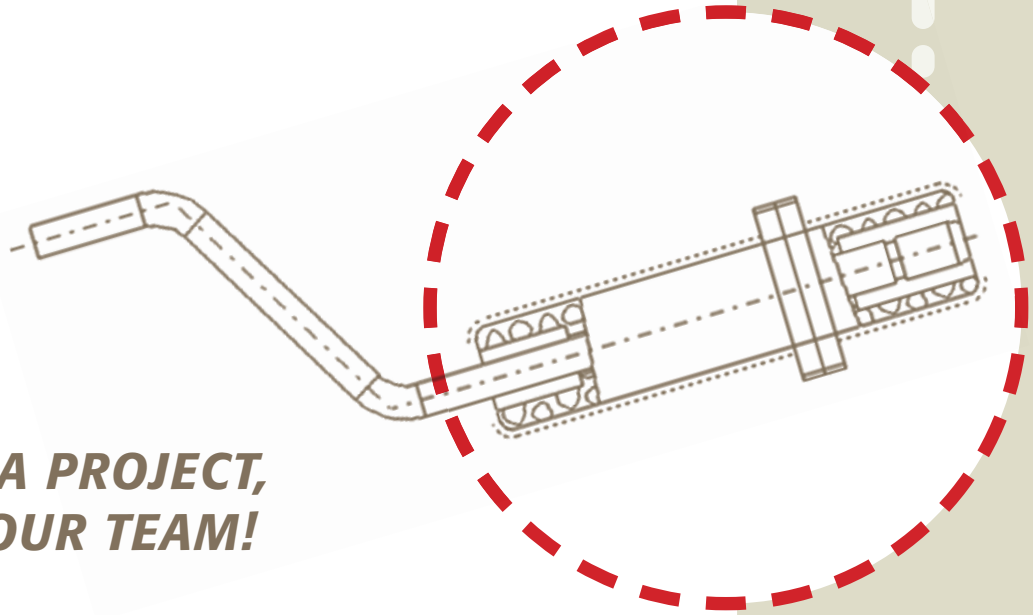
MAIN PRODUCTS RANGE

TO BE CUSTOMIZED TO YOUR NEEDS...



YOU HAVE A PROJECT, WE ARE YOUR TEAM!

SAPCO

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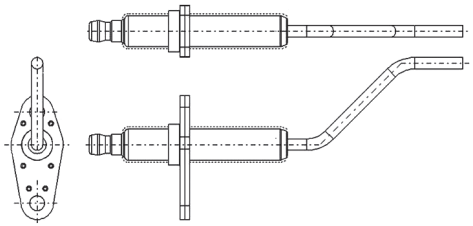
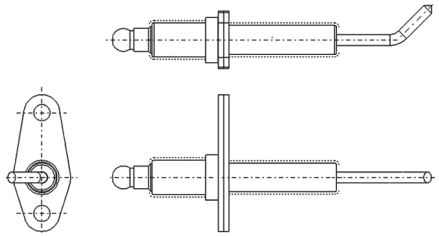
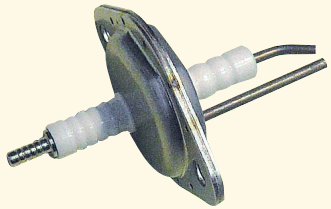
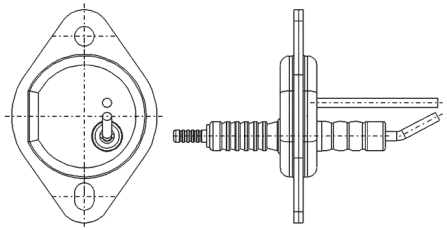
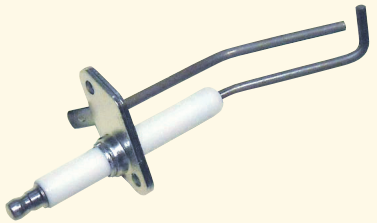
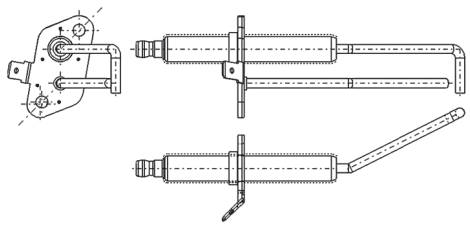
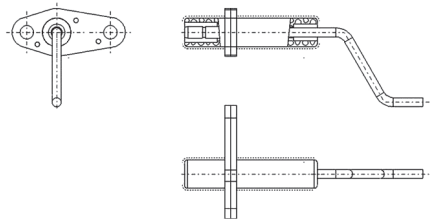
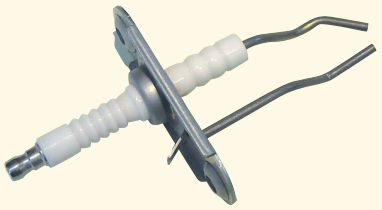
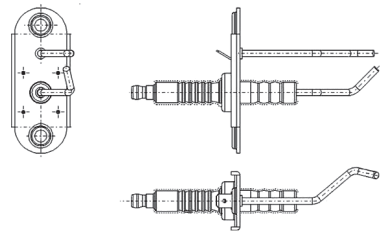
infomail@sapco.fr - www.sapco.fr

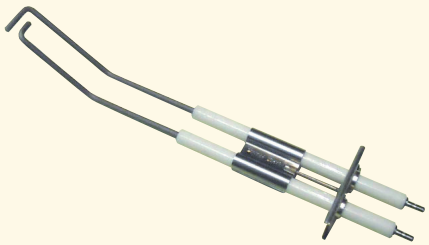
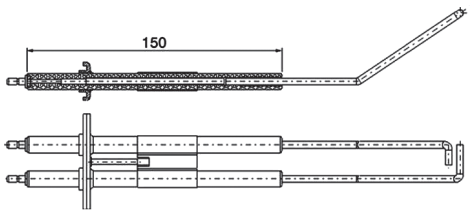
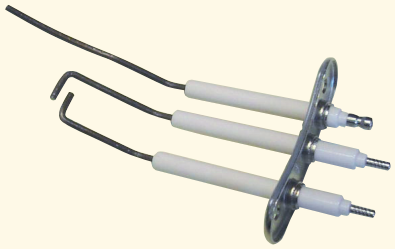
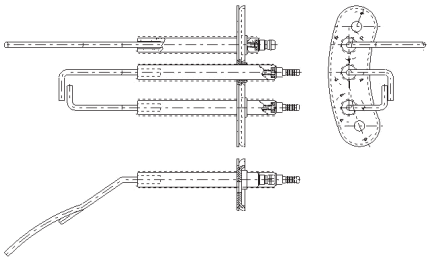
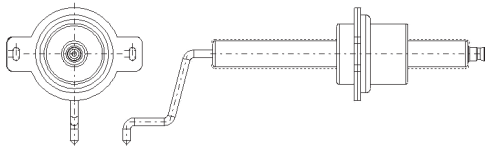
IGNITION & PROBE ELECTRODES FOR CONDENSING BOILERS

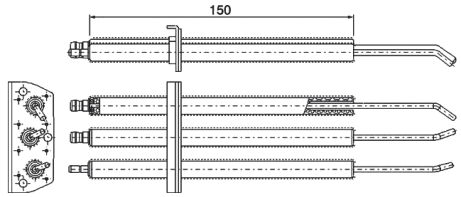
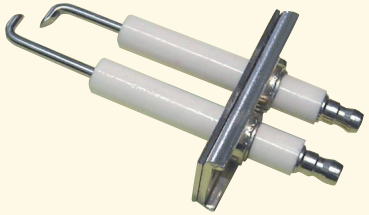
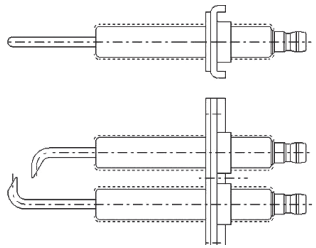
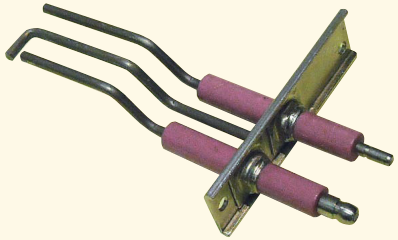
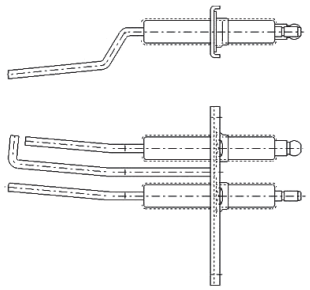
SAPCO

	MAIN USES	CHARACTERISTICS
		
	• Condensing boilers • Detection electrode	• Gastight • Ionisation
		
	• Condensing boilers • Spark plug	• Gastight • Ignition
		
	• Condensing boilers • Spark plug	• Ignition • Special bracket • Gastight

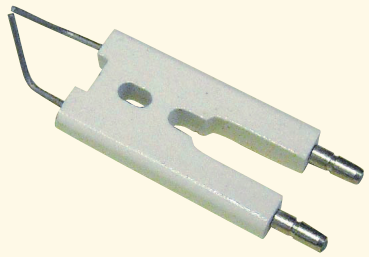
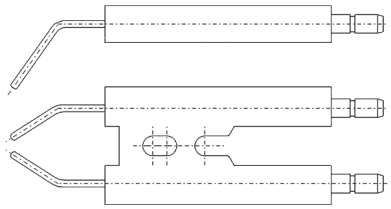
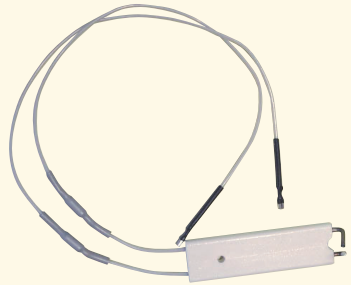
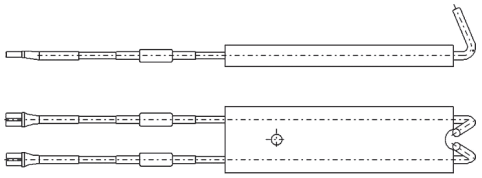
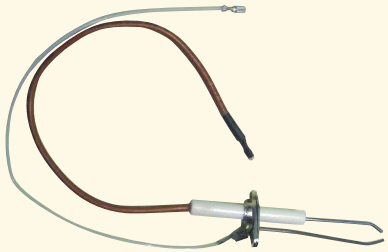
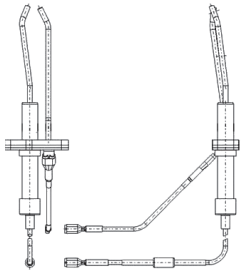
	MAIN USES	CHARACTERISTICS
		
	• Condensing boilers • Ignition electrode	• Gastight • With ground electrode
		
	• Compact condensing boilers • Spark electrode	• Very compact design • Gastight • Internal connection
		
	• Condensing boilers • Spark plug	• Ignition • Special bracket • Gastight

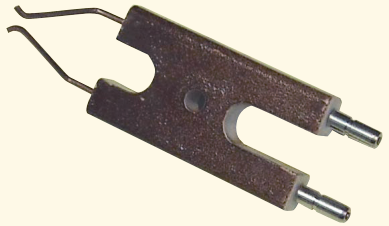
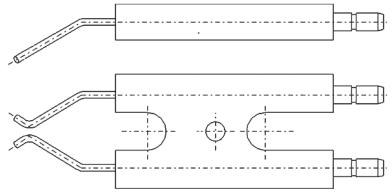
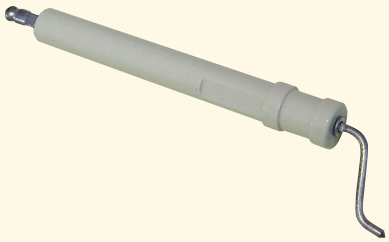
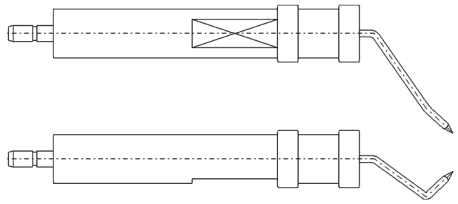
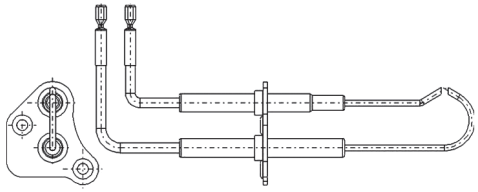
IGNITION & PROBE ELECTRODES FOR BURNERS

	MAIN USES	CHARACTERISTICS
		
	• High power burners	• Long design • Special assembly • Ignition • Gastight
		
	• Gas burners	• Triple electrode • Gastight
		
	• Gas burners	• Heavy insulator • High insulation

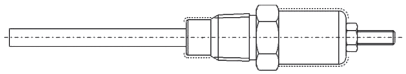
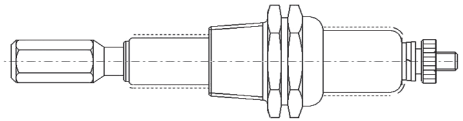
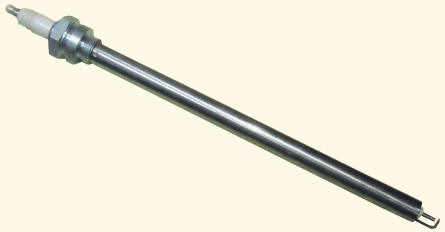
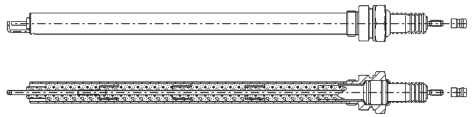
	MAIN USES	CHARACTERISTICS
		
	• Heavy burners	• Triple electrode • Ignition + detection • Gastight • Long design
		
	• Gas burners	• Special sparking design
		
	• Gas burners	• Triple electrode • Pink alumina

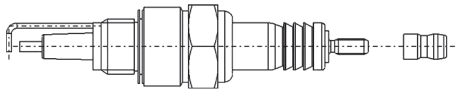
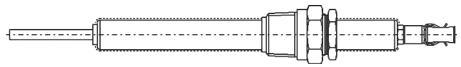
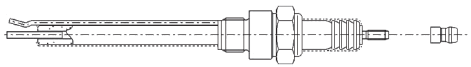
IGNITION & PROBE ELECTRODES FOR BOILERS

	MAIN USES	CHARACTERISTICS
		
	• Oil burners	• Glued wires
		
	• Gas burners	• Double electrode with integrated resistor on leads
		
	• Spark electrodes	• Integrated PTFE leads

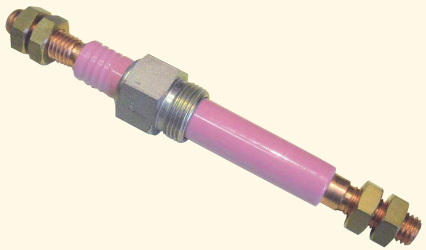
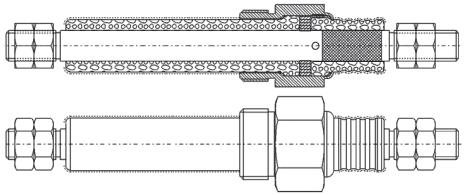
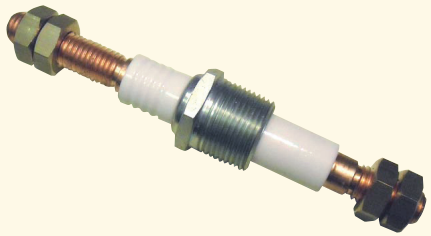
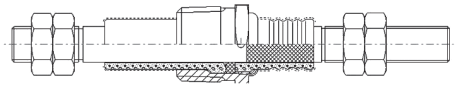
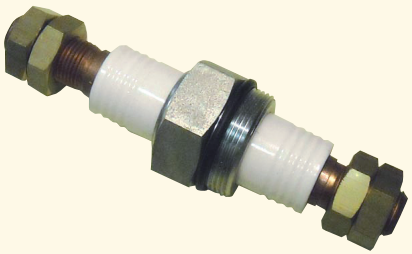
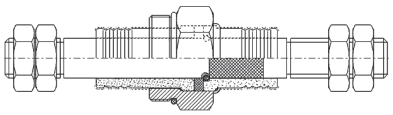
	MAIN USES	CHARACTERISTICS
		
	• Oil burners	• Glued wires
		
	• Oil burners	• Cemented wires
		
	• Spark electrodes	• Integrated silicon leads

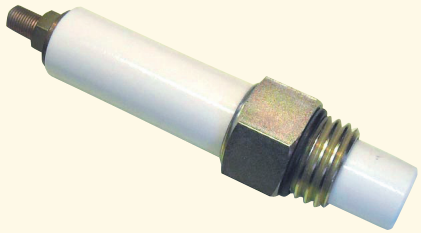
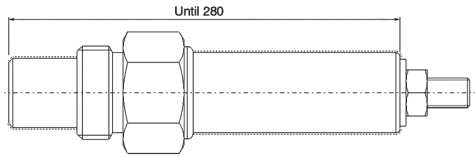
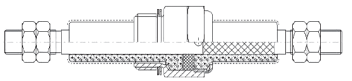
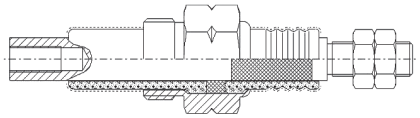
INDUSTRIAL USES

	MAIN USES	CHARACTERISTICS
		
	• Industrial rod	• Very thick electrode • No gastight
		
	• Level detection	• Gastight • Special connection
		
	• Spark electrode	• Long tubing electrode

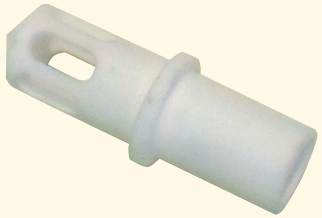
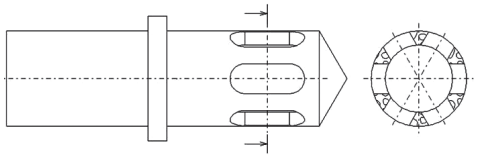
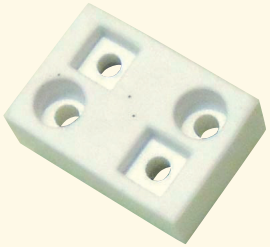
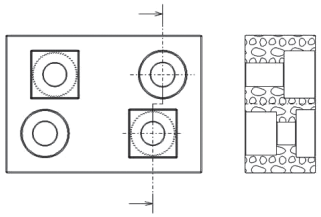
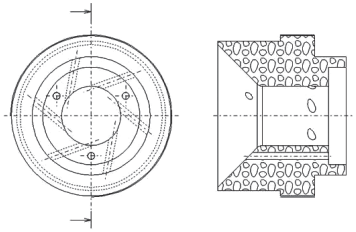
	MAIN USES	CHARACTERISTICS
		
	• Spark electrode	• Gastight • Removable connector
		
	• Industrial uses • Food industry	• No gastight • Cemented long ceramic
		
	• Industrial uses	• Long ceramic insulator

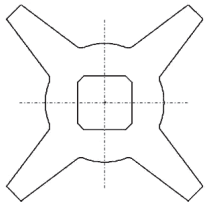
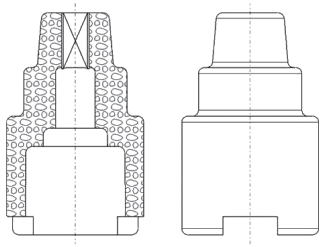
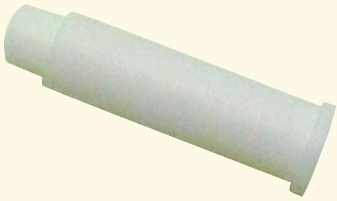
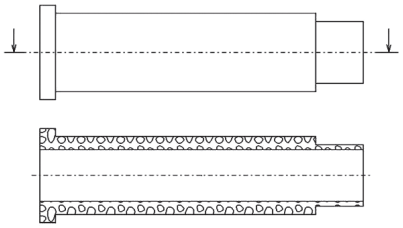
FEEDTHROUGH

	MAIN USES	CHARACTERISTICS
		
	• Cooling system • High power feedthrough • Electrical motor terminal	• Gastight • High electrical resistivity • High torque resistance • 5/8“ cooper center wire
		
	• Cooling system • High power feedthrough • Electrical motor terminal	• Gastight • High electrical resistivity • High torque resistance • 5/8“ cooper center wire
		
	• Cooling system • High power feedthrough • Electrical motor terminal	• Gastight • Big sized motor terminal • High electrical resistivity • 7/8“ cooper center wire

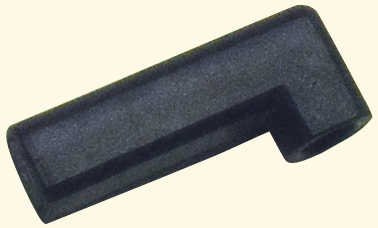
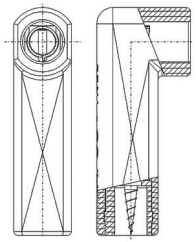
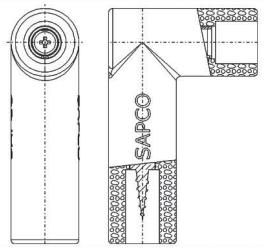
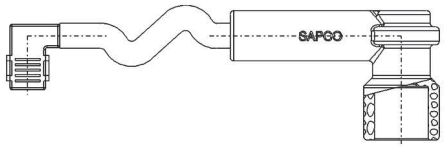
	MAIN USES	CHARACTERISTICS
		
	• Cooling system • High power feedthrough • Electrical motor terminal	• Gastight • Big sized motor terminal • High electrical resistivity • Cooper center wire
		
	• Cooling system • High power feedthrough • Electrical motor terminal	• Gastight • Big sized motor terminal • High electrical resistivity • 3/8“ cooper center wire
		
	• Cooling system • High power feedthrough • Electrical motor terminal	• Gastight • Big sized motor terminal • High electrical resistivity • 5/8“ cooper center wire

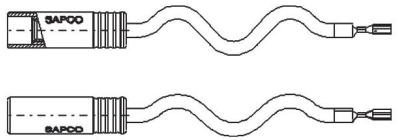
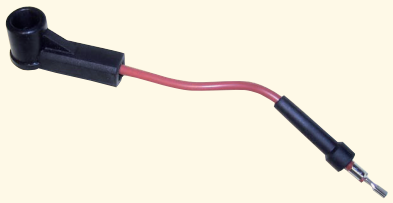
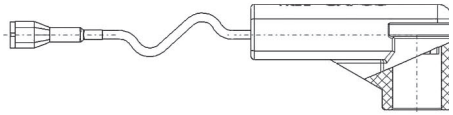
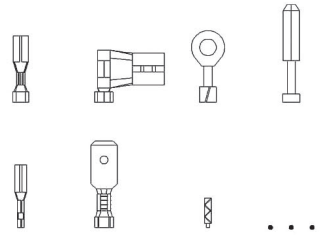
CERAMIC INSULATORS

	MAIN USES	CHARACTERISTICS
		
	• Nozzle	• High wear resistance • 95 % alumina
		
	• Low voltage (< 400 V) • Electrical insulator	• C221 steatite • No porous
		
	• Nozzle	• High wear resistance • 95 % alumina

	MAIN USES	CHARACTERISTICS
		
	• Spacer for long tubing electrode	• 95 % alumina • Complex shape
		
	• Insulator	• C221 steatite unglazed
		
	• Welding nozzle	• High quality material • 99,7 % alumina

SCREW-IN BOOTS & INTEGRAL LEADS

	MAIN USES	CHARACTERISTICS
		
	• For ceramic Ø 9,5 or 14,5 • For connector Ø 4 or 6,35	• Polyamid (200 °C) • With or without resistor • Screw-in type
		
	• For ceramic Ø 9,5 or 14,5 • For connector Ø 4 or 6,35	• Ceramic (350 °C) • With or without resistor • Screw-in type
		
	• For ceramic Ø 9,5 or 14,5 • For connector Ø 4 or 6,35	• Ceramic (350 °C) • With or without resistor • Integral lead

	MAIN USES	CHARACTERISTICS
		
	• For ceramic Ø 9,5 or 14,5 • For connector Ø 4 or 6,35	• Polyamid (200 °C) • With or without resistor • Integral lead
		
	• For ceramic Ø 9,5 or 14,5 • For connector Ø 4 or 6,35	• Silicon Rubber (250 °C) • With or without resistor • Integral lead
		
	• Transformer's side	• With heat shrink • With plastic boot

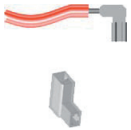
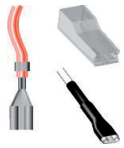
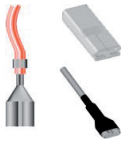
SCREW-IN BOOTS & INTEGRAL LEADS

SAPCO

	RIGID, POLYAMID (200°C - 390°F)				SUPPLE, SILICON RUBBER (250°C - 480°F)				GLAZED ADVANCED CERAMIC (350°C - 660°F)			
Ø CERAMIC O.D.	Ø9,5		Ø14,5		Ø9,5		Ø14,5		Ø9,5		Ø14,5	
EMI RESISTOR	✗	—	✗	—	✗	—	✗	—	✗	—	✗	—
INTEGRAL LEAD	 P.N.: i1	 P.N.: i3	 P.N.: i2	 P.N.: i4	 P.N.: i1S	 P.N.: i3S	 P.N.: i2S	 P.N.: i4S	 P.N.: i1C	 P.N.: i3C	 P.N.: i2C	 P.N.: i4C
CONNECTING BOOT	 P.N.: i11	 P.N.: i12	 P.N.: i13	 P.N.: i14	 P.N.: i11S	 P.N.: i12S	 P.N.: i13S	 P.N.: i14S	 P.N.: i11C	 P.N.: i12C	 P.N.: i13C	 P.N.: i14C
EMI RESISTOR	✗	—	✗	—	✗	—	✗	—	✗	—	✗	—
DISCREET SCREW-IN	 P.N.: V1	 P.N.: V3	 P.N.: V2	 P.N.: V4	 P.N.: V1S	 P.N.: V3S	 P.N.: V2S	 P.N.: V4S	 P.N.: V1C	 P.N.: V3C	 P.N.: V2C	 P.N.: V4C
CONNECTING BOOT	 P.N.: V11	 P.N.: V12	 P.N.: V13	 P.N.: V14	P.N.: V11S	P.N.: V12S	P.N.: V13S	P.N.: V14S	P.N.: V11C	P.N.: V12C	P.N.: V13C	P.N.: V14C

SCREW-IN BOOTS & INTEGRAL LEADS

SAPCO

TRANSFO. CONNECTOR	RIGID, POLYAMID (200°C – 390°F)				SPECIALTIES		FASTON AND EYELET TERMINAL	
EMI RESISTOR	✗	—	✗	—	✗	—	✗	—
INTEGRAL LEAD CONNECTING BOOT	 P.N.: T1	 P.N.: T2	 P.N.: T15	 P.N.: T16	 P.N.: W2	 P.N.: W2R	 2,8 x 0,8	 6,35 x 0,8
	 P.N.: T7 or T3	 P.N.: T11	 P.N.: T17 or T21	 P.N.: T26	 P.N.: iXB	 P.N.: iXB R	 2,8 x 0,5 or 0,8	 2,8 x 0,8 sq
EMI RESISTOR	✗	—	✗	—	✗	—	✗	—
DISCREET SCREW-IN CONNECTING BOOT	 P.N.: Ø4V0P	 P.N.: Ø4V0PR	 P.N.: Ø6,35V0P	 P.N.: Ø6,35V0PR	 P.N.: W2/V5	 P.N.: W2R/V5	 4,8 x 0,8	 Eyelet
	 P.N.: T10 or T6	 P.N.: T14	 P.N.: T20 or T24	 P.N.: T25	 P.N.: V XB	 P.N.: V XB R	 6,35 x 0,8	 6,35 x 0,8 sq

HIGH TENSION CABLES		
Ø	TEMP.	CHARACTERISTICS
2,5	250°C	PTFE Cable  U.L. 1911 - AWG 20 (7 x 32 Cu) 25kV DC
2,75	200°C	FEP Cable  AWG 18 (7 x 40 Cu) 25kV DC
3,5	250°C	Silicon Cable  AWG 22 (12 x 0,192 Cu)
5	250°C	Silicon Cable  AWG 20 (5 x 0,40 Cu)
5	250°C	RADIX Cable  U.L. 3257 - 25kV DC
7	250°C	Silicon Cable  AWG 18 (5 x 0,40 Cu)
7	250°C	RADIX Cable  U.L. 3257 - 25kV DC

PROPERTIES OF THE CERAMIC

PHYSICAL PROPERTIES	UNITS	AI2O3				ZIRCONE	STEATITE		
		99,90%	99,70%	98%	95%	Y303 Partially stabilized T.Z.P.	C 221	C 220	C410
DENSITY	g/cm³	3,97	3,93	3,9	3,7	6,05	2,7	2,6	2,2
OPEN POROSITY	%	0	0	0	0	0	0	0	< 0,5
HARDNESS	Mohs MH	9	9	9	9	8	7	7	-
COMPRESSIVE STRENGHT	MPa	3800	3200	2600	2400	2100	850	800	300
FLUXUAL STRENGHT	MPa	550	500	350	300	1000	135	120	50
TENSILE STRENGHT	MPa	300	280	250	170	-	75	75	-
ELASTIC MODULUS (YOUNG)	GPa	400	380	350	350	200	100	80	65
WEIBULL MODULUS	m	>10	>10	>10	>10	22	-	-	-
POISSON'S RATIO	-	0,24	0,22	0,22	0,22	0,31	-	-	-
MAX. USE TEMPERATURE	°C	1800	1800	1700	1500	1100	1200	1200	1000
COEFF. OF THERMAL EXP.	$*10^{-6}$/°C	8,9	8,9	8,2	7,6	10,3	7	7	3
SPECIFIC CONDUCTIVITY	J/kg/K	800	800	880	880	400	900	900	900
THERMAL CONDUCTIVITY	W/m°K (20°C)	30	30	25	20	2	2,6	2,6	2,1
THERMAL SHOCK RESISTANCE	Δ T°C	200	200	250	250	250 ↓ 800 ↑	200	200	260
ELECTRICAL PROPERTIES									
DIELECTRIC STRENGHT	ac - Kv/mm	30	30	20	18	-	16	13	-
DIELECTRIC CONSTANT	ε 20°C, 1MHz	9,6	9,8	9,2	9,1	-	5,7	5	-
DIELECTRIC LOSS	Tanδ $*10^{-4}$, 1MHz	8	8	2	3	-	5	6,2	-
LOSS INDEX	Tanδ * εr25°C	0,008	0,008	0,0018	0,0027	-	28	250	-
VOLUME RESISTIVITY	Ω*cm 20°C	10	10	10	10	10	10	10	10
TE	temp. °C, 1M image	1170	1100	1070	1000	-	700	600	400