

Duotek Series

AIR OPERATED DOUBLE DIAPHRAGM PUMPS



innovation > technology > future

Duotek

Air operated double diaphragm pumps.

The draft of the SEKO's new double diaphragm pumps, it is mainly developed around the air distribution system, the diaphragm's high technology, the pumping chambers geometry and the valves system; this in order to extend the functionality, not only for transfer but also for dosing. The result is an innovative product with next-generation solutions.

MAIN FEATURES

- . construction's materials: PP,PVDF, AISI 316, ALUMINIUM
- . Self-priming up to 6m
- . Unlimited dry running
- . Anti-stall pneumatic circuit , easy to maintain
- . possibility to adjust: flow-rate, head and speed
- . various installations and configurations
- . ATEX certifications for Zone 1 and 2 in all versions
- . air-discharge's cover with connections for various uses

- | | |
|---|-----------------------|
| a | DELIVERY MANIFOLD |
| b | SUCTION MANIFOLD |
| c | ASTABLE AIR EXCHANGER |
| d | PUMPING CHAMBER |
| e | DIAPHRAGMS |
| f | BALL VALVE |

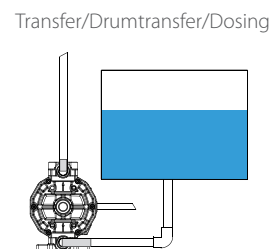
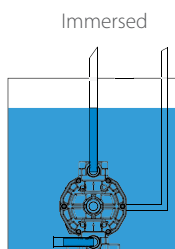
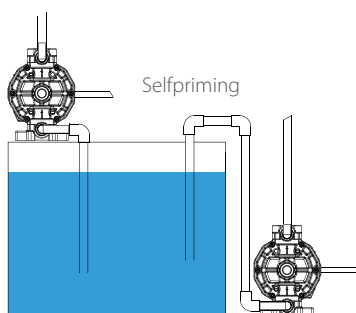
ASTABLE SISTEM INTERNAL PNEUMATIC EXCHANGER P18 - P50



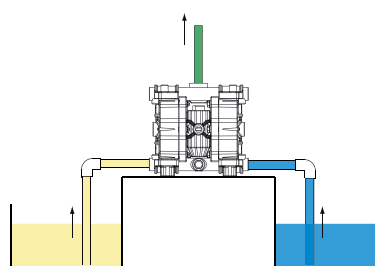
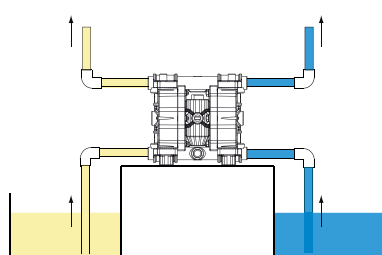
ASTABLE SYSTEM EXTERNAL PNEUMATIC EXCHANGER P65 - P100 - P160 - P250 - P500 - P700



INSTALLATION



ON REQUEST: POSSIBILITY TO DOUBLE THE MANIFOLDS IN SUCTION AND IN DELIVERY



PUMPS COMPOSITION

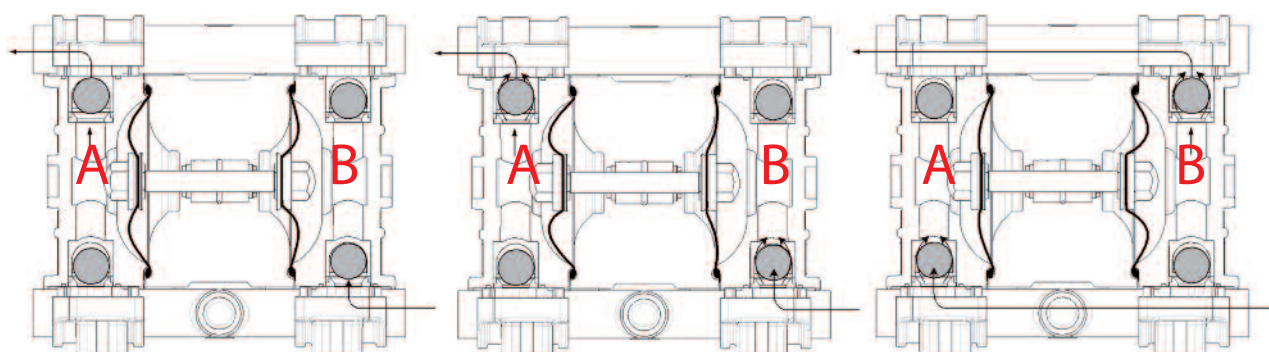
PUMP MODEL	TYPE ATEX 	SERIES	PUMP BODY	AIR DIAPHRAGM	FLUID DIAPHRAGM	BALLS	BALL SEATS	O-RINGS	CONNECTIONS
AF	X0 - ATEX ZONE 1 00 - ATEX ZONE 2	0018	P - POLYPROPYLENE	H - HYTREL	T - PTFE	T - PTFE	P - POLIPROPILENE	D - EPDM	1 - BSP THREADED
		0050	POLYPROPYLENE +CF WITH ATEX ZONE 1	M - SANTOPRENE		S - SS AISI 316	K - PVDF	V - FPM	2 - FLANGED
		0065		D - EPDM		D - EPDM	S - SS AISI 316	T - PTFE	3 - CLAMP
		0100	A - ALUMINIUM	N - NBR		N - NBR	A - ALUMINIUM	N - NBR	4 - TWIN CONNECTION
		0160	S - SS316				Z - PE-UHMW		5 - NPT THREADED
		0250	M - POM						
		0500	POM+CF WITH ATEX ZONE 1						
		0700	K - PVDF						
		1000	PVDF+CF WITH ATEX ZONE 1						

OPERATING PRINCIPLE

The pneumatic distribution system sends compressed air behind one of the two diaphragms (A), which pushes the fluid towards the delivery circuit.

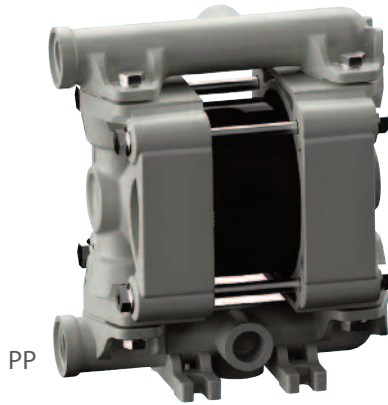
Simultaneously, the opposing diaphragm (B) is located, creating a vacuum in the chamber B, in the suction phase, moved from the shaft that connect the diaphragm to the other (A). In this way the product is sucked from the intake manifold, thanks to de-pressure created in the fluid chamber.

When the diaphragm (A), under pressure, reaches the limit of the stroke the distributor switches the two inputs, and the cycle starts again. At the same time, the balls open and close, alternating the chamber A and B, in the closed situation for suction and open delivery in the situation.





Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C



PP



PVDF+CF



POMc

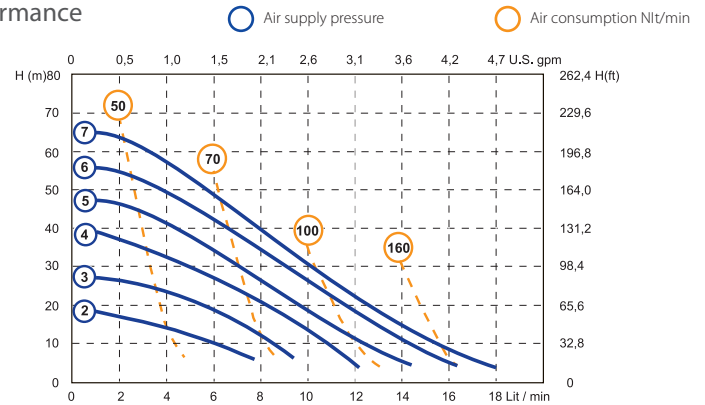


AISI 316

Technical data

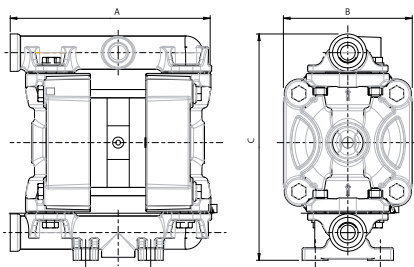
Connections	3/8" BSP	Air connection	6 mm
Max flow rate	18 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	2,5 mm
Max pressure	7 bar		

Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



	PP	PVDF	POMc	AISI 316
A (mm)	145	145	145	145
B (mm)	95	95	95	95
C (mm)	160	160	160	160
Weight (kg)	2	2,5	2	3
MAX Temperature	65°	95°	95°	95°

AF**0050

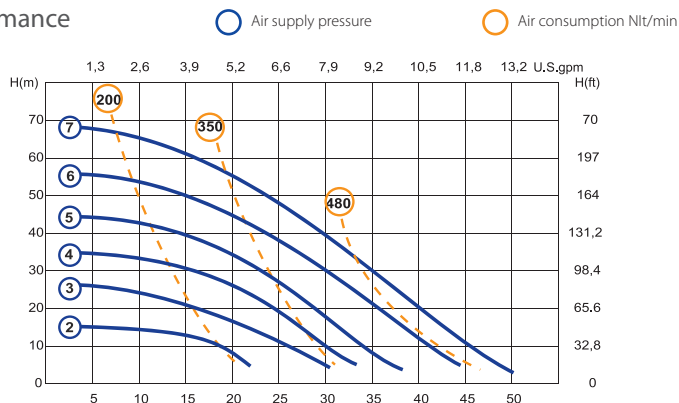


Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C

Technical data

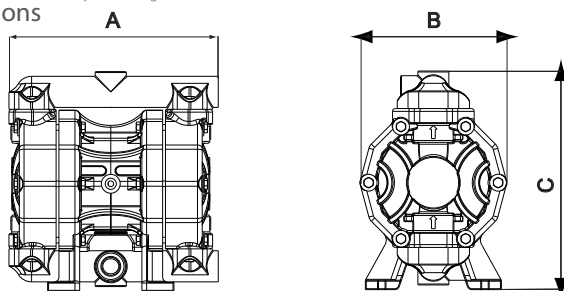
Connections	1/2" BSP	Air connection	1/4" BSP
Max flow rate	50 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	3 mm
Max pressure	7 bar		

Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



PP



PVDF+CF



Alu





AISI 316

	PP	PVDF	Alu	AISI 316
A (mm)	222	222	225	225
B (mm)	156	156	156	156
C (mm)	233	233	230	230
Weight (kg)	4	4,5	5	6
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request

AF**0065

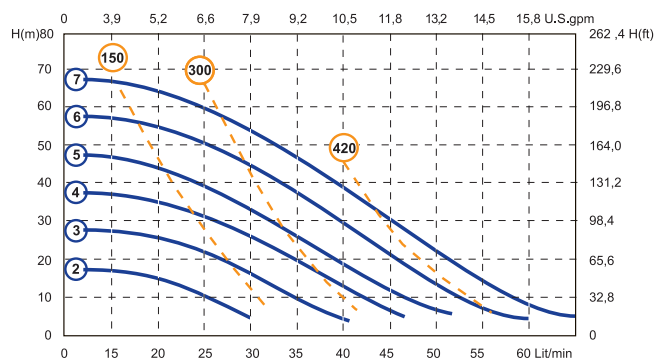
Duotek - zone 2  II 3/3 GD c IIB T135°C
Duotek Atex - zone 1  II 2/2 GD c IIB T135°C

Technical data

Connections 1/2" BSP Air connection 1/2" BSP
Max flow rate 65 l/min Max self priming capacity 6 m
Max head 70 m Diameter of passing solids 3,5 mm
Max pressure 7 bar

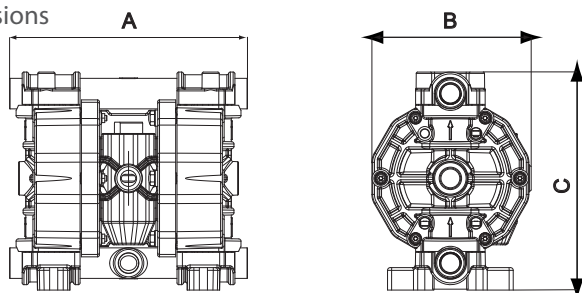
Performance

 Air supply pressure  Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



PP



PVDF+CF



Alu





AISI 316

	PP	PVDF	Alu	AISI 316
A (mm)	265	265	265	250
B (mm)	175	175	175	175
C (mm)	245	245	245	250
Weight (kg)	6,5	7	7	9
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request


AF**0100

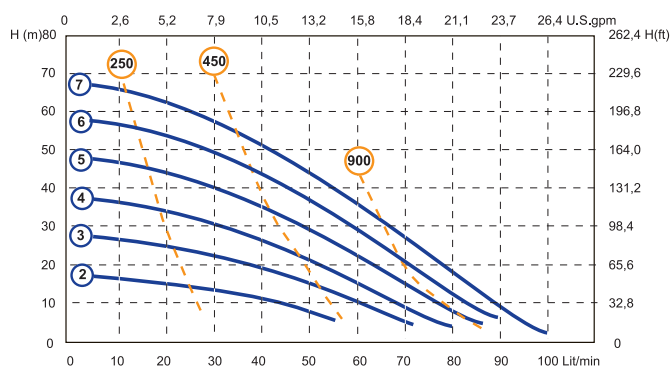
Duotek - zone 2  II 3/3 GD c IIB T135°C
Duotek Atex - zone 1  II 2/2 GD c IIB T135°C

Technical data

Connections 3/4" BSP Air connection 1/2" BSP
Max flow rate 100 l/min Max self priming capacity 6 m
Max head 70 m Diameter of passing solids 3,5 mm
Max pressure 7 bar

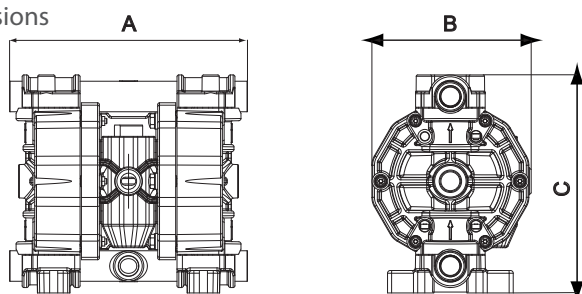
Performance

 Air supply pressure  Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



PP



PVDF+CF



Alu



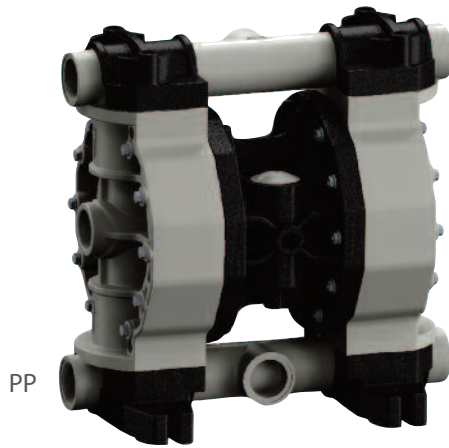
AISI 316

	PP	PVDF	Alu	AISI 316
A (mm)	265	265	265	250
B (mm)	175	175	175	175
C (mm)	245	245	245	250
Weight (kg)	6,5	7	7	9
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request



Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C



PP



PVDF+CF



Alu



AISI 316

Technical data

Connections	1" BSP	Air connection	1/2" BSP
Max flow rate	160 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	7,5 mm
Max pressure	7 bar		

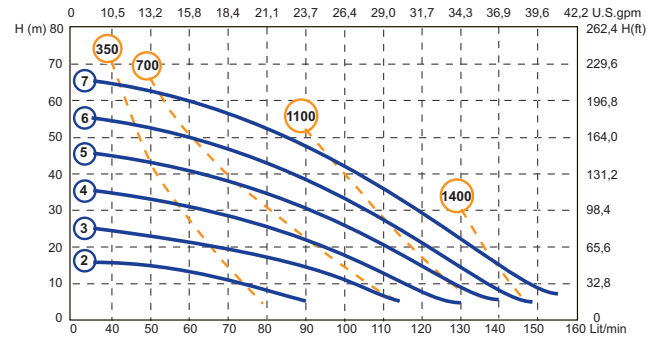
Performance



Air supply pressure

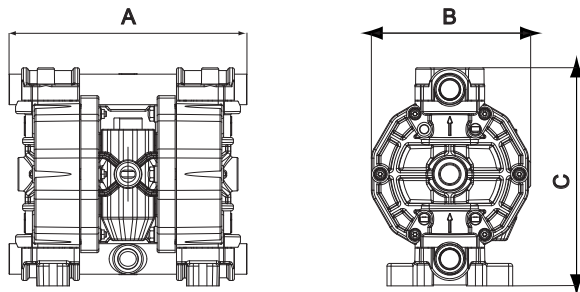


Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



	PP	PVDF	Alu	AISI 316
A (mm)	370	370	370	360
B (mm)	220	220	220	220
C (mm)	364	364	364	365
Weight (kg)	15	16	16	20
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request

AF**0250



Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C

Technical data

Connections	1 1/4" BSP	Air connection	1/2" BSP
Max flow rate	250 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	7,5 mm
Max pressure	7 bar		

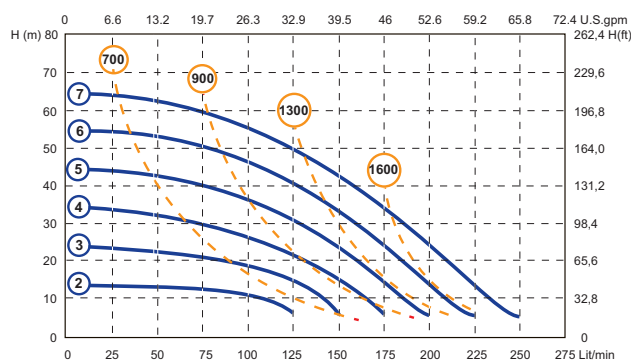
Performance



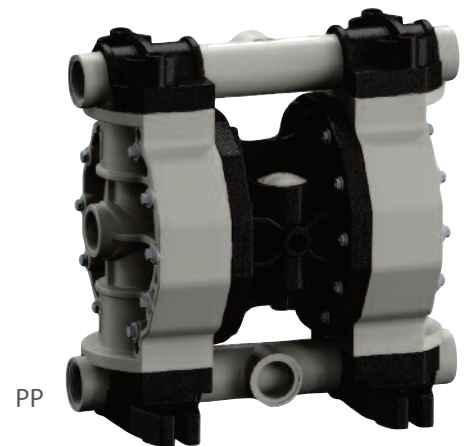
Air supply pressure



Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.



PP



PVDF+CF

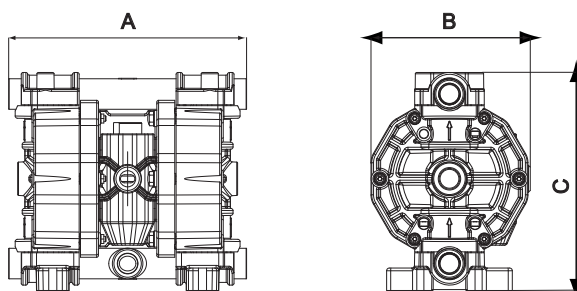


Alu



AISI 316

Dimensions



	PP	PVDF	Alu	AISI 316
A (mm)	370	370	370	360
B (mm)	220	220	220	220
C (mm)	364	364	364	365
Weight (kg)	15	16	16	20
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request

AF**0400

Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C

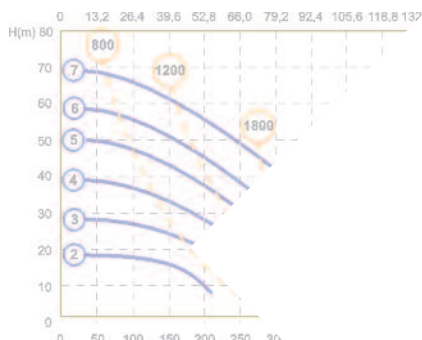
Technical data

Connections DN40 (1 1/2" BSP)*
Max flow rate 400 l/min
Max head 70 m
Max pressure 7 bar

Air connection
Max self priming capacity
Diameter of passing solid

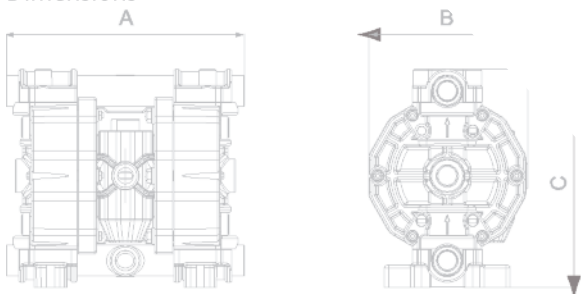
Performance

○ Air supply pressure

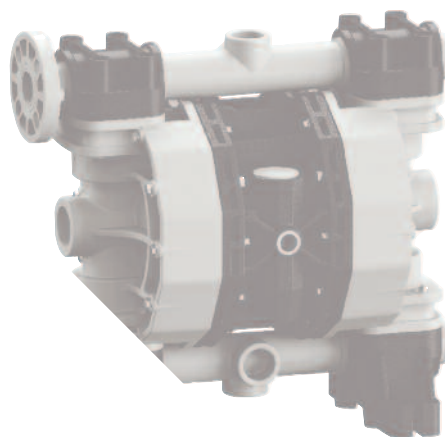


* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction n.

Dimensions



READY IN JUNE 2014



AISI 316

	PP	PVDF	Alu	AISI 316
Max flow rate (l/min)	265	265	265	250
Max head (m)	175	175	175	175
Max pressure (bar)	245	245	245	250
Weight (kg)	6,5	7	7	9
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request

Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C

AF**0500

Technical data

Connections DN40 (1 1/2" BSP)*
Max flow rate 500 l/min
Max head 70 m
Max pressure 7 bar

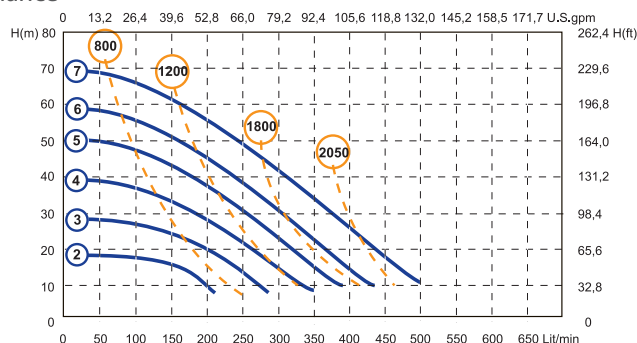
Air connection
Max self priming capacity
Diameter of passing solids

3/4" BSP
6 m
8,5 mm

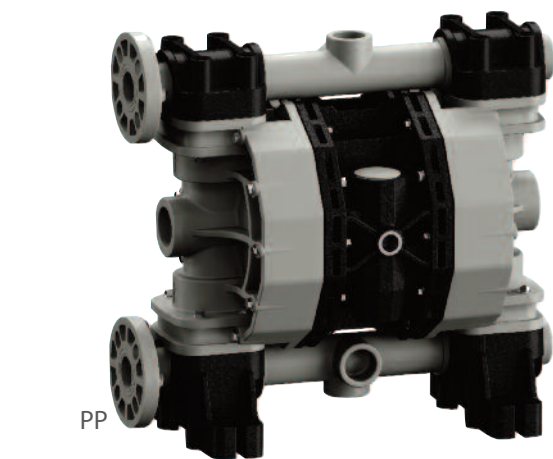
Performance

○ Air supply pressure

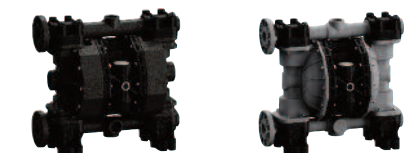
○ Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction n.



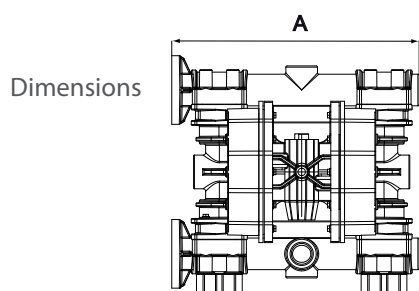
PVDF+CF



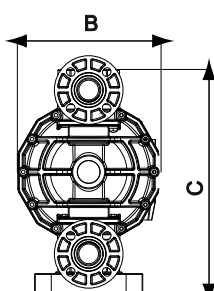
Alu



AISI 316



Dimensions



	PP	PVDF	Alu	AISI 316
A (mm)	595	595	595	582
B (mm)	340	340	340	345
C (mm)	565	565	245	570
Weight (kg)	30	30	35	58
MAX Temperature	65°	95°	95°	95°

(*) Threaded connections on request

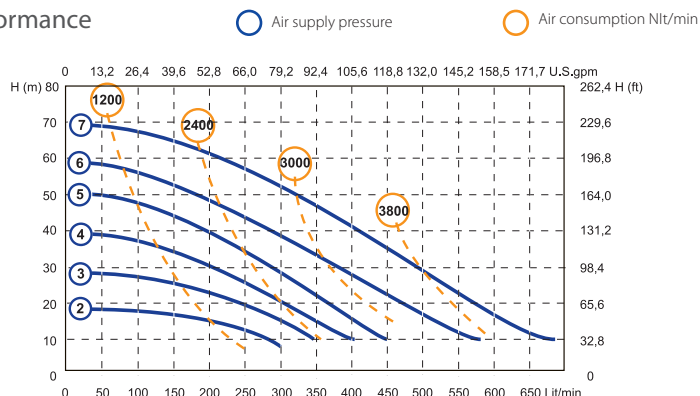
AF**0700

Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C

Technical data

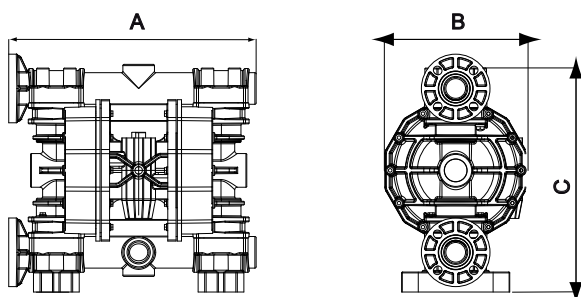
Connections DN50 (2" BSP)* Air connection 3/4" BSP
Max flow rate 680 l/min Max self priming capacity 6 m
Max head 70 m Diameter of passing solids 8,5 mm
Max pressure 7 bar

Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



	PP	PVDF	Alu	AISI 316
A (mm)	595	595	595	582
B (mm)	340	340	340	345
C (mm)	572	572	572	570
Weight (kg)	31	36	36	60
MAX Temperature	65°	95°	95°	95°

(*) Threaded connections on request



PVDF+CF



Alu



AISI 316



PP



Alu



AISI 316

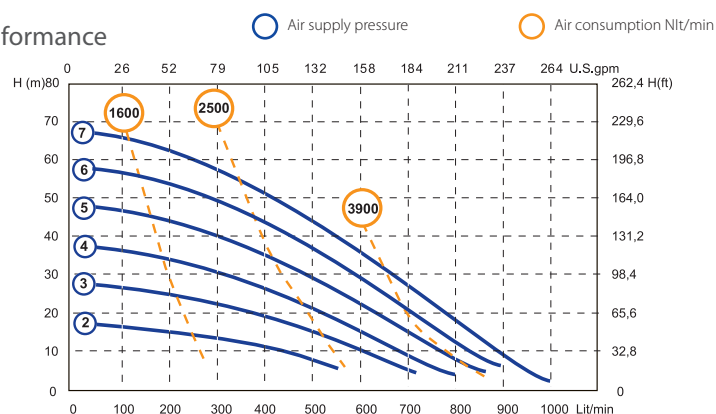
Duotek - zone 2 II 3/3 GD c IIB T135°C
Duotek Atex - zone 1 II 2/2 GD c IIB T135°C

AF**1000

Technical data

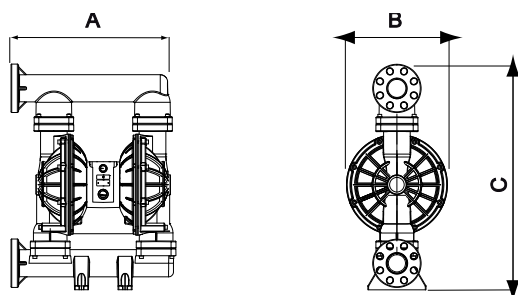
Connections DN80 (3" BSP)* Air connection 3/4" BSP
Max flow rate 1000 l/min Max self priming capacity 6 m
Max head 70 m Diameter of passing solids 10 mm
Max pressure 7 bar

Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



	PP	Alu	AISI 316
A (mm)	595	595	582
B (mm)	340	340	345
C (mm)	572	572	570
Weight (kg)	31	36	60
MAX Temperature	65°	95°	95°

(*) Threaded connections on request

Duotek Food & Sani Duotek

Double diaphragm pumps for food, pharmaceutical and cosmetics industry.



The air-operated double diaphragm pumps series FOOD Duotek, thanks to their structural characteristics, can be used to pump products used in food and cosmetics industry.

The air-operated double diaphragm pumps series Duotek FOOD, are made with FDA certified construction materials.

The parts in contact with the fluid, in fact, are exclusively electro-polished AISI 316 and PTFE, both certified for food use.

These pumps are able to handling fluids with very high viscosity and temperature up to 95° C.

MAIN FEATURES

- . Construction's materials: Electro-polished AISI 316, medium roughness is 2,7µm.
- . Self-priming up to 6m
- . Unlimited dry running
- . Anti-stall pneumatic circuit , easy to maintain
- . Possibility to adjust: flow-rate, head and speed
- . Various installations and configurations
- . ATEX certifications for Zone 1 and 2 in all versions
- . Air-discharge's cover with connections for various uses
- . Suction and delivery connection with CLAMP

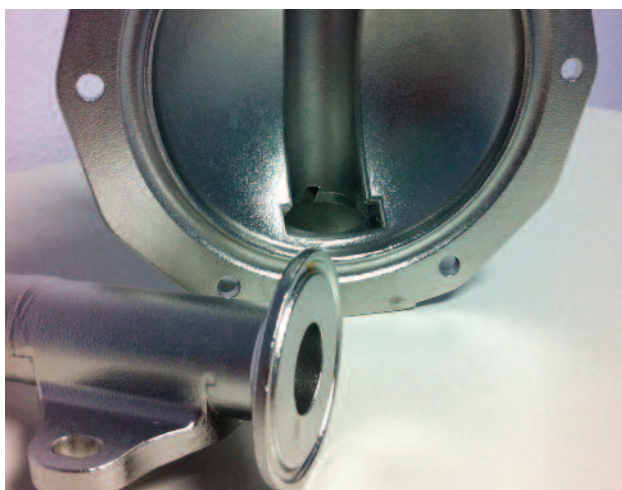
FDA
compliant

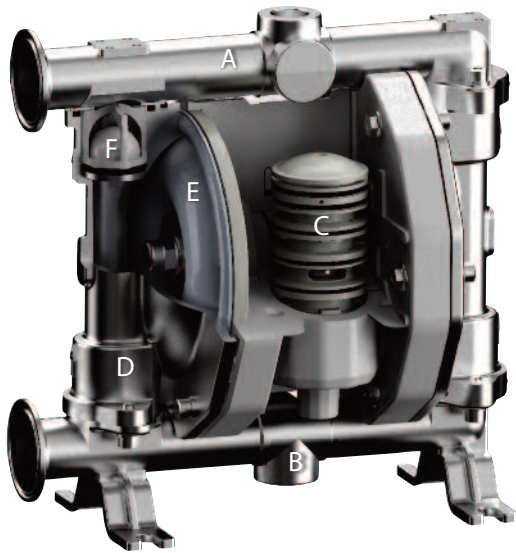
DUOTEK FOOD

Material: Stainless steel AISI 316 Electropolished.
Average roughness of 2.7 µm

SANI DUOTEK

Material: Stainless steel AISI 316 mechanically polished.
Roughness of 0,4 µm






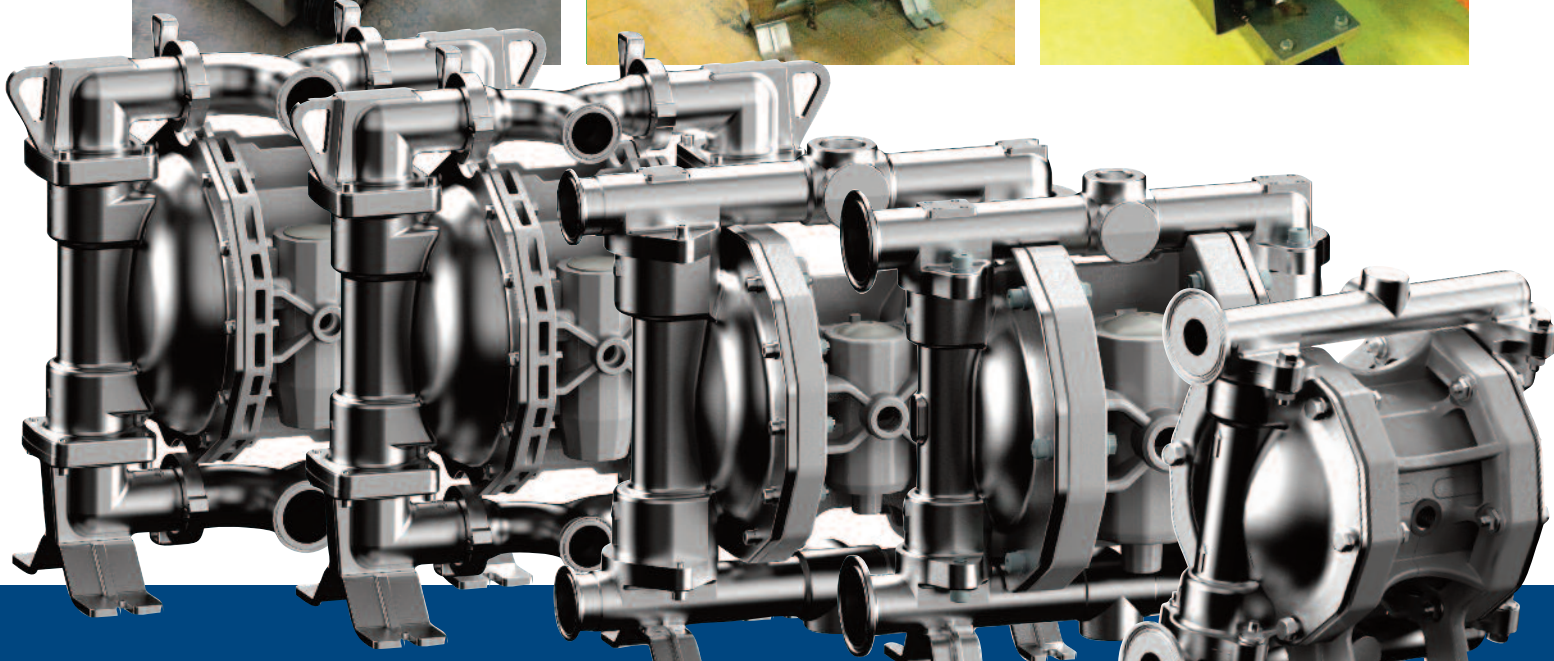
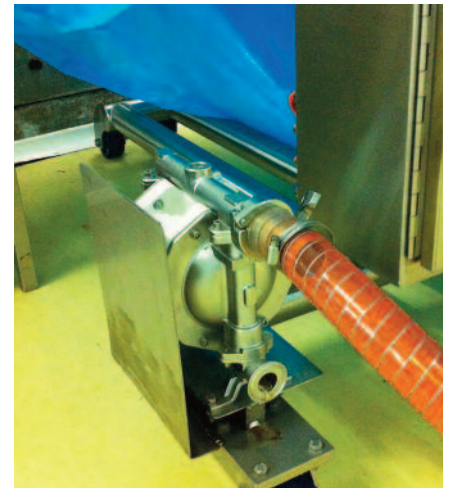
FDA

compliant

a DELIVERY MANIFOLD
 b SUCTION MANIFOLD
 c ASTABLE AIR EXCHANGER
 d PUMPING CHAMBER
 e DIAPHRAGMS
 f BALL VALVE

PUMPS COMPOSITION

PUMP MODEL	TYPE ATEX 	SERIES	PUMP BODY	AIR DIAPHRAGM	FLUID DIAPHRAGM	BALLS	BALL SEATS	O-RINGS	CONNECTIONS
AF	XF - ATEX ZONE 1 / FDA COMPLIANT	0018	S - AISI 316	H - HYTREL	T - PTFE	T - PTFE	S - AISI 316 SS	T - PTFE	1 - BSP THREADED
		0050	PF: ELECTROPOLISHED			S - AISI 316 SS			2 - FLANGED
	OF - ATEX ZONE 2 / FDA COMPLIANT	0100	SP: MECHANICALLY POLISHED						3 - CLAMP
		0160							
	XS - ATEX ZONE 1 / SANI FDA COMPLIANT	0500							
	OS - ATEX ZONE 2 / SANI FDA COMPLIANT	0700							
		1000							

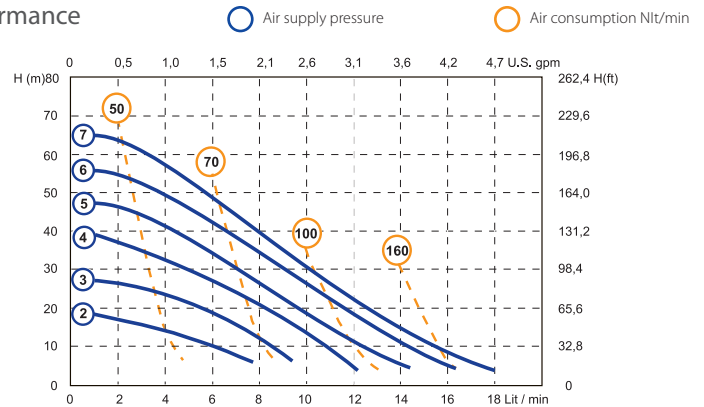




Technical data

Connections	CLAMP da 3/4"	Air connection	6 mm
Max flow rate	18 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	2,5 mm
Max pressure	7 bar		

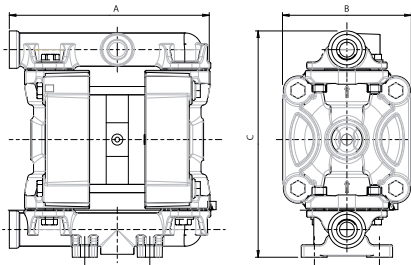
Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

AISI 316 electropolished or mechanically polished

Dimensions



AISI 316

A (mm)	145
B (mm)	95
C (mm)	160
Weight (kg)	2,5
MAX Temperature	95°

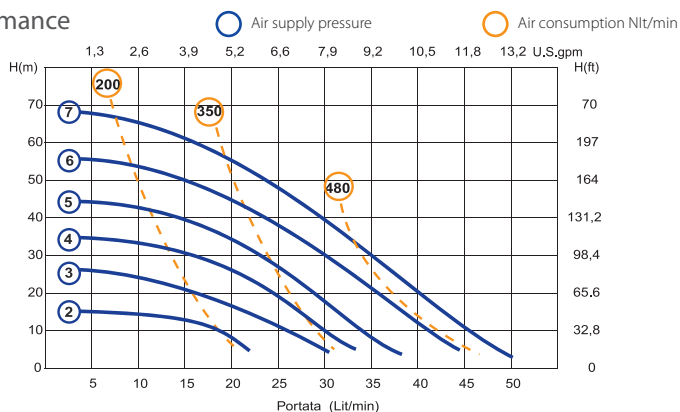
AF**0050

PF/SP - zone 2 II 3/3 GD c IIB T135°C
PF/SP Atex - zone 1 II 2/2 GD c IIB T135°C

Technical data

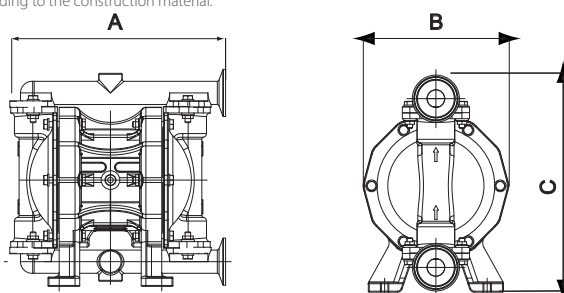
Connections	CLAMP da 1"	Air connection	1/4" BSP
Max flow rate	50 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	3 mm
Max pressure	7 bar		

Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



AISI 316

A (mm)	225
B (mm)	156
C (mm)	230
Weight (kg)	6
MAX Temperature	95°

AISI 316 electropolished or mechanically polished



AF**0100



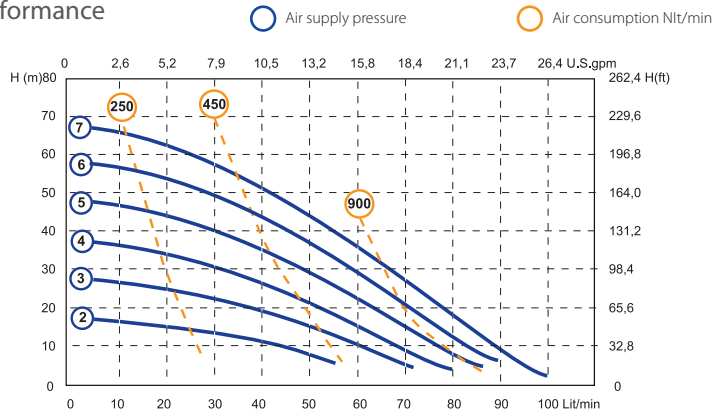
PF/SP - zone 2 II 3/3 GD c IIB T135°C
PF/SP Atex - zone 1 II 2/2 GD c IIB T135°C



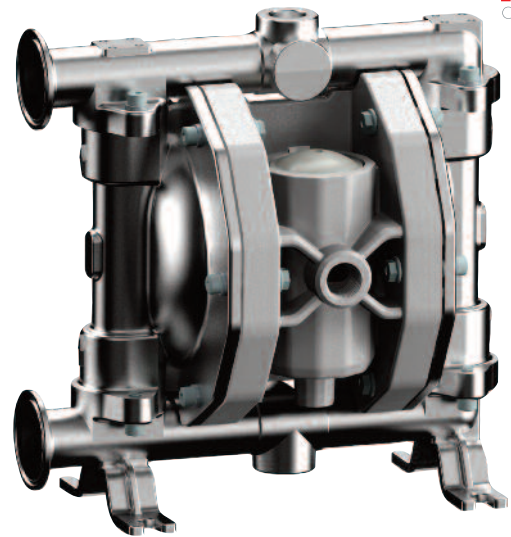
Technical data

Connections	CLAMP da 1"	Air connection	3/8" BSP
Max flow rate	100 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	3,5 mm
Max pressure	7 bar		

Performance

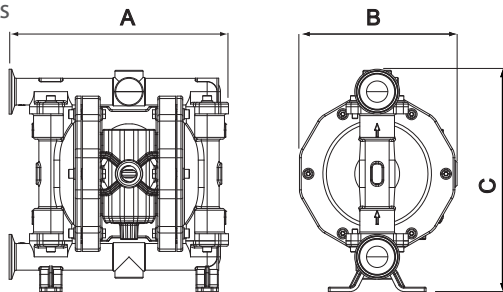


* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.



AISI 316 electropolished or mechanically polished

Dimensions



	AISI 316
A (mm)	250
B (mm)	175
C (mm)	250
Weight (kg)	9
MAX Temperature	95°



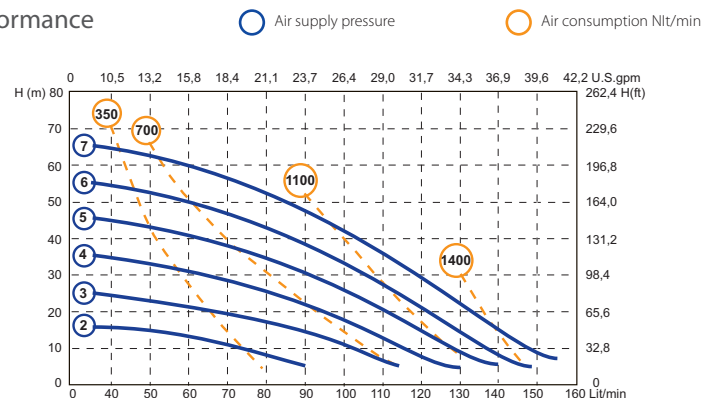
PF/SP - zone 2 II 3/3 GD c IIB T135°C
PF/SP Atex - zone 1 II 2/2 GD c IIB T135°C

AF**0160

Technical data

Connections	CLAMP da 1 1/2"	Air connection	1/2" BSP
Max flow rate	160 l/min	Max self priming capacity	6 m
Max head	70 m	Diameter of passing solids	7,5 mm
Max pressure	7 bar		

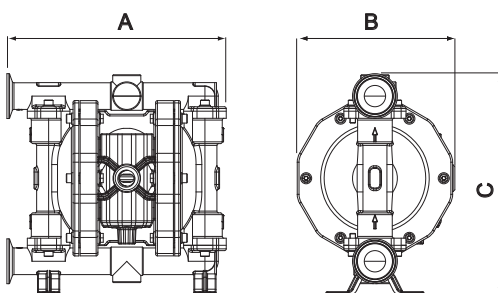
Performance



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

AISI 316 electropolished or mechanically polished

Dimensions



	AISI 316
A (mm)	360
B (mm)	220
C (mm)	365
Weight (kg)	20
MAX Temperature	95°



PF/SP - zone 2 II 3/3 GD c IIB T135°C
PF/SP Atex - zone 1 II 2/2 GD c IIB T135°C

Technical data

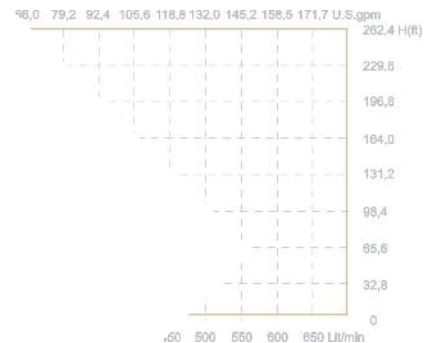
CLAMP da 2 1/2"
680 l/min
70 m
7 bar

Air connection
Max self priming capacity
Diameter of passing solids

3/4" BSP
6 m
8,5 mm

○ Air supply pressure

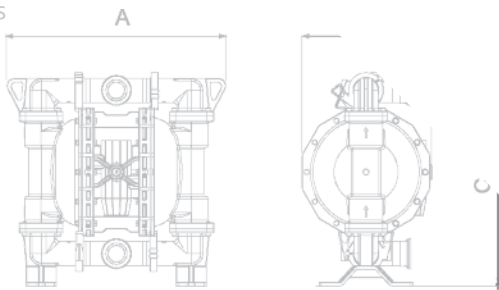
○ Air consumption Nlt/min



READY IN JUNE 2014

AISI 316 electropolished or mec.

Dimensions



AISI 316

A (mm)	582
B (mm)	345
C (mm)	570
Weight (kg)	60
MAX Temperature	95°

AF**0500



PF/SP - zone 2 II 3/3 GD c IIB T135°C
PF/SP Atex - zone 1 II 2/2 GD c IIB T135°C



Technical data

Connections
Max flow rate
Max head
Max pressure

CLAMP da 2"
500 l/min
70 m
7 bar

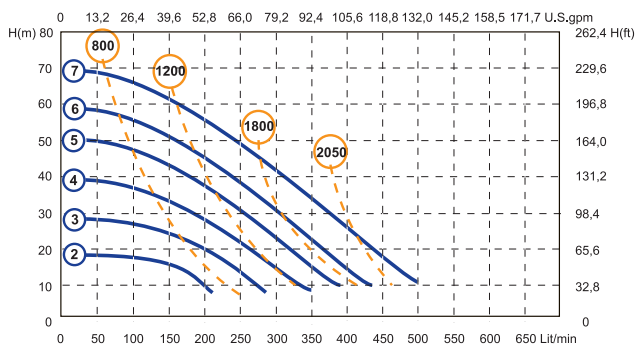
Air connection
Max self priming capacity
Diameter of passing solids

3/4" BSP
6 m
8,5 mm

Performance

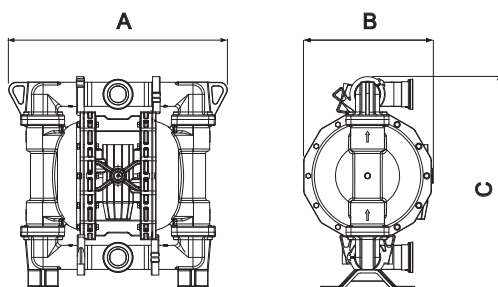
○ Air supply pressure

○ Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

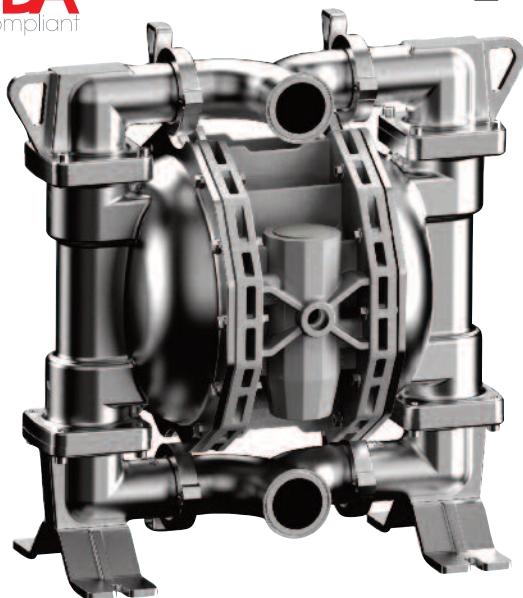
Dimensions



AISI 316

A (mm)	582
B (mm)	345
C (mm)	570
Weight (kg)	58
MAX Temperature	95°

AISI 316 electropolished or mechanically polished



Technical data

Connections
Max flow rate
Max head
Max pressure

CLAMP da 2 1/2"
680 l/min
70 m
7 bar

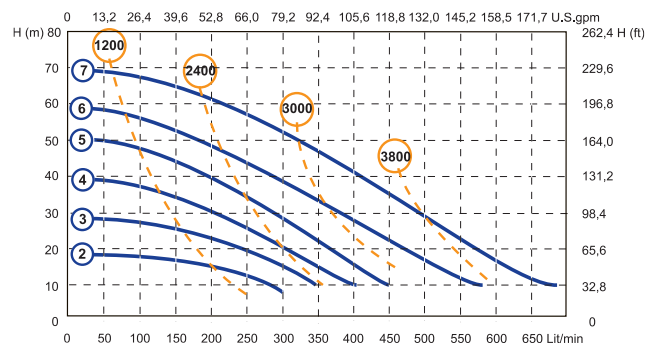
Air connection
Max self priming capacity
Diameter of passing solids

3/4" BSP
6 m
8,5 mm

Performance

○ Air supply pressure

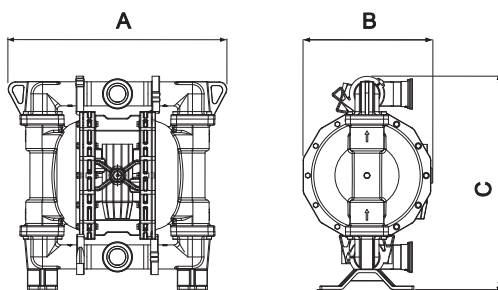
○ Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

AISI 316 electropolished or mechanically polished

Dimensions



AISI 316

A (mm)	582
B (mm)	345
C (mm)	570
Weight (kg)	60
MAX Temperature	95°

AF**1000

PF/SP - zone 2 II 3/3 GD c IIB T135°C
PF/SP ATEX - zone 1 II 2/2 GD c IIB T135°C

Technical data

Connections
Max flow rate
Max head
Max pressure

3" BSP
1000 l/min
70 m
7 bar

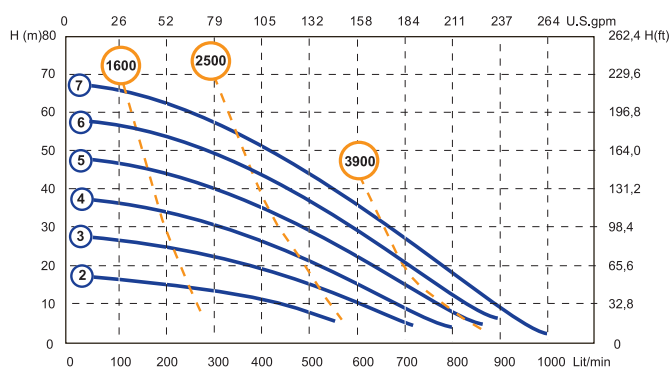
Air connection
Max self priming capacity
Diameter of passing solids

3/4" BSP
6 m
10 mm

Performance

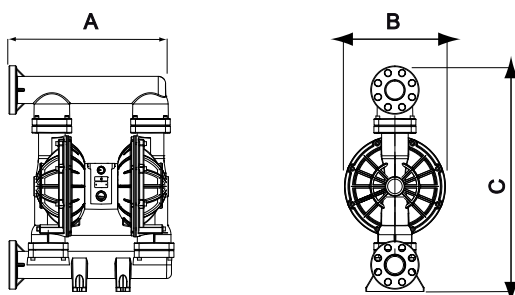
○ Air supply pressure

○ Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions



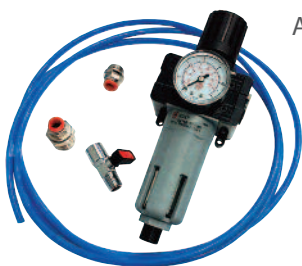
AISI 316 electropolished or mechanically polished

AISI 316

A (mm)	582
B (mm)	345
C (mm)	570
Weight (kg)	60
MAX Temperature	95°

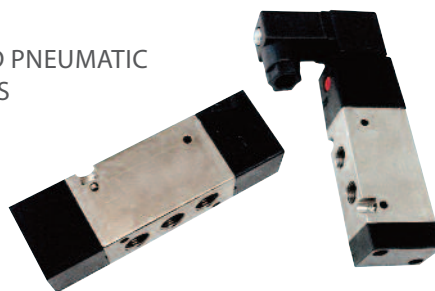
(*) Clamp connections on request

Accessories



AIR REGULATION KIT

ELECTRICAL AND PNEUMATIC
CONTROL VALVES



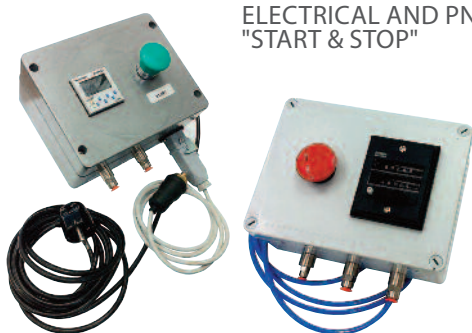
PRESSURE SWITCH CYCLE COUNTER



FLANGE CONNECTION KIT



ELECTRICAL AND PNEUMATIC
"START & STOP"



ANTI VIBRATION FEET KIT



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seko is an International Group, developing, manufacturing and delivering its products in more than 50 countries, through its subsidiaries and an extended network of distributors, agents and authorized dealers.

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