**Range of application**
Testing the ductility of sheet metals in accordance with established standards and customers’ requirements.

Testing the influence of surface treatments, coatings, and lubricants in typical types of forming such as cupping and earing tests. Checking the effect of tool and process parameters on the forming process.

**Advantages and features**
- Fast, easy tool and fixture changes, including drawing-punch, drawing-die, blank-holder, cutting-punch, cutting-ring and scraper-ring. Numerous modular expansion options.
- Test tools/fixtures for established test methods available ‘off-the-shelf’, special tools on application. Test tools/fixtures from earlier-generation machines can mostly still be used.
- Open-design tool head for tests on long sheet metal strips.
- Low piston-actuator friction, proportional valve technology and non-contact digital travel sensor positioned centrally enable accurate measurement recording and outstanding reproducibility.
- Position-controlled deep drawing speed.
- Deep drawing speed or clamping force can be changed manually during the test sequence.
- Program-controlled change of deep drawing speed and clamping force during the test.
- Automatic piston withdrawal and switch-off after end of test due to crack detection or on reaching maximum ram stroke (s-limit).
- Easy to operate: illuminated push-buttons guide the operator intuitively through the test sequence.
- Electrical and hydraulic protection for all functions.
- Innovative testControl II with 500Hz measured-value acquisition-rate for high data transmission rate, together with 24-bit resolution and 2-channel safety circuit. Development based on experience gained from over 12,000 installations of testControl electronics.
- testXpert III software: logical grouping of test preparation and performance, results analysis and the higher-level system settings makes every user feel confident and at home with the software, avoiding user error. Time-synchronized display of clamping, ram force and ram stroke measurement channels.
- Clean and quiet in operation. Easily transportable thanks to compact design.
- Individual requirements accommodated: as an alternative to the standard version, the testing machine, tools and accessories can be adapted to suit your requirements, e.g. piezo load cell, different deep drawing speeds, separate hydraulic power-pack, U-bending tool etc.
Product Information
BUP 400 / BUP 600 Sheet Metal Testing Machines for testControl II

- Set-up stroke for easy tool change.
- Hydraulic opening and closing of tool head, with 2-handed operation
- Display for parameter input and test result read-out has a swivel arm mount and can be aligned to suit the operator. Alternatively the testing system can optionally be operated with testControl II electronics and testXpert III testing software.
- Low testing machine overall height plus convenient positioning of controls enables fatigue-free, operator-friendly working.

All data at ambient temperature. We reserve the right to make technical changes in the course of ongoing development.
## Technical data

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All data at ambient temperature. We reserve the right to make technical changes in the course of ongoing development.