

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

# Boxer 522 / Boxer 502



 **HpE** PROCESS

CE



- 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 522 / Boxer 502



## 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 522 / Boxer 502	2" f BSPP (*)
Suction / delivery connections Foodboxer 502	2"1/2 Clamp
Air fitting	1/2" f BSPP
Max. flow rate*	600 l/min
Max. supply air pressure	8 bar
Max. head*	80 m
Max negative suction head - dry-running**	5 m
Max negative suction head - with pump primed	9,5 m
Max. diameter suspended solids	8 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 522



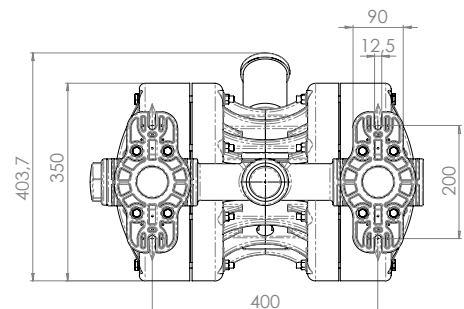
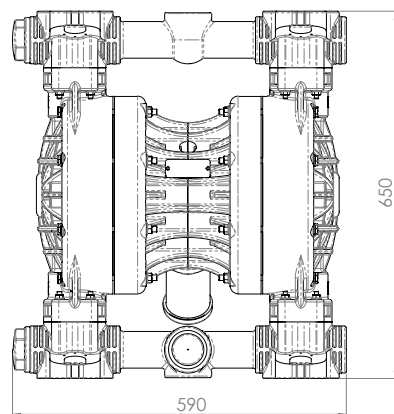
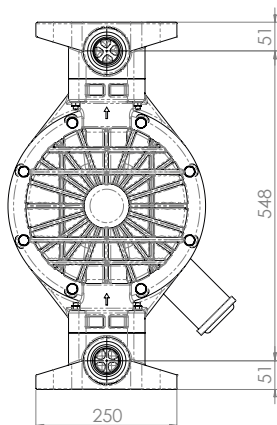
#### Maximum dimensions

Height	650 mm
Width	590 mm
Depth	404 mm



#### Construction mat. (casing and manifolds) and net weight

<b>POLYPROPYLENE</b> (with glass additive)	38 Kg
	Temp. 3°C min. 65°C max
<b>CONDUCTIVE POLYPROPYLENE</b> (with carbon additive)	34,5 Kg
	Temp. 3°C min. 65°C max
<b>PVDF</b> (with carbon additive)	45 Kg
	Temp. 3°C min. 95°C max



# Boxer 522 / Boxer 502

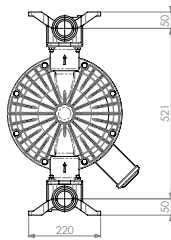


## Specifications and types



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\*

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### METAL MATERIAL - ALU

### Boxer 502



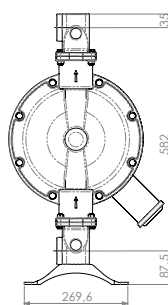
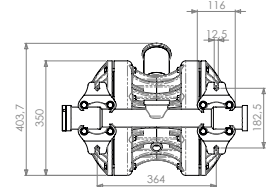
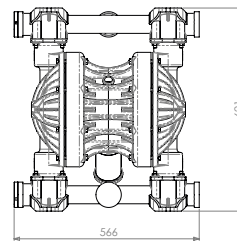
#### Maximum dimensions

Height	621 mm
Width	566 mm
Depth	404 mm



#### Construction mat. (casing and manifolds) and net weight

ALU	37 Kg
	Temp. 3°C min.
	95°C max



### METAL MATERIAL - AISI 316

### Boxer 502



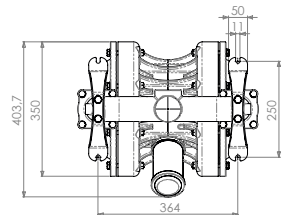
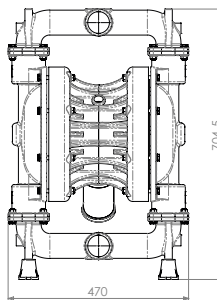
#### Maximum dimensions

Height	705 mm
Width	470 mm
Depth	404 mm



#### Construction mat. (casing and manifolds) and net weight

AISI 316	54 Kg
	Temp. 3°C min.
	95°C max



## FOODBOXER 502



### METAL MATERIAL - AISI 316 L ELECTROPOLISHED

### Foodboxer 502



#### Maximum dimensions

Height	705 mm
Width	470 mm
Depth	404 mm



#### Construction mat. (casing and manifolds) and net weight

AISI 316 (electropolished)	54 Kg
	Temp. 3°C min.
	95°C max

# Boxer 522 / Boxer 502



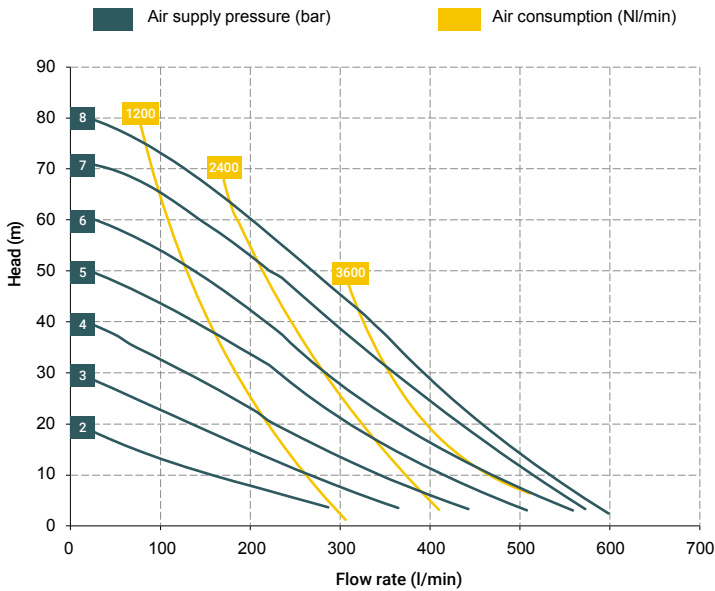
## Specifications and types



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 502 (ALU):

A1 - A2 - A3 - M1 - M2 - M3

#### Standard fittings:

- Suction: A1
- Delivery: M1



### BOXER 502 (INOX):

A3 - M3

#### Standard fittings:

- Suction: A3
- Delivery: M3



### BOXER 522 (PP):

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

### BOXER 522 (PVDF):

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

#### Standard fittings:

- Suction: A1
- Delivery: M1



#### 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 - 74 x 70 x 53 cm - weight 22 Kg (PP, PP+CF, PVDF, ALU)  
(the weight refers only to the packaging without the pump inside)

Wooden crate - 79 x 55 x 52 cm - weight 25 Kg (AISI316)  
(the weight refers only to the packaging without the pump inside)

#### Accessories

- Equaflex 302 (For damper materials, please refer to the technical data sheet)
- Basket filter in Polypropylene or PVDF with G 2" 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 522 / Boxer 502



## 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. IB522-P-HTTPV-  
 Internal distributor, Boxer 522, 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)

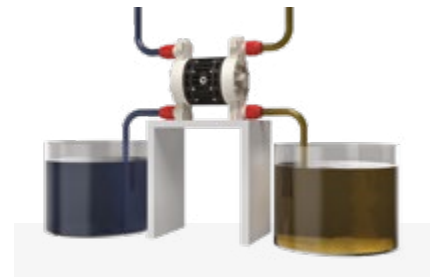
C = CONDUCT version for ATEX ZONE 1  
 Z = Version for IECEx Standard



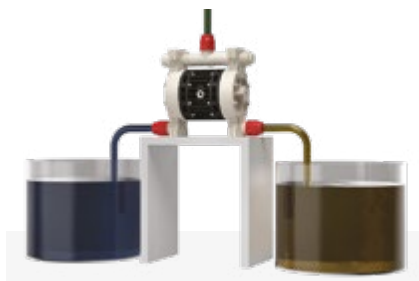
Self priming



Under head



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



WATER AND SLUDGE TREATMENT



TEXTILE AND LEATHER INDUSTRY



FOODBOXER 502