



MAXIMUM TEMPERATURE RANGE

Thermocouple Grade

-32 to 4208°F  
-0 to 2320°C

Extension Grade

32 to 1600°F  
0 to 870°C

LIMITS OF ERROR

(whichever is greater)

Standard: 4.5°C to 425°C

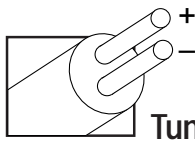
1.0% to 2320°C

Special: Not Established

COMMENTS, BARE WIRE ENVIRONMENT:

Vacuum, Inert; Hydrogen; Beware of Embrittlement; Not Practical Below 750°F; Not for Oxidizing Atmosphere

TEMPERATURE IN DEGREES °F  
REFERENCE JUNCTION AT 32°F



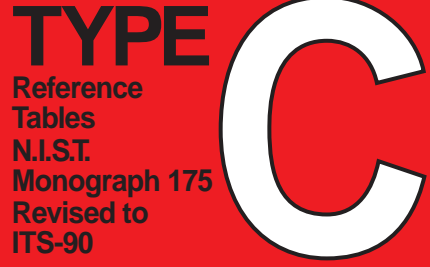
Thermocouple Grade  
NONE ESTABLISHED

Tungsten-  
5% Rhenium  
vs.  
Tungsten-  
26% Rhenium



Extension Grade

Revised Thermocouple Reference Tables



Reference Tables  
N.I.S.T.  
Monograph 175  
Revised to ITS-90

Thermoelectric Voltage in Millivolts

Table of thermoelectric voltage in millivolts for Type C thermocouples. Columns represent temperature in °F (0 to 10) and °C (0 to 10). Rows represent temperature in °F (1000 to 1490) and °C (540 to 810).

Table of thermoelectric voltage in millivolts for Type C thermocouples. Columns represent temperature in °F (0 to 10) and °C (0 to 10). Rows represent temperature in °F (1500 to 1990) and °C (820 to 1100).

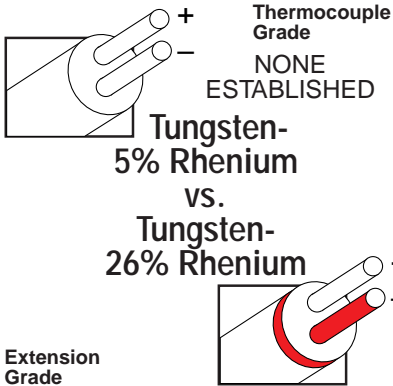




# Revised Thermocouple Reference Tables

# TYPE C

Reference Tables  
N.I.S.T.  
Monograph 175  
Revised to ITS-90

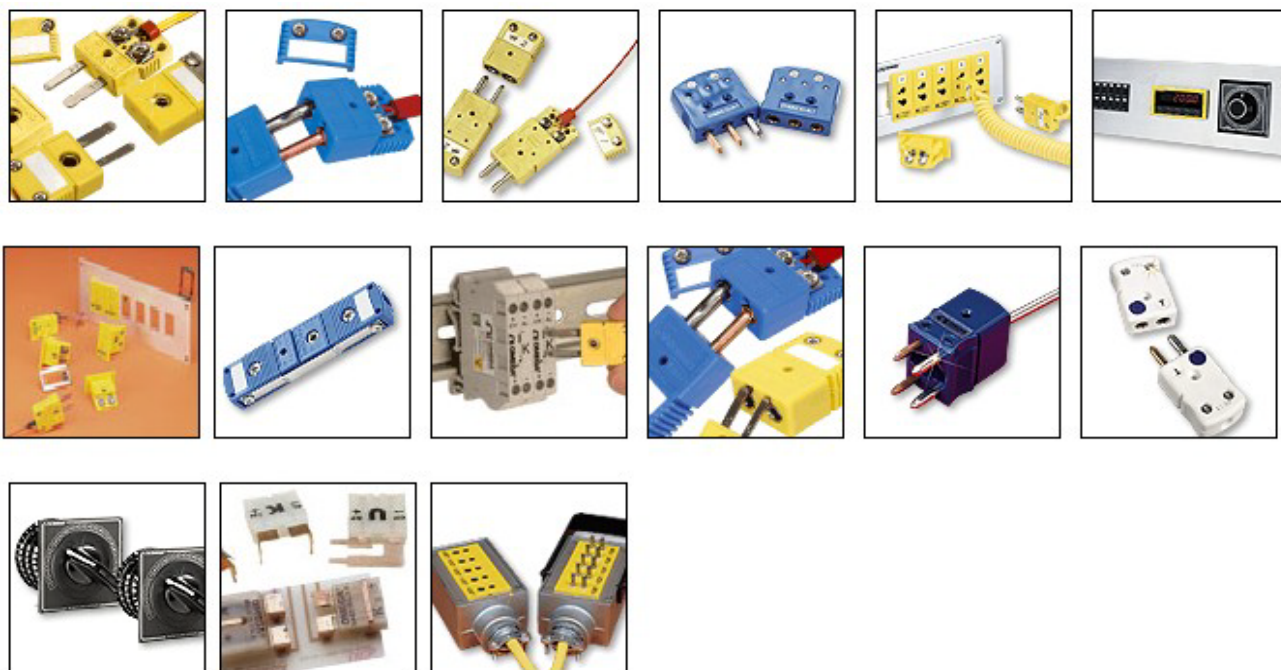


**MAXIMUM TEMPERATURE RANGE**  
**Thermocouple Grade**  
 -32 to 4208°F  
 -0 to 2320°C  
**Extension Grade**  
 32 to 1600°F  
 0 to 870°C  
**LIMITS OF ERROR**  
 (whichever is greater)  
**Standard:** 4.5°C to 425°C  
 1.0% to 2320°C  
**Special:** Not Established  
**COMMENTS, BARE WIRE ENVIRONMENT:**  
 Vacuum, Inert; Hydrogen; Beware of Embrittlement; Not Practical Below 750°F; Not for Oxidizing Atmosphere  
**TEMPERATURE IN DEGREES °F**  
**REFERENCE JUNCTION AT 32°F**

Thermoelectric Voltage in Millivolts

°F	0	1	2	3	4	5	6	7	8	9	10	°F	°F	0	1	2	3	4	5	6	7	8	9	10	°F
4000	35.978	35.984	35.989	35.995	36.001	36.007	36.013	36.018	36.024	36.030	36.036	4000	4100	36.539	36.545	36.550	36.556	36.561	36.566	36.572	36.577	36.583	36.588	36.594	4100
4010	36.036	36.041	36.047	36.053	36.058	36.064	36.070	36.076	36.081	36.087	36.093	4010	4110	36.594	36.599	36.604	36.610	36.615	36.621	36.626	36.631	36.637	36.642	36.647	4110
4020	36.093	36.099	36.104	36.110	36.116	36.121	36.127	36.133	36.138	36.144	36.150	4020	4120	36.647	36.653	36.658	36.664	36.669	36.674	36.680	36.685	36.690	36.696	36.701	4120
4030	36.150	36.155	36.161	36.167	36.172	36.178	36.184	36.189	36.195	36.201	36.206	4030	4130	36.701	36.706	36.712	36.717	36.722	36.728	36.733	36.738	36.744	36.749	36.754	4130
4040	36.206	36.212	36.218	36.223	36.229	36.235	36.240	36.246	36.251	36.257	36.263	4040	4140	36.754	36.760	36.765	36.770	36.775	36.781	36.786	36.791	36.797	36.802	36.807	4140
4050	36.263	36.268	36.274	36.280	36.285	36.291	36.296	36.302	36.308	36.313	36.319	4050	4150	36.807	36.812	36.818	36.823	36.828	36.833	36.839	36.844	36.849	36.854	36.860	4150
4060	36.319	36.324	36.330	36.335	36.341	36.347	36.352	36.358	36.363	36.369	36.374	4060	4160	36.860	36.865	36.870	36.875	36.881	36.886	36.891	36.896	36.901	36.907	36.912	4160
4070	36.374	36.380	36.385	36.391	36.397	36.402	36.408	36.413	36.419	36.424	36.430	4070	4170	36.912	36.917	36.922	36.927	36.933	36.938	36.943	36.948	36.953	36.958	36.964	4170
4080	36.430	36.435	36.441	36.446	36.452	36.457	36.463	36.468	36.474	36.479	36.485	4080	4180	36.964	36.969	36.974	36.979	36.984	36.989	36.994	37.000	37.005	37.010	37.015	4180
4090	36.485	36.490	36.496	36.501	36.507	36.512	36.517	36.523	36.528	36.534	36.539	4090	4190	37.015	37.020	37.025	37.030	37.035	37.041	37.046	37.051	37.056	37.061	37.066	4190
°F	0	1	2	3	4	5	6	7	8	9	10	°F	°F	0	1	2	3	4	5	6	7	8	9	10	°F

一: [Omega热电偶连接器](#)



二: [Omega热电偶线及热电偶补偿导线](#)



三: [Omega热电偶](#)



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