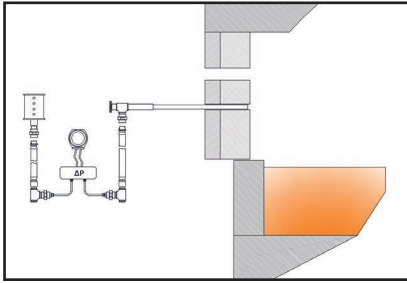


## Furnace pressure measurement and control

### Robust and interference-resistant sensors for high temperature use



Keep pressure sensor position close to glass level!

Detection of the right furnace pressure has impact not only on air ingress and fire stability but also on glass level control. Pressure always should be measured close to glass level.

If pressure is set too high, this causes an increased energy consumption and the refractory material will be overstressed. This also results in a reduction of furnace lifetime.

If pressure is set too low, uncontrolled air ingress causes both an increased energy consumption and increased NO<sub>x</sub> formation.

Therefore an optimal regulated furnace pressure among others is an essential requirement to ensure quality, save energy, reduce costs, and to optimize emissions.

For this purpose STG has developed:

- Robust and interference-resistant furnace pressure measurements
- Sophisticated software function blocks for an advanced control strategy



STG Furnace pressure probe installed

#### Technical Data

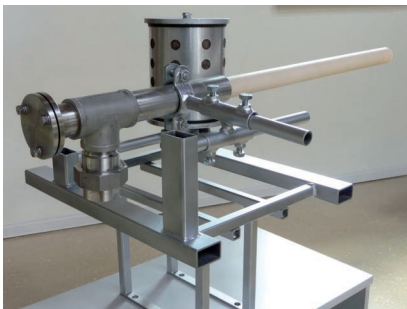
- Total length: 1,170 mm (bracket 200 mm, ceramic tube 800 mm)
- Al<sub>2</sub>O<sub>3</sub> tube (operational temp. to 1,500°C),  
Diameters: 25 / 38 mm
- Connection: 1 1/2"

#### Scope of supply

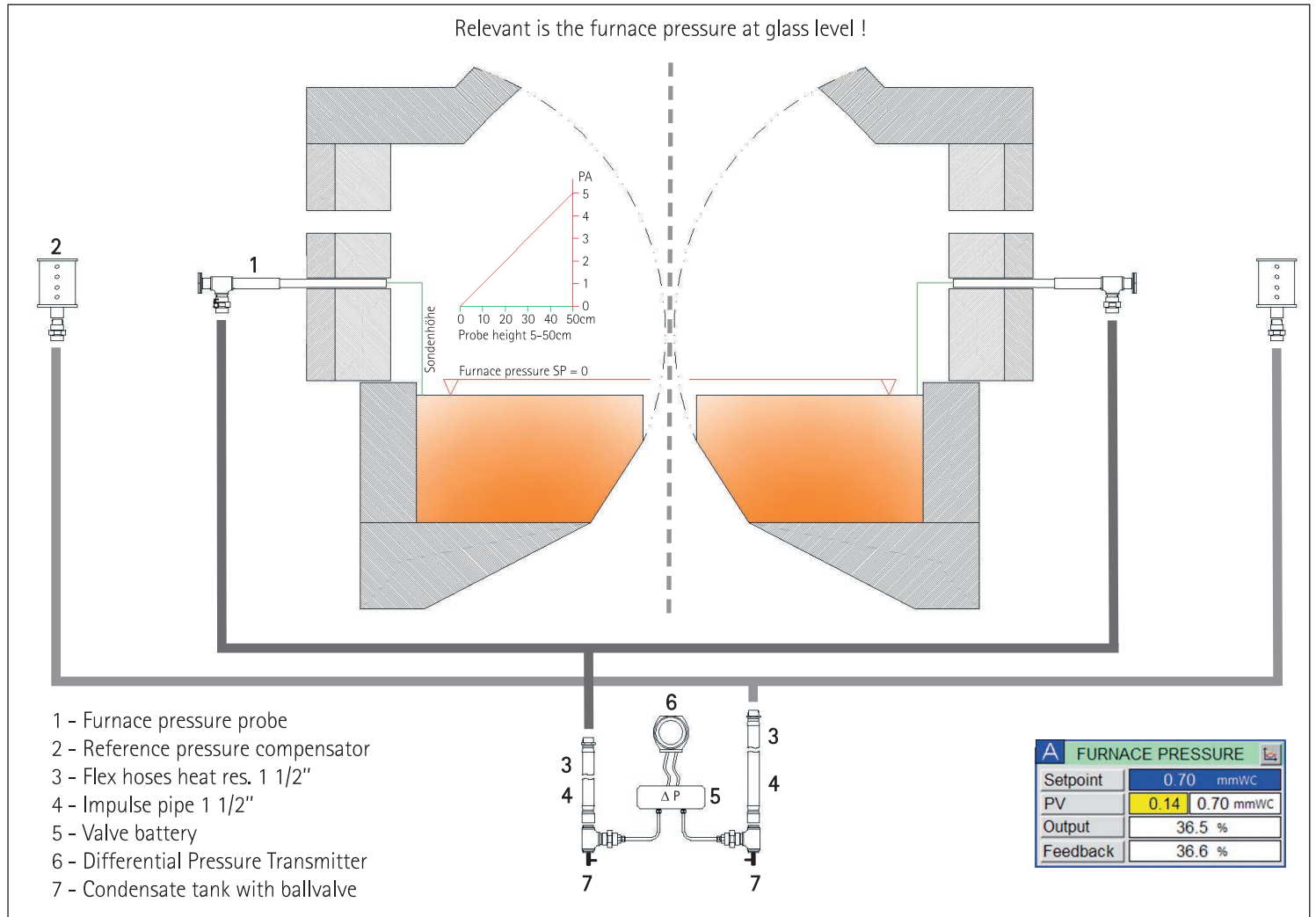
- Engineering acc. to individual requirements
- Probes consisting of ceramic tube and bracket
- Reference pressure control unit, compensating ambient influences
- Flexible connection hoses
- Impulse pipe 1 1/2"
- Valve battery
- Differential pressure transmitters
- Brackets and accessories
- Installation / Optimization of control parameters

#### System extensions

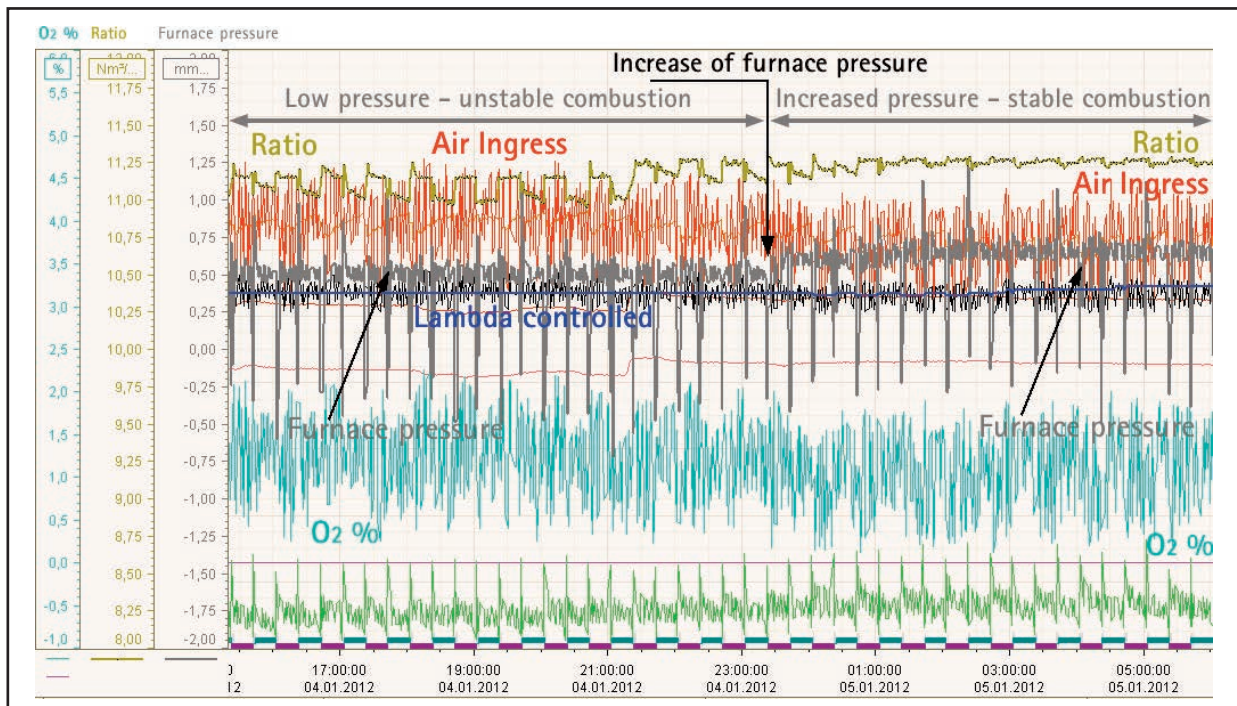
- Implementation of signals into DCS control loops
- Integration into Energy Management System
- Optimization of reversal behavior of furnace pressure damper



STG Furnace pressure probe with reference pressure compensator



Scheme of STG Furnace pressure measurement – probe position close to glass level



Increase of furnace pressure stabilizes combustion