

**JYALOX - High Tension Igniting Electrodes**

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**Jyalox Tubular-Flat High Tension Single-Twin Igniting Electrodes**

Insulated electrodes are used in two forms, as igniters and flame detecting probes. Electrode consists basically of corrosion and spark erosion resistant alloy conductor encapsulated in a high quality glazed-unglazed alumina-steatite ceramic insulators.

The electrodes can be supplied with a gland nut or by screwing to the casing or with sheet metal brackets for fixing with screws. Igniting electrodes are used for igniting of gas and medium distillate fuel oil burners used for industrial boilers and domestic wate, gas turbines, domestic gas cookers, etc.



Igniting electrodes are available in wide range of sizes to meet individual requirements.

Thanks to Jyoti's modern ceramic manufacturing facilities coupled with state-of-the-art R&D Lab and CAD-CAM assisted tool room cum engineering workshop, custom made small/large quantity high tension igniting electrodes for domestic and industrial use can be developed and manufactured to international quality standards.

We welcome customer enquiries for standard/custom-designed igniting electrodes.

Regular igniting electrodes are available with Kanthal-D/equivalent wire conductor. Igniting electrodes can also be availed with Kanthal A-1/ stainless or other alloy steel conductors. Prices on request.

Following are the standards for electrode conductors used in igniters:

Kanthal -D Electrode suitable for operating temperature 1300°C or equivalent.

Kanthal A-1 Electrode suitable for operating temperature 1400°C or equivalent.

STAINLESS STEEL Electrode grade 404 suitable for operating temperature 700°C or equivalent.

**Tubular High Tension Igniting Electrodes**



The simplest type of electric ignition is the high tension system, which usually takes the form of a mains transformer supplying some 10K volts to a pair of insulated electrodes placed to form a spark gap adjacent to the burner nozzle. The resultant spark across the gap is sufficient to ignite distillate medium fuel oils and most gas installations. In some installations a single electrode may be mounted to utilize a part of the burner casing (or a special projection from it) to complete the circuit.

The growing use of various gases and oils as a burning fuel for both industrial and domestic boilers has led to development of equipment to control the burner under varying load conditions. During periods when no load is imposed on the boiler, the boiler is allowed to shut down, conversely when it is necessary to relight the burner the control gear switches on the ignition system again.

Ceramic insulators used in manufacture of igniters are available in low-loss, alkali-free glazed/unglazed natural smooth surface finish steatite and 92-95% white/pink Aluminium Oxide glazed or unglazed in natural satin smooth surface-finish, as per the customer's choice.

Tubular ceramic insulators are available in Dia. 6 to 15mm x 50 to 550mm length.

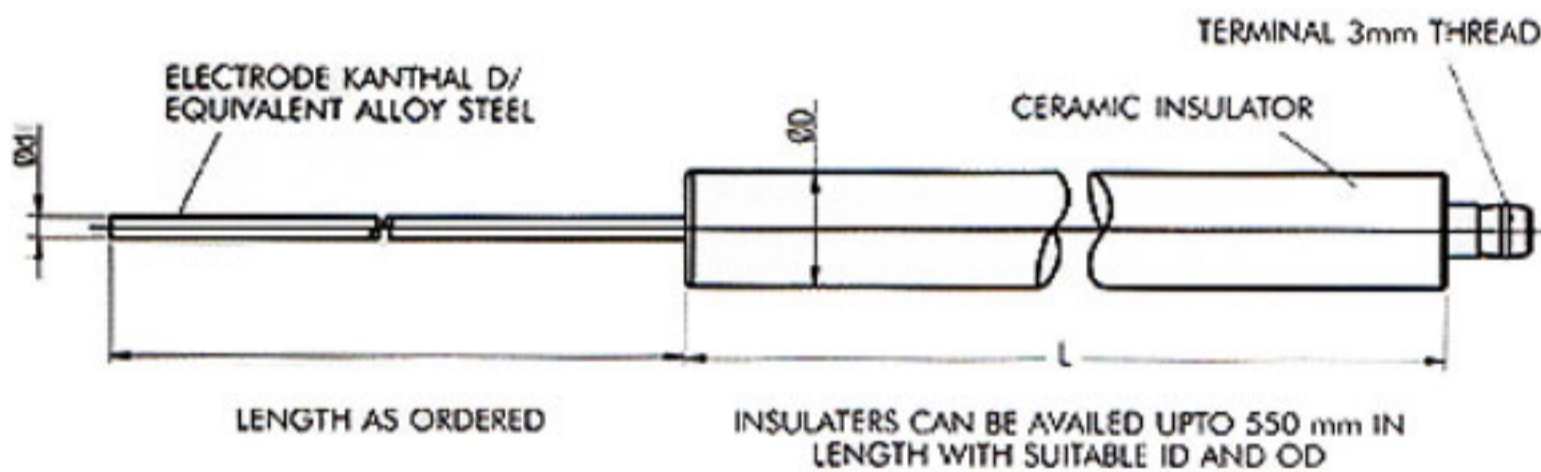
Ceramic insulators used in manufacture of igniting electrodes are of high-grade quality materials of following specifications: -

1. Jyoti grade HF82 low loss Alkali free steatite corresponding to German DIN standard KER 221 equivalent to IEC C-221 glazed or unglazed natural, satin smooth surface finish.
2. Jyalox 95 (containing 95% Al<sub>2</sub>O<sub>3</sub>) corresponding to German DIN standard KER 708.2 equivalent to ISO IEC C-795 High Density High Alumina ceramic pink or in white colour glazed/unglazed satin smooth surface finish.

### Dimensions of Standard Size Tubular Igniter

Model	Igniter Dia x Length	Kanthal D Electrode Dia Length	Total Length (Approx)
8 - 60	8 mm x 60 mm	2.34 mm x 100 mm	160 mm
8 - 100	8 mm x 100 mm	2.35 mm x 100 mm	210 mm
10 - 60	10 mm x 60 mm	2.34 mm x 100 mm	160 mm
10 - 100	10 mm x 100 mm	2.35 mm x 100 mm	210 mm
12 - 125	12 mm x 125 mm	3 mm x 100 mm	235 mm
12 - 150	12 mm x 150 mm	3 mm x 100 mm	260 mm
14 - 125	14.5 mm x 125 mm	3 mm x 100 mm	235 mm
14 - 150	14.5 mm x 150 mm	3 mm x 100 mm	260 mm
14 - 200	14.5 mm x 200 mm	3 mm x 100 mm	310 mm
Tolerances:	± 0.3 mm or 2% whichever is greater	± 0.15 mm or 2% whichever is greater	± 1.5% of the length

Electrode and insulator lengths can be altered to desired configuration on request.



**NOTE:** The information gathered in this brochure is based on the results obtained from our customers and our R & D laboratory. Since the conditions of application and use of Jyalox High Tension Igniting Electrodes is beyond our control, we cannot stand any warranty or accept representation regarding the result obtained by the use of the product, or that such use will not infringe on any patent. This information is provided in good faith that the user will evaluate material through testing and determine the suitability of the product. JYOTI ceases the liability for any damage, injury etc. caused by the mishandling of the product. JYOTI disclaims any warranty of merchantability or fitness for particular application.