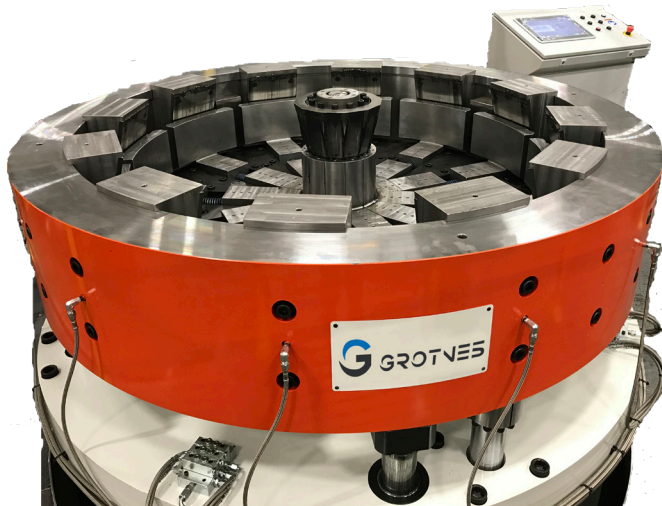




EXPANDER/SHRINKERS

8-HS-400-12 / 14-HE-270-12

A 400 ton push type Expander is mounted within a 270 ton hydraulic Shrinker. Inward working force is generated by eight circumferentially positioned cylinders. This machine is constructed with a fixed vertical centerline, with the centerline perpendicular to the factory floor. This Expander/Shrinker simultaneously expands and shrinks tubular rings for the power generation industry.



7-4-HS-120-12/12-HE-125-12

A 120 ton hydraulic Shrinker and a 125 ton hydraulic Expander are both equipped with 12 jaws. A hydraulic power unit of the machine consists of a 120 gallon reservoir and Rexroth pumps and controls. The hydraulic pumps are driven by a 30HP 1800rpm, 460 volts, 3 phase, and 60Hz electric motor.

7-HE-30-12/5-HS-50-12

A 30 ton hydraulic Expander and a 50 ton hydraulic Shrinker. Both are equipped with twelve jaws. Depending on the type of product to be manufactured, the expanding process takes place either before or after the shrinking operation. This machine offers a flexible process for sizing different parts and is equipped with a quick tool change.

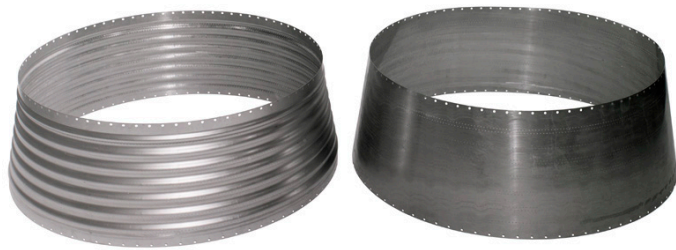




COMBINING SHRINKING EXPANDING

Parts with Special Profiles

Combination Expander/Shrinkers are widely used to form and size complex profiles into parts such as, profiled in pipe ends and turbines for power generation. Combination Expander/Shrinker is usually applied to thin sheet metal parts. Expander/Shrinkers provide an ability to tightly form and emboss annular grooves and tapers, and allows the forming of skirts around the circumference of a part.



Calibration and forming of special drill pipe ends. Drill pipe ends are shrunk on the outside and expanded on the inside. After sizing, the part is machined internally and externally to form a precise threaded connection.

APPLICATIONS

Forming profiles in exhaust ducts. Exhaust ducts consist of outer and inner tubes with insulation material between. When stacked, the lower ducts could collapse under the weight of the upper assembly. Sharp contours are formed, stiffening the ducts, preventing this from happening.



BENEFITS

- Less machining allowance is needed as the Shrinker brings the outer diameter of the ring much closer to final dimension while creating a perfect circle.
- Shrinking is a highly accurate and repeatable forming process with shorter cycle time than comparable forming techniques.
- Many different materials can be formed with this process.

