

ASTRA evo FOOD

DDE SPN

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS
FDA COMPLIANCE FOR FOOD, PHARMACEUTICAL
AND COSMETIC INDUSTRIES
ELECTRO-POLISHED AISI 316L
from ½" to 2"



SINCE 1975

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FOR FOOD/BEVERAGES, PHARMACEUTICAL & COSMETICS

ASTRAevo FOOD range can be used for handling and pumping products from food industry and related ones. These pumps comply with FDA recommendations, as the parts in contact with the fluid are made of **AISI 316 electro-polished** with 125 Ra finishing and PTFE - both certified for food usage.



DDE SPN 650

AISI 316L
ELECTRO-POLISHED
125 Ra finishing / PTFE.

DIAPHRAGMS

The diaphragms stand out on advantages like a large choice of superior materials, such as the **TFM** - a special variation of **PTFE** used in the aerospace industry or such as **VITON**, the best elastomer available, recommended for high-temperature processes.

INTERNAL DESIGN

Our Engineers have re-thought the internal design of the pump to improve the performance: a supersized diameter of the inlet pipe to allow a more uniform transfer of the liquids and a better performance with viscous and dense liquids.

WHY ASTRAevo FOOD?

- High hydraulic performance
- Optimised air consumption
- Evolved fluid cap
- Free-ice system
- Improved operating sensibility (from 1 bar)
- Integrated muffler up to model DDE 160**
- Low maintenance
- Ideal for shear sensitive liquids
- TFM diaphragms inert to chemical agents
- Reinforced elastomer and thermoplastic diaphragm
- Dry-running
- Self-priming
- FDA compliance
- ATEX compliance (Ex-proof)
- Stall-free design

Thanks to their characteristics and design **ASTRAevo FOOD** series can be applied for the transfer of fluids deployed in industries as food, the cosmetics, pharmaceuticals, or chemical additives, beverages, dairy, biotechnologies, medical appliances, paint and in all those applications where a quick release clamp connection is required or appreciated..

These pumps are capable to pump **fluids with very high viscosity** and **temperature up to 95°C**. **ASTRAevo FOOD** share the same characteristics of **ASTRAevo** series.

VERSIONE ATEX

All **ASTRAevo FOOD** pumps comply with **ATEX Zone 2** regulation and are adequate to operate in areas with atmosphere potentially explosive and, with the variant of the conductive executions, can operate also in areas classified ATEX Zone 1.

AIR DISTRIBUTOR SYSTEM

ARGAL's ADS is a 5-component construction with the advantages of being faster in the operation and of having bigger air unloading capacities, which increases the pump efficiency and reducing lower air consumption. Plus, the use of antiabrasive and autolubricating polymers helps in reducing significantly the maintenance operations.

ASTRAevo FOOD range is the complete solution for transferring, dosing, injecting corrosive, aggressive and viscous liquids with high performance and reduced air consumption in total safety, even within explosive areas (Ex-proof).

DDE SPN 30



DIMENSIONS (mm)

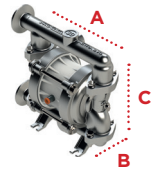
AISI 316L **A** 203 **B** 106 **C** 197

TECHNICAL DATA

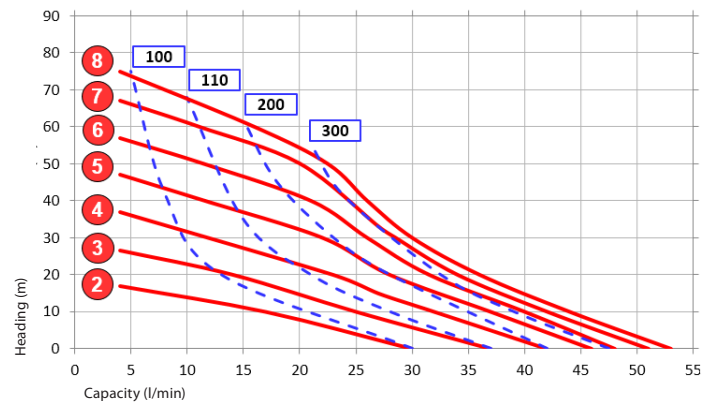
Fluid connections	<ul style="list-style-type: none"> • Tri-Clamp 1" • BSP • NPT
Air connections	6 mm
Max flow rate	52 l/m'
Max air pressure	8 bar
Displacement/cycle	70
Max size solids	3 mm

bar Air pressure
main supply

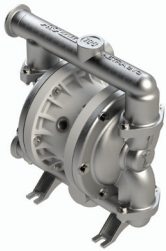
l/min Air consumption



Dimensions



DDE SPN 100

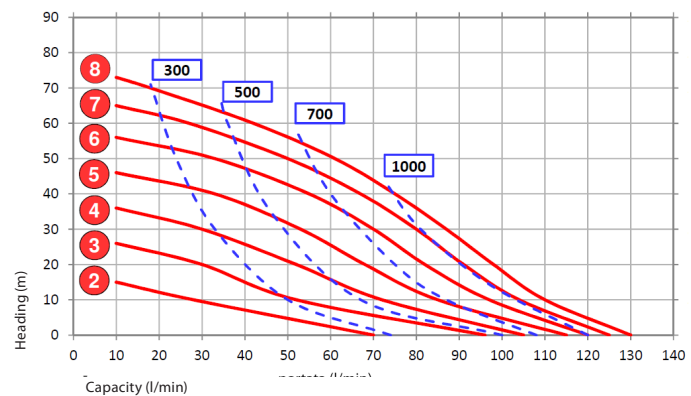


DIMENSIONS (mm)

AISI 316L **A** 273 **B** 170 **C** 288

TECHNICAL DATA

Fluid connections	<ul style="list-style-type: none"> 1" BSP • NPT* FLANGED DN25*
Air connections	<ul style="list-style-type: none"> 3/8" BSP • NPT*
Max flow rate	130 l/m'
Max air pressure	8 bar
Displacement/cycle	240
Max size solids	5,5 mm



DDE SPN 400

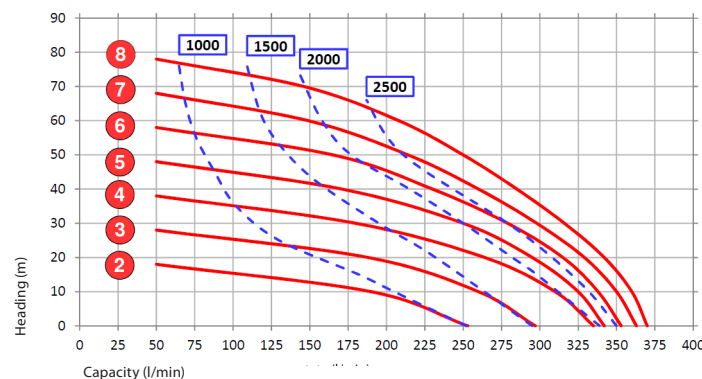


DIMENSIONS (mm)

AISI 316L **A** 400 **B** 263* **C** 501

TECHNICAL DATA

Fluid connections	<ul style="list-style-type: none"> • Tri-Clamp 2"
Air connections	<ul style="list-style-type: none"> 1/2" BSP • NPT*
Max flow rate	370 l/m'
Max air pressure	8 bar
Displacement/cycle	1.340
Max size solids	7 mm



*with muffler: 317 mm

TECHNICAL DATA DDE SPN

ASTRA^{evo}FOOD

30 • 60 • 100 • 160 • 400 • 650

DDE SPN 60

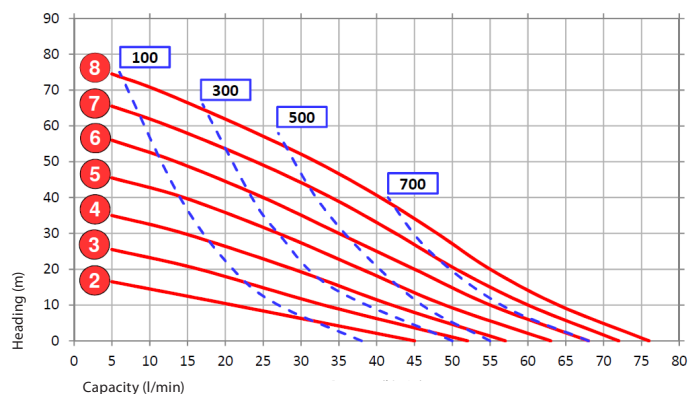


DIMENSIONS (mm)

AISI 316L A 247 B 160 C 253

TECHNICAL DATA

Fluid connections	<ul style="list-style-type: none"> • Tri-Clamp 1" • BSP • NPT
Air connections	<ul style="list-style-type: none"> • 1/4" BSP • NPT*
Max flow rate	76 l/m
Max air pressure	8 bar
Displacement/cycle	60
Max size solids	3,2 mm



DDE SPN 160

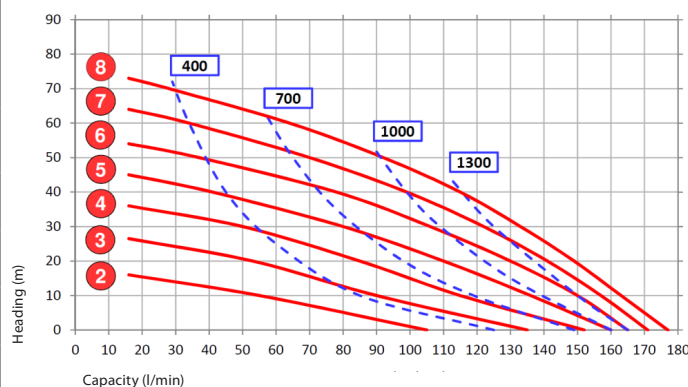


DIMENSIONS (mm)

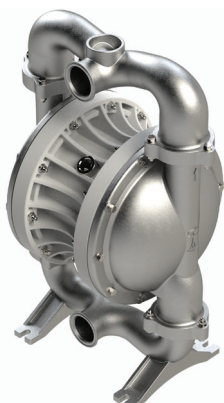
AISI 316L A 310 B 203 C 322

TECNICAL DATA

Fluid connections	<ul style="list-style-type: none"> • Tri-Clamp 1" 1/2 • BSP*
Air connections	<ul style="list-style-type: none"> • 3/8" BSP • NPT*
Max flow rate	130 l/m'
Max air pressure	8 bar
Displacement/cycle	240
Max size solids	6 mm



DDE SPN 650

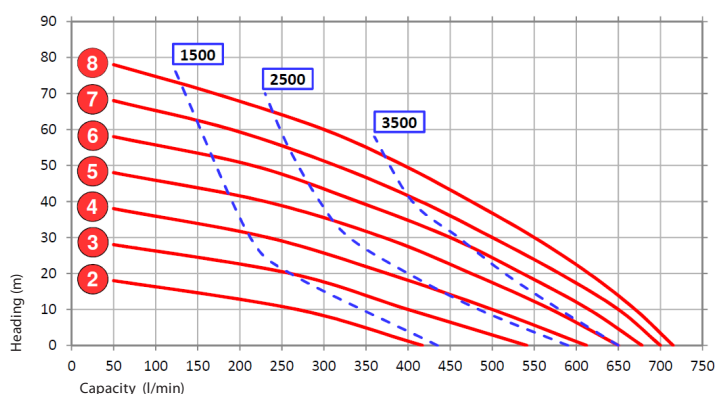


DIMENSIONS (mm)

AISI 316L A 479 B 345* C 695

TECHNICAL DATA

Fluid connections	<ul style="list-style-type: none"> • Tri-Clamp 2 1/2" • BSP*
Air connections	<ul style="list-style-type: none"> • 3/4" BSP • NPT*
Max flow rate	715 l/m'
Max air pressure	8 bar
Displacement/cycle	3.820
Max size solids	9 mm



*with muffler: 381 mm

CONFIGURATION		
Body materials	①	• AISI 316L Electro-polished
Diaphragms	②	• NBR+PTFE
Balls	③	• PTFE • AISI 316
Seat balls	④	• AISI 316 • UPPE
O-ring	⑤	• PTFE



FOOD		PHARMACEUTICAL / COSMETICS		VARIOUS INDUSTRIES	
Products	cPs	Products	cPs	Products	cPs
Butter	50.000	Toothpaste	200.000	SAE70 oil	18.000
Mayonaise	6.000	Glycerine	1.400	Barbotine	50.000
Honey	1.500÷3.000	Shampoo	250	Lubricant grease	2.000
Marmelade	<1.000			Mineral oil	800
Tomato sauce	180			SAE30 oil	350
Yogurt	100			Paint	300
Olive oil	100	PRODUCTS' VISCOSITY			

APPLICATIONS

These pumps are usually used to transfer or to remove the products from the mixing contains or storage basins or to pack them in bottles or similar containers.

The air operated double diaphragm pumps **ASTRAevo FOOD** are constructed with materials compliant with the **FDA regulation**: the wet parts are made of AISI 316 electro-polished and the surface finish is made of 125 Ra (average 2,7 Qm) both certified for food applications.





ASTRAevo FOOD (DDE SPN 30) installed in a pharmaceutical plant in Europe.

ACCESSORIES

- **ARDROP** (Dosing pneumatic system)
- **ARAIR** (Air regulation kit)
- **ARCONTROL** (Pump monitoring kit)
- **ARDRUM** (Drum kit)



- **ARGEMINI** (2-liquid pumping kit)
- **ARCOMBI** (Mobile emergency kit)
- **ARFLEX** (Anti-vibration connections kit for pump/plant) 
- **ARGARD** (Diaphragm leakage detector) 

MECH-SEALED
& MAG-DRIVEN
CENTRIFUGAL
PUMPS

AIR-METERING
& AODD PUMPS
PULSATION
DAMPENERS

SELF-PRIMING
PUMPS



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