

ASTRA SOLID

DDS

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

MADE OF SOLID-BLOCK

UHMW-PE

from 1/2" to 2"

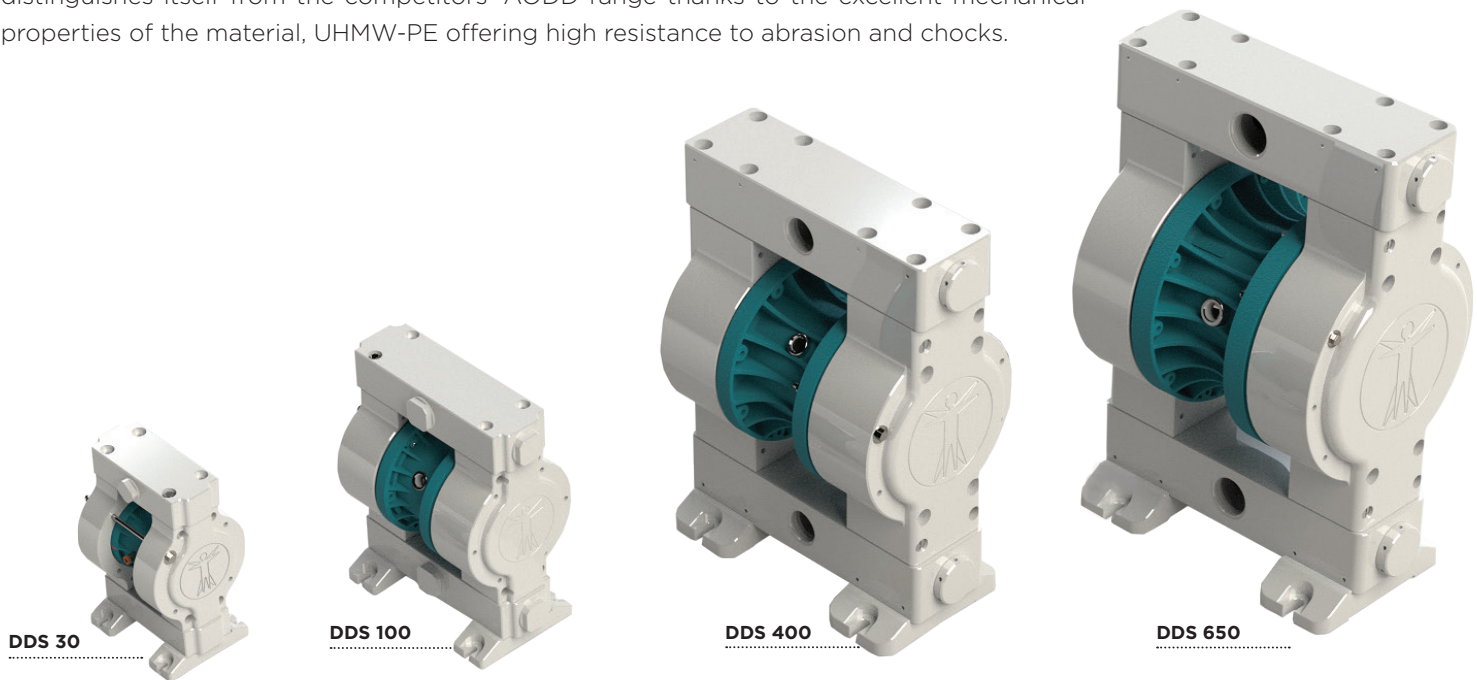


SINCE 1975

EN

MADE OF SOLID-BLOCK UHMW-PE

ARGALAIR team has made a new AODD range using the latest technology trends and the best materials on the market. **ASTRASolid** range is **made of solid-block UHMW-PE** and distinguishes itself from the competitors' AODD range thanks to the excellent mechanical properties of the material, UHMW-PE offering high resistance to abrasion and chocks.



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.

BODY MATERIALS' PROPERTIES

The **UHMW-PE** is a linear polyethylene with a higher molecular weight comparing to the standard PE. It offers an optimal abrasion resistance, chock resistance, auto-lubricating and anti-friction properties, as well as excellent mechanical characteristics, even into cryogenic conditions.

This material offers extra properties:

- stress resistance
- low-friction
- very high resistance to acids, alkalis and basic acids
- large temperature range from -40°C to 70°C

PNEUMATIC DISTRIBUTOR

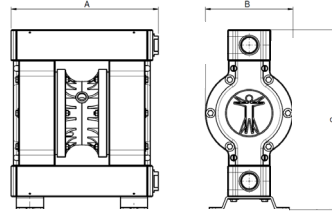
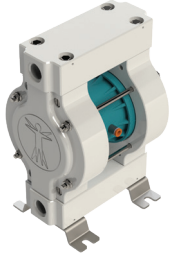
ARGAL's pneumatic distributor is a 5-component construction with the advantages of being faster in the operation and of having bigger air unloading capacities, which increases the pump efficiency and reducing lower air consumption. Plus, the use of antiabrasive and autolubricating polymers helps in reducing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

ASTRASolid series is a complete solution for transferring operations, as well as dosing and injecting operations of abrasive, corrosive or viscous liquids with high performances and reduced air consumption

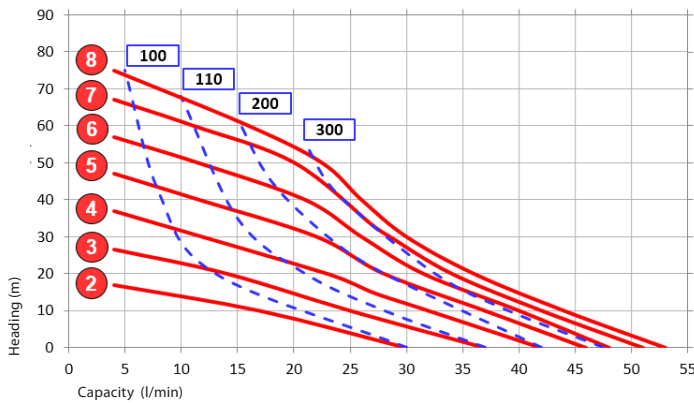
WHY ASTRASolid?

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

DDS 30



| DIMENSIONS (mm) | |
|-----------------|-----|
| A | 170 |
| B | 140 |
| C | 260 |

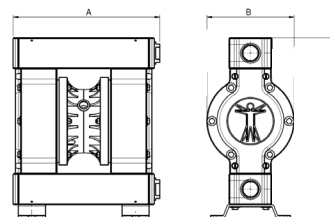
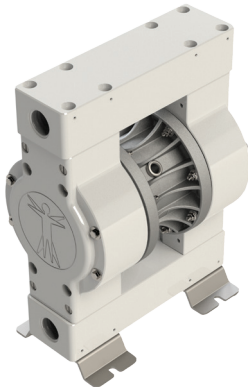


| TECHNICAL DATA | |
|---------------------------|---------------------------------|
| Fluid connections | 1/2" BSP • NPT* • FLANGED DN15* |
| Air connections | 6 mm |
| Max flow rate | 52 l/m' |
| Max air pressure | 8 bar |
| Displacement/cycle | 70 |
| Max size solids | 3 mm |

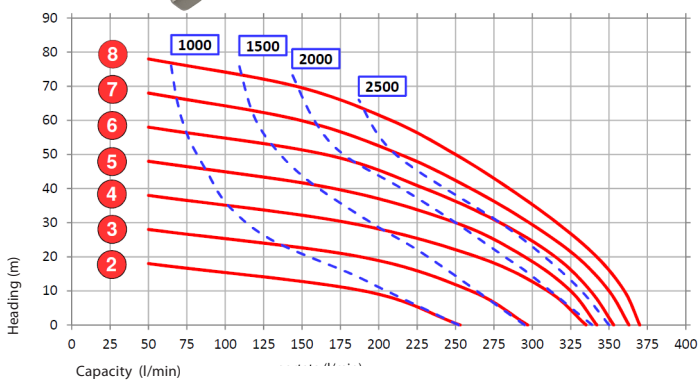
bar Air pressure main supply

NI/min Air Consumption

DDS 400



| DIMENSIONI (mm) | |
|-----------------|-----|
| A | 433 |
| B | 262 |
| C | 575 |



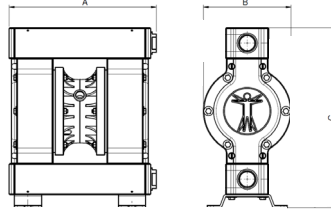
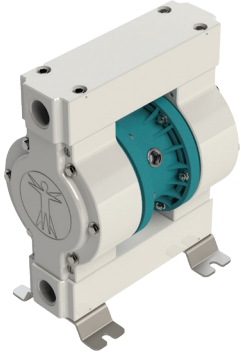
| DATI TECNICI | |
|---------------------------|----------------------------------|
| Fluid connections | FLANGED DN40 • 1 1/2" BSP • NPT* |
| Air connections | 1/2" BSP • NPT* |
| Max flow rate | 375 l/m' |
| Max air pressure | 8 bar |
| Displacement/cycle | 1.340 |
| Max size solids | 7 mm |

bar Air pressure main supply

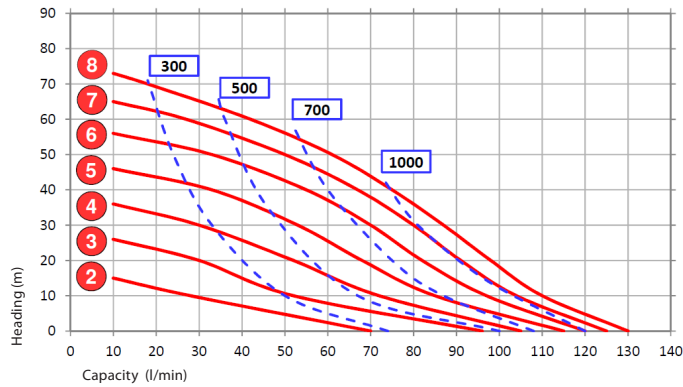
NI/min Air Consumption

30 • 100 • 400 • 650

DDS 100



| DIMENSIONI (mm) | |
|-----------------|-----|
| A | 285 |
| B | 170 |
| C | 349 |

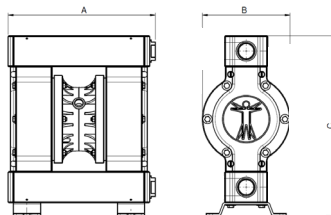
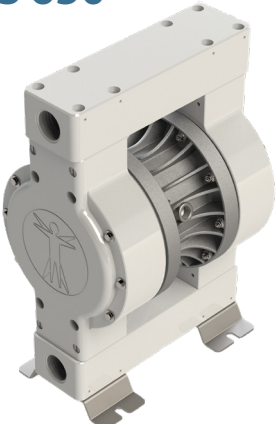


| DATI TECNICI | |
|---------------------------|-------------------------------|
| Fluid connections | 1" BSP • NPT* • FLANGED DN25* |
| Air connections | 3/8" BSP • NPT* |
| Max flow rate | 130 l/m' |
| Max air pressure | 8 bar |
| Displacement/cycle | 240 |
| Max size solids | 5,5 mm |

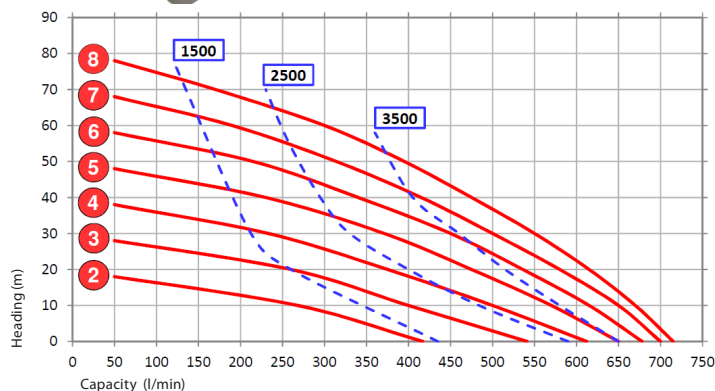
bar Air pressure main supply

NI/min Air Consumption

DDS 650



| DIMENSIONI (mm) | |
|-----------------|-----|
| A | 493 |
| B | 345 |
| C | 710 |



| DATI TECNICI | |
|---------------------------|------------------------------|
| Fluid connections | FLANGED DN50 • 2" BSP • NPT* |
| Air connections | 3/4" BSP • NPT* |
| Max flow rate | 715 l/m' |
| Max air pressure | 8 bar |
| Displacement/cycle | 3.820 |
| Max size solids | 9 mm |

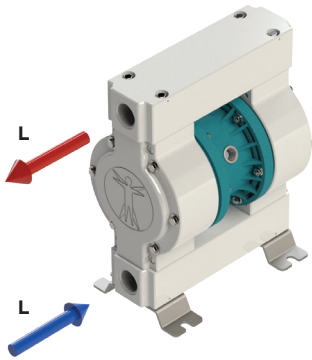
bar Air pressure main supply

NI/min Air Consumption

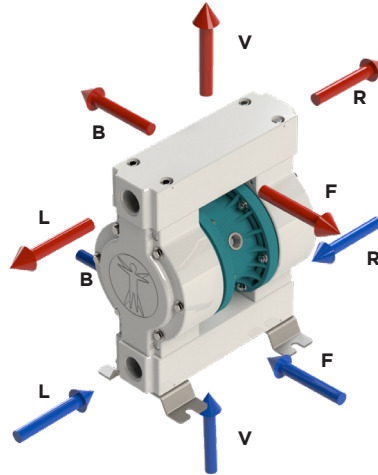
FOR A TAILORED-MADE SOLUTION

CONNECTIONS

STANDARD⁽¹⁾



UPON REQUEST²⁾



STANDARD connections configuration scheme (1) (threaded connection BSP "L-L") is referred to all Plastic and Aluminum pumps. Upon request, pumps can be set as per scheme (2).

TEMPERATURES

| CONFIGURATION | PE with plastic center block | PE with metal center block (only for DDS 400 e 650) |
|---------------------------|------------------------------|--|
| TEMPERATURE min - max* | -5°C - +40°C | -40°C - +40°C |

INTERNAL STRUCTURE

| | | | |
|--------------------|---|---|--------------------------------------|
| Body materials | 1 | • PE | |
| Diaphragms | 2 | Fluoropolymer | • TFM (PTFE modificato) |
| | | Thermoplastics | • TPE (Keyflex®) • TPV (Santoprene®) |
| | | Reinforced | • FKM (Viton®) • EPDM • NBR |
| Valve balls | 3 | • PTFE • AISI 316 • EPDM • NBR • FKM (Viton®) | |
| Valve seats & cage | 4 | • PE | |
| O-ring | 5 | • EPDM • FKM (Viton®) • NBR • PTFE | |

ASTRASolid DXE ATEX version

ASTRASolid series are ideal for operations into explosive atmospheres **Zona 2 (Serie II 3/3 IIB T4)**.

ACCESSORIES

- **ARDROP** (Pneumatic batch dosing system) 
- **ARAIR** (Air regulation kit)
- **ARFORCE** (Pump monitoring kit)
- **ARDRUM** (Drum transfer kit)
- **ARGEMINI** (2-liquid pumping kit)
- **ARCOMBI** (Mobile emergency kit)
- **ARFLEX** (Pump/plant antivibration connections) 
- **ARGARD** (Diaphragm leakage detector) 

MECH-SEALED
& MAG-DRIVEN
CENTRIFUGAL
PUMPS

AIR-METERING
& AODD PUMPS
PULSATION
DAMPENERS

SELF-PRIMING
PUMPS



ARGAL srl

Via Labirinto, 159 - 25125 BRESCIA
Tel. 030 3507011 | argal@argal.it |
www.argalpumps.com



ARGAL AMERICAS

597 Prescott Lane, Gurnee IL, 60031 USA
Tel. (847) 361-8782 | a.malik@argal.it



ARGAL DALIAN

N° 2 Xuexi Street
DALIAN HIGH-TECH INDUSTRIAL ZONE
info@argal.cn | www.argalchina.com



VERTICAL SUMP
PUMPS