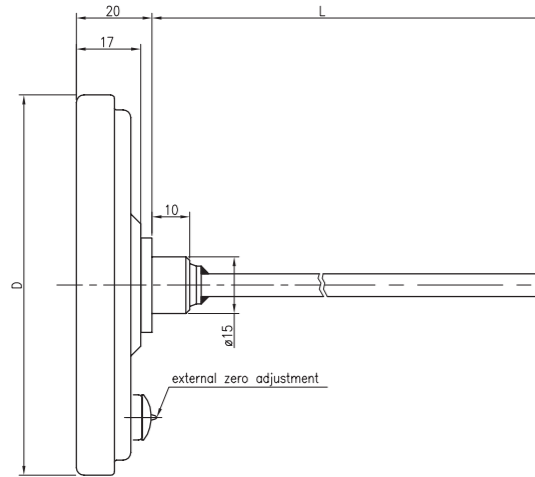




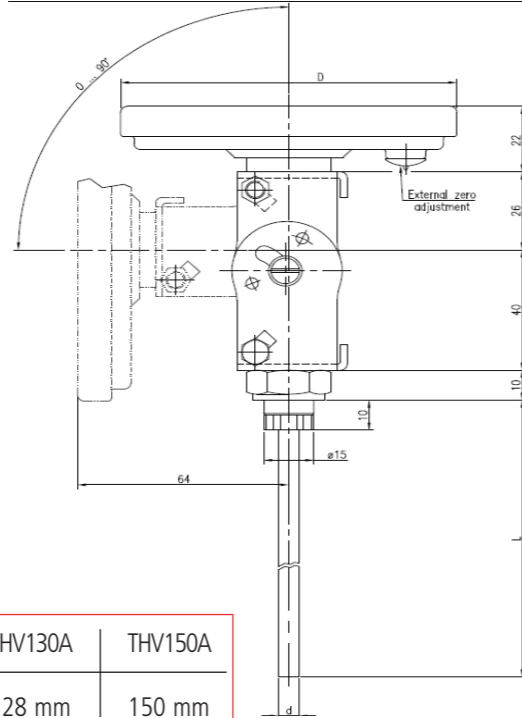
## Dimensions

	THH080A	THH100A	THH130A	THH150A
D	77.2 mm	100.6 mm	128 mm	150 mm

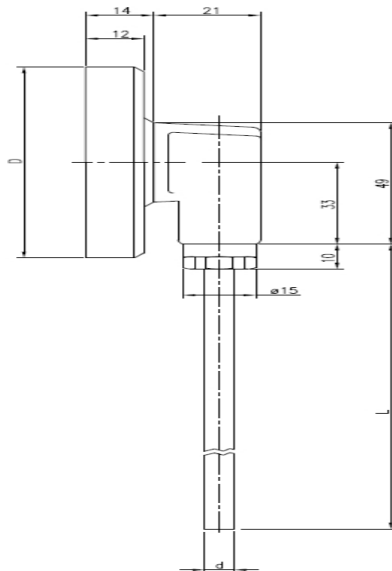


# RÜEGER

	THI080A	THI100A	THI130A	THI150A
D	77.2 mm	100.6 mm	128 mm	150 mm



	THV080A	THV100A	THV130A	THV150A
D	77.2 mm	100.6 mm	128 mm	150 mm



# RÜEGER



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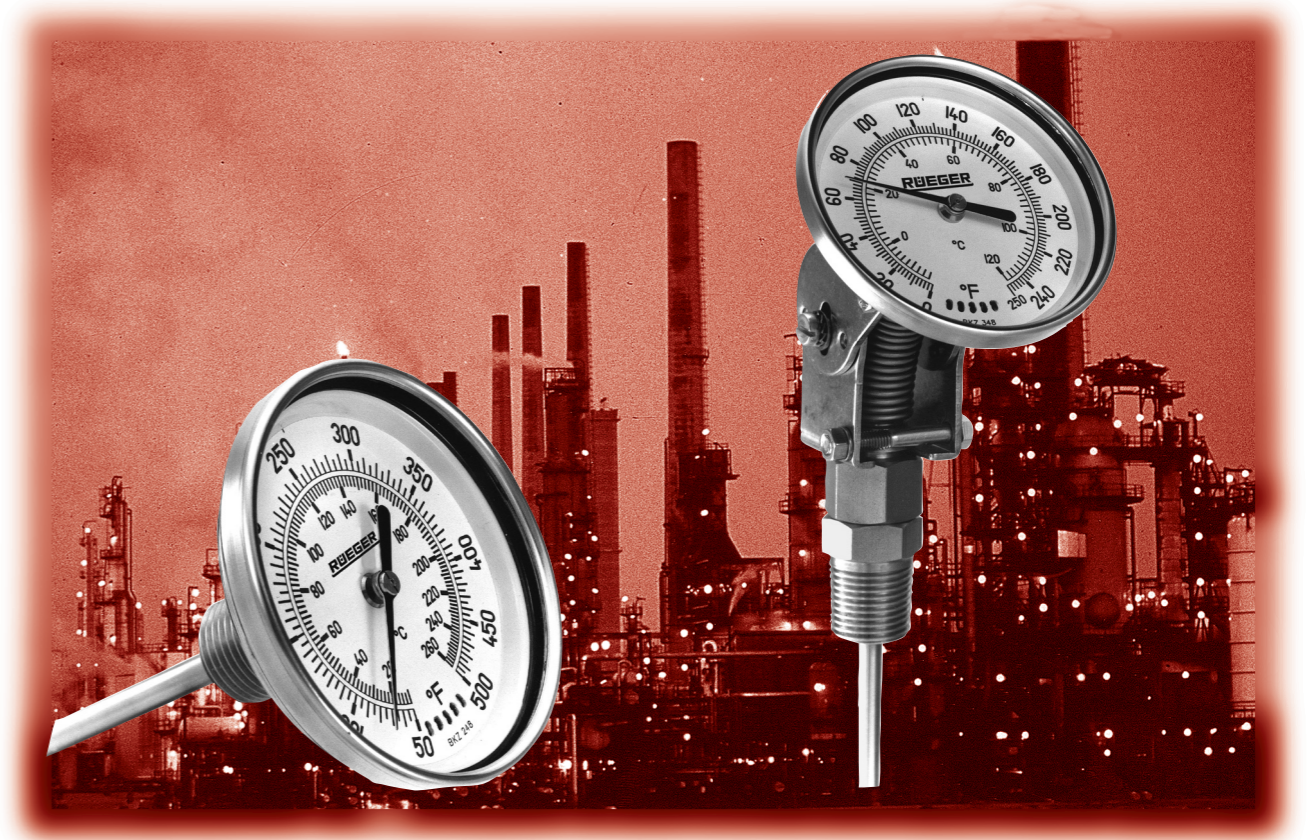
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# RÜEGER

## TH1 - Stainless bimetallic industrial thermometers

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

FT TH1-E-02.17



### 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 or 2 acc. EN 13190

#### 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.	Length (L = mm or inch)	Materials available for all dias and lengths
6 mm	from 60mm (2") to 650 mm (6')	Stainless steel AISI 304 L/1.4306 (standard) or AISI 316 L/1.4404 (optional)
8, 9 mm	from 60mm (2") to 2m (6')	stainless steel AISI 304 L/1.4306 (standard) or AISI 316 L/1.4404 (optional)

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

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

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.


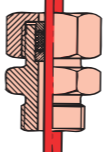
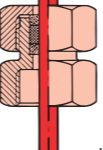
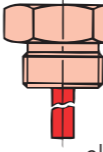
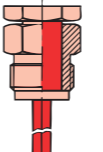
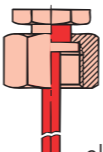
## Technical specifications

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) ΔT	°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)		
feak overload	°C	550	for range ≤ 400°C	% FS/year	≤ +/- 0.3
continuous overload	°C	520	for range > 400°C	% FS/year	≤ +/- 0.8
Accuracy acc. EN 13190 for range ≤ 400°C	cl. 1	1	Sealing	IP	65
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) H	Every angle execution I	Vertical execution V
<b>«A» TYPE UNTHREADED SHOULDER</b>  all-stainless steel AISI 303/1.4305 Ø 15 x 10 mm	80 mm (3") dia. THH080A 100 mm (4") dia. THH100A 130 mm (5") dia. THH130A 150 mm (6") dia. THH150A	THI080A THI100A THI130A THI150A	THV080A THV100A THV130A THV150A
<b>«AMX» TYPE SWIVELLING AND SLIDING THREADED</b>  all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/4 A	80 mm (3") dia. THH080A+AMX 100 mm (4") dia. THH100A+AMX 130 mm (5") dia. THH130A+AMX 150 mm (6") dia. THH150A+AMX	THI080A+AMX THI100A+AMX THI130A+AMX THI150A+AMX	THV080A+AMX THV100A+AMX THV130A+AMX THV150A+AMX
<b>«AMU» TYPE SWIVELLING AND SLIDING CAP</b>  all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/4 A	80 mm (3") dia. THH080A+AMU 100 mm (4") dia. THH100A+AMU 130 mm (5") dia. THH130A+AMU 150 mm (6") dia. THH150A+AMU	THI080A+AMU THI100A+AMU THI130A+AMU THI150A+AMU	THV080A+AMU THV100A+AMU THV130A+AMU THV150A+AMU
<b>«S» TYPE THREADED CONNECTION</b>  all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A G 3/8 A, G 3/4 A	80 mm (3") dia. THH080S 100 mm (4") dia. THH100S 130 mm (5") dia. THH130S 150 mm (6") dia. THH150S	THI080S THI100S THI130S THI150S	THV080S THV100S THV130S THV150S
<b>«T» TYPE SWIVELLING THREADED CONNECTION</b>  all-stainless steel AISI 303/1.4305 Available thread : G 1/2 A, M 18x1.5, M 20x1.5	80 mm (3") dia. THH080T 100 mm (4") dia. THH100T 130 mm (5") dia. THH130T 150 mm (6") dia. THH150T	THI080T THI100T THI130T THI150T	THV080T THV100T THV130T THV150T
<b>«U» TYPE SWIVELLING CAP CONNECTION</b>  all-stainless steel AISI 303/1.4305 Available thread : G 1/2 A, G 3/4 A, M 24x1.5, M 27x2	80 mm (3") dia. THH080U 100 mm (4") dia. THH100U 130 mm (5") dia. THH130U 150 mm (6") dia. THH150U	THI080U THI100U THI130U THI150U	THV080U THV100U THV130U THV150U