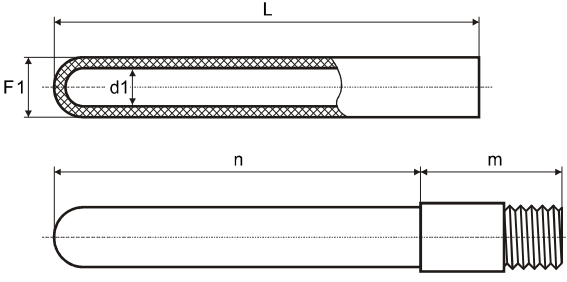
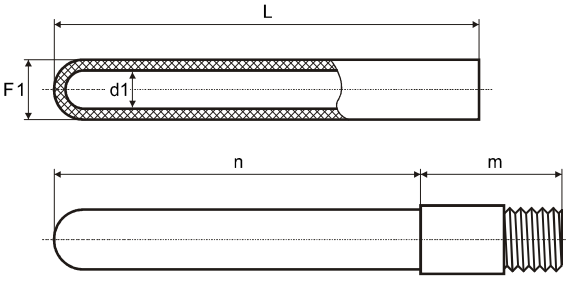
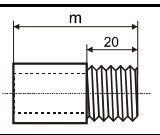
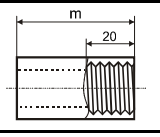
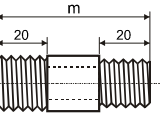


**Ceramic Protection Tubes YAC**

CERAMIC PROTECTION TUBE Material - alumina ceramics (see Appendix - Sheath materials) Application - T/C protection in gaseous chemical media	YAC	MATERIAL	Maximum Temperature	DIMENSIONS *						
				F1 [mm]	d1 [mm]	Fitting Type	L [mm]			
<b>CERAMIC PROTECTION TUBE (C2)</b>  $L \approx n + m - 30$	C 710	1600 °C	6	4.5	1, 5, 9	100÷1000				
			8	6	1, 5, 9					
			10	7	1, 5, 9					
			15	10	1, 5, 9	100÷2000				
			18	12	2, 5, 10					
			20	15	2, 6, 10					
			24	17	3, 6, 11					
			32	24	4, 7, 12					
							PROPERTIES			
			Chemical Composition		≥ 95% Al <sub>2</sub> O <sub>3</sub>		Flexural Strength		280 MPa	
Thermal Shock Resist		good		Thermal Conductivity		20 W/m.K				
Thermal Expansion		8.10 <sup>-6</sup> K <sup>-1</sup> (0-1000 °C)		Porosity		0 %				
Electrical Resistivity		> 10 <sup>12</sup> Ω.m (25°C)								
<b>CERAMIC PROTECTION TUBE (C3)</b>  $L \approx n + m - 30$	C 799	1700 °C	6	4.5	1, 5, 9	100÷1000				
			8	6	1, 5, 9					
			10	7	1, 5, 9					
			15	10	1, 5, 9	100÷2000				
			18	12	2, 5, 10					
			20	15	2, 6, 10					
			24	17	3, 6, 11					
			32	24	4, 7, 12					
							PROPERTIES			
			Chemical Composition		> 99.7% Al <sub>2</sub> O <sub>3</sub>		Flexural Strength		360 MPa	
Thermal Shock Resist		good		Thermal Conductivity		28 W/m.K				
Thermal Expansion		9.10 <sup>-6</sup> K <sup>-1</sup> (0-1200°C)		Porosity		0 %				
Electrical Resistivity		> 10 <sup>12</sup> Ω.m (25°C)								
* Other dimensions are available on request. Please contact COMECO!										

FITTING	Length 'm' [mm]	Material	TYPE	CONNECTION
	80 or 150 <sup>(1)</sup>	stainless steel	1	1/2"
			2	3/4"
			3	1"
			4	1 1/4"
	80 or 150 <sup>(1)</sup>	stainless steel	5	1/2"
			6	3/4"
			7	1"
			8	1 1/4"
	80 or 150 <sup>(1)</sup>	stainless steel	9	1/2" x 1/2"
			10	3/4" x 1/2"
			11	1" x 3/4"
			12	1 1/4" x 3/4"

<sup>(1)</sup> For tube length L ≥ 1000 mm

**Ordering code** YAC - G10.G5.G6.G9'G9"

Code	Feature or option	Code values
G10	Sheath material <sup>(2)</sup>	C2 - Alumina 95% (C 710), C3 - Alumina 99% (C 799), C4 - Cr+Al <sub>2</sub> O <sub>3</sub> , C5 - SiC+SiO <sub>2</sub> , C6 - SiC, C7 - Si <sub>3</sub> N <sub>4</sub> +Al <sub>2</sub> O <sub>3</sub> , C8 - Si <sub>3</sub> N <sub>4</sub>
G5	Outer diameter 'OD' [mm]	from tables overleaf
G6	Length 'L' [mm]	from tables overleaf
G9'	Fitting type	X - none, 1 - type 1, 2 - type 2, 3 - type 3, 4 - type 4, 5 - type 5, 6 - type 6, 7 - type 7, 8 - type 8, 9 - type 9, 10 - type 10, 11 - type 11, 12 - type 12, Z - other (specify!)
G9"	Fitting thread	G - parallel pipe threads, N - NPT threads, X - none *, Z - other (specify!)

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

\* contact COMECO!