

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

Boxer 251 / Boxer 252



- 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

Boxer 251 / Boxer 252



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 251 / Boxer 252	1 1/2" f BSPP (*)
Suction / delivery connections Foodboxer 252	2" Clamp
Air fitting	1/2" f BSPP
Max. flow rate*	340 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	6 mm
Noise	80 dB
Volume per stroke	552 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 251



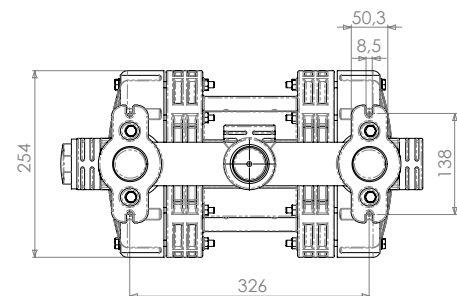
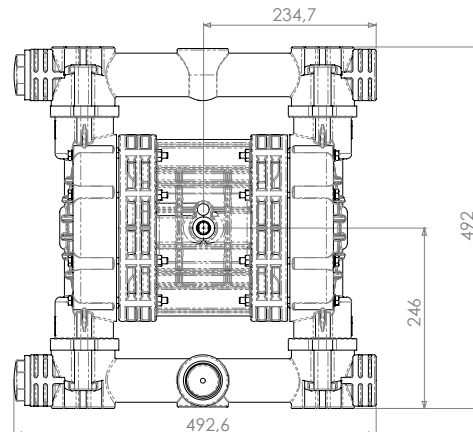
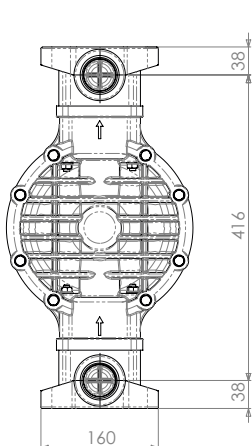
Maximum dimensions

Height	492 mm
Width	493 mm
Depth	254 mm



Construction mat. (casing and manifolds) and net weight

POLYPROPYLENE (with glass additive)	17,5 Kg Temp. 3°C min. 65°C max
CONDUCTIVE POLYPROPYLENE (with carbon additive)	20 Kg Temp. 3°C min. 65°C max
PVDF (with carbon additive)	20 Kg Temp. 3°C min. 95°C max



Boxer 251 / Boxer 252

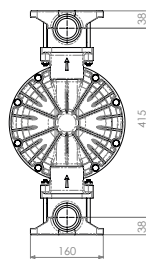


Specifications and types



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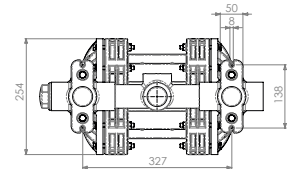
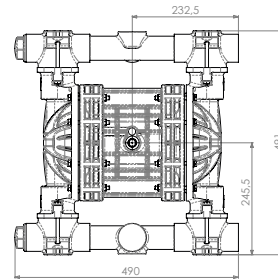
Maximum dimensions

Height	491 mm
Width	490 mm
Depth	254 mm

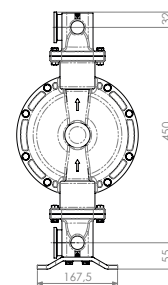


Construction mat. (casing and manifolds) and net weight

ALU	19 Kg
	Temp. 3°C min.
	95°C max



BOXER 252



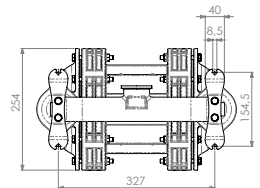
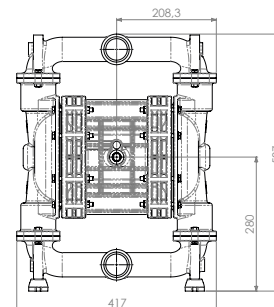
Maximum dimensions

Height	537 mm
Width	417 mm
Depth	254 mm



Construction mat. (casing and manifolds) and net weight

AISI 316	26,2 Kg
	Temp. 3°C min.
	95°C max



FOODBOXER 252



METAL MATERIAL - AISI 316 L ELECTROPOLISHED



Maximum dimensions

Height	537 mm
Width	417 mm
Depth	254 mm



Construction mat. (casing and manifolds) and net weight

AISI 316 (electropolished)	26,2 Kg
	Temp. 3°C min.
	95°C max

Boxer 251 / Boxer 252



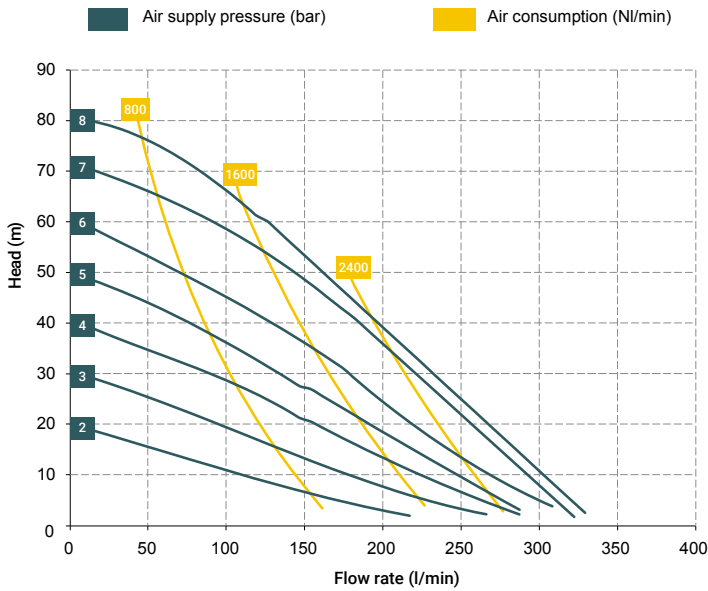
Specifications and types



Zone 2 - Zone 22
Zone 1 - Zone 21
Zone M2
Ex h IIB T4 Gb e Ex h IIIB T135°C Db

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

* 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 251 (PP):

A1 - A2 - A3 - A4 - A5 - A6 - M1 - M2 - M3 - M4 - M5 - M6

BOXER 251 (PVDF):

A1 - A2 - A3 - A4 - A5 - A6 - M1 - M2 - M3 - M4 - M5 - M6

BOXER 251 (ALU):

A1 - A2 - A3 - A4 - A5 - A6 - M1 - M2 - M3 - M4 - M5 - M6



Standard fittings:

- Suction: A1
- Delivery: M1

BOXER 252 (INOX):

A3 - M3

Standard fittings:

- Suction: A3
- Delivery: M3



T30 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

Cardboard box - 36 x 59 x 64 cm - weight 3 kg
(the weight refers only to the packaging without the pump inside)

Accessories

- Equaflex 200 (For damper materials, please refer to the technical data sheet)
- Truck model 02
- Basket strainer with fittings 1 1/2" f-f (PP or PVDF)
- Foot valve
- Air regulation kit W3000-10-G
- Batch controller
- 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 251 / Boxer 252



Specifications and types



Zone 2 – Zone 22 II 3G Ex h IIB T4 Gc e II 3D Ex h IIIB T135°C Dc X
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BOXER PUMPS CODES ENCODING

ex. IB251-P-HTTPV-
 Internal distributor, Boxer 251, 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	P - PP	N - NBR	T - PTFE	T - PTFE	P - Polypropylene	D - EPDM	X*	C*
IB15 - Boxer 15	PC - PP+CF	D - EPDM		A - AISI 316 L	F - PVDF	V - Viton®	3*	Z*
IMICR - Microboxer	FC - PVDF+CF	H - Hytrel®		D - EPDM	A - AISI 316 L	N - NBR	Y*	
IB35 - Boxer 35	A - AISI 316 (L)	M - Santoprene®		N - NBR	I - PE-UHMW	T - PTFE	W*	
IB50 - Boxer 50	AL - ALU				R - PPS		K*	
IMIN - Miniboxer					L - Aluminium			
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								

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)

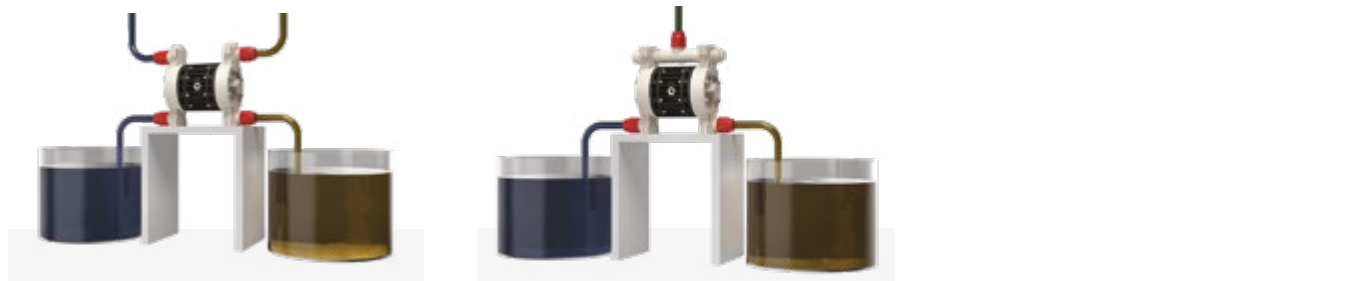
C = CONDUCT version for ATEX ZONE 1
 Z = Version for IECEx Standard



Self priming

Under head

Immersed



Split Suction

Split Suction and Delivery

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 METALLURGICAL INDUSTRY



GALVANIC AND ELECTRONIC INDUSTRY



AUTOMOTIVE



WATER AND SLUDGE TREATMENT



TEXTILE AND LEATHER INDUSTRY



FOODBOXER 252