



M&S vacuum valves are used for vacuum protection in hygienic containers, apparatus and machines.

They are closed when not in use and only open when the pressure falls below the set differential pressure compared to atmospheric pressure. After the negative pressure has been compensated, the valve closes and the system can continue to be operated. The valves are of spring-loaded or weight-loaded design.

M&S manufactures a wide range of valve types and sizes that can be selected to suit the requirements. Optionally, they can be equipped with pneumatic lifting, CIP device, position feedback and valve heating.

**Selection of different valve types**



**Cross section view vacuum valve type 9224**

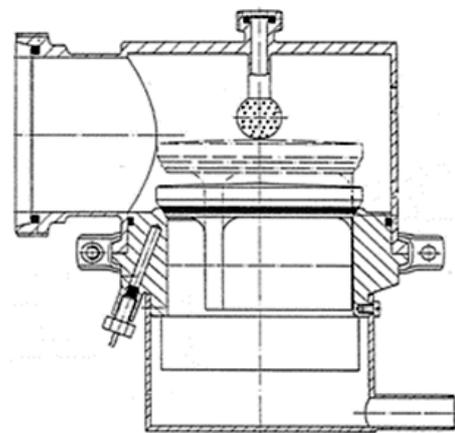


Fig. 1

**Usage**

**Features**

**Versions**

For vacuum protection in containers, apparatus and machines.

**Usage**

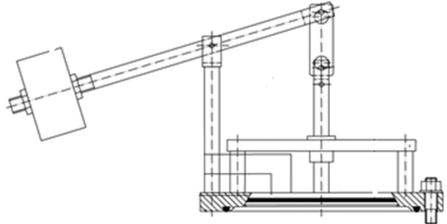
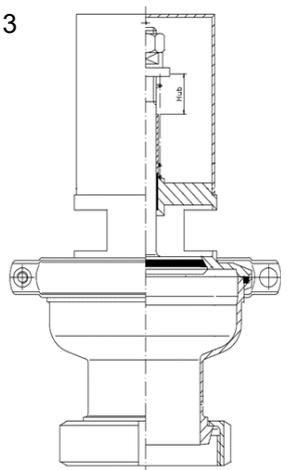
**Features**

**Versions**

- Suspended vacuum valve type 9224 (figure 1)
  - \* Vertical installation;
  - \* Hygienic design with CIP collection tray;
  - \* Very easy to clean by means of built-in spray ball;
  - \* Idle, with valve seat at bottom level;
  - \* Cleaning of the valve seat by means of pneumatic lifting optional;
  - \* Heating with heating cartridge optional;
  - \* Feedback of switching position optional.
- Weight-loaded vacuum valve type 92250
  - \* Vertical installation;
  - \* Weight-loaded;
  - \* Connection flange according to DIN EN 1092-1;
  - \* Pneumatic lifting optional;
  - \* Heating with heating cartridge optional;
  - \* Feedback of switching position optional.



Usage	Features	Version
<ul style="list-style-type: none"> <li>Vacuum valve L type 92220               <ul style="list-style-type: none"> <li>* Spring-loaded;</li> <li>* Vertical installation;</li> <li>* Feedback of switching position optional.</li> </ul> </li> <li>Vacuum valve L type 92210               <ul style="list-style-type: none"> <li>* Spring-loaded;</li> <li>* Vertical or horizontal installation;</li> <li>* Feedback of switching position optional.</li> </ul> </li> </ul>		

Usage	Features	Version
<ul style="list-style-type: none"> <li>Sizes               <ul style="list-style-type: none"> <li>* Suspended vacuum valve type 9224 (figure 1)                   <ul style="list-style-type: none"> <li>◆ DN 50 - 200, other sizes on request.</li> </ul> </li> <li>* Vacuum valve weight-loaded type 92250 (figure 2)                   <ul style="list-style-type: none"> <li>◆ DN 50 - 400.</li> </ul> </li> <li>* Vacuum valve L type 92220 (figure 3)                   <ul style="list-style-type: none"> <li>◆ DN 50 - 150.</li> </ul> </li> <li>* Vacuum valve L type 92210 (figure 4)                   <ul style="list-style-type: none"> <li>◆ DN 25 - 80.</li> </ul> </li> </ul> </li> <li>Differential response pressure               <ul style="list-style-type: none"> <li>* Suspended vacuum valve type 9224                   <ul style="list-style-type: none"> <li>◆ <math>\Delta p = 4 \text{ mbar}</math> (0,004 bar).</li> </ul> </li> <li>* Vacuum valve weight-loaded type 92250                   <ul style="list-style-type: none"> <li>◆ <math>\Delta p = 4 \text{ mbar}</math> (0,004 bar).</li> </ul> </li> <li>* Vacuum valve L type 92220 / type 92210                   <ul style="list-style-type: none"> <li>◆ <math>\Delta p = 6 \text{ mbar}</math> (0,006 bar).</li> </ul> </li> </ul> </li> <li>Materials               <ul style="list-style-type: none"> <li>* Suspended vacuum valve type 9224                   <ul style="list-style-type: none"> <li>◆ 1.4301/1.4307-AISI 304/304L, 1.4404 AISI 316L;</li> <li>◆ Sealing cone: PTFE.</li> </ul> </li> <li>* Vacuum valve type 92250 / 92220 / 92210                   <ul style="list-style-type: none"> <li>◆ 1.4301/1.4307-AISI 304/304L, 1.4404 AISI 316L.</li> </ul> </li> <li>* Gaskets (FDA compliant): EPDM, FKM, NBR.</li> </ul> </li> <li>Surfaces               <ul style="list-style-type: none"> <li>* In contact with product <math>Ra \leq 0,8 \mu\text{m}</math>, not in contact with product <math>Ra \leq 1,6 \mu\text{m}</math>.</li> </ul> </li> <li>Connections               <ul style="list-style-type: none"> <li>* Suspended vacuum valve type 9224                   <ul style="list-style-type: none"> <li>◆ With welding ends or other connecting elements from the M&amp;S product range.</li> </ul> </li> <li>* Vacuum valve type Typ 92250                   <ul style="list-style-type: none"> <li>* Connecting flange according to DIN EN 1092-1.</li> </ul> </li> <li>* Vacuum valve type 92220 / 92210                   <ul style="list-style-type: none"> <li>◆ Standard liner/nut or other connecting elements from the M&amp;S product range.</li> </ul> </li> </ul> </li> </ul>	<p>Fig. 2</p>  <p>Fig. 3</p>  <p>Fig. 4</p> 