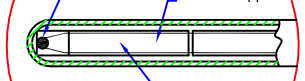


# High Temperature Ceramic Sheathed Thermocouple Assemblies

## SCHEMATIC OF TYPICAL ASSEMBLY

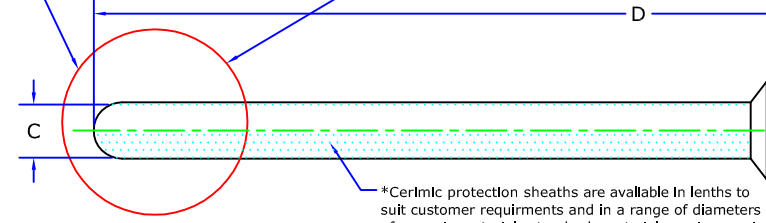
\*Thermocouple junctions are argon arc welded, simplex or duplex junctions can be provided.

\*Thermocouple conditions with diameters up to 0.5mm (25 SWg) are used for precious metal thermocouple conductor combinations. conductors up to 3.25mm diameter (10swg) are used for base metal thermocouple conductor combinations. alternative diameter can be supplied on request.



\*The simplex or duplex thermocouple conductors are protected and isolated within the ceramic sheath by twin bore or four bore ceramic insulators. these insulators will normally be of impervious recrystallised aluminous porcelain in the case of base metal thermocouple conductor combinations.

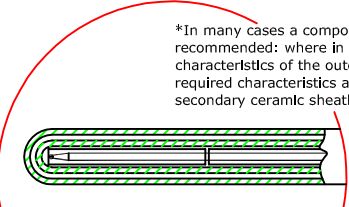
CROSS SECTION:  
NOT TO SCALE



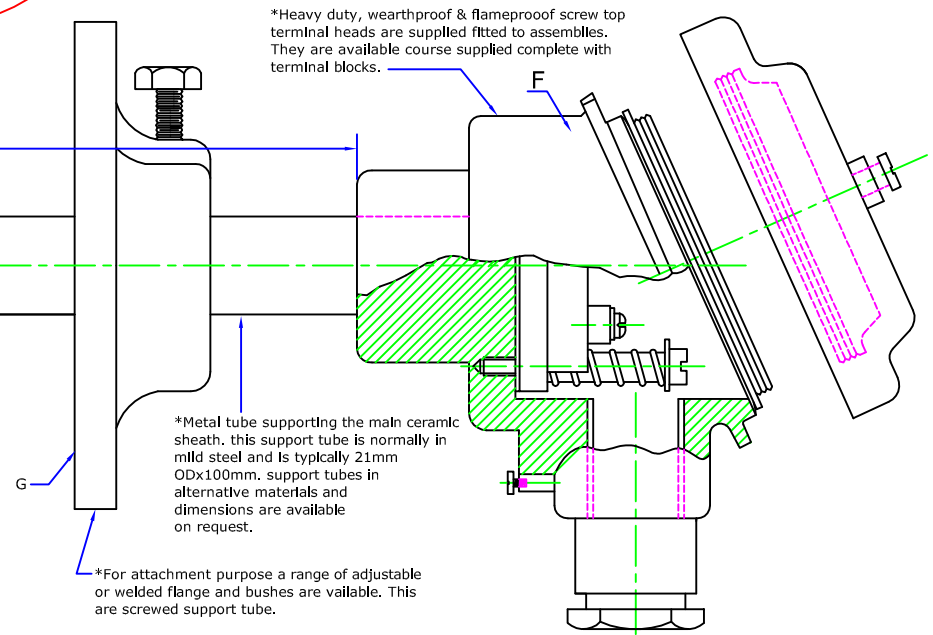
\*Ceramic protection sheaths are available in lengths to suit customer requirements and in a range of diameters of ceramic materials standards materials are impervious aluminium porcelain, impervious recrystallised alumina, impervious mullite and silicon carbide. alternative ceramic sheath materials are available on request.

## SINGLE OR DOUBLE CERAMIC PROTECTION TUBE

\*In many cases a composite protection sheath is recommended: where in addition to the protection characteristics of the outer primary ceramic sheath other required characteristics are achieved by the use of a secondary ceramic sheath within the primary sheath.



Secondary Protection Tube  
In Ceramic Material



\*Heavy duty, weatherproof & flameproof screw top terminal heads are supplied fitted to assemblies. They are available course supplied complete with terminal blocks.

\*Metal tube supporting the main ceramic sheath, this support tube is normally in mild steel and is typically 21mm ODx100mm. support tubes in alternative materials and dimensions are available on request.

\*For attachment purpose a range of adjustable or welded flange and bushes are available. This are screwed support tube.

- \* This assemblies are used for temperature measurement up to 1600°C plus in kilns, furnaces and flues thermocouple conductors type K,R,S & B.
- \* The protective ceramic sheaths of these assemblies are available as standard with a range of diameters from 6mm. We are pleased to advise on which sheath material and size to select to suit the operating temperature ranges, atmosphere and thermal conditions of your particular application.
- \* Heavy duty, weatherproof & flameproof termination heads for both simplex and duplex assemblies are available in either diecast aluminium & stainless steel.
- \* Available attachment fittings include fixed or adjustable flanges, welded or adjustable bushes.
- \* Assemblies are available as standard with primary and optional secondary ceramic protective sheaths in a range of diameters of; impervious aluminous porcelain, impervious recrystallised alumina, impervious mullite and silicon carbide etc.
- \* Assemblies in all the the common thermocouple conductor combinations are available in both simplex and duplex thermocouples.
- \* These assemblies can be supplied with bends in appropriate position along the sheath to meet customer requirements.

- REQUIRED DETAILS**
- A. Type of sensor.
  - B. Operating temperature.
  - C. Immersion outer Dia.
  - D. Immersion length.
  - E. Sheath Material.
  - F. Protection & termination head.
  - G. Process connection.
  - H. Type of Junction.