



Hose Carrier  
Peristaltic tubular  
diaphragm pumps for  
difficult fluids

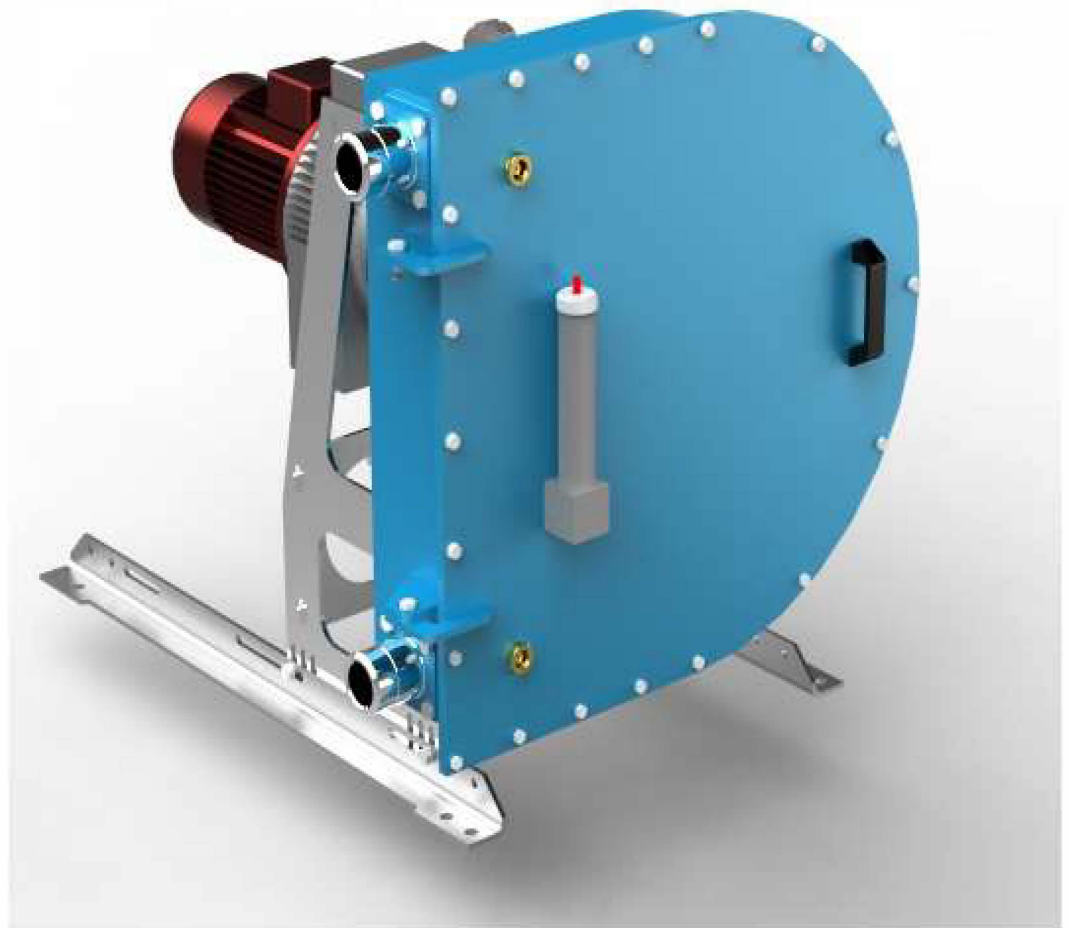


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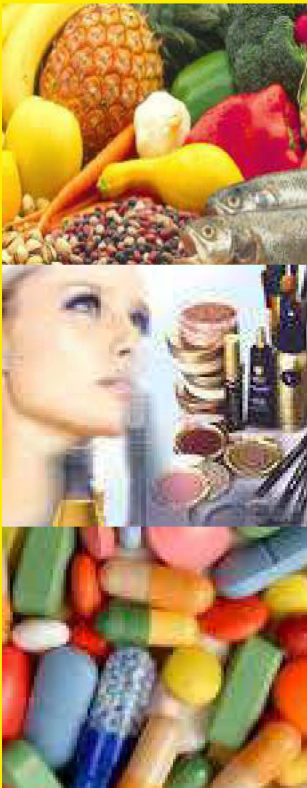
**Simple solutions to complex problems**





## HOSE CARRIER

UNA POMPA SEMPLICE  
PER LA FACILE  
SOLUZIONE DI  
COMPLESSI PROBLEMI DI  
POMPAGGIO



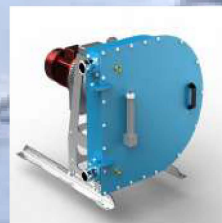
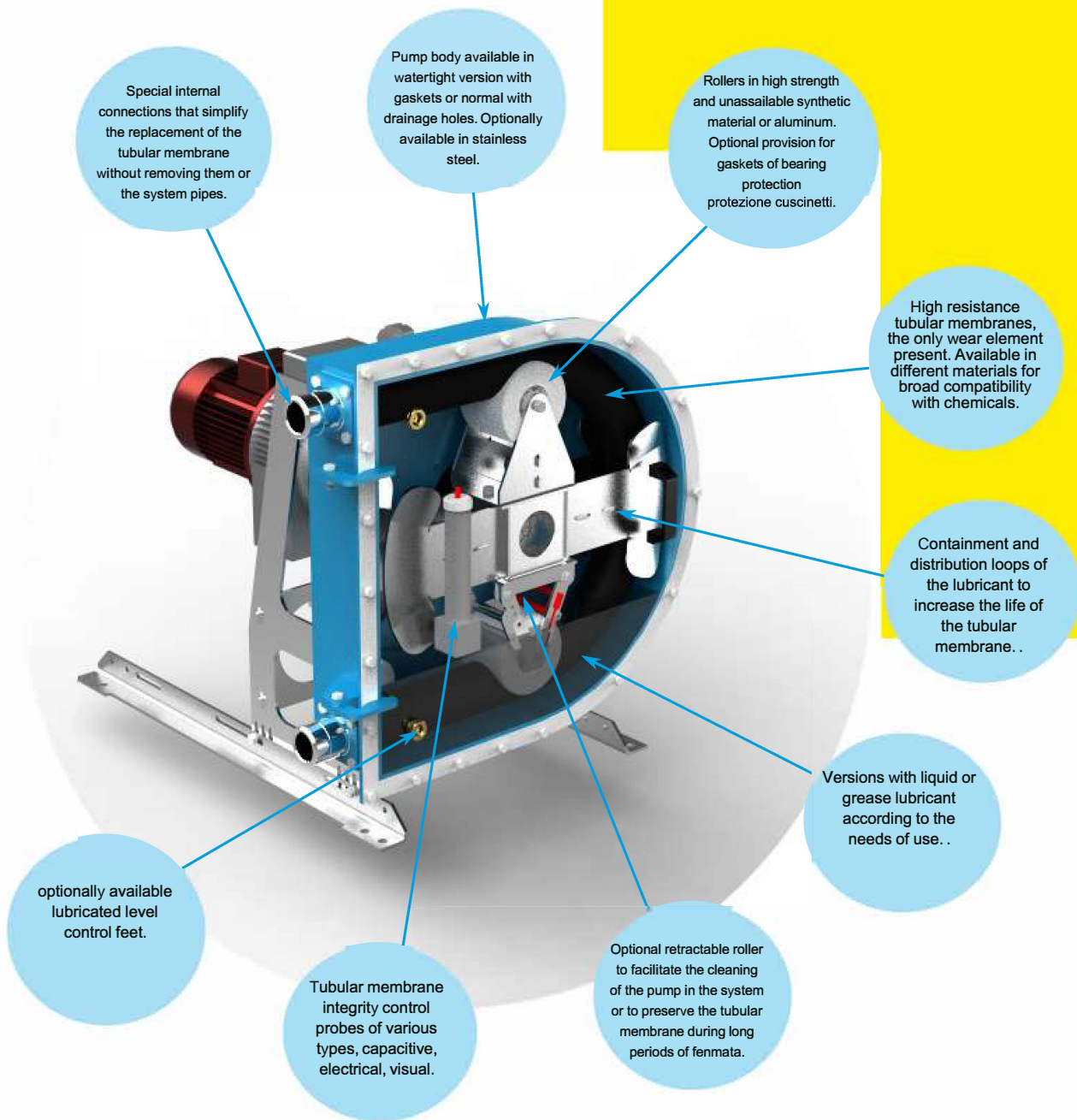
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Industria Cosmetica  
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## What are Hose Carriers

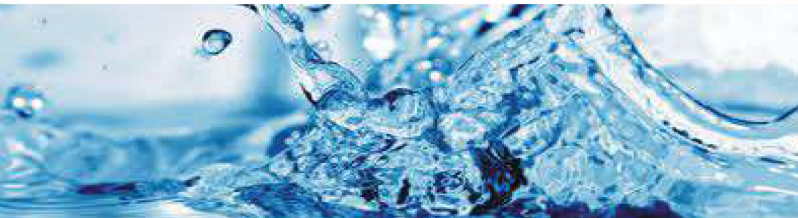
- HOSE CARRIER pumps are special pumps for industrial applications with flow rates up to 70 cubic meters per hour and prevalence up to 10 bar.
- Equipped with hoses of various compounds they fit to most of the most widespread and particularly heavy industrial applications.
- Easy to clean and sanitize, they are essential for food, pharmaceutical and chemical, ceramics and ecology sectors. The pumped fluid remains inside the tube and does not come into contact with any part of the pump.
- They suck up to 9.5 meters from the liquid level e they can pump particularly dense or difficult materials, they are very resistant to abrasion and transport solid bodies in relation to the internal dimensions of the hose.
- They run dry without problems for periods prolonged and do not require particular maintenance. The only wearing part is the flexible tube (or tubular membrane).

# Dentro al progetto

concepito per garantire  
economia, efficienza, razionalità.



**POMPE HOSE CARRIER  
MASSIMA ESPRESSIONE DI  
SEMPLICITA', ESSENZIALITA'  
EFFICIENZA E PRESTAZIONI**



## Hose Carrier safe and effective pumps that make a difference.

The special HOSE CARRIER pumps are made making use of the great experience accumulated in the pumping of difficult industrial liquids and in the search for elastomers suitable for working in harsh operating conditions.

- • The operating principle is based on the impulsion generated by a pair of rollers that crush a tube of elastomeric material, the rotation added to the crushing determines a highly effective pumping effect.

- • The significant suction effect generated by the HOSE CARRIER pumps occurs following the return to the original position of the flexible tube after the passage of the impulsive roller.

- • The large priming capacity makes HOSE CARRIER pumps particularly suitable for pumping dense solutions even in suction. HOSE CARRIER pumps also work as vacuum pumps in special cases.

- • The HOSE CARRIERS are closed-cycle pumps as the pumped fluid does not come into contact with the mechanical parts of the pump nor can it be contaminated by the pump itself. Special hoses for food use certified according to current standards allow the use of the pumps also in specialized sectors such as food or pharmaceuticals.

- • WHAT IS NOT THERE WILL NOT BREAK, in the HOSE CARRIERS there are no:

- Stators, rotors, mechanical seals, valves, valve seats, impellers, mechanical parts in contact with the fluid. The HOSE CARRIERS run at very low speeds, there are no phenomena of sliding, friction, rubbing or interference of any kind. Only one wear part foreseen, the tubular membrane, easily and quickly replaceable, on site, without special tools, without removing the pump or pipes. The Hose CARRIER do not require particularly skilled labor for operation or maintenance.



[Ceramics and bricks](#) [Mechanical industry](#) [Mining and quarrying](#) [Paper industry](#) [Color paints and inks](#)

# VANTAGGI TECNICI E MATERIALI

- • Economical purchase and operation.
- • High vacuum capacity up to 95% of product vacuum.
- • Priming and dry running without damage.
- • Total reversibility in line (reversing the direction of rotation).
- • DOSING applications with repetition in the order of 1%
- • Wide compatibility with the most aggressive chemicals.
- • Great resistance to abrasive products.
- • Low rotation speed and less wear.
- • Absence of valves or seals, rotors and stators that wear out.
- • Simple on-site maintenance without piping removal.
- • No contact between mechanical parts and pumped fluid

## EXCLUSIVE PROJECT ADVANTAGES

- • Possibility of orienting the mouths to the north-south-east-west.
- • Rotor with two rollers mounted on bearings lubricated for life.
- • Rollers with optional bearing protection.
- • Optional retractable roller device.
- • Hose containment loops to extend its life.
- • Forced grease or Lubex lubrication system.
- • Pipe break control kit.
- • Mechanical or electrical vacuum device for dense fluids.
- • Double body versions for doubling the flow rate.



## CONSTRUCTION MATERIALS

- Body and base in painted carbon steel (standard).
- Body in AISI 304 - 316 stainless steel (optional).
- Synthetic rollers resistant to chemical aggression. (option).
- Aluminum or stainless steel rollers (optional).
- Stainless steel hose connections (standard).
- Ports in PVC and PTFE (optional).
- Nitek or Zinc coating (optional).

## AVAILABLE VERSIONS

- Fixed rotation speed.
- Variable rotation speed with electronic variator.
- Variable rotation speed with mechanical variator.
- On a simple basis.
- On trolley for slow towing on site.
- In compact trim.
- In suspendable configuration

## POSSIBLE MOTORISATIONS

- Standard electric motor.
- Double polarity electric motor.
- Hydraulic motor.
- Diesel or petrol engine.

## TUBULAR MEMBRANES

- NBR nitrile rubber.
- Natural neoprene NR.
- Food grade rubber NRA with FDA certification.
- EPDM synthetic polymer rubber.
- HYPALON polyethylene rubber.
- Pharmed biocompatible rubber.



## WHAT CAN BE PUMPED

The pumps can pump all thixotropic, pseudoplastic, viscoplastic fluids.

The viscosity places a limit on the suction of the fluid only. In principle it is possible to suck fluids up to a viscosity of 50000 cps with high percentages of solid on the liquid (up to 80% depending on the nature of the fluid). The fluids that cannot be sucked can however be pumped by placing the pump in positive suction (under head).

Hose Carrier pumps operate with chemically aggressive fluids such as acids and bases even in high concentrations. The wide availability of tubular membranes in different elastomers makes it possible to treat almost all substances for industrial use.

Solid and coarse suspensions are pumped in relation to the size of the pump itself. Hose Carrier pumps are very resistant to abrasion and erosion. Hose Carriers are suitable for:

- Organic and inorganic substances.
- Clear and contaminated fluids.
- Charged fluids and with solid suspensions.
- Abrasive fluxes.
- Crystallizing fluids.
- Heterogeneous fluids.
- Fluids not to mix or create foam.
- Solutions and emulsions.
- Foams.
- Resins and polymers
- Semi solid products
- Fragile fluids.
- Doughs and creams.
- Fluids with compact solid suspensions.
- Fluids with intact suspensions to be transferred.
- Fluids not to be emulsified.
- Liquids with dissolved gases.

### DOSABILITY

The pumps can be used as metering units with a repeatability error contained in the order of 1% (for under head applications).

### OPERATING TEMPERATURE.

The pumps can operate with a maximum temperature up to 120 ° C (for intermittent service) according to the type of tubular membrane used.



Industria della carta e tipografia  
Marmi e materiali lapidei  
Verniciatura e finitura  
Industria chimica  
Gomma e materie plastiche  
Servizi ambientali ed ecologici

# VERSIONI DISPONIBILI STANDARD E CUSTOM

## FIXED SPEED VERSIONS

- Equipped with mechanical speed reducer.
- Normal electric motor or with servo ventilation.
- Vertical or horizontal arrangement
- Base with perforated support feet for fixing.

However, they can be connected to an external inverter in order to allow speed variation with an adjustment range in relation to the type of electric motor installed.

### BASIC INDUSTRIAL VERSION:

The fixed speed version represents the most common solution in the industrial field, guarantees the least space requirement and still retains the possibility of being able to add and update at a later time.

Of course, the fixed speed version is the one with the least commitment in economic terms.



## VARIABLE SPEED VERSION

- Equipped with mechanical speed reducer
- Variation by manual flyer.
- Normal electric motor or with servo ventilation
- Vertical or horizontal arrangement
- Base with perforated support feet for fixing

## VARIABLE FLOW WITH 5: 1 FIELD

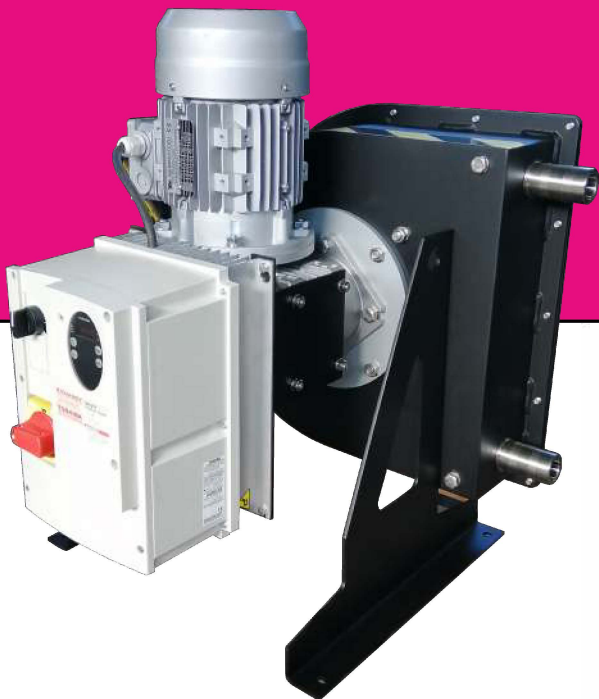
Pumps equipped with a mechanical speed variation system allow to obtain a range of flow rate variation with the possibility of varying it up to one fifth of the maximum flow rate of the pump defined during the set-up phase, the variation occurs only with the motor running.

## SIMPLE AND DURABLE SYSTEM

The mechanical variator is simple to use and essentially free of significant maintenance. Perfectly suitable for any environment, the mechanical variator offers high levels of efficiency precisely by virtue of its condition as a mechanical component, simple, easy and durable, since there are no electronic control systems it is particularly suitable for operating in critical conditions, in the presence of high humidity, dust and dirt. This system is particularly suitable for more difficult industrial environments or those exposed outdoors.



# VERSIONI ELETTRONICHE CON INVERTER O MOTOINVERTER



## VARIABLE FLOW PUMP WITH EXTERNAL INVERTER IN CASSETTA IP 56

- Equipped with mechanical speed reducer.
- Normal electric motor or with servo ventilation.
- External inverter on board the machine in IP 55 box or IP 56, three-phase or single-phase.

## VARIABLE FLOW WITH A 10: 1 FIELD

Pumps equipped with electronic speed variation system allow to obtain a wider range of flow rate variation than the versions equipped with mechanical variator.

## CHARACTERISTICS OF THE EXTERNAL INVERTER.

- External stand alone version on the machine
- Disconnecter with automatic switch
- Start / stop selector
- Local potentiometer
- Control panel with display
- Parameter programming keypad
- Output frequency 0.5 - 500.0 Hz
- Braking with integrated 100% adjustable chopper
- 8 programmable digital inputs
- 2 relay outputs and 1 programmable transistor output
- 1 selectable 0-20 ma or 0-10 Vdc analogue output
- Motor thermal protection functions
- TTL serial communication with RS485 interface
- IP 56 case in PVC with heat sink

## VARIABLE FLOW PUMP WITH MOTOINVERTER

Equipped with mechanical speed reducer  
Normal or servo-ventilated electric motor with integrated motor inverter in IP 55 or IP 56 three-phase or single-phase.

## PUMP WITH MOTOINVERTER INTEGRATED IN THE MOTOR

- Energy saving
- High starting torque
- Speed adjustment with potentiometer (optional)
- Selectable acceleration / deceleration ramps
- Quick change of direction
- Inverter box designed to have up to seven inputs.
- PLC connection
- MODBUS module to connect PC, PLC and different interfaces.
- Overload up to 150% of rated current
- Operating humidity 0 to 95% non-condensing
- Multi-speed programming
- Incorporated adjustment keypad.
- With LCD display. motor parameters (optional)
- Remote control terminal (optional)



# VERSIONI SPECIALI IN ACCIAIO INOX 304 L - 316 L



## MAXIMUM RESISTANCE TO CHEMICAL AGGRESSION.

In Hose Carrier pumps the pumped product does not come into contact with functional mechanical parts, it remains within the tubular membrane which effectively creates an impassable physical separation. This is the reason why, unlike other pumps, Hose Carriers can work with even intensely aggressive products despite being made of standard materials.

## STAINLESS STEEL AISI 304 - 316 L

There are reasons why, in some applications, the pump is made of stainless steel. The stainless steel Hose Carrier pumps offer a further guarantee of durability and safety thanks to the great qualities of resistance of stainless steel to corrosion.

The stainless steel pumps are particularly suitable for working in the most severe operating environments, or simply in those for which an aesthetic as well as functional performance is desired.

the sectors that most require the construction of the pump in stainless steel are:

### THE FOOD INDUSTRY

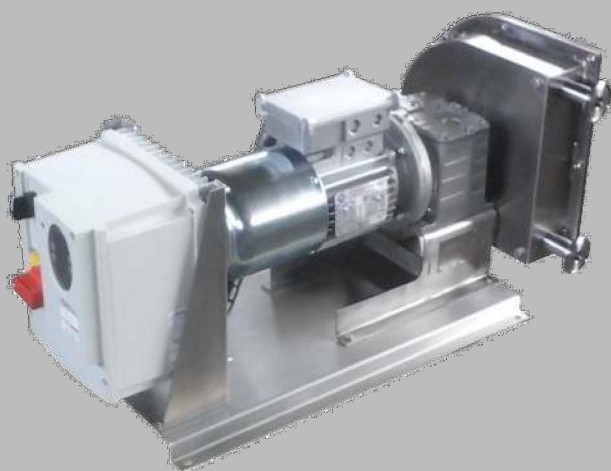
Since most of the typical appliances in this sector are already made of stainless steel. Cleaning and maintenance of metal surfaces is also much easier, the pumps for food use are equipped with FDA compliant membranes. They are also generally equipped with specific attacks among the most common ones.

### PHARMACEUTICAL AND COSMETIC INDUSTRY

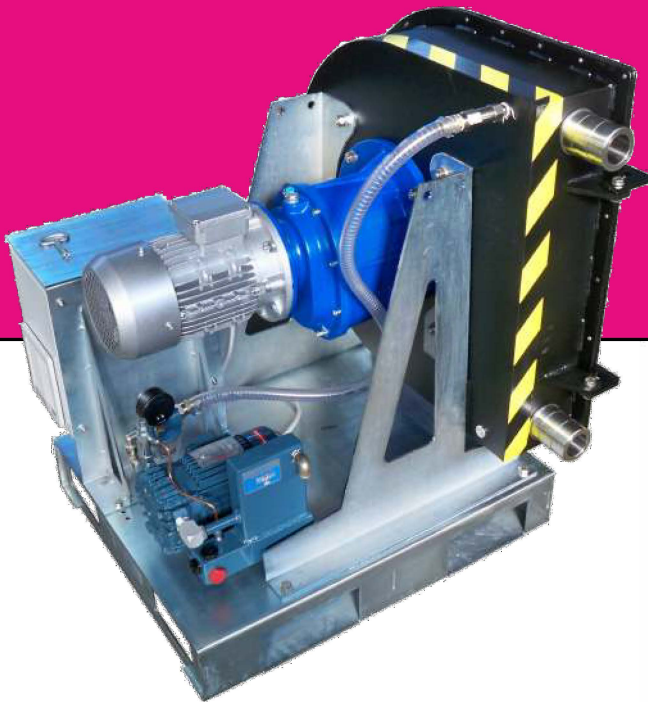
With needs quite similar to the food one, even in the pharmaceutical industry it is considered essentially essential that the pump be made of stainless steel even if there is not always an actual concrete need.

### CHEMICAL INDUSTRY

In this case, the construction of the pump in stainless steel gives a greater guarantee of duration, especially for the particularly severe conditions in which the pump must operate. Often in an external environment or exposed to indirect aggressive and corrosive phenomena in addition to the usual operational ones.



# APPLICAZIONI PARTICOLARI E MOTOPOMPE DI EMERGENZA



## MOTOR PUMPS FOR GENERAL AND EMERGENCY SERVICES

The Hose Carrier pumps are also available in some sizes with gasoline thermal motorization to be able to operate in situations where mains voltage is not available.

## GROUPS ON TROLLEY AND PROTECTION CAGE

The pumps are set up on cage trolleys with perimeter protections, foldable maneuvering handles, systems and arrangements for lifting and transport, they can be supplied with accessories such as suction lances, tanks for indirect suction, quick and anti-corrosion couplings or other on request.

## HIGH VISCOSITY FLUID SUCTION PUMPS

Even if all the pumps of the Hose Carrier family are characterized by a very high suction capacity, equal to 95% of vacuum produced, some industrial applications require the need to be able to further improve the performance of the pump in terms of suction efficiency.

## ADDING A DEDICATED VACUUM PUMP

It allows to reach the maximum possible capacity necessary to operate in suction with high viscosity fluids. A special vacuum pump is integrated into the Hose Carrier pump. The function of the additional vacuum pump is to create a vacuum condition inside the pump body in order to facilitate and improve the elastic return of the tubular membrane. With this configuration, the Hose Carrier pump is able to suck fluids with a viscosity of 100,000 cPs, no other pump can operate with such high values without the risk of any damage even in the event that the flow of the product is intermittent. The additional pump can be sectioned off when not needed.

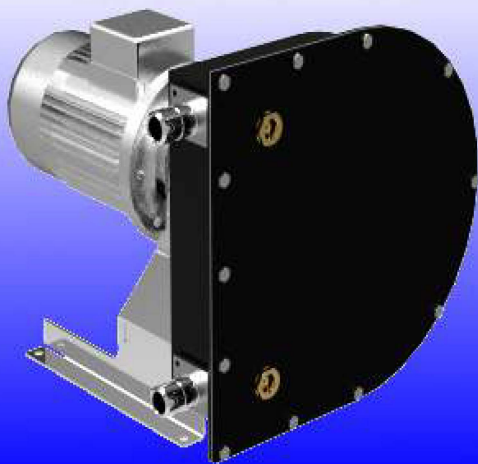
## THE EQUIPMENT INCLUDES:

- • Pumping unit with electronically variable flow
- • Auxiliary vacuum pump unit self-lubricated with oil
- • Electric motor with or without servo ventilation
- • General electrical panel in IP 56 metal box
- • IP 21 inverter in general panel

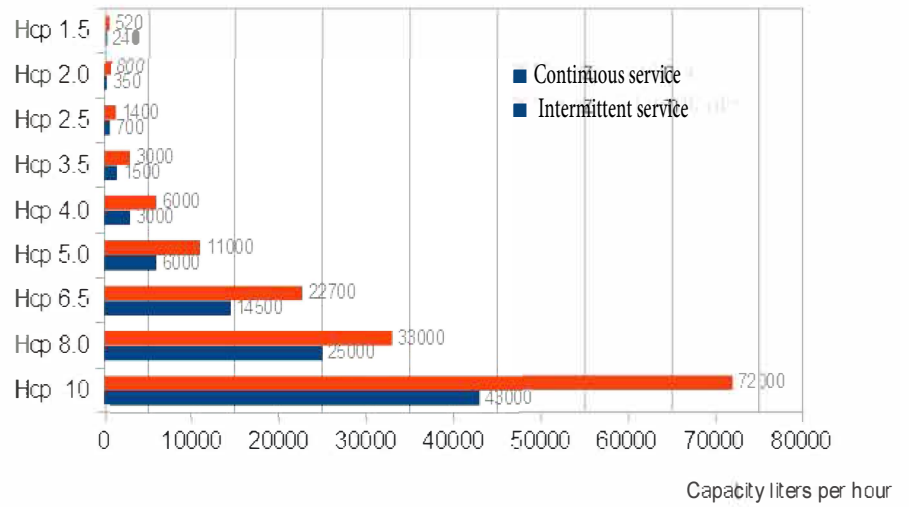
## SECTORS OF TYPICAL USE

- • Ecological and environmental services.
- • Chemical industry.
- • Industrial sites and plants.
- • Naval, port and dock services.
- • Emergency services.
- • Logistics for the transport of chemical and various fluids, clean or wastewater.





## MAXIMUM PERFORMANCE



## Product specifications

Model pump	Flow rate for around Liters	Passage libero nominale mm	Rotation speed In revolutions per minute		Maximum capacity Liters per hour		Pressure maximum Bar	Mouths a Hose connector
			Continuosly	Intermittent	Contiluosly	Intermittent		
HCP 1.5	0,11	15	35	80	230	528	10	DN 20
HCP 2.0	0,17	20	35	80	350	816	10	DN 25
HCP 2.5	0,34	25	35	70	714	1428	10	DN 32
HCP 3.5	0,72	32	35	70	1512	3024	10	DN 40
HCP 4.0	1,5	40	35	70	3150	6300	10	DN 50
HCP 5.0	2,8	50	35	65	5880	10900	10	DN 60
HCP 6.5	6,9	65	35	55	14490	22770	8	DN 80
HCP 8.0	12	80	30	50	21600	36000	8	DN 100
HCP 10.0	24	100	30	50	43000	72000	8	DN 125

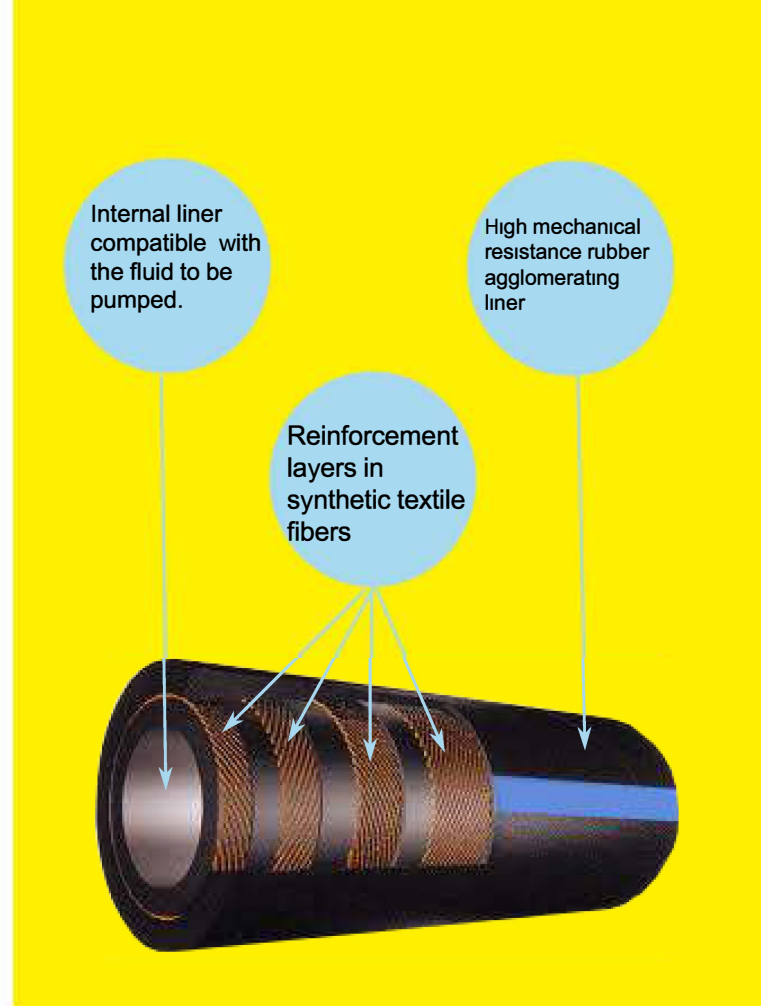


**Biogas e biomasse**  
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## HOW TUBULAR MEMBRANES ARE MADE

The heart of the HOSE CARRIER pump is its tubular membrane. The only wear element present in the pump, it must guarantee a long service in very severe operating conditions and often totally impossible for other pumps.

The tubular membrane is made with a technology that involves the lamination of layers of different materials according to the final use. It is composed of natural or synthetic rubber compounds associated with very high resistance synthetic textile fibers. The different composition of these layers generates a flexible structure, extremely resistant to mechanical and chemical aggression, and also has a remarkable elastic memory, the main feature for obtaining an effective pumping effect. The surface of the tubular membrane is microtextured to better retain any lubricant.



MATERIAL	CODE COLOR	COMPATIBILITY	TEMPERATURE	PRESSURE MAXIMUM
NR	GREEN band	For general use, maximum abrasion resistance. Modestly corrosive products. Products of organic origin	- 20° + 80° C	16 Bar
NRA	BLU band	For food applications FDA certification. Cosmetic, Hygienic, Pharmaceutical Applications	- 20° + 80° C	16 Bar
NBR	RED band	for industrial, general use suitable for oils, greases, some organic products, hydrocarbons, excellent resistance to abrasion, mechanics e	- 20° + 80° C	16 Bar
EPDM	WHITE band	Suitable for chemical applications, for broad spectrum chemical applications, resistance to aggression resistance inorganic substances. at Excellent heat.	- 20° + 100° C	16 Bar
HPALON	YELLOW band	Suitable for chemical applications with highly assidant agents. corroded	- 20°C + 85° C	16 Bar

Ask our technical department for information to better identify the tubular membrane that best suits your needs.



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