DIAPHRAGM PUMPS

BOXER 251

- **Product of Italian origin**
- **Patented** stall protection pneumatic circuit
- Works with non-lubricated air
- **Self priming**
- Idles without damage
- Possibility of adjusting the pumping speed
- Versatility of use
- Broad choice of materials that are compatible with the fluid to be pumped
- Particularly suitable for heavy duty applications
- Atex zone 1 (on request) - Atex zone 2 standard
- Customisable suction/delivery fitting position (on request)
- Available with reinforcement rings (on request)

- Available with NPT fittings (on request, only for stainless steel pumps)
- Available with clamp / din connections (on request, only for stainless steel pumps)
- Diaphragms with “long life” profile
- Diaphragms in various materials
- Suitable for pumping high viscosity fluids
- High performance
- High power and sturdiness
- Continuous operation: YES
- Warranty: 1 year - according to our general conditions of sale
- Spare parts: to identify the spare parts check the exploded views provided at the end of the operation and maintenance manual

**STANDARD:** II 3/3 GD c IIB T135°C (zone 2)

**CONDUCT:** II 2/2 GD c IIB T135°C (zone 1)

**Intake/delivery connections** G 1” 1/2 f o DN 40 (*) - flow rate 340 l/min

**Construction materials** PP · PP+CF · PVDF · Alu · AISI 316

(*) NPT connections on request
DIAPHRAGM PUMPS
BOXER 251

STANDARD: II 3/3 GD c IIB T135°C (zone 2)
CONDUCT: II 2/2 GD c IIB T135°C (zone 1)

DEBEM s.r.l. Via Del Bosco, 41 - 21052 Busto Arsizio (VA) - Italy - ph. +39 0331 074034 - fax +39 0331 074036 - www.debem.it - info@debem.it

AVAIL ABL E W ITH
Reinforcement rings

* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material. ** Attention: the average values of the various configurations of materials by ball and ball seats. *** The value depends on the configuration of the pump.

Guaranteed head/flow rate according to ISO 9906

** Intake/delivery connections **
G 1" 1/2 f o DN 40 (*)

Air connection
G 1/2" f

Max. flow rate*
340 l/min

Max. air supply pressure
8 bar

Max. head*
80 m

Max. self-priming capacity**
4 m

Max. stored neg. suction
9,5

Max. diameter of passing solids
6 mm

Noise***
80 dB

Displacement per cycle
552 cc

Max. viscosity
50,000 cps

(*) NPT connections on request

Construction materials and net weight

| Material | Net Weight | Temperature
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>16 Kg</td>
<td>3°C min. 65°C max.</td>
</tr>
<tr>
<td>PP+CF</td>
<td>16 Kg</td>
<td>3°C min. 65°C max.</td>
</tr>
<tr>
<td>PVDF</td>
<td>20 Kg</td>
<td>3°C min. 95°C max.</td>
</tr>
<tr>
<td>Alu</td>
<td>21 Kg</td>
<td>3°C min. 95°C max.</td>
</tr>
<tr>
<td>AISI 316</td>
<td>32 Kg</td>
<td>3°C min. 95°C max.</td>
</tr>
</tbody>
</table>

Air supply pressure (bar)  Air consumption NL/min  Flow rate (litres/min)

<table>
<thead>
<tr>
<th>Air supply pressure (bar)</th>
<th>Air consumption NL/min</th>
<th>Flow rate (litres/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>50</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>70</td>
</tr>
</tbody>
</table>

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

BOXER 251 (PLASTIC): A1-A2-A3-A4-A5-A6-M1-M2-M3-M4-M5-M6
BOXER 251 (Alu): A1-A2-A3-A4-M1-M2-M3-M4

DEBEM s.r.l. Via Del Bosco, 41 - 21052 Busto Arsizio (VA) - Italy - ph. +39 0331 074034 - fax +39 0331 074036 - www.debem.it - info@debem.it
DIAPHRAGM PUMPS

BOXER 251

**AVAILABLE MATERIALS**

- PP
- PP+CF
- PVDF
- Alu
- AISI 316

**INSTALLATION**

**SELF PRIMING**

**IMMERSED**

**TWIN SUCTION AND DELIVERY MANIFOLD**

**TWIN SUCTION MANIFOLD**

**POSITIVE SUCTION HEAD**

* Not available on BOXER 251 AISI 316.

**B251**

PP/PP+CF/PVDF/Alu

* The dimensional drawing refers to PP/PP + CF/PVDF pumps

**B251**

AISI 316

1 1/2" G DELIVERY

1/2" G AIR CONNECTION

1 1/2" G INTAKE

(Dimensions in mm)

**Packaging:** cardboard box - 35 x 58 x 62 cm - weight: 2.9 Kg

(the weight only refers to the packaging without the pump itself)
**DIAPHRAGM PUMPS**

**BOXER 251**

**STANDARD:** II 3/3 GD c IIB T135°C (zone 2)

**CONDUCT:** II 2/2 GD c IIB T135°C (zone 1)

---

**BOXER COMPOSITION CODE**

ex. IB251 - P - HT - T - P - V

Internal Exchanger, Boxer 251, body PP, air side diaphragm Hytrel, fluid side diaphragm PTFE, balls PTFE, ball seats PP, O-Ring in Viton.

<table>
<thead>
<tr>
<th>I</th>
<th>B251 -</th>
<th>P -</th>
<th>H</th>
<th>T</th>
<th>T</th>
<th>P</th>
<th>V</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNAL EXCHANGER</td>
<td>PUMP MODEL</td>
<td>PUMP BODY</td>
<td>AIR SIDE DIAPHRAGM</td>
<td>FLUID SIDE DIAPHRAGM</td>
<td>BALLS</td>
<td>BALL SEATS</td>
<td>O-RING</td>
<td>TWIN MANIFOLD</td>
<td>CONDUCT VERSION</td>
</tr>
<tr>
<td>I</td>
<td>B251 - Boxer 251</td>
<td>P - PP</td>
<td>H - Hytrel</td>
<td>T - PTFE**</td>
<td>P - Polypropylene</td>
<td>T - PTFE</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PC - PP + CF</td>
<td>M - Santoprene</td>
<td>A - AISI 316</td>
<td>F - PTFE</td>
<td>A - AISI 316</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FC - PVDF + CF</td>
<td>D - EPDM</td>
<td></td>
<td>D - EPDM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AL - Al</td>
<td>N - NBR</td>
<td></td>
<td>L - Al</td>
<td>N - NBR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*) Cover diaphragms (only on Hytrel and Santoprene diaphragms) cannot be fitted individually.

---

**PRODUCT APPLICATION**

- Mechanical and Engineering Industry
- Ceramic Industry
- Petrochemical Industry
- Waste Treatment Industry
- Agriculture and Biogas
- Biosilicon Industry
- Naval Industry
- Cosmetic Industry
- Mining Industry
- Construction Industry
- Saline Industry
- Chemical Industry
- Textile Industry
- Resins Industry
- Lubricating Industry
- Adhesive Industry
- Automotive Industry
- Paint and Varnish Industry
- Paper and Paper Industry
- Leather Industry
- Ink and Print Industry
- Cleaning Industry