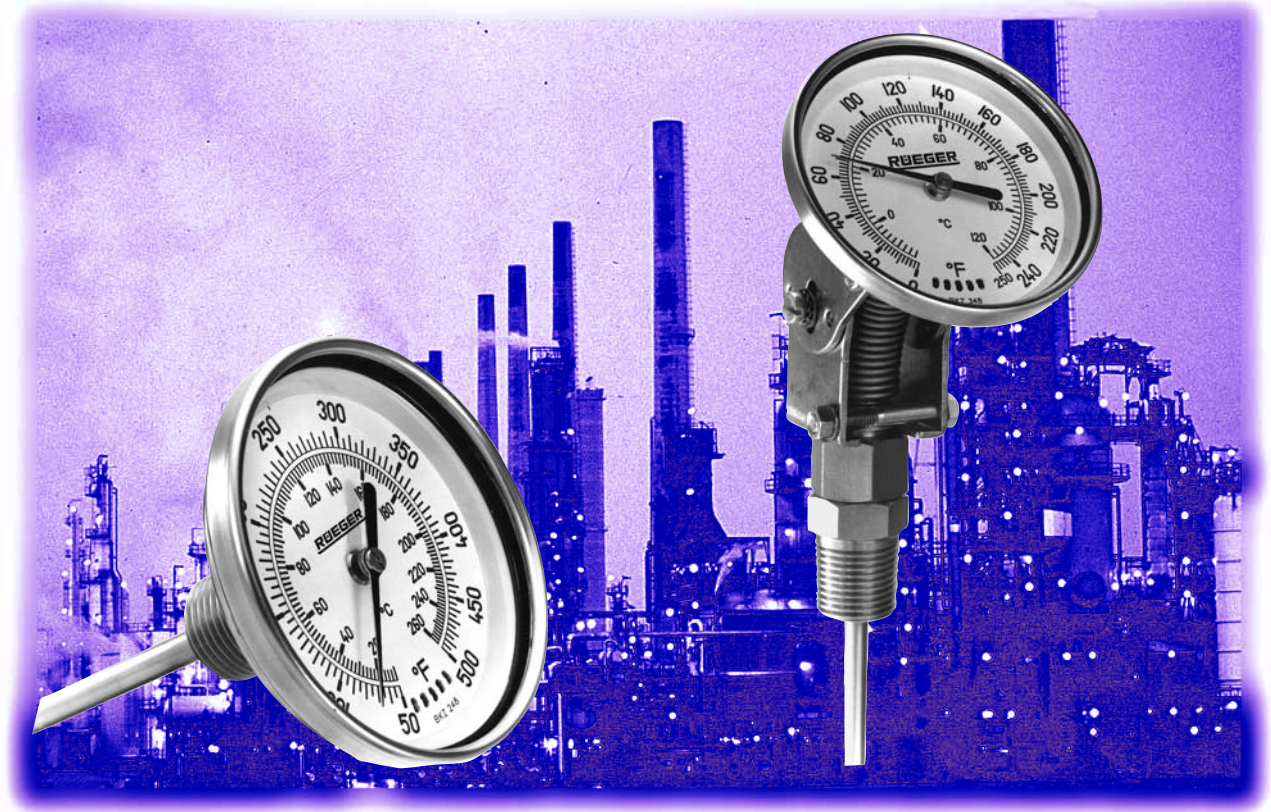


# TH1 - **Stainless** bimetallic industrial thermometers

A proved mechanism and a sturdy housing, for reliability under severe conditions

FT TH1-E-9.02



## All stainless steel thermometer with °C , °F or double scales

### ● Main features

- Bimetallic thermometer
- Heavy duty all-stainless steel construction
- External zero adjustment in option
- Complying with ASME standard B40.3 grade A (option AA) & class 1 acc. DIN 16203

### ● Technical features

- Horizontal (THH), every angle executions (THI) and vertical (THV)
- Case diameters (in AISI 304) 3" (80 mm), 4" (100 mm), 5" (130 mm), 6" (150 mm)
- A large choice of temperature ranges
- Stem length: from 2" (60 mm) to 6' (2000 mm)
- Stem diameters: 6, 8, 9 mm

### ● Applications

- General industry
- Foods
- Chemicals
- Petro-chemicals
- Heating & cooling systems
- Air conditioning systems
- Offshore
- Fossil-fuel
- Power stations
- Hydraulics
- Refrigeration



## Standard temperature ranges

Single scales °C		Double scales °C/°F	
-70°C ...+ 40°C (1:1)	0°C ...+300°C (1:5)	- 40°C ... + 70 °C	+10°C ... +200 °C
-30°C ...+ 70°C (1:1)	0°C ...+400°C (1:5)	- 40°F ... +160 °F	+50°F ... +400 °F
0°C ...+ 60°C (1:0.5)	0°C ...+500°C (1:10)	-20°C ... +120 °C	+10°C ... +290 °C
0°C ...+120°C (1:1)		0°F ... +250 °F	+50°F ... +550 °F
0°C ...+160°C (1:2)		+10°C ... +150 °C	+60°C ... +400 °C
0°C ...+200°C (1:2)		+50°F ... +300 °F	+150°F ...+750 °F
0°C ...+250°C (1:2)			

Other ranges (°C; °Kelvin; °F) are available on request



## Stems

Stem dia. (mm)	Length (L = mm or inch)	Materials available for all dias and lengths
6	from 60mm (2") to 2m (6')	Stainless steel AISI 304 L/1.4306 (standard) or stainless steel AISI 316 L/1.4404 (optional)
8, 9	from 60mm (2") to 2m (6')	

Tolerance on stem diameters: 0/-0,1 mm

### Important !

The fixing systems described on sheet TA 1 and supplied as accessories (e.g. the connection "AMX") require that in all cases the length L1, and to the lengths L2 and L, be specified for vertical (bottom-connected) thermometers with unthreaded shoulder THH...A+ .../THV...A + .../THI...A+ ... The length L1 is in fact the useful length for temperature measurement.

If the instrument is ordered with pocket (thermowell) type DAE, please refer to corresponding technical leaflet. For vertical thermometers THV...A+ ... according to the head diameter and to the fixing system, the length L2 corresponds in each case to a minimum length which allows the connection to be screwed up without the spanner fouling the head.

When the length L2 exceeds 100mm, we recommend 8 or 9mm diameter stems (wall thickness 1.4 or 1.9mm respectively) to eliminate any risk of accidental bending. The connections AMX/AMU are not recommended with a stem dia. 6mm.

Vertical Thermometers	Fittings and connections supplied as accessories		
	Min. length L2		
Types	+TP1	+AMX	+AMU
THV080A	25mm	37mm	30mm
THV100A	32mm	44mm	37mm
THV130A	46mm	58mm	51mm
THV150A	57mm	69mm	62mm



## Technical specifications

Characteristics	Unit	Value	Characteristics	Unit	Value
Lower range limit	°C	-70	Repeatability	% FS	+/- 0.2
Upper range limit	°C	+500	Hysteresis	% FS	+/- 0.5
Full scale (FS) $\Delta T$	°C	-70...500	Position error	% FS	+/- 0.5
Overload for range 400°C	% FS	20	Tilt error (90°) for types THI	% FS	+/- 0.5
for range > 400°C			Long time stability (free of peak loads exceeding 100 g)		
peak overload	°C	550	for range 400°C	% FS/year	+/- 0.3
continuous overload	°C	520	for range > 400°C	% FS/year	+/- 0.8
Accuracy			Sealing	IP	65
for range 400°C	cl. 1	1			
for range > 400°C	cl. 2	2			



## Options

Measuring system dampened by silicon grease for protection against vibrations C2

Mineral glass (standard)

Acrylic glass


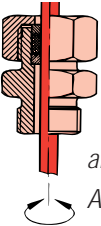
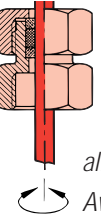
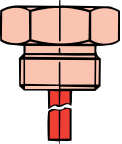
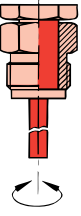
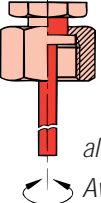
Safety glass, only with head Ø 4" (100 mm), Ø 5" (130 mm)

Window with index pointer, only with mineral or acrylic glass, case Ø 3" (80 mm), Ø 4" (100 mm)



**Connections board**  
6 connection types



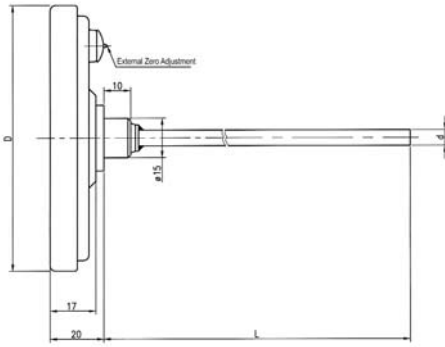
		Horizontal execution (back connection) <b>H</b>	Every angle execution <b>I</b>	Vertical execution <b>V</b>
<b>«A» TYPE UNTHREADED SHOULDER</b>				
 <p>all-stainless steel AISI 303/1.4305 Ø 15 x 10 mm</p>	80 mm (3") dia.	<b>THH080A</b>	<b>THI080A</b>	<b>THV080A</b>
	100 mm (4") dia.	<b>THH100A</b>	<b>THI100A</b>	<b>THV100A</b>
	130 mm (5") dia.	<b>THH130A</b>	<b>THI130A</b>	<b>THV130A</b>
	150 mm (6") dia.	<b>THH150A</b>	<b>THI150A</b>	<b>THV150A</b>
<b>«AMX» TYPE SWIVELLING AND SLIDING THREADED CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/4 A</p>	80 mm (3") dia.	<b>THH080A+AMX</b>	<b>THI080A+AMX</b>	<b>THV080A+AMX</b>
	100 mm (4") dia.	<b>THH100A+AMX</b>	<b>THI100A+AMX</b>	<b>THV100A+AMX</b>
	130 mm (5") dia.	<b>THH130A+AMX</b>	<b>THI130A+AMX</b>	<b>THV130A+AMX</b>
	150 mm (6") dia.	<b>THH150A+AMX</b>	<b>THI150A+AMX</b>	<b>THV150A+AMX</b>
<b>«AMU» TYPE SWIVELLING AND SLIDING CAP CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/4 A</p>	80 mm (3") dia.	<b>THH080A+AMU</b>	<b>THI080A+AMU</b>	<b>THV080A+AMU</b>
	100 mm (4") dia.	<b>THH100A+AMU</b>	<b>THI100A+AMU</b>	<b>THV100A+AMU</b>
	130 mm (5") dia.	<b>THH130A+AMU</b>	<b>THI130A+AMU</b>	<b>THV130A+AMU</b>
	150 mm (6") dia.	<b>THH150A+AMU</b>	<b>THI150A+AMU</b>	<b>THV150A+AMU</b>
<b>«S» TYPE THREADED CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/8 A, G 3/4 A</p>	80 mm (3") dia.	<b>THH080S</b>	<b>THI080S</b>	<b>THV080S</b>
	100 mm (4") dia.	<b>THH100S</b>	<b>THI100S</b>	<b>THV100S</b>
	130 mm (5") dia.	<b>THH130S</b>	<b>THI130S</b>	<b>THV130S</b>
	150 mm (6") dia.	<b>THH150S</b>	<b>THI150S</b>	<b>THV150S</b>
<b>«T» TYPE SWIVELLING THREADED CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available thread : G 1/2 A, M 18x1.5, M 20x1.5</p>	80 mm (3") dia.	<b>THH080T</b>	<b>THI080T</b>	<b>THV080T</b>
	100 mm (4") dia.	<b>THH100T</b>	<b>THI100T</b>	<b>THV100T</b>
	130 mm (5") dia.	<b>THH130T</b>	<b>THI130T</b>	<b>THV130T</b>
	150 mm (6") dia.	<b>THH150T</b>	<b>THI150T</b>	<b>THV150T</b>
<b>«U» TYPE SWIVELLING CAP CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available thread : G 1/2 A, G 3/4 A, M 24x1.5, M 27x2</p>	80 mm (3") dia.	<b>THH080U</b>	<b>THI080U</b>	<b>THV080U</b>
	100 mm (4") dia.	<b>THH100U</b>	<b>THI100U</b>	<b>THV100U</b>
	130 mm (5") dia.	<b>THH130U</b>	<b>THI130U</b>	<b>THV130U</b>
	150 mm (6") dia.	<b>THH150U</b>	<b>THI150U</b>	<b>THV150U</b>



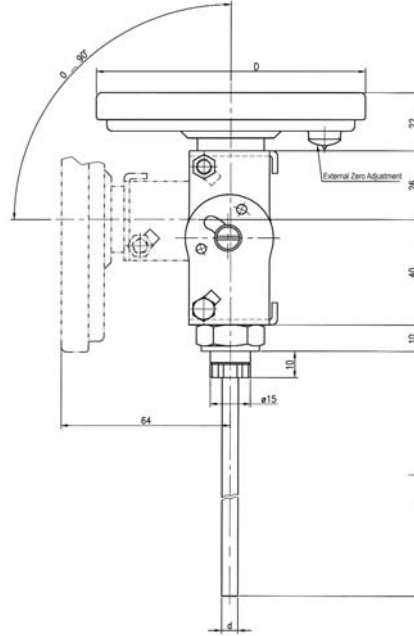
## Dimensions

# RÜEGER

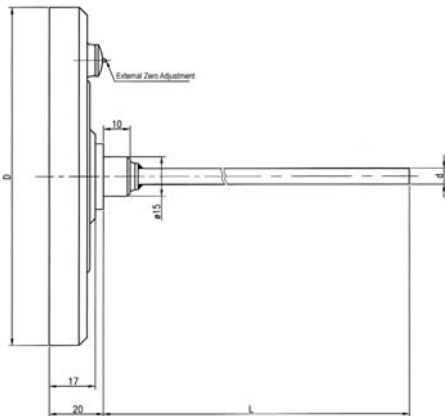
	THH080A	THH100A
D	77.2 mm	100.6 mm



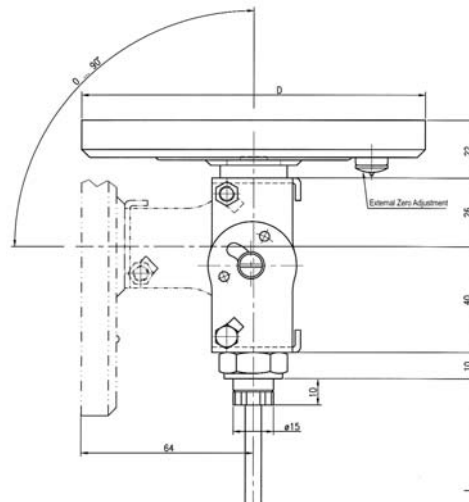
	THI080A	THI100A
D	77.2 mm	100.6 mm



	THH130A	THH150A
D	128 mm	150 mm



	THI130A	THI150A
D	128 mm	150 mm



Drawings of THV on request



RÜEGER SA  
Ch. de Mongevon 9  
Case postale 98  
1023 CRISSIER  
SWITZERLAND

Tel ++41 (0)21 637 32 32  
Fax ++41 (0)21 637 32 00  
E-mail info@rueger.ch

RÜEGER GmbH  
Plieninger Strasse 58  
70567 STUTTGART

GERMANY

Tel ++49 (0)711 16-163-0  
Fax ++49 (0)711 16-16333  
E-mail info@rueger.de

RÜEGER Sdn Bhd  
ASIA Head Quarter  
NO. 78-2, JALAN 1/27F  
BANDAR BARU WANGSA MAJU  
(KLSC) 53300 KUALA LUMPUR,  
MALAYSIA

Tel ++ 603 - 4142 30 80  
Fax ++ 603 - 4142 39 09  
E-mail rueger@tm.net.my

www.rueger.com