

END FORMING

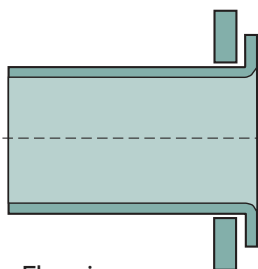
# Multipurpose Flanging Technology

With the enhanced T-DRILL F-series pipe flanging machines you achieve new potential in heavy-duty pipe end forming and flanging. Lips and flanges are formed directly on the end of the pipe - a system that saves you up to 40% in both time and costs compared with traditional weld neck flange connections.

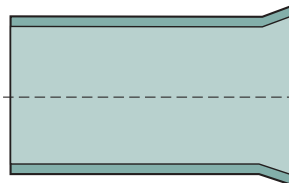
The F-series T-DRILL flanging machines are now PROGRAMMABLY controlled and thus even faster and easier to operate than their predecessors.



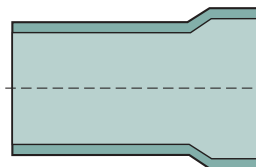
F-200 / F-400



Flanging



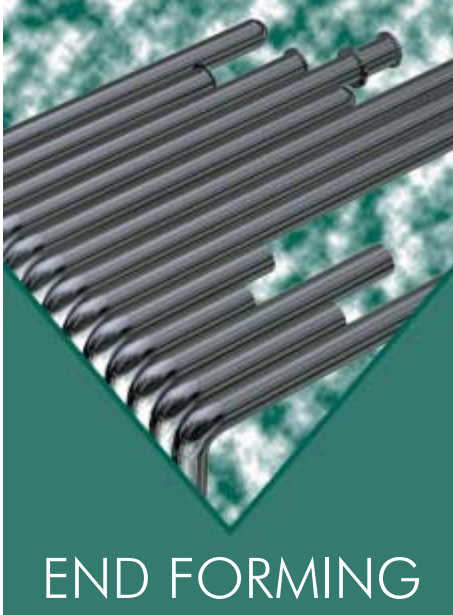
Flaring



Expansion (couplings)



End finishing



## END FORMING

# F-200

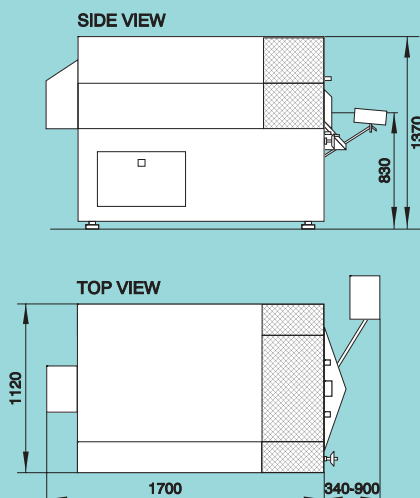
The T-DRILL F-200 is capable of both hot and cold forming of all malleable materials within an O.D. range of 21.3-219.0 mm. The F-200 meets the major requirements of the chemical and food-processing industries, and of shipbuilding and pipe fabrication in general.

### Technical Data

- Machine specifications
  - height 1370 mm
  - width 1120 mm
  - depth 1700 mm
  - weight 1800 kg
- Hydraulic pump 4 kW
- Pressure 120 bars
- Electric motors 5.5 kW and 4 kW
- Connections for hot forming
  - pressurized air 6 bars
- Gas connections for burner
  - oxygen 6 bars
  - propane 2 bars



## F-200



## Materials

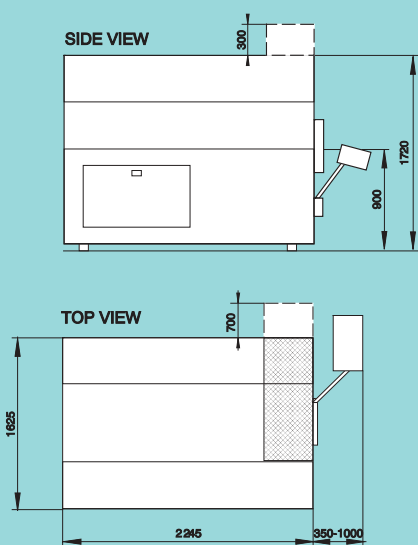
- Copper alloys
  - cold forming
- Austenitic steel
  - cold forming normal
  - depending on local approval and recommendations of pipe manufacturers. Preheating to 200-300 °C.
- Carbon steels
  - hot forming at 900 - 950 °C
  - no annealing necessary
- Other materials
  - please contact T-DRILL

# F-400

The redesigned programmable T-DRILL F-400 meets the most stringent requirements of pipe manufacturers working with larger O.D. ranges. It is capable of both hot and cold forming within an O.D. range of 42.4-419 mm. The F-400 is also suitable for producing flange pieces.



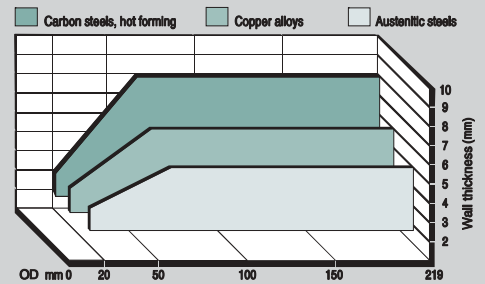
## F-400



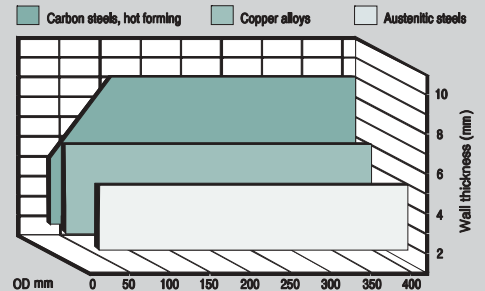
### Technical data

- Machine specifications
  - height 1720 mm
  - width 1625 mm
  - depth 2245 mm
  - weight 4500 kg
- Hydraulic pump 4 kW
- Pressure 160 bars
- Electric motors 11 kW and 4 kW
- Connections for hot forming
  - pressurized air 6 bars
- Gas connections for burner
  - oxygen 6 bars
  - propane 2 bars

F-200/PIPE DIMENSIONS TO BE FLANGED\*

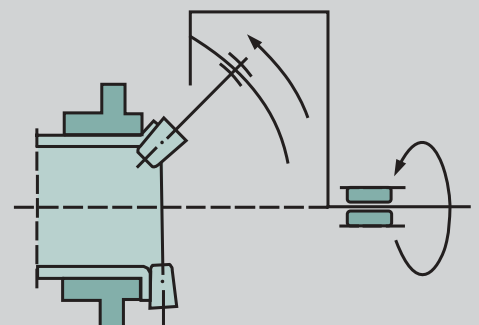
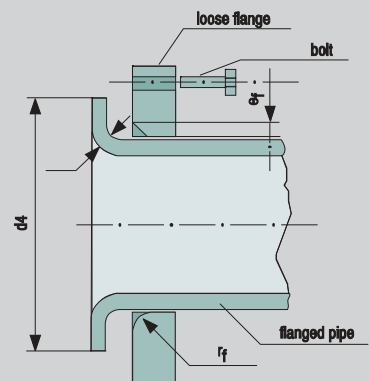
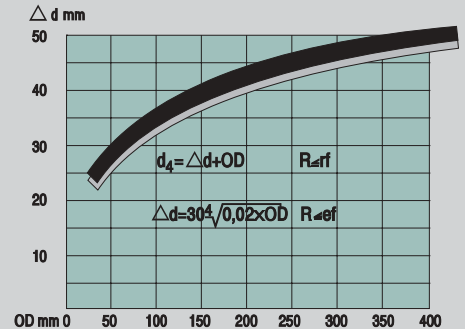


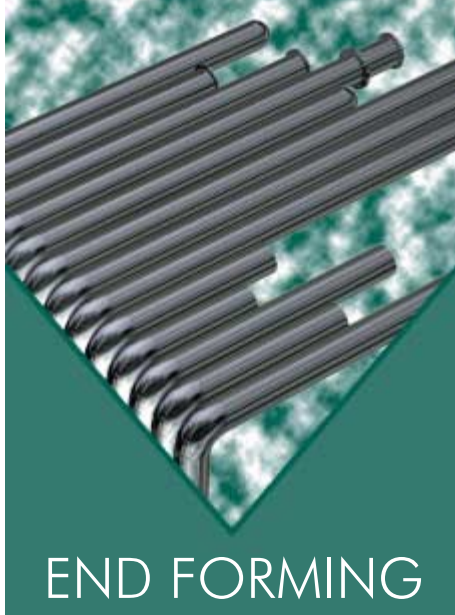
F-400/PIPE DIMENSIONS TO BE FLANGED\*



\* The maximum flange dimensions are the same as those of equivalent welded on lapped pipe ends. Depending on the conditions of use and relevant pipe diameters, DIN standards 2641 and 2642 or standards derived from these can be used in dimensioning.

### RECOMMENDED FLANGE DIMENSIONS





# Why T-DRILL?

The multipurpose T-DRILL F-series flanging machines:

- Cut workshop costs by eliminating the need for welding and X-raying.
- Reduce the need for working capital: no loose flange inventory or complex welding and X-raying equipment required.
- Save installation time by eliminating difficult bolt-hole positioning.
- Provide precision results and constant high quality: no risk of weld or braze fractures.
- Are capable of cold and hot forming both long and bent pipes with either smooth or grooved flanged surfaces.
- Programmability makes them very easy to operate and practically maintenance-free.

## Flanging

The unit's main application is the forming of 90° flanges at pipe ends. The flange can be used as a joint element for loose flange joints. Pipes flanged by this method can be used to replace welded flange connections, where permitted by the code.

## Flaring

The forming tool can be adjusted to produce 37° flares or other flare configurations.

## Expansion

With optional tooling, the tube end can be enlarged to provide a slipfit to accept the O.D. of the tube diameter from which it is formed.

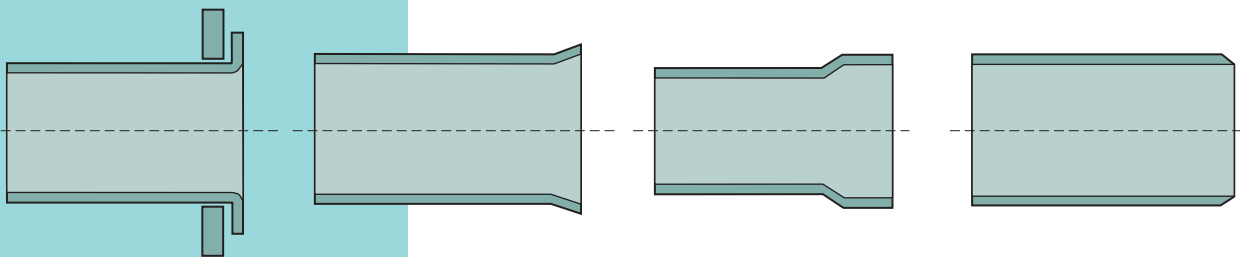
## End finishing

The tube end can be squarred or bevelled with cutting tools.

The T-DRILL method is approved, eg. by

- Det Norske Veritas
- Germanischer Lloyd
- Lloyd's Register of Shipping
- Bureau Veritas
- ASME Standard
- ASTM F2015-00

The data in this prochure are subject to revision without notice.



Manufacturer:

Distributor:

# T-DRILL

P.O.Box 20, FIN-66401 LAIHIA, Finland  
Tel. +358 6 475 3333  
Telefax +358 6 475 3300  
e-mail: sales@t-drill.fi  
www.t-drill.fi