DIAPHRAGM PUMPS No. 224-PM



ADVANCED FLUID MANAGEMENT SOLUTIONS





ADVANCED FLUID MANAGEMENT SOLUTIONS







Aluminum diaphragm pumps with treatment in cataphoresis



Stainless steel and aluminum diaphragm pumps



Page 12

Aluminum diaphragm pumps







ADVANCED FLUID MANAGEMENT SOLUTIONS

Page 38

Polypropylene diaphragm pumps



Page 42

Accessories



Page 30

Stainless steel and polypropylene diaphragm pumps



Page 34

Polypropylene

and aluminum diaphragm pumps

RAASM pneumatic double-diaphragm pumps are designed and manufactured to pump a wide range of fluids even with high viscosities and with suspended solids.

Being ATEX certified, they can also be used for heavy applications, such as in places with high humidity or with potentially explosive atmosphere.

- Self-priming capability
- Easy adjustment of delivery
- Resistance even in case of prolonged no-load operation

Are some of the features that make these pumps particularly versatile and appreciated in all work environments. The wide range of materials used for the pumps makes easy to identify the model that has the best chemical compatibility with the fluid to be pumped and for the work environment.

> Our sales department is at your disposal to provide information and solutions.

www.raasm.com



ADVANCED FLUID MANAGEMENT SOLUTIONS







More than **5000 products** available for your business









DIAPHRAGM PUMPS

RAASM diaphragm pumps in die-cast

aluminum are manufactured in several sizes and with high quality materials, allowing the pumping of a variety of fluids.

In addition, this type of pump is certified for use in potentially explosive environments according to ATEX directive, making it ideal for use in environments with severe conditions.

Our technical department is always at your disposal to help you choosing the materials of membranes, balls and seats compatible with the fluid to be pumped.



Technical characteristics

FLANGES Created to withstand heavy work conditions.

BALL VALVES Designed to guarantee the total flow of the pumped fluid.

PNEUMATIC MOTOR

With anti-ice device. This allows the pump to maintain its performance, even if powered with untreated air.

AIR DISTRIBUTION VALVE

Ensures perfect operations in any working conditions. Some examples:

- minimum supply pressures (min. 2 bar);
- critical fluid and environmental temperatures;
- supply pressure fluctuations.

MEMBRANES

Made of different and specific materials, able to withstand many types of fluids and millions of cycles.

AIR **DISTRIBUTOR UNIT** Equipped with

anti-stall reversing piston that prevents the pump from stopping at a dead point, even in critical operating conditions.

PNEUMATIC MOTOR BLOCK OF THE PUMP Does not require any type of lubrication because the moving parts

are self-lubricating.

TOTAL FLOW SUCTION AND **DELIVERY MANIFOLDS** They facilitate suction of the

liquid in any situation, with threaded or flanged connections available in different diameters, according to the pump models.



1/2" - Flow rate 70 I/min

1" - Flow rate 170 l/min

Diaphragm pumps R. 1:1 for transferring, made of die-cast aluminum; they ensure lasting and reliable operation with the most common automotive and industry fluids. In accordance with directive M = M = M = M = M = M = M = M = M = M =		R. 1:1 ade of they ensure operation non ustry fluids.	1/2" (f) Tigo 1/2" (f) Tigo 1/2" (f)	1" (f) 1.1/4" (f)
	Mode	əl	AAB-12	AAB-1
Membranes	Balls	Seats	P/N	P/N
EPDM	Acetal	Acetal	3C1/16111EAA	3C1/26111EAA
Hytrel®	Hytrel®	Hytrel®	3C1/16111HHH	3C1/26111HHH
NBR	Hytrel®	Hytrel®	3C1/16111NHH	3C1/26111NHH
Santoprene™	Santoprene™	Santoprene™	3C1/16111SSS	3C1/26111SSS
PTFE+Hytrel [®] *	PTFE	Polypropylene	3C1/16111TTP	3C1/26111TTP
Max pressu	re		8 bar	8 bar
Max cycles	per min		400 cpm	300 cpm
Litres per cy	/cle **		0,188 l	0,590 l
Max suction	n lift		dry column 4,5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m
Max size pu	mpable soli	ds	1,5 mm	3 mm
Max workin	g temperatu	re ***	100 °C	100 °C
Noise level			75 dB	75 dB
Max air con	sumption		0,80 m³/min	1,40 m³/min
Air working	pressure		2 - 6 bar	2 - 6 bar
Air inlet con	inection		G 3/8" (f)	G 3/8" (f)
Air outlet connection (muffler)		uffler)	G 1/2" (f)	G 1/2" (f)
Fluid inlet c	onnection		G 3/4" (f)	G 1.1/4" (f)
Fluid outlet	connection		G 1/2" (f)	G 1" (f)
Balls for inl	et and outlet		0	0
Overall dim	ensions (A -	B - C - D - E)	201 - 160 - 256 - 145 - 100 mm	261 - 200 - 345 - 182 - 130 mm
Screws for	pump fixing	-	M8	M10
Packing - Weight			🕅 N° 1 0,02 m³ 🛱 6,3 kg	🏹 No. 1 0,03 m³ 🛱 12 kg

* 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









Diaphragm pumps R. 1:1 for transferring, made of die-cast aluminum; they ensure lasting and reliable operation with the most common automotive and industry fluids.

In accordance with directive



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



1.1/4" (f)

	Mode	el	AAB-1-9 with multiple inlet/outlet	AAB-114
Membranes	Balls	Seats	P/N	P/N
EPDM	Acetal	Acetal	3C3/26111EAA	3C1/30111EAA
Hytrel®	Hytrel®	Hytrel®	3C3/26111HHH	3C1/30111HHH
NBR	Hytrel®	Hytrel®	3C3/26111NHH	3C1/30111NHH
Santoprene™	Santoprene™	Santoprene™	3C3/26111SSS	3C1/30111SSS
PTFE+Hytrel [®] *	PTFE	Polypropylene	3C3/26111TTP	3C1/30111TTP
Max pressu	ire		8 bar	8 bar
Max cycles	per min		300 cpm	260 cpm
Litres per c	ycle **		0,590 I	0,800 I
Max suction	n lift		dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m
Max size p	umpable soli	ds	3 mm	3 mm
Max workir	Max working temperature ***		100 °C	100 °C
Noise level			75 dB	75 dB
Max air cor	nsumption		1,40 m³/min	1,80 m³/min
Air working	g pressure		2 - 6 bar	2 - 6 bar
Air inlet co	nnection		G 3/8" (f)	G 3/4" (f)
Air outlet c	onnection (m	uffler)	G 1/2" (f)	G 1" (f)
Fluid inlet o	connection		4 x G 1" (f)	G 1.1/4" (f)
Fluid outlet	connection		5 x G 1" (f)	G 1.1/4" (f)
Balls for inlet and outlet		:	0 9	0
Overall dim	ensions (A -	B - C - D - E)	280 - 200 - 352 - 182 - 130 mm	286 - 238 - 386 - 199 - 137 mm
Screws for	pump fixing		M10	M10
Packing - V	Veight		🕅 No. 1 0,03 m³ 🛱 13 kg	🏹 No. 1 0,03 m³ 🛱 15 kg
ANCH DEFE				

* 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











Diaphragm pumps R. 1:1 for transferring, made of die-cast aluminum; they ensure lasting and reliable operation with the most common automotive and industry fluids.

In accordance with directive



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



2" (f)



2" - Flow rate 610 I/min

2.1/2" (f)

Model		əl	AAB-112	AAB-2	
Membranes	Balls	Seats	P/N	P/N	
EPDM	Acetal	Acetal	3C1/40111EAA	3C1/50111EAA	
Hytrel®	Hytrel®	Hytrel®	3C1/40111HHH	3C1/50111HHH	
NBR	Hytrel®	Hytrel®	3C1/40111NHH	3C1/50111NHH	
Santoprene™	Santoprene™	Santoprene™	3C1/40111SSS	3C1/50111SSS	
PTFE+Hytrel® *	PTFE	Polypropylene	3C1/40111TTP	3C1/50111TTP	
Max pressu	re		8 bar	8 bar	
Max cycles	per min		220 cpm	147 cpm	
Litres per c	ycle **		2,150 l	4,150 l	
Max suction	n lift		dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m	
Max size pu	impable soli	ds	5,5 mm	6,5 mm	
Max workin	ig temperatu	re ***	100 °C	100 °C	
Noise level			78 dB	82 dB	
Max air consumption			3,40 m³/min	4,00 m³/min	
Air working	pressure		2 - 6 bar	2 - 6 bar	
Air inlet cor	nnection		G 3/4" (f)	G 3/4" (f)	
Air outlet co	onnection (m	uffler)	G 1" (f)	G 1" (f)	
Fluid inlet c	onnection		G 2" (f)	G 2.1/2" (f)	
Fluid outlet	connection		G 1.1/2" (f)	G 2" (f)	
Balls for inlet and outlet		t	0	0	
Overall dim	ensions (A -	B - C - D - E)	350 - 402 - 514 - 250 - 182 mm	427 - 435 - 616 - 305 - 227 mm	
Screws for	pump fixing		M12	M12	
Packing - W	/eight		🏹 No. 1 0,07 m³ 🛱 21,5 kg	🏹 No. 1 0,12 m³ 🛱 43 kg	
A MOUL DIEF					

* 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 AIR FEEDING PRESSURE

🗛 🗛 8 bar 🕒 🕒 6 bar 🕒 🖸 4 bar













* 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 AIR FEEDING PRESSURE

🗛 🗛 8 bar 🕒 🕒 6 bar 🕒 🕒 4 bar







KIND OF FLUID: Water 20 °C

15



DIAPHRAGM PUMPS IN ALUMINUM WITH TREATMENT IN CATAPHORESIS



RAASM diaphragm pumps with cataphoresis

treatment are the ideal solution for use in particularly aggressive working environments thanks to the coating of a protective layer that ensures high resistance to chemical and environmental corrosion processes.

POWERCRON® 6000 HE cataphoresis treatment ensures better coating of the paint film over the entire surface of the pump, with significant benefits in terms of durability.

In addition, they can be used in applications with potentially explosive atmospheres thanks to their compliance with the ATEX directive.

Our technical department is always at your disposal to help you choosing the materials of membranes, balls and seats compatible with the fluid to be pumped.

Technical characteristics

MEMBRANES Made of different and

specific materials, able to withstand many types of fluids and millions of cycles.

AIR DISTRIBUTOR

Equipped with anti-stall reversing piston that prevents the pump from stopping at a dead point, even in critical operating conditions. PNEUMATIC MOTOR BLOCK OF THE PUMP Does not require any type of lubrication because the moving parts are self-lubricating.

FLANGES Created to withstand heavy work conditions.

BALL VALVES Designed to guarantee the total flow of the pumped fluid.

PNEUMATIC MOTOR

With anti-ice device. This allows the pump to maintain its performance, even if powered with untreated air.

TOTAL FLOW SUCTION AND DELIVERY MANIFOLDS

They facilitate suction of the liquid in any situation, with threaded or flanged connections available in different diameters, according to the pump models.

AIR DISTRIBUTION VALVE

Ensures perfect operations in any working conditions. Some examples:

- minimum supply pressures (min. 2 bar);
- critical fluid and environmental temperatures;
- supply pressure fluctuations.



. .

1/2" - Flow rate 70 I/min

1" - Flow rate 170 l/min

In accordance with directive $\overbrace{c \in \underbrace{c \in \underbrace{c \in \underbrace{c}}{\underbrace{c \in \underbrace{c}}}}^{\text{In a ccordance with directive}} \text{In a ccordance with directive}$			1/2" (f)	1" (f)	
	Mode	el	AAB-12	AAB-1	
Membranes	Balls	Seats	P/N	P/N	
EPDM	Acetal	Acetal	3C1/1666VEAA	3C1/2666VEAA	
Hytrel®	Hytrel®	Hytrel®	3C1/1666VHHH	3C1/2666VHHH	
NBR	Hytrel®	Hytrel®	3C1/1666VNHH	3C1/2666VNHH	
Santoprene™	Santoprene™	Santoprene™	3C1/1666VSSS	3C1/2666VSSS	
PTFE+Hytrel [®] *	PTFE	Polypropylene	3C1/1666VTTP	3C1/2666VTTP	
Max pressu	re		8 bar	8 bar	
Max cycles	per min		400 cpm	300 cpm	
Litres per c	ycle **		0,188 l	0,590 l	
Max suction	<u>ı lift</u>		dry column 4,5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m	
Max size pu	impable soli	ds	1,5 mm	3 mm	
Max workin	ig temperatu	ire ***	100 °C	100 °C	
Noise level			75 dB	/5 dB	
Max air con	sumption		0,80 m³/min	1,40 m³/min	
Air working	pressure		2 - 6 bar	2 - 6 bar	
Air Inlet connection		wfflor)	G 3/8 (I)	G 3/0 (I)	
Air outlet connection (MUMIer)		unier)	G 1/2 (I)		
Fluid outlet	connection		G 3/4 (I) G 1/2" (f)	G 1.1/4 (I) G 1" (f)	
Balls for inf	et and outlet	t			
Overall dim	ensions (A -	B - C - D - E)	201 - 160 - 256 - 145 - 100 mm	261 - 200 - 345 - 182 - 130 mm	
Screws for	pump fixina		M8	M10	
Packing - W	s /eiaht		No. 1 0.02 m³ 🛱 6,3 kg	No. 1 0,03 m³ 🛱 12 kg	

* 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









Diaphragm pumps R. 1:1 for transferring, made of die-cast aluminum, with black cataphoresis treatment that guarantees resistance up to 500 hours in saline fog.

In accordance with directive



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



1.1/4" (f)

	Mode	el	AAB-1-9 with multiple inlet/outlet	AAB-114
Membranes	Balls	Seats	P/N	P/N
EPDM	Acetal	Acetal	3C3/2666VEAA	3C1/3066VEAA
Hytrel®	Hytrel®	Hytrel®	3C3/2666VHHH	3C1/3066VHHH
NBR	Hytrel®	Hytrel®	3C3/2666VNHH	3C1/3066VNHH
Santoprene™	Santoprene™	Santoprene™	3C3/2666VSSS	3C1/3066VSSS
PTFE+Hytrel® *	PTFE	Polypropylene	3C3/2666VTTP	3C1/3066VTTP
Max pressu	ire		8 bar	8 bar
Max cycles	per min		300 cpm	260 cpm
Litres per c	ycle **		0,590 I	0,800 l
Max suction	n lift		dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m
Max size pu	impable soli	ds	3 mm	3 mm
Max workin	ng temperatu	ire ***	100 °C	100 °C
Noise level			75 dB	75 dB
Max air con	sumption		1,40 m³/min	1,80 m³/min
Air working	pressure		2 - 6 bar	2 - 6 bar
Air inlet cor	nnection		G 3/8" (f)	G 3/4" (f)
Air outlet co	onnection (m	uffler)	G 1/2" (f)	G 1" (f)
Fluid inlet c	onnection		4 x G 1" (f)	G 1.1/4" (f)
Fluid outlet	connection		5 x G 1" (f)	G 1.1/4" (f)
Balls for inlet and outlet			0	0
Overall dim	ensions (A -	B - C - D - E)	280 - 200 - 352 - 182 - 130 mm	286 - 238 - 386 - 199 - 137 mm
Screws for	pump fixing		M10	M10
Packing - W	Veight		🏹 No. 1 0,03 m³ 🛱 13 kg	🕅 No. 1 0,03 m³ 🛱 15 kg
ALL DEFE				

* 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











Diaphragm pumps R. 1:1 for transferring, made of die-cast aluminum, with black cataphoresis treatment that guarantees resistance up to 500 hours in saline fog.

In accordance with directive



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

1.1/2" - Flow rate 480 I/min

2" - Flow rate 610 I/min



2" (f)



2.1/2" (f)

	Mode	el	AAB-112	AAB-2
Membranes	Balls	Seats	P/N	P/N
EPDM	Acetal	Acetal	3C1/4066VEAA	3C1/5066VEAA
Hytrel®	Hytrel®	Hytrel®	3C1/4066VHHH	3C1/5066VHHH
NBR	Hytrel®	Hytrel®	3C1/4066VNHH	3C1/5066VNHH
Santoprene™	Santoprene™	Santoprene™	3C1/4066VSSS	3C1/5066VSSS
PTFE+Hytrel [®] *	PTFE	Polypropylene	3C1/4066VTTP	3C1/5066VTTP
Max pressu	ire		8 bar	8 bar
Max cycles	per min		220 cpm	147 cpm
Litres per c	ycle **		2,150 l	4,150 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		ds	5,5 mm	6,5 mm
Max working temperature ***		ire ***	100 °C	100 °C
Noise level			78 dB	82 dB
Max air consumption			3,40 m³/min	4,00 m³/min
Air working pressure			2 - 6 bar	2 - 6 bar
Air inlet cor	nnection		G 3/4" (f)	G 3/4" (f)
Air outlet co	onnection (m	uffler)	G 1" (f)	G 1" (f)
Fluid inlet o	onnection		G 2" (f)	G 2.1/2" (f)
Fluid outlet	connection		G 1.1/2" (f)	G 2" (f)
Balls for inlet and outlet		t	0	0
Overall dim	ensions (A -	B - C - D - E)	350 - 402 - 514 - 250 - 182 mm	427 - 435 - 616 - 305 - 227 mm
Screws for	pump fixing		M12	M12
Packing - Weight			🏹 No. 1 0,07 m³ 🛱 21,5 kg	👕 No. 1 0,12 m³ 🛱 43 kg
* With DTEE mombrane flow rate is 10 % lower ** Displacement per cycle may be influenced by cyclical lift fluid viscosity air proceure, number of cycles per minute				

* 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 AIR FEEDING PRESSURE

🗛 🗛 8 bar 🕒 🕒 6 bar 🕒 🖸 4 bar



Е



KIND OF FLUID: Water 20 °C



			2" - Flow rate 610 I/min	2" - Flow rate 580 I/min
			2" (f)	with FLANGE 2"
Diaphragm pumps R. 1:1 for transferring, made of die-cast aluminum, with black cataphoresis treatment that guarantees resistance up to 500 hours in saline fog.				
In accordance wi C E (Ex) Note: The max	th directive II 2 GD flow rate show	'n		
in the below gr obtained by lat	aphics has bee poratory test.	n	2.1/2" (f)	with FLANGE 2"
Model		el	AAB-2 with multiple inlet/outlet	AABM-2 modular
Membranes	Balls	Seats	P/N	P/N
EPDM	Acetal	Acetal	3C3/5066VEAA	3C6/5066VEAA
Hytrel®	Hytrel®	Hytrel®	3C3/5066VHHH	3C6/5066VHHH
NBR	Hytrel®	Hytrel®	3C3/5066VNHH	3C6/5066VNHH
Santoprene™	Santoprene™	Santoprene™	3C3/5066VSSS	3C6/5066VSSS
PTFE+Hytrel [®] *	PTFE	Polypropylene	3C3/5066VTTP	3C6/5066VTTP
Max pressu	ire		8 bar	8 bar
Max cycles	per min		147 cpm	147 cpm
Litres per c	ycle **		4,150 l	3,950 l
Max suction	n lift		dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m
Max size p	impable solic	ds	6,5 mm	6,5 mm
Max workir	ng temperatu	re ***	100 °C	100 °C
Noise level			82 dB	82 dB
Max air cor	sumption		4,00 m³/min	4,00 m³/min
Air working	pressure		2 - 6 bar	2 - 6 bar
Air inlet co	nnection		G 3/4" (f)	G 3/4" (f)
Air outlet c	onnection (m	uffler)	G 1" (f)	G 1" (f)
Fluid inlet connection			G 2.1/2" (f)	ANSI 150 - DIN PN 10 - JIS 10K 2" (50 mm)
Fluid outlet	connection		G 2" (f)	ANSI 150 - DIN PN 10 - JIS 10K 2" (50 mm)
Balls for in	et and outlet	:	0 ©	0 @
Overall dim	ensions (A -	B - C - D - E)	449 - 435 - 675 - 255 - 227 mm	410 - 435 - 710 - 305 - 238 mm
Screws for	pump fixing		M12	M12
Packing - Weight				

* 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 AIR FEEDING PRESSURE







cycles/min bar m³/min 38 75 113 150 8 4 A A FLUID OUTLET PRESSURE AIR CONSUMPTION 3 6 B 4 2 2 0 0 l/min 150 300 450 600 KIND OF FLUID: Water 20 °C







STAINLESS STEEL DIAPHRAGM PUMPS WITH ALUMINUM MOTOR

RAASM diaphragm pumps in AISI 316 stainless steel with aluminum motor are versatile and easy to use, suitable for a wide variety of industrial applications.

AISI 316 stainless steel is a material with high mechanical and thermal resistance, ideal for use with corrosive agents or in particularly harsh environments.

Moreover, they can be used in applications with a potentially explosive atmosphere thanks to their compliance with the ATEX directive.



Technical characteristics

MEMBRANES

Made of different and specific materials able to withstand many types of fluids and millions of cycles.

AIR DISTRIBUTOR

Equipped with anti-stall reversing piston that prevents the pump from stopping at a dead point, even in critical operating conditions. PNEUMATIC MOTOR BLOCK OF THE PUMP Does not require any type of lubrication because the moving parts are self-lubricating.

FLANGES Created to withstand heavy work conditions

BALL VALVES

Designed to guarantee the total flow of the pumped fluid.

PNEUMATIC MOTOR

Pneumatic motor with anti-ice device. This allows the pump to maintain its performance, even if powered with untreated air.

AIR DISTRIBUTION VALVE

Ensures perfect operations in any working conditions. Some examples:

- minimum supply pressures (min. 2 bar);
- critical fluid and environmental temperatures;
- supply pressure fluctuations.

TOTAL FLOW SUCTION AND DELIVERY MANIFOLDS

They facilitate suction of the liquid in any situation, with threaded or flanged connections available in different diameters according to the pump models.



The R 1:1 diaphragm pumps made of AISI 316 stainless steel with aluminum motor ensure reliability and efficiency.



In accordance with directive



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

Model			AIB-1	
Membranes	Balls	Seats	P/N	
PTFE+Hytrel®	PTFE	AISI 316 stainless steel	4C1/26115TTI	
Max pressu	re		8 bar	
Litres per c	ycle *		0,590 l	
Max suction	n lift		dry column 5 m - wet column 7,5 m	
Max size pu	impable soli	ids	3 mm	
Max workin	g temperati	ure **	100 °C	
Noise level			75 dB	
Max air con	sumption		1,4 m³/min	
Air working	pressure		3 - 8 bar	
Air inlet cor	nection		G 3/8" (f)	
Air outlet co	onnection (n	nuffler)	G 1/2" (f)	
Fluid inlet c	onnection		G 1.1/4" (f)	
Fluid outlet	connection		G 1" (f)	
Balls for inlet and outlet		t		
Overall dimensions (A - B - C - D - E)		B - C - D - E)	271 - 201 - 345 - 182 - 130 mm	
Screws for	pump fixing		M10	
Packing - Weight			🏹 No. 1 0,03 m³ 🛱 25 kg	
* Displacement per cycle may be influenced by suc		nay be influenced by suc	tion 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 AIR FEEDING PRESSURE

B B 6 bar ⊙ ⊙ 4 bar



🔕 🔕 8 bar





STAINLESS STEEL DIAPHRAGM PUMPS WITH POLYPROPYLENE MOTOR

RAASM AISI 316 stainless steel diaphragm pumps with polypropylene motor are designed to handle particularly aggressive fluids (acids and alkalis) and are the ideal solution to be used in many working environments, even the most aggressive.



Technical characteristics

MEMBRANES

Made of different and specific materials able to withstand many types of fluids and millions of cycles.

TOTAL FLOW SUCTION AND

threaded or flanged connections

available in different diameters

according to the pump models.

DELIVERY MANIFOLDS

They facilitate suction of the

liquid in any situation, with

SILENCER

Made of plastic material with increased exhaust system designed to withstand corrosive environments also thanks to stainless steel cage.

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.

PNEUMATIC MOTOR ANTI-ICING DEVICE

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

BALLS AND BALL SEATS

Available in many types of materials to guarantee chemical compatibility according to the fluid to be pumped. Easy to clean or replace as required.

PUMP BODY

In polypropylene with integrated flanges and co-molded inserts to guarantee elevated tightening torques.

PNEUMATIC MOTOR BLOCK OF THE PUMP

Does not require any type of lubrication because the moving parts are self-lubricating.

AIR DISTRIBUTOR UNIT

Equipped with anti-stall reversing piston that prevents the pump from stopping at a dead point, even in critical operating conditions.



The R 1:1 diaphragm pumps made of AISI 316 stainless steel with polypropylene motor ensure reliability and efficiency.



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

PPIB-1 Model Membranes Balls P/N Seats PTFE+Hytrel® PTFE AISI 316 stainless steel 2A1/26775TTI Max pressure 8 bar Litres per cycle * 0,540 I Max suction lift dry column 5 m - wet column 7,5 m Max size pumpable solids 3 mm Max working temperature ** 65 °C Noise level 78 dB Max air consumption 1,1 m³/min Air working pressure 3 - 8 bar G 3/8" (f) Air inlet connection Air outlet connection (muffler) G 3/4" (f) Fluid inlet connection G 1.1/4" (f) Fluid outlet connection G 1" (f) 0 Balls for inlet and outlet Overall dimensions (A - B - C - D - E) 271 - 201 - 345 - 182 - 130 mm Screws for pump fixing M10 Packing - Weight 🕅 No. 1 0,03 m³ 🛱 24 kg 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 AIR FEEDING PRESSURE

🔕 🔕 8 bar

B B 6 bar **G G** 4 bar







DIAPHRAGM PUMPS IN POLYPROPYLENE WITH ALUMINUM MOTOR



RAASM polypropylene diaphragm pumps

with aluminum motor are designed to handle particularly aggressive fluids (acids and alkalis) and are the ideal solution to be used in many working environments, even the most aggressive.

The screws on these pumps are made entirely of stainless steel to ensure quality, longevity and a better aesthetic design of the product.

Furthermore, they can be used in applications with a potentially explosive atmosphere thanks to their compliance with the ATEX directive.

Our technical department is always at your disposal to help you choosing the materials of membranes, balls and seats compatible with the fluid to be pumped.

Technical characteristics



(versions 1/2").

thread (versions 1/2").

- supply pressure fluctuations.



Diaphragm pumps R. 1:1 for transferring fluids,

made of molding injected polypropylene with motor made of aluminum; they ensure lasting and reliable operation even in extreme conditions and with aggressive fluids.

In accordance with directive



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

1/2" (f)	l
+	
and.	THE
1	
	, ALM
1 0	Le
	24
	1
3/4" (f)	1" (f)

1/2" (f)	
Charles -	
1110	
11	
7 20	
. (5	割り
4	Ed
~	
3/4" (f)	3/4" (f)
PB-12 dual inle	t/multiple outle

	Mod	el	APPB-12 with multiple inlet/outlet	APPB-12 dual inlet/multiple outlet	
Membranes	Balls	Seats	P/N	P/N	
EPDM	Acetal	Polypropylene and AISI 316	2B3/16117EA5	2B8/16117EA5	
Hytrel®	Hytrel®	Polypropylene and AISI 316	2B3/16117HH5	2B8/16117HH5	
NBR	Hytrel®	Polypropylene and AISI 316	2B3/16117NH5	2B8/16117NH5	
Santoprene™	Santoprene™	Polypropylene and AISI 316	2B3/16117SS5	2B8/16117SS5	
PTFE+Hytrel®*	PTFE	Polypropylene and AISI 316	2B3/16117TT5	2B8/16117TT5	
Max pressu	ire		8 bar	8 bar	
Max cycles	per min		330 cpm	330 cpm	
Litres per c	ycle **		0,188 l	0,188	
Max suction	n lift		dry column 4,5 m - wet column 7,5 m	dry column 4,5 m - wet column 7,5 m	
Max size pu	impable soli	ids	1,5 mm	1,5 mm	
Max workin	ng temperati	ure ***	65 °C	65 °C	
Noise level	Noise level		75 dB	75 dB	
Max air con	sumption		0,50 m³/min	0,50 m³/min	
Air working	pressure		2 - 6 bar	2 - 6 bar	
Air inlet cor	nnection		G 3/8" (f)	G 3/8" (f)	
Air outlet co	onnection (n	nuffler)	G 1/2" (f)	G 1/2" (f)	
Fluid inlet o	onnection		G 3/4" (f) - G 1" (f) per fusto	dual inlet G 3/4" (f)	
Fluid outlet	connection		G 1/2" (f)	G 1/2" (f)	
Balls for inlet and outlet		t			
Overall dim	ensions (A -	B - C - D - E)	220 - 160 - 327 - 145 - 100 mm	220 - 160 - 327 - 145 - 100 mm	
Screws for	pump fixing		M8	M8	
Packing - W	Packing - Weight		🏹 No. 1 0,02 m³ 🛱 5,8 kg	🏹 No. 1 0,02 m³ 🛱 5,7 kg	
* With PTFE membrane flow rate is 10 % lower ** D			isplacement per cycle may be influenced by suction lift, fluid vis	cosity, 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







Diaphragm pumps R. 1:1 for transferring fluids, made of molding injected polypropylene with motor made of aluminum. These versions have got 1" flange to connect the pump with the plant. Use the new AISI 304 stainless steel flange available in the "accessories" section for the piping connection.

In accordance with directive



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

Model



with FLANGE 1"

APPB-1

with FLANGE 1"
APPB-1 dual inlet
P/N
2B7/26117EAI
2B7/26117HHI
2B7/26117NHI
2B7/26117SSI
2B7/26117TTI
8 bar

with FLANGE 1"

Membranes	Membranes Balls Seats		P/N	P/N	
EPDM	Acetal	AISI 316 stainless steel	2B4/26117EAI	2B7/26117EAI	
Hytrel®	Hytrel [®]	AISI 316 stainless steel	2B4/26117HHI	2B7/26117HHI	
NBR	Hytrel®	AISI 316 stainless steel	2B4/26117NHI	2B7/26117NHI	
Santoprene™	Santoprene™	AISI 316 stainless steel	2B4/26117SSI	2B7/26117SSI	
PTFE+Hytrel [®] *	PTFE	AISI 316 stainless steel	2B4/26117TTI	2B7/26117TTI	
Max pressu	ire		8 bar	8 bar	
Max cycles	per min		300 cpm	300 cpm	
Litres per c	ycle **		0,590 l	0,590 l	
Max suction	n lift		dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m	
Max size pu	umpable soli	ds	3 mm	3 mm	
Max workin	ng temperatu	ire ***	65 °C	65 °C	
Noise level			75 dB	75 dB	
Max air cor	Max air consumption		1,60 m³/min	1,60 m³/min	
Air working	pressure		2 - 6 bar	2 - 6 bar	
Air inlet co	nnection		G 3/8" (f)	G 3/8" (f)	
Air outlet c	onnection (m	nuffler)	G 1/2" (f)	G 1/2" (f)	
Fluid inlet connection			ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread	dual inlet ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread	
Fluid outlet	connection		ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread	ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread	
Balls for inlet and outlet		t	0	0	
Overall dim	ensions (A -	B - C - D - E)	305 - 200 - 420 - 191 - 130 mm	357 - 200 - 420 - 191 - 130 mm	
Screws for	pump fixing		M10	M10	
Packing - V	Veight		🕎 No. 1 0,03 m³ 🖞 7 kg	🏹 No. 1 0,03 m³ 🛱 12,1 kg	
			tentereneration and a sector sector in the tentered by sector in the theta state		

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









DIAPHRAGM PUMPS IN POLYPROPYLENE

RAASM diaphragm pumps completely made of polypropylene are designed to handle particularly aggressive fluids (acids and alkalis) and are the best solution to be used in many working environments, even the most aggressive.

The screws on these pumps are made entirely of stainless steel to ensure quality, longevity and a better aesthetic design of the product.



Technical characteristics

MEMBRANES

Made of different and specific materials able to withstand many types of fluids and millions of cycles.

TOTAL FLOW SUCTION AND

They facilitate suction of the liquid in any situation, with threaded

connections or flanged available in

pump models. There is a AISI 316

stainless steel ring to reinforce the

different diameters according to the

DELIVERY MANIFOLDS

thread (versions 1/2").

SILENCER

Made of plastic material with increased exhaust system designed to withstand corrosive environments also thanks to stainless steel cage.

AIR DISTRIBUTION VALVE

Ensures perfect operations in any working conditions, some examples:

- minimum supply pressures (min. 2 bar); - fluid and environment critical
- temperatures;
- supply pressure fluctuations.

PNEUMATIC MOTOR ANTI-ICING DEVICE

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

BALLS E SEATS

Available in many types of materials to guarantee chemical compatibility according to the fluid to be pumped. Easy to clean or to replace as required. The ball seats are in AISI 316 stainless steel (versions 1") or in AISI 316 stainless steel and polypropylene (versions 1/2").

PUMP BODY

In polypropylene with integrated flanges and co-molded inserts to guarantee elevated tightening torques.

PNEUMATIC MOTOR BLOCK OF THE PUMP

Does not require any type of lubrication because the moving parts are self-lubricating.

AIR DISTRIBUTOR UNIT

Equipped with anti-stall reversing piston that prevents the pump from stopping at a dead point, even in critical operating conditions.



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.

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

1/2" (f)	1/2" (f)
Gran an	
🔌 (1) 👘 ()	
3/4" (f) <mark> -</mark>	3/4" (f) 3/4" (f)

Model		el	PPB-12 with multiple inlet/outlet	PPB-12 dual inlet/multiple outlet	
Membranes Balls Seats		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 pressu	re		8 bar	8 bar	
Max cycles	per min		350 cpm	350 cpm	
Litres per c	ycle **		0,188	0,188 l	
Max suction	n 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		ds	1,5 mm	1,5 mm	
Max working temperature ***		ire ***	65 °C	65 °C	
Noise level			76 dB	76 dB	
Max air con	sumption		0,89 m³/min	0,89 m³/min	
Air working	pressure		2 - 6 bar	2 - 6 bar	
Air inlet cor	nnection		G 3/8" (f)	G 3/8" (f)	
Air outlet co	onnection (m	nuffler)	G 3/4" (f)	G 3/4" (f)	
Fluid inlet c	onnection		G 3/4" (f) - G 1" (f) for drum	dual inlet G 3/4" (f)	
Fluid outlet	connection		G 1/2" (f)	G 1/2" (f)	
Balls for inlet and outlet		t			
Overall dim	ensions (A -	B - C - D - E)	208 - 220 - 326 - 145 - 100 mm	220 - 220 - 326 - 145 - 100 mm	
Screws for	pump fixing		M8	M8	
Packing - W	/eight		₩ No. 1 0,02 m ³ 5,8 kg	No. 1 0,02 m³ [⊕] 5,8 kg	
+ MOUL DIEF					

* 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







B B 6 bar

🕒 🕒 4 bar

The family pumps, R transfer, p polypropy performan with indus aggressive environme atmosphe unquestio capacity.	y of 1" dia 1. 1:1 for f produced lene, main ace on app strial fluids e, and in v ents with c res, offeri nable high flow rate show aphics has been protory test.	aphragm fluid entirely in ntain their polications s, also working corrosive ng an ner	with FLANGE 1"	with FLANGE 1"
	Mod	el	PPB-1	PPB-1 dual inlet
Membranes	Balls	Seats	P/N	P/N
EPDM	Acetal	AISI 316 stainless steel	2A4/2677EAI	2A7/2677EAI
Hytrel®	Hytrel®	AISI 316 stainless steel	2A4/2677HHI	2A7/2677HHI
NBR	Hytrel [®]	AISI 316 stainless steel	2A4/2677NHI	2A7/2677NHI
Santoprene™	Santoprene™	AISI 316 stainless steel	2A4/2677SSI	2A7/2677SSI
PTFE+Hytrel [®] *	PTFE	AISI 316 stainless steel	2A4/2677TTI	2A7/2677TTI
Max pressu	re		8 bar	8 bar
Max cycles	per min		270 cpm	270 cpm
Litres per cy	ycle **		0,540 I	0,540 l
Max suction	n lift		dry column 5 m - wet column 7,5 m	dry column 5 m - wet column 7,5 m
Max size pu	impable soli	ds	3 mm	3 mm
Max workin	ig temperati	ıre ***	65 °C	65 °C
Noise level			78 dB	78 dB
Max air con	sumption		1,1 m³/min	1,1 m³/min
Air working	pressure		2 - 6 bar	2 - 6 bar
Air inlet con	nection		G 3/8" (f)	G 3/8" (f)
Air outlet co	onnection (n	nuffler)	G 3/4" (f)	G 3/4" (f)
Fluid inlet connection			ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread	dual inlet ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread
Fluid outlet	connection		ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread	ANSI 150 - DIN PN 10 - JIS 10K 1" (25 mm) proneness to G 1.1/4" (f) thread
Balls for inl	et and outle	t	0 	© @
Overall dim	ensions (A -	B - C - D - E)	305 - 300 - 420 - 191 - 130 mm	357 - 300 - 420 - 191 - 130 mm
Screws for	pump fixing		M10	M10
Packing - W	/eight		🗊 No. 1 0,03 m³ 🛱 9,6 kg	🏹 No. 1 0,03 m³ 🛱 9,6 kg
* With PTFE m	embrane flow	rate is 10 % lower ** D	isplacement per cycle may be influenced by suction lift, fluid visi	cosity, air pressure, number of cycles per minute

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





39









P/N 37819

Pressure regulator with condensate discharge filter and pressure gauge.

- connections G 3/8" (f) x G 3/8" (f) for application at the start of the compressed air line feeding the pump.

P/N 37815

Pressure regulator with condensate discharge filter and pressure gauge.

 connections G 1/2" (f) x G 1/2" (f) for application at the start of the compressed air line feeding the pump.





Pressure regulator with condensate discharge filter, air lubricator and pressure gauge.

- connections G 3/8" (f) x G 3/8" (f) the system guarantees that the pump feed air is free of condensate.

P/N 37817

Pressure regulator with condensate discharge filter, air lubricator and pressure gauge. - connections G $1/2^{"}$ (f) x G $1/2^{"}$ (f)

the system guarantees that the pump feed air is free of condensate.





- Flow regulator chamber G 3/4" (f) x G 3/4" (f) equipped with:
- one-way valve eliminates sudden pressure
- changes, ensuring a regular flow
- suitable for R 1:1 3:1 5:1 pumps
- max pressure 100 bar.
 - max pressure 100 bar.

PRESSURE TREND OF PUMP OUTLET



with pump R 1:1 - 8 bar

without chamber





P/N KR4506

Earthing cable provided with plier. In environments with risk of explosion (i.e. with a potentially explosive atmosphere according to the ATEX directive) it is mandatory to connect to the ground both the pump and other equipment placed in the working area.





Mufflers reduce exponentially the noise level perceived. They decrease the pump outlet air level noise bringing it to a comfortable level, optimizing the air flow and increasing the pump performance.

P/N 32/89 Increased muffler G 1/2" (m) suitable for 1/2" and 1" pumps with aluminum motor.

 $\ensuremath{\text{P/N}}$ 32/90 $\ensuremath{\text{Muffler}}$ G 3/4" (m) in polypropylene for 1/2" and 1" pumps with plastic motor.

P/N 32/91 Muffler G 1" (m) for 1.1/4", 1.1/2" and 2" pumps with aluminum motor. Suggested with very dusty environments.

P/N 32/92

Muffler G 1" (m) for 1.1/4", 1.1/2" and 2" pumps with aluminum motor.

MUFFLER STANDARD INSTALLATION

MUFFLER REMOTE INSTALLATION

In case of dangerous fluids pumping please move the muffler in a safe zone away from the working environment.





Overall dimensions (mm)						
С В	P/N	Α	В	С		
	32/89	1/2"	40	80		
	32/90	3/4"	67	131		
	32/91	1"	100	220		
	32/92	1"	64	131		



P/N 33590

Wall bracket in painted steel for wall-mounting of diaphragm pumps 1/2" and 3/4" and screws for pump fixing M8.

P/N 33591

Wall bracket in painted steel for wall-mounting of diaphragm pumps 1" and 1.1/4" and screws for pump fixing M10.













P/N KR33/90

Antivibration kit in SBR rubber ø 30 x h. 20 mm thread M/M - M8 for 1/2" and 3/4" diaphragm pump. It reduces the vibrations in heavy applications.

P/N KR33/91

Antivibration kit in SBR rubber ø 50 x h. 30 mm thread M/M - M10 for 1" and 1.1/4" diaphragm pump. It reduces the vibrations in heavy applications.

P/N KR33/88

Antivibration kit in SBR rubber ø 30 x h. 20 mm thread F/F - M12 for 1.1/2" and 2" diaphragm pump. It reduces the vibrations in heavy applications.



P/N 32/95 *

1" AISI 304 stainless steel flange suitable to connect the pump to the plant. Thread G 1" (f).

P/N 32/96 *

1" polypropylene flange suitable to connect the pump with to the plant. Thread G 1" (f).

P/N 32/97 *

 ${\bf 2"}$ aluminum flange suitable to connect the pump to the plant. Thread G 1" (f).

* accessory only for flanged diaphragm pump.

P/N 33574 Hose holder ø 1.3/4" (47,5 mm) with connection G 1.1/4" (m).

P/N 33575 Hose holder ø 1.3/4" (47,5 mm) with connection G 1.1/2" (m).

P/N 33576 Hose holder ø 1.3/4" (47,5 mm) with connection G 2" (m).

P/N 38080 Hose holder ø 1.1/4" (31,4 mm) with connection G 3/4" (m).

P/N 38081 Hose holder ø 1.1/4" (31,4 mm) with connection G 1" (m).

P/N 38082 Hose holder ø 1.1/4" (31,4 mm) with connection G 1.1/4" (m).

P/N 33571

Hose holder ø 3/4" (22 mm) with connection G 3/4" (m) in AISI 304 stainless steel.

P/N 38083

Hose holder ø 3/4" (22 mm) with connection G 1" (m) in AISI 304 stainless steel.













P/N 38026 Flexible suction tube 2 m - ø 30,5 x ø 39 mm.

P/N 38028 Flexible suction tube 1 m - ø 30,5 x ø 39 mm.

P/N 33584 Flexible suction tube 2 m - ø 45 x ø 57 mm.



.

with ø 34 mm suction tube.

Bung adaptor for pump

P/N 33434



P/N 10/15 Bung adaptor for pump with ø 53 mm suction tube.

P/N 33581 Rigid suction tube ø 34 mm - length 940 mm.

P/N 33582 Rigid suction tube ø 34 mm - length 1240 mm.

P/N 33586 Rigid suction tube ø 53 mm - length 940 mm.

P/N 33588 Rigid suction tube ø 53 mm - length 1240 mm.

P/N 33594 Rigid suction tube ø 34 mm - length 1460 mm.



P/N 33583 Rigid suction tube ø 34 mm - length 940 mm. P/N 33585 Rigid suction tube ø 34 mm - length 1240 mm. P/N 33587 Rigid suction tube kit ø 53 mm - length 940 mm. P/N 33589 Rigid suction tube kit ø 53 mm - length 1240 mm. P/N 33595 Rigid suction tube kit ø 34 mm



P/N 33569 Stainless steel suction tube ø 34 mm - length 1240 mm straight connection without joint.

P/N 33579 Stainless steel suction tube ø 34 mm - length 940 mm.

P/N 33580 Stainless steel suction tube ø 34 mm - length 1240 mm.

P/N 33596 Stainless steel suction tube ø 34 mm - length 1460 mm.

P/N 33577 AISI 304 stainless steel rigid suction tube kit ø 34 mm - length 940 mm.

P/N 33578 AISI 304 stainless steel rigid suction tube kit ø 34 mm - length 1260 mm.

P/N 33597 AISI 304 stainless steel rigid suction tube kit ø 34 mm - length 1460 mm.



PUMP CONFIGURATION

Two types of ATEX certifications are available, for zone 2, or for zone 1, it 3GD (for zone 2) The value seats are to be coupled to the balls and must ensure correct closing. Like the balls, they must be made of a material suitable for the fluid they come into contact with. They can be threaded (6) or flanged, single, multiple and modular. They can be threaded (6) or flanged, single, multiple and modular. They can be threaded (6) or flanged, single, multiple and modular. It defines It defines It defines They are the only elastic parts of the purp, that suck and pump the liquid with the finue do being pumped. They can be threaded (6) or flanged, single, multiple and modular. They are the only elastic parts of the purp, that suck and pump the liquid with the finue do be pumped. They are the only elastic parts of the purp, responsible for the purp, responsible for the purp eliquid. These are all the rigid and sieves which are compatibility with the liquid to be pumped. MATERIALS MANFOLD FOR INVEX TABLE CONTECT WITH Backet part is the purp eliquid. These are not in control with the liquid to be pumped. Ba = Polyproxyteme for zone 2 V = threaded connection 6 if the 1/2 1 = Nicket plat. I = Nicket plat. NetRenAL A = Actel Ba = Polyproxyteme for zone 2 V = threaded connection 6 if the read connection 6 if the liquid and an intermined and an intermined intermined and a subthoresis I = Nicket plat. I = Nicket plat. I = Nicket plat. Nother is antipoperis	Esf c T c u c t r	Exploded view of the showing its main part acilitating the choice configuration. The table summarises configurations availat user to create his own code whenever the mode whe	pump, is and thereby for a custom s the pump ble, allowing the n personalised nodels listed on et the specific	MOTOR INNER FL PARTS IN CONTAC ^T THE FLUI	ANGES					PARTS IN CONTACT WITH THE FLUID MEMBRANE BALLS SEATS
MATERIALS MANIFOLD FOR INLET AND OUTLET FOW Big 2 FOW FOUND For the and not compatible with the fluid being pumped. MATERIALS MANIFOLD FOR INLET AND OUTLET FOW Big 2 FOW Pumped. They can be threaded (G) or flaged, single, multiple and modular. MATERIALS MANIFOLD FOR INLET AND OUTLET FOW Big 2 They can be threaded (G) or flaged, single, multiple and modular. They are the only elastic parts of the pump, these subscription order to obtain the correct	$\left[\right]$	Two types of ATEX cer depending o II 3GD (fo	tifications are available, fo on the materials the pump or zone 2) II 2GD (fo	r zone 2 or 1 is made of. r zone 1)	for zone 1,	The valve correct cl su	e seats are to b losing. Like the itable for the fl	e coupled to th balls, they mu uid they come	ne balls and mu ist be made of a into contact wi	ist ensure a material th.
Materials Manifold FOR Invertige FLOW Invertige FLOW Invertige FLOW Invertige They are the only elastic parts of the purp, that suck and purp the liquid with their movement. The material they are made of muscle baselected in order to obtain the correct chemical compatibility with the liquid to be purped. It defines the inside diameter of the manifold. It defines the inside diameter of the manifold. These are all the rigid parts such as external flanges, manifolds and sleeves which are constantly in contact with the liquid to be pumped. Materials Manifold FOR Invertige FLOW Invertige These are not in contract with the pumpe (liquid, but only with the compressed air feeding the motor. Materials SEATS 28 – Polypropylene to 2 – Auminum for Zone 1 14 – threaded connection G 32 = 11 ⁻¹¹ 15 – Nicket plat all minum 1 = Nicket plat all minum 1 = Nicket plat all minum E = EPOM a = Acetal a = Acetal all minum A = Acetal a = Acetal a = Acetal a = Acetal all minum A = Acetal a			They can be thread	led (G) or fla	inged	They oper of the re- plates. T comp	and close the ciprocating mo he material the atible with the t	flow of liquid a vement of the y are made of fluid being pun	as a result follower must be nped.	
In the inside diameter of the manifold. In the inside diameter of the manifold. In the inside diameter of the manifold. These are all the rigid parts such as external flanges, manifolds and sleeves which are constantly in contact with the liquid to be pumped. These are not in contact with the pump, responsible for the reciprocating movement that creates the flow of liquid. These are not in contact with the pump responsible for the flow of liquid. MATERIALS AND ATEX VERSIONS MANIFOLD FOR INLET AND OUTLET FLOW INSIDE DIAMETER FLOW INSIDE DIAMETER These are not in contact with the preciprocating movement that creates the flow of liquid. These are not in contact with the pump responsible for the flow of liquid. 2B = Polypropylene for Zone 1 1/2 = threaded connection G 2/4 = mult. thread. connection			single, multiple	and modula	fines	They are the pump, that s with their r they are may order to obt compa	e only elastic p suck and pump novement. The de of must be s tain the correct tibility with the	arts of the o the liquid material selected in c chemical liquid		
Materials, depending on the type of liquid. This is the heart of the pump, responsible for the reciprocating movement that creates the flow of liquid. These are not in contact with the pump, responsible for the reciprocating movement that creates the flow of liquid. These are not in contact with the pump element of the pump element of the reciprocating movement that creates the flow of liquid. These are not in contact with the pump element of the reciprocating movement that creates the flow of liquid. These are not in contact with the pump element of the reciprocating movement that creates the flow of liquid. Motor Type of Material. 28 = Polypropylene for Zone 2 1/ = threaded connection G 16 = 1/2" 1 = Nickel plat. aluminum with 5 = Alsi 316 E = EPDM A = Acetal A = Acetal 30 = Auminum with flange 30 = 1.1/2" 6 = Auminum with 0 = Auminum with 5 = Alsi 316 N = NBR S = Santoprene ¹⁰ P = Polypropylene 41 = Alsi 316 stainless steel for Zone 1 7 = dual inlet connection with flange 50 = 2" 7 = Polypropylene 7 = Polypropylene N = NBR S = Santoprene ¹⁰ S = Sontoprene ¹⁰				the ii dian of man	inside neter the ifold.	These are a parts such a flanges, m and sleeves constantly in o	Il the rigid is external anifolds which are contact with			
MATERIALS AND ATEX VERSIONS MANIFOLD FOR INLET AND OUTLET FLOW INSIDE DIAMETER FLOW INSIDE DIAMETER Inner FLANGES PARTS IN CONTACT WITH FLANGES MemBrane Contact with the pumped liquid, but only with the compressed air feeding the motor. 2B = Polypropylene for Zone 2 1/ = threaded connection G 16 = 1/2" 26 = 1" 1 = Nickel plat. aluminum 1 = Nickel plat.				Thi	s is the rt of the	the liquid to b Available ir materials, de the type o	be pumped. In various pending on of liquid.			
MATERIALS AND ATEX VERSIONS MANIFOLD FOR INLET AND OUTLET FLOW INSIDE DIAMETER FLOW INSIDE DIAMETER INNER FLANGES PARTS IN CONTACT WITH THE FLUID MEMBRANE BALLS SEATS 2B = Polypropylene for Zone 2 1/ = threaded connection G 16 = 1/2" 1 = Nickel plat. aluminum 1 = Nickel plat. aluminum 1 = Nickel plat. aluminum 1 = Nickel plat. aluminum E = EPDM A = Acetal A = Acetal 3C = Aluminum for Zone 1 4/ = connection with flange 30 = 1.1/4" 6 = Aluminum with cataphoresis 5 = AISI 316 N = NBR S = Santoprene TM P = Polypropylene T = PTFE N = NBR S = Santoprene TM P = Polypropylene motor and flanged are a single body) 7 = Polypropylene (motor and flanged are a single body) 7 = Polypropylene motor and flanged are a single body) T = PTFE + Hytrel® I = AISI 316 st. steel				recip mo that c flow	or the procating vement reates the of liquid.	contact with pumped liq but only with compressed feeding the r	n the uid, n the d air notor.			
MATERIALS AND ATEX VERSIONS MANIFOLD FOR INLET AND OUTLET FLOW INSIDE DIAMETER MOTOR INNER FLANGES PARTS IN CONTACT WITH THE FLUID MEMBRANE BALLS SEATS 2B = Polypropylene for Zone 2 1/ = threaded connection G 16 = 1/2" 1 = Nickel plat. aluminum E = EPDM A = Acetal A = Acetal 3C = Aluminum for Zone 1 4/ = connection with flange 30 = 1.1/4" 6 = Aluminum with cataphoresis 6 = Aluminum with cataphoresis 5 = AISI 316 st. steel N = NBR S = Santoprene TM P = Polypropylene 4C = AISI 316 stainless steel for Zone 1 6/ = multiple modular connection with flange 50 = 2" 7 = Polypropylene (motor and flanged are a single body) 7 = Polypropylene (motor and flanged are a single body) N = NBR S = Santoprene TM I = AISI 316 st. steel 8/ = dual inlet threaded connection G M M M M M M S = Polypropylene (ataphoresis T = PTFE + Hytrel [®] I = AISI 316 st. steel S = Polypropylene (motor and flanged are a single body) T = PTFE + Hytrel [®] I = AISI 316 st. steel	ſ	★	*	*	•			MATERIAL	•	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		MATERIALS AND ATEX VERSIONS	MANIFOLD FOR INLET AND OUTLET	FLOW INSIDE DIAMETER	MOTOR	INNER Flanges	PARTS IN Contact with The fluid	MEMBRANE	BALLS	SEATS
for Zone 2 $3/$ = mult. thread. connection G $26 = 1^{\circ}$ aluminumaluminumaluminumaluminum $H = Hytrel^{\odot}$ $H =$	ſ	2B = Polypropylene	1/= threaded connection G	16 = 1/2"	1 = Nickel plat.	1 = Nickel plat.	1 = Nickel plat.	$\mathbf{E} = EPDM$	A = Acetal	A = Acetal
3C = Aluminum for Zone 1 4/ = connection with flange 30 = 1.1/4" 6 = Aluminum with cataphoresis 6 = Aluminum with cataphoresis 5 = AISI 316 N = NBR S = Santoprene™ P = Polypropylene 2A = Polypropylene 6/ = multiple modular connection with flange 40 = 1.1/2" 6 = Aluminum with cataphoresis 6 = Aluminum with cataphoresis 5 = AISI 316 S = Santoprene™ T = PTFE S = Santoprene™ T = PTFE S = Santoprene™ I = AISI 316 4C = AISI 316 stainless steel for Zone 1 7/ = dual inlet connection with flange 50 = 2" 7 = Polypropylene 7 = Polypropylene T = PTFE + Hytrel® I = AISI 316 S = Sontoprene™ I = AISI 316 7/ = dual inlet connection with flange are a single body are a single body V Aluminum with cataphoresis T = PTFE + Hytrel® I = AISI 316 S = Polypropylene 8/ = dual inlet threaded connection G Interaded connection G I = AISI 316 I = AISI 316 S = Polypropylene S = Poly		for Zone 2	3 = mult. thread. connection G	26 = 1"	aluminum	aluminum	aluminum	H = Hytrel®	H = Hytrel®	H = Hytrel [®]
2A = Polypropylene 6/ = multiple modular connection with flange 40 = 1.1/2" cataphoresis cataphoresis st. steel S = Santoprene™ T = PTFE S = Santoprene™ 4C = AISI 316 stainless steel for Zone 1 7/ = dual inlet connection with flange 50 = 2" 7 = Polypropylene (motor and flanged are a single body) 7 = Polypropylene (motor and flanged are a single body) 7 = Polypropylene V = Aluminum with cataphoresis T = PTFE + Hytrel® I = AISI 316 st. steel 5 = Polypropylene and AISI 316 st. steel 8/ = dual inlet threaded connection G I I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	L	3C = Aluminum for Zone 1	4/ = connection with flange	30 = 1.1/4"	6 = Aluminum with	6 = Aluminum with	5 = AISI 316	N = NBR	S = Santoprene [™]	P = Polypropylene
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		2A = Polypropylene	6/ = multiple modular	40 = 1.1/2"	cataphoresis	cataphoresis	st. steel	S = Santoprene™	T = PTFE	S = Santoprene™
B/ = dual inlet and AISI 316 threaded connection G st. steel		4C = AISI 316 stainless steel for Zone 1	connection with flange 7/ = dual inlet connection with flange	50 = 2"	7 = Polypropylene (motor and fla are a single bo	nged ody)	7 = Polypropylene V = Aluminum with cataphoresis	T = PTFE + Hytrel®		I = AISI 316 st. steel
			8/ = dual inlet threaded connection G				6414p11016515			5 = Polypropylene and AISI 316 st. steel

EXAMPLE 3C1/16111EAA								
3C = Aluminum for Zone 1	1/ = threaded connection G	16 = 1/2"	1 = Nickel plat. aluminum	1 = Nickel plat. aluminum	1 = Nickel plat. aluminum	E = EPDM	A = Acetal	A = Acetal



INSTALLATION AND OPERATION

SIMPLE AND EFFECTIVE (1:1 RATIO)



The slide valve of the air motor sends air (blue) to the left chamber which, pushing the membrane outwards, compresses the previously filled liquid (green). Through the effect of the pressure created valve 1 closes and valve **2** opens allowing the liquid to dispense

(green). The right membrane then carries out the same movement by the shaft joining it to the left membrane, creating a vacuum. Through the effect of the vacuum, the valve 3 opens and the valve 4 closes, enabling suction of the liquid (orange).



The slide valve of the air motor sends air (blue) to the right chamber which, pushing the membrane outwards, compresses the previously filled liquid (green). Through the effect of the pressure created valve 3 closes and valve (a) opens allowing the liquid to dispense (green). The left membrane then carries out the same movement by the shaft joining it to the right membrane, creating a vacuum. Through the effect of the vacuum, the valve 1 opens and the valve 2 closes, enabling suction of the liquid (orange).



PUMP INSTALLATION



WIDE CHOICE OF MATERIALS

PARTS IN CONTACT WITH FLUID

PUMP PARTS	MATERIALS	CHARACTERISTICS	TEMPERATURE MAX *
R	Nickel-plated aluminum	 average resistance to abrasion and corrosion not intended for use with HHC (halogenated hydrocarbons) 	+100 °C
ar 🖉	Aluminum with treatment in cataphoresis	 wide chemical compatibility high resistance to abrasion and corrosion 	+100 °C
R	AISI 316 stainless steel	 wide chemical compatibility best alternative with aggressive fluids 	+100 °C
R	Polypropylene	 wide chemical compatibility best alternative with aggressive fluids 	+65 °C

CENTRAL MOTOR BLOCK

PUMP PARTS	MATERIALS	CHARACTERISTICS	TEMPERATURE MAX *
	Nickel-plated aluminum	 high mechanical strength electrically conductive material for ATEX directive 	+100 °C
	Aluminum with treatment in cataphoresis	 high mechanical strength wide chemical compatibility electrically conductive material for ATEX directive cheaper solution 	+100 °C
	Polypropylene	- wide chemical compatibility - general use - cheaper solution	+65 °C

DIAPHRAGMS - SEATS - BALLS

PUMP PARTS	MATERIALS	CHARACTERISTICS	TEMPERATURE MAX *
90	High Nitrile NBR	 high resistance to alphatic hydrocarbons, oils and greases good flexibility 	+90 °C
<u>)</u>]	Hytrel®	 high tenacity and springback high resistance to permanent deformation good resistance to industrial chemical substances and solvents excellent flexibility even at low temperature 	+65 °C
90° 2	Santoprene™	 excellent flexural and fatigue strength excellent resistance to abrasion and laceration excellent resistance to acids, alkalis and ageing also usable at high temperatures 	+110 °C
90	EPDM	 good compatibility with organic and non-organic acids excellent resistance to heat and steam insensitive to the action of oxidising agents 	+110 °C
90° 2	PTFE Teflon [®]	 inert with nearly all chemical reagents excellent heat resistance excellent dielectric characteristics excellent resistance to ageing 	+120 °C
0	Acetal resin Delrin®	 high fatigue strength high compressive strength good dimensional stability (low humidity absorption) resistance to alcohols and organic compounds 	+115 °C
0	AISI 316 stainless steel	 high resistance to corrosion even in saline environments excellent compatibility with chemical and industrial fluids 	+100 °C

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

▲ Use these pumps only with fluids with flash point not less than +55 °C



GUIDE TO CHOOSING A PUMP

HOW TO CHOOSE A PUMP SUITABLE FOR ONE'S NEEDS

	FLOW RATE		MODEL				
PUMP SIZE		MAX Ø SOLID PARTS	POLYPROPYLENE	POLYPROPYLENE AND ALUMINUM	ALUMINUM AND CATAPHORESIS	AISI 316 STAINLESS STEEL	
	60 l/min	1,5 mm	-	APPB-12	-	-	
1/2"	65 l/min	1,5 mm	PPB-12	-	-	-	
	70 l/min	1,5 mm	-	-	AAB-12	-	
	170 l/min	3 mm	-	APPB-1	AAB-1 / AAB-1-9	-	
-1 "	145 l/min	3 mm	PPB-1	-	-	-	
•	130 l/min	3 mm	-	-	-	PPIB-1	
	150 l/min	3 mm	-	-	-	AIB-1	
1.1/4"	200 l/min	3 mm	-	-	AAB-114	-	
1.1/2"	480 l/min	5,5 mm	-	-	AAB-112	-	
0"	580 l/min	6,5 mm	-	-	AABM-2 flanged	-	
2	610 l/min	6,5 mm	-	-	AAB-2	-	

TECHNICAL ASPECTS TO BE CONSIDERED FOR A CORRECT CHOICE OF PUMP

PUMP SIZE

The size of a pump is closely linked to its maximum delivery: in fact, the larger the pump the greater the delivery.

CHEMICAL COMPATIBILITY

Some parts of the pump are always in contact with the liquid to be pumped. Therefore the materials these parts are made of must be chemically compatible with the liquid.

DIMENSIONS OF SUSPENDED SOLIDS

The maximum dimensions for suspended solids in the fluid to be pumped are specified in the technical tables of each diaphragm pump.

WORKING TEMPERATURE

The maximum and minimum working temperatures take into account the physical characteristics of the various parts the pump is made of and their interaction with the pumped liquid.

ABRASION RESISTANCE

If the fluid to be pumped is very abrasive, the wear on parts that deteriorate quickly (e.g. diaphragms, balls, seats) can be reduced by choosing a pump larger than required. In this way the speed of the fluid inside the pump will be lower, thereby reducing the abrasion on the parts in contact with it.

SYSTEM SIZE

In order to optimise the performance of the pump it is advisable to consider the following dimensional parameters relevant to the system:

- Suction pipe: position the pump as close as possible to the suction point; if this is not possible, the maximum vertical distance must not exceed the limits reported in the technical table.
- 2) Delivery pipe: the pipe must be sized so as to avoid pressure losses; the internal diameter must be chosen according to the distance to be covered, the temperature and the viscosity of the fluid.

ATEX DIRECTIVE

PUMP FAMILY	DESCRIPTION	CERTIFICATION CLASS		
ENTIRELY ALUMINUM MODEL	Conductive material version Built with central body and manifolds in conductive metallic material (Aluminum)	(zone 1)		
CATAPHORESIS MODEL	Conductive material version Built with central body and manifolds in conductive metallic material (Aluminum)	(zone 1)		
AISI 316 STAINLESS STEEL AND ALUMINUM MODEL	Conductive material version Built with central body (Aluminum) and manifolds (AISI 316 stainless steel) in conductive metallic material	(zone 1)		
AISI 316 STAINLESS STEEL AND POLYPROPYLENE MODEL	Central body in non-conductive plastic material (PP)	not certified		
ALUMINUM AND POLYPROPYLENE MODEL	Partially conductive material version Manifolds built with non-conductive plastic material (PP) and central body with conductive material (Aluminum)	(zone 2)		
ENTIRELY POLYPROPYLENE MODEL	Central body and manifolds in non-conductive plastic material (PP)	not certified		





Always choose **RAASM** original spare parts.



GENERAL SALES CONDITIONS

FOR FOREIGN MARKETS



The following general sales conditions regulate the sale of goods and services by the company RAASM S.p.A. for customers residing outside the territory of the Italian State.

Art. 1 GOODS DELIVERY TERMS

The goods are delivered ex works RAASM S.p.A. The subsequent transport/shipment must occur by, in the name and at the expense of the purchasing customer, even by means of a carrier appointed and designated by the same. All risks arising from loading, subsequent custody and transport are borne entirely by the purchasing customer.

Art. 2 MINIMUM ORDERS

Each order cannot be for less than € 1,500.00, net of fees, taxes, customs duties, discounts and rebates and any other charges not included in the price of the goods. If, at the option of RAASM S.p.A., orders for lower amounts are accepted, an extra charge of € 155,00 shall be applied for order management administrative expenses.

Art. 3 ACCESSORIES

All the accessories given in the price list (plugs, oil bar taps, oil guns, grease guns, probes, protection caps, clutches, swivelling supports, etc.) are supplied exclusively for fitting to or combining with the items RAASM S.p.A. produces

Art. 4 COMPLAINTS

Any defects immediately noticed after a brief inspection of the goods (damage, shortages or different product from that ordered) must be notified in writing to our company within 8 (eight) days of receipt the goods. Any defects in the product noticeable only during its use must be notified in writing to RAASM S.p.A. within 8 (eight) days of being detected. Any returns of goods must be authorized in advance by RAASM S.p.A. and freight charges are at the customer's expenses.

Art. 5 DELIVERY TIMES/TERMS

Delivery times and dates are only approximate and are subject to change. Any delays in delivery do not entitle the customer to cancel the order or claim compensation for damages caused by delay of delivery. Delivery times for urgent orders must be agreed directly with RAASM S.p.A. RAASM S.p.A. has the right not to carry out the order and/or totally or partially carry it out, without this giving rise to reimbursement or claims for compensation for damage.

Art. 6 PACKS AND PACKAGING

Packaging costs are included in the price, except for special packing, which shall be charged at cost.

Art. 7 PRICES

The current Price list cancels and replaces the previous price list. In the event of changes to our price list and/or individual items, the goods shall be forwarded at the price in force on the day of the order confirmation. The price list and/or the prices of individual items can be changed even without notice, according to the changes in market conditions or technical innovations/ modifications made to the product. The prices are understood to be ex works RAASM S.p.A.

Art. 8 PAYMENTS

Payments must be made exclusively to RAASM S.p.A. at the agreed conditions. Under no circumstances will deductions or roundings be accepted. In case of late payment with respect to the agreed conditions, RAASM S.p.A. reserves the right to charge interest at the current rate, effective from the day after that agreed for payment, plus any additional expenses. Discounts conditional on the payment term and already credited shall be recharged.

Art. 9 WARRANTY

RAASM S.p.A. provides each product with the communication of particular instructions for the installation, use and maintenance requirements and the need to carry out possible checks on the product. All the technical information and data mentioned in the catalogue and in the price-list in force are not binding and can be changed without prior notice for the purpose of improving the quality of the products. All products manufactured by RAASM S.p.A. are guaranteed for a period of 5 (five) years from the date of delivery to the first user. The user must keep and show the sales invoice - or an equivalent document - together with the item's serial number in order to make a claim under the RAASM S.p.A. guarantee. The 5 (five) year guarantee does not apply to components which are subject to normal wear and tear (such as gaskets, diaphragms, O-rings, hoses, etc.), electronic components and items that are sold but not manufactured by RAASM S.p.A. (marked with a red asterisk in the current product catalogue) which are guaranteed for 1 (one) year from the date of delivery to the first user.

- 1 (one) year warranty is valid also for the following products:
- digital litre counters and FCS system;
- cable reels;
- electric, pneumatic or hydraulic motor supplied with our industrial hose reels S. 600 and 700.

Incorrect installation, use or maintenance of the product shall void the warranty. Upon written notice, the articles must be returned free to our Factory for checking and acceptance. In any case, the guarantee expires in the 10th year from the date of manufacture (indicated by the serial number), if the stated expiry takes place before the expiration terms indicated above (1 or 5 years from delivery to the first user).

The manufacturer declines any responsibility for possible inaccuracies contained in this catalogue, due to printing or transcription errors. The manufacturer reserves the right to make any changes or improvements of a functional, technical or aesthetic nature without prior notice.



Art. 10 RESPONSIBILITY

RAASM S.p.A. is exempt from any responsibility and liability for accidents that may occur to persons and property, as a result of or during the use of the equipment, due to or depending on the same whenever the products have been damaged during transport, tampered with or modified, or improperly used, or stored, installed, protected and preserved without complying with the instructions of RAASM S.p.A. as given in the installation, use and maintenance instruction manuals for each product. RAASM S.p.A. is liable for the value for the supplied product and cannot be held responsible in any way for other possible costs or additional costs that the customer may bear.

Art. 11 CONFIDENTIALITY

Information not in the public domain that is exchanged in the execution of the contract is subject to the obligation of confidentiality, secrecy and security; said information is covered as an industrial secret and is of a confidential and reserved nature and may not be disseminated to third parties; its use is permitted exclusively and strictly to execute the supply contract.

Art. 12 INTELLECTUAL PROPERTY RIGHTS

The RAASM trademark, and likewise the name RAASM, RAASM S.p.A., the logo and the other distinctive signs are internationally registered trademarks, and RAASM S.p.A. does not authorise their use and application under any circumstances. Without prior written consent from RAASM S.p.A., the content of catalogues, price lists, instruction manuals and similar, including content on the website may not be reproduced, either entirely or partially, nor may it be transferred by electronic or traditional means, nor may it be modified or utilised by any means and for any purpose. All rights are held by RAASM S.p.A. The customer acknowledges that RAASM S.p.A. holds exclusive ownership of all the parts, images, photographs and signs not in common usage, the content in the catalogues, price lists, instruction manuals and similar and/or present on the website www.raasm.com and/or other channels and/or social networks used by RAASM S.p.A. for their informational and marketing campaigns pursuant to Copyright Law and the Industrial Property Code.

Art. 13 INFORMATION ON THE PROCESSING OF DATA PURSUANT TO ITALIAN LEGISLATIVE DECREE 196/2003

In accordance with article 13 of Italian Legislative Decree 196/2003 - Personal Data Protection Code - you are hereby advised that the processing of the personal data, provided with the purchase of goods or services and/or the supply of goods or services is solely for the purposes of carrying out the contract-based obligations and to comply with the specific requests from customers/ suppliers, as well as adhering to legislative obligations, in particular accounting and tax obligations or to respect orders issued by public authorities or to exercise a right in court. The data shall also be used for commercial statistics for corporate use and to obtain commercial information on our products and services if expressly authorised by the applicant. The processing of data shall be done using hard-copy and computerised procedures, in the manner and within the limits necessary to achieve the aforementioned purposes. Data may be communicated and processed by other companies in the Group for the same specified purposes, and may be made known to employees of our company, consultants and other suppliers, always and exclusively within the limits of the aforementioned purposes. The provision of data is mandatory for the correct execution of the contract and pre-contract based obligations, and failure to do so could result in it being impossible to fully comply with contractual obligations, and make it impossible to provide updates on the new products and services offered by our company. Data shall be processed for the duration of the contract relationship in place and subsequently to fulfil any legal formalities.

Art. 14 RIGHTS OF DATA SUBJECTS

The information is aimed at defining the limits and methods for the processing of data, based on which individual customers and/or suppliers may freely authorise the collection and subsequent use of data. Data subjects are entitled to the rights pursuant to article 7 of the aforementioned Code and in particular, the right to access their personal data, ask for the amendment, update and cancellation thereof, if incomplete, incorrect or collected in violation of the law, and may object to the processing for legitimate reasons, addressing requests in this regard to RAASM S.p.A. Pursuant to the same article the data subject also has the right to request the complete and updated list of the Data Supervisors, and to ask for the cancellation, transformation into anonymous form or blocking of data processed in violation of the law, and to oppose in any case, for legitimate reasons, the processing thereof.

To exercise these rights, and in the case of problems or any requests for clarification regarding what has been explained herein, kindly address these to RAASM S.p.A. - Via Marangoni, 33, Cassola (VI) - Italy or to the following email address: info@raasm.com.

Art. 15 DATA CONTROLLER

The Data Controller is RAASM S.p.A. with registered office at Via Marangoni 33, Cassola (VI) - Italy, and this is where the data processing shall take place.

Art. 16 COMPETENT LAW COURT

Any disputes shall be settled by the Law Court of Vicenza, Italy.

The company **RAASM** S.p.A. holds the exclusive Intellectual Property rights on the **RAASM** trademark and all rights to its use and reproduction are reserved. The **RAASM** trademark is a registered trademark and is protected at an international level. No part of the **RAASM** trademark and its logo may be utilized, copied and/or used in any form, time and space, even by means of improper alterations.

The Intellectual Property rights on the images published in this catalogue are owned exclusively by **RAASM** S.p.A. and any unauthorized reproduction is prohibited.

Any use in general of the assets protected by the Intellectual Property rights of **RAASM** S.p.A. is prohibited and is subject to the prior written permission of **RAASM** S.p.A.









RAASM S.p.A. 36022 S. ZENO DI CASSOLA (VI) Via Marangoni, 33 - ITALY

Export department Tel. +39 0424 571130 - Fax +39 0424 571135

Technical department Tel. +39 0424 571150 - Fax +39 0424 571155 info@raasm.com - www.raasm.com





Company with quality, environment and safety system according to ISO 9001:2015, ISO 14001:2015 and

ISO 45001:2018 standards

Authorized dealer