



GAPLESS EXPANDER LINE

Gapless Expander line for forming the inner housings of dishwashers. This process starts with a welded cylindrical tube, which is formed into square shaped inner dishwasher housings. This machine is a gapless Expander, which means that there are no gaps between the tools at the end of the expansion process. The line features automated loading and unloading for handling of the product.



GAPLESS EXPANDER

A gapless Expander is used in production processes for forming products where no marks may be visible after expansion.



GAPLESS EXPANDER

A 28 ton pull type hydraulic gapless Expander. The tooling has a square shape at the end of the expansion process. The Expander is used to expand cylinders into square cases for central-heating boilers.





EXPANDING

DOMESTIC APPLIANCES

In the domestic appliance industry, many products must be converted from a cylindrical shape into a square shape. Due to the nature of these products, visible defects, including marks and scratches are unacceptable. Fontijne Grotnes has developed expansion techniques, including gapless expansion, which is being used for these processes. Dishwasher inner liners are produced by gapless expansion of a metal blank. The production process includes operations such as:

- Pre expansion to form the rectangular blank
- Additional expanding to form the dimensions of the body and door area.
- Punching the drain hole and other features
- Flange folding (seaming)



APPLICATIONS

Grotnes Expanders are also used for forming parts for other domestic appliances. For instance, inner housings for dishwashers, baking ovens, dryer drums, boiler housings, central-heating boilers and water heaters.



BENEFITS

- Expansion is a highly accurate and repeatable forming process with a shorter cycle time than comparable forming techniques.
- Grotnes Expanders make it possible to size and form profiles in a wide range of materials
- By using an Expander less material is needed and the machining time is dramatically reduced, also there is virtually no limit to the materials that can be formed or sized.

