



Hygienic Design

In the food industry, medical technology and the pharmaceutical industry, product safety and consumer protection are becoming increasingly important. Due to their specific properties, standard parts in Hygienic Design can assist the production process in these sensitive areas and facilitate the manufacture of products with a long shelf life, which are free from preservatives.



Advantages of Hygienic Design

Less and shorter cleaning work (this can be up to 25% of the production time), therefore

- more time available for production
- less fresh water consumption
- lower energy consumption
- less cleaning agent required
- less production of waste water
- lower total costs and saving of resources

Ganter has solutions

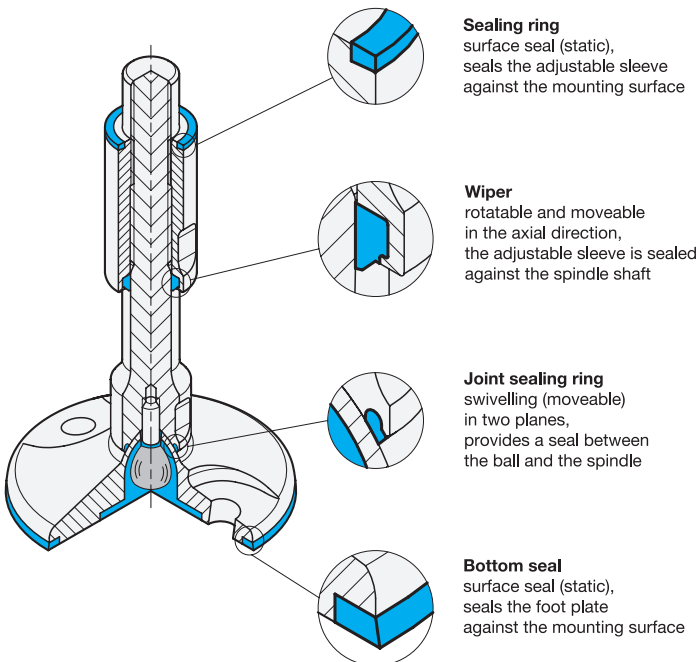
Since even the smallest weak spots can contaminate entire production lines, Ganter decided to develop a special series of Standard Parts that meet the high requirements of the EHEDG and the 3-A Sanitary Standards.

Seals

For the standard parts which are listed in Hygienic Design, seals have the central function of protecting dead spaces, gaps and cracks from the penetration of cleaning fluids or product residues.

For this, a defined pre-tension or pressing of the seals and wipers is necessary for a reliable and permanent seal in the installed condition. Within the Hygienic Design product family, seal installation spaces and seal cross sections are calculated and designed with simulation software, so that the necessary surface compression is achieved on installation and the seal material is not subjected to excess pressure.

Depending on the version and the type of use, it may be the case that seals may need to be replaced in case of damage or for preventative maintenance. For this, Ganter supplies the relevant seals as spare parts or offers these under GN 7600 (→ Page 881) as standard parts.



Design requirements for Hygienic Design

Material

- Non-rusting Stainless Steels
- FDA and EU compliant plastics and elastomers

Surfaces

- Surfaces must be able to be cleaned
- Steps due to appliance configurations which are not aligned must be avoided
- Seals must be designed so that no gaps occur
- O-ring grooves must be hygienically designed
- Contact with the product to be manufactured must be ruled out
- Corners should preferably have a radius of 6 mm or more

Design / Geometry

The interior and exterior areas of all appliances, components or piping must be self-draining or be able to be drained and easy to clean.

Surface properties and roughness

Easy to clean with $Ra < 0.8 \mu m$

