

## WILLBRANDT Supporting Rings

As rubber expansion joints are highly elastic elements, the rubber expansion joint must be equipped for vacuum operation with a corresponding vacuum supporting ring. Different designs are available.

### Vacuum supporting spiral

A loose internal vacuum spiral made from 1.4571 stainless steel. The spiral is used for high-corrugated expansion joints up to DN 500 (Type 49) and for low-corrugated expansion joints up to DN 300 (Type 50/51/55).



### Vacuum supporting rings with guided sleeves

Vacuum supporting ring with buffer plate made from 1.4571, 1.4539 stainless steel or special steel according to customers request. Can be used for DN 150 to DN 350.



### Vacuum supporting ring with lock

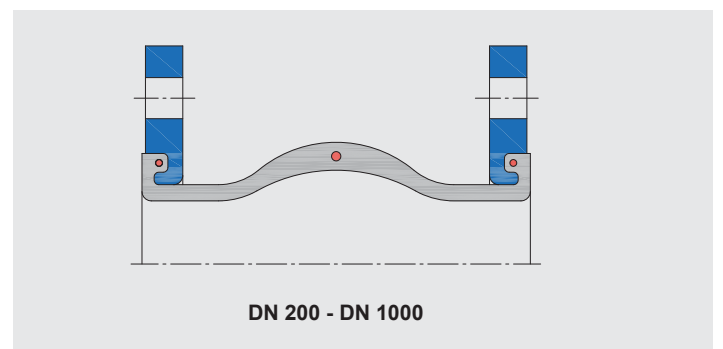
Vacuum supporting ring with lock made from 1.4571, 1.4539 stainless steel or special steel according to customer request. These supporting rings are used for DN 150/500 - DN 5000.



### Vulcanised vacuum supporting ring

This version is used in applications in which heavily abrasive media may affect the supporting ring or in which media with fibrous materials are transported. It is also used at critical points, at which turbulences could cause fatigue failure or the supporting ring could be washed away.

Please bear in mind that vulcanised vacuum supporting rings significantly reduce the elasticity of the expansion joint and therefore limit the movement and pressure absorption. This version can only be used for hand-made expansion joints.



### PTFE vacuum supporting ring

PTFE vacuum supporting ring for high chemical loads. However, please note that because the supporting ring is made from 100 % PTFE, the vacuum resistance falls as the temperature increases. In nominal diameters from DN 65 to DN 300, this version is used for low-corrugated expansion joints (our low-corrugated expansion joints up to DN 50 are vacuum-resistant without a supporting ring).

