

## **THERMO** – *Test* ————— TT 1

**Small, fast-response thermometers  
for industry**

*Accurate and responsive  
as laboratory thermometers*

- Accuracy:  $\leq \pm 1\%$  of full scale
- Stem diameters: 4 mm and 4.5 mm

*Sturdy and easy to read  
as industrial thermometers*

- All-stainless construction
- Head diameters: 26 mm (1"), 36 mm (1 1/2"), 46 mm (1 3/4"), 52 mm (2"), 65 mm (2 1/2")

# Small, fast-response bimetallic thermometers, for industry

Rolled stainless steel head AISI 304/1.4301

- = Standard model, without extra cost
- = Optional, with extra cost
- = Stem pressed into shoulder **A** or threaded connection **S** = not pressure sealed
- = Stem welded to threaded connection **S** = pressure sealed
- ◻ = Stem pressed (or welded on request) into shoulder **A** or threaded connection **S**

## 4 mm dia. stem, stainless steel

L = 60 - 300 mm



With unthreaded shoulder <b>A</b>	Head					
	dia.	26	36	46	52	65 mm
- in aluminium						
- in galvanized brass						
With threaded connection <b>S</b>						
- in aluminium						Threads M8
- in dull chrome-plated brass (for ranges up to + 250°C/ + 500°F only)						G1/4
Thermometers fitted with these connections can be supplied with pockets. See sheet «Thermo-Well».						G3/8
						G1/2
With back mounting flange <b>F</b> in neutral coloured anodized aluminium and unthreaded shoulder <b>A</b> in galvanized brass, stem 4 mm dia. (dimensions see page 5).						

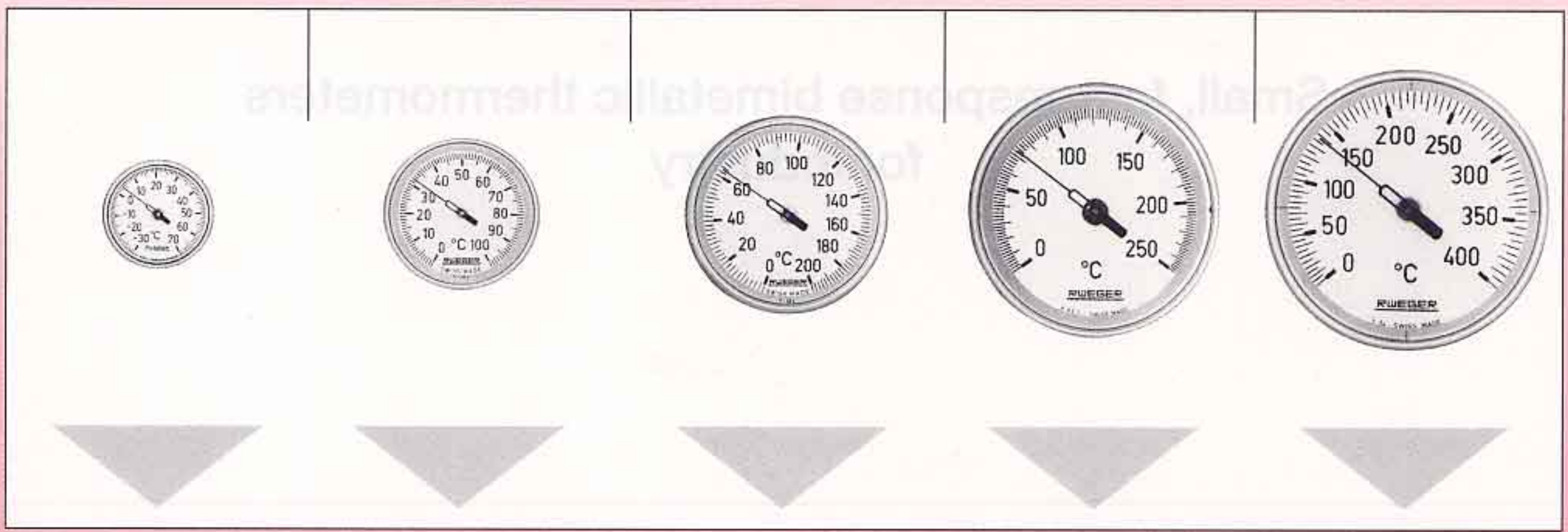
## 4.5 mm dia. stem, stainless steel

L = 60 - 500 mm

With unthreaded shoulder <b>A</b>						
- in stainless steel						
With threaded connection <b>S</b>						
- in stainless steel						Threads M8
						G1/4
						G3/8
						G1/2
						1/4"NPT
						1/2"NPT
Thermometers fitted with these connections can be supplied with pockets. See sheet «Thermo-Well».						
With back mounting flange <b>F</b> in neutral coloured anodized aluminium and unthreaded shoulder <b>A</b> in galvanized brass, stem 4.5 mm dia. (dimensions see page 5).						

## Options

Unbreakable acrylic glass (*= without extra cost)		
Support	(see page 4)	N° 049 30L1 01
Bimetallic measuring system damped by silicon oil «C1» for working temperatures from - 30 to + 200°C		
Plastic protection sheat for thermometers with M8 connection, (see page 4)		L = 60 mm
		L = 120 mm
		N° 066 10P0 01
		N° 066 10P0 02
Stem with spear point in stainless steel AISI 304/1.4301		
- Spear point pressed into stem, welded on request	for 4 mm dia. stem	
- Welded spear point	for 4.5 mm dia. stem	
See pricelist		



TTH026A	TTH036A	TTH046A	TTH052A	TTH065A
● □	● □	● □	-	-
-	-	-	● □	● □
TTH026S	TTH036S	TTH046S	TTH052S	TTH065S
● □	● □	● □	-	-
-	-	-	● ■	● ■
-	-	-	○ ■	○ ■
-	-	-	○ ■	○ ■
-	-	-	-	TTH065F
-	-	-	-	● □

TTH026A	TTH036A	TTH046A	TTH052A	TTH065A
● ■	● ■	● ■	● ■	● ■
TTH026S	TTH036S	TTH046S	TTH052S	TTH065S
● ■	● ■	● ■	-	-
○ ■	○ ■	○ ■	● ■	● ■
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-	-	-	-	TTH065F
-	-	-	-	● □

○*	○	○	○	○
○	○	○	○	○
○	○	○	○	○
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○	○	○	-	-
○	○	○	○	○
○	○	○	○	○
TT 1	TT 1	TT 1	TT 1	TT 1

## Standard temperature ranges

TTH026./TTH036.		TTH046.		TTH052./TTH065.	
°C	Range	°C	Range	°C	Range
	°Div.		°Div.		°Div.
- 30... + 70	1	- 70... + 40	1	- 30... + 70	1
- 20... + 40	1	- 30... + 70	1	- 20... + 40 **	1/2
		- 20... + 40	1/2		
		- 10... + 110	1		
		- 10... + 150	2	- 10... + 150	2
0... + 60	1	0... + 60	1/2	0... + 60	1/2
0... + 100	1	0... + 100	1	0... + 100	1
0... + 200	2	0... + 200	2	0... + 200	2
0... + 250	5 (2*)	0... + 250	2	0... + 250	2
0... + 320	5	0... + 320	5	0... + 320	5
0... + 400	5	0... + 400	5	0... + 400	5

\* = for type TTH036. Ranges in °F or other units available on request, with extra cost.  
 \*\* = available only for types TTH065.

## Stems

L = mm	Standard lengths (L = ... mm or...» ) (other lengths available on request)							Material	Immersion depth
	60 (2 1/2")	120 (6")	150 (9")	200 (12")	300 (16")	400 (20")	500		
4 mm dia.	●	●	●	○	○	-	-	Stainless steel AISI 304L/ 1.4306	For guaranteed accurate measurement, the immersion depth should be at least 60 mm (2 1/2"). Shorter immersion depth on request, with extra cost.
4.5 mm dia.	●	●	○	○	○	○	○		

## Technical specification

Characteristic	Unit	Value	Characteristic	Unit	Value
Lower range limit	°C	≥ - 70	Repeatability	% FS	≤ ± 0.2
Upper range limit	°C	≤ + 400	Hysteresis	% FS	≤ ± 0.5
Full scale (FS) ΔT	K	60...400	Sealing		
Overload	% FS	20	for range ≤ 200°C	IP	67
Accuracy	% FS	≤ ± 1	for range > 200°C	IP	54

## Options

### Pocket thermometer with plastic case

Precision thermometer for technicians, fitters, inspectors. Plastic protective case, also usable as a support when measuring temperatures. Available also as 36 and 46 mm dial versions.



### Types available from stock

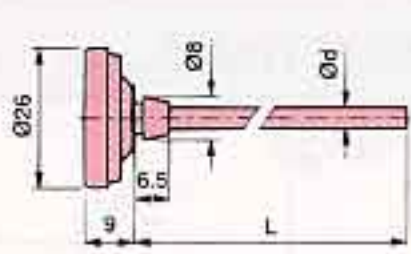
Types	Stems		Ranges
	dia.	Lengths	
TTH026S	4 mm	60 mm	- 30... + 70°C 0... + 100°C 0... + 200°C 0... + 250°C
		120 mm	0... + 100°C 0... + 200°C 0... + 250°C
Stem with spear point	4.5 mm	120 mm	- 30... + 70°C 0... + 100°C

### Support

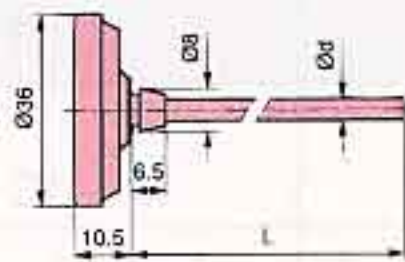
Nickel-plated brass support for fast fixing of horizontal thermometers on walls of vessels or test-tubes.

N° 049 30L1 01

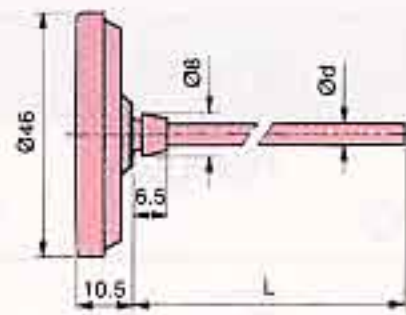




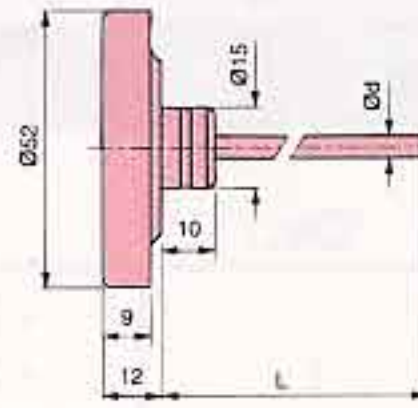
TTH026A



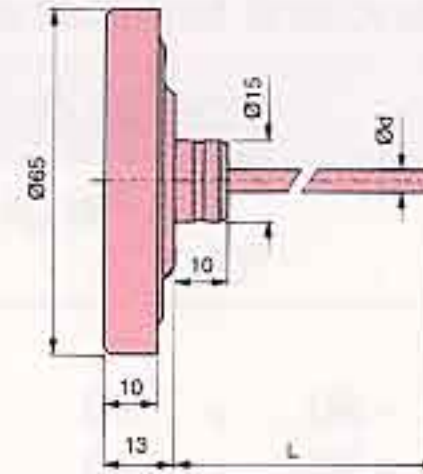
TTH036A



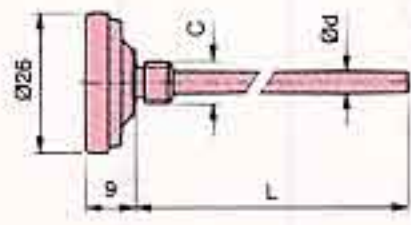
TTH046A



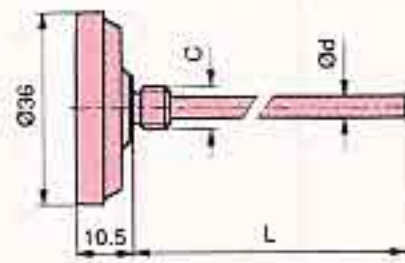
TTH052A



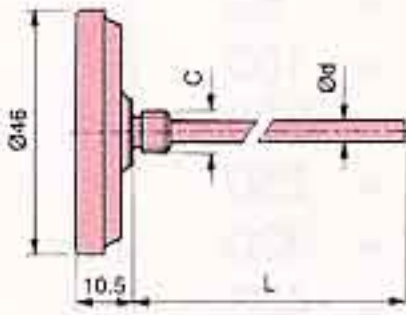
TTH065A



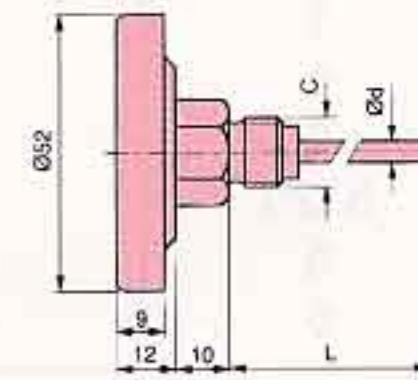
TTH026S



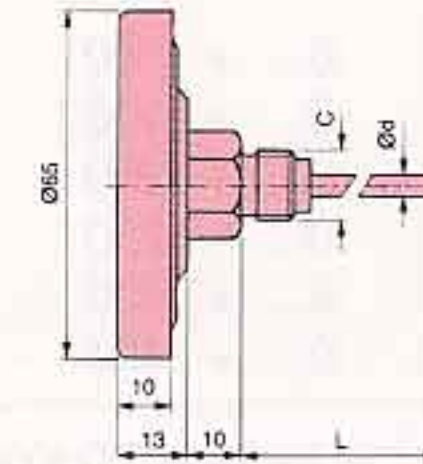
TTH036S



TTH046S



TTH052S



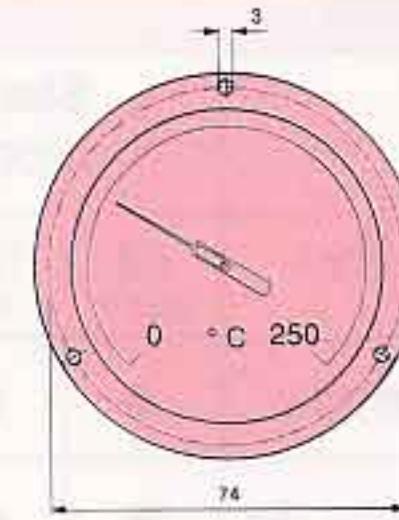
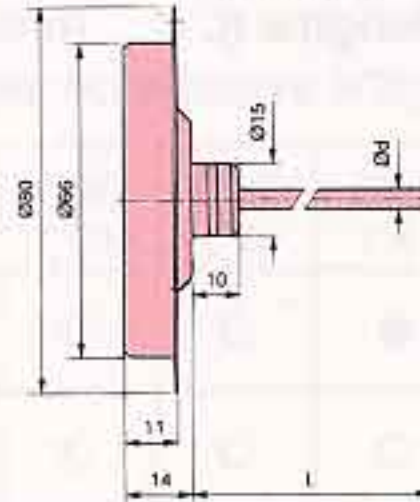
TTH065S

**Thermometer with back mounting flange F**

Thermometer with fixing flange for panel mounting. Instrument fixed by 3 holes 3 mm dia. spaced at 120°. Available only for 65 mm dials.



TTH065F



**Bimetallic thermometers for measuring surface temperatures**



**Type TTO046**

Thermometers for measuring surface temperatures: Hotplates (ovens, stoves), metals and structures (beams, roofs), insulation (moulds, motors), road surfaces, etc.

Head in stainless steel. Contact base in copper.

Ranges: 0... + 100°C  
0... + 200°C  
0... + 250°C  
0... + 400°C } available from stock

**Type TTA046 with 2 pivoting magnets**

Same execution as for thermometer TTO046 but also fitted with 2 pivoting magnets.

Ranges: 0... + 100°C  
0... + 200°C  
0... + 250°C } available from stock

**Type TTA070**

Head in synthetic material, light alloy base with 2 pivoting magnets.

Ranges: - 35... + 55°C  
0... + 120°C  
0... + 200°C } available from stock

Plastic sheath.....N° 066 10P0 04

# Small, fast-response bimetallic thermometers for industry

## Interesting characteristics

These fast-response thermometers are provided with miniaturized bimetallic measuring systems housed in thin-wall stems (0.25 mm for 4 mm dia. stems, 0.5 mm for 4.5 mm). The response time is thus very short: about 5 s for 90% full scale deflection, in turbulent water.

## For varied applications

This small, dial-type thermometers, which need no electrical power and are modestly priced, are an advantageous alternative or auxiliary to electronic temperature display systems in a wide range of industrial applications. For example:

- plastics and packaging, general engineering
- hydraulic circuits, sterilization, drying plants
- injection moulding, plastic welding
- casting
- mixer taps and similar devices
- fuel preheating circuits
- drink dispensers
- etc.

## Ordering code structure

### Type

T T H 0 2 6 A

— Connection types

A = unthreaded shoulder  
S = fixed threaded connection  
F = back mounting flange  
(65 mm dia.)

Nominal head diameters (26, 36, 46, 52, 65 mm)

H = co-axial

O = contact base for surface temperatures

A = contact base O, fitted with 2 pivoting magnets

THERMO-Test fast-response bimetallic thermometers

### Additional information

- Temperature range
- Connection thread and material
- Stem diameter and material
- Length of stem
- Options

# RÜEGER

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**RÜEGER S.A.**

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