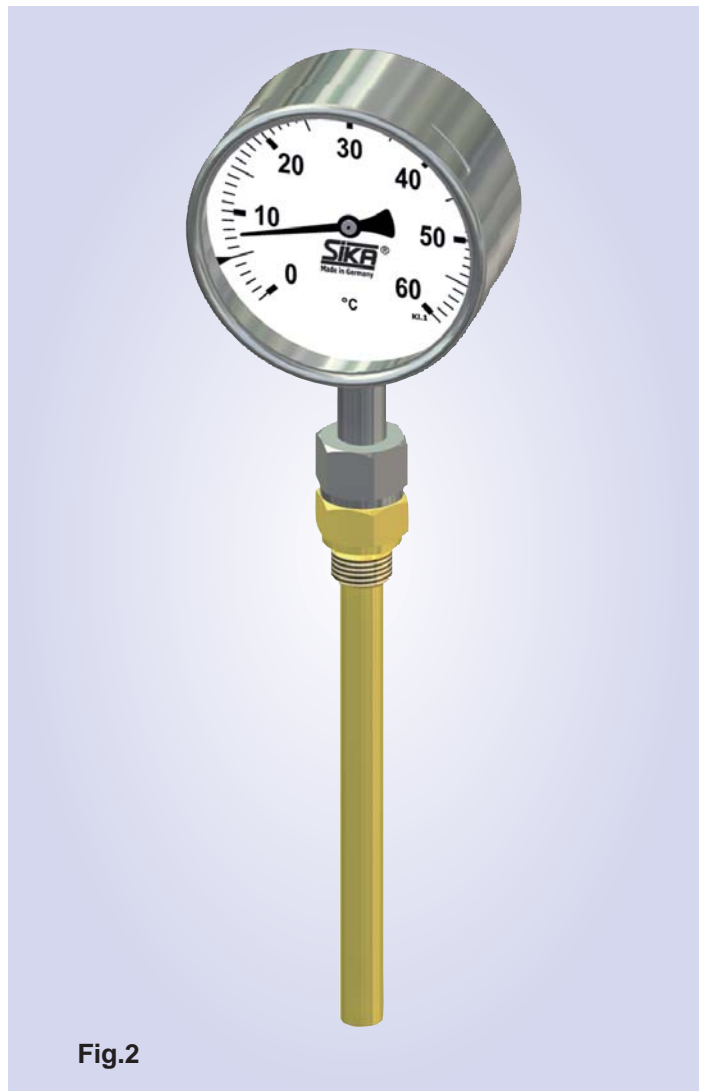
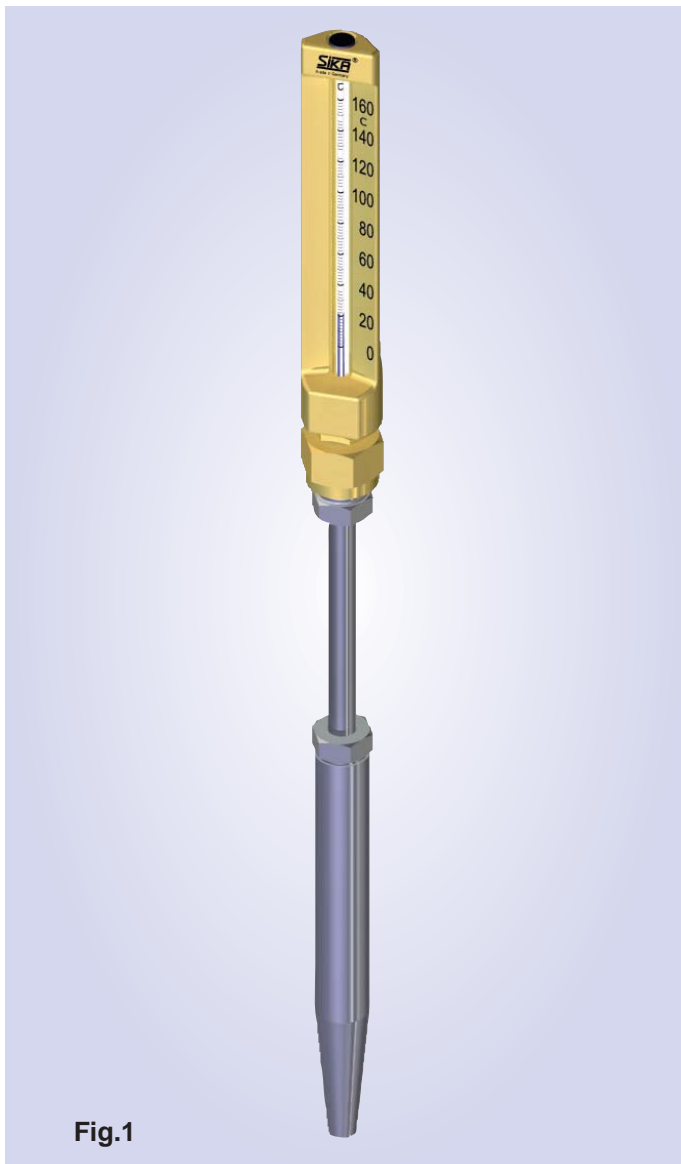


Introduction

We manufacture protection tubes for our industrial-glass thermometers, precision dial thermometers and bi-metal dial thermometers.

Protection tubes are used to protect the thermometer immersion tube from process media and to ensure that temperature measurements can be achieved even in severe conditions. These conditions are caused by high temperatures, high pressure, aggressive media or high flow velocities, as well as by an incoming flow of particles or impurities.

A major advantage of protection tube usage is that the thermometer can be installed and removed without having to drain the process media. The thermometer can be simply replaced during operation.



Our extensive protection tube range includes protection tubes made of several pieces being soldered or welded together and protection tubes turned from a single piece. The protection tubes are either screwed or welded into position. We manufacture thermometers with internal or external threads which can also be combined with neck tubes to bridge thicker insulating layers. Protection tubes made of various materials are available. SIKKA thermometer protection tubes are based on the DIN standards 43772 and 16179. This results in the various protection tube designs and shapes.

If desired, various test certificates in accordance with EN 10204 can be issued. Please contact us if you require protection tubes which are not available in this catalogue or which deviate from the specified standards.

Materials and Certificates

The order of the following pages relates to the SIKA-specific connection types:

- Protection tubes in accordance with DIN 43772, form 4, 5 and 6 or DIN 16179: For thermometers with an external thread, connection types B, SN and AK.
- Protection tubes in accordance with DIN 43772, form 8 and 9 or DIN 16179 CS: For thermometers with a union nut, connection type Da.
- Weld-in protection tubes in accordance with DIN 43772, form 4: Version to bridge insulating layers. For thermometers with a union nut when using a neck tube or double threaded adapter.

The following table displays the availability of materials for the various types of protection tubes as well as their material numbers and chemical composition. A number of factors that cannot generally be defined can allow or exclude the use of a material. Please understand that we are unable to make binding recommendations for the selection of materials due to reasons of liability.



On request SIKA thermometer protection tubes can be supplied with certificates in accordance with EN 10204-2.1, EN 10204-3.2 or EN 10204-3.1. This service is subject to charge. Please specify whether you require certificates when ordering!

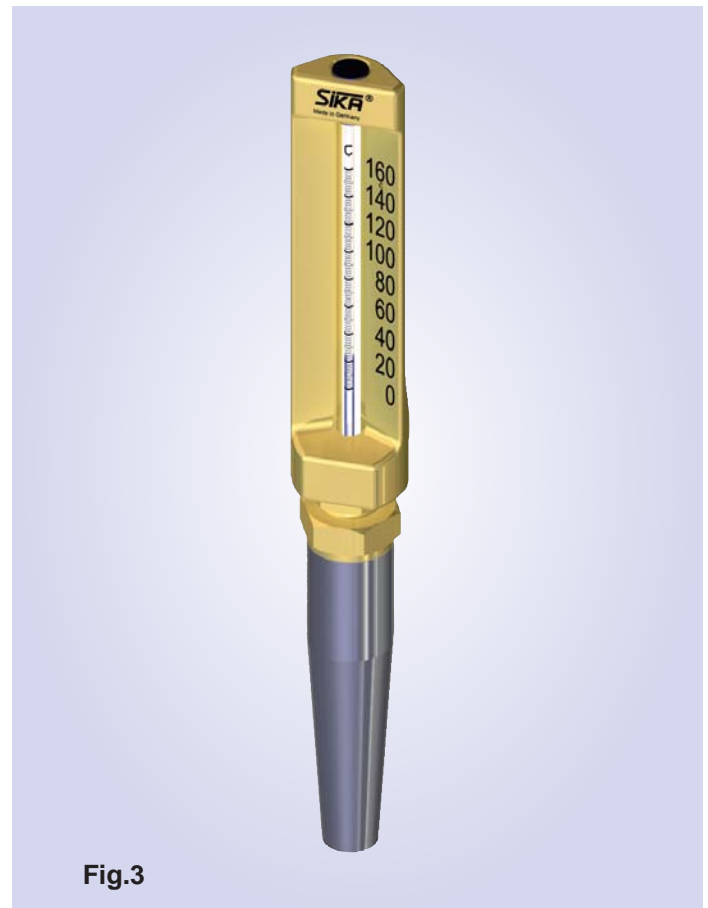


Fig.3

Table of materials (on stock)

	Brass	Steel	Stainless steel	Special brass	Copper-nickel alloy	Steel	Stainless steel			Special brass	
	CW614N CuZn39Pb3 or CW612N CuZn39Pb2	Thread connection: 1.0718 11SMnPb30 tube: 1.0308 E235	1.0718 11SMnPb30	1.4571 X6CrNiMo Ti17-12-2	CW702R CuZn20Al2As	CW354H CuNi30Mn1Fe	1.0460 P250GH	1.7335 13CrMo4-5	1.7380 10CrMo9-10	1.5415 16Mo3	CW710R CuZn- 35Ni3Mn 2AlPb
SIKA Type											
Ei	● ¹⁾²⁾	● ¹⁾		● ¹⁾	● ¹⁾	● ¹⁾					
Ea	● ¹⁾²⁾	● ¹⁾		● ¹⁾	● ¹⁾	● ¹⁾					
Gi	●		● ¹⁾	●	● ¹⁾	● ¹⁾		●			●
Ga	●		● ¹⁾	●	● ¹⁾	● ¹⁾		●			●
CS				●		●	●	●	●	●	
BS				●		●	●	●	●	●	
HD				●		●	●	●	●	●	
HDo				●		●	●	●	●	●	

¹⁾ Only possible with Works Certificate EN 10204-2.1 or -2.2

²⁾ Hexagon CuZn40Pb2 / CuZn20Al2As or CuZn37 brazed