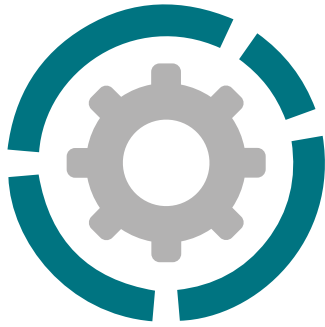


# MICROBOXER

## AIR-OPERATED DOUBLE DIAPHRAGM PUMPS



**DEBEM**  
MADE IN ITALY



Suction / delivery connections	1/2" f BSPP(*)
Air fitting	1/4" f BSPP
Max flow rate*	35 l/min
Max supply air pressure	8 bar
Max head*	80 m
Max negative suction head - dry running**	4 m
Max negative suction head - pump primed	9,5 m
Max diameter suspended solids	2 mm
Noise level	65 dB
Volume per stroke	30 cc



[\*] NPT fittings only on request

\* 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.

\*\* Value depends on pump configuration.

CE



- Product designed and constructed in Italy
- PATENTED stall-prevention pneumatic circuit
- Operates with NON-lubricated air
- SELF-PRIMING
- Supports dry running
- ATEX certification for ZONE 1 - ZONE 2
- IECEx certification
- Adjustable operating speed
- Versatile
- Suitable for pumping fluids with high viscosity and for demanding applications
- Usable with fluids containing suspended solids
- Option of suspended installation
- Manifolds available with stainless steel reinforcement rings for PP – PP + CF – PVDF pumps
- Suitable for continuous use

# MICROBOXER

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS



## Specifications and types



STANDARD: II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc X - I M2 Ex h I Mb X  
 CONDUCT: II 2G Ex h IIB T4 Gb - II 2D Ex h IIIB T135°C Db X - Ex h IIB T4 Gb - Ex h IIIB T135°C Db



### PP

Microboxer



#### Maximum Dimensions

Height	168 mm
Width	167,5 mm
Depth	120 mm



#### Construction materials (body and manifolds) and net weight

<b>Polypropylene</b> (with glass filler)	1,6 Kg
	Temp. 3°C min. 65°C max
<b>Conductive polypropylene</b> (with carbon filler)	1,6 Kg
	Temp. 3°C min. 65°C max



### PVDF

Microboxer



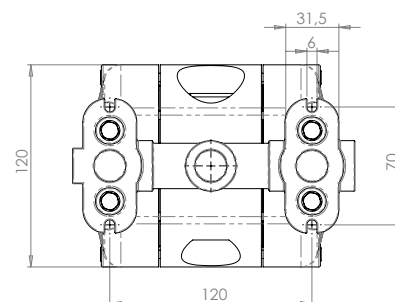
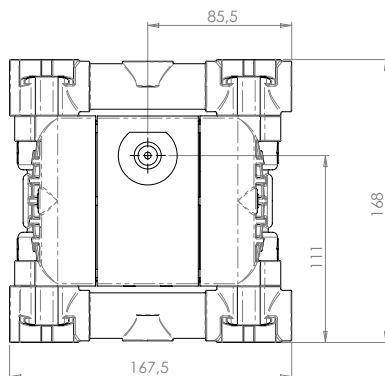
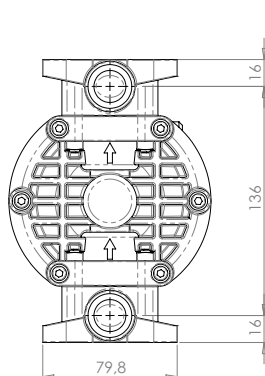
#### Maximum Dimensions

Height	168 mm
Width	167,5 mm
Depth	120 mm



#### Construction materials (body and manifolds) and net weight

<b>PVDF</b> (with carbon filler)	1,98 Kg
	Temp. 3°C min. 95°C max



# MICROBOXER

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS



## Specifications and types



STANDARD: II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc X - I M2 Ex h I Mb X  
 CONDUCT: II 2G Ex h IIB T4 Gb - II 2D Ex h IIIB T135°C Db X - Ex h IIB T4 Gb - Ex h IIIB T135°C Db



### ALU

Microboxer



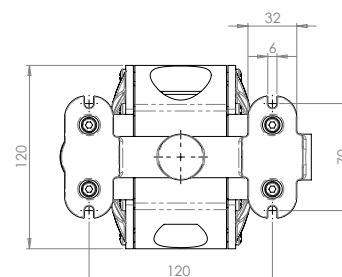
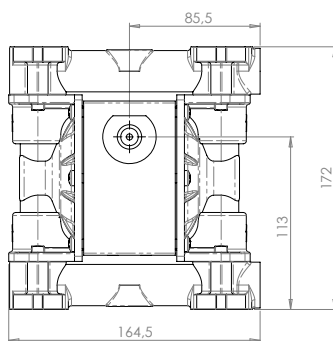
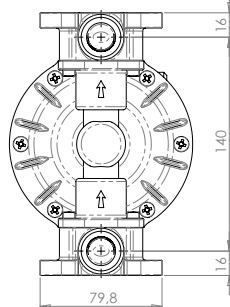
#### Maximum Dimensions

Height	172 mm
Width	164,5 mm
Depth	120 mm



#### Construction materials (body and manifolds) and net weight

ALU	2,1 Kg
	Temp. 3°C min.
	95°C max



### AISI 316 L

Microboxer



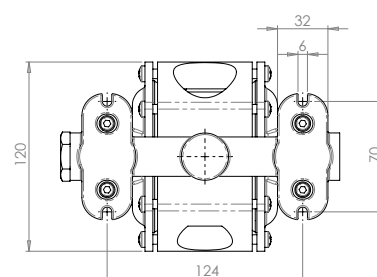
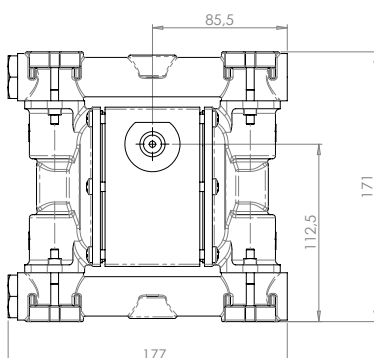
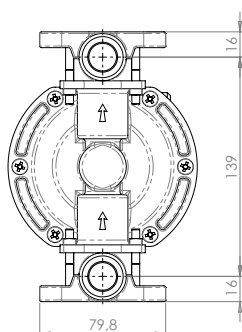
#### Maximum Dimensions

Height	171 mm
Width	177 mm
Depth	120 mm



#### Construction materials (body and manifolds) and net weight

AISI 316 L	3,75 Kg
	Temp. 3°C min.
	95°C max



# MICROBOXER

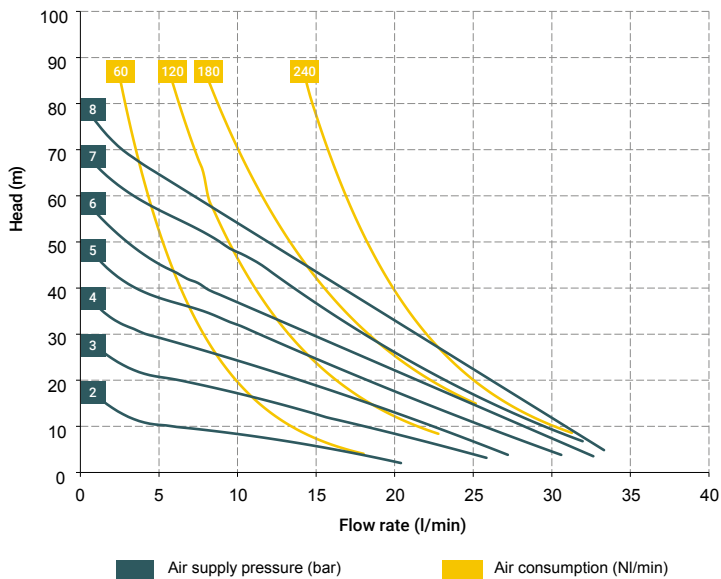
AIR-OPERATED DOUBLE DIAPHRAGM PUMPS



## Specifications and types



STANDARD: II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc X - I M2 Ex h I Mb X  
 CONDUCT: II 2G Ex h IIB T4 Gb - II 2D Ex h IIIB T135°C Db X - Ex h IIB T4 Gb - Ex h IIIB T135°C Db



\* 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.

### Accessories:

- Equaflex 51
- [For damper materials, please refer to the technical data sheet]
- Foot valve
- Air regulation kit W1000-8-G
- Batch controller
- Stroke counter
- Reinforcement rings
- Flange kit (DIN flanges - ANSI on request)

### MONOSTABLE distributor material (Distributor + spool) - (compressed air circuit)

- POM

### Core material:

- Polypropylene
- Aluminium
- AISI 316

### Diaphragm materials:

- PTFE
- HYTREL®
- SANTOPRENE
- NBR

### Cap materials:

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

### Ball materials:

- PTFE
- AISI 316 L
- EPDM
- NBR

### O-ring materials:

- EPDM
- NBR
- VITON®
- PTFE

**Packaging:** cardboard box - cm 14 x 20 x 20 cm - weight 0,4 Kg  
 (the weight refers only to the packaging without the pump inside)

### MINIBOXER (PP):

A1 - A2 - A4 - M1 - M2 - M4

### MINIBOXER (PVDF):

A1 - A2 - A4 - M1 - M2 - M4

### MINIBOXER (INOX):

A1 - A2 - A4 - M1 - M2 - M4

### MINIBOXER (ALU):

A1 - A2 - A4 - M1 - M2 - M4

### Standard fittings:

- Suction: A1
- Delivery: M1

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.



# MICROBOXER

AIR-OPERATED DOUBLE DIAPHRAGM PUMPS



## Specifications and types



STANDARD: II 3G Ex h IIB T4 Gc - II 3D Ex h IIIB T135°C Dc X - I M2 Ex h I Mb X  
 CONDUCT: II 2G Ex h IIB T4 Gb - II 2D Ex h IIIB T135°C Db X - Ex h IIB T4 Gb - Ex h IIIB T135°C Db

## BOXER PUMPS CODES ENCODING

ex. IMICR-P-HTTPV--

Internal distributor, Microboxer, 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
<b>IB07</b> - Boxer 07 <b>IB15</b> - Boxer 15 <b>IMICR</b> - Microboxer <b>IB35</b> - Boxer 35 <b>IB50</b> - Boxer 50 <b>IMIN</b> - Miniboxer <b>IB81</b> - Boxer 81 <b>IB90</b> - Boxer 90 <b>IB100</b> - Boxer 100 <b>IB150</b> - Boxer 150 <b>IB251</b> - Boxer 251 <b>IB252</b> - Boxer 252 <b>IB522</b> - Boxer 522 <b>IB502</b> - Boxer 502 <b>IB503</b> - Boxer 503	<b>P</b> - PP <b>PC</b> - PP+CF <b>FC</b> - PVDF+CF <b>A</b> - AISI 316 (L) <b>AL</b> - ALU	<b>N</b> - NBR <b>D</b> - EPDM <b>H</b> - Hytrel® <b>M</b> - Santoprene®	<b>T</b> - PTFE	<b>T</b> - PTFE <b>A</b> - AISI 316 L <b>D</b> - EPDM <b>N</b> - NBR	<b>P</b> - Polypropylene <b>F</b> - PVDF <b>A</b> - AISI 316 L <b>I</b> - PE-UHMW <b>R</b> - PPS <b>L</b> - Aluminium	<b>D</b> - EPDM <b>V</b> - Viton® <b>N</b> - NBR <b>T</b> - PTFE	<b>X*</b> <b>3*</b> <b>Y*</b> <b>W*</b> <b>K*</b>	<b>C*</b> <b>Z*</b>

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

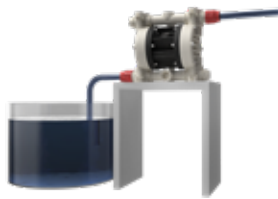
\*K = manifold with reinforcement rings

(all on request only)

C = CONDUCT version for ATEX ZONE 1

Z = Version for IECEx Standard

### SELF-PRIMING USE



### UNDER HEAD USE



### DRUM TRANSFER



### SPLIT SUCTION and DELIVERY



### MAIN APPLICATION SECTORS



### MAIN APPLICATION SECTORS



CHEMICAL INDUSTRY



GRAPHIC INDUSTRY



PRODUCTION AND STORAGE OF BIODIESEL



GOLD PROCESSING INDUSTRY



GALVANIC AND ELECTRONIC INDUSTRY



PAINT INDUSTRY