



# PRESSISION

THE MOST ACCURATE TEMPERATURE MEASURING  
DEVICE IN THE WORLD





# / SURPASS

Known approaches require known results. Only those who are willing to break away from existing patterns of thought are able to find new solutions whose results exceed the known ones.

The PRESSISION sensor is the result of our relentless pursuit of development and innovation – and surpasses everything that has gone before.



**TEMPERATURE MEASUREMENT  
WITH UNMATCHED PRECISION**

**NO ELECTRICITY AT THE  
MEASURING POINT**



# / THIS IS ASHCROFT

## DEVELOPMENT FROM TRADITION

When Edward Ashcroft founded our company in 1852, his mission was to protect the steam-powered industry and its workers by using more sophisticated and reliable instruments. Times have changed, but not our attitude. With a history of more than 165 years, of which more than 40 years with our own production in Europe, we have experienced and learned a lot. Together with our customers, we have mastered three industrial revolutions, survived global and regional conflicts and crisis's. We look forward to accompanying our customers with our products in the fourth industrial revolution as well.

## GLOBAL - REGIONAL - LOCAL

Globally positioned - regionally represented and locally available for you. With local contacts who speak your language and are ready to solve your challenges.

## OUR GREATEST STRENGTH

All of Ashcroft's products and services are the result of our exceptional people. We are all passionate about our common goal, the best customer satisfaction. Ashcroft is inspired of a common commitment to our work and to each other. Combining the talents of our diverse workforce makes us more competitive, resilient and better able to respond to the ever-changing needs of our customers and markets.

## OUR MOTIVATION

As a customer and partner, you are the focus of our attention. We are passionate about designing and producing the most innovative, high quality pressure and temperature measuring instruments on our planet.

## OUR VALUES

Our five corporate values are not abstract, but are lived by us, and every Ashcroft employee bases his or her daily actions on them.



## THINK CUSTOMER FIRST

Every measure, every plan and every project is aimed first and foremost at you, our customer. We see the world through your eyes.

## NEVER SETTLE / CHALLENGE THE STATUS QUO

What was true yesterday is not necessarily true today. At Ashcroft, we challenge each other to never be indifferent, to keep improving ourselves and the company.

## RESPECT EACH OTHER

We celebrate our diversity, share our ideas and intensify our collective thinking. We act and discuss in mutual respect and thus find better solutions.

## THINK BEYOND BORDERS

Across geographical borders. Beyond the factory. Beyond your own area of responsibility. Beyond the personal comfort zone.

## WIN AS A TEAM

The common goal is more important to us than our own.

# / ASHCROFT PRESSISION

THE ASHCROFT® PRESSISION TEMPERATURE SENSOR MEASURES THE PRESSURE OF AN INERT GAS CONTAINED IN A GAS CARTRIDGE TO DETERMINE THE TEMPERATURE.

All PRESSISION temperature sensors are tailored to the specific needs of the customer.

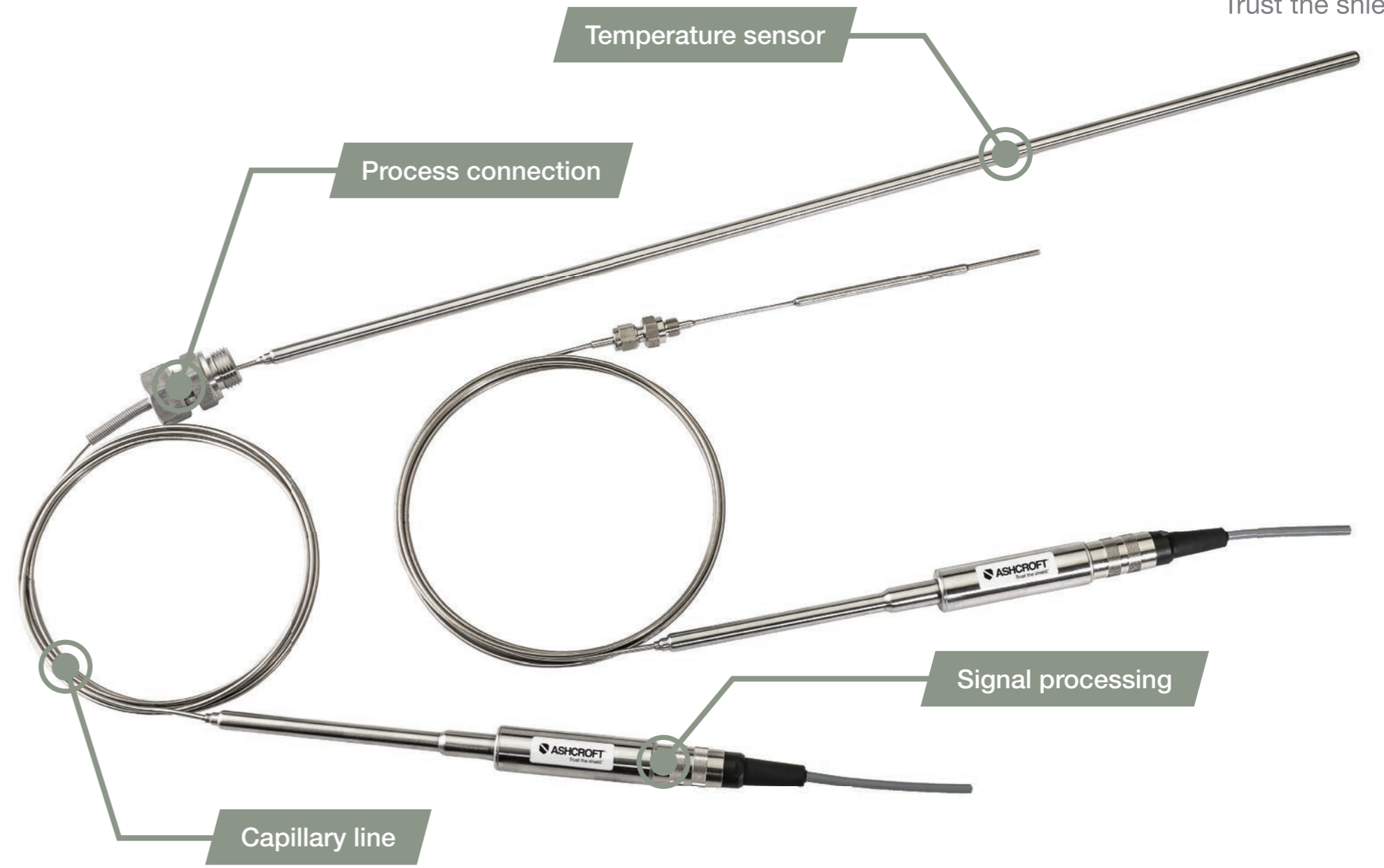
Size, shape and material of the temperature sensor, as well as the length of the connection of the stainless steel capillaries are always customer-specific.

**The main advantages of the PRESSISION temperature sensor are:**

- Best possible accuracy for temperature measurement  $\leq 0.1$  % of the measuring span
- Safety – No electricity in the process
- Measurement of the averaged temperature (along a length, over a diameter)
- Short response time: Up to 5x faster than a mineral-insulated sensor
- Alternative measuring principle to traditional measuring methods like Pt100 and thermocouples



**PRESSISION  
SENSOR**







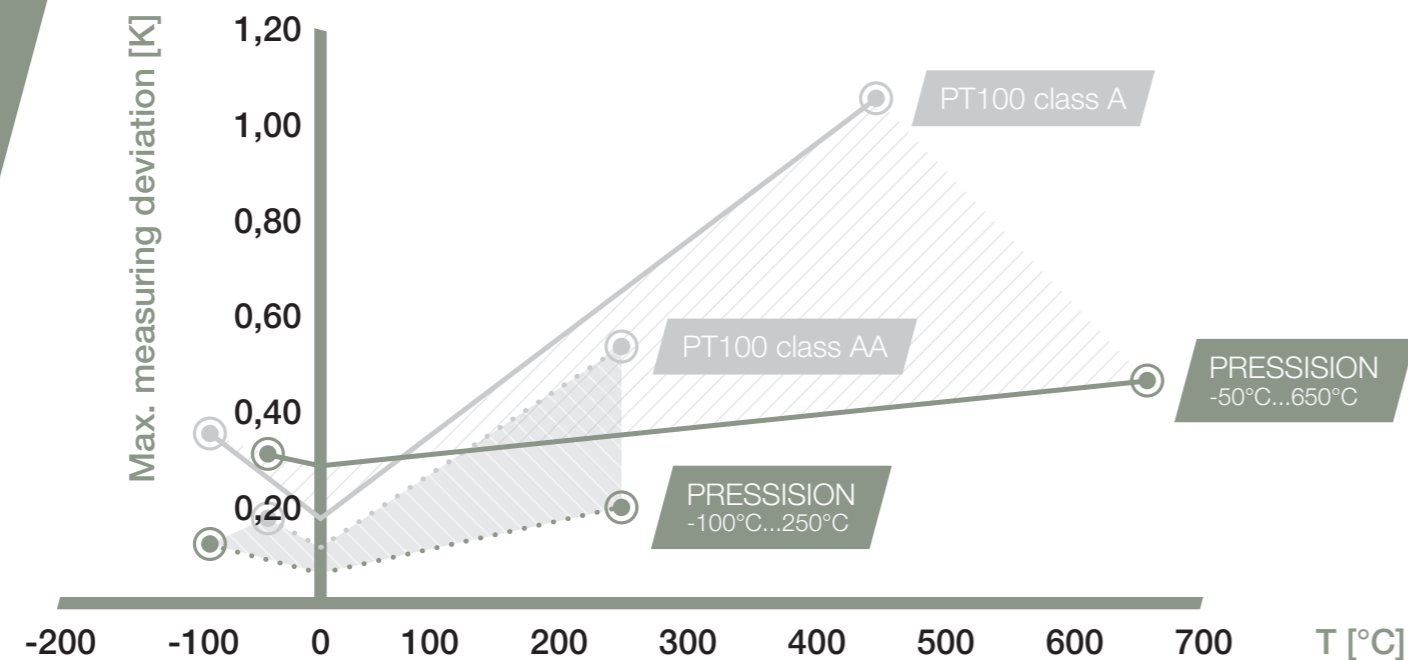
**PRESSISION  
SENSOR**

PRESSISION

## / PERFORMANCE FEATURES

- Averaged temperature over the temperature sensor
- Customised temperature sensors up to several metres
- Alternative to RTD's and thermocouples
- High stability, very low drift
- Constant volume gas thermometer with high-precision pressure transmitter
- Inert gas filling, pressure transmission via stainless steel capillary
- Compensation of ambient temperature

## / ACCURACY COMPARISON PRESSISION TO PT100



PRESSISION



## / TECHNICAL SPECIFICATIONS

<b>MATERIAL TEMPERATURE SENSOR</b>	/ Stainless steel 316L (or custom made)	<b>SUPPLY VOLTAGE</b>	/ 8...28 V DC
<b>AMBIENT TEMPERATURE</b>	/ -40°C to 80°C	<b>ATEX APPROVAL</b>	/ optional
<b>MEASUREMENT RANGE</b>	/ -180°C...650°C	<b>ACCURACY</b>	/ 0,1 % of the measuring span
<b>LONG-TERM STABILITY</b>	/ max. 0.05 % of the measuring span / year	<b>TIME CONSTANT STEP RESPONSE</b>	/ $t_{63} = 4s...12s$
<b>LENGTH OF THE CAPILLARY</b>	/ Customised up to 10 m		
<b>PRESSURE TRANSMITTER</b>	/ Temperature compensated high precision pressure transmitter		
<b>CAPILLARY</b>	/ Stainless steel 316L, outer diameter 2.5 mm, inner diameter 0.08 mm		
<b>DIMENSIONS</b>	/ according to customer specifications		
<b>OUTPUT SIGNAL</b>	/ 4...20 mA / 0...10 V / RS 485 / ModBus		
<b>OPTIONS</b>	/ Protective sheath for capillary / multi-point measurement within a single sheath		

ASHCROFT  
CUSTOM  
ENGINEERED  
SOLUTION

# / ASHCROFT CES

PRECISION

## / ASHCROFT CES

CUSTOMER-SPECIFIC SOLUTIONS AS CORE  
COMPETENCE

Every installation is individual, every challenge specific.  
We know that.

That's why we also know that it is often not enough to meet special  
problems with off-the-peg products alone – and therefore  
does not live up to our own standards:

We regard perfect product implementation and the realisation of  
smooth process flows – for example in the form of stocking  
concepts – as elementary.

With our Custom Engineered Solutions (CES<sup>SM</sup>) we offer our  
customers tailor-made solution concepts.

In close coordination between you, our product experts and our  
development engineers, we work out customised product  
solutions for the most individual applications.

This flexibility distinguishes us and enables us to offer our  
customers the best possible concepts.

We identify with your results and are aware of our  
responsibility. This is our understanding of partnership.

**MEASURE US BY IT!**

PRECISION







 **ASHCROFT**<sup>®</sup>  
Trust the shield.<sup>®</sup>

 [www.ashcroft.eu](http://www.ashcroft.eu)

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