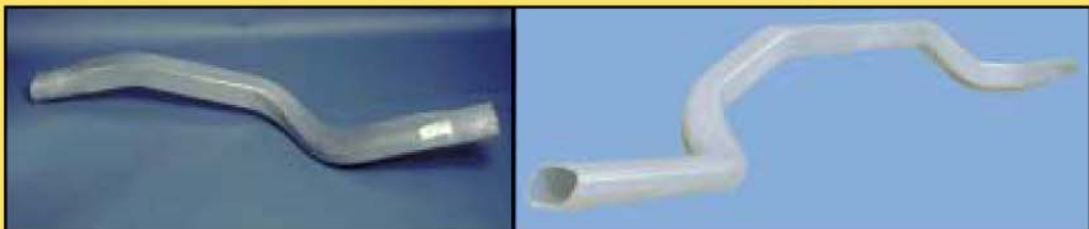
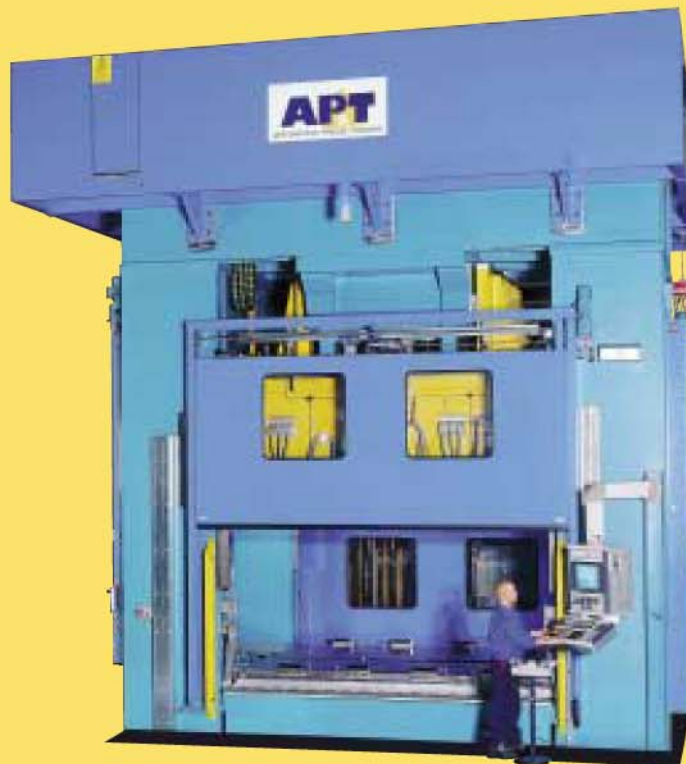


# Hydraulic Short Stroke Press HF for Hydroforming



- 1 or 2 modules in short stroke design
- Pre-stressed four-column frame providing rigid support against deflection
- Pre-forming slide with long prisma guiding
- Locking force range per module 30 000 – 50 000 kN
- Bed size range per module 1600 – 3500 mm
- Pressure range 250 – 400 MPa

# Hydroforming HF

**HF Hydro Forming is the unique module concept of AP&T for active hydroforming. HF is the most compact system solution on the market with advanced CNC-controls for all functions, improving the forming process.**

**The HF's are high technology and price-effective production systems that require smaller foundations than conventional hydroform presses, giving lower installation costs.**

**The HF series are modern systems for hydroforming of tube and sheet metal.** The HF consists of a powerful locking press with a guided pre-forming slide where the hydroform process is carried out. The slide is blocked in its lower position to lock the tooling. Each frame module is pretensioned with eight (8) tie-rods. The tie-rod frame and the short-stroke cylinder unit minimises both the deflection in the frame and the oil compression in the cylinder. This also gives a fast pressure/force increases and saves energy. The result is an improved forming process and product quality, as well as longer tool life. The basic tool unit is positioned in the press with the forming tool.

**Which size – 1 or 2 modules?** The HF series consist of a basic module of 30 000 kN in force, with a standard range of press tables. By combining 1 or 2 modules, a solution that gives a minimum of deflection is achieved. The design is appropriate for long parts that require a small deflection and high stability in frame, press table and tooling. The HF series is available with 30 000, 40 000 and 50 000 kN in locking force. Others on request.

**AP&T has extensive experience in programmable process control systems and high forming pressures.** A servo control system (CNC system) is needed to be able to obtain the best forming results and to control the forming process. The HF series is equipped with a modern servo control system, which is freely programmable and controls the forming process. This gives unlimited possibilities to hydroform tubes and sheet metal. The CNC controls (servo driven) increase the formability, the accuracy and the level of quality.

## Standard equipment:

- Locking press with 4 / 8-column frame
- Pre-tensioned frame with 8 tie-rods / module
- Guided slide with blocking function
- Long-stroke pre-form cylinder (from above)
- Short-stroke main cylinder (from below)
- "Constant-Pressure-Pumps" for locking force and axial force
- Energy efficient hydraulics
- Block-built low pressure hydraulics
- "High Speed" filling system – pressure media
- Pre-forming system – pressure media
- High pressure hydraulics with pressure intensifier
- Servo system for forming pressure, force, position, speed and time
- Cooling/filtering for low/high pressure systems
- Service platform with ladder
- Module-built electric/control systems
- Freely programmable CNC-control system
- CE-certified for manual operation

## Optional equipment:

- Locking force per module 30.000 – 50.000 kN
- Larger press table and column distance
- Alternative daylight – closed tooling
- Basic tool unit for tool fastening
- Higher forming pressure – higher volume