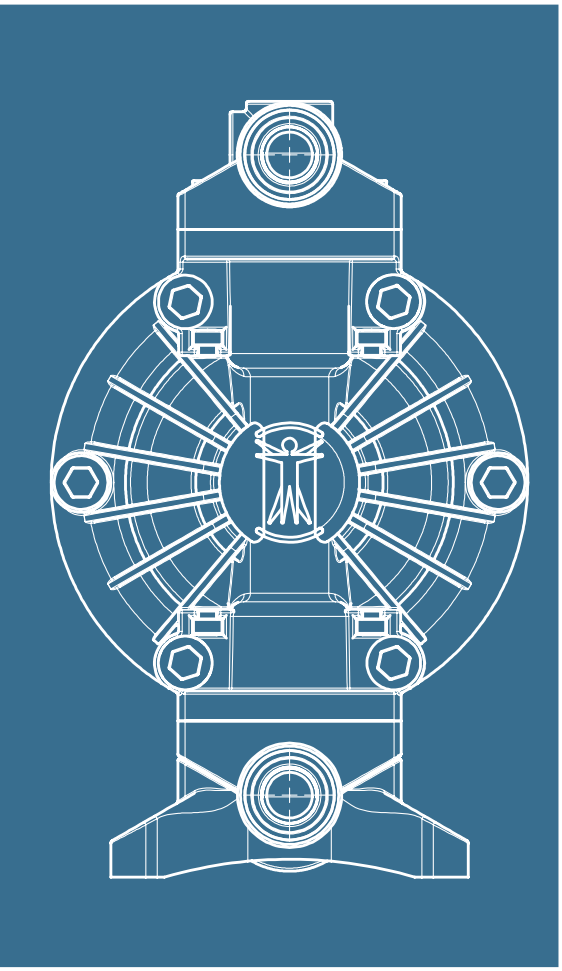
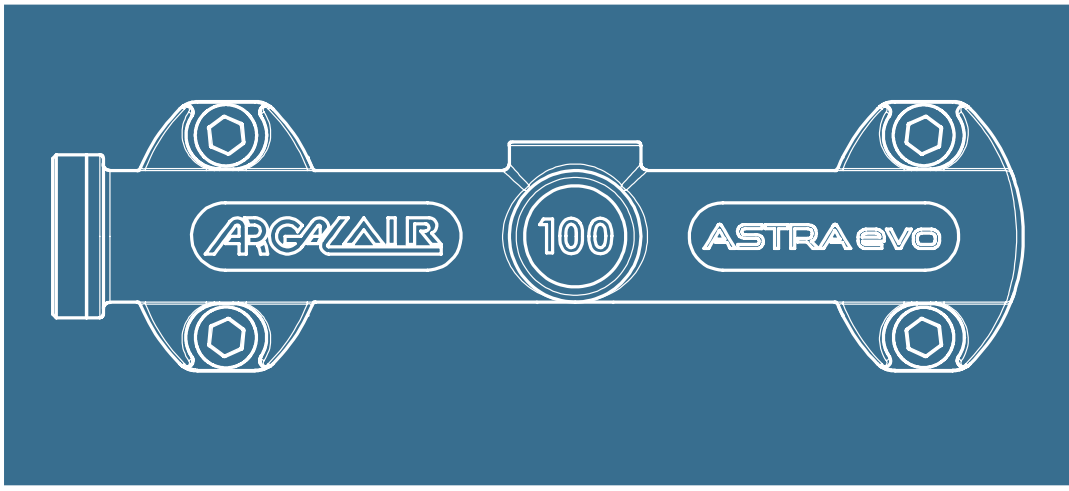
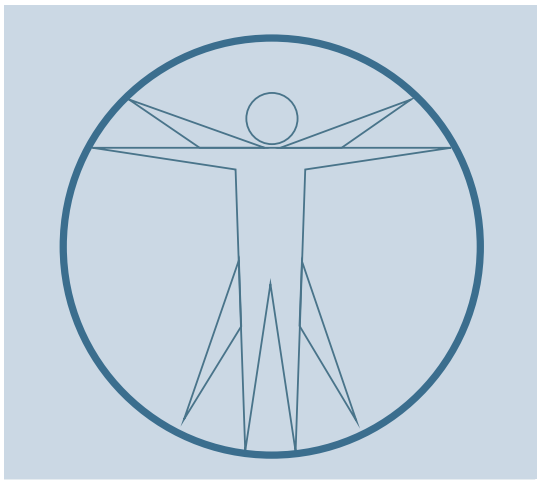
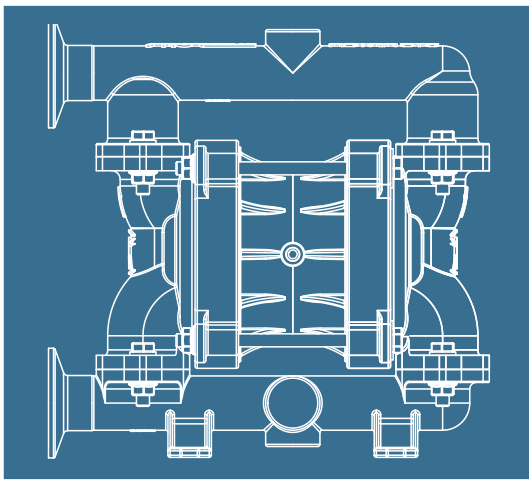
AMCAL
INDUSTRIAL PUMP SOLUTIONS

ARGAL PUMPS
DATA BOOKLET









PUMPS
FOR ALL TYPES
OF LIQUIDS

AIR-OPERATED ***DOUBLE-DIAPHRAGM***

ARGALAIR PUMPS

PRODUCTION PROGRAM

UK CA EAC CE
EU product
Made in Italy

2022



STAY TUNED!

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Find out all our services, information and contact details! To get the latest news, please subscribe to our newsletters!

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CONTACTS

NEWSLETTERS

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We are also on social media! Follow us to be updated ontime on what happens in ARGAL

LINKEDIN

YOUTUBE

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ARGAL ITALY PUMPS

PUMP MANUFACTURERS
SINCE 1975

ARGAL boasts +45 years of activity in the invention and production of pumps made of thermoplastic material, compounds and corrosion-resistant metal alloys. During the past decade, significant efforts were directed to research and development on the entire production. Such an effort resulted in entirely new or renovated pump ranges.

Our mission is a continuous and constant technological improvement, along the path of innovation instead of emulation.

How? By offering the best technical performance and engineering obtaining the leadership in performance while providing appropriate responses to the needs of market dynamics by realizing a “State-of-the-art quality.

Today the company has an extensive range of pumps in various constructions for industrial applications requiring temperatures ranging from -40° C to +120°C, with load capacities up to 1700 m^3/h-head over the 100 m.

ARGAL is certified ISO 9001:2015





OVERVIEW
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QUANTUM
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#INDEX

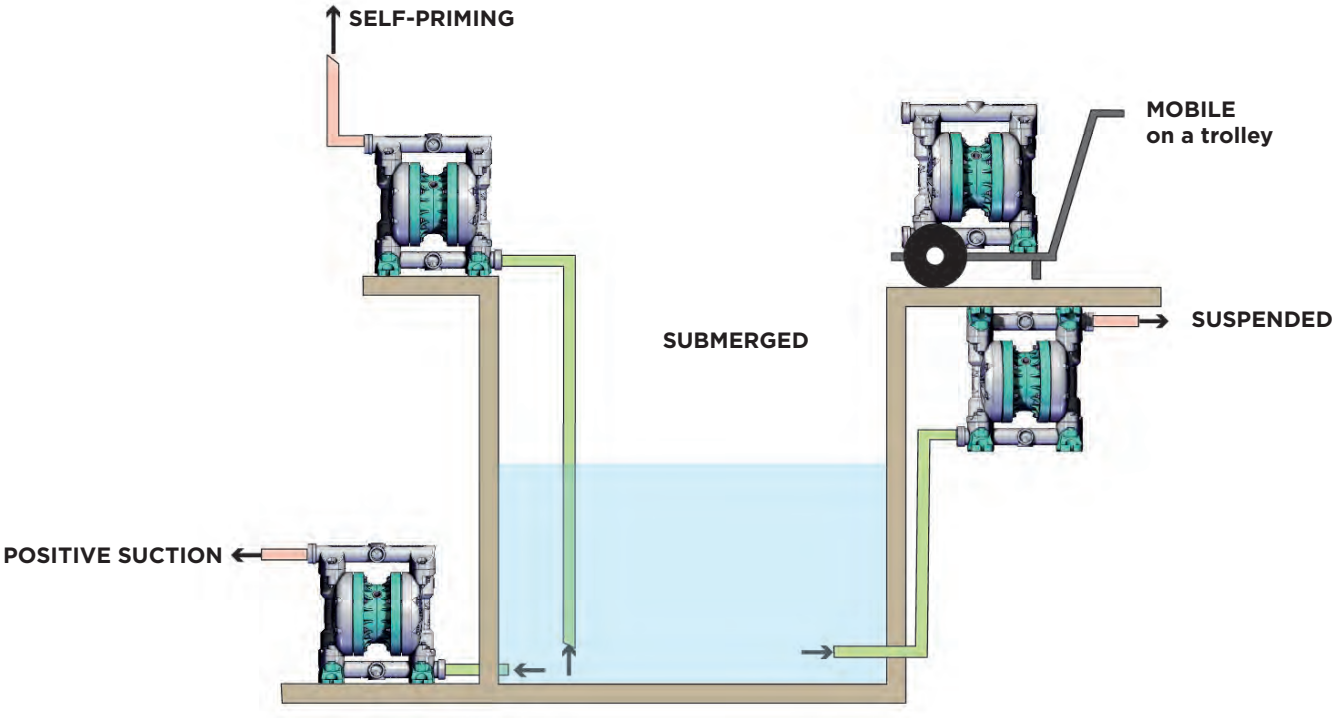
OVERVIEW

MATERIALS

- PP +G — Glass reinforced Polypropylene
- PP +C — Carbon reinforced Polypropylene
- PVDF +C — Carbon reinforced Polyvinylidene Fluoride
- POMc — Acetal Copolymer
- PE 1000 — Ultra-High Molecular Weight Polyethylene
- PTFE — Poly Tetra Fluoro Ethylene
- Alu — Aluminum
- AISI 316 L — Stainless Steel (low carbon)
- FRP — Fiberglass reinforced Polymer resin

CHEMICAL COMPATIBILITY CHART

INSTALLATIONS



series	size (inch)	materials	flow rate (l/min)	solids (mm)	compliance
ASTRAevo	1/4”	PP+G • PVDF+C • POMc+G	10	1.5	
ASTRAevo	3/8”	PP+G • PVDF+C • AISI 316L	up to 20	3.5	
ASTRAevo ASTRAevoFOOD ASTRAsolid DDQ	1/2”	PP+G • PVDF+C • ALU • AISI 316L • PE1000 • PTFE	up to 75	3.8	FDA
ASTRAevo ASTRAevoFOOD	3/4”	PP+G • PVDF+C	up to 105	5.5	FDA
ASTRAevo ASTRAevoFOOD ASTRAsolid DDQ	1”	PP+G • PVDF+C • ALU • AISI 316L • PE1000 • PTFE	up to 170	6	FDA
ASTRAevo ASTRAevoFOOD ASTRAsolid DDQ	1 1/2”	PP+G • PVDF+C • ALU • AISI 316L • PE1000 • PTFE	up to 370	7	FDA
ASTRAevo ASTRAevoFOOD ASTRAsolid	2”	PP+G • PVDF+C • ALU • AISI 316L • PE1000	up to 715	9	FDA
MISTRAL	3”	AISI 316L • PE1000	up to 1100	11	
MISTRAL	4”	AISI 316L	up to 1280	13	

CONFORMITY

Upon request, **ASTRAevo** pumps can be set with conductive materials and be compliant with

- **ATEX Zone 2 (II 3G Ex h IIB T4 Gb X | II 3D Ex h IIIB T135°C Db X)**
- **ATEX Zone 1 (II 2G Ex h IIB T4 Gb X | II 2D Ex h IIIB T135°C Db X)**

Made for food applications and related operations: the wetted parts are made of **electropolished AISI 316L with 125 Ra surface finishing** - recommended material for Food&Beverages processing.
ARGAL delivers the declaration that the materials of construction are compliant with FDA conformity.

- **Great choice of high-quality materials**
- **Continuous, discontinuous and mobile operation**
- **Dry-running**
- **Self-priming**
- **Dead-head**
- **Low air consumption**
- **Ideal with shear-sensitive and/or viscous liquids**
- **Easy installation and maintenance**
- **Variable flow and discharge pressure**
- **Unique internal design and components**

ASTRA evo



- **10 models available from ¼" to 2"**
- **Materials:** PP+g · PP+c · PVDF+c · POMc · ALU · AISI 316l
- **Max capacity: 715 l/min**
- **Integrated muffler up to 1"**
- **Upon request: ATEX Zone 2 or 1 compliance**

Main sectors
Chemical processes
Industrial processes
Laboratories
Flexography
OEM market

They are ideal for transferring, dosing, injecting corrosive, aggressive and viscous liquids with high performance and reduced air consumption.

ASTRA evo FOOD



- **6 models available from ½" to 2"**
- **Material: electropolished AISI 316l**
- **Max capacity: 715 l/min**
- **Shear-sensitive liquids**

Main sectors
Food&Beverages
Pharmaceutical processes
Laboratories
Cosmetics
Shear-sensitive processes

The series is conceived for the Food & Beverages industry and related ones. All materials in contact with the liquid are FDA compliant.

QUANTUM

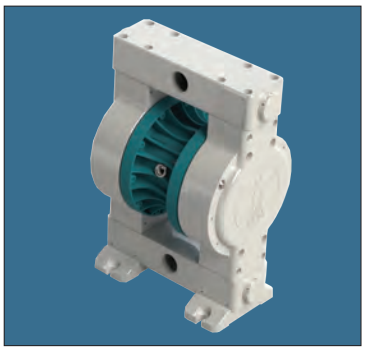


- **3 models available from ½" to 1 ½"**
- **Materials:** PTFE · PE1000
- **Max capacity: 450 l/min**
- **Ideal for ultra-pure liquid transfer**
- **Upon request: ATEX Zone 2 compliance**

Main sectors
Pharmaceutical processes
Photovoltaic
Laboratories
Metal treatments
OEM market

Cubic-shape pump from machined PTFE or pure PE which offers an unlimited chemical resistance, and allow the pumping of viscous liquids.

ASTRA SOLID FDA



- 4 models available from ½” to 2”
- Materials: PE1000
- Max capacity: 715 l/min
- Integrated muffler up to 1”

Main sectors
Metal & mineral treatments
Wastewater treatments
Seawater applications
Heavy-duty processes
Abrasive processes

The pump is entirely made from machined **Ultra High Molecular Weight Polyethylene.** It offers excellent mechanical properties, high-abrasion and stress resistance.

MISTRAL Ex



- 3 models available with size 3” and 4”
- Material: PE1000 (3”) · AISI 316l (3” - 4”)
- Max capacity: 1280 l/min
- Easy access valve
- Solid handling up to 13 mm
- Corrosion and abrasive-resistant materials

Main sectors
Offshore platforms
Cement mixing
Metal & mineral extraction
Heavy-duty processes
Chemical processes

It represents the safest and most efficient pneumatic solution for heavy-industrial, dangerous and/or continuous operations.

ARGALAIR’s UNIQUE ADS*
*made of only **5** components*



**Air Distribution System*

ASTRA evo

The series distinguishes itself from competitors' AODD pumps thanks to the choice of materials: from thermoplastic polymers reinforced with glass or carbon fiber to the new distribution system, high-quality material for diaphragms, and optimized design.

They are ideal for transferring, dosing, injecting corrosive, shear-sensitive and viscous liquids with high performance and reduced air consumption.

PP +G

PP +C

PVDF +C

POMc

Alu

AISI 316 L

Ex

- **Dry-running**
- **Self-priming**
- **Non-icing air valve system**
- **Ideal with shear sensitive liquids**
- **Easy installation and maintenance**
- **Integrated muffler up to 1"**
- **Unique internal design and components**
- **High-quality materials for diaphragms**
- **Best-in-class air consumption**
- **Upon request: ATEX Zone 2 or Zone 1 compliance* with special conductive material for body and parts**

** Zone 2 (II 3G Ex h IIB T4 Gb X | II 3D Ex h IIIB T135°C Db X)*
Zone 1 (II 2G Ex h IIB T4 Gb X | II 2D Ex h IIIB T135°C Db X)

MATERIALS

Pump materials 1		• PP+G • PP+C • PVDF+C • ALU • AISI 316L • POM-c
Diaphragms 2	**Fluoropolymer**	• modified PTFE
	Thermoplastics	• TPE (Keyflex®) • TPV (Santoprene®)
	Reinforced	• FKM (Viton®) • EPDM • NBR
Valve balls 3		• PTFE • AISI 316 • EPDM • NBR • FKM (Viton®)
Valve seats & cage 4		• PP • PVDF • AISI 316 • PE1000 • ALU
O-ring 5		• EPDM • FKM (Viton®) • NBR • PTFE • FFKM



MATERIALS	PP+g · PP+c	PVDF+c	Alu	AISI 316L
TEMPERATURES min - max	-5°C - +60°C	- 10°C - +90°C	- 10°C - +100°C	- 10°C - +100°C

CONNECTIONS

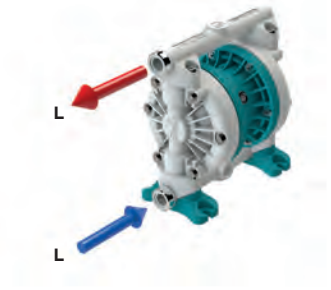
- Standard configuration with threaded connections BSP “L-L” for all plastic and aluminum pumps and for AISI 316L versions up to model DDE 160 (1)
- Other connections are available upon request (2)

! *Models DDE 400 and DDE 650 made of AISI 316 L are set with “F-B” connections.*

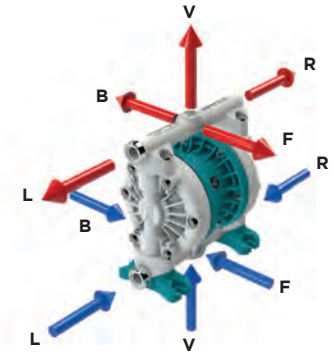
! *Model DDE 020 cannot be set with F or B connections*

! *Model DDE 020 set with V connection is not recommended*

For any questions on connection configuration, contact our sales force.



STANDARD(1)



UPON REQUEST(2)

APPLICATIONS



ASTRAevo pumps *(1 1/2” PP+glass version) installed for wastewater treatments (Belgium).*



ASTRAevo pumps *(1/2” PP+glass version) installed for chemical transfer (Europe).*



ASTRAevo pumps *(1 1/2” metallic version) installed for lubricant transfer (China).*

- **Chemical processes**
  acids, concentrated liquids, acid mix, liquids with solids
- **Industrial processes**
  residual waste, cleaning solutions
- **Laboratories**
  cleaning solutions, mix of acids
- **Flexography**
  inks, paintings and glues
- **Seawater applications**
  seawater, brine, coolants

bar Air pressure

Nl/min Air consumption



Dimensions

* optional

DDE 007 (¼")

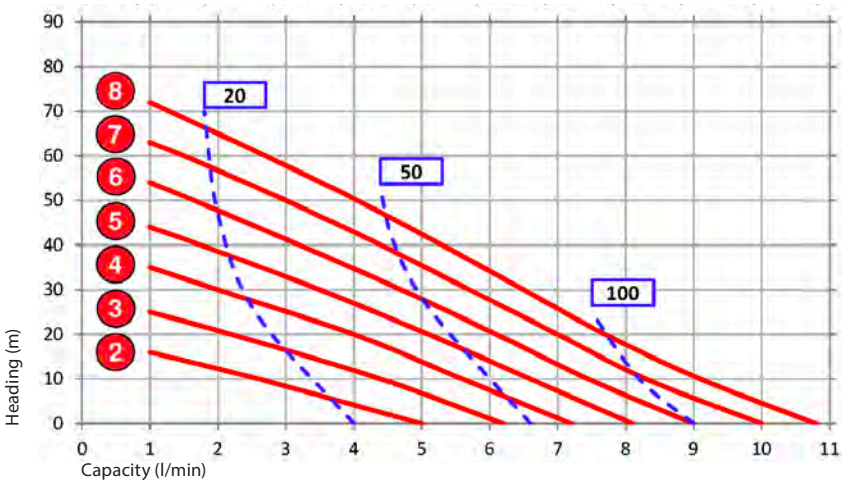
TECHNICAL DATA	
Fluid connections	¼" BSP • NPT
Air connections	4 mm
Max flow rate	10 l/m'
Max air pressure	8 bar
Displacement/cycle	<70
Max size solids	<3 mm

DIMENSIONS (mm)	
PP+g PP+c PVDF+c POMc+g	**A** 128 **B** 74 **C** 126

MATERIALS

PP +G PVDF +C POMc





DDE 015 (¼")

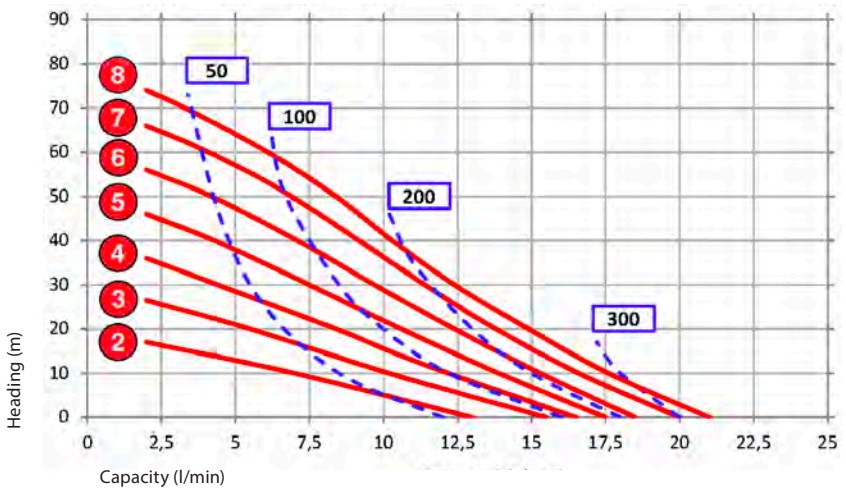
TECHNICAL DATA	
Fluid connections	¼" BSP • NPT
Air connections	6 mm
Max flow rate	15 l/m'
Max air pressure	8 bar
Displacement/cycle	70
Max size solids	3 mm

DIMENSIONS (mm)	
PP+g PP+c PVDF+c	**A** 183 **B** 107 **C** 203

MATERIALS

PP +G PVDF +C





DDE 020 (⅜")

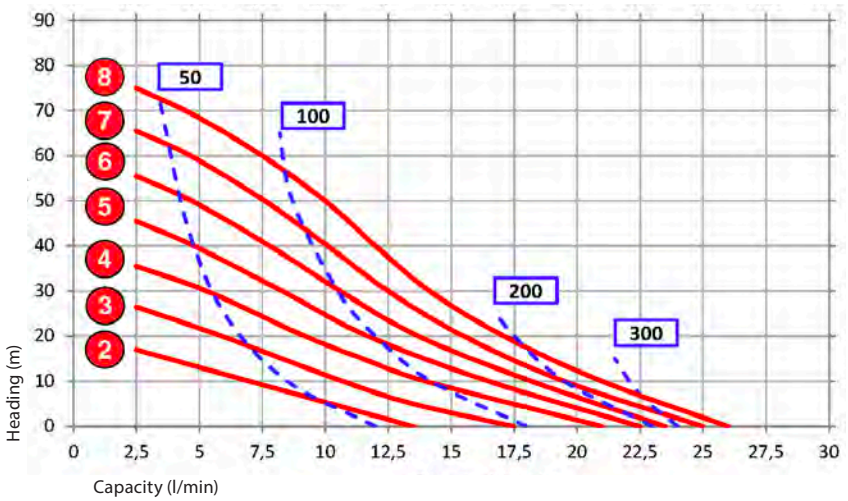
TECHNICAL DATA	
Fluid connections	⅜" BSP • NPT
Air connections	6 mm
Max flow rate	20 l/m'
Max air pressure	8 bar
Displacement/cycle	70
Max size solids	3 mm

DIMENSIONS (mm)	
PP+g PP+c PVDF+c	**A** 192,5 **B** 107 **C** 209

MATERIALS

PP +G PVDF +C





DDE 030 (½")

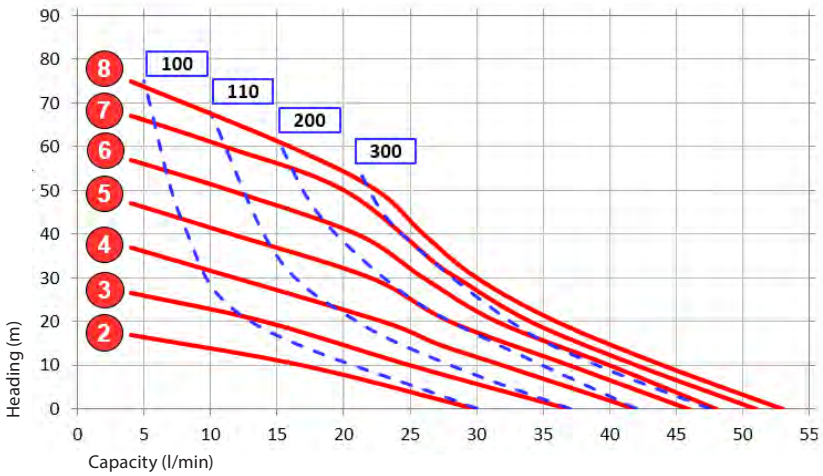
TECHNICAL DATA	
Fluid connections	½" BSP • NPT • FLANGED DN15
Air connections	6 mm
Max flow rate	50 l/m'
Max air pressure	8 bar
Displacement/cycle	70
Max size solids	3 mm

DIMENSIONS (mm)	
PP+g PP+c PVDF+c	**A** 192,5 **B** 107 **C** 209
Alu	**A** 194 **B** 107 **C** 205
AISI 316L	**A** 203 **B** 107 **C** 197

MATERIALS

PP +G PP +C PVDF +C Alu AISI 316 L





DDE 060 (½")

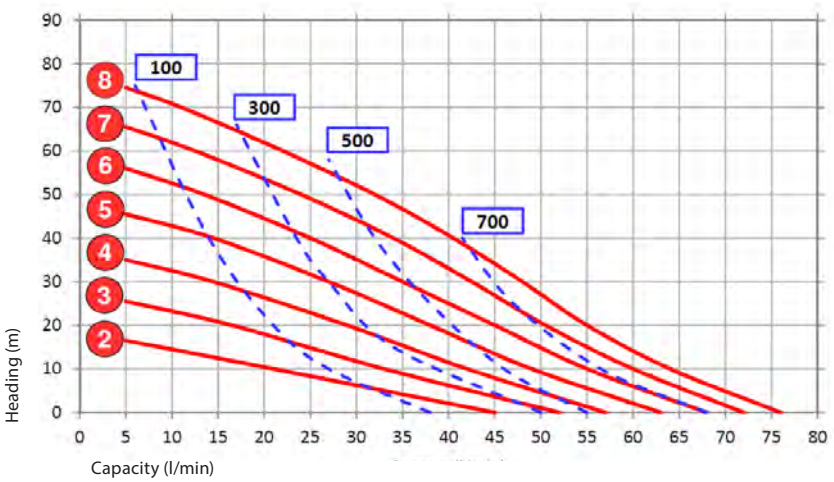
TECHNICAL DATA	
Fluid connections	½" BSP • NPT • FLANGED DN15
Air connections	⅜" BSP • NPT*
Max flow rate	76 l/m'
Max air pressure	8 bar
Displacement/cycle	160
Max size solids	3,2 mm

DIMENSIONS (mm)	
PP+g PVDF+c	**A** 243 **B** 160 **C** 260,5
Alu	**A** 245,5 **B** 160 **C** 253,5
AISI 316L	**A** 246,5 **B** 160 **C** 247,5

MATERIALS

PP +G | PP +C | PVDF +C | Alu | AISI 316 L





DDE 080 (¾")

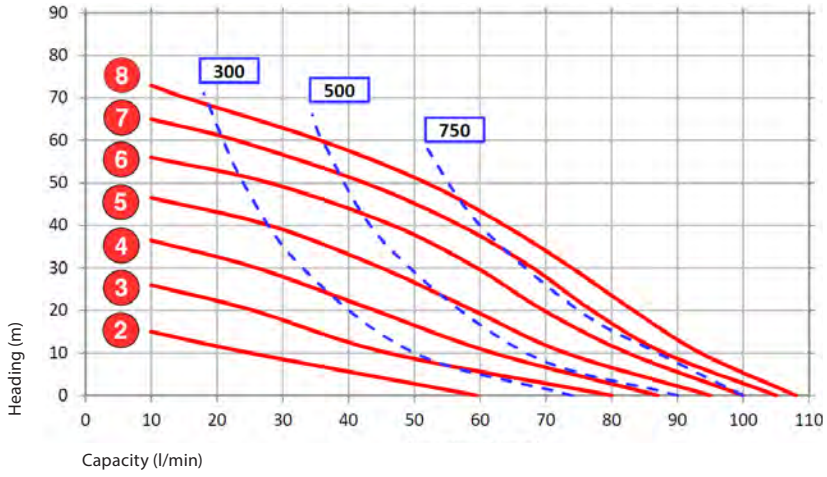
TECHNICAL DATA	
Fluid connections	¾" BSP • NPT* • FLANGED DN20
Air connections	⅜" BSP • NPT*
Max flow rate	105 l/m'
Max air pressure	8 bar
Displacement/cycle	160
Max size solids	3,2 mm

DIMENSIONS (mm)	
PP+g PVDF+c	**A** 288 **B** 170 **C** 297

MATERIALS

PP +G | PVDF +C





DDE 100 (1")

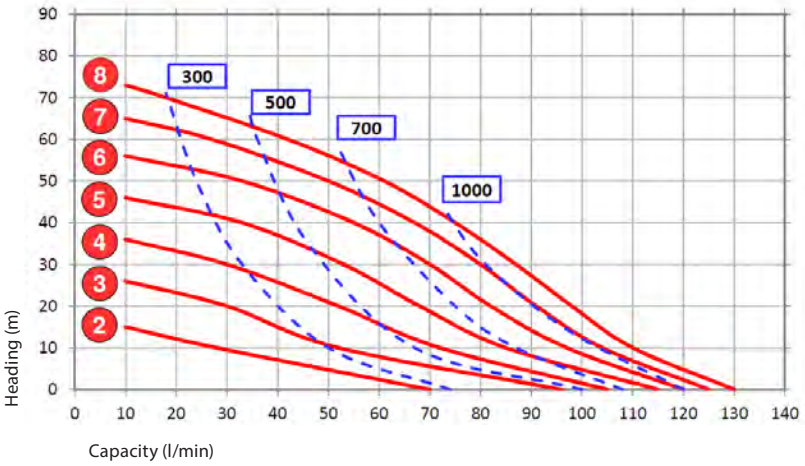
TECHNICAL DATA	
Fluid connections	1" BSP • NPT* • FLANGED DN25*
Air connections	⅜" BSP • NPT*
Max flow rate	130 l/m'
Max air pressure	8 bar
Displacement/cycle	240
Max size solids	5,5 mm

DIMENSIONS (mm)	
PP+g PVDF+c	**A** 288 **B** 170 **C** 297
Alu	**A** 292 **B** 170 **C** 289
AISI 316L	**A** 275,5 **B** 170 **C** 288

MATERIALS

PP +G | PP +C | PVDF +C | Alu | AISI 316 L





DDE 160 (1")

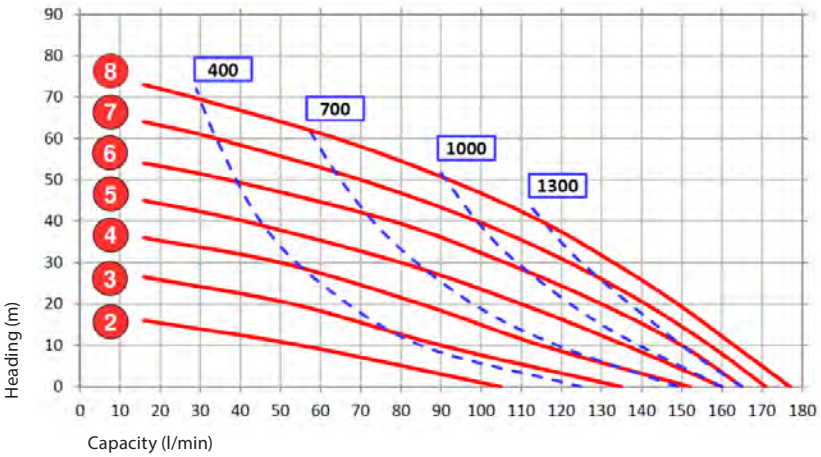
TECHNICAL DATA	
Fluid connections	1" BSP • NPT* • FLANGED DN25*
Air connections	⅜" BSP • NPT*
Max flow rate	175 l/m'
Max air pressure	8 bar
Displacement/cycle	440
Max size solids	6 mm

DIMENSIONS (mm)	
PP+g PP+c PVDF+c	**A** 310 **B** 203 **C** 344.5
Alu	**A** 310 **B** 203 **C** 335
AISI 316L	**A** 312 **B** 203 **C** 321.5

MATERIALS

PP +G | PP +C | PVDF +C | Alu | AISI 316 L





DDE 400 (1 ½")

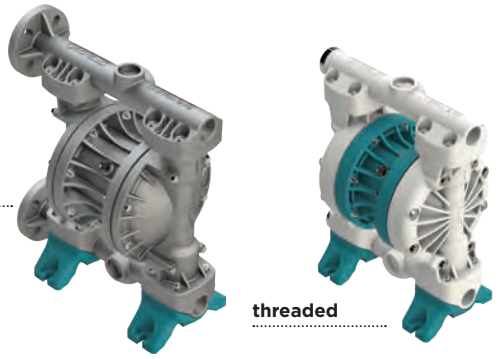
TECHNICAL DATA	
Fluid connections	FLANGED DN40 • 1 ½" BSP • NPT
Air connections	¾" BSP • NPT
Max flow rate	375 l/m'
Max air pressure	8 bar
Displacement/cycle	1.340
Max size solids	7 mm

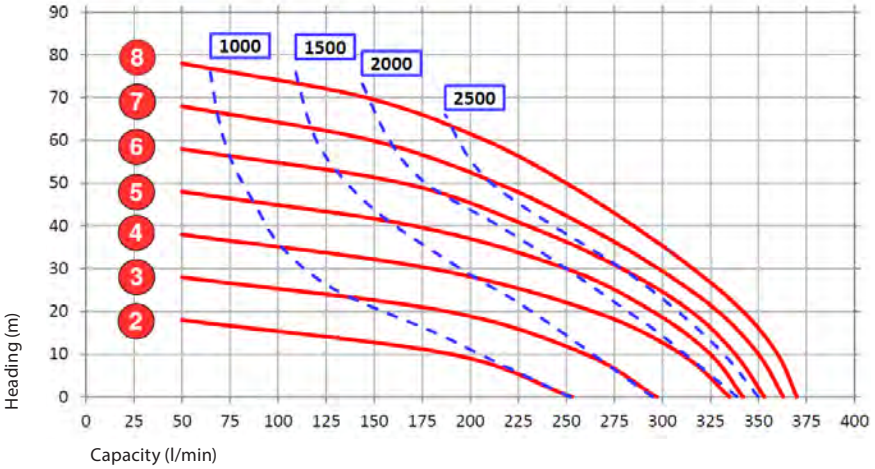
DIMENSIONS (mm)		
PP+v PVDF+c	**thread**	**A** 429.5 **B** 263* **C** 538
	flange	**A** 465,5 **B** 263* **C** 573
Alu		**A** 467 **B** 263,5* **C** 573
AISI 316L		**A** 400 **B** 263,5* **C** 501

**with muffler: 317 mm*

MATERIALS

PP +G PP +C PVDF +C Alu AISI 316 L







ARgemini

Pumping two liquids simultaneously

The upper manifold has two outlets and the lower manifold two inlets, this allows a double pumping.

This pump configuration is ideal for paintings, inks or varnishes used in flexographic sector or pulp and paper industry.

PP +G

DDE 650 (2")

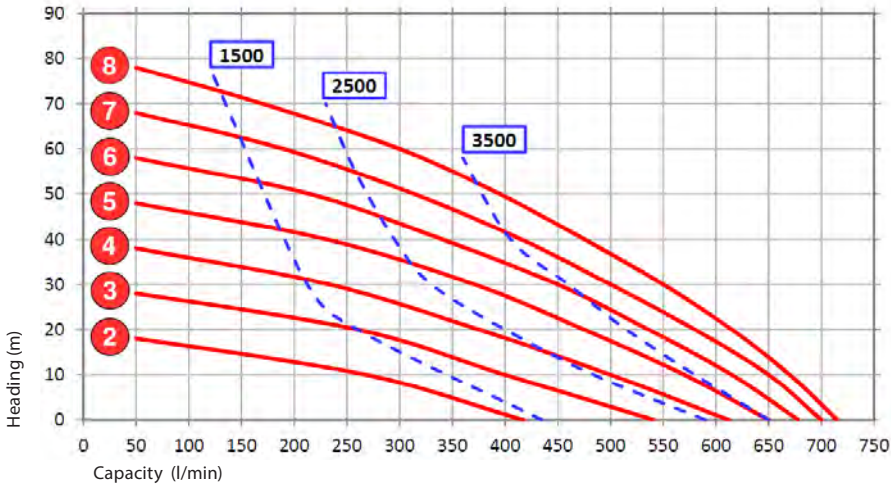
TECHNICAL DATA	
Fluid connections	FLANGED DN50 • 2" BSP • NPT
Air connections	¾" BSP • NPT
Max flow rate	715 l/m'
Max air pressure	8 bar
Displacement/cycle	3.820
Max size solids	9 mm

MATERIALS

PP +G PP +C

PVDF +C Alu AISI 316 L





DIMENSIONS (mm)		
PP+v PVDF+c	**thread**	**A** 594 **B** 345* **C** 690
	flange	**A** 563 **B** 345* **C** 662,5
Alu		**A** 594 **B** 345* **C** 688
AISI 316L		**A** 478 **B** 346* **C** 694

**with muffler: 381 mm*



ARdrum

Drum kit for unloading

Available in size 1/2" and 1". The pump comes with the fixing bracket and suction tube.

PP +G PVDF +C Alu AISI 316 L

ASTRA evo FOOD

ASTRAevoFOOD series is conceived for products used in the Food & Beverages industry and related ones. All materials in contact with the liquid are FDA compliant.

The DDE SPN models ensure an **optimal reliability**, **clean operations** with **relevant performance and efficiency** on a short and long term.

AISI 316 L **electropolished**

PE 1000



- **Electropolished AISI 316L with surface finishing 125 Ra (roughness around 2,7 Qm)**
- **FDA conformity**
- **For shear-sensitive liquids, also with solids**
- **For high viscous liquids**
- **No heat neither alteration of the liquid**
- **Temperature up to 120°C**
- **Upon request: ATEX Zone 2 or Zone 1***
- **Ideal for cosmetics and pharmaceutical processes**

** Zone 2 (II 3G Ex h IIB T4 Gb X | II 3D Ex h IIIB T135°C Db X)*
Zone 1 (II 2G Ex h IIB T4 Gb X | II 2D Ex h IIIB T135°C Db X)

MATERIALS

Body materials	1	• AISI 316L electropolished • PE1000
Diaphragms	2	• HYTREL+PTFE • PTFE • EPDM
Valve balls	3	• PTFE • AISI 316 • EPDM
Valve seats & cage	4	• AISI 316 • PE1000
O-ring	5	• PTFE • EPDM



	electropolished AISI316l	PE1000
Pumped liquids	Raw chemical, active chemicals, solvents, oils and lubricants	Abrasive liquids
Working temperature (max)	120°C	70°C

APPLICATIONS

	Pumped liquids	Viscosity cPs	Ideal Construction
Food & Beverages	Butter	50.000	PE1000
	Mayonaise	6.000	PE1000
	Honey	1.500÷3.000	AISI 316l
	Jam	<1.000	PE1000
	Yogurt	100	AISI 316l
	Olive oil	100	AISI 316l
Cosmetics & Pharma	Toothpaste	200.000	PE1000
	Shampoo	3.000	AISI 316l
	Wax	500	PE1000
	Hand cold cream	780	PE1000
	Detergent	1.470	AISI 316l
Various industries	SAE70 oil	18.000	AISI 316l
	Barbottine	50.000	PE1000
	Lubricants	2.000	AISI 316l
	Varnished	300	AISI 316l
	Printer inks	550÷2.200	AISI 316l
	Glue	1.200÷1.400	PE1000



***ASTRAevo FOOD pumps** (1/2" metallic version) installed at PHARMASYSTEMS (Europe).*

- **Chili sauce production**
  transfer from stockage tank to mixing tank
- **Chocolate production**
  lecitine dosing
- **Distillery**
  alcol transfer
- **Brewery**
  brine unloading
- **Laboratory**
  6% hydrogen peroxyde circulation
- **Cosmetics**
  viscous substances loading (shower gel, shampoo,..)



bar Air pressure

Nl/min Air consumption



Dimensions

* optional

DDE SPN 030 (1")

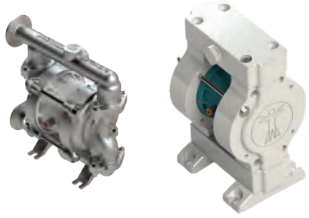
TECHNICAL DATA	
Fluid connections	• Tri-Clamp 1" • BSP • NPT
Air connections	6 mm
Max flow rate	50 l/m'
Max air pressure	8 bar
Displacement/cycle	70
Max size solids	3 mm

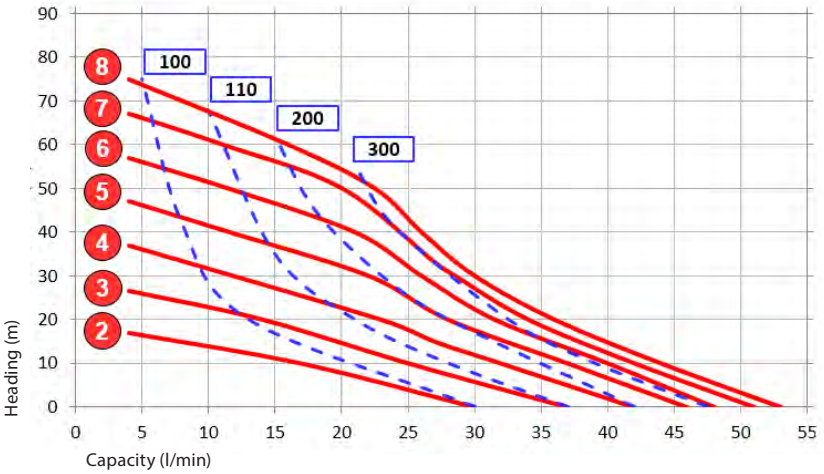
DIMENSIONS (mm)	
AISI 316L	**A** 203 **B** 106 **C** 197
PE1000	**A** 170 **B** 140 **C** 260

MATERIALS

AISI 316 L **electropolished**

PE 1000





DDE SPN 060 (1")

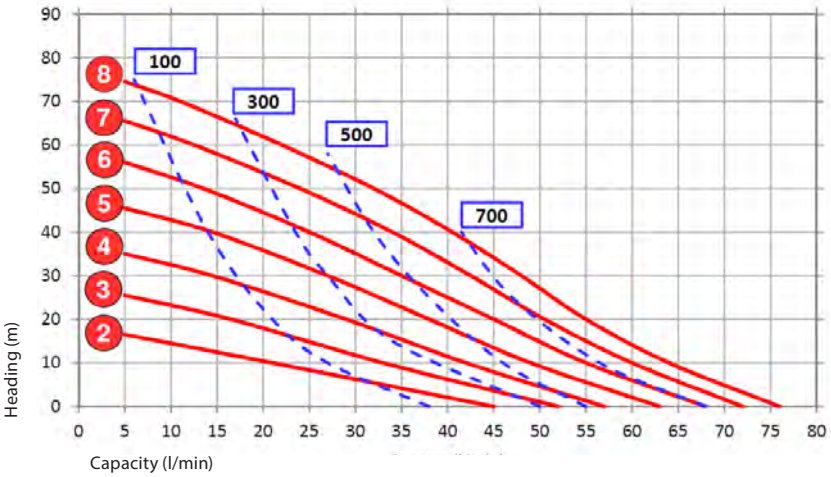
TECHNICAL DATA	
Fluid connections	• Tri-Clamp 1" • BSP • NPT
Air connections	¼" BSP • NPT*
Max flow rate	76 l/m
Max air pressure	8 bar
Displacement/cycle	160
Max size solids	3,2 mm

DIMENSIONS (mm)	
AISI 316L	**A** 247 **B** 160 **C** 253

MATERIALS

AISI 316 L **electropolished**





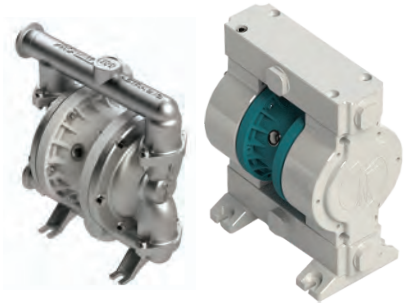
DDE SPN 100 (1")

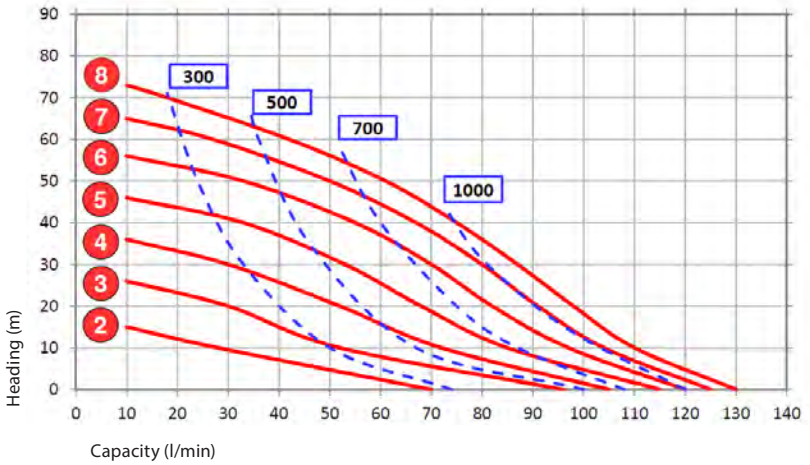
TECHNICAL DATA	
Fluid connections	1" BSP • NPT* • FLANGED DN25*
Air connections	⅜" BSP • NPT*
Max flow rate	130 l/m
Max air pressure	8 bar
Displacement/cycle	240
Max size solids	5,5 mm

DIMENSIONS (mm)	
AISI 316L	**A** 273 **B** 170 **C** 288
PE1000	**A** 285 **B** 170 **C** 349

MATERIALS

AISI 316 L **electropolished** PE 1000





DDE SPN 160 (1 ½")

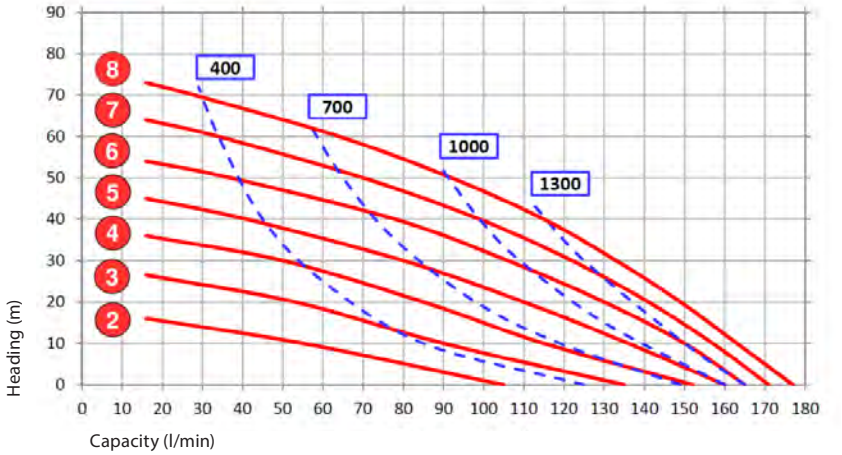
TECHNICAL DATA	
Fluid connections	• Tri-Clamp 1" ½ • BSP*
Air connections	⅜" BSP • NPT*
Max flow rate	176 l/m
Max air pressure	8 bar
Displacement/cycle	440
Max size solids	6 mm

DIMENSIONS (mm)	
AISI 316L	**A** 310 **B** 203 **C** 322

MATERIALS

AISI 316 L **electropolished**





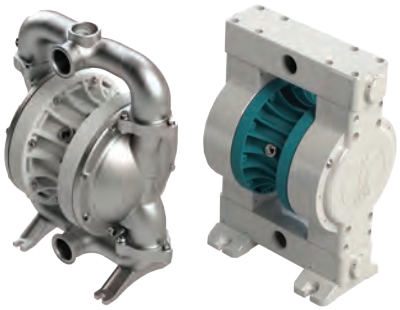
DDE SPN 400 (2")

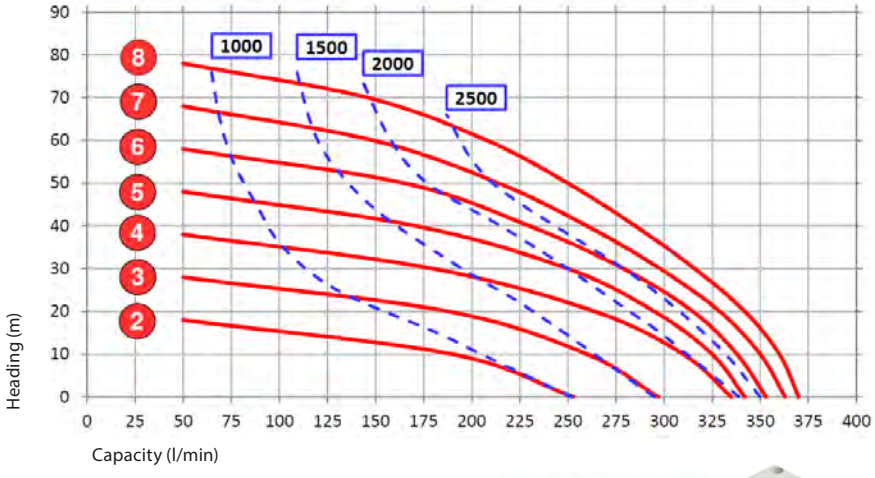
TECHNICAL DATA	
Fluid connections	• Tri-Clamp 2"
Air connections	½" BSP • NPT*
Max flow rate	370 l/m'
Max air pressure	8 bar
Displacement/cycle	1.340
Max size solids	7 mm

DIMENSIONS (mm)	
AISI 316L	**A** 203 **B** 106 **C** 197
PE1000	**A** 433 **B** 262 **C** 575

MATERIALS

AISI 316 L **electropolished** PE 1000





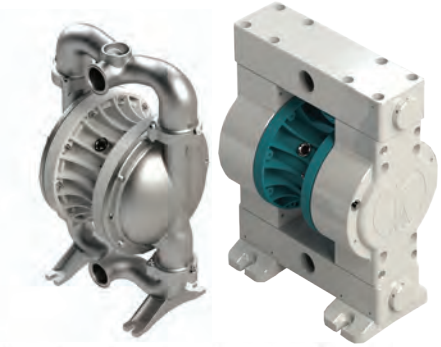
DDE SPN 650 (2 ½")

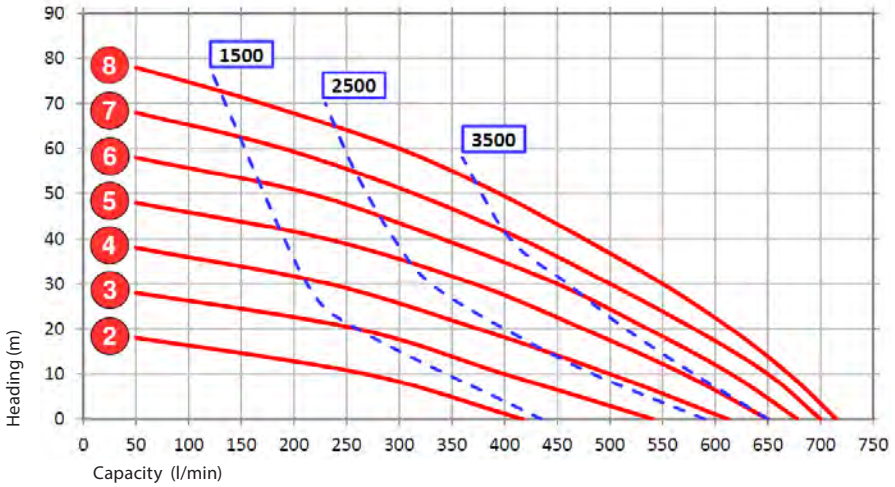
TECHNICAL DATA	
Fluid connections	• Tri-Clamp 2½" • BSP*
Air connections	¾" BSP • NPT*
Max flow rate	715 l/m'
Max air pressure	8 bar
Displacement/cycle	3.820
Max size solids	9 mm

DIMENSIONS (mm)	
AISI 316L	**A** 247 **B** 160 **C** 253
PE1000	**A** 493 **B** 345 **C** 710

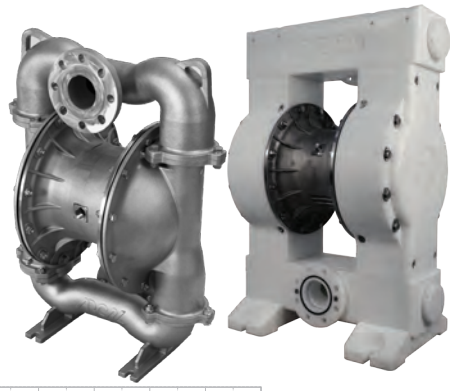
MATERIALS

AISI 316 L **electropolished** PE 1000





DDE SPN 3” (3”)

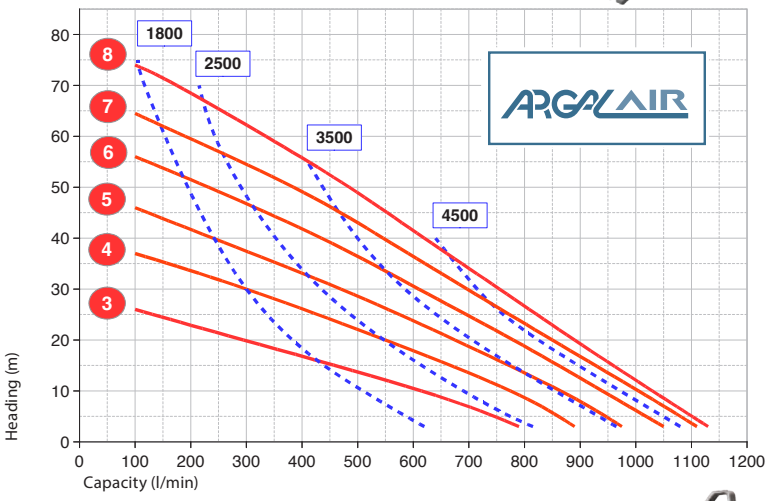


TECHNICAL DATA	
Fluid connections	3” DN80
Air connections	¾” F NPT
Max flow rate	1.100 l/m’
Max air pressure	8 bar
Displacement/cycle	96
Max size solids	11 mm

DIMENSIONS (mm)	
AISI 316L	**A** 624 **B** 435 **C** 815
PE1000	**A** 693 **B** 520 **C** 980

MATERIALS

AISI 316 L **electropolished** PE 1000



DDE SPN 4” (4”)

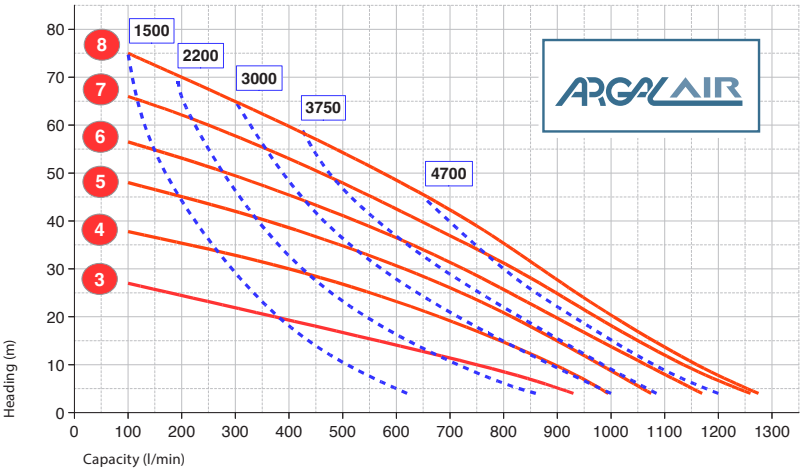


TECHNICAL DATA	
Fluid connections	4” DN100
Air connections	¾” F NPT
Max flow rate	1.280 l/m’
Max air pressure	8 bar
Displacement/cycle	96
Max size solids	13 mm

DIMENSIONS (mm)	
AISI 316L	**A** 725 **B** 435 **C** 815

MATERIALS

AISI 316 L **electropolished**



ASTRA SOLID

ASTRAsolid range is **made of solid-block PE1000 (Ultra High Molecular Weight Polyethylene)** and distinguishes itself from the competitors' AODD range.
PE1000 offers excellent mechanical properties and high abrasion and stress resistance.

PE 1000

- **Made of solid-block**
- **5-component air distributor system**
- **modified PTFE diaphragms inert to chemicals**
- **Auto-lubricating and anti-friction ADS***
- **Easy installation and maintenance**
- **Internal or external installation**
- **Ideal for operations in cryogenic conditions (up to -40°C)**
- **For acids, alkalis and basic acids, shear-sensitive liquids**

** Air Distribution System*

MATERIALS

Body materials	1	• PE1000
Diaphragms	2	• modified PTFE
Valve balls	3	• PTFE • AISI 316 • EPDM • NBR • FKM (Viton®)
Valve seats & cage	4	• PE 1000
O-ring	5	• EPDM • FKM (Viton®) • NBR • PTFE

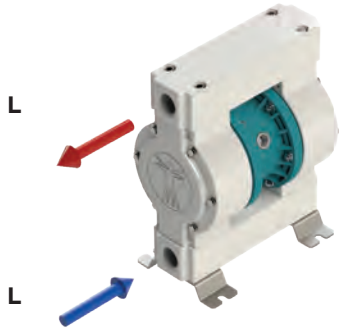


	PE1000
Pumped liquids	Abrasive liquids
Working temperature (max)	70°C

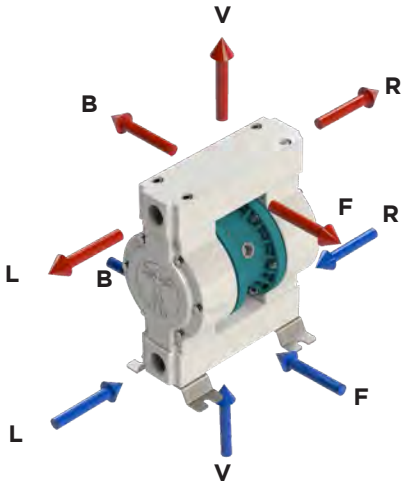
CONNECTIONS

- Standard configuration (1) with threaded connections BSP "L-L" for all models.
- Other connections are available upon request (2).

STANDARD(1)



UPON REQUEST(2)



For any questions on connection configuration, contact our sales force.

APPLICATIONS

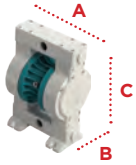
- **Hevy-duty industrial processes**
  abrasive liquids and waste circulation
- **Ceramics industry**
  transfer of cleaning liquids containing residues
- **Metal and precious metal treatments**
  extraction, metal waste circulation
- **Wastewater treatments**
  waste transfer with toxic particles, polluted mix
- **Seawater applications**
  seawater, brine, water containing solids



***ASTRAsolid pumps** (2") installed outside the plant, nearby the coastline for polluted and waste treatments (Italy)*

bar Air pressure

Nl/min Air consumption



Dimensions

* optional

DDS 030 (½")

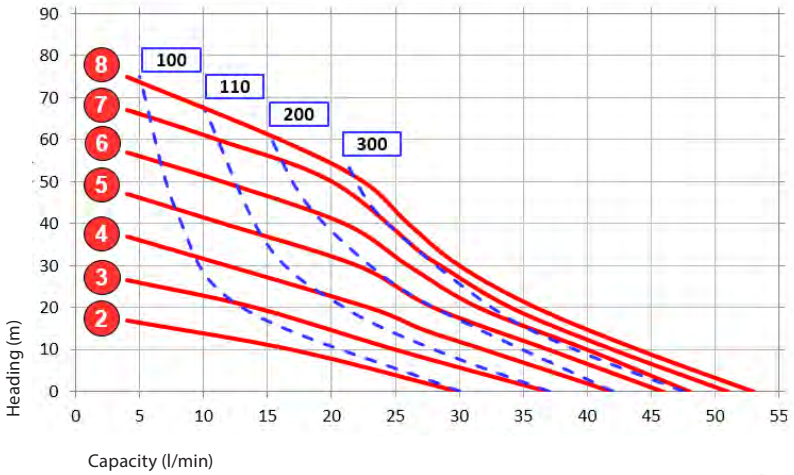
TECHNICAL DATA	
Fluid connections	½" BSP • NPT* • FLANGED DN15*
Air connections	6 mm
Max flow rate	50 l/m'
Max air pressure	8 bar
Displacement/cycle	70
Max size solids	3 mm

DIMENSIONS (mm)	
PE1000	**A** 170 **B** 140 **C** 260

MATERIALS

PE 1000





DDS 100 (1")

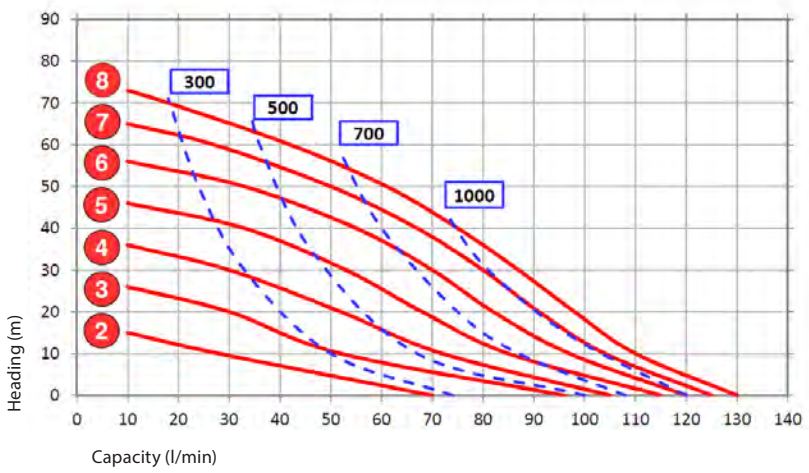
TECHNICAL DATA	
Fluid connections	1" BSP • NPT* • FLANGED DN25*
Air connections	⅜" BSP • NPT*
Max flow rate	130 l/m'
Max air pressure	8 bar
Displacement/cycle	240
Max size solids	5,5 mm

DIMENSIONS (mm)	
PE1000	**A** 285 **B** 170 **C** 349

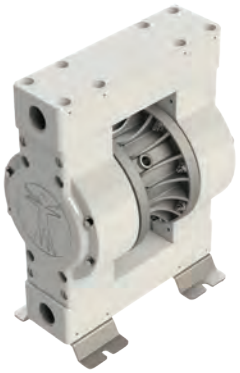
MATERIALS

PE 1000





DDS 400 (1 ½")

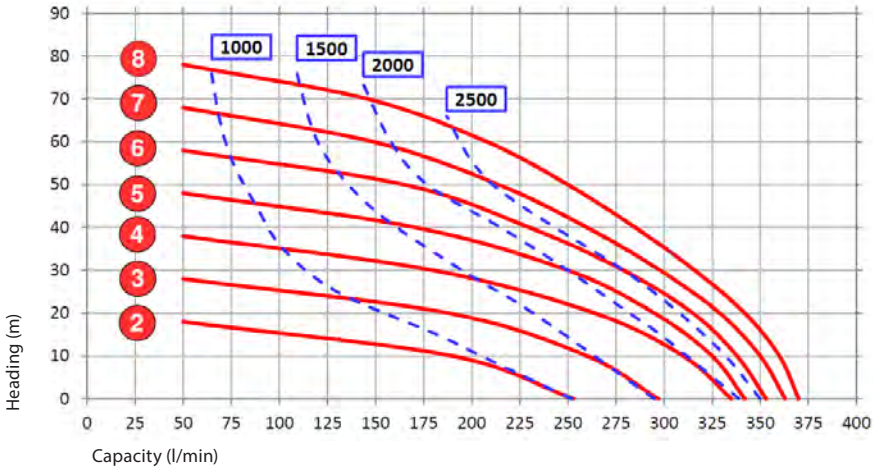


TECHNICAL DATA	
Fluid connections	FLANGED DN40 • 1 ½" BSP • NPT*
Air connections	½" BSP • NPT*
Max flow rate	375 l/m'
Max air pressure	8 bar
Displacement/cycle	1.340
Max size solids	7 mm

DIMENSIONS (mm)	
PE1000	**A** 433 **B** 262 **C** 575

MATERIALS

PE 1000



DDS 650 (2")

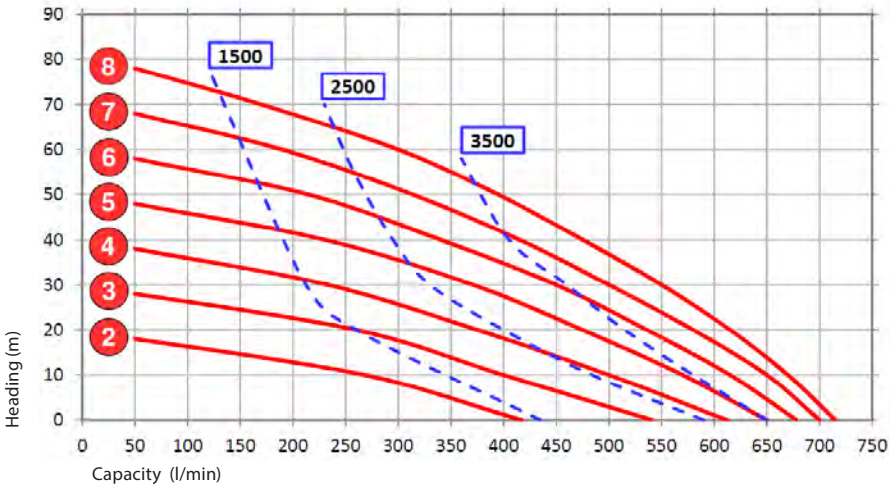


TECHNICAL DATA	
Fluid connections	FLANGED DN50 • 2" BSP • NPT*
Air connections	¾" BSP • NPT*
Max flow rate	715 l/m'
Max air pressure	8 bar
Displacement/cycle	3.820
Max size solids	9 mm

DIMENSIONS (mm)	
PE1000	**A** 493 **B** 345 **C** 710

MATERIALS

PE 1000



QUANTUM

QUANTUM series is made of pure polymers solid-block construction and with original internal design.
The idea was conceived to offer a **unique pump perfectly balanced between efficiency** (linear pumping directly to the center block and reduced air consumption) **and sustainability** (reduced use of materials, longer life cycla and all parts are recyclable).

PE 1000

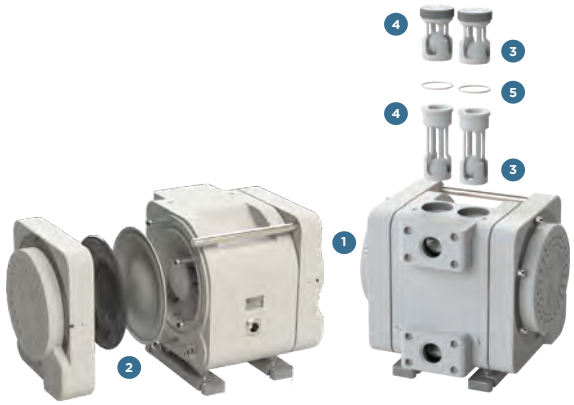
PTFE

- **Made of solid-block PTFE or PE1000**
- **Non-icing valve system**
- **Diaphragms are not coupled to the shaft**
- **Auto-lubricating and anti-friction material**
- **Easy installation and maintenance**
- **Unique and super efficient internal design**
- **Unlimited chemical resistance**
- **Acids, mixtures, glues, additives, inks, adhesives, solvents...**

MATERIALS

Body materials	1	• PE1000 • PTFE
Diaphragms	2	• TPE*+PTFE • TPV**+PTFE
Valve balls	3	• PTFE • EPDM • NBR • VITON
Valve seats & cage	4	• PTFE • PE1000
O-ring	5	• PTFE • FFKM

** Santoprene®, Geolast® (ExxonMobil)*
*** Keyflex®, Hytrel® (LG Chem Ltd.)*



	PTFE	PE1000
Pumped liquids	For ultra-pure liquids	All types, especially abrasive ones
Working temperature (max)	100°C	70°C

UNIQUE & INNOVATIVE

Advantages of the free-fastened diaphragms
- easy maintenance and replacing
- more safety with aggressive liquids

Advantages of the special design for the valves
- guaranteed easy maintenance operations
- no need to remove the pump from the system

Advantages of the non-icing valve system
- utterly not affected by humidity

Advantages of the air distrubutor system
- equipped with air capacity regulator
- quick discharging valve (30% less air consumption)
- operations in any conditions

Advantages of the security system
- longer life cycle
- in case of diaphragm leakage, the liquid cannot enter the air supply line

APPLICATIONS



QUANTUM pump installed for HF transfer to reactors (Italy)



QUANTUM pumps for acid mix transfer (Belgium)

- **Solar panel systems**
  ultra-pure liquids
- **Display production**
  nematic, smectic liquid crystals
- **Chemical waste treatments**
  HF from reactors
- **Pharmaceutics and Laboratories**
  strong acids, viscous mix, cleaning solutions

bar Air pressure

Nl/min Air consumption



Dimensions

DDQ 060 (½")

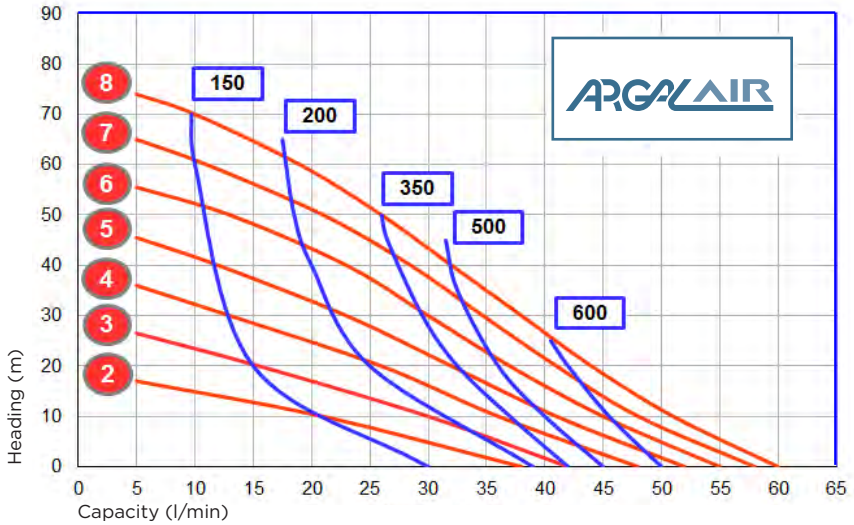
TECHNICAL DATA	
Fluid connections	G ½" BSP
Air connections	G ¼" BSP
Max flow rate	60 l/m'
Max air pressure	8 bar
Displacement/cycle	160
Max size solids	7.5 mm

DIMENSIONS (mm)	
PE1000 PTFE	**A** 220 **B** 210 **C** 186

MATERIALS

PE 1000 PTFE





DDQ 160 (1")

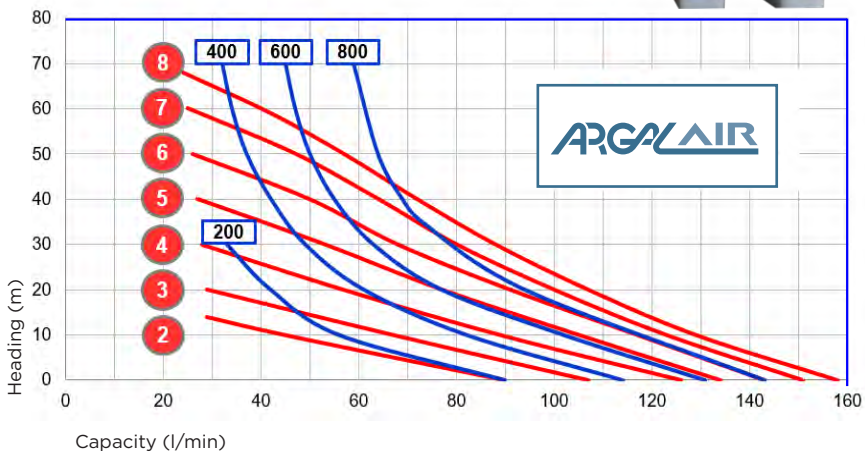
TECHNICAL DATA	
Fluid connections	G 1" BSP
Air connections	G ⅜" BSP
Max flow rate	160 l/m'
Max air pressure	8 bar
Displacement/cycle	440
Max size solids	11 mm

DIMENSIONS (mm)	
PE1000 PTFE	**A** 270 **B** 250 **C** 227

MATERIALS

PE 1000 PTFE





DDQ 400 (1 ½")

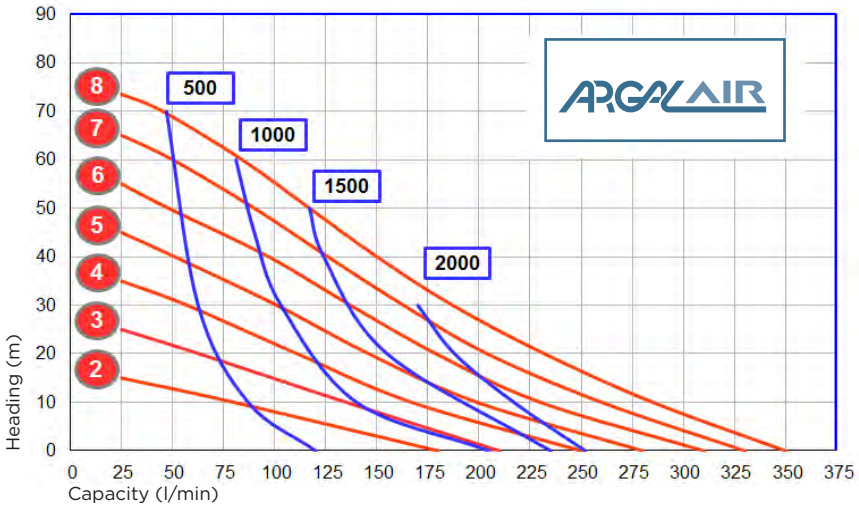
TECHNICAL DATA	
Fluid connections	G 1 ½" BSP
Air connections	G ½" BSP
Max flow rate	400 l/m'
Max air pressure	8 bar
Displacement/cycle	1.340
Max size solids	19 mm

DIMENSIONS (mm)	
PE1000 PTFE	**A** 381 **B** 330 **C** 310

MATERIALS

PE 1000 PTFE





MISTRAL

MISTRAL series represents the safest and most efficient pneumatic solution for heavy-industrial, dangerous and/or continuous operations.

The range came out first with the metallic version, entirely made of stainless steel, to allow the pumping of highly corrosive agents. Then the solid-block plastic version was conceived to resolve the market issue of abrasion.

- **High capacities for large loadings**
- **Extremely robust big-size AODD solutions**
- **5-component air distributor system**
- **Non-icing valve system**
- **Corrosion and abrasive-resistant materials**
- **Auto-lubricating and anti-friction ADS***
- **Easy installation and maintenance**
- **Ideal for solid handling (up to 13 mm)**
- **Internal or external installation**
- **Upon request: ATEX Zone 1****

* Air Distribution System
***Zone 1 (II 2G Ex h IIB T4 Gb X | II 2D Ex h IIIB T135°C Db X)*

MATERIALS

Body materials 1	• AISI 316L • PE1000
Diaphragms 2	• EPDM • NBR • EPDM+PTFE • NBR+PTFE
Valve balls 3	• EPDM • NBR • PTFE • AISI 316L
Valve seats & cage 4	• POLYURETHANE • PE1000 • PVDF • AISI 316L
O-ring 5	• EPDM • NBR • FKM • PTFE

	AISI 316L	PE1000
Working temperature (max)	100°C	70°C

MADE FOR HEAVY-INDUSTRIAL OPERATION



MISTRALsolid pump 3” *for ceramic production plant (Italy)*



MISTRAL pump 4” *for silice extraction (Italy)*

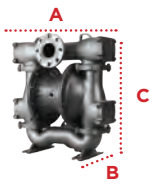


MISTRAL pump 3” *for brine circulation, offshore platform (Asia)*

- **Offshore platforms**
  waste, brine, mud, seawater
- **Chemical processes**
  strong acids, concentrated acids, cleaning solutions
- **Construction processes**
  cement mixing loading/unloading
- **Metal and mineral treatments**
  liquid extraction, cleaning solution circulation

bar Air pressure

Nl/min Air consumption



Dimensions

DDM 300 (3″)

TECHNICAL DATA	
Fluid connections	3” DN80
Air connections	¾” F NPT
Max flow rate	1100 l/m’
Max air pressure	8 bar
Displacement/cycle	96
Max size solids	11 mm

DIMENSIONS (mm)	
AISI 316L	**A** 624 **B** 435 **C** 815

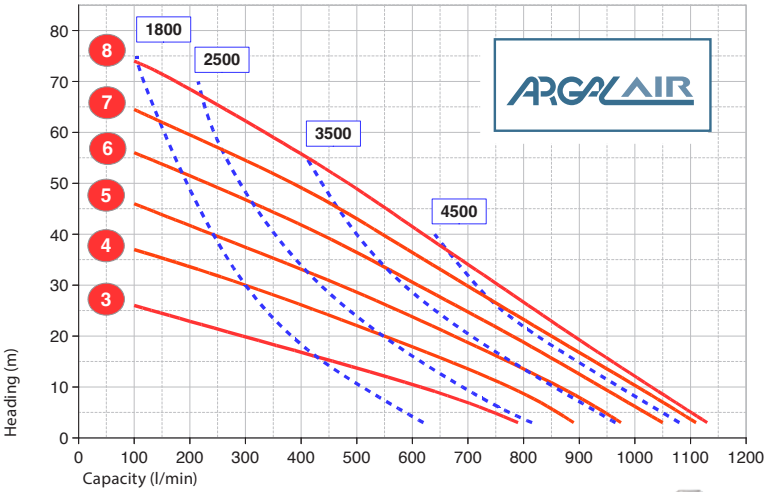
**with muffler: 570 mm*

MATERIALS

AISI 316 L

PE 1000





DDM 400 (4″)

TECHNICAL DATA	
Fluid connections	4” DN100
Air connections	¾” F NPT
Max flow rate	1280 l/m’
Max air pressure	8 bar
Displacement/cycle	96
Max size solids	13 mm

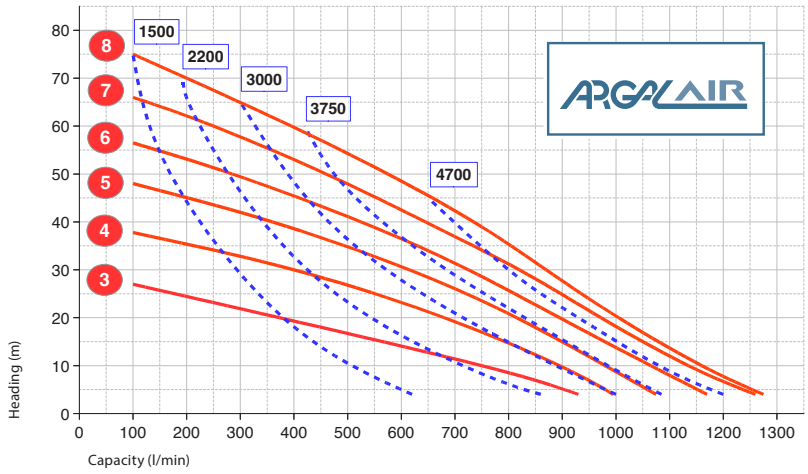
DIMENSIONS (mm)	
AISI 316L	**A** 725 **B** 435 **C** 815

**with muffler: 570 mm*

MATERIALS

AISI 316 L






ARGAL

MECH-SEALED & MAG-DRIVEN CENTRIFUGAL PUMPS

AODD PUMPS

SELF-PRIMING PUMPS

VERTICAL SUMP PUMPS

ARGAL PUMPS
Via Labirinto, 159 - 25125 BRESCIA
Tel. 030 3507011 I sales@argalpumps.com
www.argalpumps.com

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