

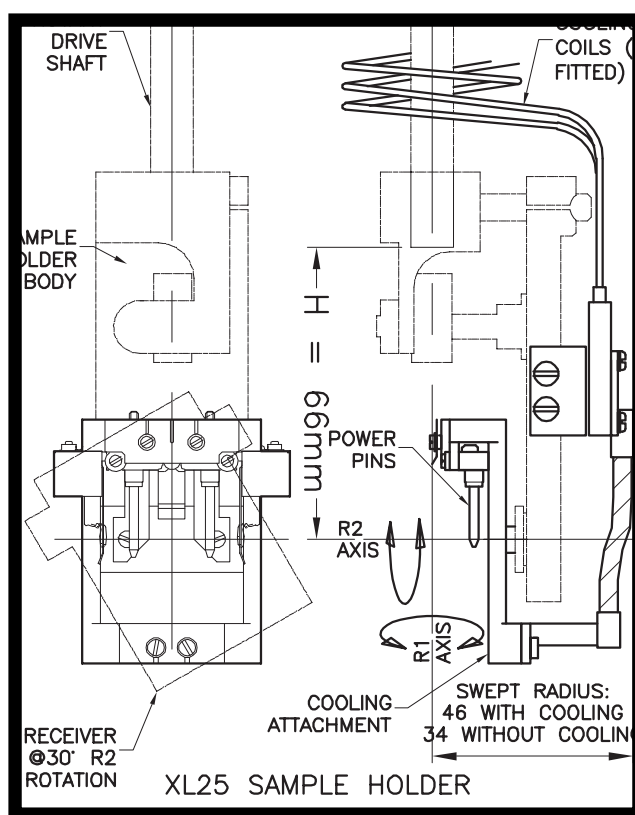


VACGEN

Assembly Guide

XL25 Heater Assembly AS0034

VGS03-02T34



Copyright Notice 2002 by VACGEN. All rights reserved. Information contained in this handbook is subject to change without notice and does not represent a commitment on the part of VACGEN. No part of this document may be copied or distributed, transmitted, transcribed, stored in a retrieval system or translated into any human or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, manual or otherwise or disclosed to third parties without the express written permission of VACGEN LTD, Unit A, Swallow Business Park, Diamond Drive, Lower Dicker, Hailsham, East Sussex, BN27 4EL, UK.

Helping you make the next leap forward

www.vacgen.com



DISCLAIMER

This Assembly Guide should be used in conjunction with the owner's manual where available, and is intended as a guide only as there may be variations between versions and therefore must be used at the Owner's Risk. For more detailed assistance, please contact our Support desk +44 (0) 1323 379 335 or support@vacgen.com.

HEALTH AND SAFETY

All repairs and services should be carried out by a qualified engineer, using the correct tools and procedures to carry out the repair. VACGEN are not liable for any errors within the assembly guides which may cause inconsistencies during repair.

The Goods, especially chemicals, may be dangerous if not properly used or stored and the appropriate precautions taken. The Customer accordingly agrees that it shall take all such steps as are reasonably practicable or usual to eliminate or reduce any risk to health and/or safety to which use of the Goods may give rise and acknowledges that where the Goods are manufactured to a design supplied by the Customer, the Company will not undertake any research as to the risks to health and/or safety which may arise from use or storage of the Goods. Where the Goods are manufactured to a design supplied by the Customer, the Customer shall comply with all the duties which may be implied at law on a designer and/or manufacturer of the Goods.

Revision	Date	Comment	Initials
1			
2			
3			

Unit A, Swallow Business Park
Diamond Drive, Lower Dicker
Hailsham, East Sussex
BN27 4EL, UK



Strip the heater assembly

The only difference between the XL25VH and XL25HC is the XL25VH has a hole in the top plate, so the sample can sit directly on the PBN Element

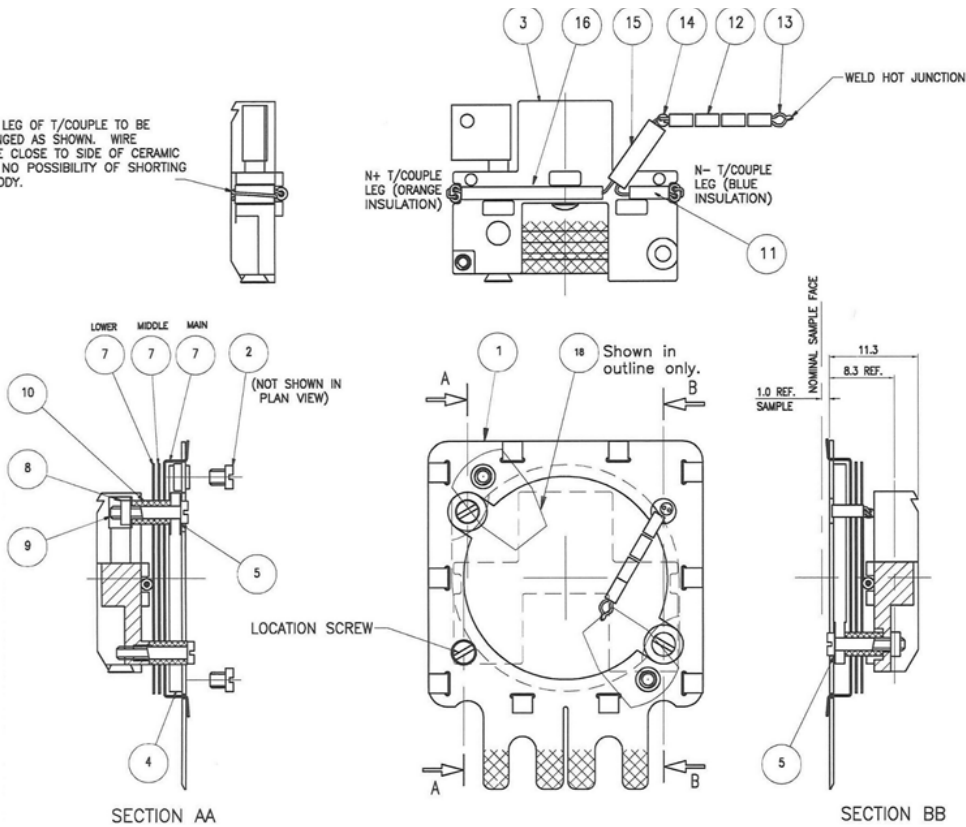
Tip: To try and stop the screws breaking when undoing, apply isopropanol to the screw thread to act as a lubricant, also slightly wiggling the screw breaks the bond before undoing.

1. Remove the sample clips (18)
2. Remove the two main screws holding the assembly together (9)
Be careful of the Graphite Washers (5)
3. Lift off the heater assembly
4. Note the orientation of the Radiation Shields
5. Peel the clips back on the Sample Plate Assembly and part the upper and lower part
6. Lift out the Heater Element (4) (This should be between 19.5 to 22.5 ohms)

When replacing the heater, take care not to break the contacts on the PBN Element. Check the height (11.3mm) as this is critical for loading the heater onto the carrier.



EACH LEG OF T/COUPLE TO BE ARRANGED AS SHOWN. WIRE TO BE CLOSE TO SIDE OF CERAMIC WITH NO POSSIBILITY OF SHORTING TO BODY.

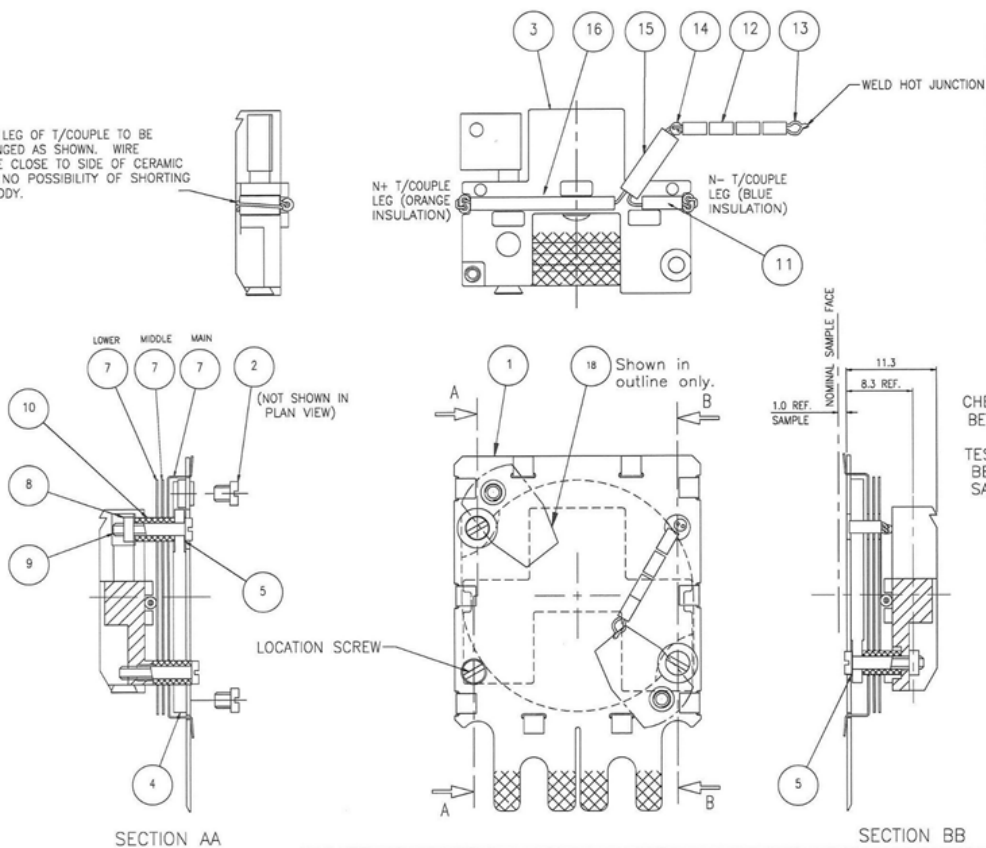


ITEM	DESCRIPTION	QTY
1	SAMPLE PLATE ASY	1
2	SPECIAL SCREW (M6)	2
3	INITIAL ASSEMBLY	1
4	HEATER ELEMENT: REF DC-36-07-3	1
5	GRAPHITE WASHER	2
6		
7	HEAT SHIELD SET	1
8	MOLY NUT, M1.6: REF DC-36-15-4	2
9	MOLY SCREW M1.6 x 9: REF DC-36-16-4	3
10	CERAMIC SPACER, 4.85 LONG	3
11	CERAMIC TUBE CUT TO 5.0 LONG	1
12	INSULATOR	4
13	N-TYPE THERMOCOUPLE 1/0.3 PAIR	0.1 m
14	TWIN ROUND CERAMIC CUT TO 4.0 LONG	1
15	TWIN FLAT CERAMIC CUT TO 9.0 LONG	1
16	CERAMIC TUBE CUT TO 18.0 LONG	1
17		
18	SAMPLE CLAMP	2
19		

CHECK ELEMENT RESISTANCE TO BE BETWEEN 19.5 & 22.5 OHMS.

BREAKDOWN VOLTAGE BETWEEN T'COUPLE AND SAMPLE PLATE 1000 VOLTS MIN.

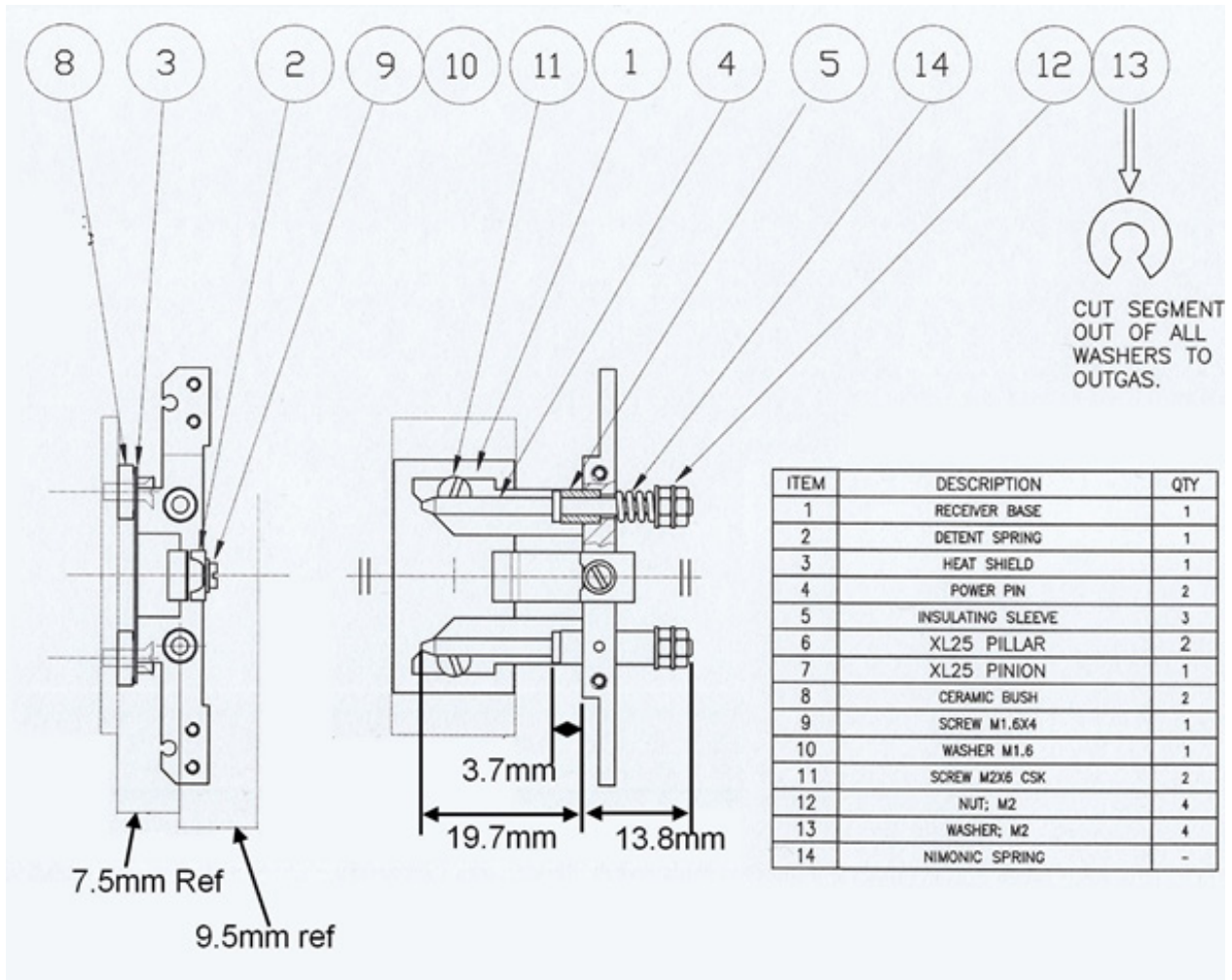
EACH LEG OF T/COUPLE TO BE ARRANGED AS SHOWN. WIRE TO BE CLOSE TO SIDE OF CERAMIC WITH NO POSSIBILITY OF SHORTING TO BODY.



ITEM	DESCRIPTION	QTY
1	SAMPLE PLATE ASY	1
2	SPECIAL SCREW (M6)	2
3	INITIAL ASSEMBLY	1
4	HEATER ELEMENT: REF DC-36-07-3	1
5	GRAPHITE WASHER	2
6		
7	HEAT SHIELD SET	1
8	MOLY NUT, M1.6: REF DC-36-15-4	2
9	MOLY SCREW M1.6 x 9: REF DC-36-16-4	3
10	CERAMIC SPACER, 4.85 LONG	3
11	CERAMIC TUBE CUT TO 5.0 LONG	1
12	INSULATOR	4
13	N-TYPE THERMOCOUPLE 1/0.3 PAIR	0.1 m
14	TWIN ROUND CERAMIC CUT TO 4.0 LONG	1
15	TWIN FLAT CERAMIC CUT TO 9.0 LONG	1
16	CERAMIC TUBE CUT TO 18.0 LONG	1
17		
18	SAMPLE CLAMP	2
19		

CHECK ELEMENT RESISTANCE TO BE BETWEEN 19.5 & 22.5 OHMS.

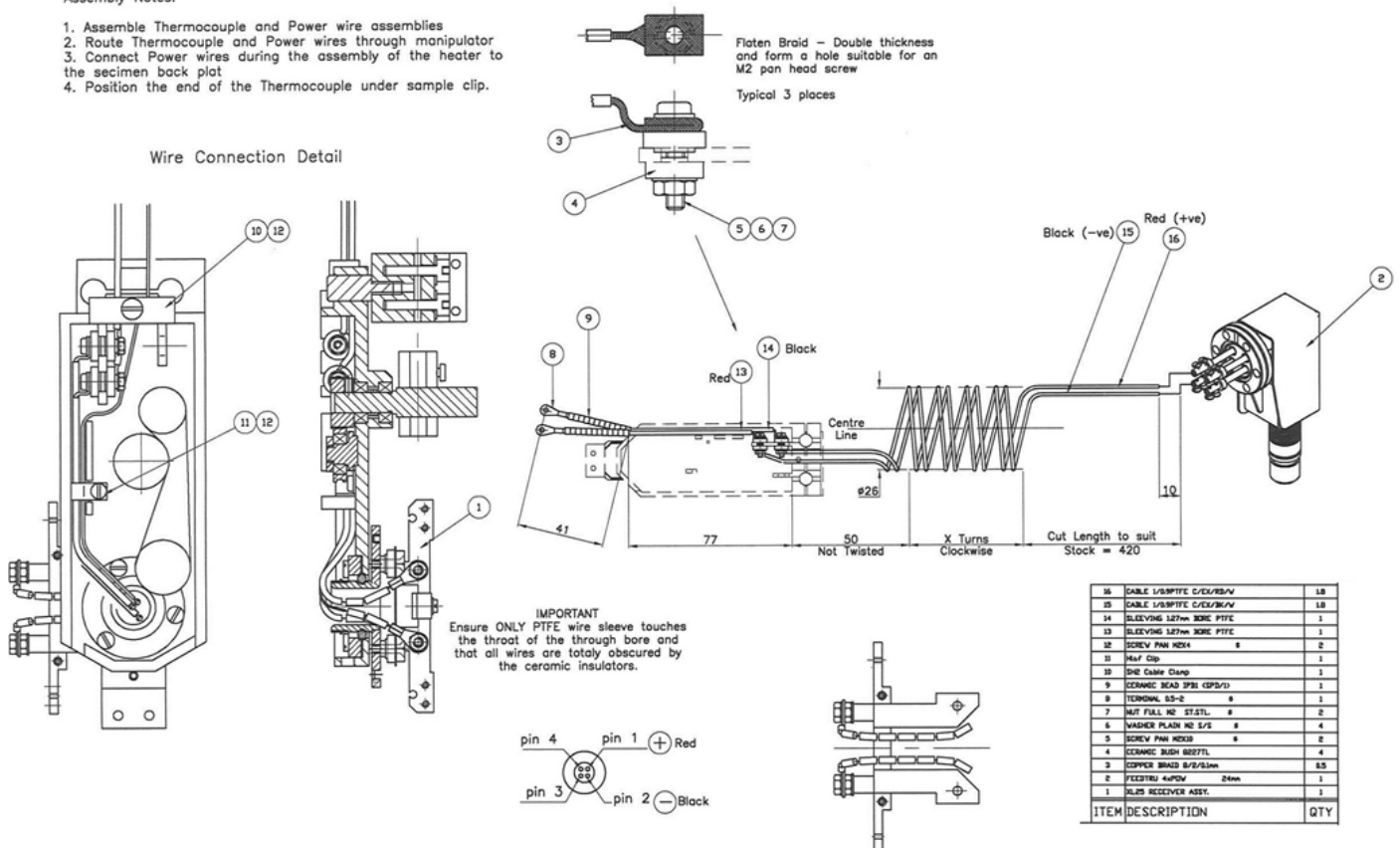
TEST EARTH LEAKAGE AT 500 VOLTS BETWEEN THERMOCOUPLE AND BODY, AND SAMPLE PLATE AND BODY. TO READ INFINITY.

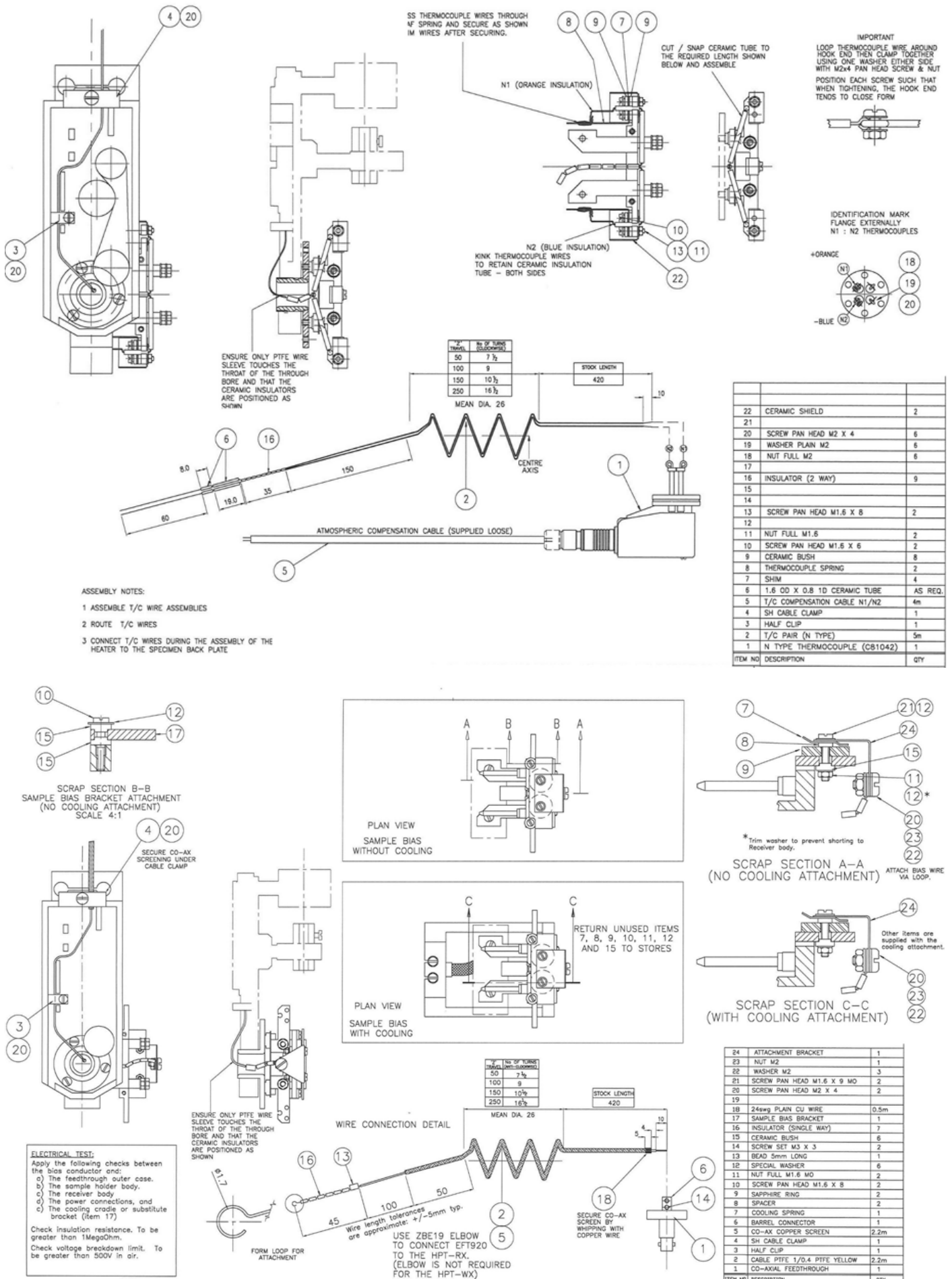


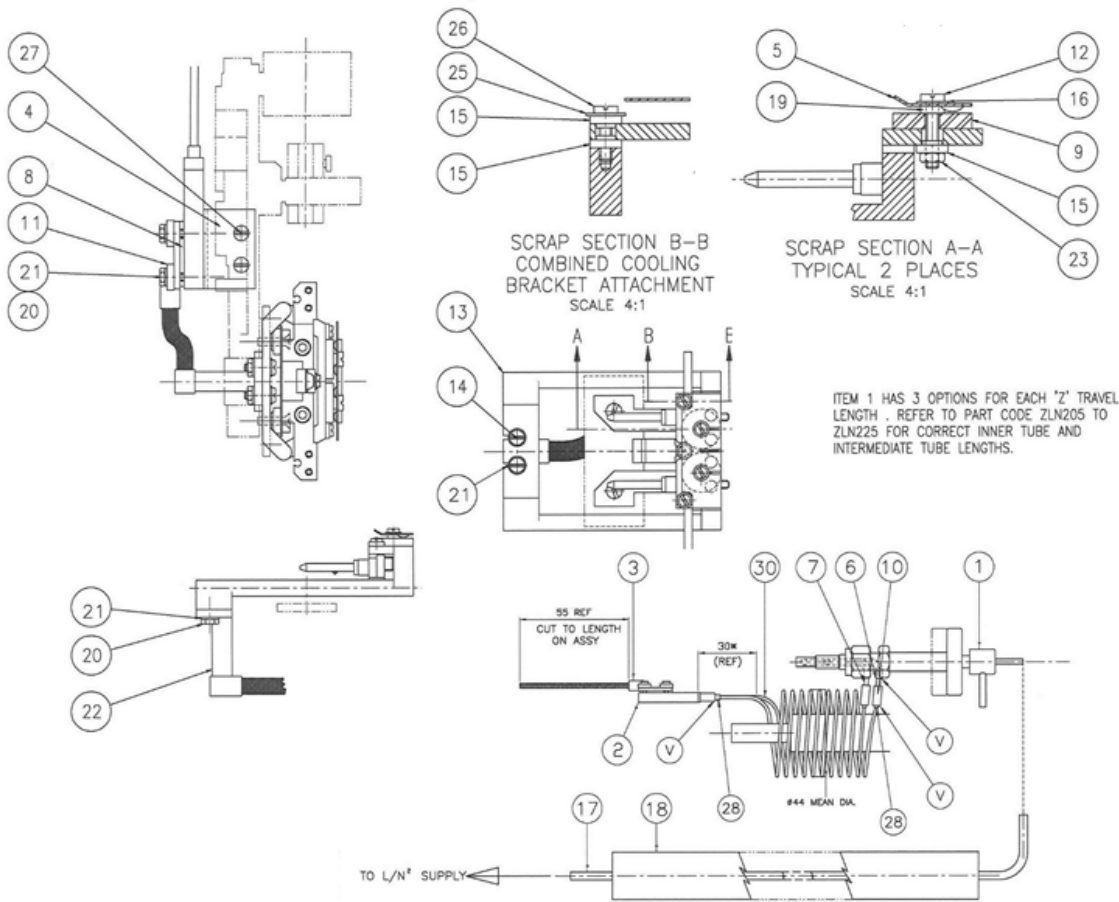
Assembly Notes:

1. Assemble Thermocouple and Power wire assemblies
2. Route Thermocouple and Power wires through manipulator
3. Connect Power wires during the assembly of the heater to the specimen back plot
4. Position the end of the Thermocouple under sample clip.

Wire Connection Detail







ITEM NO	DESCRIPTION	QTY
30	TUBE ST/SL 1/16 X 0.006 WALL	SEE DRG
29	PIPE NIPPLE	2
28	PIPE COLLAR	4
27	SCREW PAN HEAD M2 X 4	4
26	SCREW PAN HEAD M1.6 X 8	3
25	SPECIAL WASHER	2
24	SCREW CAP HEAD M3 X 6	3
23	NUT FULL M1.6 M0	2
22	COOLING BRACKET	2
21	WASHER PLAIN M2	8
20	NUT FULL M2	4
19	SPACER	2
18	SLEEVING PLASTAZOTE 6.0 1/0 (1.8m)	2
17	POLYTHENE TUBE 4.3 O/Dx 3.0 I/D 4.0m LG	1
16	WASHER PLAIN M1.6	2
15	CERAMIC BUSH	5
14	SCREW PAN HEAD M2 X 8	2
13	COMBINED COOLING BRACKET	1
12	SCREW PAN HEAD M1.6 X 8 M0	2
11	INSULATOR	3
10	ADAPTOR	2
9	SAPPHIRE RING	2
8	SAPPHIRE DISC	1
7	INLET TUBE	1
6	OUTLET TUBE	1
5	COOLING SPRING	1
4	COOLING BOX BRACKET ASSY	1
3	HEAT SINK ASSY	1
2	COOLING BOX ASSY	1
1	RX LN FEEDTHROUGH ASSY	1