**DUALSENSOR ‘NOZZLE-MATE’**

**MEASURE NOZZLE PRESSURE** (=Specific Injection Pressure) & **NOZZLE TOUCH FORCE** (=Carriage Force)

**AT THE SAME TIME:**

- Proven Quartz-Technology for High Temperature Ranges
- Fits onto every machine - one sensor for the whole moulding shop
- Adapter plates for specific nozzles available
- Quick magnet mounting; instant results without any adaption-work
- Optional cooling systems allows the use in hot chamber die casting
- Optional heated nozzle for calibration of LOAD CELLS on all-electric injection moulding machines

Sets: Set for Nozzle Pressure measurement, with Nozzle Pressure Sensor only, incl. Display Box,

  - Battery charger and Standard Nozzle Adapter
  - Another Nozzle Adapter
  - Nozzle Adapter plate (no nozzle recess)
  - Carrying case with insert
  - Heated Nozzle for continuous pressure measurement (not only PEAK pressure)

**Technical data**

**Nozzle Pressure Sensor:**
- Pressure range I 0...2000bar
- Pressure Range II 0...4000bar
- Max. Error < 1% FS
- Temperature range 10...200°C
- Overload; max. 200%
- Reset/Calibration Integrated
- Dimensions Ø79 x 60mm
- can not be used for online measurement
- only a small volume is filled with plastic

**Nozzle Touch Force Sensor:**
- Standard load range 0...400kN
- Calibrated partial range 0...200.0kN
- Max. Error < 1%
- Strain gage Bridge 350 Ohm

Sensor technology for static measurement. This sensor can be retrofitted to the Nozzle Pressure Sensor at any time.

load range: 400 kN (partial range: 200.0 kN).
Advantage of this measurement:

- Recognize pressure drops hydraulic-Nozzle
- Recognize wear of screw
- Fast, simple and reliable results
- Machine check within the ISO9000ff tests
- Data acquisition for setup protocols
- One sensor for the whole molding

NEW: NOZZLE PRESSURE & NOZZLE TOUCH FORCE MEASUREMENT

This new line of sensors is a world novelty: Two important molding parameters can be measured at the same time, in one mounting:
- the Nozzle Touch Force (Strain Gauges) and
- Nozzle pressure (with Quartz Technology)

Especially developed for injection molding and Die Casting Machines. The Nozzle Pressure (=specific Injection Pressure) is measured by a quartz load cell behind a measuring pin. Pressures up to 4000 bar can be measured with high accuracy, by only injecting plastic into a recess in the sensor tip. The load cell measures static by means of bonded strain gauges. The load range of 40 tons scopes with even the largest machines.

Digital Dual-display instrument for the 'Nozzle-Mate' sensor. The Nozzle Pressure is indicated directly in bar, and the Nozzle Touch Force in kN. One channel instruments are available to measure only one parameter.

The DUALSENSOR measures the Nozzle Pressure and the Nozzle Touch force.