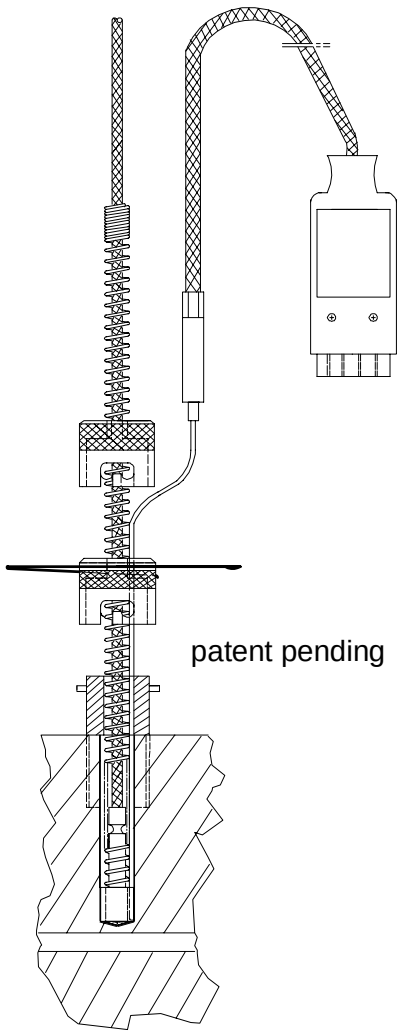
Finally, an economic solution

New temperature-measuring system for the continuous supervision the control exactness with running process in plastic (corresponds to the measuring means supervision after German Institute for Standardization EN ISO 9001:2008)



Benefits through the VMS measurement system:

1. Reference measurement without loss of production!
2. low time involved !
3. low cost !
4. high accuracy !

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Reference temperature measurement on plastics machinery

New measuring system for continuous temperature monitoring in a running process(corresponds to the test equipment monitoring according to DIN ISO 9000, DIN ISO 2000 new).

I. Application examples

Option 1:

Insert in new machine equipped with 8 mm hole and insert a 6 mm sensor (Fig. a).

Option 2:

Drill hole to old mschine, for example, 6 mm to 8mm and insert 6mm sensor

(Fig. a).

Option 3:

Replace the 8mm sensor previously used by a 6 mm sensor (Fig. a).

A special bayonet cap has an over the corresponding sensor measure beyond Through Hole, whereby an easy donning possible. Thus, the cap on the spring can be fixed in the correct clamping position, has these two lateral bores, where an inserted spring clip makes through adjustment of tightness.

Other dimensionally successive relative tuned sensor replacements are also possible (for example 9 mm auf 7 mm / 10 mm auf 8 mm / etc.).

With the help of a special bayonet cap (Fig . b), the calibrated reference - insulated thermocouple NiCr-Ni type K to be tested with special recording and plug (Fig . C) , together with the Combines 6 mm sensor (Fig . D) and fully (e fig .) inserted into the bore.
.
On sufficient spring pressure to look for.

Connect the calibrated mineral insulated thermocouple with the programmed connector to the hand-held instrument (fig. f, terminal “M1”.

The temperature compensation is in the Thermocouple connector.

II. Calibration of measurement standards

The reference Coat Type-K thermocouple with connector and hand temperature measuring instrument form a single unit.

The coat-type K thermocouple must be calibrated and the plug can be programmed with the determined deviation.

The temperature test points, as well as the inspection intervals are determined by the customer.

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III. Balance of hand measuring instruments for reference mineral insulated thermocouple

In a test protocol, the temperature deviation of the reference Coat thermocouple is to certify. This temperature difference is in the measured value correction of hand measuring instruments considered. Accurate measurement is therefore given.

IV. Evulation of the measurement

The value of the temperature displayed on the machine is to be compared with the value of the hand instrument. This difference is the temperature deviation to document.
The measuring duration is at potential bound thermocouples > = 5 minutes.

V. Accuracy of measurement

Under optimal operating conditions a measuring accuracy of up to ± 0.2 ° C is reachable.

VI. VMS-Measuring instrument

Working temperature	:	-10 bis +60°C
Storage temperature	:	-30 bis +60°C
Relative humidity range	:	10 – 90% (not condensing)

Accuracy with thermocouple plug "K"

Temperature range	:	-20 bis + 400°C
solution	:	0,1K
linearization - precision	:	±0,05K ±0,05% v.Mw

VII. VMS – connector

Working temperature	:	-10 bis +60°C
Storage temperature	:	-30 bis +60°C
Relative humidity range	:	10 – 90% (nicht kondensierend)

VIII. VMS-Reference thermocouple „K“

precision : Calibration (Deviation is taken into account in the plug s. II.)

storage : VMS- Reference sensor with plug must be stored dry at room temperature.

Occupational safety regulations must be observed !

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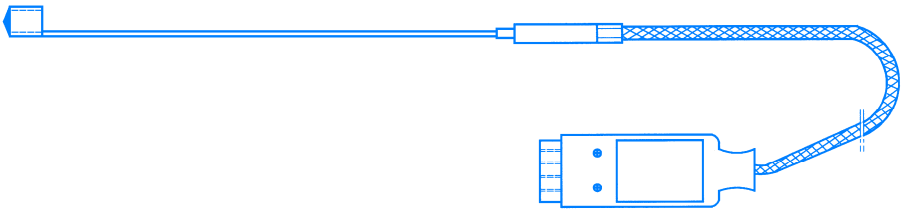
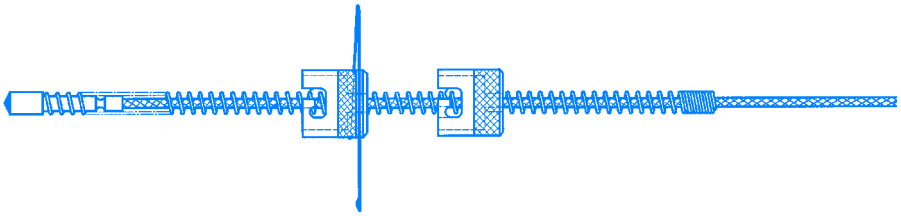
a) ø6

b)

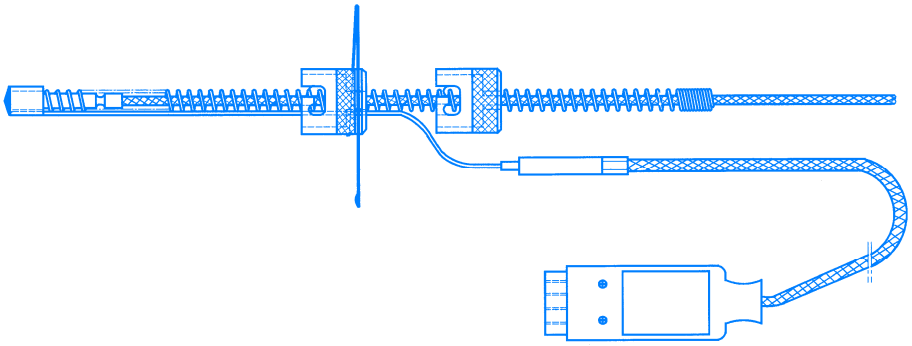
c) ø8



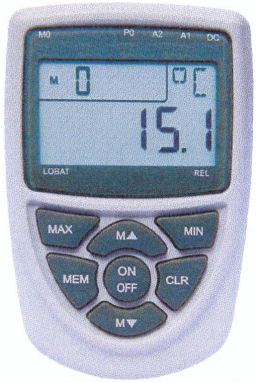
d) ø6



e) ø8



f)



patent pending

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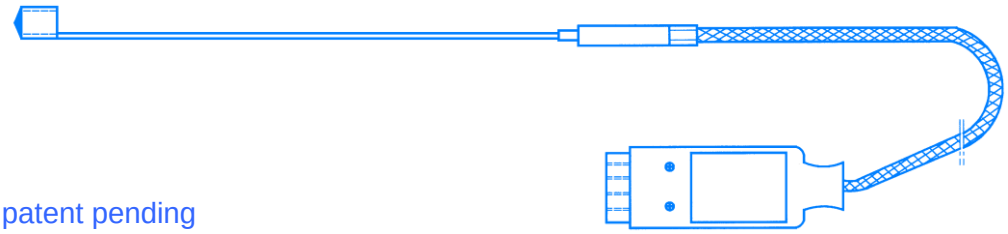
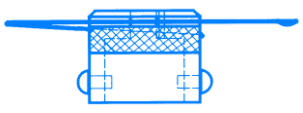
V M S - System

Reference number		price €
	Special-mineral insulated-reference-thermocouple NiCr-Ni Typ (K) DIN EN 60584, Kl. 1 Potential-free	
0059.	VMS – 1,0/ po/ ET 400/ 1,0 with 1,0 m thermo line 001.248 (Si/ Si) with special-connector ***incl. calibration***	**on request**



patent pending

000009042	**Special bayonet cap „n-VMS“** with cross - and axial milling incl. special spring clamp ID=14,8 x 18 mm protected utility model		**on request**
000009043	**Special bayonet cap „k-VMS“** with cross - and axial milling incl. special spring clamp ID=12,8 x 16 mm protected utility model		**on request**
000009044	**Special bayonet cap „gS-VMS“** with cross - and axial milling incl. special spring clamp ID=15,5 x 18 mm protected utility model		**on request**
000829014	**Handheld instrument ALMEMO 2450-1** with 1 measurement input configured on the logged deviation from the VMS – 1,0 / po/ ET 400/ 1,0		**on request**

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Reference number		price €
	Replacement thermocouples for permanent whereabouts	
0044.	**thermocouple Fe-CuNi Typ (J) DIN EN 60584,Kl.1 (alternativ Typ (L) 1/2 DIN 43710)** related BT-KS 29 „n“, „k“ or „gs“/ without nipple/ D=6mm/ 1,0 with 1,0 m thermo line 001.256 (001.252) without screw-in nipple feature: - sensor tip material 1.4305	**on request**
0044.	**thermocouple Fe-CuNi Typ (J) DIN EN 60584,Kl.1 (alternativ Typ (L) 1/2 DIN 43710)** related BT-KP 29 „n“, „k“ oder „gs“/ without nipple/ D=6mm/ 1,0 with 1,0 m thermo line 001.256 (001.252) without screw-in nipple featuret: - sensor tip material 1.4305	**on request**

Altenative sensors on request

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