

BEDU
≡ POMPEN ≡

Peristaltic pumps

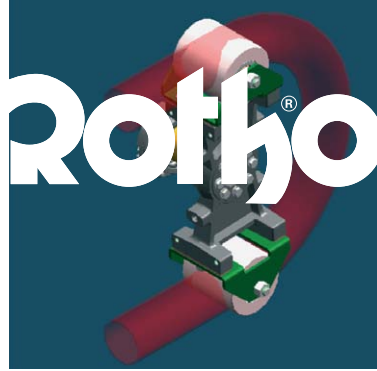
SR1 SR2 / DR1 DR2



made for your process

Simple Principle

The basic principle of the peristaltic pump traces back to human “peristalsis” a term referring to the alternating contraction and relaxation of muscles around a tube to force the contents through it. An elastomeric tube is squeezed along a length by rollers that push the fluid contained within. The tube’s restitution after squeezing produces a vacuum that draws fluid continuously into the tube. This creates a gentle pumping action that doesn’t cause any damage to the product. Contaminations are avoided because the fluid is contained within the tube (one contact part with product). The pump employs a rotor with rollers mounted on it that continually compress and occlude some portion of the tube. This action moves the fluid through the tube with a constant rate of displacement for each revolution of the rotor, enabling a precise measurement of the volume of fluid pumped through the tube.



The Rotho Pump

The “roller on bearings” design of the Rotho pump offers many advantages:

- It eliminates the requirement for adding a lubrication fluid inside the pump housing, because there is no friction on the surface of the tube therefore giving a longer tube life.
- **it requires smaller drives, so less power installed, compared to others peristaltic pumps, to get the same rpm and capacity.**
- They can transfer food products with no contamination hazards, as the pump housing is lubrication free.
- With no lubrication fluid required, hose replacement is greatly simplified and cheaper without having to drain and dispose of a messy and possibly contaminated oil or glycerine solution.



Advantages

- No seals
- No valves
- Self priming
- Only tube to replace
- Reverse flow by reversing motor
- No contact between product and mechanical parts
- Can run dry without damage
- Able to pump products with solid parts inside
- Suitable for CIP applications

Uses

- Transfer, feed, meter, filter of:
 - Fragile or sensitive fluids
 - Compound fluids
 - Abrasive and corrosive fluids
 - Non pollutable or pollutant fluids

Fields of application



Ceramic



Chemical



Water and waste treatments



Food & beverage



Metallurgy



Pulppaper



Construction



Painting and pigment



Ink



Mining



Marine



Biogas

Abrasive Products

The Rotho pump is excellent on abrasive slurries where it has had much more success than other pumps. The Rotho pump parts stay out of the product zone and the hose is the only one thing that is in contact with the product, this keeping abrasive wear to a minimum.

Products that crystallize are also well pumped by the Rotho pump.

There are no valves or glands so the eventual build up of crystals could not clog the pump.



Corrosive Products

With corrosive fluids the hose selection is of paramount importance to the longevity of the pump. With the correct hose selection and no other contact mechanical parts in the product, this ensures a long pump life.



Fluids With Solid Parts Or Sensitive Products

A problematic product for many pump types is fluids with solid particles such as waste water with gravel, pieces of wood, concrete or foods, where as the peristaltic pump due to free tube-passage can easily transfer it without any product or pump damage.

The Rotho pump is also a good choice for transferring shear-sensitive fluids or foamy products, the non emulsifying action minimises damage to the product or its consistency.



Viscous Products

The Rotho pump gives a strong self-priming suction which can draw almost full vacuum, producing the pull necessary to draw viscous materials such as honey, grout, resins or waste sludge, which is almost impossible for many other pump types.

Environmental Applications

There are two main environmental applications for the Rotho pump:

- Chemical metering
- Sludge transfer

1) Chemical metering:

The most common is for Sodium Hypochlorite, Sodium Bisulfite, Ferric Chloride and some polymers, as well as lime slurry and carbon slurry. Above all with sodium hypochlorite that emits off gas, the Rotho pump doesn't lose efficiency due to pockets of air, pumping together both liquid and gas

2) Sludge:

The Rotho pump can handle many different kinds of sludge depending upon the level of treatment in a plant. It can feed and transfer thickened sludge, waste activated sludge, return activated sludge and corrosive sludge.



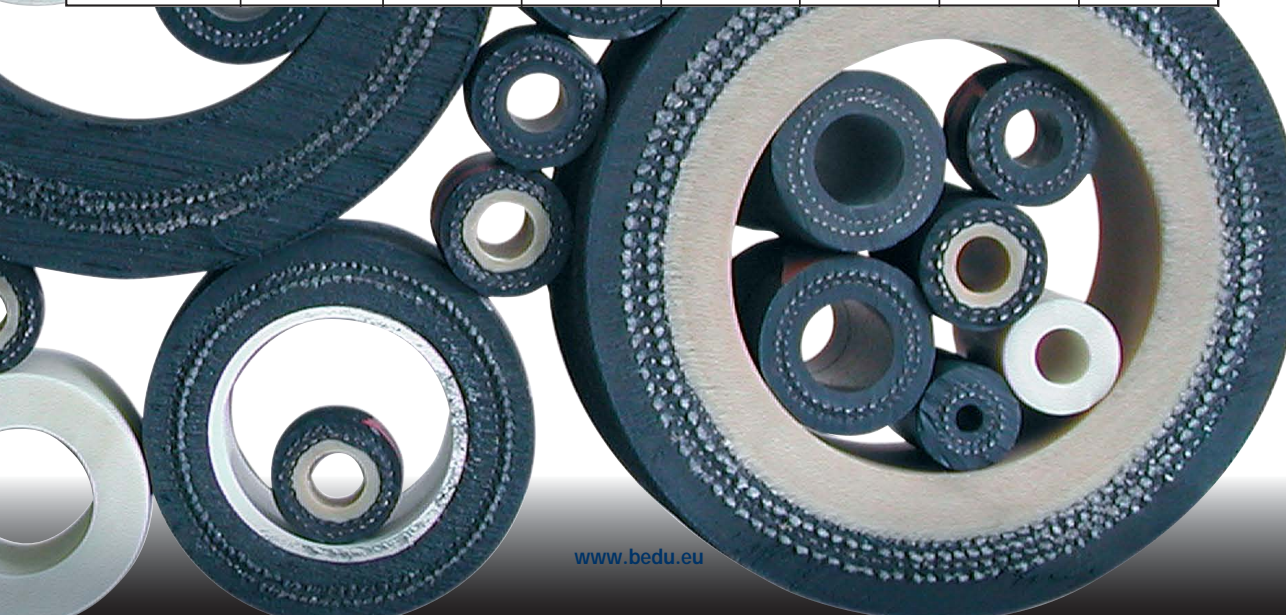
ROTHO tube

It is an elastomeric tube right for duty service and its selection depends by the product to pump, pressure, temperature; it is a multilayer hose with 2, 4 or 6 textile insert reinforcement depends by its dimension and pressure to win.



The right hose for the right product

Hose Colour Identification	BLE	RED	GREEN	YELLOW	WHITE	ORANGE	BEIGE
Hose mark	NN	NP	EP	RN	RF	HY	PH
Composition	NATURAL ISOPRENE	Substrate for food products NATURAL ISOPRENE	Monomer Ethylene-Propylene EPDM	Nitril-Butadiene Substrate for foods NBR	Nitril-Butadiene For foods NBR	Polyethylene Chlorosulphonate HYPALON	PHARMED Thermoplastic Elastomer-base. Polypropylene
Technical features	Multilayer hose with textile insert reinforcement.	Multilayer hose with textile insert reinforcement.	Multilayer hose with textile insert reinforcement.	Multilayer hose with textile insert reinforcement.	Multilayer hose with textile insert reinforcement.	Multilayer hose with textile insert reinforcement.	Omogeneous tube, without textile insert.
TEMP. C°	-10 +85	-10 +75	-10 +95	-10 +75	-10 +75	-10 +85	-20 +135
PRESS. BAR	-0,9 +8 (15)	-0,9 +6(8)	-0,9 +8	-0,9 +6(8)	-0,9 +6(8)	-0,9 +8 (15)	-0,5 +1,5/2
Compatibility	Excellent behaviour for abrasive liquids and moderately aggressive liquids and fluids for high pressure.	Similar to NN type, suitable for foods products.	Suitable for chemical use and for relatively high pressure.	Suitable for oils, greases, hydrocarbons and various solvents.	Suitable for alimentary use, oils and fats.	Suitable for concentrated acids, alkaline liquids.	Suitable for alimentary and pharmaceutical products, (liquid).
Mechanical characteristics	Resistance/Duration HIGH	Resistance/Duration HIGH	Resistance/Duration MEDIUM	Resistance/Duration MEDIUM	Resistance/Duration HIGH	Resistance/Duration HIGH	Resistance/Duration HIGH
	Hose available for all models.	Hose available for all models.	Hose available for all models.	Hose available for all models.	Hose available for all models.	Hose available for all models.	Available for PSF serie only.
Alimentary classification		FDA-CFR 21 Parts 170 to 199 Item 177.2600			FDA 1777.2600 DM 21-3.73 IV B		FDA 177. 2600 NSF CRITERIA
For cleaning: C.I.P. and S.I.P. Suggest to remove the tube.		To sterilize whit water to 70° and solution of 5% volume surface-active agent, rinse with cold water. Washing with steam to 120°, for max. 3 minutes.			To sterilize with water to 70° and solution of 5% volume surface-active agent, rinse with cold water. Washing with steam to 120°, for max. 3 minutes.		To sterilize with hot water and neutral nonoil soaps. Rinse with distilled water. Possibility to autoclave sterilization.



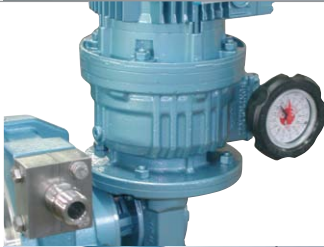
Accessories and Optionals

Connections



Flanges DIN; ANSI;
DIN 11851 Threaded , Clamp, Tri-clamp, RJT, BSP threaded
In: S.S. 316,
PVC, PVDF, PTFE
Polypropylene,
Titanium

Variable gear speed



Ratio 1-5

Frequency inverter



Possible arrangement
for analogical signal 4-20mA, 0-10V.

Pulse dampeners



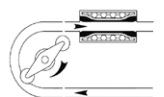
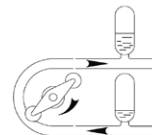
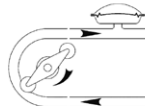
The pulse dampeners are suggested in case of negative suction and pressure over 2 bar;
they ensure a better pump working
and a longer tube life.

Three types are available:

Membrane

Empty vessel

Flexible tube



The models of MS and SDF Serie can be equipped of feeder to feed products with solid parts or sensitive parts.

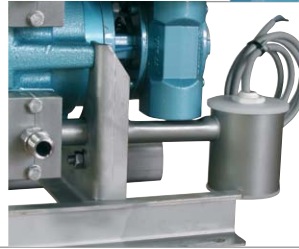


Feeder

All Rotho pumps (optional for PSF Serie) are equipped of leak detector to provide early indication of hose failure. This is a float type sensor that is located at the lowest point of the pump housing.



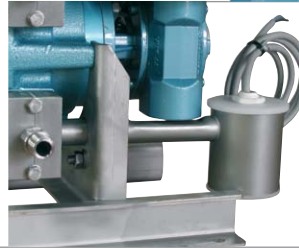
Leak detector



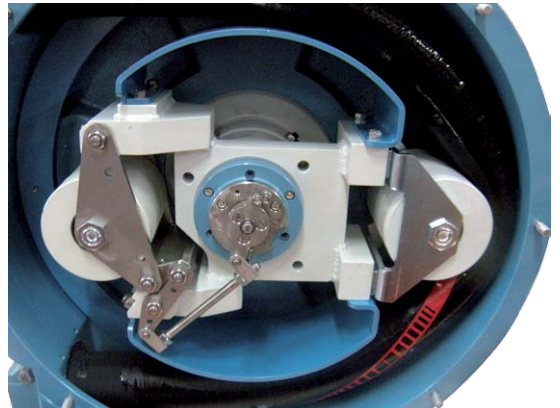
The “retractable” position of the roller is instrumental in increasing the lifetime of the tube element. When the pump is not in use for a certain period of time, the tube element can be separated from the roller from outside the pump by activating the rapid release mechanism of the retractable roller, quickly and safely without opening the pump casing.

This new positioning system is essential for all those pumps used for fully automated foodstuff handling that requires regular cleaning and sterilization of all components in contact with the product.

In this case, the retractable roller quickly releases the tube element, ensuring perfect CIP and SIP cleaning procedures whenever required.



Retractable roller



ATEX CERTIFICATION
II GROUP – CAT. 2/3 – ZONE 1-2

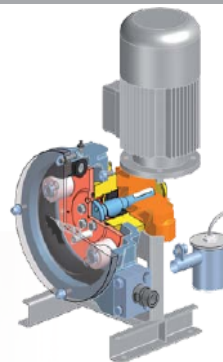


PSF serie

Capacity/h from 1lt up to 3.100 lt

Pressure up to 8-15 bar

Tubes diameter 5; 10; 16; 26 mm

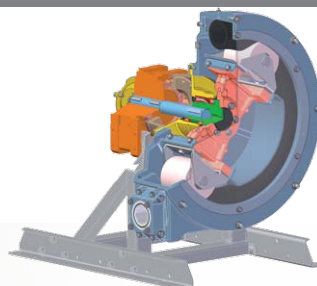


MS serie

Capacity/h from 1.000 lt up to 18.000 lt

Pressure up to 8-15 bar

Tubes diameter 34; 40; 55; 68 mm

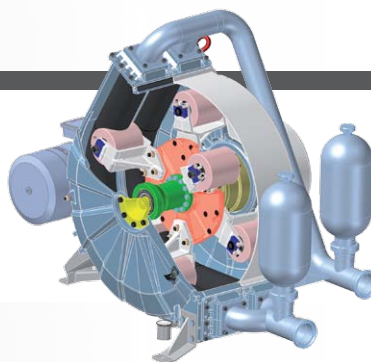


SDF serie

Capacity/h from 10.000lt up to 70.000 lt

Pressure up to 8-15 bar

Tubes diameter 76; 90 mm

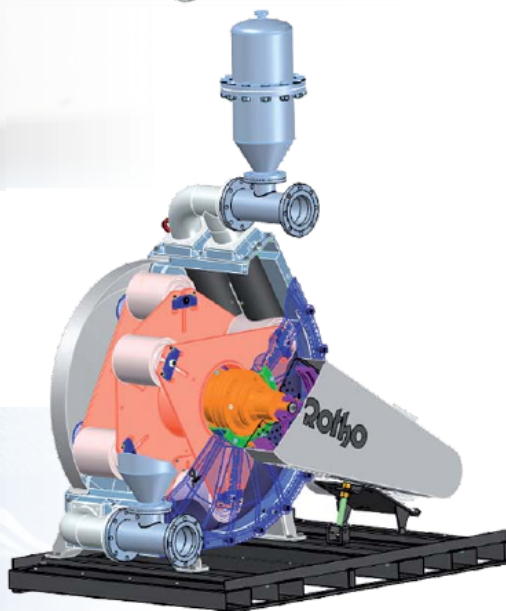


SDR serie

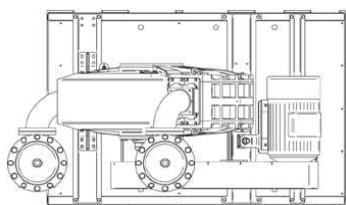
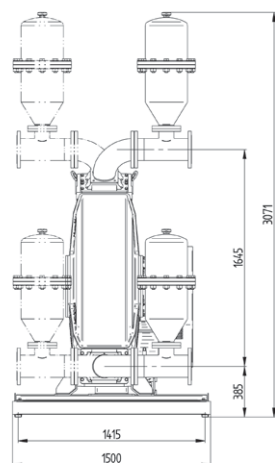
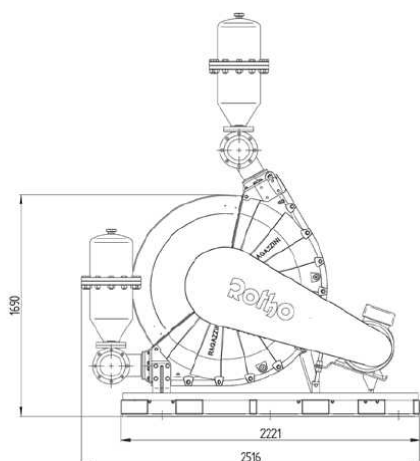
Capacity/h from 80.000lt up to 180.000 lt

Pressure up to 8-15 bar

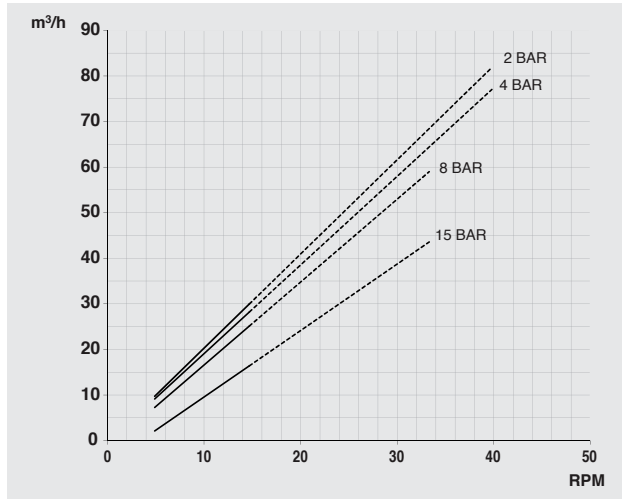
Tubes diameter 114; 127 mm



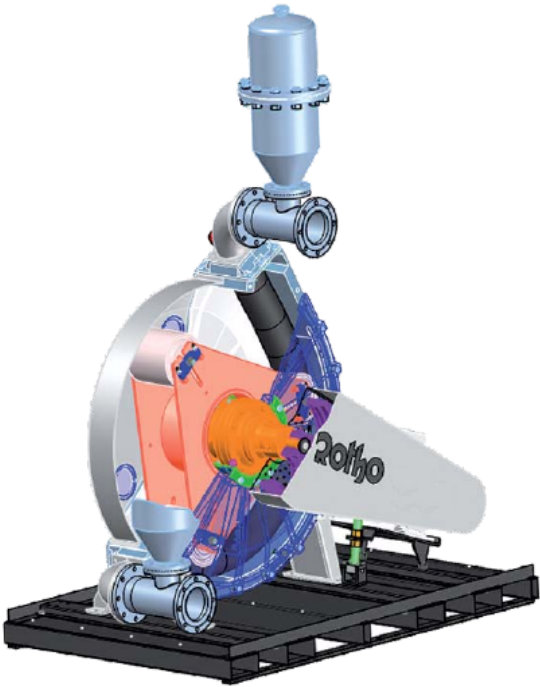
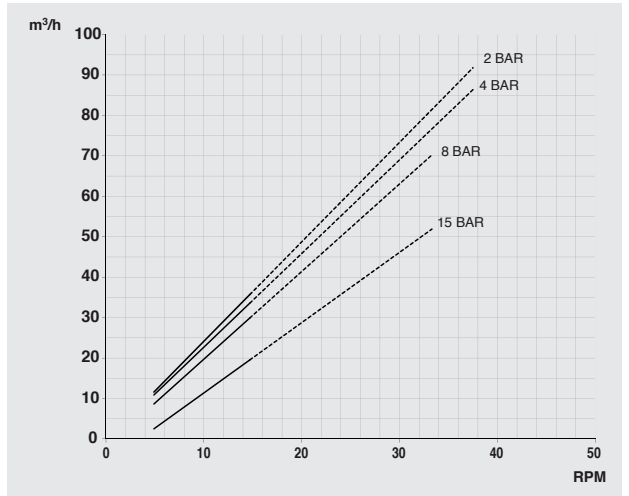
SR1 - SR2



SR1

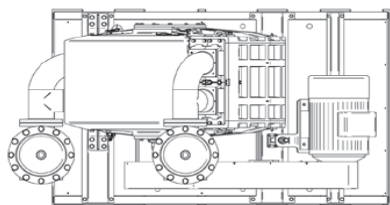
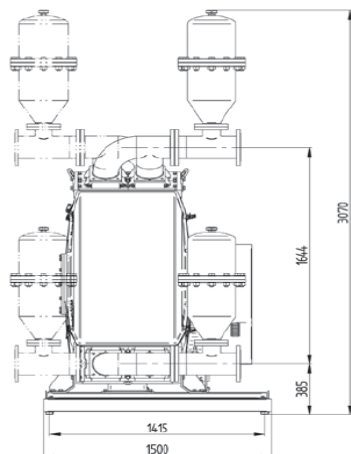
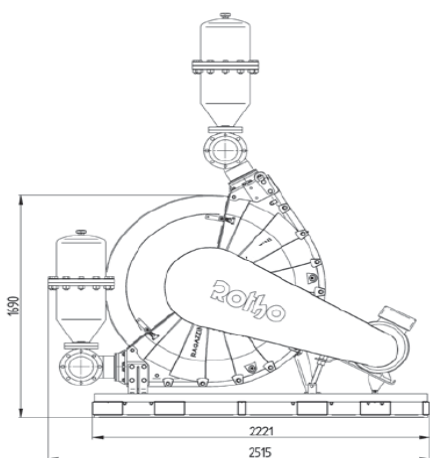


SR2

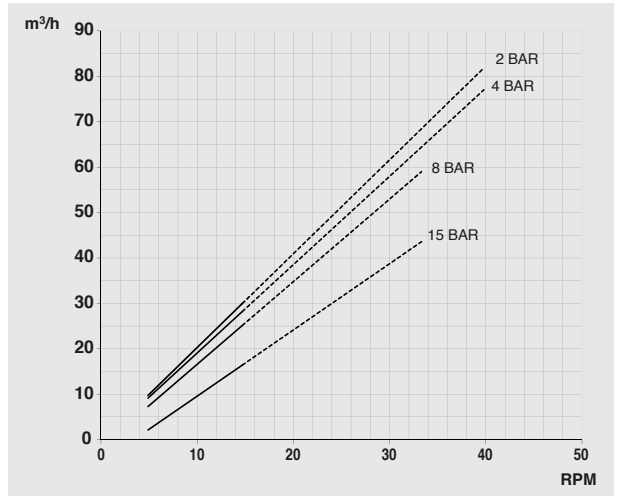


	SR1	SR2
HOSE DIAMETER	DN114	DN127
MAX CAPACITY m³/h	80	90
MAX RPM	40	37,5
MAX PRESSURE BAR	15	15
MAX POWER Kw	30	55
ANSI FL. CONNECTION	4"	5"

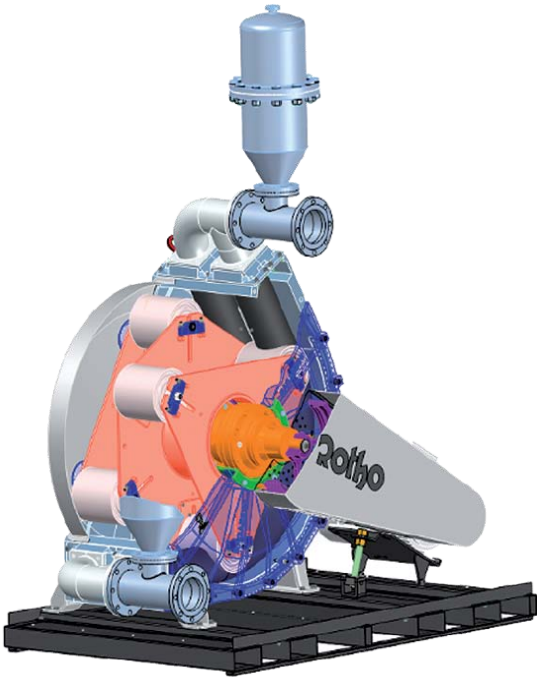
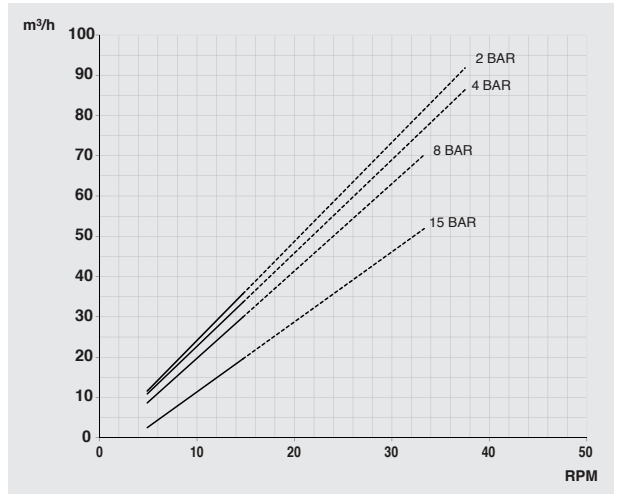
DR1 - DR2



DR1



DR2



	DR1	DR2
HOSE DIAMETER	DN114	DN127
MAX CAPACITY m³/h	152	180
MAX RPM	37,5	37,5
MAX PRESSURE BAR	8	8
MAX POWER Kw	45	55
ANSI FL. CONNECTION	6"	6"



BEDU
≡ P O M P E N ≡

made for your process

- Expert advice
- A customer-oriented organization that adapts to the requirements and wishes of your organization
- Innovative and customized solutions
- Breakdownservice, 24 hours a day, 7 days a week
- Technical service with extensive test facilities, working from our own workplace or at your location
- A fast and appropriate solution for all your issues
- Wide range of liquid pumps
- Repair, maintenance and revision

BEDU POMPEN B.V.
Poort van Midden Gelderland Rood 10
6666 LT HETEREN
Nederland
Telefoon +31 (0)88 4802 900
E-mail sales@bedu.eu

WWW.BEDU.NL

BEDU BELGIUM B.V.B.A.
Industriepark-West 75
9100 SINT-NIKLAAS
België
Telefoon +32 (0)3 80 87 980
E-mail sales@bedu.eu

WWW.BEDU.BE

