PlusAir

STANDARD PUMP Europe

2022 - Catalogue

PlusAir - the brand of Air-Operated Double-Diaphragm pumps

PlusAir

STANDARD PUMP Europe

PlusAir is a product line of Standard Pump Europe and offers a wide range of AODD pumps for many different industries, e.g. Automotive, Chemicals, Paints, Inks or Wastewater to meet requirements in all industries.

PlusAir pumps are made by one of the world-wide leading pump manufacturers who has more than half a century of experience in developing and making AODD pumps.

PlusAir AODD pumps ranging from the light weight Polypropylene (1,3kg) version with a maximum capacity of 11,7 l/m to the stainless steel version weighing 104 kg with a maximum flow rate of 814 l/m.

PlusAir pumps are available in Polypropylene, Groundable Acetal, Aluminium, Stainless Steel, Cast Iron and PVDF.

AtEx certified pumps are available in many different sizes and many body and diaphragm materials.

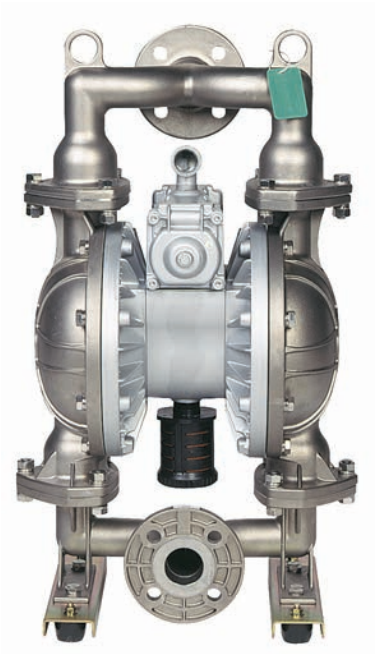
PlusAir Advantages and Characteristics

- **Handle a wide variety of fluids with high solids content:** No close fitting or rotating parts so liquid with high solids content and/or particle size can be easily pumped.
- **Self Priming:** The PlusAir pump design (incorporating internal check valves) provides high suction lift even at dry start-up and with heavier fluids.
- **Ability to run dry:** No close fitting or sliding parts are at risk—the pump can run dry without damage.
- **Variable flow rate and discharge pressure:** PlusAir pumps will run at any setting within their operating range simply by adjusting the air inlet pressure and system conditions. One pump can fit a broad spectrum of applications.
- **Portable/Simple Installation:** PlusAir pumps transport easily to the application site. Simply connect an air supply, attach fluid connections, and the pump is ready to perform. There are no complex controls to install or operate.
- **Dead Head:** The discharge line can be closed with no damage or wear. The pump will simply slow down and stop.
- **Shear sensitive:** The gentle nature and minimal parts contact with the liquid make PlusAir pumps an excellent choice for shear sensitive fluids.
- **Safe Operation:** Powered by compressed air, PlusAir pumps are intrinsically safe.
- **Submersible:** If external components are compatible, Plus pumps can be submerged in liquids by simply running the exhaust line above the liquid level.
- **Pumping efficiency remains constant:** There are no rotors, gears, or pistons, which wear over time and lead to the gradual decline in performance/flow rate.

PlusAir

STANDARD PUMP Europe

Table of Contents



If the pump body material is made of Kynar, the following dual use export restrictions have to be observed.

Please note that EC regulation no. 428/2009, concerning products of dual use, comprises the listed items. We refer to this regulation and the special rules applying for export to countries outside the EU. Furthermore, we refer to information and guidelines in www.ebst.dk Danish Business Authority (DBA). Finally, we wish to emphasize that these products are subject to control if they are exported to a country outside the EU. This means that export permit must be issued by the appropriate authorities (in Denmark: DBA) Cat.no. 2B350i in the control list.

PlusAir

STANDARD PUMP Europe

PA-05 Series

Port Dimensions

Intake & discharge connection:	1/4” Female RC
Air inlet (incl. ball valve):	1/4" Female RC
Air exhaust (internal silencer):	3/8" Female RC

Maximum Liquid Temperature*

Fitted with Teflon® (PTFE) diaphragm

Pump Material	Temperature
Polypropylene (PPG)	82°C
Kynar® (PVDF)	100°C
Groundable Acetal	82°C
Aluminium (ADC-12)	100°C
Stainless Steel (316)	100°C

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

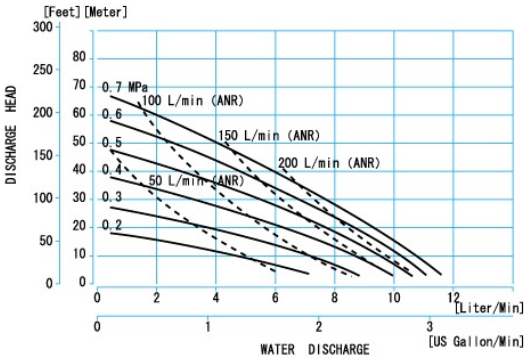
Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)
Discharge Volume Per Cycle: 29 cc
Maximum Cycles Per Minute: 400

Maximum Dry Suction Lift: 1,5 m

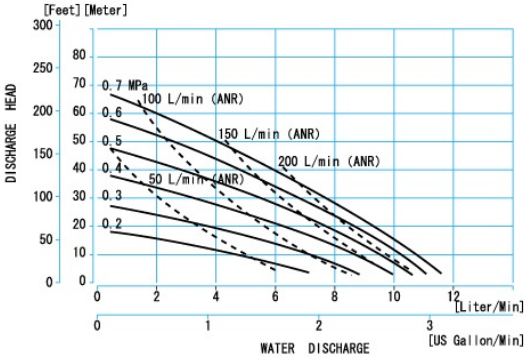
Air Motors: Standard: Ryton® air motor

Model Number	
Polypropylene (PPG)	PA05-FPT
Kynar® (PVDF)	PA05-FVT
Groundable Acetal	PA05-FDT
Aluminium (ADC-12)	PA05-FAT
Stainless Steel (316)	PA05-FST

Performance curve: PA-5FPT/FVT/FDT



Performance curve: PA-5FAT/FST



PlusAir

STANDARD PUMP Europe

PA-10/15 Series

Port Dimensions PA-10 series

Intake & discharge connection:	
Polypropylene (PPG)	3/8" Female RC

Port Dimensions PA-15 series

Intake & discharge connection:	
Polypropylene (PPG)	1/2" Female RC
Aluminum (ADC-12)	1/2" Female RC
Stainless Steel (316)	1/2" Female RC
Groundable Acetal	1/2" Female RC
Kynar® (PVDF)	1/2" Female RC

Air Inlet/Exhaust

Air inlet (incl. ball valve):	1/4" Female RC
Air exhaust (internal silencer):	3/8" Female RC

Maximum Liquid Temperature*

Diaphragm Material	Temperature
Neoprene	82°C
Buna N	82°C
Hytrel® (TPEE)	120°C
Santoprene® (TPO)	100°C
Viton® fluoroelastomer	120°C
Teflon® (PTFE)	100°C

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene and Groundable Acetal pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)
Discharge Volume Per Cycle: PA-10: 50 cc PA-15: 128cc

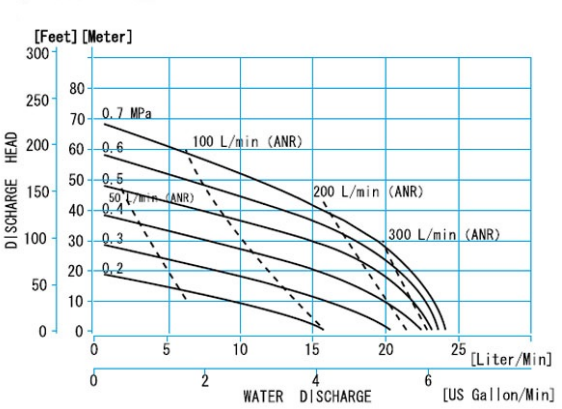
Maximum Dry Suction Lift

PA-10: All diaphragms: 1,5m
PA-15: Flat-type check valve: 2,4m, Ball-type check valve: 1,5m

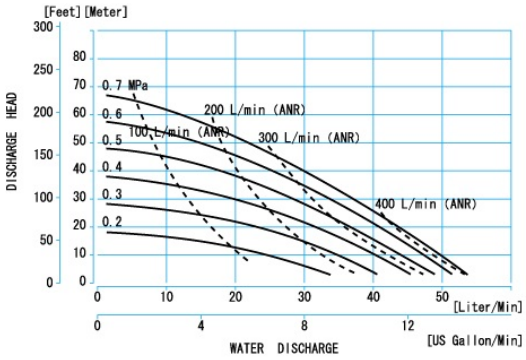
Maximum Cycles Per Minute: 400
Maximum Size Solid: 1,0mm

Air Motor: Standard: Ryton® air motor

Performance curve: PA-10



Performance curve: PA-15 BA/BS



Notes: Hytrel®-fitted pumps include BUNA wetted o-rings. Santoprene®-fitted pumps include EPDM wetted o-rings. Kynar® (PVDF) fitted with Santoprene®, Hytrel® or Teflon® include Teflon® o-rings. Flat valves are standard PTFE.

PlusAir

STANDARD PUMP Europe

PA-20 Series

Port Dimensions

Intake & discharge connection:	
Polypropylene (PPG)	3/4" Female RC
Aluminum (ADC-12)	3/4" Female RC
Stainless Steel (316)	3/4" Female RC
Air inlet (incl. ball valve):	3/8” Female RC
Air exhaust (incl. silencer):	3/4" Female RC

DN and ANSI flange also available - consult Standard Pump Europe A/S

Notes: Flange connections are equivalent to DIN and JIS 10K 20A

Maximum Liquid Temperature*

Diaphragm Material	Temperature
Neoprene	82°C
Buna N	82°C
Nordel™ (EPDM)	100°C
Hytrel® (TPEE)	120°C
Santoprene® (TPO)	100°C
Viton® fluoroelastomer (FKM)	120°C
Teflon® (PTFE)	100°C

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)
Discharge Volume Per Cycle: Rubber diaphragm: 615cc, PTFE diaphragm: 539cc
Maximum Cycles Per Minute: Rubber diaphragm: 195, PTFE diaphragm: 195

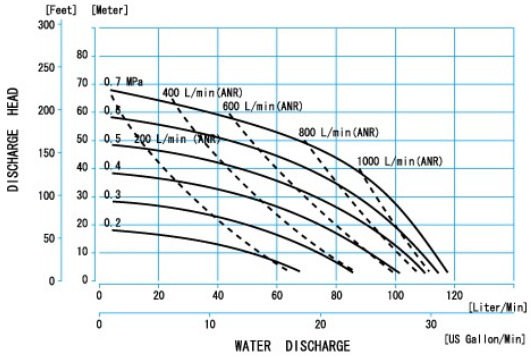
Maximum Size Solid: 2,0 mm (1/16")

Maximum Dry Suction Lift: Rubber-fitted pump capability: 5,5 m

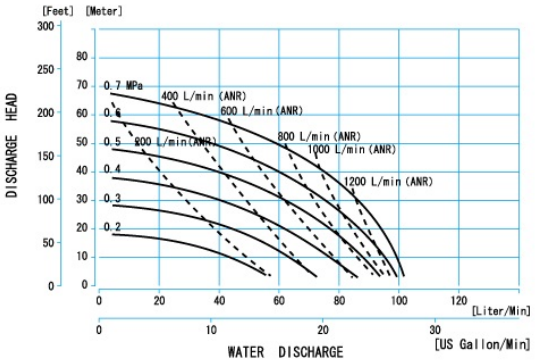
Air Motors:
Metal pumps standard with aluminum motor. Plastic pumps standard with PPG. Optional air motors: Teflon® -coated, Electroless Nickel Plate for aluminum air motor.

Notes: Hytrel® fitted pumps include BUNA-N wetted o-rings. Santoprene®-fitted pumps include EPDM wetted o-rings.

Performance curve: PA-20BA/BS/BP flange



Performance curve: PA-20BAT/BST/BPT flange



PlusAir

STANDARD PUMP Europe

PA-25 Series

Port Dimensions

Intake & discharge connection:	
Polypropylene (PPG)	1” Female RC
Kynar® (PVDF)	1” Female RC
Aluminum (ADC-12)	1" Female RC
Stainless Steel (316)	1" Female RC
Cast Iron	1” Female RC
Air inlet (incl. ball valve):	3/8" Female RC
Air exhaust (incl. silencer):	3/4" Female RC

DN and ANSI flange also available - consult Standard Pump Europe A/S

Notes: Flange connections are equivalent to DIN and JIS 10K 25A

Maximum Liquid Temperature*

Diaphragm Material	Temperature
Neoprene	82°C
Buna N	82°C
EPDM	100°C
Hytrel® (TPEE)	120°C
Santoprene® (TPO)	100°C
Viton® fluoroelastomer	120°C
Teflon® (PTFE)	100°C

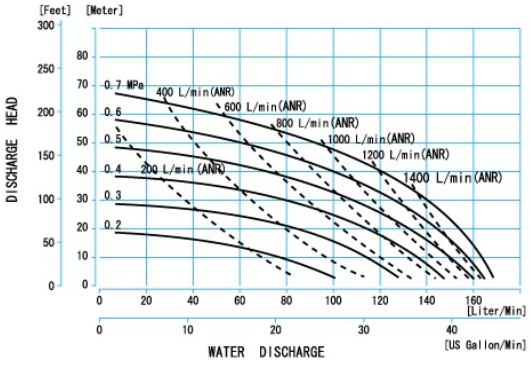
* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)
Discharge Volume Per Cycle: Rubber diaphragm: 833cc
PTFE diaphragm: 787cc
Maximum Cycles Per Minute: Rubber diaphragm: 210, PTFE diaphragm: 210

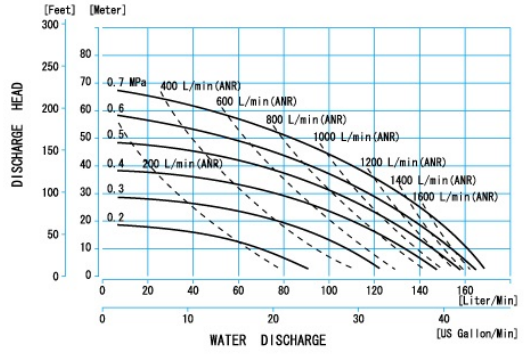
Maximum Size Solid: 4,8 mm (3/16")
Maximum Dry Suction Lift: Rubber-fitted pump capability: 5,5 m

Air Motors: Metal pumps standard with aluminium motor - Plastic pumps standard with PPG motor.
Optional air motors: Teflon®-coated, Electroless Nickel Plate for aluminium air motor.

Performance curve: PA-25BA/BS/BF/BP/BV flange



Performance curve: PA-25BAT/BST/BFT/BPT/ BVT flange



Notes: All Polypropylene, Aluminum, Cast Iron, and SS Hytrel® fitted pumps include BUNA-N wetted o-rings. Santoprene®-fitted pumps include EPDM wetted o-rings, Kynar® (PVDF) pumps fitted with Santoprene®, Hytrel®, or Teflon® include Teflon® check balls & o-rings.

PlusAir

STANDARD PUMP Europe

PA-40 Series

Port Dimensions

Intake & discharge connection:	
Polypropylene (PPG)	1-1/2" DN40 PN10
Kynar® (PVDF)	1-1/2" DN40 PN10
Aluminum (ADC-12)	1-1/2" DN40 PN10
(Combi flange with tapped 1/1-2" Female RC)	
Stainless Steel (316)	1-1/2" DN40 PN10
(Combi flange with tapped 1/1-2" Female RC)	
Cast Iron	1-1/2" Female RC
Air inlet (incl. ball valve):	1/2" Female RC
Air exhaust (incl. silencer):	1" Female RC

Notes: Flange connections are equivalent to DIN and JIS 10K 40A

Maximum Liquid Temperature*

Diaphragm Material	Temperature
Neoprene	82°C
Buna N	82°C
EPDM	100°C
Hytrel® (TPEE)	120°C
Santoprene® (TPO)	100°C
Viton® fluoroelastomer	120°C
Teflon® (PTFE)	100°C

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)

Discharge Volume Per Cycle: Rubber diaphragm: 2,74 liters
PTFE diaphragm: 1,40 liters

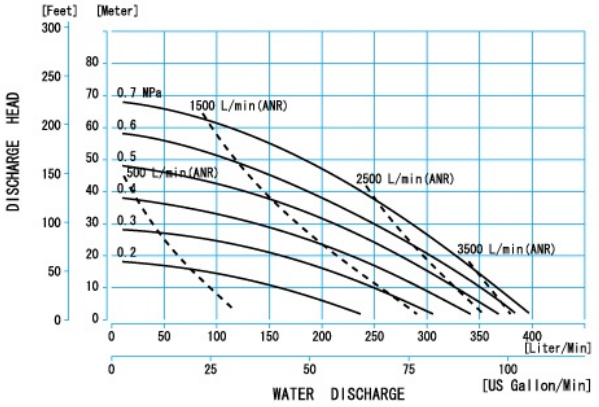
Maximum Cycles Per Minute: Rubber diaphragm: 148, PTFE diaphragm: 270

Maximum Size Solid: 7,0 mm (9/32")

Maximum Dry Suction Lift: Rubber-fitted pump capability: 5,5 m

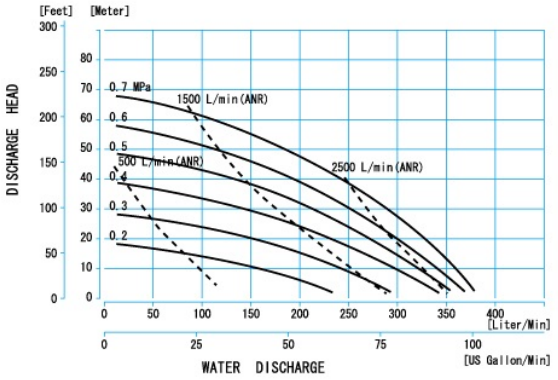
Air Motor: Standard: Aluminum: Optional: Teflon®-coated or Electroless Nickel Plate

Performance curve: PA-40BA/BS/BF



Please consult us for detailed PTFE diaphragm curves

Performance curve: PA-40BP/BV



Notes: All Polypropylene, Aluminum, Cast Iron, and SS Hytrel® fitted pumps include BUNA-N wetted o-rings. Santoprene®-fitted pumps include EPDM wetted o-rings, Kynar® (PVDF) pumps fitted with Santoprene®, Hytrel®, or Teflon® include Teflon® check balls & o-rings.

PlusAir

STANDARD PUMP Europe

PA-50 Series

Port Dimensions

Intake & discharge connection:	
Polypropylene (PPG)	2” DN50 PN10
Kynar® (PVDF)	2” DN50 PN10
Aluminum (ADC-12)	2" DN50 PN10
(Combi flange with tapped 2” Female RC)	
Stainless Steel (316)	2" DN50 PN10
(Combi flange with tapped 2” Female RC	
Cast Iron	2” Female RC
Air inlet (incl. ball valve):	3/4” Female RC
Air exhaust (incl. silencer):	1" Female RC
Notes: Flange connections are also equivalent to DIN and JIS 10K 50A and ANSI 150 2	

Maximum Liquid Temperature*

Diaphragm Material	Temperature
Neoprene	82°C
Buna N	82°C
EPDM	100°C
Hytrel® (TPEE)	120°C
Santoprene® (TPO)	100°C
Viton® fluoroelastomer	120°C
Teflon® (PTFE)	100°C

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)

Discharge Volume Per Cycle: Rubber diaphragm: 4,25 liters
PTFE diaphragm: 2,61 liters

Maximum Cycles Per Minute: Rubber diaphragm: 146, PTFE diaphragm: 220

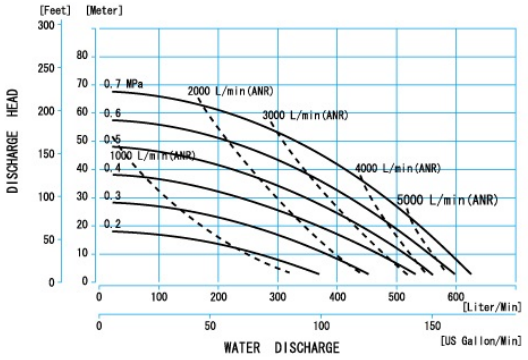
Maximum Size Solid: 8,0 mm (5/16")

Maximum Dry Suction Lift: Rubber-fitted pump capability: 5,8 m

Air Motor: Standard: Aluminum, Optional: Teflon®-coated or Electroless Nickel Plate

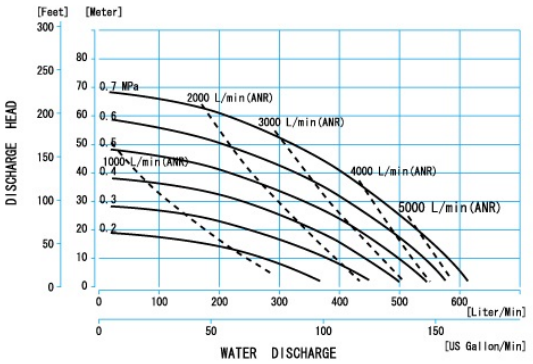
Notes: All Polypropylene, Aluminum, Cast Iron, and SS Hytrel® fitted pumps include BUNA-N wetted o-rings. Santoprene®-fitted pumps include EPDM wetted o-rings, Kynar® (PVDF) pumps fitted with Santoprene®, Hytrel®, or Teflon® include Teflon® check balls & o-rings.

Performance curve: PA-50BA/BS/BF



Please consult us for detailed PTFE diaphragm curves

Performance curve: PA-50BP/BV



PlusAir

STANDARD PUMP Europe

PA-80 Series

Port Dimensions

Intake & discharge connection:	
Polypropylene (PPG)	3” DN80 PN10
Kynar® (PVDF)	3” DN80 PN10
Aluminum (ADC-12)	3" DN80 PN10
(Combi Flange with tapped 3” Female RC)	
Stainless Steel (316)	3" DN80 PN10
(Combi Flange with tapped 3” Female RC)	
Cast Iron	3” Female RC
Air inlet (incl. ball valve):	3/4” Female RC
Air exhaust (incl. silencer):	1" Female RC
Flange connections are equivalent to DIN and JIS 10K 80A and ANSI 150 3	

Maximum Liquid Temperature*

Diaphragm Material	Temperature
Neoprene	82°C
Buna N	82°C
EPDM	100°C
Hytrel® (TPEE)	120°C
Santoprene® (TPO)	100°C
Viton® fluoroelastomer	120°C
Teflon® (PTFE)	100°C

* The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 82°C regardless of diaphragm material.

Air Supply Pressure (All Models): 1,4 – 7 Bar (20 – 100 PSI)

Discharge Volume Per Cycle: Rubber diaphragm: 8,57 liters
PTFE diaphragm: 3,8 liters

Maximum Cycles Per Minute: Rubber diaphragm: 95, PTFE diaphragm: 160

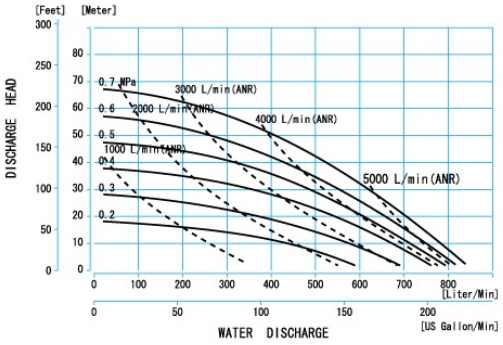
Maximum Size Solid: 10,0 mm (13/32")

Maximum Dry Suction Lift: Rubber-fitted pump capability: 5,8 m

Air motor: Standard: Aluminium, Optional: Teflon®-coated or Electroless Nickel Plate

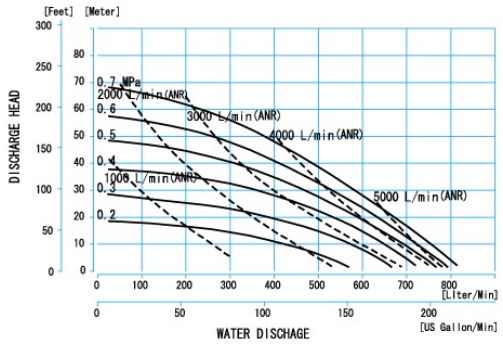
Notes: All Polypropylene, Aluminum, Cast Iron, and SS Hytrel® fitted pumps include BUNA-N wetted o-rings. Santoprene®-fitted pumps include EPDM wetted o-rings.

Performance curve: PA-80BA/BS/BF



Please consult us for detailed PTFE diaphragm curves

Performance curve: PA-80BP

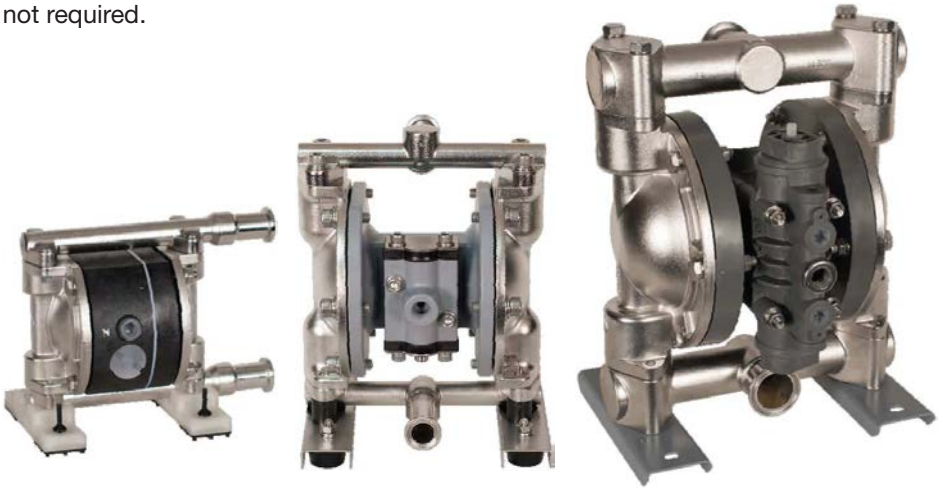


PlusAir

STANDARD PUMP Europe

FDA Compliant Pumps

PlusAir FDA Compliant Pumps are specifically designed for Food Ingredients, Pharmaceutical & Cosmetic applications where 3A, USDA or EHEDG Standards are not required.



Features

- 316 stainless steel Housings—passivated Satin finish
- Self priming
- Dry run without damage
- FDA compliant elastomers
- Portable
- Sanitary clamp fittings
- No mechanical seals, couplings or motors
- Handles a wide variety of fluids with high solids content
- Variable flow rates

Applications

- Food Ingredients
- Winery
- Brewery
- Cosmetics
- Pharmaceutical
- Pre Processes
- And many more…

Nonstalling air valve

Outside accessible nonstalling air valve includes a non-centering, spring assisted shuttle, ensuring a positive shift every time.

Nonstalling air valve

PlusAir

STANDARD PUMP Europe

FDA Compliant Pumps

Pump Model	Sanitary Fitting Size	Diaphagm	Net Weight	Max. Liquid Temperature	Max. Solid Size
PA-5FST-FDA	3/4"	PTFE	3 kg	100°C	0 mm
PA-10BSH-FDA	3/4"	Hytrel®	6,5 kg	120°C	1 mm
PA-10BST-FDA	3/4"	PTFE	6,5 kg	100°C	1 mm
PA-15BSH-FDA	1"	Hytrel®	6,5 kg	120°C	1 mm
PA-15BST-FDA	1"	PTFE	6,5 kg	100°C	1 mm
PA-20BSE-PP-FDA	1"	EPDM-FDA	15 kg	82°C	2 mm
PA-20BSH-PP-FDA	1"	Hytrel®	15 kg	120°C	2 mm
PA-20BST-PP-FDA	1"	PTFE	15 kg	100°C	2 mm
PA-25BSE-PP-FDA	1½"	EPDM-FDA	23 kg	82°C	5 mm
PA-25BSH-PP-FDA	1½"	Hytrel®	23 kg	120°C	5 mm
PA-25BST-PP-FDA	1½"	PTFE	23 kg	100°C	5 mm
PA-40BSE-PP-FDA	2"	EPDM-FDA	52 kg	82°C	7 mm
PA-40BSH-PP-FDA	2"	Hytrel®	52 kg	120°C	7 mm
PA-40BST-PP-FDA	2"	PTFE	52 kg	100°C	7 mm
PA-50BSE-PP-FDA	2½"	EPDM-FDA	60 kg	82°C	8 mm
PA-50BSH-PP-FDA	2½"	Hytrel®	60 kg	120°C	8 mm
PA-50BST-PP-FDA	2½"	PTFE	60 kg	100°C	8 mm
PA-80BSE-PP-FDA	4"	EPDM-FDA	112 kg	82°C	10 mm
PA-80BSH-PP-FDA	4"	Hytrel®	112 kg	120°C	10 mm
PA-80BST-PP-FDA	4"	PTFE	112 kg	100°C	10 mm

Hytrel® is a registered trademark of DuPont Dow Elastomers

Note: All FDA pumps include 316SS passivated satin finished housings, PTFE check valves and capped sanitary center disks. Pumps with aluminum motor become grey PTFE coating. Air supply pressure is 2 to 7 Bar.

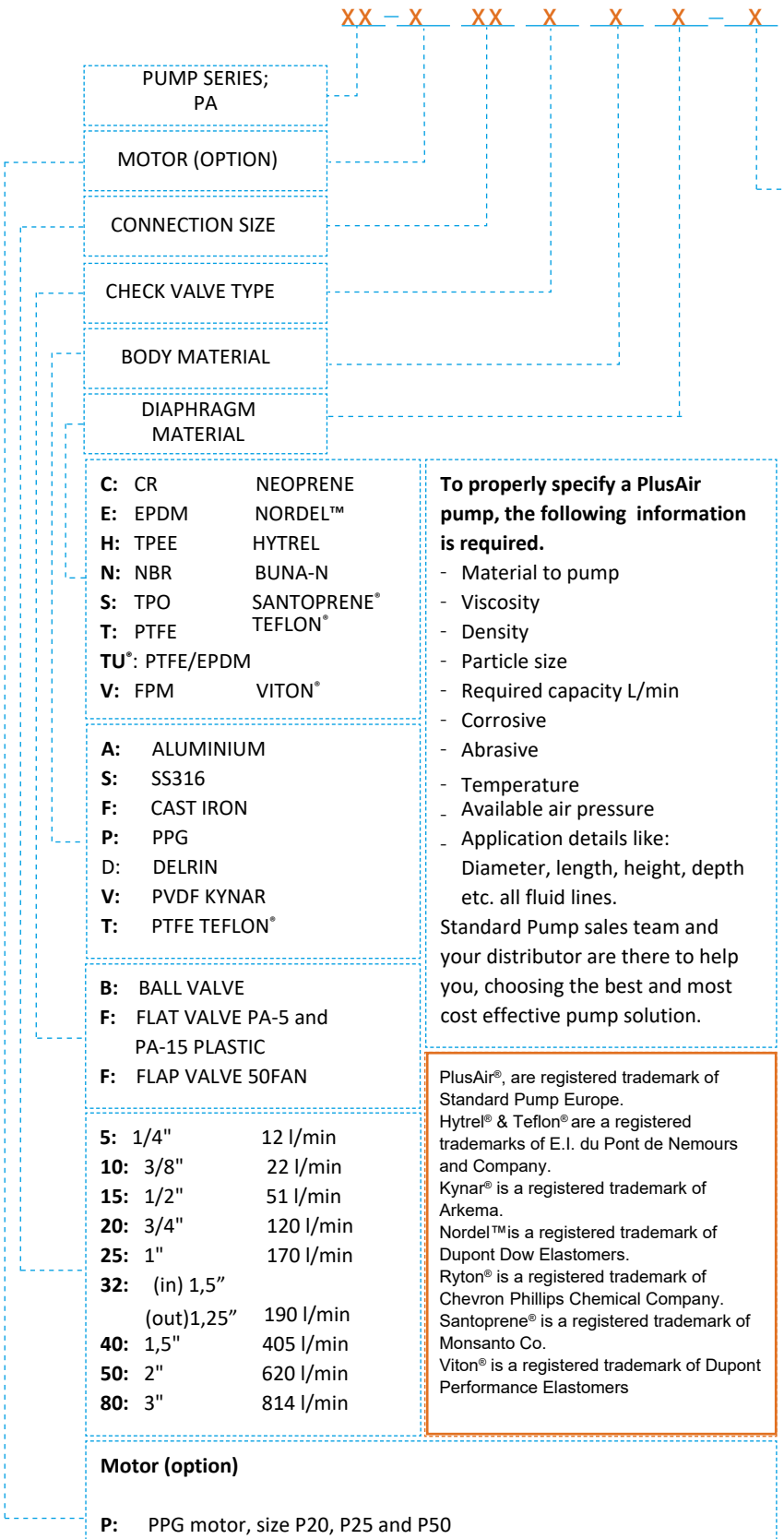
Additional Option

10Ra to 20RA interior Mechanical polish available for some models – Contact Standard Pump Europe.

For performance curves, BOM and data sheets, please contact Standard Pump Europe.

ADDITIONAL OPTIONS

Model Number Nomenclature



C: CR NEOPRENE
E: EPDM NORDEL™
H: TPEE HYTREL
N: NBR BUNA-N
S: TPO SANTOPRENE®
T: PTFE TEFLON®
TU®: PTFE/EPDM
V: FPM VITON®

A: ALUMINIUM
S: SS316
F: CAST IRON
P: PPG
D: DELRIN
V: PVDF KYNAR
T: PTFE TEFLON®

B: BALL VALVE
F: FLAT VALVE PA-5 and PA-15 PLASTIC
F: FLAP VALVE 50FAN

5: 1/4" 12 l/min
10: 3/8" 22 l/min
15: 1/2" 51 l/min
20: 3/4" 120 l/min
25: 1" 170 l/min
32: (in) 1,5" (out)1,25" 190 l/min
40: 1,5" 405 l/min
50: 2" 620 l/min
80: 3" 814 l/min

To properly specify a PlusAir pump, the following information is required.

- Material to pump
- Viscosity
- Density
- Particle size
- Required capacity L/min
- Corrosive
- Abrasive
- Temperature
- Available air pressure
- Application details like: Diameter, length, height, depth etc. all fluid lines.

Standard Pump sales team and your distributor are there to help you, choosing the best and most cost effective pump solution.

Motor (option)

P: PPG motor, size P20, P25 and P50 (=standard all PPG pumps 20, 25 and 50)
H: XDP motor, size H40, H50 and H80

Special Pumps:

BH1: Powder pumps Series 1
BH2: Powder pumps Series 2
BH22: Powder pumps Series 22
P: Reinforced rod + bolted diaphragms
Y: Y-manifold stainless steel PA-40, 50, 80
HP: High pressure 2:1 pump metal 20 until 80
D: Drum pump until size 20
FDA: FDA compliant series

Additional Options:

Ball Options
NBR: Ball-N
E: Nordel™
S: Santoprene®
T: Teflon® ball
V: Viton® ball
S1: Stainless steel ball (until size 50)
Stainless steel flat (PA-5/15)

Valve seat Options
T2: Teflon® (only PA-40 and 50)
V2: Viton®
S2: Stainless steel machined seat

Combi SUS ball/seat/guide:
S3: Stainless steel guide (until size 25)
SS: Stainless steel seat + ball (S1 + S2)
ST: Stainless steel seat + guide (S2+S3)
ST1: S1 + S2 + S3

Connection options:
I: Split inlet manifold (Double in)
O: Split outlet manifold (Double out)
Z: Double in and out
I, O and Z only until size 25
FLG: DN flange connection ≥ size 15
FLGA: ANSI flange connection ≥ size 15
NPT: NPT female thread connection

Air Motor options:
X2: Nickel plated aluminum motor
XS: PTFE coated aluminum motor

Electrical control options:
P2: Proximity sensor
PX: Proximity sensor ATEX
RM: Electr. on/off solenoid 24VDC
RMX: Electr. on/off solenoid 24VDC ATEX
DM: Full solenoid control 24VDC
DMX: Full solenoid control 24VDC ATEX+ (DM(X) PA-10, PA-P20/P25, 40, (P)50 and 80)
DMB: Full solenoid control 24VDC
DMBX: Full solenoid control 24VDC ATEX (DMB(X) for PA-5, 15, 20, 23, 25, 32)
Q: Leak sensor(s) (Diaphragm rupture)

Specific options:
1: PTFE O-rings
1S: 1" side connection PA-20BA
N: Special bearing dry air
XPS: Extreme duty C-spool PA-20/25

Accessories options:
AP: Abrasion PAD
J: Speed control muffler
L: De-stroke PA-20 until 80

PlusAir

STANDARD PUMP Europe

STANDARD PUMP Europe

Ronnekrogen 2,

DK-3400 Hillerod, Denmark

Tel +45 7023 2100

Fax +45 7023 5655

info@standard-europe.eu

www.standard-europe.eu