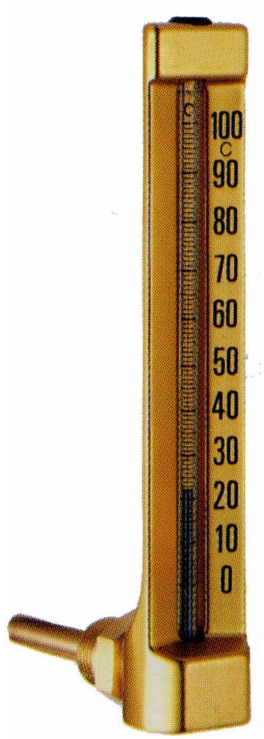
Glass thermometer for machines



V-shape

Description

Glass thermometers for machines are used for temperature measurement in gaseous and liquid media and vapours in pipelines and tanks.

The V-shaped upper section is provided with a cut-out for the scale and the measuring capillaries. The measuring part of the capillaries is protected mechanically by the submersible tube. The upper part and the submersible tube are connected together by a threaded section.

Glass thermometers for machines are adapted to the varying conditions in which they are used by different housing and submersible shaft materials plus three housing sizes and various lengths of submersible shaft in straight, 90°- or 135°- angle designs.

Features

- o Robust universal thermometer
- o Large selection of designs in stock
- o Special designs available on request

Temperature range

-60 ... 40 °C to 0 ... 600 °C

Suitable for use in:

Plant and machinery construction
Tank and pipeline construction
Domestic services, air conditioning
Large scale heating systems

Model no.: T42XX, T45XX

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Technical data

Nominal dimensions 110 x 30 mm

Models	**T4202, T4212, T4222,T4502, T4512, T4522**		
Description	Aluminium, anodised brass-coloured finish Nominal dimensions 110 x 30 mm		
Housing	Straight	90° angle	135° angle
Standard	DIN 16 181	DIN 16 182	--
Connecting thread	Screw-in pin with G1/2 A (Standard), G3/8 A, M20x1.5, M16x1.5		
Submersible shaft	Diameter 10 mm Installed lengths l_1 = 30, 40, 63, 100, 160, 250, or 400 mm Material brass, stainless steel as an option		
Measuring principle	Expansion of liquid in prismatic rod capillaries		
Operating pressure	Permissible operating pressure at brass submersible shaft 6 bar Permissible operating pressure at stainless steel submersible shaft 25 bar		
Lettering on housing	Housing printed and anodised		
Models	**BR T4202** Straight design, Brass submersible shaft **BR T4502** Straight design, Stainless steel submersible shaft	**BR T4212** 90°-angle, Brass submersible shaft **BR T4512** 90°angle, Stainless steel submersible shaft	**BR T4222** 135°-angle Brass submersible shaft **BR T4522** 135°-angle Stainless steel subm. shaft

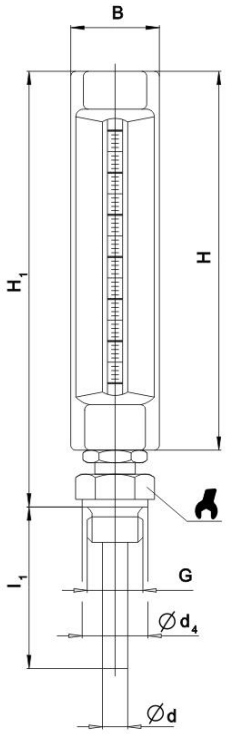
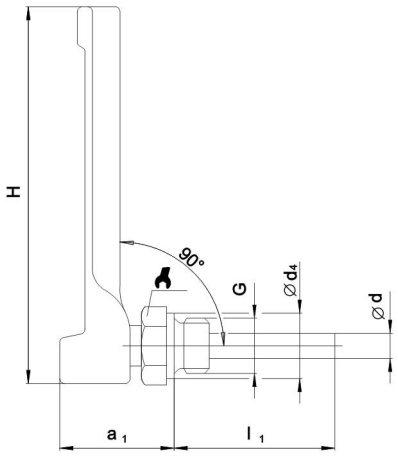
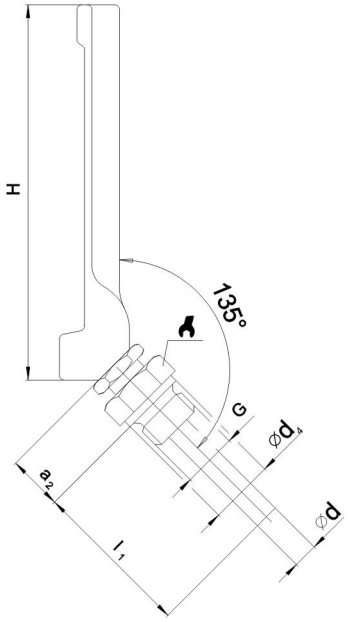
Nominal dimensions 150 x 36 mm

Models	**T4232, T4242, T4252, T4532, T4542, T4552**		
Description	Aluminium, anodised brass-coloured finish Nominal dimensions 150 x 36 mm		
	Straight	90° angle	135° angle
Standard	DIN 16 185	DIN 16 186	--
Connecting thread	Screw-in pin with G1/2 A (Standard), G3/4 A, M20x1.5, M27x2		
Submersible shaft	Diameter 10 mm Installed lengths l_1 = 63, 100, 160, 250, or 400 mm Material brass, stainless steel as an option		
Measuring principle	Expansion of liquid in prismatic rod capillaries		
Operating pressure	Permissible operating pressure at brass submersible shaft 6 bar Permissible operating pressure at stainless steel submersible shaft 25 bar		
Lettering on shaft	Housing printed and anodised		
Models	**BR T4232** Straight design, Brass submersible shaft **BR T4532** Straight design, Stainless steel subm. shaft	**BR T4242** 90°-angle, Brass submersible shaft **BR T4542** 90°-angle, Stainless steel subm. shaft	**BR T4252** 135°-angle Brass submersible shaft **BR T4552** 135°-angle Stainless steel subm. shaft

Nominal dimensions 200 x 36 mm

Models	**T4262, T4272, T4282, T4562, T4572, T4582**		
Description	Aluminium, anodised brass-coloured finish Nominal dimensions 200 x 36 mm		
Housing	Straight	90° angle	135° angle
Standard	DIN 16 189	DIN 16 190	DIN 16 191
Connecting thread	Screw-in pin with G1/2 A (Standard), G3/4 A, M20x1.5, M27x2		
Submersible shaft	Diameter 10 mm Installed lengths l_1 = 63, 100, 160, 250, or 400 mm Material brass, stainless steel as an option		
Measuring principle	Expansion of liquid in prismatic rod capillaries		
Operating pressure	Permissible operating pressure at brass submersible shaft 6 bar Permissible operating pressure at stainless steel submersible shaft 25 bar		
Lettering on housing	Housing printed and anodised		
Models	**BR T4262** Straight design Brass submersible shaft **BR T4562** Straight design, Stainless steel subm. shaft	**BR T4272** 90°-angle, Brass submersible shaft **BR T4572** 90°-angle, Stainless steel subm. shaft	**BR T4282** 135°-angle Brass submersible shaft **BR T4582** 135°-angle Stainless steel subm. shaft

Models

T4202 T4232 T4262 T4502 T4532 T4562	T4212 T4242 T4272 T4512 T4542 T4572	T4252 T4282 T4552 T4582
Straight	90° angle	135° angle
		

Dimensions

ND	Dimensions in mm									Weight in Kg
	a_1	a_2	B	d	d_4	G	H	H_1	WAF	
110	44	20	30	10	22	G 3/8 A	110	130	22	0.25
					21	M 16 x 1.5				
					26	G ½ A			27	
					25	M20 x 1.5				
150	46	21	36	10	26	G ½ A	120	170	27	0.3
					25	M20 x 1.5				
					32	G ¾ A			32	
						M27 x 2				
200	46	21	36	10	26	G ½ A	200	220	27	0.35
					25	M20 x 1.5				
					32	G ¾ A			32	
						M27 x 2				
				6.5	-	-				

Technical data:

Glass thermometer for machines **Temperature ranges**

Nominal dimensions 110 x 30 mm

Data complying with	Measuring range	Scale division	Margin for error	Therm. filling
DIN 16 195 for: Measuring ranges, scale division, margin for error, filling	-30 50 °C	1 °C	2 °C	Blue, liquid
	0 ... 60 °C	1 °C	2 °C	Blue, liquid
	0 ... 100 °C	2 °C	2 °C	Blue, liquid
	0 ... 120 °C	2 °C	2 °C	Blue, liquid
	0 ... 160 °C	4 °C	4 °C	Blue, liquid
	0 ... 200 °C	5 °C	5 °C	Blue, liquid

Nominal dimensions 150 x 36 mm

Data complying with	Measuring range	Scale division	Margin for error	Therm. filling
DIN 16 195 for: Measuring ranges, Scale division, margin for error, filling	-60 ... 40 °C	2 °C	2 °C	Red, liquid
	-30 ... 50 °C	1 °C	2 °C	Blue, liquid
	0 ... 60 °C	2 °C	2 °C	Blue, liquid
	0 ... 100 °C	2 °C	2 °C	Blue, liquid
	0 ... 120 °C	2 °C	2 °C	Blue, liquid
	0 ... 160 °C	2 °C	4 °C	Blue, liquid
	0 ... 200 °C	2 °C	2 °C	Blue, liquid
	0 ... 300 °C	2 °C	2 °C	Mercury
	0 ... 400 °C	5 °C	5 °C	Mercury
	0 ... 500 °C	5 °C	5 °C	Mercury
	0 ... 600 °C	5 °C	8 °C	Mercury

Nominal dimensions 200 x 36 mm

Data complying with	Measuring range	Scale division	Margin for error	Therm. filling
DIN 16 195 for: Measuring ranges, scale division, margin for error, filling	-60 ... 40 °C	1 °C	2 °C	Red, liquid
	-30 ... 50 °C	1 °C	2 °C	Blue, liquid
	0 ... 60 °C	2 °C	2 °C	Blue, liquid
	0 ... 100 °C	2 °C	2 °C	Blue, liquid
	0 ... 120 °C	2 °C	2 °C	Blue, liquid
	0 ... 160 °C	2 °C	4 °C	Blue, liquid
	0 ... 200 °C	2 °C	2 °C	Blue, liquid
	0 ... 300 °C	2 °C	2 °C	Mercury
	0 ... 400 °C	5 °C	5 °C	Mercury
	0 ... 500 °C	5 °C	5 °C	Mercury
	0 ... 600 °C	5 °C	8 °C	Mercury

Subject to technical changes