AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

Boxer 503

- Product designed and constructed in Italy
- Patented stall protection pneumatic circuit
- Operation with non-lubricated air
- Self priming
- Supports dry running
- ATEX certification for ZONE 1 - ZONE 2
- IECEx certification
- Possibility of adjusting the operating speed
- Versatility of use
- Suitable for pumping fluids with high viscosity and for demanding applications
- Possibility of pumping fluids containing suspended solids
- Possibility of suspended installation
- Manifolds can be supplied with stainless steel reinforcement rings for pumps in PP – PP+CF – PVDF
- Nozzles available with clamp connections and DIN 11851 (only pumps in AISI 316)
- Long Life profile diaphragms (available in different elastomers) for greater resistance and longer life
- Suitable for continuous use

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BOXER

Boxer 503

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone M2 I M2 Ex h I Mb X*
Ex h IIB T4 Gb e Ex h IIIB T135°C Db

* The string relating to mining applications is not applicable to aluminium BOXER range pumps

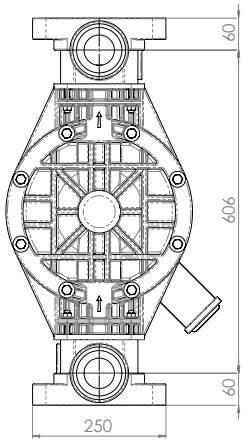
Suction / delivery connections Boxer 503	3” f BSPP (*)
Suction / delivery connections Foodboxer 503	4” Clamp
Air fitting	3/4” f BSPP
Max. flow rate*	800 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	4 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	10 mm
Noise	80 dB
Volume per stroke	1825 cc

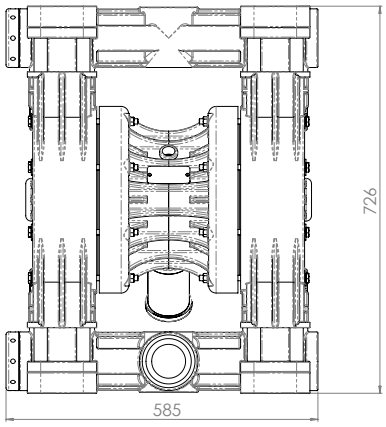
(*) NPT fittings only on request
* The curves and the performances refer to pumps with immersed suction and open delivery outlet, with water at 20°C and vary depending on material composition.
** The value depends on the pump configuration.

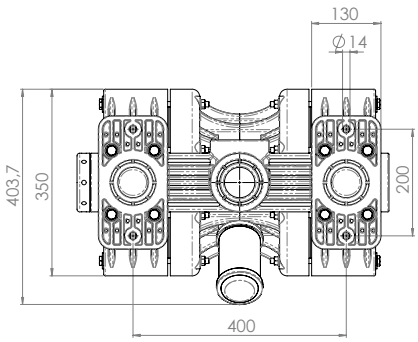
PLASTIC MATERIAL PP (GF/CF) - PVDF	Boxer 503

Maximum dimensions	
Height	726 mm
Width	585 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight	
POLYPROPYLENE (with glass additive)	50 Kg Temp. 3°C min. 65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	50 Kg Temp. 3°C min. 65°C max
PVDF (with carbon additive)	67 Kg Temp. 3°C min. 95°C max







Boxer 503

Specifications and types

Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone M2 I M2 Ex h I Mb X*
Ex h IIB T4 Gb e Ex h IIIB T135°C Db

* The string relating to mining applications is not applicable to aluminium BOXER range pumps

METAL MATERIAL - ALU — Boxer 503

Maximum dimensions	
Height	806 mm
Width	580 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight	
ALU	66 Kg Temp. 3°C min. 95°C max

METAL MATERIAL - AISI 316 — Boxer 503

Maximum dimensions	
Height	826 mm
Width	546 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight	
AISI 316	71 Kg Temp. 3°C min. 95°C max

FOODBOXER 503

METAL MATERIAL - AISI 316 L ELECTROPOLISHED — Foodboxer 503

Maximum dimensions	
Height	826 mm
Width	546 mm
Depth	404 mm

Construction mat. (casing and manifolds) and net weight	
AISI 316 (electropolished)	71 Kg Temp. 3°C min. 95°C max

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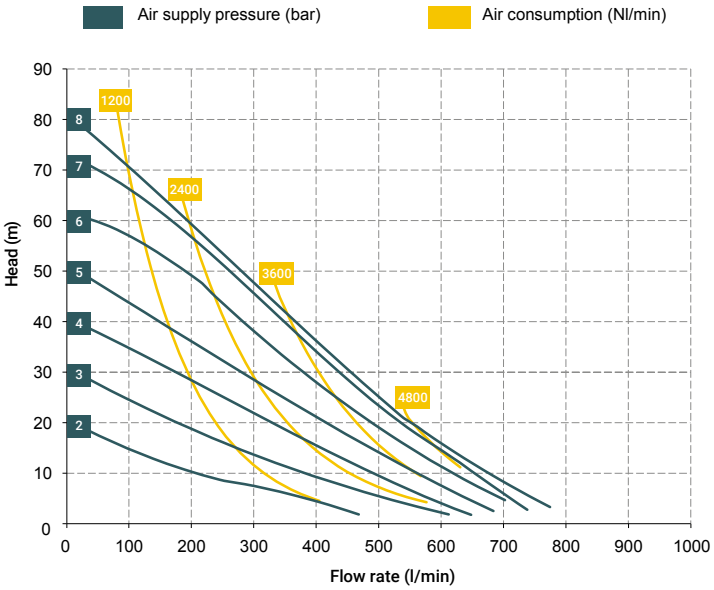
BOXER

Boxer 503

Specifications and types

Zone 2 – Zone 22	II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
Zone 1 – Zone 21	II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
Zone M2	I M2 Ex h I Mb X*
Ex h IIB T4 Gb e Ex h IIIB T135°C Db	

* The string relating to mining applications is not applicable to aluminium BOXER range pumps



* The curves and performances refer to pumps with immersed suction and open delivery outlet with water at 20 °C and vary according to the composition materials.

BOXER 503 (PP):

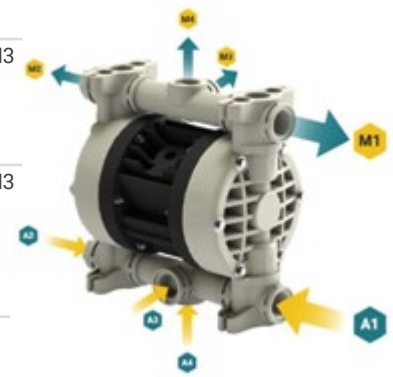
A1 - A2 - A3 - A4 - M1 - M2 - M3 - M4

BOXER 503 (PVDF):

A1 - A2 - A3 - A4 - M1 - M2 - M3 - M4

Standard fittings:

- Suction: A1
- Delivery: M1



BOXER 503 (INOX):

A3 - M3

BOXER 503 (ALU):

A3 - M3

Standard fittings:

- Suction: A3
- Delivery: M3

T40 distributor material (compressed air circuit)

- POM

Core material

- Polypropylene (with glass filler)
- Conductive polypropylene (with carbon filler)
- Aluminium

Diaphragm materials

- PTFE
- HYTREL®
- SANTOPRENE
- NBR
- EPDM

Cap materials

- Polypropylene (with glass filler)
- Conductive polypropylene (with carbon filler)
- PVDF
- Aluminium
- AISI 316 L

Ball materials

- PTFE
- AISI 316 L
- EPDM
- NBR

O-ring materials

- EPDM
- NBR
- VITON®
- PTFE

Packaging

Wooden crate - 83 x 70 x 52 cm - weight 25 Kg (PP, PP+CF, PP+PVDF)
(the weight refers only to the packaging without the pump inside)

Wooden crate - 93 x 68 x 51 cm - weight 25 Kg (ALU)
(the weight refers only to the packaging without the pump inside)

Wooden crate - 94 x 63 x 51 cm - weight 24 Kg (AISI316)
(the weight refers only to the packaging without the pump inside)

Accessories

- Equaflux 303 (For damper materials, please refer to the technical data sheet)
- Basket filter in Polypropylene or PVDF with G 3” f/f fittings
- Foot valve
- Air regulation W8000-20-G
- Stroke counter
- Reinforcement rings
- Flange kit (DIN flanges - ANSI on request)

Any colour variations in our polypropylene and PVDF products are due to the special blends of the raw materials used. The use of high levels of glass and long-fiber carbon filler result in a unique colour that does not in any way affect the quality of the product; on the contrary, it points to the high level of content used to ensure outstanding performance.

BOXER

Boxer 503

Specifications and types

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Zone 1 – Zone 21 II 2G Ex h IIB T4 Gb e II 2D Ex h IIIB T135°C Db X
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* The string relating to mining applications is not applicable to aluminium BOXER range pumps

BOXER PUMPS CODES ENCODING

ex. IB503-P-HTTPV--
Internal distributor, Boxer 503, body PP, air-side diaph. Hytrel®, product-side diaph. PTFE, AISI 316 L balls, PP ball seats, EPDM O-Ring.

IB07-	P	H	T	T	P	V	-	-
PUMP MODEL	**PUMP BODY**	**AIR-SIDE DIAPHRAGM**	**FLUID-SIDE DIAPHRAGM**	**BALLS**	**BALL SEATS**	**O-RING**	**MANIFOLD**	**VERSION**
IB07 - Boxer 07 IB15 - Boxer 15 IMICR - Microboxer IB35 - Boxer 35 IB50 - Boxer 50 IMIN - Miniboxer IB81 - Boxer 81 IB90 - Boxer 90 IB100 - Boxer 100 IB150 - Boxer 150 IB251 - Boxer 251 IB252 - Boxer 252 IB522 - Boxer 522 IB502 - Boxer 502 IB503 - Boxer 503	P - PP PC - PP+CF FC - PVDF+CF A - AISI 316 (L) AL - ALU	N - NBR D - EPDM H - Hytrel® M - Santoprene®	T - PTFE	T - PTFE A - AISI 316 L D - EPDM N - NBR	P - Polypropylene F - PVDF A - AISI 316 L I - PE-UHMW R - PPS L - Aluminium	D - EPDM V - Viton® N - NBR T - PTFE	X* 3* Y* W* K*	C* Z*

Example table, for the table with the complete codes please contact the Debem sales department.

*X = split manifold
*3 = 3rd hole on the manifold
*Y = manifold with NPT fitting
*W = clamp manifold
*K = manifold with reinforcement rings (all on request only)

C = CONDUCT version for ATEX ZONE 1
Z = Version for IECEx Standard

Self priming

Under head

MAIN APPLICATION SECTORS

- CERAMIC, STONE, MARBLE, GLASS AND MINING INDUSTRY
- PRODUCTION AND STORAGE OF BIODIESEL
- CHEMICAL INDUSTRY
- OIL & GAS
- PAINT INDUSTRY
- PACKING, GLUE, PAPER AND PAPER MILLS
- MECHANICAL AND METALLURGIC INDUSTRY
- WATER AND SLUDGE TREATMENT
- TEXTILE AND LEATHER INDUSTRY
- FOODBOXER 503

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