MISTRAL • AIRSATURN AODD PUMPS

WITH AISI 316L CENTRAL BLOCK

WORLD FIRST FRP

MAIN APPLICATIONS

- **Off-Shore platforms**
- **Marine**
- **Chemical process**
- **Cleaning/Cement mixer sewage**
- **Mining**

MISTRAL

200 (2”) - 300 (3”) - 400 (4”)

Zone 1

MISTRAL range represents the safest and most efficient solution for heavy dangerous and even explosive applications but also for process applications.

The entire construction of the body pumps and of the distributor is realised in AISI 316L (low carbon content) making the pumps extremely resistant to corrosion, robust and perfect **for continuous operation.**

BR AISI 316 L Alu DX (PTFE diaphragms) (NBR, EPDM, SANTOPRENE diaphragms)

MISTRAL 300 (3”)

Zone 2

The UHMW-PE Mistral (more than 1.000.000 molecules).
Thanks to its excellent mechanical properties and low friction coefficient, this auto-lubricant material represents the ideal solution **for highly abrasive or wear applications.**

UPPE (membrane in PTFE) (membrane in NBR, EPDM, SANTOPRENE)

AIRSATURN
300 (3") - 400 (4")

Zona 2

A World First by ARGALAIR,

AIRSATURN is the new range of AODD pumps realised in fiberglass **(FRP)** available in size 3" and 4".

A unique product on the market to this date thanks to the **composite materials** used: **vinyl ester resin reinforced with long strands of fiberglass** moulded with the RTM technique.

Plus:

- high chemical resistance (the highest amongst resins and polyesters)
- mechanical strength comparable to some metal alloys;
- dimensional stability, characteristic of the resins becoming irreversibly insoluble and infusible after catalysis;
- abrasive and wear resistance;
- light weight;
- esistance to flame propagation in case of fire.

FRP (PTFE diaphragms) (NBR, EPDM, SANTOPRENE diaphragms)

MATERIALS PROFILE Pump Casings

Pump casings of **AIRSATURN** are of the following types of FRP:

V1G standard vinyl ester resin for **general use**;
V1A mixture of vinyl ester resin for **abrasive liquids**;
V1C mixture of vinyl ester resin for **liquids with chlorine**;
V1F mixture of vinyl ester resin for **liquids with fluorine**.

The significant advantages of the distribution system:

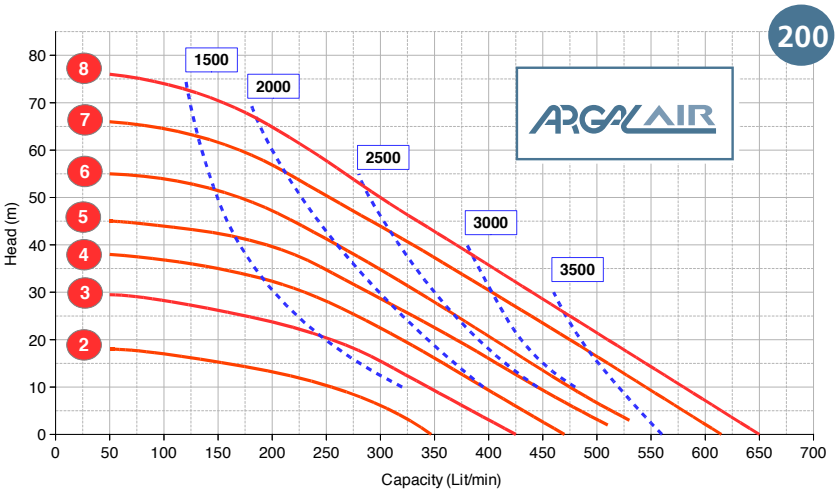
- **simple and maintenance free 5-component construction,**
- material of construction resistant to wear and chemicals for longer lifetime without damage,
- affordable cost,
- High-shift speed and high-discharge speed of the exhaust air,
- low consumption as consequence of the fine tuned air quantity supplied to the diaphragms.

"PROGRESS" VALVE

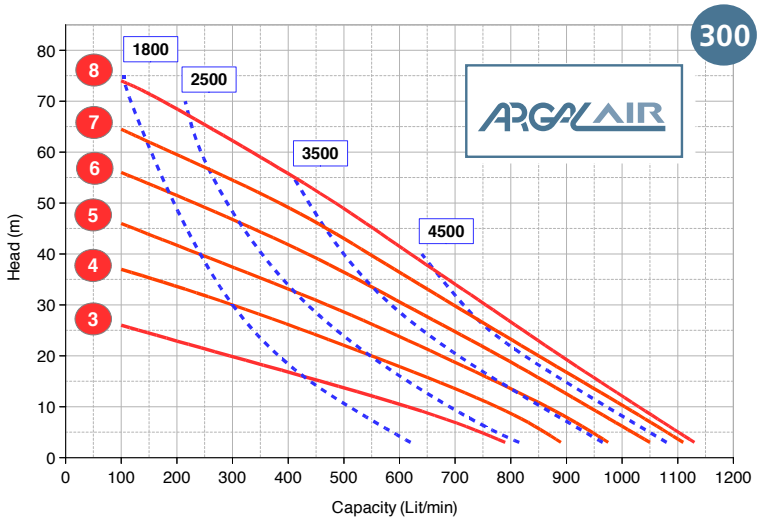
Argal designed a special adaptive air distributor to turn on and off the pump and to fine tune the air flow consumption to the liquid pumped and the required performance with a real reduction of consumption and operational cost.

The materials used, the switching speed and the distribution spool shift speed all highly **resist to the formation of ice** that detaches itself from the surface to get then ejected from the discharge tube. Possible remaining will never affect the pump operation.

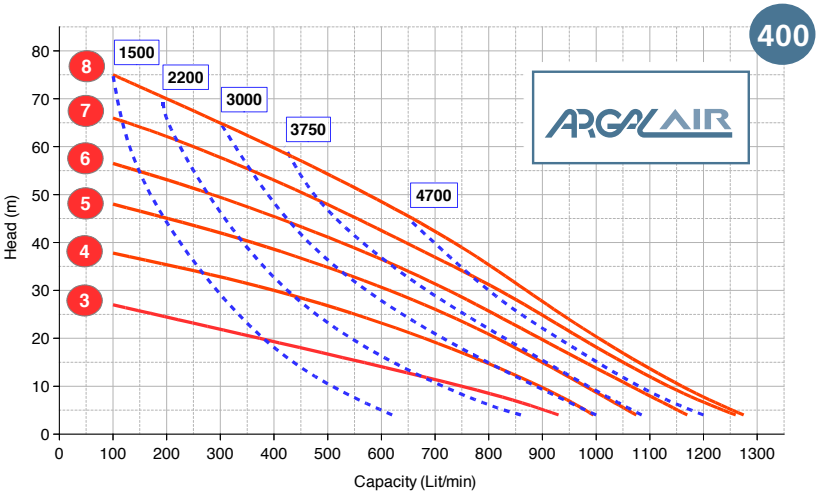
GENERAL CURVES



COMPOSITION MISTRAL 2”	
Wetted parts	• AISI 316L • DUPLEX • BRONZE
Diaphragms	• EPDM • NBR • HYTREL • SANTOPRENE • HYTREL +PTFE
Valve Balls	• EPDM • NBR • PTFE • AISI 316L
Valve Seats	• POLYURETHANE • UPPE • PVDF • AISI 316L
Gaskets	• EPDM • NBR • FKM • FEP



COMPOSITION MISTRAL • AIRSATURN 3”	
Wetted parts	• AISI 316L • DUPLEX • BRONZE • FRP
Diaphragms	• EPDM • NBR • EPDM+PTFE • NBR+PTFE
Valve Balls	• EPDM • NBR • PTFE • AISI 316L • FRP
Valve Seats	• POLYURETHANE • UPPE • PVDF • AISI 316L
Gaskets	• EPDM • NBR • FKM • FEP

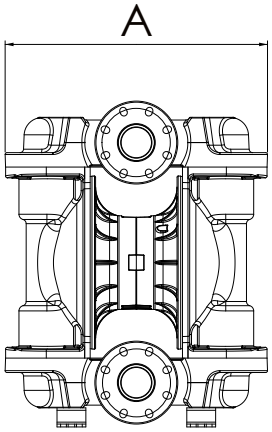


COMPOSITION MISTRAL • AIRSATURN 4”	
Wetted parts	• AISI 316L • DUPLEX • BRONZE FRP
Diaphragms	• EPDM • NBR • EPDM+PTFE • NBR+PTFE
Valve Balls	• EPDM • NBR • PTFE • AISI 316L • FRP
Valve Seats	• POLYURETHANE • UPPE • PVDF • AISI 316L
Gaskets	• EPDM • NBR • FKM • FEP

bar Air Pressure main supply **Nl/min** Air consumption

CHARACTERISTICS AND DIMENSIONS

TECHNICAL DATA	200 (2”)	300 (3”)	400 (4”)
Maximum Capacity Litres/Minute	680	1100	1280
Materials of Pump Housings & Central Block	AISI 316L • BRONZE DUPLEX	AISI 316L • BRONZE DUPLEX • UPPE • FRP	AISI 316L • BRONZE DUPLEX • FRP
Fluid Port (ISO-ANSI Flange) Intake & Discharge Connections	2” BSP	3” DN80	4” DN100
Air Inlet	½” F NPT	¾” F NPT	¾” F NPT
Air Exhaust (included silencer)	¾” F NPT	1” F NPT	1” F NPT
Maximum Working Pressure	8 bar	8 bar	8 bar
Maximum Cycles per Minutes	140	96	96
Max. Discharge Volume/Cycles	3,7 litri	8,5 litri	8,5 litri
Maximum Solids Particle Size	9 mm	11 mm	13 mm
Suction Lift (dry)	6 m	6 m	4,5 m



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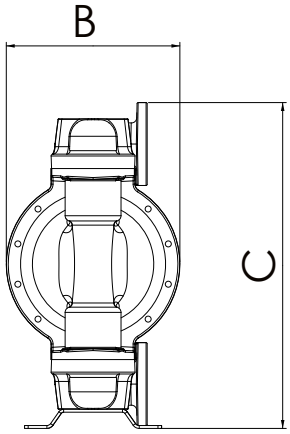
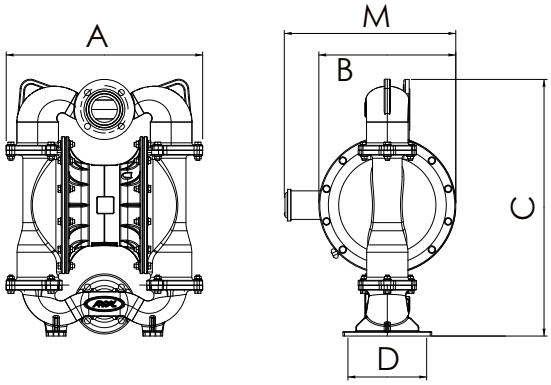


AIRSATURN FRP

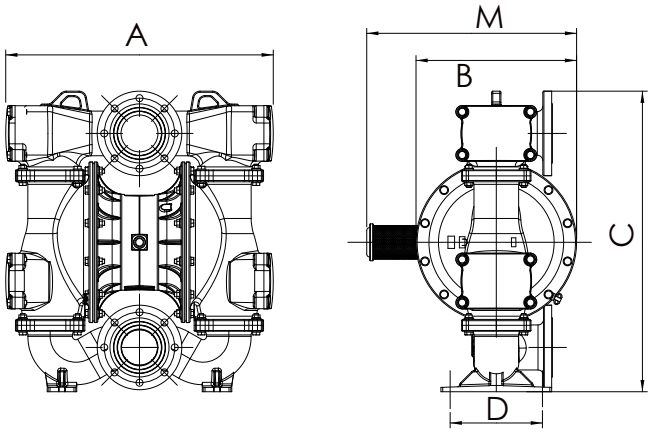
DIMENSIONS (mm)	300 (3”)	400 (4”)
A	662	728
B	436	482
C	803	904

TEMPERATURES	
DIAPHRAGM MATERIALS	**TEMP. °C MIN/MAX**
EPDM	+100 -35
NBR	+80 -20
EPDM + PTFE	+120 -35
NBR + PTFE	+80 -20

MISTRAL BR AISI 316 L Alu DX

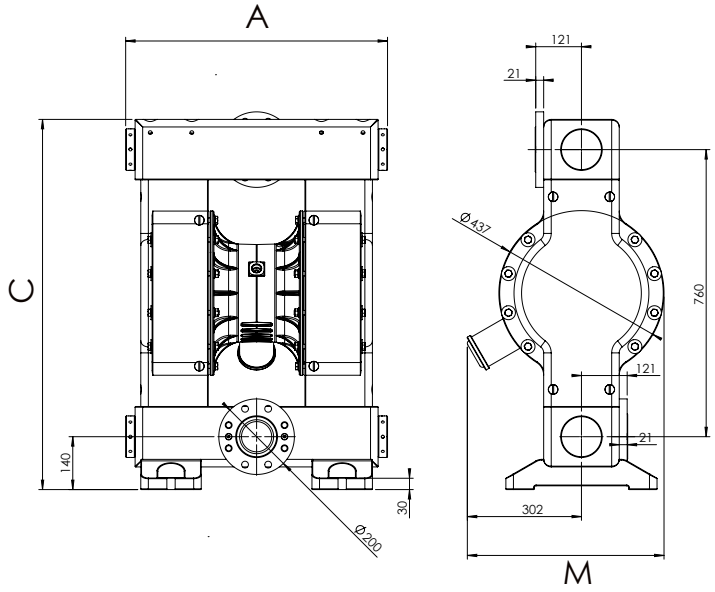


DIMENSIONS	200 (2”)	300 (3”)
A	440	624
B	340	435
C	707	815
D	220	250
M	460	570



DIMENSIONS	400 (4”)
A	725
B	435
C	815
D	235
M	570

MISTRAL UPPE



DIMENSIONS	300 (3”)
A	693
C	980
M	520