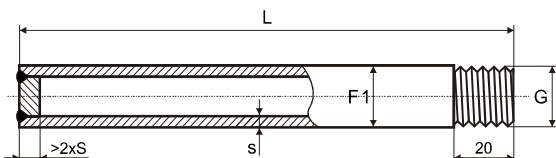
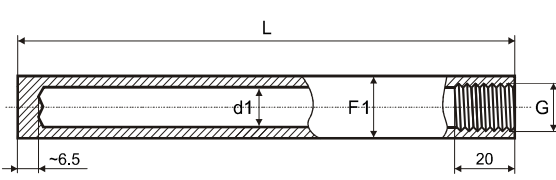


**Metal Protection Tubes YAM**

METAL PROTECTION TUBE		YAM		MATERIAL	PROPERTIES		APPLICATION
Material - metals and metal alloys (see Appendix - Sheath materials) Application - temperature probe protection in atmospheres and baths							
<p><b>WELDED PROTECTION TUBE (W)</b></p> 				Carbon Steel	Max. temperature	550 °C	Atmospheres: non-oxidizing Baths: petroleum, molten Zn, Mg, Pb, Sn, babbitt
					Composition	Mn0.8Si0.4C0.2	
Thermal conductivity	76 W/m.K						
				1.4301 (AISI 304)	Max. temperature	450 °C	Atmospheres: oxidizing, cryogenic Baths: food products, mild acids and alkalis, petroleum
					Composition	Cr18Ni9Mn2Si1	
Thermal conductivity	15 W/m.K						
				1.4404 (AISI 316L)	Max. temperature	850 °C	Atmospheres: oxidizing Baths: food products, mild acids and alkalis, petroleum
					Composition	Cr17Ni11Mo2	
Thermal conductivity	15 W/m.K						
				1.4571 (AISI 316Ti)	Max. temperature	850 °C	Atmospheres: oxidizing Baths: food products, petroleum increased resistance to acids
					Composition	Cr17Ni13Mo2Ti	
Thermal conductivity	16 W/m.K						
				1.4841 (AISI 310)	Max. temperature	1150 °C	Atmospheres: oxidizing, carburizing, nitriding Baths: general applications
					Composition	Cr25Ni21Mn2	
Thermal conductivity	16 W/m.K						
				1.4762 (AISI 446)	Max. temperature	1150 °C	Atmospheres: oxidizing, sulphurous (NOT suitable for carburizing!) Baths: molten Pb, Sn, babbitt, neutral salt baths
					Composition	Cr25Al2Si1	
Thermal conductivity	14 W/m.K						
				2.4816 (Inconel 600)	Max. temperature	1100 °C	Atmospheres: oxidizing, nitriding, mild sulphur and carburizing (up to 550 °C) Baths: salt (cyanide) baths
					Composition	Cr16Ni72Mn1	
Thermal conductivity	14 W/m.K						
				Monel® (Alloy 400)	Max. temperature	550 °C	Atmospheres: non-oxidizing Baths: salt waters, alkalis, and acids, but NOT oxidizing acids like nitric or nitrous.
					Composition	Ni63Cu34Mn2	
Thermal conductivity	22 W/m.K						
				2.4602 (Hastelloy C)	Max. temperature	1050 °C	Atmospheres: oxidizing, carburizing, nitriding, chlorine Baths: acids, chlorides, brine and many aggressive chemicals
					Composition	Cr21Mo14W03Co	
Thermal conductivity	10 W/m.K						
				Hastelloy X	Max. temperature	1200 °C	Atmospheres: oxidizing, carburizing, sulphurous, nitriding, chlorine Baths: general applications
					Composition	Cr22Mo10Co2Wo	
Thermal conductivity	10 W/m.K						
				Kanthal® A	Max. temperature	1250 °C	Atmospheres: oxidizing, carburizing, sulphurous, nitriding, ammonia Baths: molten Cu, Zn, Mg
					Composition	Cr22Al6	
Thermal conductivity	29 W/m.K						
				3.7035 Titanium Grade 2	Max. temperature	600 °C	Atmospheres: high aggressive gases Baths: high aggressive solvents
					Composition	99.2% Ti	
Thermal conductivity	16 W/m.K						
<p><b>BORED PROTECTION TUBE (B)</b></p> 				Carbon Steel	see above		see above
				1.4404 (AISI 316L)	see above		see above
				1.4571 (AISI 316Ti)	see above		see above
				3.7035 Titanium Grade 2	see above		see above
				Cast Iron GG-30 (ATSM A48)	Max. temperature	700 °C	Atmospheres: oxidizing Baths: sulphur and caustic solutions some molten non-ferrous metals
					Composition	C3Si2Mn	
Thermal conductivity	45 W/m.K						
				Pure Iron	Max. temperature	1300 °C	Baths: salt, cyanide, chloride
					Composition	Fe	
Thermal conductivity	80 W/m.K						
<p>* Other dimensions are available on request. Please contact COMECO!</p>							

COMECO reserves the right of changing specifications without prior notice!

**Ordering code** YAM\* - G6.G9.G10

Code	Feature or option	Code values
*	Design	W - welded, B - bored
G6	Length 'L' [mm]	100...2000 (see tables overleaf) <sup>(1)</sup>
G9	Connection thread 'G' <sup>(1)</sup>	G - parallel pipe threads, N - NPT threads, X - none *, Z - other (specify!)
G10	Material <sup>(2)</sup> (see tables overleaf)	M1 - 1.4301, M3 - 1.4571, M4 - 1.4762 (1.4749), M5 - 1.4841, M8 - 2.4816 (Inconel 600), M9 - 1.4404(1.4435), M12 - cast iron, M13 - carbon steel, M14 - Kanthal® A, M18 - 2.4602 (Hastelloy C), M19 - Hastelloy X, M20 - Titanium alloy, M21 - Monel®, Z - other (specify!)

<sup>(1)</sup> Applicable for the selected design and material

<sup>(2)</sup> Always ask for availability!

\* contact COMECO!