and on the production cycle. Intermediate checks during the manufacturing stages and final performance tests are carried out for every single pump. This strict working regime has ensured the approval of the classification societies such as Rina, ABS, Bureau Veritas, Lloyd's Register, Det Norske Veritas, Germanischer Lloyd, NKK, whose surveyors are daily in the workshop to attend tests and certify the pumps.

Classifications societies: Registro Navale Italiano (RINA), American Bureau of Shipping (ABS), Bureau Veritas (BV), Lloyd's Register (LR), Det Norske Veritas (DNV), Germanischer Lloyd (GL), Nippon Kaiji Kyokai (NKK).

In the Naval field pumps are manufactured and tested following NATO standards:

- MIL STD 167 1 (mechanical vibrations)
- MIL STD 740 1 (airborne sound)
- MIL STD 740 2 (structure borne vibrations)
- MIL S 901 D (shock test)
- Non - magnetic executions



Applications



Marine and Naval applications

- Main and auxiliaries cooling
- Ballast service
- Bilge service
- Deck water sealing
- Sludge
- Sewage transfer
- Main engine lub oil system
- Lub oil, fuel oil, waste oil transfer
- Boiler feed
- Economizer circulation
- Fire fighting & general services
- Fresh water system
- AC chilled water circulation
- HT/LT circulation
- Grey / Black water handling
- Water chilling



Industrial applications

- Cooling service
- Sea water service
- Acid and alkaline liquids with suspended solids transfer
- Hydrocarbons transfer
- Condensate and gaseous fluids transfer
- Drain service
- Reverse osmosis
- Boiler feed
- Chemical services
- Air conditioning, air cooling, chilled water services
- Oil & gas upstream various services
- Screen wash system service



Materials

- Cast Iron, Ductile Iron, Ni-Resist
- Bronze (Tin Bronze B10 And BZN4, Nickel-Aluminium Bronze ASTM B148-C95800)
- Martensitic Stainless Steel (AISI 410 – 420), Austenitic Stainless Steel (AISI 304, AISI 304 L, AISI 316 L, AISI 317 L)
- Duplex and Superduplex (ASTM A890 GR. 4a, 5a, CD4MCU)
- Special Alloys (Monel, Hastelloy, Alloy 20, Incoloy 825)

Any other material combination can be supplied.



Production

Centrifugal Pumps



MU

Pumps according to EN 733



MU- L

Vertical in line pumps



MU- LDS

Vertical in line double suction pumps



MCA

Recessed impeller torque flow pumps



VS

Vertically suspended line-shaft pumps



CN

Chemical pumps according to ISO 2858 - 5199



ZN

Diathermic oil circulation pumps



G/GH

Multistage high pressure pumps



BT

Side channel pumps



MU-MPF

Portable fire pumps

Positive Displacements Pumps



P

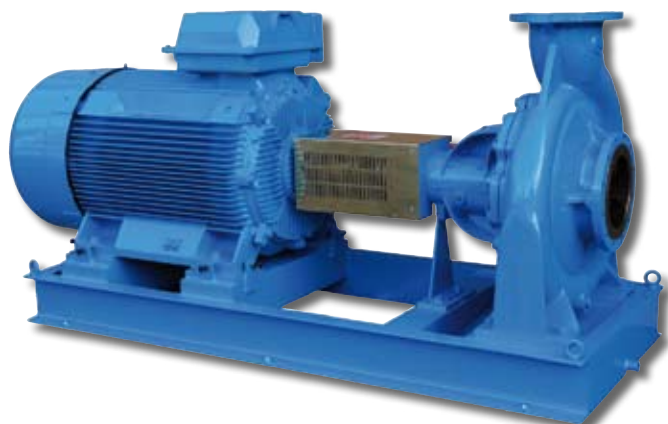
Hollow oscillating disk pumps



IN

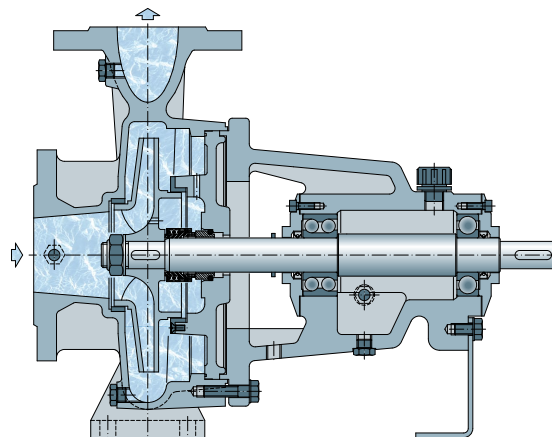
Gear pumps

MU



MU pumps are suitable for fresh and sea water, condensate, oils, chemical and petrochemical products in shipbuilding industry, heating plants, air conditioning system, aqueducts, effluent treatment plants, fire fighting, petrochemical plants. Special versions according to Naval Rules (shock-proof, vibration-proof, noise-proof, non magnetic).
Further versions: close coupled, selfpriming.

Pumps according to EN 733



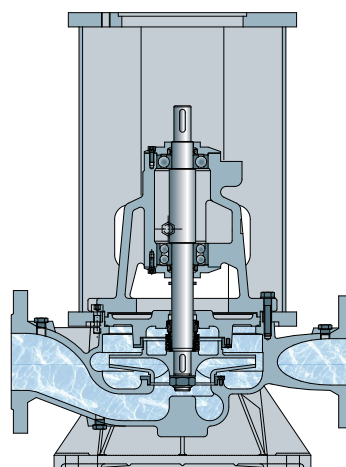
ND	inch	1" ÷ 12"
Q	gpm	≤ 13500
H	ft	≤ 460
n	rpm	≤ 3500
t	°F	≤ 400

MU- L



MU-L pumps are suitable for fresh and sea water, condensate, oils chemical and petrochemical products in shipbuilding industry, heating plants, air conditioning systems, aqueducts, effluent treatment plants, fire fighting, petrochemical plants. Special versions according to Naval Rules (shock-proof, vibration-proof, noise-proof, non magnetic).
Further versions: close coupled, selfpriming.

Vertical in line pumps



ND	inch	1" ÷ 12"
Q	gpm	≤ 8000
H	ft	≤ 495
n	rpm	≤ 3500
t	°F	≤ 400

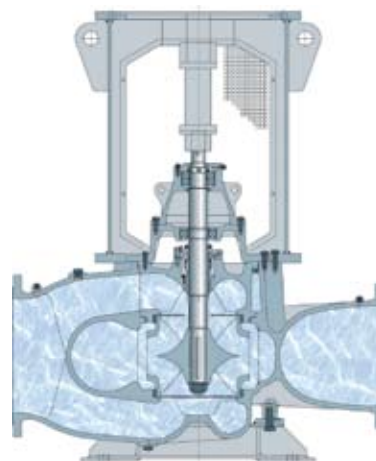
MU- LDS



MU-LDS pumps are suitable for fresh water, sea water, industrial water, condensate, brine, oils and other clean liquids in shipbuilding industry (ballast, hull and general services, cooling, circulation) and land based industry (circulation, cooling, water supply and general services).

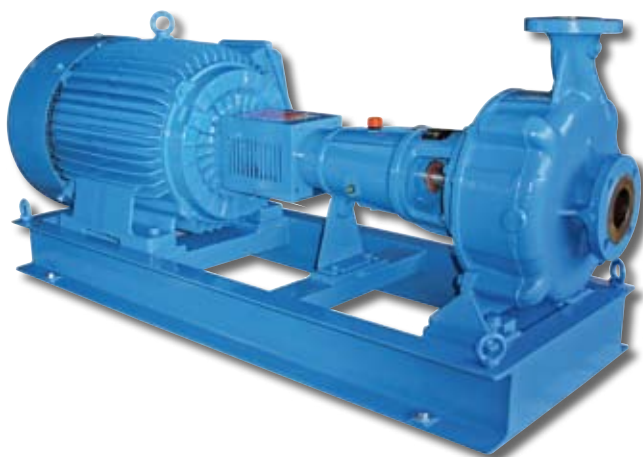
Special versions according to Naval Rules (shock-proof, vibration-proof, noise-proof, non magnetic).

Vertical in line double suction pumps



ND	inch	10" ÷ 18"
Q	gpm	≤ 15400
H	ft	≤ 180
n	rpm	≤ 1780
t	°F	≤ 250

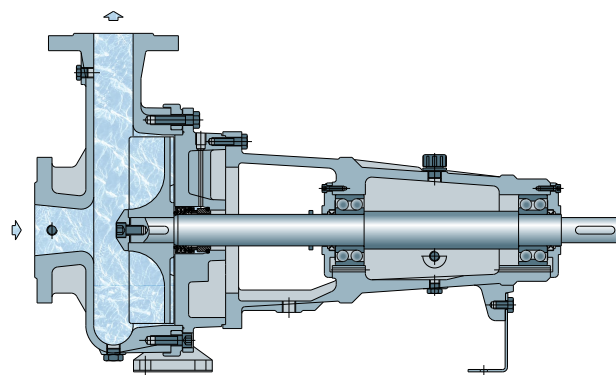
MCA



MCA pumps are suitable for pumping viscous and pasty liquids containing suspended solids thanks to the shape of the impeller and to its recessed position in the casing.

They are used in sewage treatment plants, paper industry, food and sugar industry and generally to convey all liquids with suspended solids.

Recessed impeller torque flow pumps



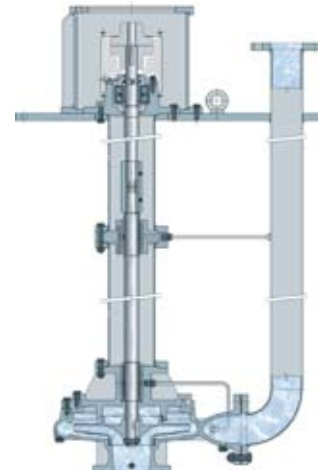
ND	inch	1.25" ÷ 6"
Q	gpm	≤ 2200
H	ft	≤ 330
n	rpm	≤ 3500
t	°F	≤ 400

VS



VS pumps are suspended vertical line-shaft, single stage pumps with base plate. The main components are based on MU or MCA serie pumps. They are used to pump clean or dirty fluids that may contain suspended abrasive materials. They are specially useful for many industrial processes, supply drainage, etc.. Thanks to their versatility and material diversification, the VS serie handle and pump a wide range of fluids.

Vertically suspended line-shaft pumps



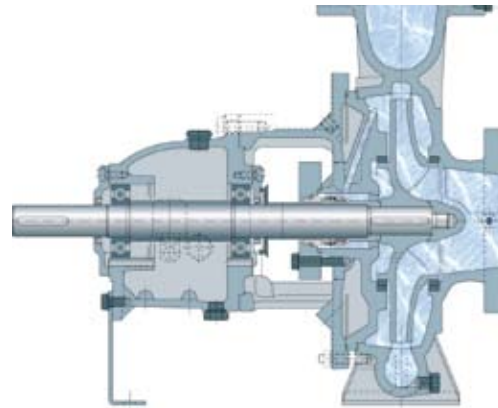
ND	inch	1.25" ÷ 12"
Q	gpm	≤ 3100
H	ft	≤ 460
n	rpm	≤ 3500
t	°F	≤ 400

CN



CN pumps are single stage centrifugal pumps, hydraulically balanced overhung impeller, simple volute casing, axial suction and radial discharge. Bearings are oil bath lubricated. The high standardization of the common parts simplifies spare parts storage. CN pumps are suitable for aggressive and viscous liquids. Particularly used in the chemical and food industries.

Chemical pumps according to ISO 2858 - 5199



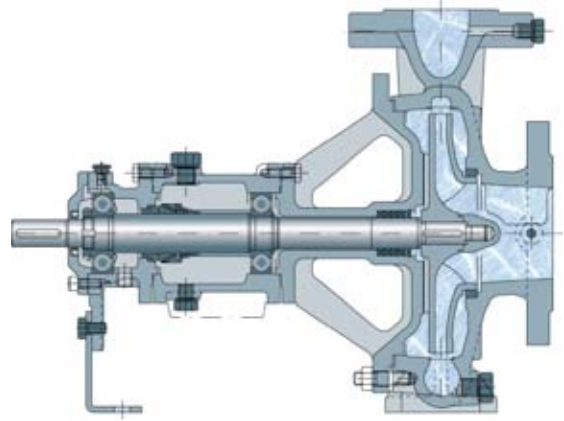
ND	inch	1" ÷ 6"
Q	gpm	≤ 1800
H	ft	≤ 495
n	rpm	≤ 3500
t	°F	≤ 665

ZN



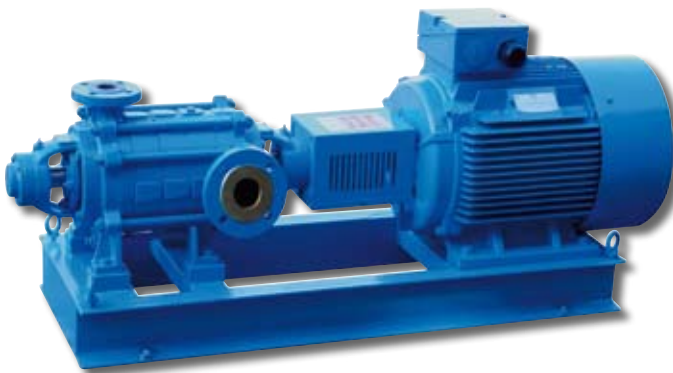
ZN pumps are designed to handle diathermic fluids up to 665°F temperature. Pumped fluids should contain neither abrasive particles nor chemicals which may attack the pump materials. No cooling of the seal chamber required. ZN series pumps are of centrifugal, single stage, horizontal shaft type. Self-balancing impeller by rear impeller blades. The main dimensions of the pump are according to ISO 2858.

Diathermic oil circulation pumps



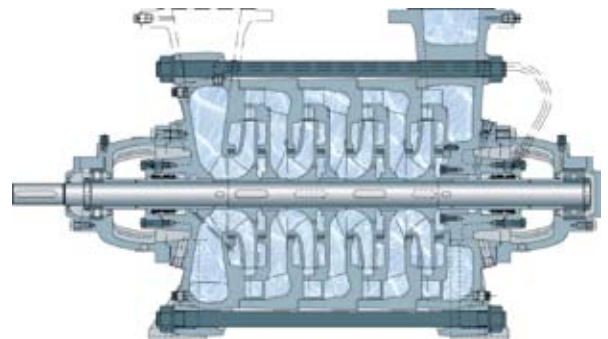
ND	inch	1.25" ÷ 4"
Q	gpm	≤ 1600
H	ft	≤ 330
n	rpm	≤ 3000
t	°F	≤ 665

G/GH



G/GH pumps are designed for trouble-free pumping for clear or slightly dirty liquids and used in: power and desalination plants for boiler feeding and reverse osmosis, heating plants, water-works and water supply plants, pressure raising plants, water and condensate circulation, high pressure washing. Moreover they can be used in other fields such as snowmaking equipment, marine and off-shore industries for water mist fire fighting services and others.

Multistage high pressure pumps



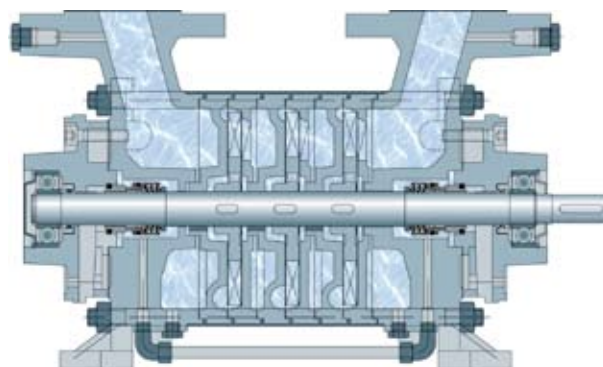
ND	inch	1.25" ÷ 8"
Q	gpm	≤ 2700
H	ft	≤ 2500
n	rpm	≤ 3500
t	°F	≤ 400

BT



BT pumps are self priming multistage pumps with multibladed impellers. They are used for drinking water and industrial purposes, sea water, automatic system with hydrofore tank, conveying acid and alkaline liquids, petrol and light oils, for condensate and gaseous fluids, for food and pharmaceutical products. Special versions according to Naval rules: shock-proof, vibration-proof, noise-proof, non magnetic.

Side channel pumps



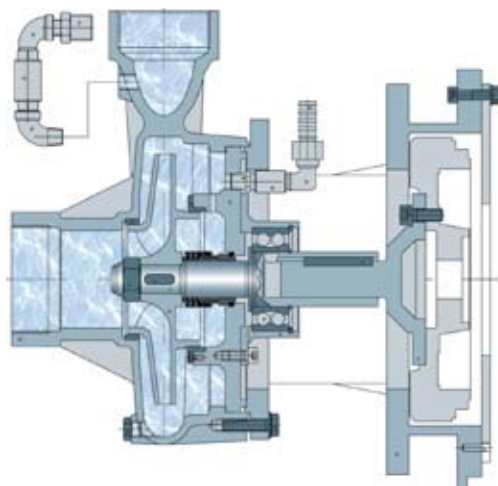
ND	inch	0.75" ÷ 2.5"
Q	gpm	≤ 180
H	ft	≤ 985
n	rpm	≤ 1750
t	°F	≤ 320

MU- MPF



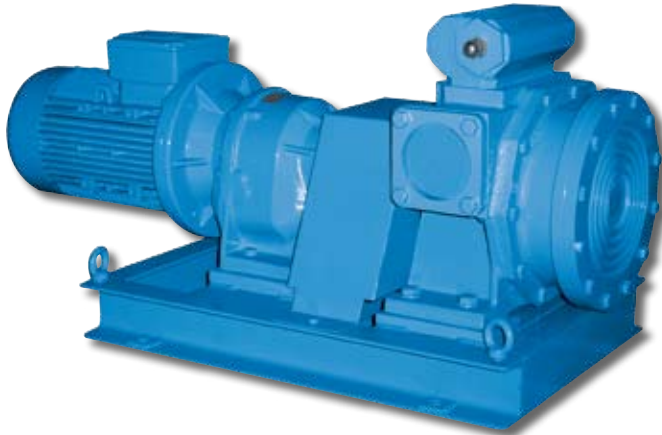
Marine portable diesel engine pump for emergency services, fire-fighting and drainage. Compact and lightweight construction for easy transportation, it can be pushed by one individual with front wheels, or it can be lifted by two individuals in case of obstacles. Self-priming pump with high suction capacity, designed for pumping seawater. Automatic priming, without need of operator action. Control panel with instruments, accelerator and engine stop.

Portable fire pumps



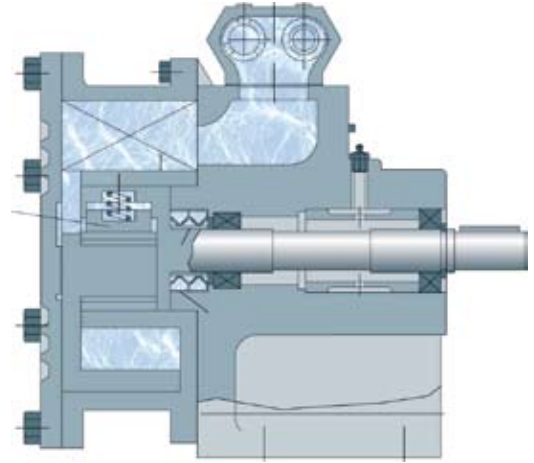
ND	mm	70 / UNI 810
Q	gpm	≤ 290 - 330
H	ft	≤ 265 - 100
n	rpm	≤ 3600
t	°F	≤ //

P



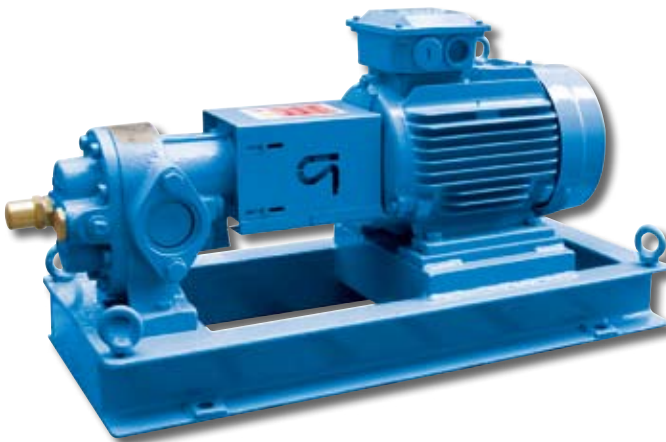
P pumps have been designed for use on wide ranging applications within the marine, chemical, petrochemical, paper, food and paint industries. They can pump different fluids from viscous to more volatile ones, from lubricating to dry and therefore seizing liquids, slightly and medium abrasive products, aggressive fluids, etc..

Hollow oscillating disk pumps



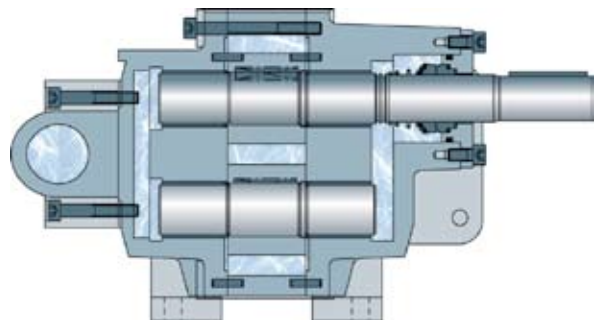
ND	inch	1" ÷ 4"
Q	gpm	≤ 660
H	ft	≤ 265
n	rpm	≤ 350
t	°F	≤ 320

IN



IN pumps are used to pump thick and viscous liquid without suspended solids, at low and high temperature. Typical applications are machinery/engine lubrication, hydraulic power units, chemical additive metering, foam blending in fire-fighting system, fuel oil supply or booster and general transfer of viscous liquids as glue, paints, grease, etc..

Gear pumps



ND	inch	1.5" ÷ 5"
Q	gpm	≤ 530
H	ft	≤ 330
n	rpm	≤ 1750
t	°F	≤ 485



ATEX on request



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