

DIAPHRAGM PUMPS ENTIRELY IN POLYPROPYLENE



No. 404-PPB

**ADVANCED FLUID
MANAGEMENT SOLUTIONS**

WINNING ON FLUIDS





**ADVANCED FLUID
MANAGEMENT SOLUTIONS**





**ADVANCED FLUID
MANAGEMENT SOLUTIONS**



at your service since 1975

RAASM works to offer the best through continuous improvement, in terms of performance, functionality and reliability of its products.

www.raasm.com



HELP THE NATURE



Packaging contains, depending on the articles, one or more of the following materials; they must be recycled in accordance with current regulations in the country of use.

cardboard • polyethylene sack • polystyrene
paper • wood • nails • plastic strap
cellophane • clips • gummed paper



Strength points

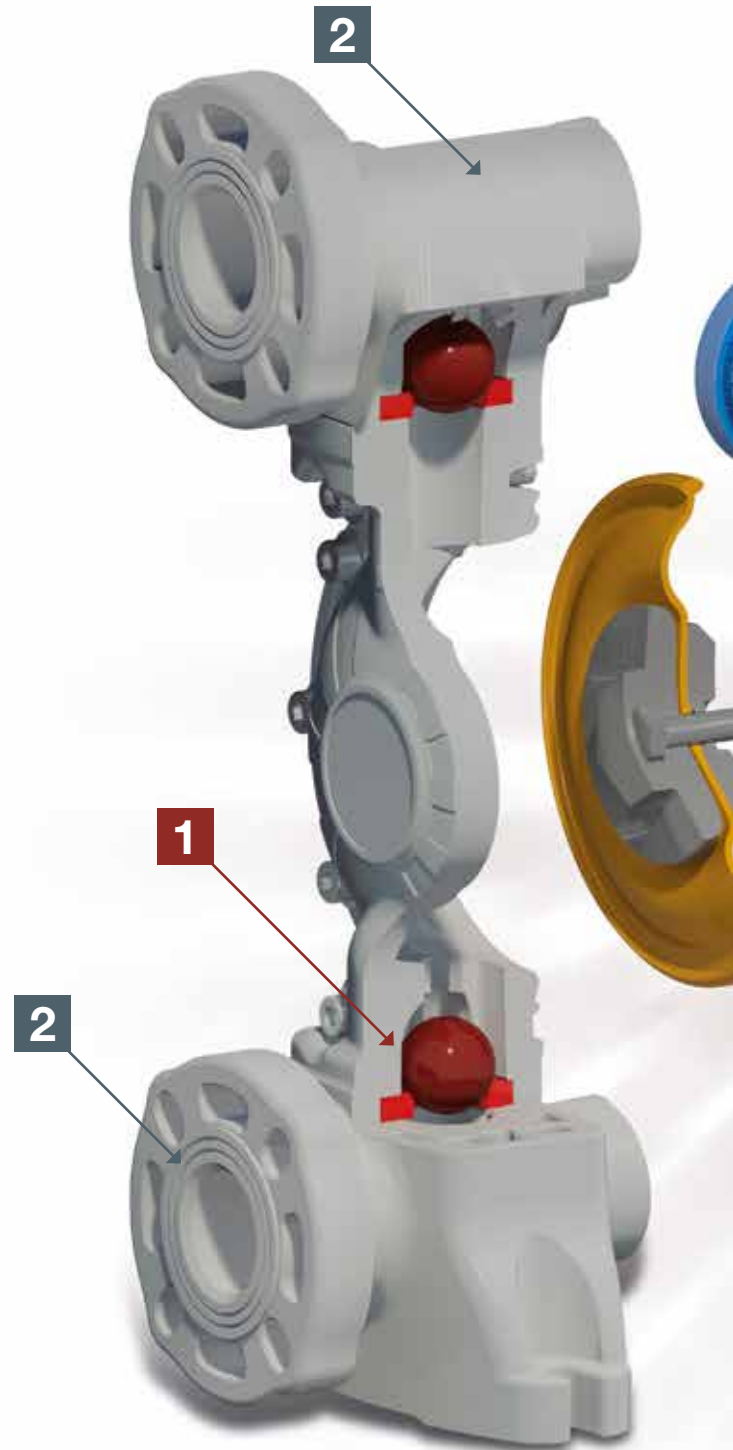


Why choose a diaphragm pump entirely made in polypropylene?

The RAASM pneumatic double diaphragm pumps completely made of polypropylene are made to work in particularly aggressive work atmospheres, with a wide range of fluids, also corrosive, **with high viscosity and solid parts in suspension.**

We summarize below why these pumps will make the difference in your working environment:

- **Suitable in corrosive environments**
- **Can be used with water or corrosive solutions**
- **Higher quality thanks also to the stainless steel screws**
- **Built with anti-stalling and anti-icing devices to maintain unaltered the performances over time**
- **Silencer in plastic material for corrosive environments with stainless steel cage.**
- **1/2" pumps with reinforced thread thanks to a stainless steel AISI 316 ring**
- **Usable with viscous fluids and with solid parts in suspension**
- **Easy and on-site maintainability by requesting predefined replacement kits**
- **Self-priming capability**
- **All pumps are tested before the packaging to ensure the highest quality**



1

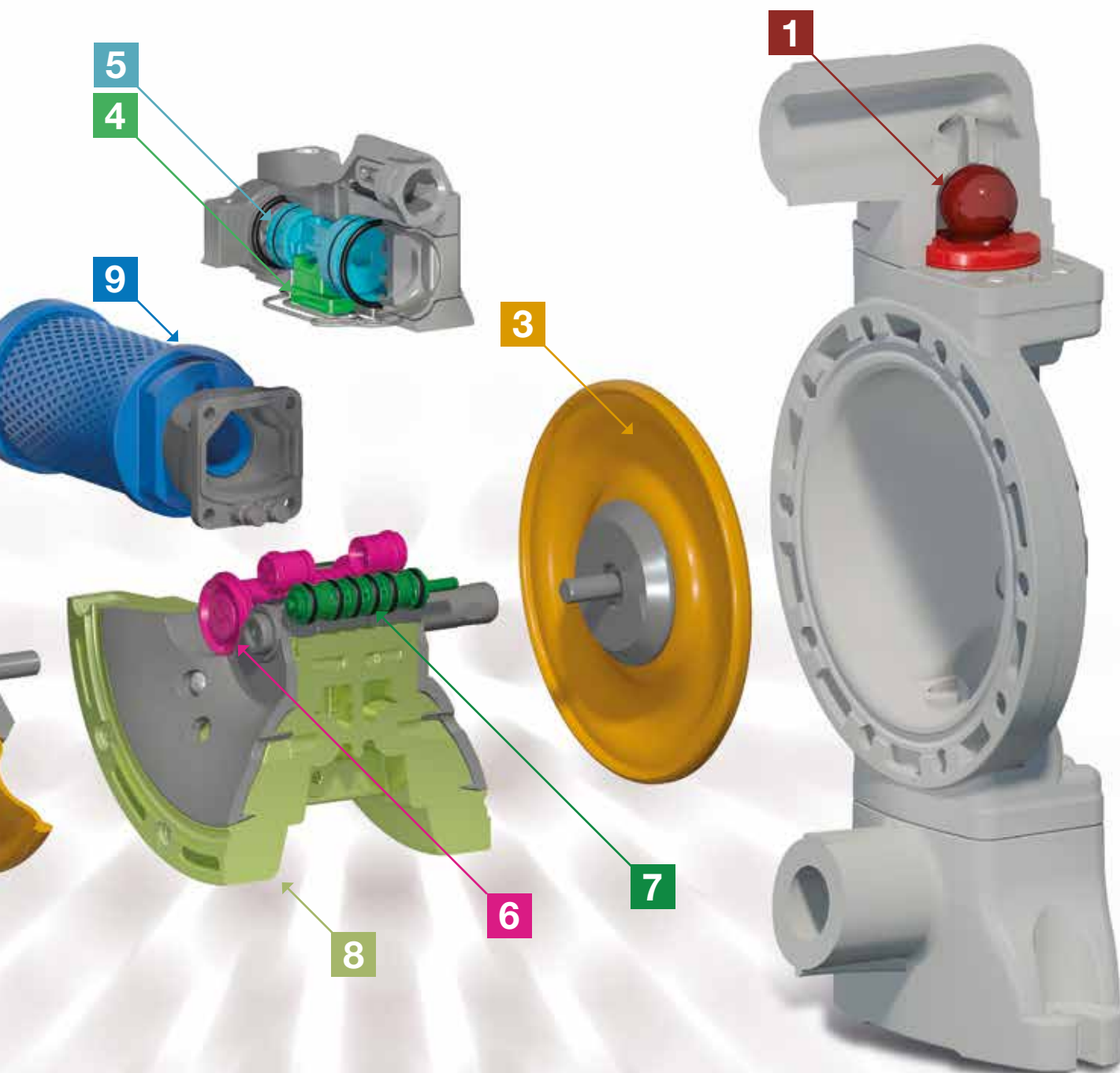
Balls and ball seats in **many types of materials** to guarantee chemical compatibility according to the fluid to be pumped. Easy to clean or replace as required.

2

Total flow suction and delivery manifolds, to facilitate suction of the liquid in any situation, with threaded connections or flanged available in different diameters according to the pump models.

3

Membranes made with **different and specific materials** able to withstand many types of fluids and millions of cycles.



4 The air distribution valve ensures **perfect operation** in any operating conditions, some examples:

- Minimum supply pressures (min. 2 bar)
- Fluid and environment critical temperatures
- Supply pressure fluctuations

5 Air distributor unit equipped with **anti-stall** reversing piston. This piston prevents the pump from stopping at a dead point, even in critical operating conditions.

6 Pneumatic motor **anti-icing** device made of plastic material. This allows the pump to maintain its unaltered performance even if powered with untreated air.

7 The pneumatic motor block of the pump does not require any type of lubrication because the moving parts are **self-lubricating**.

8 Pump body in **polypropylene** with integrated flanges and co-molded inserts to guarantee elevated tightening torques.

9 Silencer made of **plastic material** with increased exhaust system designed to withstand corrosive environments **also thanks to stainless steel cage**.



POLYPROPYLENE Diaphragm pumps

1/2" - 65 l/min

Diaphragm pumps
R. 1:1 for fluids transfer,
produced entirely in
polypropylene, are
recommended for
applications with
industrial fluids, also
corrosive, and in working
environments with
aggressive atmospheres.



**High resistance
medium flow rate**

Note: The max flow rate
shown in the below graphics
has been obtained by
laboratory test.

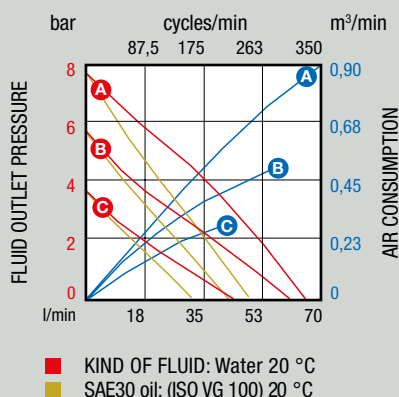
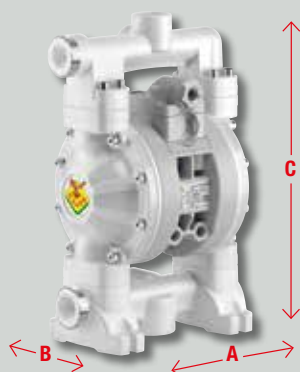


Series			120-PPB	120-PPB dual inlet
membranes	balls	seats	P/N	P/N
EPDM	Acetal	Polypropylene and AISI 316	2A3/1677EA5	2A8/1677EA5
Hytrel	Hytrel	Polypropylene and AISI 316	2A3/1677HH5	2A8/1677HH5
NBR	Hytrel	Polypropylene and AISI 316	2A3/1677NH5	2A8/1677NH5
Santoprene	Santoprene	Polypropylene and AISI 316	2A3/1677SS5	2A8/1677SS5
PTFE+Hytrel *	PTFE	Polypropylene and AISI 316	2A3/1677TT5	2A8/1677TT5
Max pressure			8 bar	8 bar
Max cycles per minute			350 cpm	350 cpm
Litres per cycle **			0,188 l	0,188 l
Max suction lift			dry column 4,5 m - wet column 7,5 m	dry column 4,5 m - wet column 7,5 m
Max size pumpable solids			1,5 mm	1,5 mm
Max working temperature ***			65° C	65° C
Noise level			76 dB	76 dB
Max air consumption (m³/min)			0,89 m³/min	0,89 m³/min
Air working pressure			2 - 6 bar	2 - 6 bar
Air inlet connection			F 3/8" G	F 3/8" G
Air outlet connection (muffler)			F 3/4" G	F 3/4" G
Fluid inlet connection			F 3/4" G (F 1" G for drum)	dual inlet F 3/4" G
Fluid outlet connection			F 1/2" G	F 1/2" G
Overall dimensions (A x B x C)			208 mm x 158 mm x 326 mm	208 mm x 158 mm x 326 mm
Packing - Weight			N° 1 packing m³ 0,014 Kg 5,5	N° 1 packing m³ 0,014 Kg 5

* With PTFE membrane flow rate is 10 % lower ** Displacement per cycle may be influenced by suction lift, fluid viscosity, air pressure, number of cycles per minute
*** The materials in contact with the fluid, and the fluid as well, can restrict the pump working temperature

PUMP DIMENSIONS

PUMP PERFORMANCE



PUMP AIR
FEEDING
PRESSURE

- A A 8 bar
- B B 6 bar
- C C 4 bar

POLYPROPYLENE Diaphragm pumps

1" - 145 l/min

The family of diaphragm pumps of 1", R. 1:1 for fluid transfer, produced entirely in polypropylene, maintain their performance on applications with industrial fluids, also aggressive, and in working environments with corrosive atmospheres, offering an unquestionable higher capacity.



**High resistance
high flow rate**

Note: The max flow rate shown in the below graphics has been obtained by laboratory test.

WITH FLANGE 1"



WITH FLANGE 1"

WITH FLANGE 1"



WITH FLANGE 1"

Series			1000-PPB	1000-PPB dual inlet
membranes	balls	seats	P/N	P/N
EPDM	Acetalica	Stainless steel AISI 316	2A4/2677EAI	2A7/2677EAI
Hytrel	Hytrel	Stainless steel AISI 316	2A4/2677HHI	2A7/2677HHI
NBR	Hytrel	Stainless steel AISI 316	2A4/2677NHI	2A7/2677NHI
Santoprene	Santoprene	Stainless steel AISI 316	2A4/2677SSI	2A7/2677SSI
PTFE+Hytrel *	PTFE	Stainless steel AISI 316	2A4/2677TTI	2A7/2677TTI
Max pressure			8 bar	8 bar
Max cycles per minute			270 cpm	270 cpm
Litres per cycle			0,540 l	0,540 l
Max suction lift			dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m
Max size pumpable solids			3 mm	3 mm
Max working temperature			65° C	65° C
Noise level			78 dB	78 dB
Max air consumption (m³/min)			1,1 m³/min	1,1 m³/min
Air working pressure			2 - 6 bar	2 - 6 bar
Air inlet connection			F 3/8" G	F 3/8" G
Air outlet connection (muffler)			F 3/4" G	F 3/4" G
Fluid inlet connection			ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to F 1.1/4" G thread	dual inlet ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to F 1.1/4" G thread
Fluid outlet connection			ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to F 1.1/4" G thread	ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to F 1.1/4" G thread
Overall dimensions (A x B x C)			357 mm x 150 mm x 418 mm	357 mm x 150 mm x 418 mm
Packing - Weight			N° 1 packing m³ 0,025 Kg 8	N° 1 packing m³ 0,025 Kg 8

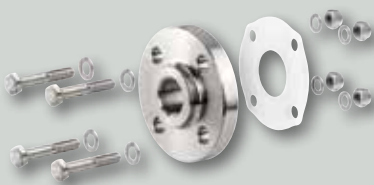
* With PTFE membrane flow rate is 10 % lower

** Displacement per cycle may be influenced by suction lift, fluid viscosity, air pressure, number of cycles per minute

*** The materials in contact with the fluid, and the fluid as well, can restrict the pump working temperature

ACCESSORY

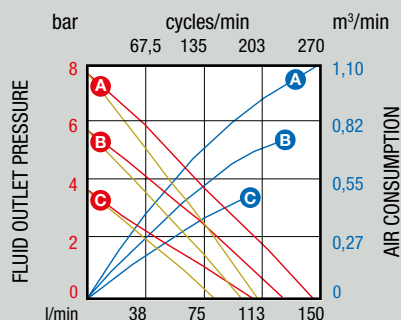
(to be ordered separately)



Art. 32/95

Flange in stainless steel AISI 304 with F 1" G thread suitable for the plant connection.

PUMP PERFORMANCE

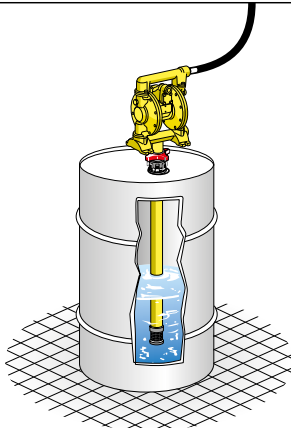
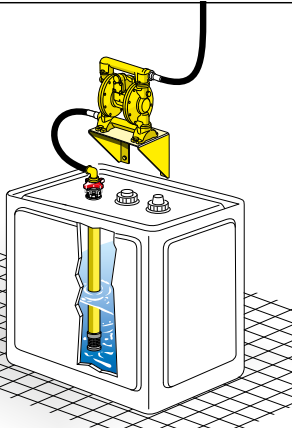
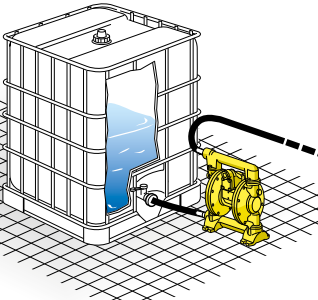
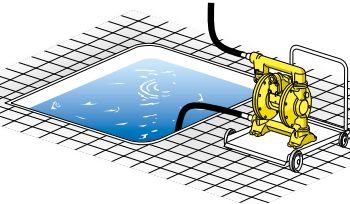
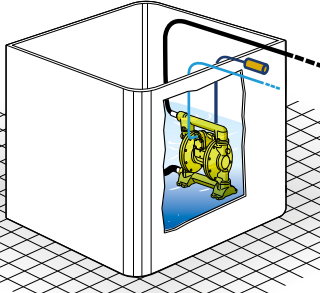
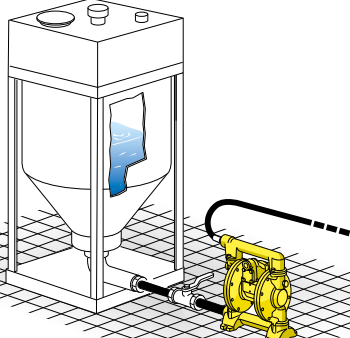


PUMP AIR
FEEDING
PRESSURE

A A 8 bar
B B 6 bar
C C 4 bar

■ KIND OF FLUID: Water 20 °C
■ SAE30 oil: (ISO VG 100) 20 °C

HOW TO INSTALL THE PUMP

PUMP INSTALLED ON DRUM	TOP FEED	BOTTOM FEED
		
PUMP INSTALLED ON A MOBILE UNIT	SUBMERGED PUMP (it is necessary to check the chemical compatibility between pump material and liquid)	BULK TANK
		

CHEMICAL COMPATIBILITY

For the specific use, refer to the chemical compatibility table and the specific characteristics required by the user. For any doubt or thorough check contact our technical department.

Abrasives	Clay, titanium dioxide, fillings
Acids	All mineral and organic acids (contact the technical department to verify the compatibility with the percentage of acid used)
Water	All types
Adhesives	Water-based solvents
Alcohols	Methanol, ethanol
Food products	Liquid and semi-solid food products, flavourings (FDA certification is not available)
Beverages	Soft drinks, spirits, beer, wine, milk (FDA certification is not available)
Caustic substances	Acids (contact the technical department to verify the compatibility with the percentage of acid used)
Cement	Cement in powder
Ceramics	Glaze, etc.
Preservative products for wood	Creosote, turpentine, copper naphthenate
Cosmetics	Creams, emulsions, detergents
Muds and discharges	Sewage, discharges, coal and lime slurries
Pharmaceuticals	Liquids, creams and emulsions
Rubber	Rubber, latex
Inks and dyes	Printing inks, drying agents, dyes, adhesives and solvents
Oils	Petrol, Diesel oil, hydraulic and cutting oils, animal and vegetable oils and greases
Pulp	Paper, wood, bonding and whitening agents
Resins	Natural and synthetic, water and solvent-based, monomer and polymer plastics
Solvents	Aromatic and aliphatic, ketones, aldehydes, hydrocarbons, esters and chlorates, antifreeze fluids
Paints	Emulsions, latex, pigments, solvents, resins, thinners

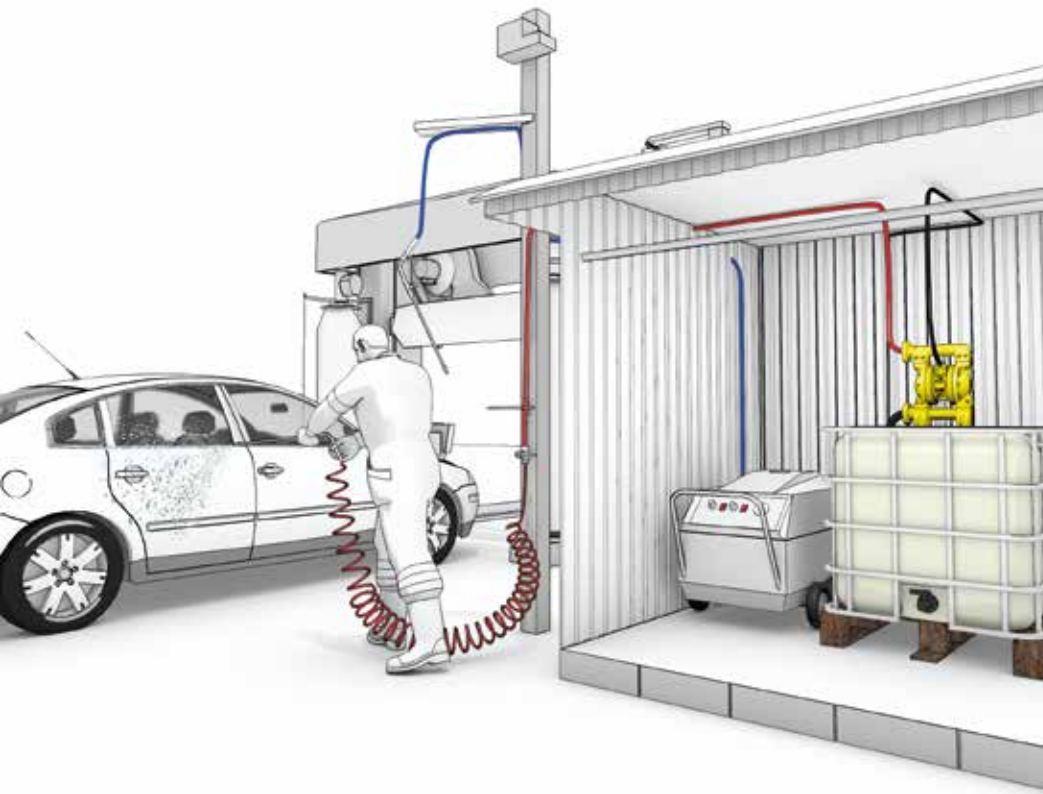


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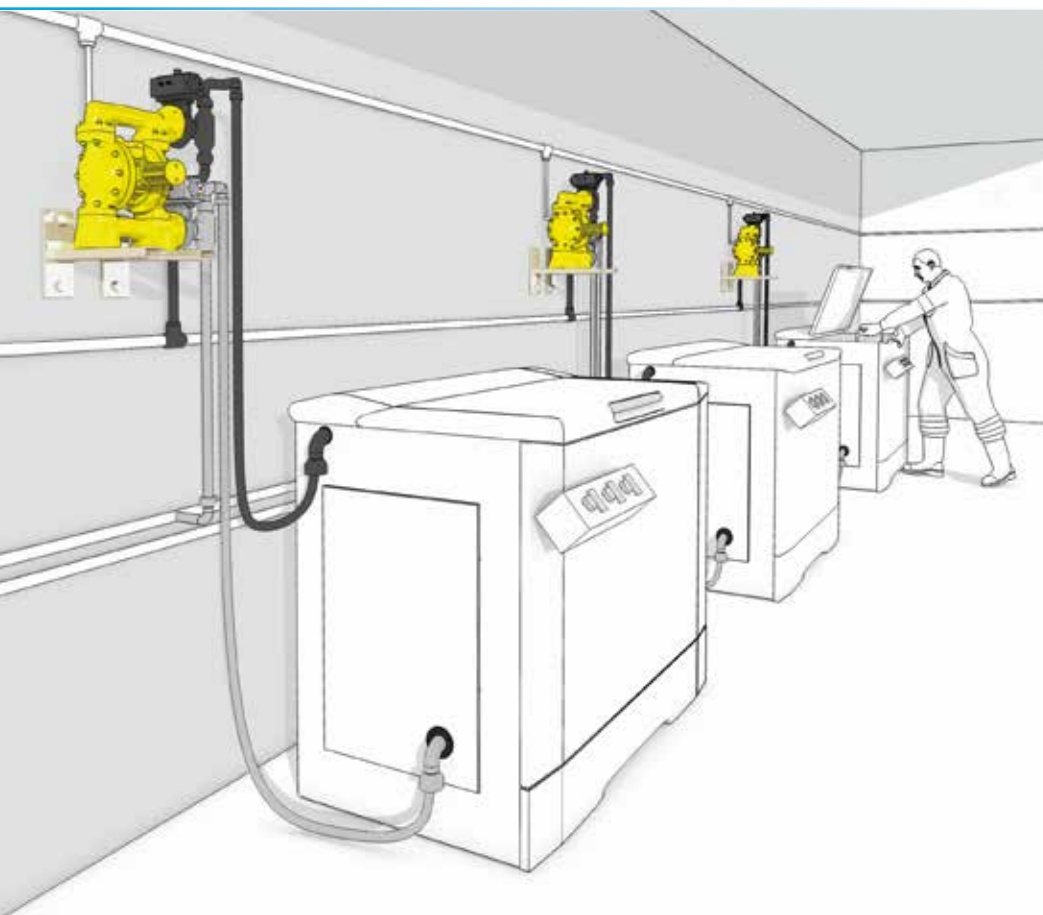
EXAMPLES OF USE

Diaphragm pumps entirely made of polypropylene are ideal to use in work environments with corrosive atmospheres. These are some examples of application:

- pumping detergent liquids in car washes
- transfer slip and glaze in the ceramics industry
- distribution of adhesives, paints, cellulose pulp in the paper and printing industry
- pumping of spent acids, dyes and wastewater in the textile and tanning industry
- distribution and mixing of paints in the colors/ varnishes industry
- pumping of corrosive and abrasive products in galvanic applications in the chemical and mechanical sector



Car wash



Metal cleaning



THREE WORDS TO DESCRIBE RAASM

■ Technology

The starting point for the entire manufacturing cycle is the research and development of cutting-edge solutions for products fully made in Italy.



■ Quality

One of our most important target is to offer high level of quality. Rigorous tests follow every single phase of the manufacturing process.



■ Efficiency

RAASM offers the most complete range of fluid management solutions suitable for many sectors. Our success is founded upon our ability to identify and fulfill specific customers' requirements.



Authorized distributor



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