Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

° Farenheit

Type B °F (32 to 3092°F)

°F	0	1	2	3	4	5	6	7	8	9	10
30			0.000	0.000	0.000	0.000	-0.001	-.0001	-.0001	-.0001	-.0001
40	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.002	-0.002	-0.002	-0.002	-0.002
50	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
60	-0.002	-0.002	-0.002	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
70	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.002	-0.002	-0.002	-0.002
80	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
90	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
100	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002
120	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.004	0.004
130	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.006	0.006	0.006
140	0.006	0.006	0.007	0.007	0.007	0.007	0.008	0.008	0.008	0.009	0.009
150	0.009	0.009	0.009	0.010	0.010	0.010	0.011	0.011	0.011	0.012	0.012
160	0.012	0.012	0.013	0.013	0.013	0.014	0.014	0.014	0.015	0.015	0.015
170	0.015	0.016	0.016	0.016	0.017	0.017	0.017	0.018	0.018	0.019	0.019
180	0.019	0.019	0.020	0.020	0.021	0.021	0.021	0.022	0.022	0.023	0.023
190	0.023	0.023	0.024	0.024	0.025	0.025	0.026	0.026	0.027	0.027	0.027
200	0.027	0.028	0.028	0.029	0.029	0.030	0.030	0.031	0.031	0.032	0.032
210	0.032	0.033	0.033	0.034	0.034	0.035	0.035	0.036	0.036	0.037	0.037
220	0.037	0.038	0.038	0.039	0.039	0.040	0.041	0.041	0.042	0.042	0.043
230	0.043	0.043	0.044	0.044	0.045	0.046	0.046	0.047	0.047	0.048	0.049
240	0.049	0.049	0.050	0.050	0.051	0.052	0.052	0.053	0.053	0.054	0.055
250	0.055	0.055	0.056	0.057	0.057	0.058	0.059	0.059	0.060	0.060	0.061
260	0.061	0.062	0.062	0.063	0.064	0.065	0.065	0.066	0.067	0.067	0.068
270	0.068	0.069	0.069	0.070	0.071	0.072	0.072	0.073	0.074	0.074	0.075
280	0.075	0.076	0.077	0.077	0.078	0.079	0.080	0.080	0.081	0.082	0.083
290	0.083	0.083	0.084	0.085	0.086	0.086	0.087	0.088	0.089	0.090	0.090
300	0.090	0.091	0.092	0.093	0.094	0.094	0.095	0.096	0.097	0.098	0.099
310	0.099	0.099	0.100	0.101	0.102	0.103	0.104	0.105	0.105	0.106	0.107
320	0.107	0.108	0.109	0.110	0.111	0.112	0.112	0.113	0.114	0.115	0.116
330	0.116	0.117	0.118	0.119	0.120	0.121	0.121	0.122	0.123	0.124	0.125
340	0.125	0.126	0.127	0.128	0.129	0.130	0.131	0.132	0.133	0.134	0.135
350	0.135	0.136	0.137	0.138	0.139	0.140	0.141	0.142	0.143	0.144	0.145
360	0.145	0.146	0.147	0.148	0.149	0.150	0.151	0.152	0.153	0.154	0.155
370	0.155	0.156	0.157	0.158	0.159	0.160	0.161	0.162	0.163	0.164	0.165
380	0.165	0.166	0.167	0.168	0.170	0.171	0.172	0.173	0.174	0.175	0.176
390	0.176	0.177	0.178	0.179	0.180	0.182	0.183	0.184	0.185	0.186	0.187
400	0.187	0.188	0.190	0.191	0.192	0.193	0.194	0.195	0.196	0.198	0.199
410	0.199	0.200	0.201	0.202	0.203	0.205	0.206	0.207	0.208	0.209	0.211
420	0.211	0.212	0.213	0.214	0.215	0.217	0.218	0.219	0.220	0.222	0.223
430	0.223	0.224	0.225	0.226	0.228	0.229	0.230	0.231	0.233	0.234	0.235
440	0.235	0.236	0.238	0.239	0.240	0.242	0.243	0.244	0.245	0.247	0.248
450	0.248	0.249	0.251	0.252	0.253	0.255	0.256	0.257	0.259	0.260	0.261
460	0.261	0.263	0.264	0.265	0.267	0.268	0.269	0.271	0.272	0.273	0.275
470	0.275	0.276	0.277	0.279	0.280	0.282	0.283	0.284	0.286	0.287	0.288
480	0.288	0.290	0.291	0.293	0.294	0.296	0.297	0.298	0.300	0.301	0.303
490	0.303	0.304	0.305	0.307	0.308	0.310	0.311	0.313	0.314	0.316	0.317
500	0.317	0.319	0.320	0.321	0.323	0.324	0.326	0.327	0.329	0.330	0.332
510	0.332	0.333	0.335	0.336	0.338	0.339	0.341	0.342	0.344	0.345	0.347
520	0.347	0.348	0.350	0.352	0.353	0.355	0.356	0.358	0.359	0.361	0.362
530	0.362	0.364	0.365	0.367	0.369	0.370	0.372	0.373	0.375	0.377	0.378
540	0.378	0.380	0.381	0.383	0.384	0.386	0.388	0.389	0.391	0.393	0.394
550	0.394	0.396	0.397	0.399	0.401	0.402	0.404	0.406	0.407	0.409	0.411
560	0.411	0.412	0.414	0.416	0.417	0.419	0.421	0.422	0.424	0.426	0.427
570	0.427	0.429	0.431	0.432	0.434	0.436	0.437	0.439	0.441	0.443	0.444
580	0.444	0.446	0.448	0.449	0.451	0.453	0.455	0.456	0.458	0.460	0.462
590	0.462	0.463	0.465	0.467	0.469	0.470	0.472	0.474	0.476	0.478	0.479
600	0.479	0.481	0.483	0.485	0.486	0.488	0.490	0.492	0.494	0.495	0.497
610	0.497	0.499	0.501	0.503	0.505	0.506	0.508	0.510	0.512	0.514	0.516
620	0.516	0.517	0.519	0.521	0.523	0.525	0.527	0.529	0.530	0.532	0.534
630	0.534	0.536	0.538	0.540	0.542	0.544	0.546	0.547	0.549	0.551	0.553
640	0.553	0.555	0.557	0.559	0.561	0.563	0.565	0.567	0.569	0.570	0.572
650	0.572	0.574	0.576	0.578	0.580	0.582	0.584	0.586	0.588	0.590	0.592
660	0.592	0.594	0.596	0.598	0.600	0.602	0.604	0.606	0.608	0.610	0.612
670	0.612	0.614	0.616	0.618	0.620	0.622	0.624	0.626	0.628	0.630	0.632
680	0.632	0.634	0.636	0.638	0.640	0.642	0.644	0.646	0.648	0.650	0.653
690	0.653	0.655	0.657	0.659	0.661	0.663	0.665	0.667	0.669	0.671	0.673
700	0.673	0.675	0.678	0.680	0.682	0.684	0.686	0.688	0.690	0.692	0.694
710	0.694	0.697	0.699	0.701	0.703	0.705	0.707	0.709	0.712	0.714	0.716
720	0.716	0.718	0.720	0.722	0.725	0.727	0.729	0.731	0.733	0.735	0.738
730	0.738	0.740	0.742	0.744	0.746	0.749	0.751	0.753	0.755	0.757	0.760
740	0.760	0.762	0.764	0.766	0.769	0.771	0.773	0.775	0.778	0.780	0.782
750	0.782	0.784	0.787	0.789	0.791	0.793	0.796	0.798	0.800	0.802	0.805
760	0.805	0.807	0.809	0.812	0.814	0.816	0.818	0.821	0.823	0.825	0.828
770	0.828	0.830	0.832	0.835	0.837	0.839	0.842	0.844	0.846	0.849	0.851
780	0.851	0.853	0.856	0.858	0.860	0.863	0.865	0.867	0.870	0.872	0.875
790	0.875	0.877	0.879	0.882	0.884	0.886	0.889	0.891	0.894	0.896	0.898
800	0.898	0.901	0.903	0.906	0.908	0.910	0.913	0.915	0.918	0.920	0.923
810	0.923	0.925	0.927	0.930	0.932	0.935	0.937	0.940	0.942	0.945	0.947
820	0.947	0.950	0.952	0.955	0.957	0.959	0.962	0.964	0.967	0.969	0.972
830	0.972	0.974	0.977	0.979	0.982	0.984	0.987	0.989	0.992	0.994	0.997
840	0.997	1.000	1.002	1.005	1.007	1.010	1.012	1.015	1.017	1.020	1.022
850	1.022	1.025	1.027	1.030	1.033	1.035	1.038	1.040	1.043	1.045	1.048
860	1.048	1.051	1.053	1.056	1.058	1.061	1.064	1.066	1.069	1.071	1.074
870	1.074	1.077	1.079	1.082	1.085	1.087	1.090	1.092	1.095	1.098	1.100
880	1.100	1.103	1.106	1.108	1.111	1.114	1.116	1.119	1.122	1.124	1.127
890	1.127	1.130	1.132	1.135	1.138	1.140	1.143	1.146	1.148	1.151	1.154
900	1.154	1.157	1.159	1.162	1.165	1.167	1.170	1.173	1.176	1.178	1.181
910	1.181	1.184	1.186	1.189	1.192	1.195	1.197	1.200	1.203	1.206	1.208
920	1.208	1.211	1.214	1.217	1.220	1.222	1.225	1.228	1.231	1.233	1.236
930	1.236	1.239	1.242	1.245	1.247	1.250	1.253	1.256	1.259	1.262	1.264
940	1.264	1.267	1.270	1.273	1.276	1.278	1.281	1.284	1.287	1.290	1.293
950	1.293	1.296	1.298	1.301	1.304	1.307	1.310	1.313	1.316	1.318	1.321
960	1.321	1.324	1.327	1.330	1.333	1.336	1.339	1.342	1.344	1.347	1.350
970	1.350	1.353	1.356	1.359	1.362	1.365	1.368	1.371	1.374	1.377	1.379
980	1.379	1.382	1.385	1.388	1.391	1.394	1.397	1.400	1.403	1.406	1.409
990	1.409	1.412	1.415	1.418	1.421	1.424	1.427	1.430	1.433	1.436	1.439
1000	1.439	1.442	1.445	1.448	1.451	1.454	1.457	1.460	1.463	1.466	1.469
1010	1.469	1.472	1.475	1.478	1.481	1.484	1.487	1.490	1.493	1.496	1.499
1020	1.499	1.502	1.505	1.508	1.511	1.515	1.518	1.521	1.524	1.527	1.530
1030	1.530	1.533	1.536	1.539	1.542	1.545	1.548	1.552	1.555	1.558	1.561
1040	1.561	1.564	1.567	1.570	1.573	1.576	1.580	1.583	1.586	1.589	1.592

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type B °F (32 to 3092°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
1050	1.592	1.595	1.598	1.601	1.605	1.608	1.611	1.614	1.617	1.620	1.624
1060	1.624	1.627	1.630	1.633	1.636	1.639	1.643	1.646	1.649	1.652	1.655
1070	1.655	1.659	1.662	1.665	1.668	1.671	1.675	1.678	1.681	1.684	1.687
1080	1.687	1.691	1.694	1.697	1.700	1.704	1.707	1.710	1.713	1.716	1.720
1090	1.720	1.723	1.726	1.729	1.733	1.736	1.739	1.743	1.746	1.749	1.752
1100	1.752	1.756	1.759	1.762	1.765	1.769	1.772	1.775	1.779	1.782	1.785
1110	1.785	1.789	1.792	1.795	1.798	1.802	1.805	1.808	1.812	1.815	1.818
1120	1.818	1.822	1.825	1.828	1.832	1.835	1.838	1.842	1.845	1.849	1.852
1130	1.852	1.855	1.859	1.862	1.865	1.869	1.872	1.875	1.879	1.882	1.886
1140	1.886	1.889	1.892	1.896	1.899	1.903	1.906	1.909	1.913	1.916	1.920
1150	1.920	1.923	1.926	1.930	1.933	1.937	1.940	1.944	1.947	1.950	1.954
1160	1.954	1.957	1.961	1.964	1.968	1.971	1.975	1.978	1.981	1.985	1.988
1170	1.988	1.992	1.995	1.999	2.002	2.006	2.009	2.013	2.016	2.020	2.023
1180	2.023	2.027	2.030	2.034	2.037	2.041	2.044	2.048	2.051	2.055	2.058
1190	2.058	2.062	2.065	2.069	2.072	2.076	2.079	2.083	2.086	2.090	2.094
1200	2.094	2.097	2.101	2.104	2.108	2.111	2.115	2.118	2.122	2.126	2.129
1210	2.129	2.133	2.136	2.140	2.143	2.147	2.151	2.154	2.158	2.161	2.165
1220	2.165	2.169	2.172	2.176	2.179	2.183	2.187	2.190	2.194	2.197	2.201
1230	2.201	2.205	2.208	2.212	2.216	2.219	2.223	2.226	2.230	2.234	2.237
1240	2.237	2.241	2.245	2.248	2.252	2.256	2.259	2.263	2.267	2.270	2.274
1250	2.274	2.278	2.281	2.285	2.289	2.292	2.296	2.300	2.303	2.307	2.311
1260	2.311	2.315	2.318	2.322	2.326	2.329	2.333	2.337	2.341	2.344	2.348
1270	2.348	2.352	2.355	2.359	2.363	2.367	2.370	2.374	2.378	2.382	2.385
1280	2.385	2.389	2.393	2.397	2.400	2.404	2.408	2.412	2.416	2.419	2.423
1290	2.423	2.427	2.431	2.434	2.438	2.442	2.446	2.450	2.453	2.457	2.461
1300	2.461	2.465	2.469	2.472	2.476	2.480	2.484	2.488	2.492	2.495	2.499
1310	2.499	2.503	2.507	2.511	2.515	2.518	2.522	2.526	2.530	2.534	2.538
1320	2.538	2.541	2.545	2.549	2.553	2.557	2.561	2.565	2.569	2.572	2.576
1330	2.576	2.580	2.584	2.588	2.592	2.596	2.600	2.604	2.607	2.611	2.615
1340	2.615	2.619	2.623	2.627	2.631	2.635	2.639	2.643	2.647	2.651	2.654
1350	2.654	2.658	2.662	2.666	2.670	2.674	2.678	2.682	2.686	2.690	2.694
1360	2.694	2.698	2.702	2.706	2.710	2.714	2.718	2.722	2.726	2.730	2.734
1370	2.734	2.738	2.742	2.746	2.750	2.754	2.758	2.762	2.766	2.770	2.774
1380	2.774	2.778	2.782	2.786	2.790	2.794	2.798	2.802	2.806	2.810	2.814
1390	2.814	2.818	2.822	2.826	2.830	2.834	2.838	2.842	2.846	2.850	2.854
1400	2.854	2.859	2.863	2.867	2.871	2.875	2.879	2.883	2.887	2.891	2.895
1410	2.895	2.899	2.903	2.908	2.912	2.916	2.920	2.924	2.928	2.932	2.936
1420	2.936	2.940	2.944	2.949	2.953	2.957	2.961	2.965	2.969	2.973	2.978
1430	2.978	2.982	2.986	2.990	2.994	2.998	3.002	3.007	3.011	3.015	3.019
1440	3.019	3.023	3.027	3.032	3.036	3.040	3.044	3.048	3.052	3.057	3.061
1450	3.061	3.065	3.069	3.073	3.078	3.082	3.086	3.090	3.094	3.099	3.103
1460	3.103	3.107	3.111	3.116	3.120	3.124	3.128	3.132	3.137	3.141	3.145
1470	3.145	3.149	3.154	3.158	3.162	3.166	3.171	3.175	3.179	3.183	3.188
1480	3.188	3.192	3.196	3.200	3.205	3.209	3.213	3.218	3.222	3.226	3.230
1490	3.230	3.235	3.239	3.243	3.248	3.252	3.256	3.261	3.265	3.269	3.273
1500	3.273	3.278	3.282	3.286	3.291	3.295	3.299	3.304	3.308	3.312	3.317
1510	3.317	3.321	3.325	3.330	3.334	3.338	3.343	3.347	3.352	3.356	3.360
1520	3.360	3.365	3.369	3.373	3.378	3.382	3.386	3.391	3.395	3.400	3.404
1530	3.404	3.408	3.413	3.417	3.422	3.426	3.430	3.435	3.439	3.444	3.448
1540	3.448	3.452	3.457	3.461	3.466	3.470	3.474	3.479	3.483	3.488	3.492
1550	3.492	3.497	3.501	3.506	3.510	3.514	3.519	3.523	3.528	3.532	3.537
1560	3.537	3.541	3.546	3.550	3.555	3.559	3.563	3.568	3.572	3.577	3.581
1570	3.581	3.586	3.590	3.595	3.599	3.604	3.608	3.613	3.617	3.622	3.626
1580	3.626	3.631	3.635	3.640	3.644	3.649	3.653	3.658	3.662	3.667	3.672
1590	3.672	3.676	3.681	3.685	3.690	3.694	3.699	3.703	3.708	3.712	3.717
1600	3.717	3.722	3.726	3.731	3.735	3.740	3.744	3.749	3.753	3.758	3.763
1610	3.763	3.767	3.772	3.776	3.781	3.786	3.790	3.795	3.799	3.804	3.809
1620	3.809	3.813	3.818	3.822	3.827	3.832	3.836	3.841	3.845	3.850	3.855
1630	3.855	3.859	3.864	3.869	3.873	3.878	3.882	3.887	3.892	3.896	3.901
1640	3.901	3.906	3.910	3.915	3.920	3.924	3.929	3.934	3.938	3.943	3.948
1650	3.948	3.952	3.957	3.962	3.966	3.971	3.976	3.980	3.985	3.990	3.994
1660	3.994	3.999	4.004	4.009	4.013	4.018	4.023	4.027	4.032	4.037	4.041
1670	4.041	4.046	4.051	4.056	4.060	4.065	4.070	4.075	4.079	4.084	4.089
1680	4.089	4.093	4.098	4.103	4.108	4.112	4.117	4.122	4.127	4.131	4.136
1690	4.136	4.141	4.146	4.151	4.155	4.160	4.165	4.170	4.174	4.179	4.184
1700	4.184	4.189	4.194	4.198	4.203	4.208	4.213	4.217	4.222	4.227	4.232
1710	4.232	4.237	4.242	4.246	4.251	4.256	4.261	4.266	4.270	4.275	4.280
1720	4.280	4.285	4.290	4.295	4.299	4.304	4.309	4.314	4.319	4.324	4.328
1730	4.328	4.333	4.338	4.343	4.348	4.353	4.358	4.362	4.367	4.372	4.377
1740	4.377	4.382	4.387	4.392	4.397	4.401	4.406	4.411	4.416	4.421	4.426
1750	4.426	4.431	4.436	4.441	4.445	4.450	4.455	4.460	4.465	4.470	4.475
1760	4.475	4.480	4.485	4.490	4.495	4.500	4.504	4.509	4.514	4.519	4.524
1770	4.524	4.529	4.534	4.539	4.544	4.549	4.554	4.559	4.564	4.569	4.574
1780	4.574	4.579	4.584	4.589	4.593	4.598	4.603	4.608	4.613	4.618	4.623
1790	4.623	4.628	4.633	4.638	4.643	4.648	4.653	4.658	4.663	4.668	4.673

°F	0	1	2	3	4	5	6	7	8	9	10
1800	4.673	4.678	4.683	4.688	4.693	4.698	4.703	4.708	4.713	4.718	4.723
1810	4.723	4.728	4.733	4.738	4.743	4.748	4.754	4.759	4.764	4.769	4.774
1820	4.774	4.779	4.784	4.789	4.794	4.799	4.804	4.809	4.814	4.819	4.824
1830	4.824	4.829	4.834	4.839	4.844	4.850	4.855	4.860	4.865	4.870	4.875
1840	4.875	4.880	4.885	4.890	4.895	4.900	4.905	4.911	4.916	4.921	4.926
1850	4.926	4.931	4.936	4.941	4.946	4.951	4.957	4.962	4.967	4.972	4.977
1860	4.977	4.982	4.987	4.992	4.998	5.003	5.008	5.013	5.018	5.023	5.028
1870	5.028	5.034	5.039	5.044	5.049	5.054	5.059	5.065	5.070	5.075	5.080
1880	5.080	5.085	5.090	5.096	5.101	5.106	5.111	5.116	5.121	5.127	5.132
1890	5.132	5.137	5.142	5.147	5.153	5.158	5.163	5.168	5.173	5.179	5.184
1900	5.184	5.189	5.194	5.199	5.205	5.210	5.215	5.220	5.225	5.231	5.236
1910	5.236	5.241	5.246	5.252	5.257	5.262	5.267	5.273	5.278	5.283	5.288
1920	5.288	5.294	5.299	5.304	5.309	5.315	5.320	5.325	5.330	5.336	5.341
1930	5.341	5.346	5.351	5.357	5.362	5.367	5.373	5.378	5.383	5.388	5.394
1940	5.394	5.399	5.404	5.410	5.415	5.420	5.425	5.431	5.436	5.441	5.447
1950	5.447	5.452	5.457	5.463	5.468	5.473	5.479	5.484	5.489	5.495	5.500
1960	5.500	5.505	5.511	5.516	5.521	5.527	5.532	5.537	5.543	5.548	5.553
1970	5.553	5.559	5.564	5.569	5.575	5.580	5.585	5.591	5.596	5.601	5.607
1980	5.607	5.612	5.618	5.623	5.628	5.634	5.639	5.644	5.650	5.655	5.661
1990	5.661	5.666	5.671	5.677	5.682	5.688	5.693	5.698	5.704	5.709	5.715
2000	5.715	5.720	5.725	5.731	5.736	5.742	5.747	5.752	5.758	5.763	5.769
2010	5.769	5.774	5.780	5.785	5.790	5.796	5.801	5.807	5.812	5.818	5.823
2020	5.823	5.828	5.834	5.839	5.845	5.850	5.856	5.861	5.867	5.872	5.878
2030	5.878	5.883	5.888	5.894	5.899	5.905	5.910	5.916	5.921	5.927	5.932
2040	5.932	5.938	5.943	5.949	5.954	5.960	5.965	5.971	5.976	5.982	5.987
2050	5.987	5.993	5.998	6.004	6.009	6.015	6.020	6.026	6.031	6.037	6.042
2060	6.042	6.048	6.053	6.059	6.064	6.070	6.075	6.081	6.086	6.092	6.098
2070	6.098	6.103	6.109	6.114	6.120	6.125	6.131	6.136	6.142	6.147	6.153
2080	6.153	6.159	6.164	6.170	6.175	6.181	6.186	6.192	6.197	6.203	6.209
2090	6.209	6.214	6.220	6.225	6.231	6.237	6.242	6.248	6.253	6.259	6.264
2100	6.264	6.270	6.276	6.281	6.287	6.292	6.298	6.304	6.309	6.315	6.320
2110	6.320	6.326	6.332	6.337	6.343	6.349	6.354	6.360	6.365	6.371	6.377
2120	6.377	6.382	6.388	6.394	6.399	6.405	6.410	6.416	6.422	6.427	6.433
2130	6.433	6.439	6.444	6.450	6.456	6.461	6.467	6.473	6.478	6.484	6.490
2140	6.490	6.495	6.501	6.507	6.512	6.518	6.524	6.529	6.535	6.541	6.546
2150	6.546	6.552	6.558	6.563	6.569	6.575	6.580	6.586	6.592	6.597	6.603
2160	6.603	6.609	6.615	6.620	6.626	6.632	6.637	6.643	6.649	6.655	6.660
2170	6.660	6.666	6.672	6.677	6.683	6.689	6.695	6.700	6.706	6.712	6.718
2180	6.718	6.723	6.729	6.735	6.740	6.746	6.752	6.758	6.763	6.769	6.775
2190	6.775	6.781	6.786	6.792	6.798	6.804	6.809	6.815	6.821	6.827	6.833
2200	6.833	6.838	6.844	6.850	6.856	6.861	6.867	6.873	6.879	6.884	6.890
2210	6.890	6.896	6.902	6.908	6.913	6.919	6.925	6.931	6.937	6.942	6.948
2220	6.948	6.954	6.960	6.966	6.971	6.977	6.983	6.989	6.995	7.000	7.006
2230	7.006	7.012	7.018	7.024	7.030	7.035	7.041	7.047	7.053	7.059	7.065
2240	7.065	7.070	7.076	7.082	7.088	7.094	7.100	7.105	7.111	7.117	7.123
2250	7.123	7.129	7.135	7.141	7.146	7.152	7.158	7.164	7.170	7.176	7.182
2260	7.182	7.187	7.193	7.199	7.205	7.211	7.217	7.223	7.229	7.234	7.240
2270	7.240	7.246	7.252	7.258	7.264	7.270	7.276	7.281	7.287	7.293	7.299
2280	7.299	7.305	7.311	7.317	7.323	7.329	7.335	7.340	7.346	7.352	7.358
2290	7.358	7.364	7.370	7.376	7.382	7.388	7.394	7.400	7.406	7.412	7.417
2300	7.417	7.423	7.429	7.435	7.441	7.447	7.453	7.459	7.465	7.471	7.477
2310	7.477	7.483	7.489	7.495	7.501	7.507	7.512	7.518	7.524	7.530	7.536
2320	7.536	7.542	7.548	7.554	7.560	7.566	7.572	7.578	7.584	7.590	7.596
2330	7.596	7.602	7.608	7.614	7.620	7.626	7.632	7.638	7.644	7.650	7.656
2340	7.656	7.662	7.668	7.674	7.680	7.686	7.692	7.698	7.704	7.710	7.716
2350	7.716	7.722	7.728	7.734	7.740	7.746	7.752	7.758	7.764	7.770	7.776
2360	7.776	7.782	7.788	7.794	7.800	7.806	7.812	7.818	7.824	7.830	7.836
2370	7.836	7.842	7.848	7.854	7.860	7.866	7.872	7.878	7.884	7.891	7.897
2380	7.897	7.903	7.909	7.915	7.921	7.927	7.933	7.939	7.945	7.951	7.957
2390	7.957	7.963	7.969	7.975	7.981	7.987	7.994	8.000	8.006	8.012	8.018
2400	8.018	8.024	8.030	8.036	8.042	8.048	8.054	8.060	8.066	8.073	8.079
2410	8.079	8.085	8.091	8.097	8.103	8.109	8.115	8.121	8.127	8.134	8.140
2420	8.140	8.146	8.152	8.158	8.164	8.170	8.176	8.182	8.188	8.195	8.201
2430	8.201	8.207	8.213	8.219	8.225	8.231	8.237	8.244	8.250	8.256	8.262
2440	8.262	8.268	8.274	8.280	8.286	8.293	8.299	8.305	8.311	8.317	8.323
2450	8.323	8.329	8.336	8.342	8.348	8.354	8.360	8.366	8.372	8.379	8.385
2460	8.385	8.391	8.397	8.403	8.409	8.416	8.422	8.428	8.434	8.440	8.446
2470	8.446	8.453	8.459	8.465	8.471	8.477	8.483	8.490	8.496	8.502	8.508
2480	8.508	8.514	8.521	8.527	8.533	8.539	8.545	8.551	8.558	8.564	8.570
2490	8.570	8.576	8.582	8.589	8.595	8.601	8.607	8.613	8.620	8.626	8.632
2500	8.632	8.638	8.644	8.651	8.657	8.663	8.669	8.675	8.682	8.688	8.694
2510	8.694	8.700	8.707	8.713	8.719	8.725	8.731	8.738	8.744	8.750	8.756
2520	8.756	8.763	8.769	8.775	8.781	8.787	8.794	8.800	8.806	8.812	8.819
2530	8.819	8.825	8.831	8.837	8.844	8.850	8.856	8.862	8.869	8.875	8.881
2540	8.881	8.887	8.894	8.900	8.906	8.912	8.919	8.925	8.931	8.937	8.944
2550	8.944	8.950	8.956	8.962	8.969	8.975	8.981	8.988	8.994	9.000	9.006

Visit www.transcat.com for instant access to more than 15,000 products, special on-line saving opportunities and complete manufacturers' data sheets.

On-Line Data Sheets at www.transcat.com

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type B °F (32 to 3092°F) cont.

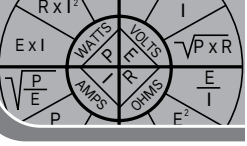
°F	0	1	2	3	4	5	6	7	8	9	10
2560	9.006	9.013	9.019	9.025	9.031	9.038	9.044	9.050	9.057	9.063	9.069
2570	9.069	9.075	9.082	9.088	9.094	9.101	9.107	9.113	9.119	9.126	9.132
2580	9.132	9.138	9.145	9.151	9.157	9.164	9.170	9.176	9.182	9.189	9.195
2590	9.195	9.201	9.208	9.214	9.220	9.227	9.233	9.239	9.245	9.252	9.258
2600	9.258	9.264	9.271	9.277	9.283	9.290	9.296	9.302	9.309	9.315	9.321
2610	9.321	9.328	9.334	9.340	9.347	9.353	9.359	9.366	9.372	9.378	9.385
2620	9.385	9.391	9.397	9.404	9.410	9.416	9.423	9.429	9.435	9.442	9.448
2630	9.448	9.454	9.461	9.467	9.473	9.480	9.486	9.492	9.499	9.505	9.511
2640	9.511	9.518	9.524	9.530	9.537	9.543	9.550	9.556	9.562	9.569	9.575
2650	9.575	9.581	9.588	9.594	9.600	9.607	9.613	9.619	9.626	9.632	9.639
2660	9.639	9.645	9.651	9.658	9.664	9.670	9.677	9.683	9.690	9.696	9.702
2670	9.702	9.709	9.715	9.721	9.728	9.734	9.741	9.747	9.753	9.760	9.766
2680	9.766	9.772	9.779	9.785	9.792	9.798	9.804	9.811	9.817	9.824	9.830
2690	9.830	9.836	9.843	9.849	9.856	9.862	9.868	9.875	9.881	9.888	9.894
2700	9.894	9.900	9.907	9.913	9.920	9.926	9.932	9.939	9.945	9.952	9.958
2710	9.958	9.964	9.971	9.977	9.984	9.990	9.996	10.003	10.009	10.016	10.022
2720	10.022	10.028	10.035	10.041	10.048	10.054	10.061	10.067	10.073	10.080	10.086
2730	10.086	10.093	10.099	10.105	10.112	10.118	10.125	10.131	10.138	10.144	10.150
2740	10.150	10.157	10.163	10.170	10.176	10.183	10.189	10.195	10.202	10.208	10.215
2750	10.215	10.221	10.228	10.234	10.240	10.247	10.253	10.260	10.266	10.273	10.279
2760	10.279	10.286	10.292	10.298	10.305	10.311	10.318	10.324	10.331	10.337	10.344
2770	10.344	10.350	10.356	10.363	10.369	10.376	10.382	10.389	10.395	10.402	10.408
2780	10.408	10.414	10.421	10.427	10.434	10.440	10.447	10.453	10.460	10.466	10.473
2790	10.473	10.479	10.485	10.492	10.498	10.505	10.511	10.518	10.524	10.531	10.537
2800	10.537	10.544	10.550	10.556	10.563	10.569	10.576	10.582	10.589	10.595	10.602
2810	10.602	10.608	10.615	10.621	10.628	10.634	10.641	10.647	10.653	10.660	10.666
2820	10.666	10.673	10.679	10.686	10.692	10.699	10.705	10.712	10.718	10.725	10.731
2830	10.731	10.738	10.744	10.751	10.757	10.763	10.770	10.776	10.783	10.789	10.796
2840	10.796	10.802	10.809	10.815	10.822	10.828	10.835	10.841	10.848	10.854	10.861
2850	10.861	10.867	10.874	10.880	10.887	10.893	10.900	10.906	10.913	10.919	10.925
2860	10.925	10.932	10.938	10.945	10.951	10.958	10.964	10.971	10.977	10.984	10.990
2870	10.990	10.997	11.003	11.010	11.016	11.023	11.029	11.036	11.042	11.049	11.055
2880	11.055	11.062	11.068	11.075	11.081	11.088	11.094	11.101	11.107	11.114	11.120
2890	11.120	11.127	11.133	11.140	11.146	11.153	11.159	11.166	11.172	11.179	11.185
2900	11.185	11.192	11.198	11.205	11.211	11.218	11.224	11.231	11.237	11.244	11.250
2910	11.250	11.257	11.263	11.270	11.276	11.282	11.289	11.295	11.302	11.308	11.315
2920	11.315	11.321	11.328	11.334	11.341	11.347	11.354	11.360	11.367	11.373	11.380
2930	11.380	11.386	11.393	11.399	11.406	11.412	11.419	11.425	11.432	11.438	11.445
2940	11.445	11.451	11.458	11.464	11.471	11.477	11.484	11.490	11.497	11.503	11.510
2950	11.510	11.516	11.523	11.529	11.536	11.542	11.549	11.555	11.562	11.568	11.575
2960	11.575	11.582	11.588	11.595	11.601	11.608	11.614	11.621	11.627	11.634	11.640
2970	11.640	11.647	11.653	11.660	11.666	11.673	11.679	11.686	11.692	11.699	11.705
2980	11.705	11.712	11.718	11.725	11.731	11.738	11.744	11.751	11.757	11.764	11.770
2990	11.770	11.777	11.783	11.790	11.796	11.803	11.809	11.816	11.822	11.829	11.835
3000	11.835	11.842	11.848	11.855	11.861	11.868	11.874	11.881	11.887	11.894	11.900
3010	11.900	11.907	11.913	11.920	11.926	11.933	11.939	11.946	11.952	11.959	11.965
3020	11.965	11.972	11.978	11.985	11.991	11.998	12.004	12.011	12.017	12.024	12.030
3030	12.030	12.037	12.043	12.050	12.056	12.063	12.069	12.076	12.082	12.089	12.095
3040	12.095	12.102	12.108	12.115	12.121	12.128	12.134	12.141	12.147	12.154	12.160
3050	12.160	12.166	12.173	12.179	12.186	12.192	12.199	12.205	12.212	12.218	12.225
3060	12.225	12.231	12.238	12.244	12.251	12.257	12.264	12.270	12.277	12.283	12.290
3070	12.290	12.296	12.303	12.309	12.316	12.322	12.329	12.335	12.342	12.348	12.355
3080	12.355	12.361	12.368	12.374	12.381	12.387	12.394	12.400	12.407	12.413	12.420
3090	12.420	12.426	12.433	12.439	12.446	12.452	12.458	12.465	12.471	12.478	12.484
3100	12.484	12.491	12.497	12.504	12.510	12.517	12.523	12.530	12.536	12.543	12.549
3110	12.549	12.556	12.562	12.569	12.575	12.582	12.588	12.595	12.601	12.607	12.614
3120	12.614	12.620	12.627	12.633	12.640	12.646	12.653	12.659	12.666	12.672	12.679
3130	12.679	12.685	12.692	12.698	12.704	12.711	12.717	12.724	12.730	12.737	12.743
3140	12.743	12.750	12.756	12.763	12.769	12.776	12.782	12.789	12.795	12.801	12.808
3150	12.808	12.814	12.821	12.827	12.834	12.840	12.847	12.853	12.860	12.866	12.872
3160	12.872	12.879	12.885	12.892	12.898	12.905	12.911	12.918	12.924	12.931	12.937
3170	12.937	12.943	12.950	12.956	12.963	12.969	12.976	12.982	12.989	12.995	13.001
3180	13.001	13.008	13.014	13.021	13.027	13.034	13.040	13.047	13.053	13.059	13.066
3190	13.066	13.072	13.079	13.085	13.092	13.098	13.104	13.111	13.117	13.124	13.130
3200	13.130	13.137	13.143	13.149	13.156	13.162	13.169	13.175	13.182	13.188	13.194
3210	13.194	13.201	13.207	13.214	13.220	13.227	13.233	13.239	13.246	13.252	13.259
3220	13.259	13.265	13.271	13.278	13.284	13.291	13.297	13.304	13.310	13.316	13.323
3230	13.323	13.329	13.336	13.342	13.348	13.355	13.361	13.368	13.374	13.380	13.387
3240	13.387	13.393	13.400	13.406	13.412	13.419	13.425	13.432	13.438	13.444	13.451
3250	13.451	13.457	13.464	13.470	13.476	13.483	13.489	13.496	13.502	13.508	13.515
3260	13.515	13.521	13.527	13.534	13.540	13.547	13.553	13.559	13.566	13.572	13.579
3270	13.579	13.585	13.591	13.598	13.604	13.610	13.617	13.623	13.630	13.636	13.642
3280	13.642	13.649	13.655	13.661	13.668	13.674	13.680	13.687	13.693	13.700	13.706
3290	13.706	13.712	13.719	13.725	13.731	13.738	13.744	13.750	13.757	13.763	13.769
3300	13.769	13.776	13.782	13.789	13.795	13.801	13.808	13.814	13.820		

Type E °F (-328 to 1652°F)

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-450	-9.830										
-440	-9.809	-9.812	-9.814	-9.817	-9.819	-9.821	-9.823	-9.825	-9.827	-9.829	-9.830
-430	-9.775	-9.779	-9.782	-9.786	-9.790	-9.793	-9.797	-9.800	-9.803	-9.806	-9.809
-420	-9.729	-9.734	-9.739	-9.744	-9.749	-9.753	-9.758	-9.762	-9.766	-9.771	-9.775
-410	-9.672	-9.678	-9.684	-9.690	-9.696	-9.702	-9.707	-9.713	-9.718	-9.724	-9.729
-400	-9.604	-9.611	-9.618	-9.625	-9.632	-9.639	-9.646	-9.653	-9.659	-9.666	-9.672
-390	-9.525	-9.534	-9.542	-9.550	-9.558	-9.566	-9.574	-9.581	-9.589	-9.597	-9.604
-380	-9.436	-9.446	-9.455	-9.464	-9.473	-9.482	-9.491	-9.500	-9.508	-9.517	-9.525
-370	-9.338	-9.348	-9.358	-9.368	-9.378	-9.388	-9.398	-9.408	-9.417	-9.427	-9.436
-360	-9.229	-9.241	-9.252	-9.263	-9.274	-9.285	-9.295	-9.306	-9.317	-9.327	-9.338
-350	-9.112	-9.124	-9.136	-9.148	-9.160	-9.172	-9.184	-9.195	-9.207	-9.218	-9.229
-340	-8.986	-8.999	-9.012	-9.025	-9.038	-9.050	-9.063	-9.075	-9.088	-9.100	-9.112
-330	-8.852	-8.866	-8.880	-8.893	-8.907	-8.920	-8.934	-8.947	-8.960	-8.973	-8.986
-320	-8.710	-8.725	-8.739	-8.754	-8.768	-8.782	-8.797	-8.811	-8.825	-8.839	-8.852
-310	-8.561	-8.576	-8.591	-8.607	-8.622	-8.637	-8.652	-8.666	-8.681	-8.696	-8.710
-300	-8.404	-8.420	-8.436	-8.452	-8.468	-8.483	-8.499	-8.515	-8.530	-8.546	-8.561
-290	-8.240	-8.257	-8.273	-8.290	-8.307	-8.323	-8.339	-8.356	-8.372	-8.388	-8.404
-280	-8.069	-8.087	-8.104	-8.121	-8.138	-8.155	-8.173	-8.189	-8.206	-8.223	-8.240
-270	-7.891	-7.910	-7.928	-7.945	-7.963	-7.981	-7.999	-8.017	-8.034	-8.052	-8.069
-260	-7.707	-7.726	-7.745	-7.763	-7.782	-7.800	-7.819	-7.837	-7.855	-7.873	-7.891
-250	-7.516	-7.536	-7.555	-7.574	-7.593	-7.613	-7.632	-7.651	-7.670	-7.688	-7.707
-240	-7.319	-7.339	-7.359	-7.379	-7.399	-7.419	-7.438	-7.458	-7.478	-7.497	-7.516
-230	-7.116	-7.137	-7.157	-7.178	-7.198	-7.219	-7.239	-7.259	-7.279	-7.299	-7.319
-220	-6.907	-6.928	-6.950	-6.971	-6.992	-7.013	-7.033	-7.054	-7.075	-7.096	-7.116
-210	-6.692	-6.714	-6.736	-6.757	-6.779	-6.801	-6.822	-6.843	-6.865	-6.886	-6.907
-200	-6.472	-6.494	-6.516	-6.539	-6.561	-6.583	-6.605	-6.627	-6.649	-6.671	-6.692
-190	-6.246	-6.269	-6.291	-6.314	-6.337	-6.359	-6.382	-6.405	-6.427	-6.449	-6.472
-180	-6.014	-6.037	-6.061	-6.084	-6.107	-6.130	-6.154	-6.177	-6.200	-6.223	-6.246
-170	-5.777	-5.801	-5.825	-5.849	-5.872	-5.896	-5.920	-5.943	-5.967	-5.991	-6.014
-160	-5.535	-5.559	-5.584	-5.608	-5.632	-5.656	-5.681	-5.705	-5.729	-5.753	-5.777
-150	-5.287	-5.312	-5.337	-5.362	-5.387	-5.412	-5.436	-5.461	-5.486	-5.510	-5.535
-140	-5.035	-5.060	-5.086	-5.111	-5.136	-5.162	-5.187	-5.212	-5.237	-5.262	-5.287
-130	-4.777	-4.803	-4.829	-4.855	-4.881	-4.907	-4.932	-4.958	-4.984	-5.009	-5.035
-120	-4.515	-4.542	-4.568	-4.594	-4.621	-4.647	-4.673	-4.699	-4.725	-4.751	-4.777
-110	-4.248	-4.275	-4.302	-4.329	-4.355	-4.382	-4.409	-4.436	-4.462	-4.489	-4.515
-100	-3.976	-4.004	-4.031	-4.058	-4.086	-4.113	-4.140	-4.167	-4.194	-4.221	-4.248
-90	-3.700	-3.728	-3.756	-3.784	-3.811	-3.839	-3.867	-3.894	-3.922	-3.949	-3.976
-80	-3.420	-3.448	-3.476	-3.504	-3.532	-3.561	-3.589	-3.617	-3.645	-3.672	-3.700
-70	-3.135	-3.163	-3.192	-3.221	-3.249	-3.278	-3.306	-3.335	-3.363	-3.391	-3.420
-60	-2.846	-2.875	-2.904	-2.933	-2.962	-2.991	-3.020	-3.048	-3.077	-3.106	-3.135
-50	-2.552	-2.582	-2.611	-2.641	-2.670	-2.699	-2.729	-2.758	-2.787	-2.816	-2.846
-40	-2.255	-2.285	-2.315	-2.344	-2.374	-2.404	-2.434	-2.463	-2.493	-2.523	-2.552
-30	-1.953	-1.984	-2.014	-2.044	-2.074	-2.105	-2.135	-2.165	-2.195	-2.225	-2.255
-20	-1.648	-1.679	-1.709	-1.740	-1.771	-1.801	-1.832	-1.862	-1.893	-1.923	-1.953
-10	-1.339	-1.370	-1.401	-1.432	-1.463	-1.494	-1.525	-1.556	-1.587	-1.617	-1.648
0	-1.026	-1.057	-1.089	-1.120	-1.152	-1.183	-1.214	-1.245	-1.277	-1.308	-1.339

°F	0	1	2	3	4	5	6	7	8	9	10
0	-1.026	-0.994	-0.963	-0.931	-0.900	-0.868	-0.836	-0.805	-0.773	-0.741	-0.709
10	-0.709	-0.677	-0.645	-0.614	-0.582	-0.550	-0.517	-0.485	-0.453	-0.421	-0.389
20	-0.389	-0.357	-0.324	-0.292	-0.260	-0.227	-0.195	-0.163	-0.130	-0.098	-0.065
30	-0.065	-0.033	0.000	0.033	0.065	0.098	0.131	0.163	0.196	0.229	0.262
40	0.262	0.294	0.327	0.360	0.393	0.426	0.459	0.492	0.525	0.558	0.591
50	0.591	0.624	0.657	0.691	0.724	0.757	0.790	0.824	0.857	0.890	0.924
60	0.924	0.957	0.990	1.024	1.057	1.091	1.124	1.158	1.192	1.225	1.259
70	1.259	1.292	1.326	1.360	1.394	1.427	1.461	1.495	1.529	1.563	1.597
80	1.597	1.631	1.665	1.699	1.733	1.767	1.801	1.835	1.869	1.904	1.938
90	1.938	1.972	2.006	2.041	2.075	2.109	2.144	2.178	2.212	2.247	2.281
100	2.281	2.316	2.351	2.385	2.420	2.454	2.489	2.524	2.558	2.593	2.628
110	2.628	2.663	2.698	2.733	2.767	2.802	2.837	2.872	2.907	2.942	2.977
120	2.977	3.012	3.048	3.083	3.118	3.153	3.188	3.224	3.259	3.294	3.330
130	3.330	3.365	3.400	3.436	3.471	3.507	3.542	3.578	3.613	3.649	3.685
140	3.685	3.720	3.756	3.792	3.827	3.863	3.899	3.935	3.970	4.006	4.042
150	4.042	4.078	4.114	4.150	4.186	4.222	4.258	4.294	4.330	4.366	4.403
160	4.403	4.439	4.475	4.511	4.547	4.584	4.620	4.656	4.693	4.729	4.766
170	4.766	4.802	4.839	4.875	4.912	4.948	4.985	5.021	5.058	5.095	5.131
180	5.131	5.168	5.205	5.242	5.278	5.315	5.352	5.389	5.426	5.463	5.500
190	5.500	5.537	5.574	5.611	5.648	5.685	5.722	5.759	5.796	5.833	5.871
200	5.871	5.908	5.945	5.982	6.020	6.057	6.094	6.132	6.169	6.207	6.244
210	6.244	6.281	6.319	6.356	6.394	6.432	6.469	6.507	6.544	6.582	6.620
220	6.620	6.658	6.695	6.733	6.771	6.809	6.847	6.884	6.922	6.960	6.998
230	6.998	7.036	7.074	7.112	7.150	7.188	7.226	7.264	7.302	7.341	7.379
240	7.379	7.417	7.455	7.493	7.532	7.570	7.608	7.647	7.685	7.723	7.762

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com



Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type E °F (-328 to 1652°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
250	7.762	7.800	7.839	7.877	7.916	7.954	7.993	8.031	8.070	8.108	8.147
260	8.147	8.186	8.224	8.263	8.302	8.340	8.379	8.418	8.457	8.496	8.535
270	8.535	8.573	8.612	8.651	8.690	8.729	8.768	8.807	8.846	8.885	8.924
280	8.924	8.963	9.002	9.041	9.081	9.120	9.159	9.198	9.237	9.277	9.316
290	9.316	9.355	9.395	9.434	9.473	9.513	9.552	9.591	9.631	9.670	9.710
300	9.710	9.749	9.789	9.828	9.868	9.907	9.947	9.987	10.026	10.066	10.106
310	10.106	10.145	10.185	10.225	10.265	10.304	10.344	10.384	10.424	10.464	10.503
320	10.503	10.543	10.583	10.623	10.663	10.703	10.743	10.783	10.823	10.863	10.903
330	10.903	10.943	10.983	11.024	11.064	11.104	11.144	11.184	11.224	11.265	11.305
340	11.305	11.345	11.385	11.426	11.466	11.506	11.547	11.587	11.627	11.668	11.708
350	11.708	11.749	11.789	11.830	11.870	11.911	11.951	11.992	12.032	12.073	12.113
360	12.113	12.154	12.195	12.235	12.276	12.317	12.357	12.398	12.439	12.480	12.520
370	12.520	12.561	12.602	12.643	12.684	12.724	12.765	12.806	12.847	12.888	12.929
380	12.929	12.970	13.011	13.052	13.093	13.134	13.175	13.216	13.257	13.298	13.339
390	13.339	13.380	13.421	13.462	13.504	13.545	13.586	13.627	13.668	13.710	13.751
400	13.751	13.792	13.833	13.875	13.916	13.957	13.999	14.040	14.081	14.123	14.164
410	14.164	14.205	14.247	14.288	14.330	14.371	14.413	14.454	14.496	14.537	14.579
420	14.579	14.620	14.662	14.704	14.745	14.787	14.828	14.870	14.912	14.953	14.995
430	14.995	15.037	15.078	15.120	15.162	15.204	15.245	15.287	15.329	15.371	15.413
440	15.413	15.454	15.496	15.538	15.580	15.622	15.664	15.706	15.748	15.790	15.831
450	15.831	15.873	15.915	15.957	15.999	16.041	16.083	16.125	16.168	16.210	16.252
460	16.252	16.294	16.336	16.378	16.420	16.462	16.504	16.547	16.589	16.631	16.673
470	16.673	16.715	16.758	16.800	16.842	16.884	16.927	16.969	17.011	17.054	17.096
480	17.096	17.138	17.181	17.223	17.265	17.308	17.350	17.392	17.435	17.477	17.520
490	17.520	17.562	17.605	17.647	17.690	17.732	17.775	17.817	17.860	17.902	17.945
500	17.945	17.987	18.030	18.073	18.115	18.158	18.200	18.243	18.286	18.328	18.371
510	18.371	18.414	18.456	18.499	18.542	18.585	18.627	18.670	18.713	18.756	18.798
520	18.798	18.841	18.884	18.927	18.969	19.012	19.055	19.098	19.141	19.184	19.227
530	19.227	19.269	19.312	19.355	19.398	19.441	19.484	19.527	19.570	19.613	19.656
540	19.656	19.699	19.742	19.785	19.828	19.871	19.914	19.957	20.000	20.043	20.086
550	20.086	20.129	20.172	20.216	20.259	20.302	20.345	20.388	20.431	20.474	20.517
560	20.517	20.561	20.604	20.647	20.690	20.733	20.777	20.820	20.863	20.906	20.950
570	20.950	20.993	21.036	21.080	21.123	21.166	21.209	21.253	21.296	21.339	21.383
580	21.383	21.426	21.470	21.513	21.556	21.600	21.643	21.686	21.730	21.773	21.817
590	21.817	21.860	21.904	21.947	21.991	22.034	22.078	22.121	22.165	22.208	22.252
600	22.252	22.295	22.339	22.382	22.426	22.469	22.513	22.556	22.600	22.644	22.687
610	22.687	22.731	22.774	22.818	22.862	22.905	22.949	22.993	23.036	23.080	23.124
620	23.124	23.167	23.211	23.255	23.298	23.342	23.386	23.429	23.473	23.517	23.561
630	23.561	23.604	23.648	23.692	23.736	23.780	23.823	23.867	23.911	23.955	23.999
640	23.999	24.042	24.086	24.130	24.174	24.218	24.262	24.305	24.349	24.393	24.437
650	24.437	24.481	24.525	24.569	24.613	24.657	24.701	24.745	24.789	24.832	24.876
660	24.876	24.920	24.964	25.008	25.052	25.096	25.140	25.184	25.228	25.272	25.316
670	25.316	25.360	25.404	25.448	25.493	25.537	25.581	25.625	25.669	25.713	25.757
680	25.757	25.801	25.845	25.889	25.933	25.977	26.022	26.066	26.110	26.154	26.198
690	26.198	26.242	26.286	26.331	26.375	26.419	26.463	26.507	26.552	26.596	26.640
700	26.640	26.684	26.728	26.773	26.817	26.861	26.905	26.950	26.994	27.038	27.082
710	27.082	27.127	27.171	27.215	27.259	27.304	27.348	27.392	27.437	27.481	27.525
720	27.525	27.570	27.614	27.658	27.703	27.747	27.791	27.836	27.880	27.924	27.969
730	27.969	28.013	28.057	28.102	28.146	28.191	28.235	28.279	28.324	28.368	28.413
740	28.413	28.457	28.501	28.546	28.590	28.635	28.679	28.724	28.768	28.813	28.857
750	28.857	28.901	28.946	28.990	29.035	29.079	29.124	29.168	29.213	29.257	29.302
760	29.302	29.346	29.391	29.435	29.480	29.525	29.569	29.614	29.658	29.703	29.747
770	29.747	29.792	29.836	29.881	29.925	29.970	30.015	30.059	30.104	30.148	30.193
780	30.193	30.238	30.282	30.327	30.371	30.416	30.461	30.505	30.550	30.595	30.639
790	30.639	30.684	30.728	30.773	30.818	30.862	30.907	30.952	30.996	31.041	31.086
800	31.086	31.130	31.175	31.220	31.264	31.309	31.354	31.398	31.443	31.488	31.533
810	31.533	31.577	31.622	31.667	31.711	31.756	31.801	31.846	31.890	31.935	31.980
820	31.980	32.025	32.069	32.114	32.159	32.204	32.248	32.293	32.338	32.383	32.427
830	32.427	32.472	32.517	32.562	32.606	32.651	32.696	32.741	32.786	32.830	32.875
840	32.875	32.920	32.965	33.010	33.054	33.099	33.144	33.189	33.234	33.278	33.323
850	33.323	33.368	33.413	33.458	33.503	33.547	33.592	33.637	33.682	33.727	33.772
860	33.772	33.816	33.861	33.906	33.951	33.996	34.041	34.086	34.130	34.175	34.220
870	34.220	34.265	34.310	34.355	34.400	34.445	34.489	34.534	34.579	34.624	34.669
880	34.669	34.714	34.759	34.804	34.849	34.893	34.938	34.983	35.028	35.073	35.118
890	35.118	35.163	35.208	35.253	35.298	35.343	35.387	35.432	35.477	35.522	35.567
900	35.567	35.612	35.657	35.702	35.747	35.792	35.837	35.882	35.927	35.972	36.016
910	36.016	36.061	36.106	36.151	36.196	36.241	36.286	36.331	36.376	36.421	36.466
920	36.466	36.511	36.556	36.601	36.646	36.691	36.736	36.781	36.826	36.870	36.915
930	36.915	36.960	37.005	37.050	37.095	37.140	37.185	37.230	37.275	37.320	37.365
940	37.365	37.410	37.455	37.500	37.545	37.590	37.635	37.680	37.725	37.770	37.815
950	37.815	37.860	37.905	37.950	37.995	38.040	38.085	38.130	38.175	38.220	38.265
960	38.265	38.309	38.354	38.399	38.444	38.489	38.534	38.579	38.624	38.669	38.714
970	38.714	38.759	38.804	38.849	38.894	38.939	38.984	39.029	39.074	39.119	39.164
980	39.164	39.209	39.254	39.299	39.344	39.389	39.434	39.479	39.524	39.569	39.614
990	39.614	39.659	39.704	39.749	39.794	39.839	39.884	39.929	39.974	40.019	40.064

°F	0	1	2	3	4	5	6	7	8	9	10
1000	40.064	40.109	40.154	40.199	40.243	40.288	40.333	40.378	40.423	40.468	40.513
1010	40.513	40.558	40.603	40.648	40.693	40.738	40.783	40.828	40.873	40.918	40.963
1020	40.963	41.008	41.053	41.098	41.143	41.188	41.233	41.278	41.323	41.368	41.412
1030	41.412	41.457	41.502	41.547	41.592	41.637	41.682	41.727	41.772	41.817	41.862
1040	41.862	41.907	41.952	41.997	42.042	42.087	42.132	42.176	42.221	42.266	42.311
1050	42.311	42.356	42.401	42.446	42.491	42.536	42.581	42.626	42.671	42.715	42.760
1060	42.760	42.805	42.850	42.895	42.940	42.985	43.030	43.075	43.120	43.165	43.209
1070	43.209	43.254	43.299	43.344	43.389	43.434	43.479	43.524	43.569	43.613	43.658
1080	43.658	43.703	43.748	43.793	43.838	43.883	43.928	43.972	44.017	44.062	44.107
1090	44.107	44.152	44.197	44.242	44.286	44.331	44.376	44.421	44.466	44.511	44.555
1100	44.555	44.600	44.645	44.690	44.735	44.780	44.824	44.869	44.914	44.959	45.004
1110	45.004	45.049	45.093	45.138	45.183	45.228	45.273	45.317	45.362	45.407	45.452
1120	45.452	45.497	45.541	45.586	45.631	45.676	45.720	45.765	45.810	45.855	45.900
1130	45.900	45.944	45.989	46.034	46.079	46.123	46.168	46.213	46.258	46.302	46.347
1140	46.347	46.392	46.437	46.481	46.526	46.571	46.616	46.660	46.705	46.750	46.794
1150	46.794	46.839	46.884	46.929	46.973	47.018	47.063	47.107	47.152	47.197	47.241
1160	47.241	47.286	47.331	47.375	47.420	47.465	47.509	47.554	47.599	47.643	47.688
1170	47.688	47.733	47.777	47.822	47.867	47.911	47.956	48.001	48.045	48.090	48.135
1180	48.135	48.179	48.224	48.268	48.313	48.358	48.402	48.447	48.492	48.536	48.581
1190	48.581	48.625	48.670	48.715	48.759	48.804	48.848	48.893	48.937	48.982	49.027
1200	49.027	49.071	49.116	49.160	49.205	49.249	49.294	49.338	49.383	49.428	49.472
1210	49.472	49.517	49.561	49.606	49.650	49.695	49.739	49.784	49.828	49.873	49.917
1220	49.917	49.962	50.006	50.051	50.095	50.140	50.184	50.229	50.273	50.318	50.362
1230	50.362	50.407	50.451	50.495	50.540	50.584	50.629	50.673	50.718	50.762	50.807
1240	50.807	50.851	50.895	50.940	50.984	51.029	51.073	51.118	51.162	51.206	51.251
1250	51.251	51.295	51.340	51.384	51.428	51.473	51.517	51.561	51.606	51.650	51.695
1260	51.695	51.739	51.783	51.828	51.872	51.916	51.961	52.005	52.049	52.094	52.138
1270	52.138	52.182	52.227	52.271	52.315	52.360	52.404	52.448	52.493	52.537	52.581
1280	52.581	52.625	52.670	52.714	52.758	52.803	52.847	52.891	52.935	52.980	53.024
1290	53.024	53.068	53.112	53.157	53.201	53.245	53.289	53.334	53.378	53.422	53.466
1300	53.466	53.510	53.555	53.599	53.643	53.687	53.732	53.776	53.820	53.864	53.908
1310	53.908	53.952	53.997	54.041	54.085	54.129	54.173	54.218	54.262	54.306	54.350
1320	54.350	54.394	54.438	54.482	54.527	54.571	54.615	54.659	54.703	54.747	54.791
1330	54.791	54.835	54.879	54.924	54.968	55.012	55.056	55.100	55.144	55.188	55.232
1340	55.232	55.276	55.320	55.364	55.408	55.453	55.497	55.541	55.585	55.629	55.673
1350	55.673	55.717	55.761	55.805	55.849	55.893	55.937	55.981	56.025	56.069	56.113
1360	56.113	56.157	56.201	56.245	56.289	56.333	56.377	56.421	56.465	56.509	56.553
1370	56.553	56.597	56.641	56.685	56.729	56.773	56.816	56.860	56.904	56.948	56.992
1380	56.992	57.036	57.080	57.124	57.168	57.212	57.256	57.300	57.344	57.387	57.431
1390	57.431	57.475	57.519	57.563	57.607	57.651	57.695	57.738	57.782	57.826	57.870
1400	57.870	57.914	57.958	58.002	58.045	58.089	58.133	58.177	58.221	58.265	58.308
1410	58.308	58.352	58.396	58.440	58.484	58.527	58.571	58.615	58.659	58.702	58.746
1420	58.746	58.790	58.834	58.878	58.921	58.965	59.009	59.053	59.096	59.140	59.184
1430	59.184	59.228	59.271	59.315	59.359	59.402	59.446	59.490	59.534	59.577	59.621
1440	59.621	59.665	59.708	59.752	59.796	59.839	59.883	59.927	59.970	60.014	60.058
1450	60.058	60.101	60.145	60.189	60.232	60.276	60.320	60.363	60.407	60.451	60.494
1460	60.494	60.538	60.581	60.625	60.669	60.712	60.756	60.799	60.843	60.887	60.930
1470	60.930	60.974	61.017	61.061	61.105	61.148	61.192	61.235	61.279	61.322	61.366
1480	61.366	61.409	61.453	61.496	61.540	61.583	61.627	61.671	61.714	61.758	61.801
1490	61.801	61.845	61.888	61.932	61.975	62.018	62.062	62.105	62.149	62.192	62.236
1500	62.236	62.279	62.323	62.366	62.410	62.453	62.496	62.540	62.583	62.627	62.670
1510	62.670	62.714	62.757	62.800	62.844	62.887	62.931	62.974	63.017	63.061	63.104
1520	63.104	63.148	63.191	63.234	63.278	63.321	63.364	63.408	63.451	63.494	63.538
1530	63.538	63.581	63.624	63.668	63.711	63.754	63.798	63.841	63.884	63.927	63.971
1540	63.971	64.014	64.057	64.101	64.144	64.187	64.230	64.274	64.317	64.360	64.403
1550	64.403	64.447	64.490	64.533	64.576	64.619	64.663	64.706	64.749	64.792	64.835
1560	64.835	64.879	64.922	64.965	65.008	65.051	65.094	65.138	65.181	65.224	65.267
1570	65.267	65.310	65.353	65.396	65.440	65.483	65.526	65.569	65.612	65.655	65.698
1580	65.698	65.741	65.784	65.827	65.871	65.914	65.957	66.000	66.043	66.086	66.129
1590	66.129	66.172	66.215	66.258	66.301	66.344	66.387	66.430	66.473	66.516	66.559
1600	66.559	66.602	66.645	66.688	66.731	66.774	66.817	66.860	66.903	66.946	66.989
1610	66.989	67.031	67.074	67.117	67.160	67.203	67.246	67.289	67.332	67.375	67.418
1620	67.418	67.460	67.503	67.546	67.589	67.632	67.675	67.718	67.760	67.803	67.846
1630	67.846	67.889	67.932	67.974	68.017	68.060	68.103	68.146	68.188	68.231	68.274
1640	68.274	68.317	68.359	68.402	68.445	68.488	68.530	68.573	68.616	68.659	68.701
1650	68.701	68.744	68.787	68.829	68.872	68.915	68.957	69.000	69.043	69.085	69.128
1660	69.128	69.171	69.213	69.256	69.298	69.341	69.384	69.426	69.469	69.511	69.554
1670	69.554	69.597	69.639	69.682	69.724	69.767	69.809	69.852	69.894	69.937	69.979
1680	69.979	70.022	70.064	70.107	70.149	70.192	70.234	70.277	70.319	70.362	70.404
1690	70.404	70.447	70.489	70.531	70.574	70.616	70.659	70.701	70.744	70.786	70.828
1700	70.828	70.871	70.913	70.955	70.998	71.040	71.082	71.125	71.167	71.209	71.252
1710	71.252	71.294	71.336	71.379	71.421	71.463	71.506	71.548	71.590	71.632	71.675
1720	71.675	71.717	71.759	71.801	71.844	71.886	71.928	71.970	72.012	72.055	72.097
1730	72.097	72.139	72.181	72.223	72.266	72.308	72.350	72.392	72.434	72.476	72.518
1740	72.518	72.561	72.603	72.645	72.687	72.729	72.771	72.813	72.855	72.897	72.939

TRANSCAT Calibration Services offers fast five-day turnaround so you can maximize uptime.

Fast, Five-Day Calibration

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type E °F (-328 to 1652°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
1750	72.939	72.981	73.023	73.066	73.108	73.150	73.192	73.234	73.276	73.318	73.360
1760	73.360	73.402	73.444	73.486	73.528	73.570	73.612	73.654	73.696	73.738	73.780
1770	73.780	73.821	73.863	73.905	73.947	73.989	74.031	74.073	74.115	74.157	74.199
1780	74.199	74.241	74.283	74.324	74.366	74.408	74.450	74.492	74.534	74.576	74.618
1790	74.618	74.659	74.701	74.743	74.785	74.827	74.869	74.910	74.952	74.994	75.036
1800	75.036	75.078	75.120	75.161	75.203	75.245	75.287	75.329	75.370	75.412	75.454
1810	75.454	75.496	75.538	75.579	75.621	75.663	75.705	75.746	75.788	75.830	75.872
1820	75.872	75.913	75.955	75.997	76.039	76.081	76.122	76.164	76.206	76.248	76.289
1830	76.289	76.331	76.373								

Type J °F (32 to 1382°F)

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-340	-8.030										
-330	-7.915	-7.927	-7.938	-7.950	-7.962	-7.973	-7.985	-7.996	-8.008	-8.019	-8.030
-320	-7.791	-7.804	-7.816	-7.829	-7.841	-7.854	-7.866	-7.878	-7.890	-7.903	-7.915
-310	-7.659	-7.672	-7.686	-7.699	-7.713	-7.726	-7.739	-7.752	-7.765	-7.778	-7.791
-300	-7.519	-7.534	-7.548	-7.562	-7.576	-7.590	-7.604	-7.618	-7.632	-7.645	-7.659
-290	-7.373	-7.388	-7.403	-7.417	-7.432	-7.447	-7.462	-7.476	-7.491	-7.505	-7.519
-280	-7.219	-7.234	-7.250	-7.265	-7.281	-7.296	-7.312	-7.327	-7.342	-7.357	-7.373
-270	-7.058	-7.074	-7.090	-7.107	-7.123	-7.139	-7.155	-7.171	-7.187	-7.203	-7.219
-260	-6.890	-6.907	-6.924	-6.941	-6.958	-6.975	-6.991	-7.008	-7.025	-7.041	-7.058
-250	-6.716	-6.734	-6.752	-6.769	-6.787	-6.804	-6.821	-6.839	-6.856	-6.873	-6.890
-240	-6.536	-6.555	-6.573	-6.591	-6.609	-6.627	-6.645	-6.663	-6.681	-6.699	-6.716
-230	-6.351	-6.370	-6.388	-6.407	-6.426	-6.444	-6.463	-6.481	-6.500	-6.518	-6.536
-220	-6.159	-6.179	-6.198	-6.217	-6.236	-6.256	-6.275	-6.294	-6.313	-6.332	-6.351
-210	-5.962	-5.982	-6.002	-6.022	-6.042	-6.061	-6.081	-6.101	-6.120	-6.140	-6.159
-200	-5.760	-5.781	-5.801	-5.821	-5.842	-5.862	-5.882	-5.902	-5.922	-5.942	-5.962
-190	-5.553	-5.574	-5.595	-5.616	-5.637	-5.657	-5.678	-5.699	-5.719	-5.740	-5.760
-180	-5.341	-5.363	-5.384	-5.405	-5.426	-5.448	-5.469	-5.490	-5.511	-5.532	-5.553
-170	-5.125	-5.146	-5.168	-5.190	-5.212	-5.233	-5.255	-5.277	-5.298	-5.320	-5.341
-160	-4.903	-4.926	-4.948	-4.970	-4.992	-5.015	-5.037	-5.059	-5.081	-5.103	-5.125
-150	-4.678	-4.701	-4.724	-4.746	-4.769	-4.791	-4.814	-4.836	-4.859	-4.881	-4.903
-140	-4.449	-4.472	-4.495	-4.518	-4.541	-4.564	-4.587	-4.610	-4.633	-4.655	-4.678
-130	-4.215	-4.239	-4.262	-4.286	-4.309	-4.332	-4.356	-4.379	-4.402	-4.425	-4.449
-120	-3.978	-4.002	-4.026	-4.050	-4.073	-4.097	-4.121	-4.144	-4.168	-4.192	-4.215
-110	-3.737	-3.761	-3.786	-3.810	-3.834	-3.858	-3.882	-3.906	-3.930	-3.954	-3.978
-100	-3.493	-3.517	-3.542	-3.566	-3.591	-3.615	-3.640	-3.664	-3.688	-3.713	-3.737
-90	-3.245	-3.270	-3.295	-3.320	-3.344	-3.369	-3.394	-3.419	-3.443	-3.468	-3.493
-80	-2.994	-3.019	-3.044	-3.070	-3.095	-3.120	-3.145	-3.170	-3.195	-3.220	-3.245
-70	-2.740	-2.766	-2.791	-2.817	-2.842	-2.867	-2.893	-2.918	-2.943	-2.969	-2.994
-60	-2.483	-2.509	-2.535	-2.560	-2.586	-2.612	-2.638	-2.663	-2.689	-2.714	-2.740
-50	-2.223	-2.249	-2.275	-2.301	-2.327	-2.353	-2.379	-2.405	-2.431	-2.457	-2.483
-40	-1.961	-1.987	-2.013	-2.040	-2.066	-2.092	-2.118	-2.145	-2.171	-2.197	-2.223
-30	-1.695	-1.722	-1.749	-1.775	-1.802	-1.828	-1.855	-1.881	-1.908	-1.934	-1.961
-20	-1.428	-1.455	-1.482	-1.508	-1.535	-1.562	-1.589	-1.615	-1.642	-1.669	-1.695
-10	-1.158	-1.185	-1.212	-1.239	-1.266	-1.293	-1.320	-1.347	-1.374	-1.401	-1.428
0	-0.886	-0.913	-0.940	-0.967	-0.995	-1.022	-1.049	-1.076	-1.104	-1.131	-1.158

°F	0	1	2	3	4	5	6	7	8	9	10
0	-0.886	-0.858	-0.831	-0.803	-0.776	-0.749	-0.721	-0.694	-0.666	-0.639	-0.611
10	-0.611	-0.583	-0.556	-0.528	-0.501	-0.473	-0.445	-0.418	-0.390	-0.362	-0.334
20	-0.334	-0.307	-0.279	-0.251	-0.223	-0.195	-0.168	-0.140	-0.112	-0.084	-0.056
30	-0.056	-0.028	0.000	0.028	0.056	0.084	0.112	0.140	0.168	0.196	0.225
40	0.225	0.253	0.281	0.309	0.337	0.365	0.394	0.422	0.450	0.478	0.507
50	0.507	0.535	0.563	0.592	0.620	0.649	0.677	0.705	0.734	0.762	0.791
60	0.791	0.819	0.848	0.876	0.905	0.933	0.962	0.991	1.019	1.048	1.076
70	1.076	1.105	1.134	1.162	1.191	1.220	1.249	1.277	1.306	1.335	1.364
80	1.364	1.392	1.421	1.450	1.479	1.508	1.537	1.566	1.594	1.623	1.652
90	1.652	1.681	1.710	1.739	1.768	1.797	1.826	1.855	1.884	1.913	1.942
100	1.942	1.972	2.001	2.030	2.059	2.088	2.117	2.146	2.175	2.205	2.234
110	2.234	2.263	2.292	2.322	2.351	2.380	2.409	2.439	2.468	2.497	2.527
120	2.527	2.556	2.585	2.615	2.644	2.673	2.703	2.732	2.762	2.791	2.821
130	2.821	2.850	2.880	2.909	2.938	2.968	2.997	3.027	3.057	3.086	3.116
140	3.116	3.145	3.175	3.204	3.234	3.264	3.293	3.323	3.353	3.382	3.412
150	3.412	3.442	3.471	3.501	3.531	3.560	3.590	3.620	3.650	3.679	3.709
160	3.709	3.739	3.769	3.798	3.828	3.858	3.888	3.918	3.948	3.977	4.007
170	4.007	4.037	4.067	4.097	4.127	4.157	4.187	4.217	4.246	4.276	4.306
180	4.306	4.336	4.366	4.396	4.426	4.456	4.486	4.516	4.546	4.576	4.606
190	4.606	4.636	4.666	4.696	4.726	4.757	4.787	4.817	4.847	4.877	4.907
200	4.907	4.937	4.967	4.997	5.028	5.058	5.088	5.118	5.148	5.178	5.209
210	5.209	5.239	5.269	5.299	5.329	5.360	5.390	5.420	5.450	5.480	5.511
220	5.511	5.541	5.571	5.602	5.632	5.662	5.692	5.723	5.753	5.783	5.814
230	5.814	5.844	5.874	5.905	5.935	5.965	5.996	6.026	6.056	6.087	6.117
240	6.117	6.147	6.178	6.208	6.239	6.269	6.299	6.330	6.360	6.391	6.421

°F	0	1	2	3	4	5	6	7	8	9	10
250	6.421	6.452	6.482	6.512	6.543	6.573	6.604	6.634	6.665	6.695	6.726
260	6.726	6.756	6.787	6.817	6.848	6.878	6.909	6.939	6.970	7.000	7.031
270	7.031	7.061	7.092	7.122	7.153	7.184	7.214	7.245	7.275	7.306	7.336
280	7.336	7.367	7.398	7.428	7.459	7.489	7.520	7.550	7.581	7.612	7.642
290	7.642	7.673	7.704	7.734	7.765	7.795	7.826	7.857	7.887	7.918	7.949
300	7.949	7.979	8.010	8.041	8.071	8.102	8.133	8.163	8.194	8.225	8.255
310	8.255	8.286	8.317	8.347	8.378	8.409	8.439	8.470	8.501	8.532	8.562
320	8.562	8.593	8.624	8.654	8.685	8.716	8.747	8.777	8.808	8.839	8.869
330	8.869	8.900	8.931	8.962	8.992	9.023	9.054	9.085	9.115	9.146	9.177
340	9.177	9.208	9.238	9.269	9.300	9.331	9.362	9.392	9.423	9.454	9.485
350	9.485	9.515	9.546	9.577	9.608	9.639	9.669	9.700	9.731	9.762	9.793
360	9.793	9.823	9.854	9.885	9.916	9.947	9.977	10.008	10.039	10.070	10.101
370	10.101	10.131	10.162	10.193	10.224	10.255	10.285	10.316	10.347	10.378	10.409
380	10.409	10.440	10.470	10.501	10.532	10.563	10.594	10.625	10.655	10.686	10.717
390	10.717	10.748	10.779	10.810	10.840	10.871	10.902	10.933	10.964	10.995	11.025
400	11.025	11.056	11.087	11.118	11.149	11.180	11.211	11.241	11.272	11.303	11.334
410	11.334	11.365	11.396	11.426	11.457	11.488	11.519	11.550	11.581	11.612	11.642
420	11.642	11.673	11.704	11.735	11.766	11.797	11.828	11.858	11.889	11.920	11.951
430	11.951	11.982	12.013	12.044	12.074	12.105	12.136	12.167	12.198	12.229	12.260
440	12.260	12.290	12.321	12.352	12.383	12.414	12.445	12.476	12.506	12.537	12.568
450	12.568	12.599	12.630	12.661	12.691	12.722	12.753	12.784	12.815	12.846	12.877
460	12.877	12.907	12.938	12.969	13.000	13.031	13.062	13.093	13.123	13.154	13.185
470	13.185	13.216	13.247	13.278	13.308	13.339	13.370	13.401	13.432	13.463	13.494
480	13.494	13.524	13.555	13.586	13.617	13.648	13.679	13.709	13.740	13.771	13.802
490	13.802	13.833	13.864	13.894	13.925	13.956	13.987	14.018	14.049	14.079	14.110
500	14.110	14.141	14.172	14.203	14.233	14.264	14.295	14.326	14.357	14.388	14.418
510	14.418	14.449	14.480	14.511	14.542	14.573	14.603	14.634	14.665	14.696	14.727
520	14.727	14.757	14.788	14.819	14.850	14.881	14.911	14.942	14.973	15.004	15.035
530	15.035	15.065	15.096	15.127	15.158	15.189	15.219	15.250	15.281	15.312	15.343
540	15.343	15.373	15.404	15.435	15.466	15.496	15.527	15.558	15.589	15.620	15.650
550	15.650	15.681	15.712	15.743	15.773	15.804	15.835	15.866	15.897	15.927	15.958
560	15.958	15.989	16.020	16.050	16.081	16.112	16.143	16.173	16.204	16.235	16.266
570	16.266	16.296	16.327	16.358	16.389	16.419	16.450	16.481	16.512	16.542	16.573
580	16.573	16.604	16.635	16.665	16.696	16.727	16.758	16.788	16.819	16.850	16.881
590	16.881	16.911	16.942	16.973	17.003	17.034	17.065	17.096	17.126	17.157	17.188
600	17.188	17.219	17.249	17.280	17.311	17.341	17.372	17.403	17.434	17.464	17.495
610	17.495	17.526	17.556	17.587	17.618	17.649	17.679	17.710	17.741	17.771	17.802
620	17.802	17.833	17.863	17.894	17.925	17.955	17.986	18.017	18.048	18.078	18.109
630	18.109	18.140	18.170	18.201	18.232	18.262	18.293	18.324	18.354	18.385	18.416
640	18.416	18.446	18.477	18.508	18.538	18.569	18.600	18.630	18.661	18.692	18.722
650	18.722	18.753	18.784	18.814	18.845	18.876	18.906	18.937	18.968	18.998	19.029
660	19.029	19.060	19.090	19.121	19.152	19.182	19.213	19.244	19.274	19.305	19.336
670	19.336	19.366	19.397	19.428	19.458	19.489	19.520	19.550	19.581	19.612	19.642
680	19.642	19.673	19.704	19.734	19.765	19.795	19.826	19.857	19.887	19.918	19.949
690	19.949	19.979	20.010	20.041	20.071	20.102	20.132	20.163	20.194	20.224	20.255
700	20.255	20.286	20.316	20.347	20.378	20.408	20.439	20.469	20.500	20.531	20.561
710	20.561	20.592	20.623	20.653	20.684	20.715	20.745	20.776	20.806	20.837	20.868
720	20.868	20.898	20.929	20.960	20.990	21.021	21.052	21.082	21.113	21.143	21.174
730	21.174	21.205	21.235	21.266	21.297	21.327	21.358	21.389	21.419	21.450	21.480
740	21.480	21.511	21.542	21.572	21.603	21.634	21.664	21.695	21.726	21.756	21.787
750	21.787	21.817	21.848	21.879	21.909	21.940	21.971	22.001	22.032	22.063	22.093
760	22.093	22.124	22.154	22.185	22.216	22.246	22.277	22.308	22.338	22.369	22.400
770	22.400	22.430	22.461	22.492	22.522	22.553	22.584	22.614	22.645	22.676	22.706
780	22.706	22.737	22.768	22.798	22.829	22.860	22.890	22.921	22.952	22.982	23.013
790	23.013	23.044	23.074	23.105	23.136	23.166	23.197	23.228	23.258	23.289	23.320
800	23.320	23.350	23.381	23.412	23.442	23.473	23.504	23.535	23.565	23.596	23.627
810	23.627	23.657	23.688	23.719	23.749	23.780	23.811	23.842	23.872	23.903	23.934
820	23.934	23.964	23.995	24.026	24.057	24.087	24.118	24.149	24.180	24.210	24.241
830	24.241	24.272	24.303	24.333	24.364	24.395	24.426	24.456	24.487	24.518	24.549
840	24.549	24.579	24.610	24.641	24.672	24.702	24.733	24.764	24.795	24.826	24.856
850	24.856	24.887	24.918	24.949	24.979	25.010	25.041	25.072	25.103	25.134	25.164
860	25.164	25.195	25.226	25.257	25.288	25.318	25.349	25.380	25.411	25.442	25.473
870	25.473	25.504	25.534	25.565	25.596	25.627	25.658	25.689	25.720	25.750	25.781
880	25.781	25.812	25.843	25.874	25.905	25.936	25.967	25.998	26.028	26.059	26.090
890	26.090	26.121	26.152	26.183	26.214	26.245	26.276	26.307	26.338	26.369	26.400
900	26.400	26.431	26.462	26.493	26.524	26.555	26.586	26.617	26.648	26.679	26.710
910	26.710	26.741	26.772	26.803	26.834	26.865	26.896	26.927	26.958	26.989	27.020
920	27.020	27.051	27.082	27.113	27.144	27.175	27.206	27.237	27.268	27.299	27.330
930	27.330	27.362	27.393	27.424	27.455	27.486	27.517	27.548	27.579	27.610	27.642
940	27.642	27.673	27.704	27.735	27.766	27.797	27.829	27.860	27.891	27.922	27.953
950	27.953	27.985	28.016	28.047	28.078	28.109	28.141	28.172	28.203	28.234	28.266
960	28.266	28.297	28.328	28.359	28.391	28.422	28.453	28.485	28.516	28.547	28.579
970	28.579	28.610	28.641	28.672	28.704	28.735	28.767	28.798	28.829	28.861	28.892
980	28.892	28.923	28.955	28.986	29.018	29.049	29.080	29.112	29.143	29.175	29.206
990	29.206	29.238	29.269	29.301	29.332	29.363	29.395	29.426	29.458	29.489	29.521

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type J °F (32 to 1382°F)

°F	0	1	2	3	4	5	6	7	8	9	10
1000	29.521	29.552	29.584	29.616	29.647	29.679	29.710	29.742	29.773	29.805	29.836
1010	29.836	29.868	29.900	29.931	29.963	29.995	30.026	30.058	30.089	30.121	30.153
1020	30.153	30.184	30.216	30.248	30.279	30.311	30.343	30.375	30.406	30.438	30.470
1030	30.470	30.502	30.533	30.565	30.597	30.629	30.660	30.692	30.724	30.756	30.788
1040	30.788	30.819	30.851	30.883	30.915	30.947	30.979	31.011	31.043	31.074	31.106
1050	31.106	31.138	31.170	31.202	31.234	31.266	31.298	31.330	31.362	31.394	31.426
1060	31.426	31.458	31.490	31.522	31.554	31.586	31.618	31.650	31.682	31.714	31.746
1070	31.746	31.778	31.811	31.843	31.875	31.907	31.939	31.971	32.003	32.035	32.068
1080	32.068	32.100	32.132	32.164	32.196	32.229	32.261	32.293	32.325	32.358	32.390
1090	32.390	32.422	32.455	32.487	32.519	32.551	32.584	32.616	32.648	32.681	32.713
1100	32.713	32.746	32.778	32.810	32.843	32.875	32.908	32.940	32.973	33.005	33.037
1110	33.037	33.070	33.102	33.135	33.167	33.200	33.232	33.265	33.298	33.330	33.363
1120	33.363	33.395	33.428	33.460	33.493	33.526	33.558	33.591	33.624	33.656	33.689
1130	33.689	33.722	33.754	33.787	33.820	33.853	33.885	33.918	33.951	33.984	34.016
1140	34.016	34.049	34.082	34.115	34.148	34.180	34.213	34.246	34.279	34.312	34.345
1150	34.345	34.378	34.411	34.444	34.476	34.509	34.542	34.575	34.608	34.641	34.674
1160	34.674	34.707	34.740	34.773	34.806	34.840	34.873	34.906	34.939	34.972	35.005
1170	35.005	35.038	35.071	35.104	35.138	35.171	35.204	35.237	35.270	35.304	35.337
1180	35.337	35.370	35.403	35.437	35.470	35.503	35.536	35.570	35.603	35.636	35.670
1190	35.670	35.703	35.736	35.770	35.803	35.837	35.870	35.903	35.937	35.970	36.004
1200	36.004	36.037	36.071	36.104	36.138	36.171	36.205	36.238	36.272	36.305	36.339
1210	36.339	36.373	36.406	36.440	36.473	36.507	36.541	36.574	36.608	36.642	36.675
1220	36.675	36.709	36.743	36.777	36.810	36.844	36.878	36.912	36.945	36.979	37.013
1230	37.013	37.047	37.081	37.114	37.148	37.182	37.216	37.250	37.284	37.318	37.352
1240	37.352	37.386	37.420	37.454	37.488	37.522	37.556	37.590	37.624	37.658	37.692
1250	37.692	37.726	37.760	37.794	37.828	37.862	37.896	37.930	37.964	37.999	38.033
1260	38.033	38.067	38.101	38.135	38.169	38.204	38.238	38.272	38.306	38.341	38.375
1270	38.375	38.409	38.444	38.478	38.512	38.546	38.581	38.615	38.650	38.684	38.718
1280	38.718	38.753	38.787	38.822	38.856	38.890	38.925	38.959	38.994	39.028	39.063
1290	39.063	39.097	39.132	39.166	39.201	39.235	39.270	39.305	39.339	39.374	39.408
1300	39.408	39.443	39.478	39.512	39.547	39.582	39.616	39.651	39.686	39.720	39.755
1310	39.755	39.790	39.825	39.859	39.894	39.929	39.964	39.998	40.033	40.068	40.103
1320	40.103	40.138	40.173	40.207	40.242	40.277	40.312	40.347	40.382	40.417	40.452
1330	40.452	40.487	40.522	40.556	40.591	40.626	40.661	40.696	40.731	40.766	40.801
1340	40.801	40.836	40.872	40.907	40.942	40.977	41.012	41.047	41.082	41.117	41.152
1350	41.152	41.187	41.222	41.258	41.293	41.328	41.363	41.398	41.433	41.469	41.504
1360	41.504	41.539	41.574	41.610	41.645	41.680	41.715	41.751	41.786	41.821	41.856
1370	41.856	41.892	41.927	41.962	41.998	42.033	42.068	42.104	42.139	42.174	42.210
1380	42.210	42.245	42.281	42.316	42.351	42.387	42.422	42.458	42.493	42.528	42.564
1390	42.564	42.599	42.635	42.670	42.706	42.741	42.777	42.812	42.848	42.883	42.919
1400	42.919	42.954	42.990	43.025	43.061	43.096	43.132	43.167	43.203	43.239	43.274
1410	43.274	43.310	43.346	43.381	43.417	43.452	43.488	43.524	43.559	43.595	43.631
1420	43.631	43.667	43.702	43.738	43.774	43.809	43.845	43.881	43.917	43.953	43.988
1430	43.988	44.024	44.060	44.096	44.131	44.167	44.203	44.239	44.275	44.310	44.346
1440	44.346	44.382	44.418	44.454	44.490	44.525	44.561	44.597	44.633	44.669	44.705
1450	44.705	44.741	44.777	44.812	44.848	44.884	44.920	44.956	44.992	45.028	45.064
1460	45.064	45.099	45.135	45.171	45.207	45.243	45.279	45.315	45.351	45.387	45.423
1470	45.423	45.458	45.494	45.530	45.566	45.602	45.638	45.674	45.710	45.746	45.782
1480	45.782	45.818	45.853	45.889	45.925	45.961	45.997	46.033	46.069	46.105	46.141
1490	46.141	46.177	46.212	46.248	46.284	46.320	46.356	46.392	46.428	46.464	46.500
1500	46.500	46.535	46.571	46.607	46.643	46.679	46.715	46.751	46.786	46.822	46.858
1510	46.858	46.894	46.930	46.966	47.001	47.037	47.073	47.109	47.145	47.181	47.216
1520	47.216	47.252	47.288	47.324	47.359	47.395	47.431	47.467	47.503	47.538	47.574
1530	47.574	47.610	47.646	47.681	47.717	47.753	47.788	47.824	47.860	47.896	47.931
1540	47.931	47.967	48.003	48.038	48.074	48.110	48.145	48.181	48.217	48.252	48.288
1550	48.288	48.324	48.359	48.395	48.430	48.466	48.502	48.537	48.573	48.608	48.644
1560	48.644	48.679	48.715	48.750	48.786	48.822	48.857	48.893	48.928	48.964	48.999
1570	48.999	49.034	49.070	49.105	49.141	49.176	49.212	49.247	49.283	49.318	49.353
1580	49.353	49.389	49.424	49.460	49.495	49.530	49.566	49.601	49.636	49.672	49.707
1590	49.707	49.742	49.778	49.813	49.848	49.883	49.919	49.954	49.989	50.024	50.060
1600	50.060	50.095	50.130	50.165	50.200	50.235	50.271	50.306	50.341	50.376	50.411
1610	50.411	50.446	50.481	50.517	50.552	50.587	50.622	50.657	50.692	50.727	50.762
1620	50.762	50.797	50.832	50.867	50.902	50.937	50.972	51.007	51.042	51.077	51.112
1630	51.112	51.147	51.181	51.216	51.251	51.286	51.321	51.356	51.391	51.425	51.460
1640	51.460	51.495	51.530	51.565	51.599	51.634	51.669	51.704	51.738	51.773	51.808
1650	51.808	51.843	51.877	51.912	51.947	51.981	52.016	52.051	52.085	52.120	52.154
1660	52.154	52.189	52.224	52.258	52.293	52.327	52.362	52.396	52.431	52.465	52.500
1670	52.500	52.534	52.569	52.603	52.638	52.672	52.707	52.741	52.776	52.810	52.844
1680	52.844	52.879	52.913	52.947	52.982	53.016	53.050	53.085	53.119	53.153	53.188
1690	53.188	53.222	53.256	53.290	53.325	53.359	53.393	53.427	53.462	53.496	53.530
1700	53.530	53.564	53.598	53.632	53.667	53.701	53.735	53.769	53.803	53.837	53.871
1710	53.871	53.905	53.939	53.973	54.007	54.041	54.075	54.109	54.143	54.177	54.211
1720	54.211	54.245	54.279	54.313	54.347	54.381	54.415	54.449	54.483	54.516	54.550
1730	54.550	54.584	54.618	54.652	54.686	54.719	54.753	54.787	54.821	54.855	54.888
1740	54.888	54.922	54.956	54.990	55.023	55.057	55.091	55.124	55.158	55.192	55.225
1750	55.225	55.259	55.293	55.326	55.360	55.393	55.427	55.461	55.494	55.528	55.561
1760	55.561	55.595	55.628	55.662	55.695	55.729	55.762	55.796	55.829	55.863	55.896
1770	55.896	55.930	55.963	55.997	56.030	56.063	56.097	56.130	56.164	56.197	56.230
1780	56.230	56.264	56.297	56.330	56.364	56.397	56.430	56.464	56.497	56.530	56.564
1790	56.564	56.597	56.630	56.663	56.697	56.730	56.763	56.796	56.829	56.863	56.896
1800	56.896	56.929	56.962	56.995	57.028	57.062	57.095	57.128	57.161	57.194	57.227
1810	57.227	57.260	57.293	57.326	57.360	57.393	57.426	57.459	57.492	57.525	57.558
1820	57.558	57.591	57.624	57.657	57.690	57.723	57.756	57.789	57.822	57.855	57.888
1830	57.888	57.920	57.953	57.986	58.019	58.052	58.085	58.118	58.151	58.184	58.217
1840	58.217	58.249	58.282	58.315	58.348	58.381	58.414	58.446	58.479	58.512	58.545
1850	58.545	58.578	58.610	58.643	58.676	58.709	58.741	58.774	58.807	58.840	58.872
1860	58.872	58.905	58.938	58.971	59.003	59.036	59.069	59.101	59.134	59.167	59.199
1870	59.199	59.232	59.265	59.297	59.330	59.363	59.395	59.428	59.460	59.493	59.526
1880	59.526	59.558	59.591	59.623	59.656	59.689	59.721	59.754	59.786	59.819	59.851
1890	59.851	59.884	59.916	59.949	59.982	60.014	60.047	60.079	60.112	60.144	60.177
1900	60.177	60.209	60.242	60.274	60.307	60.339	60.371	60.404	60.436	60.469	60.501
1910	60.501	60.534	60.566	60.599	60.631	60.663	60.696	60.728	60.761	60.793	60.826
1920	60.826	60.858	60.890	60.923	60.955	60.987	61.020	61.052	61.085	61.117	61.149
1930	61.149	61.182	61.214	61.246	61.279	61.311	61.343	61.376	61.408	61.440	61.473
1940	61.473	61.505	61.537	61.570	61.602	61.634	61.667	61.699	61.731	61.763	61.796
1950	61.796	61.828	61.860	61.893	61.925	61.957	61.989	62.022	62.054	62.086	62.118
1960	62.118	62.151	62.183	62.215	62.247	62.280	62.312	62.344	62.376	62.409	62.441
1970	62.441	62.473	62.505	62.537	62.570	62.602	62.634	62.666	62.699	62.731	62.763
1980	62.763	62.795	62.827	62.860	62.892	62.924	62.956	62.988	63.020	63.053	63.085
1990	63.085	63.117	63.149	63.181	63.214	63.246	63.278	63.310	63.342	63.374	63.406
2000	63.406	63.439	63.471	63.503	63.535	63.567	63.599	63.632	63.664	63.696	63.728
2010	63.728	63.760	63.792	63.824	63.856	63.889	63.921	63.953	63.985	64.017	64.049
2020	64.049	64.081	64.113	64.146	64.178	64.210	64.242	64.274	64.306	64.338	64.370
2030	64.370	64.402	64.435	64.467	64.499	64.531	64.563	64.595	64.627	64.659	64.691
2040	64.691	64.723	64.756	64.788	64.820	64.852	64.884	64.916	64.948	64.980	65.012
2050	65.012	65.044	65.076	65.109	65.141	65.173	65.205	65.237	65.269	65.301	65.333
2060	65.333	65.365	65.397	65.429	65.461	65.493	65.525	65.557	65.590	65.622	65.654
2070	65.654	65.686	65.718	65.750	65.782	65.814	65.846	65.878	65.910	65.942	65.974
2080	65.974	66.006	66.038	66.070	66.102	66.134	66.166	66.199	66.231	66.263	66.295
2090	66.295	66.327	66.359	66.391	66.423	66.455	66.487	66.519	66.551	66.583	66.615
2100	66.615	66.647	66.679	66.711	66.743	66.775	66.807	66.839	66.871	66.903	66.935
2110	66.935	66.967	66.999	67.031	67.063	67.095	67.127	67.159	67.191	67.223	67.255
2120	67.255	67.287	67.319	67.351	67.383	67.415	67.447	67.479	67.511	67.543	67.575
2130	67.575	67.607	67.639	67.671	67.703	67.735	67.767	67.799	67.831	67.863	67.895
2140	67.895	67.927	67.959	67.991	68.023	68.055	68.087	68.119	68.150	68.182	68.214
2150	68.214	68.246	68.278	68.310	68.342	68.374	68.406	68.438	68.470	68.502	68.534
2160	68.534	68.566	68.597	68.629	68.661	68.693	68.725	68.757	68.789	68.821	68.853
2170	68.853	68.884	68.916	68.948	68.980	69.012	69.044	69.076	69.108	69.139	69.171
2180	69.171	69.203	69.235	69.267	69.299	69.330	69.362	69.394	69.426	69.458	69.490
2190	69.490	69.521	69.553								

Type K °F (-328 to 2282°F)

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-450	-6.456	-6.456	-6.457	-6.457	-6.458						
-440	-6.446	-6.448	-6.449	-6.450	-6.451	-6.452	-6.453	-6.454	-6.454	-6.455	-6.456
-430	-6.431	-6.433	-6.435	-6.436	-6.438	-6.440	-6.441	-6.443	-6.444	-6.445	-6.446
-420	-6.409	-6.411	-6.414	-6.416	-6.419	-6.421	-6.423	-6.425	-6.427	-6.429	-6.431
-410	-6.380	-6.383	-6.386	-6.389	-6.392	-6.395	-6.398	-6.401	-6.404	-6.406	-6.409
-400	-6.344	-6.348	-6.352	-6.355	-6.359	-6.363	-6.366	-6.370	-6.373	-6.377	-6.380
-390	-6.301	-6.306	-6.310	-6.315	-6.319	-6.323	-6.328	-6.332	-6.336	-6.340	-6.344
-380	-6.251	-6.257	-6.262	-6.267	-6.272	-6.277	-6.282	-6.287	-6.292	-6.296	-6.301
-370	-6.195	-6.201	-6.207	-6.213	-6.218	-6.224	-6.230	-6.235	-6.241	-6.246	-6.251
-360	-6.133	-6.139	-6.146	-6.152	-6.158	-6.165	-6.171	-6.177	-6.183	-6.189	-6.195
-350	-6.064	-6.071	-6.078	-6.085	-6.092	-6.099	-6.106	-6.113	-6.119	-6.126	-6.133
-340	-5.989	-5.997	-6.004	-6.012	-6.020	-6.027	-6.035	-6.042	-6.049	-6.057	-6.064
-330	-5.908	-5.917	-5.925	-5.933	-5.941	-5.949	-5.957	-5.965	-5.973	-5.981	-5.989
-320	-5.822	-5.831	-5.840	-5.848	-5.857	-5.866	-5.874	-5.883	-5.891	-5.900	-5.908
-310	-5.730	-5.739	-5.749	-5.758	-5.767	-5.776	-5.786	-5.795	-5.804	-5.813	-5.822
-300	-5.632	-5.642	-5.652	-5.662	-5.672	-5.682	-5.691	-5.701	-5.711	-5.720	-5.730
-290	-5.529	-5.540	-5.550	-5.561	-5.571	-5.581	-5.592	-5.602	-5.612	-5.622	-5.632
-280	-5.421	-5.432	-5.443	-5.454	-5.465	-5.476	-5.487	-5.497	-5.508	-5.519	-5.529
-270	-5.308	-5.320	-5.331	-5.343	-5.354	-5.365	-5.377	-5.388	-5.399	-5.410	-5.421
-260	-5.190	-5.202	-5.214	-5.226	-5.238	-5.250	-5.261	-5.273	-5.285	-5.296	-5.308
-250	-5.067	-5.079	-5.092	-5.104	-5.117	-5.129	-5.141	-5.153	-5.166	-5.178	-5.190
-240	-4.939	-4.952	-4.965	-4.978	-4.991	-5.003	-5.016	-5.029	-5.042	-5.054	-5.067
-230	-4.806	-4.820	-4.833	-4.847	-4.860	-4.873	-4.886	-4.900	-4.913	-4.926	-4.939
-220	-4.669	-4.683	-4.697	-4.711	-4.724	-4.738	-4.752	-4.766	-4.779	-4.793	-4.806
-210	-4.527	-4.542	-4.556	-4.570	-4.584	-4.599	-4.613	-4.627	-4.641	-4.655	-4.669
-200	-4.381	-4.396	-4.411	-4.425	-4.440	-4.455	-4.469	-4.484	-4.498	-4.513	-4.527

TRANSCAT's Value Incentive Packages combine our top selling products with the necessary accessories at incredible savings.

VIP VALUE INCENTIVE PACKAGE

VIPs Give You More For Your Money

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

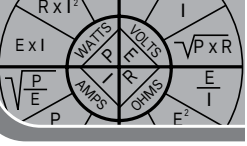
Type K °F (-328 to 2282°F) cont.

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-190	-4.231	-4.246	-4.261	-4.276	-4.291	-4.306	-4.321	-4.336	-4.351	-4.366	-4.381
-180	-4.076	-4.091	-4.107	-4.123	-4.138	-4.154	-4.169	-4.185	-4.200	-4.215	-4.231
-170	-3.917	-3.933	-3.949	-3.965	-3.981	-3.997	-4.013	-4.029	-4.044	-4.060	-4.076
-160	-3.754	-3.771	-3.787	-3.803	-3.820	-3.836	-3.852	-3.869	-3.885	-3.901	-3.917
-150	-3.587	-3.604	-3.621	-3.638	-3.655	-3.671	-3.688	-3.705	-3.721	-3.738	-3.754
-140	-3.417	-3.434	-3.451	-3.468	-3.486	-3.503	-3.520	-3.537	-3.554	-3.571	-3.587
-130	-3.243	-3.260	-3.278	-3.295	-3.313	-3.330	-3.348	-3.365	-3.382	-3.400	-3.417
-120	-3.065	-3.083	-3.101	-3.119	-3.136	-3.154	-3.172	-3.190	-3.207	-3.225	-3.243
-110	-2.884	-2.902	-2.920	-2.938	-2.957	-2.975	-2.993	-3.011	-3.029	-3.047	-3.065
-100	-2.699	-2.718	-2.736	-2.755	-2.773	-2.792	-2.810	-2.829	-2.847	-2.865	-2.884
-90	-2.511	-2.530	-2.549	-2.568	-2.587	-2.605	-2.624	-2.643	-2.662	-2.680	-2.699
-80	-2.320	-2.339	-2.359	-2.378	-2.397	-2.416	-2.435	-2.454	-2.473	-2.492	-2.511
-70	-2.126	-2.146	-2.165	-2.185	-2.204	-2.223	-2.243	-2.262	-2.282	-2.301	-2.320
-60	-1.929	-1.949	-1.969	-1.988	-2.008	-2.028	-2.048	-2.067	-2.087	-2.106	-2.126
-50	-1.729	-1.749	-1.770	-1.790	-1.810	-1.830	-1.850	-1.869	-1.889	-1.909	-1.929
-40	-1.527	-1.547	-1.568	-1.588	-1.608	-1.628	-1.649	-1.669	-1.689	-1.709	-1.729
-30	-1.322	-1.343	-1.363	-1.384	-1.404	-1.425	-1.445	-1.466	-1.486	-1.507	-1.527
-20	-1.114	-1.135	-1.156	-1.177	-1.198	-1.218	-1.239	-1.260	-1.281	-1.301	-1.322
-10	-0.905	-0.926	-0.947	-0.968	-0.989	-1.010	-1.031	-1.052	-1.073	-1.094	-1.114
0	-0.692	-0.714	-0.735	-0.756	-0.778	-0.799	-0.820	-0.841	-0.862	-0.883	-0.905

°F	0	1	2	3	4	5	6	7	8	9	10
0	-0.692	-0.671	-0.650	-0.628	-0.607	-0.586	-0.564	-0.543	-0.521	-0.500	-0.478
10	-0.478	-0.457	-0.435	-0.413	-0.392	-0.370	-0.349	-0.327	-0.305	-0.284	-0.262
20	-0.262	-0.240	-0.218	-0.197	-0.175	-0.153	-0.131	-0.109	-0.088	-0.066	-0.044
30	-0.044	-0.022	0.000	0.022	0.044	0.066	0.088	0.110	0.132	0.154	0.176
40	0.176	0.198	0.220	0.242	0.264	0.286	0.308	0.330	0.353	0.375	0.397
50	0.397	0.419	0.441	0.463	0.486	0.508	0.530	0.552	0.575	0.597	0.619
60	0.619	0.642	0.664	0.686	0.709	0.731	0.753	0.776	0.798	0.821	0.843
70	0.843	0.865	0.888	0.910	0.933	0.955	0.978	1.000	1.023	1.045	1.068
80	1.068	1.090	1.113	1.136	1.158	1.181	1.203	1.226	1.249	1.271	1.294
90	1.294	1.316	1.339	1.362	1.384	1.407	1.430	1.453	1.475	1.498	1.521
100	1.521	1.543	1.566	1.589	1.612	1.635	1.657	1.680	1.703	1.726	1.749
110	1.749	1.771	1.794	1.817	1.840	1.863	1.886	1.909	1.931	1.954	1.977
120	1.977	2.000	2.023	2.046	2.069	2.092	2.115	2.138	2.161	2.184	2.207
130	2.207	2.230	2.253	2.276	2.298	2.321	2.344	2.367	2.390	2.413	2.436
140	2.436	2.459	2.483	2.506	2.529	2.552	2.575	2.598	2.621	2.644	2.667
150	2.667	2.690	2.713	2.736	2.759	2.782	2.805	2.828	2.851	2.874	2.897
160	2.897	2.920	2.944	2.967	2.990	3.013	3.036	3.059	3.082	3.105	3.128
170	3.128	3.151	3.174	3.197	3.220	3.244	3.267	3.290	3.313	3.336	3.359
180	3.359	3.382	3.405	3.428	3.451	3.474	3.497	3.520	3.544	3.567	3.590
190	3.590	3.613	3.636	3.659	3.682	3.705	3.728	3.751	3.774	3.797	3.820
200	3.820	3.843	3.866	3.889	3.912	3.935	3.958	3.981	4.004	4.027	4.050
210	4.050	4.073	4.096	4.119	4.142	4.165	4.188	4.211	4.234	4.257	4.280
220	4.280	4.303	4.326	4.349	4.372	4.395	4.417	4.440	4.463	4.486	4.509
230	4.509	4.532	4.555	4.578	4.601	4.623	4.646	4.669	4.692	4.715	4.738
240	4.738	4.760	4.783	4.806	4.829	4.852	4.874	4.897	4.920	4.943	4.965
250	4.965	4.988	5.011	5.034	5.056	5.079	5.102	5.124	5.147	5.170	5.192
260	5.192	5.215	5.238	5.260	5.283	5.306	5.328	5.351	5.374	5.396	5.419
270	5.419	5.441	5.464	5.487	5.509	5.532	5.554	5.577	5.599	5.622	5.644
280	5.644	5.667	5.690	5.712	5.735	5.757	5.779	5.802	5.824	5.847	5.869
290	5.869	5.892	5.914	5.937	5.959	5.982	6.004	6.026	6.049	6.071	6.094
300	6.094	6.116	6.138	6.161	6.183	6.205	6.228	6.250	6.272	6.295	6.317
310	6.317	6.339	6.362	6.384	6.406	6.429	6.451	6.473	6.496	6.518	6.540
320	6.540	6.562	6.585	6.607	6.629	6.652	6.674	6.696	6.718	6.741	6.763
330	6.763	6.785	6.807	6.829	6.852	6.874	6.896	6.918	6.941	6.963	6.985
340	6.985	7.007	7.029	7.052	7.074	7.096	7.118	7.140	7.163	7.185	7.207
350	7.207	7.229	7.251	7.273	7.296	7.318	7.340	7.362	7.384	7.407	7.429
360	7.429	7.451	7.473	7.495	7.517	7.540	7.562	7.584	7.606	7.628	7.650
370	7.650	7.673	7.695	7.717	7.739	7.761	7.783	7.806	7.828	7.850	7.872
380	7.872	7.894	7.917	7.939	7.961	7.983	8.005	8.027	8.050	8.072	8.094
390	8.094	8.116	8.138	8.161	8.183	8.205	8.227	8.250	8.272	8.294	8.316
400	8.316	8.338	8.361	8.383	8.405	8.427	8.450	8.472	8.494	8.516	8.539
410	8.539	8.561	8.583	8.605	8.628	8.650	8.672	8.694	8.717	8.739	8.761
420	8.761	8.784	8.806	8.828	8.851	8.873	8.895	8.918	8.940	8.962	8.985
430	8.985	9.007	9.029	9.052	9.074	9.096	9.119	9.141	9.163	9.186	9.208
440	9.208	9.231	9.253	9.275	9.298	9.320	9.343	9.365	9.388	9.410	9.432
450	9.432	9.455	9.477	9.500	9.522	9.545	9.567	9.590	9.612	9.635	9.657
460	9.657	9.680	9.702	9.725	9.747	9.770	9.792	9.815	9.837	9.860	9.882
470	9.882	9.905	9.927	9.950	9.973	9.995	10.018	10.040	10.063	10.086	10.108
480	10.108	10.131	10.153	10.176	10.199	10.221	10.244	10.267	10.289	10.312	10.334
490	10.334	10.357	10.380	10.402	10.425	10.448	10.471	10.493	10.516	10.539	10.561
500	10.561	10.584	10.607	10.629	10.652	10.675	10.698	10.720	10.743	10.766	10.789
510	10.789	10.811	10.834	10.857	10.880	10.903	10.925	10.948	10.971	10.994	11.017
520	11.017	11.039	11.062	11.085	11.108	11.131	11.154	11.176	11.199	11.222	11.245
530	11.245	11.268	11.291	11.313	11.336	11.359	11.382	11.405	11.428	11.451	11.474
540	11.474	11.497	11.519	11.542	11.565	11.588	11.611	11.634	11.657	11.680	11.703

°F	0	1	2	3	4	5	6	7	8	9	10
550	11.703	11.726	11.749	11.772	11.795	11.818	11.841	11.864	11.887	11.910	11.933
560	11.933	11.956	11.978	12.001	12.024	12.047	12.070	12.093	12.116	12.140	12.163
570	12.163	12.186	12.209	12.232	12.255	12.278	12.301	12.324	12.347	12.370	12.393
580	12.393	12.416	12.439	12.462	12.485	12.508	12.531	12.554	12.577	12.600	12.624
590	12.624	12.647	12.670	12.693	12.716	12.739	12.762	12.785	12.808	12.831	12.855
600	12.855	12.878	12.901	12.924	12.947	12.970	12.993	13.016	13.040	13.063	13.086
610	13.086	13.109	13.132	13.155	13.179	13.202	13.225	13.248	13.271	13.294	13.318
620	13.318	13.341	13.364	13.387	13.410	13.433	13.457	13.480	13.503	13.526	13.549
630	13.549	13.573	13.596	13.619	13.642	13.665	13.689	13.712	13.735	13.758	13.782
640	13.782	13.805	13.828	13.851	13.874	13.898	13.921	13.944	13.967	13.991	14.014
650	14.014	14.037	14.060	14.084	14.107	14.130	14.154	14.177	14.200	14.223	14.247
660	14.247	14.270	14.293	14.316	14.340	14.363	14.386	14.410	14.433	14.456	14.479
670	14.479	14.503	14.526	14.549	14.573	14.596	14.619	14.643	14.666	14.689	14.713
680	14.713	14.736	14.759	14.783	14.806	14.829	14.853	14.876	14.899	14.923	14.946
690	14.946	14.969	14.993	15.016	15.039	15.063	15.086	15.109	15.133	15.156	15.179
700	15.179	15.203	15.226	15.250	15.273	15.296	15.320	15.343	15.366	15.390	15.413
710	15.413	15.437	15.460	15.483	15.507	15.530	15.554	15.577	15.600	15.624	15.647
720	15.647	15.671	15.694	15.717	15.741	15.764	15.788	15.811	15.834	15.858	15.881
730	15.881	15.905	15.928	15.952	15.975	15.998	16.022	16.045	16.069	16.092	16.116
740	16.116	16.139	16.163	16.186	16.209	16.233	16.256	16.280	16.303	16.327	16.350
750	16.350	16.374	16.397	16.421	16.444	16.468	16.491	16.514	16.538	16.561	16.585
760	16.585	16.608	16.632	16.655	16.679	16.702	16.726	16.749	16.773	16.796	16.820
770	16.820	16.843	16.867	16.890	16.914	16.937	16.961	16.984	17.008	17.031	17.055
780	17.055	17.078	17.102	17.125	17.149	17.173	17.196	17.220	17.243	17.267	17.290
790	17.290	17.314	17.337	17.361	17.384	17.408	17.431	17.455	17.478	17.502	17.526
800	17.526	17.549	17.573	17.596	17.620	17.643	17.667	17.690	17.714	17.738	17.761
810	17.761	17.785	17.808	17.832	17.855	17.879	17.902	17.926	17.950	17.973	17.997
820	17.997	18.020	18.044	18.068	18.091	18.115	18.138	18.162	18.185	18.209	18.233
830	18.233	18.256	18.280	18.303	18.327	18.351	18.374	18.398	18.421	18.445	18.469
840	18.469	18.492	18.516	18.539	18.563	18.587	18.610	18.634	18.657	18.681	18.705
850	18.705	18.728	18.752	18.776	18.799	18.823	18.846	18.870	18.894	18.917	18.941
860	18.941	18.965	18.988	19.012	19.035	19.059	19.083	19.106	19.130	19.154	19.177
870	19.177	19.201	19.224	19.248	19.272	19.295	19.319	19.343	19.366	19.390	19.414
880	19.414	19.437	19.461	19.485	19.508	19.532	19.556	19.579	19.603	19.626	19.650
890	19.650	19.674	19.697	19.721	19.745	19.768	19.792	19.816	19.839	19.863	19.887
900	19.887	19.910	19.934	19.958	19.981	20.005	20.029	20.052	20.076	20.100	20.123
910	20.123	20.147	20.171	20.194	20.218	20.242	20.265	20.289	20.313	20.336	20.360
920	20.360	20.384	20.407	20.431	20.455	20.479	20.502	20.526	20.550	20.573	20.597
930	20.597	20.621	20.644	20.668	20.692	20.715	20.739	20.763	20.786	20.810	20.834
940	20.834	20.857	20.881	20.905	20.929	20.952	20.976	21.000	21.023	21.047	21.071
950	21.071	21.094	21.118	21.142	21.165	21.189	21.213	21.236	21.260	21.284	21.308
960	21.308	21.331	21.355	21.379	21.402	21.426	21.450	21.473	21.497	21.521	21.544
970	21.544	21.568	21.592	21.616	21.639	21.663	21.687	21.710	21.734	21.758	21.781
980	21.781	21.805	21.829	21.852	21.876	21.900	21.924	21.947	21.971	21.995	22.018
990	22.018	22.042	22.066	22.089	22.113	22.137	22.160	22.184	22.208	22.232	22.255
1000	22.255	22.279	22.303	22.326	22.350	22.374	22.397	22.421	22.445	22.468	22.492
1010	22.492	22.516	22.540	22.563	22.587	22.611	22.634	22.658	22.682	22.705	22.729
1020	22.729	22.753	22.776	22.800	22.824	22.847	22.871	22.895	22.919	22.942	22.966
1030	22.966	22.990	23.013	23.037	23.061	23.084	23.108	23.132	23.155	23.179	23.203
1040	23.203	23.226	23.250	23.274	23.297	23.321	23.345	23.368	23.392	23.416	23.439
1050	23.439	23.463	23.487	23.510	23.534	23.558	23.581	23.605	23.629	23.652	23.676
1060	23.676	23.700	23.723	23.747	23.771	23.794	23.818	23.842	23.865	23.889	23.913
1070	23.913	23.936	23.960	23.984	24.007	24.031	24.055	24.078	24.102	24.126	24.149
1080	24.149	24.173	24.197	24.220	24.244	24.267	24.291	24.315	24.338	24.362	24.386
1090	24.386	24.409	24.433	24.457	24.480	24.504	24.527	24.551	24.575	24.598	24.622
1100	24.622	24.646	24.669	24.693	24.717	24.740	24.764	24.787	24.811	24.835	24.858
1110	24.858	24.882	24.905	24.929	24.953	24.976	25.000	25.024	25.047	25.071	25.094
1120	25.094	25.118	25.142	25.165	25.189	25.212	25.236	25.260	25.283	25.307	25.330
1130	25.330	25.354	25.377	25.401	25.425	25.448	25.472	25.495	25.519	25.543	25.566
1140	25.566	25.590	25.613	25.637	25.660	25.684	25.708	25.731	25.755	25.778	25.802
1150	25.802	25.825	25.849	25.873	25.896	25.920	25.943	25.967	25.990	26.014	26.037
1160	26.037	26.061	26.084	26.108	26.132	26.155	26.179	26.202	26.226	26.249	26.273
1170	26.273	26.296	26.320	26.343	26.367	26.390	26.414	26.437	26.461	26.484	26.508
1180	26.508	26.532	26.555	26.579	26.602	26.626	26.649	26.673	26.696	26.720	26.743
1190	26.743	26.767	26.790	26.814	26.837	26.861	26.884	26.907	26.931	26.954	26.978
1200	26.978	27.001	27.025	27.048	27.072	27.095	27.119	27.142	27.166	27.189	27.213
1210	27.213	27.236	27.259	27.283	27.306	27.330	27.353	27.377	27.400	27.424	27.447
1220	27.447	27.471	27.494	27.517	27.541	27.564	27.588	27.611	27.635	27.658	27.681
1230	27.681	27.705	27.728	27.752	27.775	27.798	27.822	27.845	27.869	27.892	27.915
1240	27.915	27.939	27.962	27.986	28.009	28.032	28.056	28.079	28.103	28.126	28.149
1250	28.149	28.173	28.196	28.219	28.243	28.266	28.289	28.313	28.336	28.360	28.383
1260	28.383	28.406	28.430	28.453	28.476	28.500	28.523	28.546	28.570	28.593	28.616
1270	28.616	28.640	28.663	28.686	28.710	28.733	28.756	28.780	28.803	28.826	28.849
1280	28.849	28.873	28.896	28.919	28.943	28.966	28.989	29.013	29.036	29.059	29.082
1290	29.082	29.106	29.129	29.152	29.176	29.199	29.222	29.245	29.269	29.292	29.315
1300	29.315	29.338	29.362	29.385	29.408	29.431	29.455	29.478	29.501	29.524	29.548
1310	29.548	29.571	29.594	29.617	29.640	29.664	29.687	29.710	29.733	29.757	29.780
1320	29.780	29.803	29.826	29.849	29.873	29.896	29.919	29.942	29.965	29.989	30.012
1330	30.012	30.035	30.058	30.081	30.104	30.128	30.151	30.174	30.197	30.220	30.243
1340	30.243	30.267	30.290	30.313	30.336	30.359	30.382	30.405	30.429	30.452	30.475

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com



Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type K °F (-328 to 2282°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
1350	30.475	30.498	30.521	30.544	30.567	30.590	30.613	30.637	30.660	30.683	30.706
1360	30.706	30.729	30.752	30.775	30.798	30.821	30.844	30.868	30.891	30.914	30.937
1370	30.937	30.960	30.983	31.006	31.029	31.052	31.075	31.098	31.121	31.144	31.167
1380	31.167	31.190	31.213	31.236	31.260	31.283	31.306	31.329	31.352	31.375	31.398
1390	31.398	31.421	31.444	31.467	31.490	31.513	31.536	31.559	31.582	31.605	31.628
1400	31.628	31.651	31.674	31.697	31.720	31.743	31.766	31.789	31.812	31.834	31.857
1410	31.857	31.880	31.903	31.926	31.949	31.972	31.995	32.018	32.041	32.064	32.087
1420	32.087	32.110	32.133	32.156	32.179	32.202	32.224	32.247	32.270	32.293	32.316
1430	32.316	32.339	32.362	32.385	32.408	32.431	32.453	32.476	32.499	32.522	32.545
1440	32.545	32.568	32.591	32.614	32.636	32.659	32.682	32.705	32.728	32.751	32.774
1450	32.774	32.796	32.819	32.842	32.865	32.888	32.911	32.933	32.956	32.979	33.002
1460	33.002	33.025	33.047	33.070	33.093	33.116	33.139	33.161	33.184	33.207	33.230
1470	33.230	33.253	33.275	33.298	33.321	33.344	33.366	33.389	33.412	33.435	33.458
1480	33.458	33.480	33.503	33.526	33.548	33.571	33.594	33.617	33.639	33.662	33.685
1490	33.685	33.708	33.730	33.753	33.776	33.798	33.821	33.844	33.867	33.889	33.912
1500	33.912	33.935	33.957	33.980	34.003	34.025	34.048	34.071	34.093	34.116	34.139
1510	34.139	34.161	34.184	34.207	34.229	34.252	34.275	34.297	34.320	34.343	34.365
1520	34.365	34.388	34.410	34.433	34.456	34.478	34.501	34.524	34.546	34.569	34.591
1530	34.591	34.614	34.637	34.659	34.682	34.704	34.727	34.750	34.772	34.795	34.817
1540	34.817	34.840	34.862	34.885	34.908	34.930	34.953	34.975	34.998	35.020	35.043
1550	35.043	35.065	35.088	35.110	35.133	35.156	35.178	35.201	35.223	35.246	35.268
1560	35.268	35.291	35.313	35.336	35.358	35.381	35.403	35.426	35.448	35.471	35.493
1570	35.493	35.516	35.538	35.560	35.583	35.605	35.628	35.650	35.673	35.695	35.718
1580	35.718	35.740	35.763	35.785	35.807	35.830	35.852	35.875	35.897	35.920	35.942
1590	35.942	35.964	35.987	36.009	36.032	36.054	36.076	36.099	36.121	36.144	36.166
1600	36.166	36.188	36.211	36.233	36.256	36.278	36.300	36.323	36.345	36.367	36.390
1610	36.390	36.412	36.434	36.457	36.479	36.501	36.524	36.546	36.568	36.591	36.613
1620	36.613	36.635	36.658	36.680	36.702	36.725	36.747	36.769	36.792	36.814	36.836
1630	36.836	36.859	36.881	36.903	36.925	36.948	36.970	36.992	37.014	37.037	37.059
1640	37.059	37.081	37.104	37.126	37.148	37.170	37.193	37.215	37.237	37.259	37.281
1650	37.281	37.304	37.326	37.348	37.370	37.393	37.415	37.437	37.459	37.481	37.504
1660	37.504	37.526	37.548	37.570	37.592	37.615	37.637	37.659	37.681	37.703	37.725
1670	37.725	37.748	37.770	37.792	37.814	37.836	37.858	37.881	37.903	37.925	37.947
1680	37.947	37.969	37.991	38.013	38.036	38.058	38.080	38.102	38.124	38.146	38.168
1690	38.168	38.190	38.212	38.235	38.257	38.279	38.301	38.323	38.345	38.367	38.389
1700	38.389	38.411	38.433	38.455	38.477	38.499	38.522	38.544	38.566	38.588	38.610
1710	38.610	38.632	38.654	38.676	38.698	38.720	38.742	38.764	38.786	38.808	38.830
1720	38.830	38.852	38.874	38.896	38.918	38.940	38.962	38.984	39.006	39.028	39.050
1730	39.050	39.072	39.094	39.116	39.138	39.160	39.182	39.204	39.226	39.248	39.270
1740	39.270	39.292	39.314	39.335	39.357	39.379	39.401	39.423	39.445	39.467	39.489
1750	39.489	39.511	39.533	39.555	39.577	39.599	39.620	39.642	39.664	39.686	39.708
1760	39.708	39.730	39.752	39.774	39.796	39.817	39.839	39.861	39.883	39.905	39.927
1770	39.927	39.949	39.970	39.992	40.014	40.036	40.058	40.080	40.101	40.123	40.145
1780	40.145	40.167	40.189	40.211	40.232	40.254	40.276	40.298	40.320	40.341	40.363
1790	40.363	40.385	40.407	40.429	40.450	40.472	40.494	40.516	40.537	40.559	40.581
1800	40.581	40.603	40.624	40.646	40.668	40.690	40.711	40.733	40.755	40.777	40.798
1810	40.798	40.820	40.842	40.864	40.885	40.907	40.929	40.950	40.972	40.994	41.015
1820	41.015	41.037	41.059	41.081	41.102	41.124	41.146	41.167	41.189	41.211	41.232
1830	41.232	41.254	41.276	41.297	41.319	41.341	41.362	41.384	41.405	41.427	41.449
1840	41.449	41.470	41.492	41.514	41.535	41.557	41.578	41.600	41.622	41.643	41.665
1850	41.665	41.686	41.708	41.730	41.751	41.773	41.794	41.816	41.838	41.859	41.881
1860	41.881	41.902	41.924	41.945	41.967	41.988	42.010	42.032	42.053	42.075	42.096
1870	42.096	42.118	42.139	42.161	42.182	42.204	42.225	42.247	42.268	42.290	42.311
1880	42.311	42.333	42.354	42.376	42.397	42.419	42.440	42.462	42.483	42.505	42.526
1890	42.526	42.548	42.569	42.591	42.612	42.633	42.655	42.676	42.698	42.719	42.741
1900	42.741	42.762	42.783	42.805	42.826	42.848	42.869	42.891	42.912	42.933	42.955
1910	42.955	42.976	42.998	43.019	43.040	43.062	43.083	43.104	43.126	43.147	43.169
1920	43.169	43.190	43.211	43.233	43.254	43.275	43.297	43.318	43.339	43.361	43.382
1930	43.382	43.403	43.425	43.446	43.467	43.489	43.510	43.531	43.552	43.574	43.595
1940	43.595	43.616	43.638	43.659	43.680	43.701	43.723	43.744	43.765	43.787	43.808
1950	43.808	43.829	43.850	43.872	43.893	43.914	43.935	43.957	43.978	43.999	44.020
1960	44.020	44.041	44.063	44.084	44.105	44.126	44.147	44.169	44.190	44.211	44.232
1970	44.232	44.253	44.275	44.296	44.317	44.338	44.359	44.380	44.402	44.423	44.444
1980	44.444	44.465	44.486	44.507	44.528	44.550	44.571	44.592	44.613	44.634	44.655
1990	44.655	44.676	44.697	44.719	44.740	44.761	44.782	44.803	44.824	44.845	44.866
2000	44.866	44.887	44.908	44.929	44.950	44.971	44.992	45.014	45.035	45.056	45.077
2010	45.077	45.098	45.119	45.140	45.161	45.182	45.203	45.224	45.245	45.266	45.287
2020	45.287	45.308	45.329	45.350	45.371	45.392	45.413	45.434	45.455	45.476	45.497
2030	45.497	45.518	45.539	45.560	45.580	45.601	45.622	45.643	45.664	45.685	45.706
2040	45.706	45.727	45.748	45.769	45.790	45.811	45.832	45.852	45.873	45.894	45.915
2050	45.915	45.936	45.957	45.978	45.999	46.019	46.040	46.061	46.082	46.103	46.124
2060	46.124	46.145	46.165	46.186	46.207	46.228	46.249	46.269	46.290	46.311	46.332
2070	46.332	46.353	46.373	46.394	46.415	46.436	46.457	46.477	46.498	46.519	46.540
2080	46.540	46.560	46.581	46.602	46.623	46.643	46.664	46.685	46.706	46.726	46.747
2090	46.747	46.768	46.789	46.809	46.830	46.851	46.871	46.892	46.913	46.933	46.954
2100	46.954	46.975	46.995	47.016	47.037	47.057	47.078	47.099	47.119	47.140	47.161
2110	47.161	47.181	47.202	47.223	47.243	47.264	47.284	47.305	47.326	47.346	47.367
2120	47.367	47.387	47.408	47.429	47.449	47.470	47.490	47.511	47.531	47.552	47.573
2130	47.573	47.593	47.614	47.634	47.655	47.675	47.696	47.716	47.737	47.757	47.778
2140	47.778	47.798	47.819	47.839	47.860	47.880	47.901	47.921	47.942	47.962	47.983
2150	47.983	48.003	48.024	48.044	48.065	48.085	48.105	48.126	48.146	48.167	48.187
2160	48.187	48.208	48.228	48.248	48.269	48.289	48.310	48.330	48.350	48.371	48.391
2170	48.391	48.411	48.432	48.452	48.473	48.493	48.513	48.534	48.554	48.574	48.595
2180	48.595	48.615	48.635	48.656	48.676	48.696	48.717	48.737	48.757	48.777	48.798
2190	48.798	48.818	48.838	48.859	48.879	48.899	48.919	48.940	48.960	48.980	49.000
2200	49.000	49.021	49.041	49.061	49.081	49.101	49.122	49.142	49.162	49.182	49.202
2210	49.202	49.223	49.243	49.263	49.283	49.303	49.323	49.344	49.364	49.384	49.404
2220	49.404	49.424	49.444	49.465	49.485	49.505	49.525	49.545	49.565	49.585	49.605
2230	49.605	49.625	49.645	49.666	49.686	49.706	49.726	49.746	49.766	49.786	49.806
2240	49.806	49.826	49.846	49.866	49.886	49.906	49.926	49.946	49.966	49.986	50.006
2250	50.006	50.026	50.046	50.066	50.086	50.106	50.126	50.146	50.166	50.186	50.206
2260	50.206	50.226	50.246	50.266	50.286	50.306	50.326	50.346	50.366	50.385	50.405
2270	50.405	50.425	50.445	50.465	50.485	50.505	50.525	50.545	50.564	50.584	50.604
2280	50.604	50.624	50.644	50.664	50.684	50.703	50.723	50.743	50.763	50.783	50.802
2290	50.802	50.822	50.842	50.862	50.882	50.901	50.921	50.941	50.961	50.981	51.000
2300	51.000	51.020	51.040	51.060	51.079	51.099	51.119	51.139	51.158	51.178	51.198
2310	51.198	51.217	51.237	51.257	51.276	51.296	51.316	51.336	51.355	51.375	51.395
2320	51.395	51.414	51.434	51.453	51.473	51.493	51.512	51.532	51.552	51.571	51.591
2330	51.591	51.611	51.630	51.650	51.669	51.689	51.708	51.728	51.748	51.767	51.787
2340	51.787	51.806	51.826	51.845	51.865	51.885	51.904	51.924	51.943	51.963	51.982
2350	51.982	52.002	52.021	52.041	52.060	52.080	52.099	52.119	52.138	52.158	52.177
2360	52.177	52.197	52.216	52.235	52.255	52.274	52.294	52.313	52.333	52.352	52.371
2370	52.371	52.391	52.410	52.430	52.449	52.468	52.488	52.507	52.527	52.546	52.565
2380	52.565	52.585	52.604	52.623	52.643	52.662	52.681	52.701	52.720	52.739	52.759
2390	52.759	52.778	52.797	52.817	52.836	52.855	52.875	52.894	52.913	52.932	52.952
2400	52.952	52.971	52.990	53.010	53.029	53.048	53.067	53.087	53.106	53.125	53.144
2410	53.144	53.163	53.183	53.202	53.221	53.240	53.260	53.279	53.298	53.317	53.336
2420	53.336	53.355	53.375	53.394	53.413	53.432	53.451	53.470	53.490	53.509	53.528
2430	53.528	53.547	53.566	53.585	53.604	53.623	53.643	53.662	53.681	53.700	53.719
2440	53.719	53.738	53.757	53.776	53.795	53.814	53.833	53.852	53.871	53.890	53.910
2450	53.910	53.929	53.948	53.967	53.986	54.005	54.024	54.043	54.062	54.081	54.100
2460	54.100	54.119	54.138	54.157	54.176	54.195	54.214	54.233	54.252	54.271	54.289
2470	54.289	54.308	54.327	54.346	54.365	54.384	54.403	54.422	54.441	54.460	54.479
2480	54.479	54.498	54.517	54.536	54.554	54.573	54.592	54.611	54.630	54.649	54.668
2490	54.668	54.687	54.705	54.724	54.743	54.762	54.781	54.800	54.819	54.837	54.856
2500	54.856	54.875									

Type N °F (-450 to 2372°F)

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-450	-4.344										
-440	-4.339	-4.340	-4.340	-4.341	-4.341	-4.342	-4.342	-4.343	-4.343	-4.344	-4.344
-430	-4.330	-4.331	-4.332	-4.333	-4.334	-4.335	-4.336	-4.337	-4.337	-4.338	-4.339
-420	-4.316	-4.318	-4.319	-4.321	-4.322	-4.324	-4.325	-4.326	-4.327	-4.329	-4.330
-410	-4.299	-4.301	-4.303	-4.305	-4.306	-4.308	-4.310	-4.312	-4.313	-4.315	-4.316
-400	-4.277	-4.279	-4.282	-4.284	-4.286	-4.288	-4.291	-4.293	-4.295	-4.297	-4.299
-390	-4.251	-4.254	-4.256	-4.259	-4.262	-4.264	-4.267	-4.270	-4.272	-4.275	-4.277
-380	-4.220	-4.223	-4.226	-4.230	-4.233	-4.236	-4.239	-4.242	-4.245	-4.248	-4.251
-370	-4.185	-4.189	-4.192	-4.196	-4.199	-4.203	-4.206	-4.210	-4.213	-4.217	-4.220
-360	-4.145	-4.150	-4.154	-4.158	-4.162	-4.166	-4.170	-4.174	-4.177	-4.181	-4.185
-350	-4.102	-4.106	-4.111	-4.115	-4.120	-4.124	-4.128	-4.133	-4.137	-4.141	-4.145
-340	-4.054	-4.059	-4.064	-4.068	-4.073	-4.078	-4.083	-4.088	-4.092	-4.097	-4.102
-330	-4.001	-4.007	-4.012	-4.017	-4.023	-4.028	-4.033	-4.038	-4.043	-4.049	-4.054
-320	-3.945	-3.951	-3.957	-3.962	-3.968	-3.974	-3.979	-3.985	-3.990	-3.996	-4.001
-310	-3.884	-3.891	-3.897	-3.903	-3.909	-3.915	-3.921	-3.927	-3.933	-3.939	-3.945
-300	-3.820	-3.827	-3.833	-3.840	-3.846	-3.853	-3.859	-3.866	-3.872	-3.878	-3.884
-290	-3.752	-3.759	-3.766	-3.773	-3.779	-3.786	-3.793	-3.800	-3.807	-3.813	-3.820
-280	-3.679	-3.687	-3.694	-3.702	-3.709	-3.716	-3.723	-3.730	-3.738	-3.745	-3.752
-270	-3.604	-3.611	-3.619	-3.627	-3.634	-3.642	-3.650	-3.657	-3.665	-3.672	-3.679
-260	-3.524	-3.532	-3.540	-3.548	-3.556	-3.564	-3.572	-3.580	-3.588	-3.596	-3.604
-250	-3.441	-3.449	-3.458	-3.466	-3.474	-3.483	-3.491	-3.499	-3.508	-3.516	-3.524
-240	-3.354	-3.363	-3.372	-3.380	-3.389	-3.398	-3.407	-3.415	-3.424	-3.432	-3.441
-230	-3.264	-3.273	-3.282	-3.291	-3.300	-3.309	-3.318	-3.327	-3.336	-3.345	-3.354
-220	-3.171	-3.180	-3.189	-3.199	-3.208	-3.218	-3.227	-3.236	-3.246	-3.255	-3.264
-210	-3.074	-3.084	-3.093	-3.103	-3.113	-3.123	-3.132	-3.142	-3.151	-3.161	-3.171
-200	-2.974	-2.984	-2.994	-3.004	-3.014	-3.024	-3.034	-3.044	-3.054	-3.064	-3.074
-190	-2.871	-2.881	-2.892	-2.902	-2.912	-2.923	-2.933	-2.943	-2.954	-2.964	-2.974
-180	-2.765	-2.776	-2.786	-2.797	-2.808	-2.818	-2.829	-2.839	-2.850	-2.860	-2.871
-170	-2.656	-2.667	-2.678	-2.689	-2.700	-2.711	-2.722	-2.733	-2.743	-2.754	-2.765
-160	-2.544	-2.556	-2.567	-2.578	-2.589	-2.601	-2.612	-2.623	-2.634	-2.645	-2.656
-150	-2.430	-2.442	-2.453	-2.465	-2.476	-2.488	-2.499	-2.510	-2.522	-2.533	-2.544

Make sure your new instrument is certified and "ready to use" the moment you receive it. Ask us to calibrate it to meet ISO 9002 and Guide 25/17025 requirements

CalibrateFirst!

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type N °F (-450 to 2372°F) cont.

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-140	-2.313	-2.325	-2.337	-2.348	-2.360	-2.372	-2.384	-2.395	-2.407	-2.418	-2.430
-130	-2.193	-2.206	-2.218	-2.230	-2.242	-2.254	-2.265	-2.277	-2.289	-2.301	-2.313
-120	-2.072	-2.084	-2.096	-2.108	-2.121	-2.133	-2.145	-2.157	-2.169	-2.181	-2.193
-110	-1.947	-1.960	-1.972	-1.985	-1.997	-2.010	-2.022	-2.035	-2.047	-2.059	-2.072
-100	-1.821	-1.834	-1.846	-1.859	-1.872	-1.884	-1.897	-1.910	-1.922	-1.935	-1.947
-90	-1.692	-1.705	-1.718	-1.731	-1.744	-1.757	-1.770	-1.783	-1.795	-1.808	-1.821
-80	-1.562	-1.575	-1.588	-1.601	-1.614	-1.627	-1.640	-1.653	-1.666	-1.679	-1.692
-70	-1.430	-1.443	-1.456	-1.470	-1.483	-1.496	-1.509	-1.522	-1.536	-1.549	-1.562
-60	-1.296	-1.309	-1.323	-1.336	-1.349	-1.363	-1.376	-1.390	-1.403	-1.416	-1.430
-50	-1.160	-1.174	-1.187	-1.201	-1.214	-1.228	-1.242	-1.255	-1.269	-1.282	-1.296
-40	-1.023	-1.037	-1.050	-1.064	-1.078	-1.092	-1.105	-1.119	-1.133	-1.146	-1.160
-30	-0.884	-0.898	-0.912	-0.926	-0.940	-0.954	-0.967	-0.981	-0.995	-1.009	-1.023
-20	-0.744	-0.758	-0.772	-0.786	-0.800	-0.814	-0.828	-0.842	-0.856	-0.870	-0.884
-10	-0.603	-0.617	-0.632	-0.646	-0.660	-0.674	-0.688	-0.702	-0.716	-0.730	-0.744
0	-0.461	-0.475	-0.490	-0.504	-0.518	-0.532	-0.546	-0.561	-0.575	-0.589	-0.603

°F	0	1	2	3	4	5	6	7	8	9	10
0	-0.461	-0.447	-0.433	-0.418	-0.404	-0.390	-0.375	-0.361	-0.347	-0.332	-0.318
10	-0.318	-0.304	-0.289	-0.275	-0.260	-0.246	-0.232	-0.217	-0.203	-0.188	-0.174
20	-0.174	-0.159	-0.145	-0.131	-0.116	-0.102	-0.087	-0.073	-0.058	-0.044	-0.029
30	-0.029	-0.015	0.000	0.014	0.029	0.043	0.058	0.072	0.087	0.101	0.116
40	0.116	0.130	0.145	0.159	0.174	0.188	0.203	0.217	0.232	0.246	0.261
50	0.261	0.275	0.290	0.305	0.319	0.334	0.349	0.363	0.378	0.393	0.407
60	0.407	0.422	0.437	0.451	0.466	0.481	0.496	0.510	0.525	0.540	0.555
70	0.555	0.570	0.584	0.599	0.614	0.629	0.644	0.659	0.674	0.688	0.703
80	0.703	0.718	0.733	0.748	0.763	0.778	0.793	0.808	0.823	0.838	0.853
90	0.853	0.868	0.883	0.898	0.913	0.928	0.943	0.958	0.974	0.989	1.004
100	1.004	1.019	1.034	1.049	1.065	1.080	1.095	1.110	1.125	1.141	1.156
110	1.156	1.171	1.186	1.202	1.217	1.232	1.248	1.263	1.278	1.294	1.309
120	1.309	1.324	1.340	1.355	1.371	1.386	1.402	1.417	1.432	1.448	1.463
130	1.463	1.479	1.494	1.510	1.525	1.541	1.557	1.572	1.588	1.603	1.619
140	1.619	1.635	1.650	1.666	1.682	1.697	1.713	1.729	1.744	1.760	1.776
150	1.776	1.791	1.807	1.823	1.839	1.855	1.870	1.886	1.902	1.918	1.934
160	1.934	1.950	1.965	1.981	1.997	2.013	2.029	2.045	2.061	2.077	2.093
170	2.093	2.109	2.125	2.141	2.157	2.173	2.189	2.205	2.221	2.237	2.253
180	2.253	2.269	2.285	2.301	2.318	2.334	2.350	2.366	2.382	2.398	2.415
190	2.415	2.431	2.447	2.463	2.480	2.496	2.512	2.528	2.545	2.561	2.577
200	2.577	2.594	2.610	2.626	2.643	2.659	2.676	2.692	2.708	2.725	2.741
210	2.741	2.758	2.774	2.791	2.807	2.824	2.840	2.857	2.873	2.890	2.906
220	2.906	2.923	2.939	2.956	2.973	2.989	3.006	3.022	3.039	3.056	3.072
230	3.072	3.089	3.106	3.123	3.139	3.156	3.173	3.189	3.206	3.223	3.240
240	3.240	3.257	3.273	3.290	3.307	3.324	3.341	3.358	3.374	3.391	3.408
250	3.408	3.425	3.442	3.459	3.476	3.493	3.510	3.527	3.544	3.561	3.578
260	3.578	3.595	3.612	3.629	3.646	3.663	3.680	3.697	3.714	3.731	3.748
270	3.748	3.766	3.783	3.800	3.817	3.834	3.851	3.869	3.886	3.903	3.920
280	3.920	3.937	3.955	3.972	3.989	4.007	4.024	4.041	4.058	4.076	4.093
290	4.093	4.110	4.128	4.145	4.162	4.180	4.197	4.215	4.232	4.250	4.267
300	4.267	4.284	4.302	4.319	4.337	4.354	4.372	4.389	4.407	4.424	4.442
310	4.442	4.459	4.477	4.495	4.512	4.530	4.547	4.565	4.583	4.600	4.618
320	4.618	4.635	4.653	4.671	4.688	4.706	4.724	4.742	4.759	4.777	4.795
330	4.795	4.813	4.830	4.848	4.866	4.884	4.901	4.919	4.937	4.955	4.973
340	4.973	4.991	5.008	5.026	5.044	5.062	5.080	5.098	5.116	5.134	5.152
350	5.152	5.170	5.188	5.206	5.224	5.241	5.259	5.277	5.295	5.314	5.332
360	5.332	5.350	5.368	5.386	5.404	5.422	5.440	5.458	5.476	5.494	5.512
370	5.512	5.531	5.549	5.567	5.585	5.603	5.621	5.639	5.658	5.676	5.694
380	5.694	5.712	5.731	5.749	5.767	5.785	5.804	5.822	5.840	5.858	5.877
390	5.877	5.895	5.913	5.932	5.950	5.968	5.987	6.005	6.024	6.042	6.060
400	6.060	6.079	6.097	6.116	6.134	6.152	6.171	6.189	6.208	6.226	6.245
410	6.245	6.263	6.282	6.300	6.319	6.337	6.356	6.374	6.393	6.411	6.430
420	6.430	6.449	6.467	6.486	6.504	6.523	6.542	6.560	6.579	6.597	6.616
430	6.616	6.635	6.653	6.672	6.691	6.710	6.728	6.747	6.766	6.784	6.803
440	6.803	6.822	6.841	6.859	6.878	6.897	6.916	6.934	6.953	6.972	6.991
450	6.991	7.010	7.029	7.047	7.066	7.085	7.104	7.123	7.142	7.161	7.179
460	7.179	7.198	7.217	7.236	7.255	7.274	7.293	7.312	7.331	7.350	7.369
470	7.369	7.388	7.407	7.426	7.445	7.464	7.483	7.502	7.521	7.540	7.559
480	7.559	7.578	7.597	7.616	7.635	7.654	7.673	7.692	7.711	7.731	7.750
490	7.750	7.769	7.788	7.807	7.826	7.845	7.865	7.884	7.903	7.922	7.941
500	7.941	7.960	7.980	7.999	8.018	8.037	8.057	8.076	8.095	8.114	8.134
510	8.134	8.153	8.172	8.191	8.211	8.230	8.249	8.269	8.288	8.307	8.327
520	8.327	8.346	8.365	8.385	8.404	8.423	8.443	8.462	8.482	8.501	8.520
530	8.520	8.540	8.559	8.579	8.598	8.617	8.637	8.656	8.676	8.695	8.715
540	8.715	8.734	8.754	8.773	8.793	8.812	8.832	8.851	8.871	8.890	8.910
550	8.910	8.929	8.949	8.968	8.988	9.008	9.027	9.047	9.066	9.086	9.105
560	9.105	9.125	9.145	9.164	9.184	9.204	9.223	9.243	9.262	9.282	9.302
570	9.302	9.321	9.341	9.361	9.381	9.400	9.420	9.440	9.459	9.479	9.499
580	9.499	9.519	9.538	9.558	9.578	9.598	9.617	9.637	9.657	9.677	9.696
590	9.696	9.716	9.736	9.756	9.776	9.795	9.815	9.835	9.855	9.875	9.895

°F	0	1	2	3	4	5	6	7	8	9	10
600	9.895	9.914	9.934	9.954	9.974	9.994	10.014	10.034	10.054	10.073	10.093
610	10.093	10.113	10.133	10.153	10.173	10.193	10.213	10.233	10.253	10.273	10.293
620	10.293	10.313	10.333	10.353	10.373	10.393	10.413	10.433	10.453	10.473	10.493
630	10.493	10.513	10.533	10.553	10.573	10.593	10.613	10.633	10.653	10.673	10.693
640	10.693	10.713	10.733	10.753	10.774	10.794	10.814	10.834	10.854	10.874	10.894
650	10.894	10.914	10.934	10.955	10.975	10.995	11.015	11.035	11.055	11.076	11.096
660	11.096	11.116	11.136	11.156	11.177	11.197	11.217	11.237	11.257	11.278	11.298
670	11.298	11.318	11.338	11.359	11.379	11.399	11.419	11.440	11.460	11.480	11.501
680	11.501	11.521	11.541	11.561	11.582	11.602	11.622	11.643	11.663	11.683	11.704
690	11.704	11.724	11.744	11.765	11.785	11.805	11.826	11.846	11.867	11.887	11.907
700	11.907	11.928	11.948	11.968	11.989	12.009	12.030	12.050	12.071	12.091	12.111
710	12.111	12.132	12.152	12.173	12.193	12.214	12.234	12.255	12.275	12.295	12.316
720	12.316	12.336	12.357	12.377	12.398	12.418	12.439	12.459	12.480	12.500	12.521
730	12.521	12.542	12.562	12.583	12.603	12.624	12.644	12.665	12.685	12.706	12.726
740	12.726	12.747	12.768	12.788	12.809	12.829	12.850	12.871	12.891	12.912	12.932
750	12.932	12.953	12.974	12.994	13.015	13.036	13.056	13.077	13.098	13.118	13.139
760	13.139	13.159	13.180	13.201	13.221	13.242	13.263	13.284	13.304	13.325	13.346
770	13.346	13.366	13.387	13.408	13.428	13.449	13.470	13.491	13.511	13.532	13.553
780	13.553	13.574	13.594	13.615	13.636	13.657	13.677	13.698	13.719	13.740	13.760
790	13.760	13.781	13.802	13.823	13.844	13.864	13.885	13.906	13.927	13.948	13.969
800	13.969	13.989	14.010	14.031	14.052	14.073	14.094	14.114	14.135	14.156	14.177
810	14.177	14.198	14.219	14.240	14.260	14.281	14.302	14.323	14.344	14.365	14.386
820	14.386	14.407	14.428	14.448	14.469	14.490	14.511	14.532	14.553	14.574	14.595
830	14.595	14.616	14.637	14.658	14.679	14.700	14.721	14.742	14.763	14.784	14.804
840	14.804	14.825	14.846	14.867	14.888	14.909	14.930	14.951	14.972	14.993	15.014
850	15.014	15.035	15.056	15.077	15.098	15.119	15.140	15.162	15.183	15.204	15.225
860	15.225	15.246	15.267	15.288	15.309	15.330	15.351	15.372	15.393	15.414	15.435
870	15.435	15.456	15.477	15.498	15.520	15.541	15.562	15.583	15.604	15.625	15.646
880	15.646	15.667	15.688	15.709	15.731	15.752	15.773	15.794	15.815	15.836	15.857
890	15.857	15.878	15.900	15.921	15.942	15.963	15.984	16.005	16.027	16.048	16.069
900	16.069	16.090	16.111	16.132	16.154	16.175	16.196	16.217	16.238	16.260	16.281
910	16.281	16.302	16.323	16.344	16.366	16.387	16.408	16.429	16.450	16.472	16.493
920	16.493	16.514	16.535	16.557	16.578	16.599	16.620	16.642	16.663	16.684	16.705
930	16.705	16.727	16.748	16.769	16.790	16.812	16.833	16.854	16.875	16.897	16.918
940	16.918	16.939	16.961	16.982	17.003	17.025	17.046	17.067	17.088	17.110	17.131
950	17.131	17.152	17.174	17.195	17.216	17.238	17.259	17.280	17.302	17.323	17.344
960	17.344	17.366	17.387	17.408	17.430	17.451	17.472	17.494	17.515	17.536	17.558
970	17.558	17.579	17.601	17.622	17.643	17.665	17.686	17.707	17.729	17.750	17.772
980	17.772	17.793	17.814	17.836	17.857	17.879	17.900	17.921	17.943	17.964	17.986
990	17.986	18.007	18.028	18.050	18.071	18.093	18.114	18.136	18.157	18.178	18.200
1000	18.200	18.221	18.243	18.264	18.286	18.307	18.328	18.350	18.371	18.393	18.414
1010	18.414	18.436	18.457	18.479	18.500	18.522	18.543	18.565	18.586	18.608	18.629
1020	18.629	18.650	18.672	18.693	18.715	18.736	18.758	18.779	18.801	18.822	18.844
1030	18.844	18.865	18.887	18.908	18.930	18.951	18.973	18.994	19.016	19.037	19.059
1040	19.059	19.081	19.102	19.124	19.145	19.167	19.188	19.210	19.231	19.253	19.274
1050	19.274	19.296	19.317	19.339	19.360	19.382	19.404	19.425	19.447	19.468	19.490
1060	19.490	19.511	19.533	19.554	19.576	19.598	19.619	19.641	19.662	19.684	19.705
1070	19.705	19.727	19.749	19.770	19.792	19.813	19.835	19.857	19.878	19.900	19.921
1080	19.921	19.943	19.964	19.986	20.008	20.029	20.051	20.072	20.094	20.116	20.137
1090	20.137	20.159	20.181	20.202	20.224	20.245	20.267	20.289	20.310	20.332	20.353
1100	20.353	20.375	20.397	20.418	20.440	20.462	20.483	20.505	20.527	20.548	20.570
1110	20.570	20.591	20.613	20.635	20.656	20.678	20.700	20.721	20.743	20.765	20.786
1120	20.786	20.808	20.830	20.851	20.873	20.895	20.916	20.938	20.960	20.981	21.003
1130	21.003	21.025	21.046	21.068	21.090	21.111	21.133	21.155	21.176	21.198	21.220
1140	21.220	21.241	21.263	21.285	21.306	21.328	21.350	21.371	21.393	21.415	21.437
1150	21.437	21.458	21.480	21.502	21.523	21.545	21.567	21.588	21.610	21.632	21.654
1160	21.654	21.675	21.697	21.719	21.740	21.762	21.784	21.806	21.827	21.849	21.871
1170	21.871	21.892	21.914	21.936	21.958	21.979	22.001	22.023	22.044	22.066	22.088
1180	22.088	22.110	22.131	22.153	22.175	22.197	22.218	22.240	22.262	22.284	22.305
1190	22.305	22.327	22.349	22.370	22.392	22.414	22.436	22.457	22.479	22.501	22.523
1200	22.523	22.544	22.566	22.588	22.610	22.631	22.653	22.675	22.697	22.718	22.740
1210	22.740	22.762	22.784	22.805	22.827	22.849	22.871	22.893	22.914	22.936	22.958
1220	22.958	22.980	23.001	23.023	23.045	23.067	23.088	23.110	23.132	23.154	23.176
1230	23.176	23.197	23.219	23.241	23.263	23.284	23.306	23.328	23.350	23.372	23.393
1240	23.393	23.415	23.437	23.459	23.480	23.502	23.524	23.546	23.568	23.589	23.611
1250	23.611	23.633	23.655	23.676	23.698	23.720	23.742	23.764	23.785	23.807	23.829
1260	23.829	23.851	23.873	23.894	23.916	23.938	23.960	23.982	24.003	24.025	24.047
1270	24.047	24.069	24.091	24.112	24.134	24.156	24.178	24.200	24.221	24.243	24.265
1280	24.265	24.287	24.309	24.330	24.352	24.374	24.396	24.418	24.439	24.461	24.483
1290	24.483	24.505	24.527	24.548	24.570	24.592	24.614	24.636	24.658	24.679	24.701
1300	24.701	24.723	24.745	24.767	24.788	24.810	24.832	24.854	24.876	24.897	24.919
1310	24.919	24.941	24.963	24.985	25.007	25.028	25.050	25.072	25.094	25.116	25.137
1320	25.137	25.159	25.181	25.203	25.225	25.247	25.268	25.290	25.312	25.334	25.356
1330	25.356	25.377	25.399	25.421	25.443	25.465	25.487	25.508	25.530	25.552	25.574
1340	25.574	25.596	25.618	25.639	25.661	25.683	25.705	25.727	25.748	25.770	25.792

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type N °F (-450 to 2372°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
1350	25.792	25.814	25.836	25.858	25.879	25.901	25.923	25.945	25.967	25.989	26.010
1360	26.010	26.032	26.054	26.076	26.098	26.119	26.141	26.163	26.185	26.207	26.229
1370	26.229	26.250	26.272	26.294	26.316	26.338	26.360	26.381	26.403	26.425	26.447
1380	26.447	26.469	26.491	26.512	26.534	26.556	26.578	26.600	26.622	26.643	26.665
1390	26.665	26.687	26.709	26.731	26.752	26.774	26.796	26.818	26.840	26.862	26.883
1400	26.883	26.905	26.927	26.949	26.971	26.993	27.014	27.036	27.058	27.080	27.102
1410	27.102	27.124	27.145	27.167	27.189	27.211	27.233	27.254	27.276	27.298	27.320
1420	27.320	27.342	27.364	27.385	27.407	27.429	27.451	27.473	27.495	27.516	27.538
1430	27.538	27.560	27.582	27.604	27.625	27.647	27.669	27.691	27.713	27.735	27.756
1440	27.756	27.778	27.800	27.822	27.844	27.866	27.887	27.909	27.931	27.953	27.975
1450	27.975	27.996	28.018	28.040	28.062	28.084	28.105	28.127	28.149	28.171	28.193
1460	28.193	28.215	28.236	28.258	28.280	28.302	28.324	28.345	28.367	28.389	28.411
1470	28.411	28.433	28.455	28.476	28.498	28.520	28.542	28.564	28.585	28.607	28.629
1480	28.629	28.651	28.673	28.694	28.716	28.738	28.760	28.782	28.803	28.825	28.847
1490	28.847	28.869	28.891	28.912	28.934	28.956	28.978	29.000	29.021	29.043	29.065
1500	29.065	29.087	29.109	29.130	29.152	29.174	29.196	29.218	29.239	29.261	29.283
1510	29.283	29.305	29.327	29.348	29.370	29.392	29.414	29.436	29.457	29.479	29.501
1520	29.501	29.523	29.545	29.566	29.588	29.610	29.632	29.653	29.675	29.697	29.719
1530	29.719	29.741	29.762	29.784	29.806	29.828	29.850	29.871	29.893	29.915	29.937
1540	29.937	29.958	29.980	30.002	30.024	30.046	30.067	30.089	30.111	30.133	30.154
1550	30.154	30.176	30.198	30.220	30.242	30.263	30.285	30.307	30.329	30.350	30.372
1560	30.372	30.394	30.416	30.437	30.459	30.481	30.503	30.524	30.546	30.568	30.590
1570	30.590	30.611	30.633	30.655	30.677	30.699	30.720	30.742	30.764	30.786	30.807
1580	30.807	30.829	30.851	30.873	30.894	30.916	30.938	30.960	30.981	31.003	31.025
1590	31.025	31.047	31.068	31.090	31.112	31.133	31.155	31.177	31.199	31.220	31.242
1600	31.242	31.264	31.286	31.307	31.329	31.351	31.373	31.394	31.416	31.438	31.459
1610	31.459	31.481	31.503	31.525	31.546	31.568	31.590	31.612	31.633	31.655	31.677
1620	31.677	31.698	31.720	31.742	31.764	31.785	31.807	31.829	31.850	31.872	31.894
1630	31.894	31.916	31.937	31.959	31.981	32.002	32.024	32.046	32.068	32.089	32.111
1640	32.111	32.133	32.154	32.176	32.198	32.219	32.241	32.263	32.284	32.306	32.328
1650	32.328	32.350	32.371	32.393	32.415	32.436	32.458	32.480	32.501	32.523	32.545
1660	32.545	32.566	32.588	32.610	32.631	32.653	32.675	32.696	32.718	32.740	32.761
1670	32.761	32.783	32.805	32.826	32.848	32.870	32.891	32.913	32.935	32.956	32.978
1680	32.978	33.000	33.021	33.043	33.065	33.086	33.108	33.130	33.151	33.173	33.195
1690	33.195	33.216	33.238	33.260	33.281	33.303	33.325	33.346	33.368	33.389	33.411
1700	33.411	33.433	33.454	33.476	33.498	33.519	33.541	33.563	33.584	33.606	33.627
1710	33.627	33.649	33.671	33.692	33.714	33.736	33.757	33.779	33.800	33.822	33.844
1720	33.844	33.865	33.887	33.908	33.930	33.952	33.973	33.995	34.016	34.038	34.060
1730	34.060	34.081	34.103	34.124	34.146	34.168	34.189	34.211	34.232	34.254	34.276
1740	34.276	34.297	34.319	34.340	34.362	34.384	34.405	34.427	34.448	34.470	34.491
1750	34.491	34.513	34.535	34.556	34.578	34.599	34.621	34.642	34.664	34.686	34.707
1760	34.707	34.729	34.750	34.772	34.793	34.815	34.836	34.858	34.879	34.901	34.923
1770	34.923	34.944	34.966	34.987	35.009	35.030	35.052	35.073	35.095	35.116	35.138
1780	35.138	35.160	35.181	35.203	35.224	35.246	35.267	35.289	35.310	35.332	35.353
1790	35.353	35.375	35.396	35.418	35.439	35.461	35.482	35.504	35.525	35.547	35.568
1800	35.568	35.590	35.611	35.633	35.654	35.676	35.697	35.719	35.740	35.762	35.783
1810	35.783	35.805	35.826	35.848	35.869	35.891	35.912	35.934	35.955	35.977	35.998
1820	35.998	36.019	36.041	36.062	36.084	36.105	36.127	36.148	36.170	36.191	36.213
1830	36.213	36.234	36.256	36.277	36.298	36.320	36.341	36.363	36.384	36.406	36.427
1840	36.427	36.449	36.470	36.491	36.513	36.534	36.556	36.577	36.599	36.620	36.641
1850	36.641	36.663	36.684	36.706	36.727	36.748	36.770	36.791	36.813	36.834	36.855
1860	36.855	36.877	36.898	36.920	36.941	36.962	36.984	37.005	37.027	37.048	37.069
1870	37.069	37.091	37.112	37.134	37.155	37.176	37.198	37.219	37.240	37.262	37.283
1880	37.283	37.305	37.326	37.347	37.369	37.390	37.411	37.433	37.454	37.475	37.497
1890	37.497	37.518	37.539	37.561	37.582	37.603	37.625	37.646	37.667	37.689	37.710
1900	37.710	37.731	37.753	37.774	37.795	37.817	37.838	37.859	37.881	37.902	37.923
1910	37.923	37.945	37.966	37.987	38.009	38.030	38.051	38.073	38.094	38.115	38.136
1920	38.136	38.158	38.179	38.200	38.222	38.243	38.264	38.285	38.307	38.328	38.349
1930	38.349	38.370	38.392	38.413	38.434	38.456	38.477	38.498	38.519	38.541	38.562
1940	38.562	38.583	38.604	38.626	38.647	38.668	38.689	38.711	38.732	38.753	38.774
1950	38.774	38.795	38.817	38.838	38.859	38.880	38.902	38.923	38.944	38.965	38.986
1960	38.986	39.008	39.029	39.050	39.071	39.093	39.114	39.135	39.156	39.177	39.198
1970	39.198	39.220	39.241	39.262	39.283	39.304	39.326	39.347	39.368	39.389	39.410
1980	39.410	39.431	39.453	39.474	39.495	39.516	39.537	39.558	39.580	39.601	39.622
1990	39.622	39.643	39.664	39.685	39.706	39.728	39.749	39.770	39.791	39.812	39.833
2000	39.833	39.854	39.875	39.897	39.918	39.939	39.960	39.981	40.002	40.023	40.044
2010	40.044	40.066	40.087	40.108	40.129	40.150	40.171	40.192	40.213	40.234	40.255
2020	40.255	40.276	40.297	40.319	40.340	40.361	40.382	40.403	40.424	40.445	40.466
2030	40.466	40.487	40.508	40.529	40.550	40.571	40.592	40.613	40.634	40.655	40.677
2040	40.677	40.698	40.719	40.740	40.761	40.782	40.803	40.824	40.845	40.866	40.887
2050	40.887	40.908	40.929	40.950	40.971	40.992	41.013	41.034	41.055	41.076	41.097
2060	41.097	41.118	41.139	41.160	41.181	41.202	41.223	41.244	41.265	41.286	41.307
2070	41.307	41.328	41.349	41.370	41.390	41.411	41.432	41.453	41.474	41.495	41.516
2080	41.516	41.537	41.558	41.579	41.600	41.621	41.642	41.663	41.684	41.705	41.725
2090	41.725	41.746	41.767	41.788	41.809	41.830	41.851	41.872	41.893	41.914	41.935
2100	41.935	41.955	41.976	41.997	42.018	42.039	42.060	42.081	42.102	42.123	42.143
2110	42.143	42.164	42.185	42.206	42.227	42.248	42.269	42.289	42.310	42.331	42.352
2120	42.352	42.373	42.394	42.415	42.435	42.456	42.477	42.498	42.519	42.540	42.560
2130	42.560	42.581	42.602	42.623	42.644	42.664	42.685	42.706	42.727	42.748	42.768
2140	42.768	42.789	42.810	42.831	42.852	42.872	42.893	42.914	42.935	42.956	42.976
2150	42.976	42.997	43.018	43.039	43.059	43.080	43.101	43.122	43.142	43.163	43.184
2160	43.184	43.205	43.225	43.246	43.267	43.288	43.308	43.329	43.350	43.370	43.391
2170	43.391	43.412	43.433	43.453	43.474	43.495	43.515	43.536	43.557	43.578	43.598
2180	43.598	43.619	43.640	43.660	43.681	43.702	43.722	43.743	43.764	43.784	43.805
2190	43.805	43.826	43.846	43.867	43.888	43.908	43.929	43.950	43.970	43.991	44.012
2200	44.012	44.032	44.053	44.073	44.094	44.115	44.135	44.156	44.177	44.197	44.218
2210	44.218	44.238	44.259	44.280	44.300	44.321	44.341	44.362	44.383	44.403	44.424
2220	44.424	44.444	44.465	44.485	44.506	44.527	44.547	44.568	44.588	44.609	44.629
2230	44.629	44.650	44.671	44.691	44.712	44.732	44.753	44.773	44.794	44.814	44.835
2240	44.835	44.855	44.876	44.896	44.917	44.937	44.958	44.978	44.999	45.019	45.040
2250	45.040	45.060	45.081	45.101	45.122	45.142	45.163	45.183	45.204	45.224	45.245
2260	45.245	45.265	45.286	45.306	45.326	45.347	45.367	45.388	45.408	45.429	45.449
2270	45.449	45.469	45.490	45.510	45.531	45.551	45.572	45.592	45.612	45.633	45.653
2280	45.653	45.674	45.694	45.714	45.735	45.755	45.775	45.796	45.816	45.837	45.857
2290	45.857	45.877	45.898	45.918	45.938	45.959	45.979	45.999	46.020	46.040	46.060
2300	46.060	46.081	46.101	46.121	46.142	46.162	46.182	46.202	46.223	46.243	46.263
2310	46.263	46.284	46.304	46.324	46.344	46.365	46.385	46.405	46.425	46.446	46.466
2320	46.466	46.486	46.506	46.527	46.547	46.567	46.587	46.608	46.628	46.648	46.668
2330	46.668	46.688	46.709	46.729	46.749	46.769	46.789	46.810	46.830	46.850	46.870
2340	46.870	46.890	46.910	46.931	46.951	46.971	46.991	47.011	47.031	47.051	47.071
2350	47.071	47.092	47.112	47.132	47.152	47.172	47.192	47.212	47.232	47.252	47.272
2360	47.272	47.292	47.312	47.333	47.353	47.373	47.393	47.413	47.433	47.453	47.473
2370	47.473	47.493	47.513								

Type R °F (32 to 2642°F)

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-50	-0.210										
-40	-0.188	-0.190	-0.192	-0.194	-0.197	-0.199	-0.201	-0.203	-0.205	-0.208	-0.210
-30	-0.165	-0.167	-0.169	-0.172	-0.174	-0.176	-0.179	-0.181	-0.183	-0.185	-0.188
-20	-0.141	-0.143	-0.145	-0.148	-0.150	-0.153	-0.155	-0.158	-0.160	-0.162	-0.165
-10	-0.116	-0.118	-0.121	-0.123	-0.126	-0.128	-0.131	-0.133	-0.136	-0.138	-0.141
0	-0.090	-0.092	-0.095	-0.097	-0.100	-0.103	-0.105	-0.108	-0.110	-0.113	-0.116

°F	0	1	2	3	4	5	6	7	8	9	10
0	-0.090	-0.087	-0.084	-0.082	-0.079	-0.076	-0.073	-0.071	-0.068	-0.065	-0.063
10	-0.063	-0.060	-0.057	-0.054	-0.051	-0.049	-0.046	-0.043	-0.040	-0.037	-0.035
20	-0.035	-0.032	-0.029	-0.026	-0.023	-0.020	-0.017	-0.015	-0.012	-0.009	-0.006
30	-0.006	-0.003	0.000	0.003	0.006	0.009	0.012	0.015	0.018	0.021	0.024
40	0.024	0.027	0.030	0.033	0.036	0.039	0.042	0.045	0.048	0.051	0.054
50	0.054	0.057	0.060	0.064	0.067	0.070	0.073	0.076	0.079	0.082	0.086
60	0.086	0.089	0.092	0.095	0.098	0.102	0.105	0.108	0.111	0.114	0.118
70	0.118	0.121	0.124	0.127	0.131	0.134	0.137	0.141	0.144	0.147	0.151
80	0.151	0.154	0.157	0.161	0.164	0.167	0.171	0.174	0.177	0.181	0.184
90	0.184	0.188	0.191	0.194	0.198	0.201	0.205	0.208	0.212	0.215	0.218
100	0.218	0.222	0.225	0.229	0.232	0.236	0.239	0.243	0.246	0.250	0.254
110	0.254	0.257	0.261	0.264	0.268	0.271	0.275	0.278	0.282	0.286	0.289
120	0.289	0.293	0.296	0.300	0.304	0.307	0.311	0.315	0.318	0.322	0.326
130	0.326	0.329	0.333	0.337	0.340	0.344	0.348	0.352	0.355	0.359	0.363
140	0.363	0.366	0.370	0.374	0.378	0.382	0.385	0.389	0.393	0.397	0.400
150	0.400	0.404	0.408	0.412	0.416	0.420	0.423	0.427	0.431	0.435	0.439
160	0.439	0.443	0.447	0.450	0.454	0.458	0.462	0.466	0.470	0.474	0.478
170	0.478	0.482	0.486	0.489	0.493	0.497	0.501	0.505	0.509	0.513	0.517
180	0.517	0.521	0.525	0.529	0.533	0.537	0.541	0.545	0.549	0.553	0.557
190	0.557	0.561	0.565	0.569	0.573	0.578	0.582	0.586	0.590	0.594	0.598
200	0.598	0.602	0.606	0.610	0.614	0.618	0.623	0.627	0.631	0.635	0.639
210	0.639	0.643	0.647	0.652	0.656	0.660	0.664	0.668	0.672	0.677	0.681
220	0.681	0.685	0.689	0.693	0.698	0.702	0.706	0.710	0.715	0.719	0.723
230	0.723	0.727	0.732	0.736	0.740	0.744	0.749	0.753	0.757	0.761	0.766
240	0.766	0.770	0.774	0.779	0.783	0.787	0.792	0.796	0.800	0.805	0.809
250	0.809	0.813	0.818	0.822	0.826	0.831	0.835	0.839	0.844	0.848	0.853
260	0.853	0.857	0.861	0.866	0.870	0.875	0.879	0.883	0.888	0.892	0.897
270	0.897	0.901	0.906	0.910	0.915	0.919	0.923	0.928	0.932	0.937	0.941
280	0.941	0.946	0.950	0.955	0.959	0.964	0.968	0.973	0.977	0.982	0.986
290	0.986	0.991	0.995	1.000	1.005	1.009	1.014	1.018	1.023	1.027	1.032
300	1.032	1.036	1.041	1.046	1.050	1.055	1.059	1.064	1.069	1.073	1.078
310	1.078	1.082	1.087	1.092	1.096	1.101	1.105	1.110	1.115	1.119	1.124
320	1.124	1.129	1.133	1.138	1.143	1.147	1.152	1.157	1.161	1.166	1.171
330	1.171	1.175	1.180	1.185	1.190	1.194	1.199	1.204	1.208	1.213	1.218
340	1.218	1.223	1.227	1.232	1.237	1.242	1.246	1.251	1.256	1.261	1.265

It marks those products and services that provide a combination of unmatched performance and value. They're simply the best we have to offer.

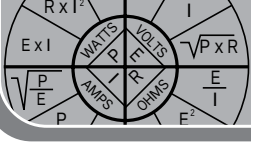
Look for the TRANSCAT TopCat Symbol

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type R °F (32 to 2642°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
350	1.265	1.270	1.275	1.280	1.284	1.289	1.294	1.299	1.304	1.308	1.313
360	1.313	1.318	1.323	1.328	1.332	1.337	1.342	1.347	1.352	1.356	1.361
370	1.361	1.366	1.371	1.376	1.381	1.386	1.390	1.395	1.400	1.405	1.410
380	1.410	1.415	1.420	1.425	1.429	1.434	1.439	1.444	1.449	1.454	1.459
390	1.459	1.464	1.469	1.473	1.478	1.483	1.488	1.493	1.498	1.503	1.508
400	1.508	1.513	1.518	1.523	1.528	1.533	1.538	1.543	1.548	1.553	1.558
410	1.558	1.563	1.568	1.572	1.577	1.582	1.587	1.592	1.597	1.602	1.607
420	1.607	1.612	1.617	1.622	1.627	1.632	1.638	1.643	1.648	1.653	1.658
430	1.658	1.663	1.668	1.673	1.678	1.683	1.688	1.693	1.698	1.703	1.708
440	1.708	1.713	1.718	1.723	1.728	1.733	1.739	1.744	1.749	1.754	1.759
450	1.759	1.764	1.769	1.774	1.779	1.784	1.790	1.795	1.800	1.805	1.810
460	1.810	1.815	1.820	1.825	1.831	1.836	1.841	1.846	1.851	1.856	1.861
470	1.861	1.867	1.872	1.877	1.882	1.887	1.892	1.898	1.903	1.908	1.913
480	1.913	1.918	1.923	1.929	1.934	1.939	1.944	1.949	1.955	1.960	1.965
490	1.965	1.970	1.975	1.981	1.986	1.991	1.996	2.002	2.007	2.012	2.017
500	2.017	2.022	2.028	2.033	2.038	2.043	2.049	2.054	2.059	2.064	2.070
510	2.070	2.075	2.080	2.085	2.091	2.096	2.101	2.107	2.112	2.117	2.122
520	2.122	2.128	2.133	2.138	2.144	2.149	2.154	2.159	2.165	2.170	2.175
530	2.175	2.181	2.186	2.191	2.197	2.202	2.207	2.213	2.218	2.223	2.229
540	2.229	2.234	2.239	2.245	2.250	2.255	2.261	2.266	2.271	2.277	2.282
550	2.282	2.287	2.293	2.298	2.304	2.309	2.314	2.320	2.325	2.330	2.336
560	2.336	2.341	2.347	2.352	2.357	2.363	2.368	2.374	2.379	2.384	2.390
570	2.390	2.395	2.401	2.406	2.411	2.417	2.422	2.428	2.433	2.438	2.444
580	2.444	2.449	2.455	2.460	2.466	2.471	2.477	2.482	2.487	2.493	2.498
590	2.498	2.504	2.509	2.515	2.520	2.526	2.531	2.537	2.542	2.547	2.553
600	2.553	2.558	2.564	2.569	2.575	2.580	2.586	2.591	2.597	2.602	2.608
610	2.608	2.613	2.619	2.624	2.630	2.635	2.641	2.646	2.652	2.657	2.663
620	2.663	2.668	2.674	2.679	2.685	2.690	2.696	2.701	2.707	2.713	2.718
630	2.718	2.724	2.729	2.735	2.740	2.746	2.751	2.757	2.762	2.768	2.773
640	2.773	2.779	2.785	2.790	2.796	2.801	2.807	2.812	2.818	2.824	2.829
650	2.829	2.835	2.840	2.846	2.851	2.857	2.863	2.868	2.874	2.879	2.885
660	2.885	2.891	2.896	2.902	2.907	2.913	2.919	2.924	2.930	2.935	2.941
670	2.941	2.947	2.952	2.958	2.964	2.969	2.975	2.980	2.986	2.992	2.997
680	2.997	3.003	3.009	3.014	3.020	3.026	3.031	3.037	3.042	3.048	3.054
690	3.054	3.059	3.065	3.071	3.076	3.082	3.088	3.093	3.099	3.105	3.110
700	3.110	3.116	3.122	3.127	3.133	3.139	3.144	3.150	3.156	3.161	3.167
710	3.167	3.173	3.179	3.184	3.190	3.196	3.201	3.207	3.213	3.218	3.224
720	3.224	3.230	3.236	3.241	3.247	3.253	3.258	3.264	3.270	3.276	3.281
730	3.281	3.287	3.293	3.298	3.304	3.310	3.316	3.321	3.327	3.333	3.339
740	3.339	3.344	3.350	3.356	3.362	3.367	3.373	3.379	3.385	3.390	3.396
750	3.396	3.402	3.408	3.413	3.419	3.425	3.431	3.437	3.442	3.448	3.454
760	3.454	3.460	3.465	3.471	3.477	3.483	3.489	3.494	3.500	3.506	3.512
770	3.512	3.517	3.523	3.529	3.535	3.541	3.546	3.552	3.558	3.564	3.570
780	3.570	3.576	3.581	3.587	3.593	3.599	3.605	3.610	3.616	3.622	3.628
790	3.628	3.634	3.640	3.645	3.651	3.657	3.663	3.669	3.675	3.680	3.686
800	3.686	3.692	3.698	3.704	3.710	3.716	3.721	3.727	3.733	3.739	3.745
810	3.745	3.751	3.757	3.762	3.768	3.774	3.780	3.786	3.792	3.798	3.803
820	3.803	3.809	3.815	3.821	3.827	3.833	3.839	3.845	3.851	3.856	3.862
830	3.862	3.868	3.874	3.880	3.886	3.892	3.898	3.904	3.909	3.915	3.921
840	3.921	3.927	3.933	3.939	3.945	3.951	3.957	3.963	3.969	3.975	3.980
850	3.980	3.986	3.992	3.998	4.004	4.010	4.016	4.022	4.028	4.034	4.040
860	4.040	4.046	4.052	4.058	4.064	4.069	4.075	4.081	4.087	4.093	4.099
870	4.099	4.105	4.111	4.117	4.123	4.129	4.135	4.141	4.147	4.153	4.159
880	4.159	4.165	4.171	4.177	4.183	4.189	4.195	4.201	4.207	4.213	4.219
890	4.219	4.225	4.231	4.237	4.243	4.249	4.255	4.261	4.267	4.273	4.279
900	4.279	4.285	4.291	4.297	4.303	4.309	4.315	4.321	4.327	4.333	4.339
910	4.339	4.345	4.351	4.357	4.363	4.369	4.375	4.381	4.387	4.393	4.399
920	4.399	4.405	4.411	4.417	4.423	4.429	4.435	4.441	4.447	4.453	4.459
930	4.459	4.465	4.471	4.477	4.483	4.489	4.495	4.502	4.508	4.514	4.520
940	4.520	4.526	4.532	4.538	4.544	4.550	4.556	4.562	4.568	4.574	4.580
950	4.580	4.586	4.593	4.599	4.605	4.611	4.617	4.623	4.629	4.635	4.641
960	4.641	4.647	4.653	4.659	4.666	4.672	4.678	4.684	4.690	4.696	4.702
970	4.702	4.708	4.714	4.720	4.727	4.733	4.739	4.745	4.751	4.757	4.763
980	4.763	4.769	4.775	4.782	4.788	4.794	4.800	4.806	4.812	4.818	4.824
990	4.824	4.831	4.837	4.843	4.849	4.855	4.861	4.867	4.874	4.880	4.886
1000	4.886	4.892	4.898	4.904	4.910	4.917	4.923	4.929	4.935	4.941	4.947
1010	4.947	4.954	4.960	4.966	4.972	4.978	4.984	4.991	4.997	5.003	5.009
1020	5.009	5.015	5.021	5.028	5.034	5.040	5.046	5.052	5.059	5.065	5.071
1030	5.071	5.077	5.083	5.090	5.096	5.102	5.108	5.114	5.121	5.127	5.133
1040	5.133	5.139	5.145	5.152	5.158	5.164	5.170	5.176	5.183	5.189	5.195
1050	5.195	5.201	5.207	5.214	5.220	5.226	5.232	5.239	5.245	5.251	5.257
1060	5.257	5.264	5.270	5.276	5.282	5.289	5.295	5.301	5.307	5.313	5.320
1070	5.320	5.326	5.332	5.338	5.345	5.351	5.357	5.364	5.370	5.376	5.382
1080	5.382	5.389	5.395	5.401	5.407	5.414	5.420	5.426	5.432	5.439	5.445
1090	5.445	5.451	5.458	5.464	5.470	5.476	5.483	5.489	5.495	5.502	5.508
1100	5.508	5.514	5.520	5.527	5.533	5.539	5.546	5.552	5.558	5.565	5.571
1110	5.571	5.577	5.583	5.590	5.596	5.602	5.609	5.615	5.621	5.628	5.634
1120	5.634	5.640	5.647	5.653	5.659	5.666	5.672	5.678	5.685	5.691	5.697
1130	5.697	5.704	5.710	5.716	5.723	5.729	5.735	5.742	5.748	5.754	5.761
1140	5.761	5.767	5.773	5.780	5.786	5.792	5.799	5.805	5.812	5.818	5.824
1150	5.824	5.831	5.837	5.843	5.850	5.856	5.862	5.869	5.875	5.882	5.888
1160	5.888	5.894	5.901	5.907	5.913	5.920	5.926	5.933	5.939	5.945	5.952
1170	5.952	5.958	5.965	5.971	5.977	5.984	5.990	5.997	6.003	6.009	6.016
1180	6.016	6.022	6.029	6.035	6.041	6.048	6.054	6.061	6.067	6.074	6.080
1190	6.080	6.086	6.093	6.099	6.106	6.112	6.119	6.125	6.131	6.138	6.144
1200	6.144	6.151	6.157	6.164	6.170	6.176	6.183	6.189	6.196	6.202	6.209
1210	6.209	6.215	6.222	6.228	6.235	6.241	6.247	6.254	6.260	6.267	6.273
1220	6.273	6.280	6.286	6.293	6.299	6.306	6.312	6.319	6.325	6.332	6.338
1230	6.338	6.345	6.351	6.358	6.364	6.370	6.377	6.383	6.390	6.396	6.403
1240	6.403	6.409	6.416	6.422	6.429	6.435	6.442	6.448	6.455	6.461	6.468
1250	6.468	6.474	6.481	6.488	6.494	6.501	6.507	6.514	6.520	6.527	6.533
1260	6.533	6.540	6.546	6.553	6.559	6.566	6.572	6.579	6.585	6.592	6.598
1270	6.598	6.605	6.612	6.618	6.625	6.631	6.638	6.644	6.651	6.657	6.664
1280	6.664	6.671	6.677	6.684	6.690	6.697	6.703	6.710	6.716	6.723	6.730
1290	6.730	6.736	6.743	6.749	6.756	6.762	6.769	6.776	6.782	6.789	6.795
1300	6.795	6.802	6.809	6.815	6.822	6.828	6.835	6.841	6.848	6.855	6.861
1310	6.861	6.868	6.874	6.881	6.888	6.894	6.901	6.907	6.914	6.921	6.927
1320	6.927	6.934	6.941	6.947	6.954	6.960	6.967	6.974	6.980	6.987	6.994
1330	6.994	7.000	7.007	7.013	7.020	7.027	7.033	7.040	7.047	7.053	7.060
1340	7.060	7.067	7.073	7.080	7.086	7.093	7.100	7.106	7.113	7.120	7.126
1350	7.126	7.133	7.140	7.146	7.153	7.160	7.166	7.173	7.180	7.186	7.193
1360	7.193	7.200	7.206	7.213	7.220	7.226	7.233	7.240	7.247	7.253	7.260
1370	7.260	7.267	7.273	7.280	7.287	7.293	7.300	7.307	7.313	7.320	7.327
1380	7.327	7.334	7.340	7.347	7.354	7.360	7.367	7.374	7.381	7.387	7.394
1390	7.394	7.401	7.407	7.414	7.421	7.428	7.434	7.441	7.448	7.454	7.461
1400	7.461	7.468	7.475	7.481	7.488	7.495	7.502	7.508	7.515	7.522	7.529
1410	7.529	7.535	7.542	7.549	7.556	7.562	7.569	7.576	7.583	7.589	7.596
1420	7.596	7.603	7.610	7.616	7.623	7.630	7.637	7.644	7.650	7.657	7.664
1430	7.664	7.671	7.677	7.684	7.691	7.698	7.705	7.711	7.718	7.725	7.732
1440	7.732	7.739	7.745	7.752	7.759	7.766	7.772	7.779	7.786	7.793	7.800
1450	7.800	7.807	7.813	7.820	7.827	7.834	7.841	7.847	7.854	7.861	7.868
1460	7.868	7.875	7.882	7.888	7.895	7.902	7.909	7.916	7.922	7.929	7.936
1470	7.936	7.943	7.950	7.957	7.964	7.970	7.977	7.984	7.991	7.998	8.005
1480	8.005	8.011	8.018	8.025	8.032	8.039	8.046	8.053	8.059	8.066	8.073
1490	8.073	8.080	8.087	8.094	8.101	8.108	8.114	8.121	8.128	8.135	8.142
1500	8.142	8.149	8.156	8.163	8.169	8.176	8.183	8.190	8.197	8.204	8.211
1510	8.211	8.218	8.225	8.232	8.238	8.245	8.252	8.259	8.266	8.273	8.280
1520	8.280	8.287	8.294	8.301	8.308	8.314	8.321	8.328	8.335	8.342	8.349
1530	8.349	8.356	8.363	8.370	8.377	8.384	8.391	8.398	8.405	8.411	8.418
1540	8.418	8.425	8.432	8.439	8.446	8.453	8.460	8.467	8.474	8.481	8.488
1550	8.488	8.495	8.502	8.509	8.516	8.523	8.530	8.537	8.544	8.551	8.557
1560	8.557	8.564	8.571	8.578	8.585	8.592	8.599	8.606	8.613	8.620	8.627
1570	8.627	8.634	8.641	8.648	8.655	8.662	8.669	8.676	8.683	8.690	8.697
1580	8.697	8.704	8.711	8.718	8.725	8.732	8.739	8.746	8.753	8.760	8.767
1590	8.767	8.774	8.781	8.788	8.795	8.802	8.809	8.816	8.823	8.830	8.837
1600	8.837	8.844	8.852	8.859	8.866	8.873	8.880	8.887	8.894	8.901	8.908
1610	8.908	8.915	8.922	8.929	8.936	8.943	8.950	8.957	8.964	8.971	8.978
1620	8.978	8.985	8.992	8.999	9.007	9.014	9.021	9.028	9.035	9.042	9.049
1630	9.049	9.056	9.063	9.070	9.077	9.084	9.091	9.098	9.106	9.113	9.120
1640	9.120	9.127	9.134	9.141	9.148	9.155	9.162	9.169	9.176	9.184	9.191
1650	9.191	9.198	9.205	9.212	9.219	9.226	9.233	9.240	9.248	9.255	9.262
1660	9.262	9.269	9.276	9.283	9.290	9.297	9.304	9.312	9.319	9.326	9.333
1670	9.333	9.340	9.347	9.354	9.361	9.369	9.376	9.383	9.390	9.397	9.404
1680	9.404	9.411	9.419	9.426	9.433	9.440	9.447	9.454	9.461	9.469	9.476
1690	9.476	9.483	9.490	9.497	9.504	9.512	9.519	9.526	9.533	9.540	9.547
1700	9.547	9.555	9.562	9.569	9.576	9.583	9.590	9.598	9.605	9.612	9.619
1710	9.619	9.626	9.634	9.641	9.648	9.655	9.662	9.670	9.677	9.684	9.691
1720	9.691	9.698	9.706	9.713	9.720	9.727	9.734	9.742	9.749	9.756	9.763
1730	9.763	9.770	9.778	9.785	9.792	9.799	9.806	9.814	9.821	9.828	9.835
1740	9.835	9.843	9.850	9.857	9.864	9.872	9.879	9.886	9.893	9.900	9.908
1750	9.908	9.915	9.922	9.929	9.937	9.944	9.951	9.958	9.966	9.973	9.980
1760	9.980	9.987	9.995	10.002	10.009	10.016	10.024	10.031	10.038	10.046	10.053
1770	10.053	10.060	10.067	10.075	10.082	10.089	10.096	10.104	10.111	10.118	10.126
1780	10.126	10.133	10.140	10.147	10.155	10.162	10.169	10.177	10.184	10.191	10.198
1790	10.198	10.206	10.213	10.220	10.228	10.235	10.242	10.250	10.257	10.264	10.271
1800	10.271	10.279	10.286	10.293	10.301	10.308	10.315	10.323	10.330	10.337	10.345
1810	10.345	10.352	10.359	10.367	10.374	10.381	10.389	10.396	10.403	10.411	10.418
1820	10.418	10.425	10.433	10.440	10.447	10.455	10.462	10.469	10.477	10.484	10.491
1830	10.491	10.499	10.506	10.513	10.521	10.528	10.535	10.543	10.550	10.557	10.565
1840	10.565	10.572	10.580	10.587	10.594	10.602	10.609	10.616	10.624	10.631	10.638

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com



Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type R °F (32 to 2642°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
1850	10.638	10.646	10.653	10.661	10.668	10.675	10.683	10.690	10.698	10.705	10.712
1860	10.712	10.720	10.727	10.734	10.742	10.749	10.757	10.764	10.771	10.779	10.786
1870	10.786	10.794	10.801	10.808	10.816	10.823	10.831	10.838	10.845	10.853	10.860
1880	10.860	10.868	10.875	10.883	10.890	10.897	10.905	10.912	10.920	10.927	10.934
1890	10.934	10.942	10.949	10.957	10.964	10.972	10.979	10.986	10.994	11.001	11.009
1900	11.009	11.016	11.024	11.031	11.039	11.046	11.053	11.061	11.068	11.076	11.083
1910	11.083	11.091	11.098	11.106	11.113	11.121	11.128	11.135	11.143	11.150	11.158
1920	11.158	11.165	11.173	11.180	11.188	11.195	11.203	11.210	11.218	11.225	11.233
1930	11.233	11.240	11.247	11.255	11.262	11.270	11.277	11.285	11.292	11.300	11.307
1940	11.307	11.315	11.322	11.330	11.337	11.345	11.352	11.360	11.367	11.375	11.382
1950	11.382	11.390	11.397	11.405	11.412	11.420	11.427	11.435	11.442	11.450	11.457
1960	11.457	11.465	11.472	11.480	11.487	11.495	11.502	11.510	11.518	11.525	11.533
1970	11.533	11.540	11.548	11.555	11.563	11.570	11.578	11.585	11.593	11.600	11.608
1980	11.608	11.615	11.623	11.631	11.638	11.646	11.653	11.661	11.668	11.676	11.683
1990	11.683	11.691	11.698	11.706	11.714	11.721	11.729	11.736	11.744	11.751	11.759
2000	11.759	11.766	11.774	11.782	11.789	11.797	11.804	11.812	11.819	11.827	11.834
2010	11.834	11.842	11.850	11.857	11.865	11.872	11.880	11.888	11.895	11.903	11.910
2020	11.910	11.918	11.925	11.933	11.941	11.948	11.956	11.963	11.971	11.979	11.986
2030	11.986	11.994	12.001	12.009	12.016	12.024	12.032	12.039	12.047	12.054	12.062
2040	12.062	12.070	12.077	12.085	12.092	12.100	12.108	12.115	12.123	12.131	12.138
2050	12.138	12.146	12.153	12.161	12.169	12.176	12.184	12.191	12.199	12.207	12.214
2060	12.214	12.222	12.230	12.237	12.245	12.252	12.260	12.268	12.275	12.283	12.291
2070	12.291	12.298	12.306	12.313	12.321	12.329	12.336	12.344	12.352	12.359	12.367
2080	12.367	12.375	12.382	12.390	12.397	12.405	12.413	12.420	12.428	12.436	12.443
2090	12.443	12.451	12.459	12.466	12.474	12.482	12.489	12.497	12.505	12.512	12.520
2100	12.520	12.528	12.535	12.543	12.551	12.558	12.566	12.574	12.581	12.589	12.597
2110	12.597	12.604	12.612	12.620	12.627	12.635	12.643	12.650	12.658	12.666	12.673
2120	12.673	12.681	12.689	12.696	12.704	12.712	12.719	12.727	12.735	12.742	12.750
2130	12.750	12.758	12.765	12.773	12.781	12.788	12.796	12.804	12.812	12.819	12.827
2140	12.827	12.835	12.842	12.850	12.858	12.865	12.873	12.881	12.889	12.896	12.904
2150	12.904	12.912	12.919	12.927	12.935	12.942	12.950	12.958	12.966	12.973	12.981
2160	12.981	12.989	12.996	13.004	13.012	13.019	13.027	13.035	13.043	13.050	13.058
2170	13.058	13.066	13.073	13.081	13.089	13.097	13.104	13.112	13.120	13.128	13.135
2180	13.135	13.143	13.151	13.158	13.166	13.174	13.182	13.189	13.197	13.205	13.213
2190	13.213	13.220	13.228	13.236	13.243	13.251	13.259	13.267	13.274	13.282	13.290
2200	13.290	13.298	13.305	13.313	13.321	13.329	13.336	13.344	13.352	13.359	13.367
2210	13.367	13.375	13.383	13.390	13.398	13.406	13.414	13.421	13.429	13.437	13.445
2220	13.445	13.452	13.460	13.468	13.476	13.483	13.491	13.499	13.507	13.514	13.522
2230	13.522	13.530	13.538	13.545	13.553	13.561	13.569	13.577	13.584	13.592	13.600
2240	13.600	13.608	13.615	13.623	13.631	13.639	13.646	13.654	13.662	13.670	13.677
2250	13.677	13.685	13.693	13.701	13.709	13.716	13.724	13.732	13.740	13.747	13.755
2260	13.755	13.763	13.771	13.778	13.786	13.794	13.802	13.810	13.817	13.825	13.833
2270	13.833	13.841	13.848	13.856	13.864	13.872	13.880	13.887	13.895	13.903	13.911
2280	13.911	13.919	13.926	13.934	13.942	13.950	13.957	13.965	13.973	13.981	13.989
2290	13.989	13.996	14.004	14.012	14.020	14.028	14.035	14.043	14.051	14.059	14.066
2300	14.066	14.074	14.082	14.090	14.098	14.105	14.113	14.121	14.129	14.137	14.144
2310	14.144	14.152	14.160	14.168	14.176	14.183	14.191	14.199	14.207	14.215	14.222
2320	14.222	14.230	14.238	14.246	14.254	14.261	14.269	14.277	14.285	14.293	14.300
2330	14.300	14.308	14.316	14.324	14.332	14.340	14.347	14.355	14.363	14.371	14.379
2340	14.379	14.386	14.394	14.402	14.410	14.418	14.425	14.433	14.441	14.449	14.457
2350	14.457	14.465	14.472	14.480	14.488	14.496	14.504	14.511	14.519	14.527	14.535
2360	14.535	14.543	14.551	14.558	14.566	14.574	14.582	14.590	14.597	14.605	14.613
2370	14.613	14.621	14.629	14.637	14.644	14.652	14.660	14.668	14.676	14.683	14.691
2380	14.691	14.699	14.707	14.715	14.723	14.730	14.738	14.746	14.754	14.762	14.770
2390	14.770	14.777	14.785	14.793	14.801	14.809	14.817	14.824	14.832	14.840	14.848
2400	14.848	14.856	14.864	14.871	14.879	14.887	14.895	14.903	14.911	14.918	14.926
2410	14.926	14.934	14.942	14.950	14.958	14.965	14.973	14.981	14.989	14.997	15.005
2420	15.005	15.012	15.020	15.028	15.036	15.044	15.052	15.059	15.067	15.075	15.083
2430	15.083	15.091	15.099	15.106	15.114	15.122	15.130	15.138	15.146	15.153	15.161
2440	15.161	15.169	15.177	15.185	15.193	15.200	15.208	15.216	15.224	15.232	15.240
2450	15.240	15.248	15.255	15.263	15.271	15.279	15.287	15.295	15.302	15.310	15.318
2460	15.318	15.326	15.334	15.342	15.349	15.357	15.365	15.373	15.381	15.389	15.397
2470	15.397	15.404	15.412	15.420	15.428	15.436	15.444	15.451	15.459	15.467	15.475
2480	15.475	15.483	15.491	15.499	15.506	15.514	15.522	15.530	15.538	15.546	15.553
2490	15.553	15.561	15.569	15.577	15.585	15.593	15.601	15.608	15.616	15.624	15.632
2500	15.632	15.640	15.648	15.655	15.663	15.671	15.679	15.687	15.695	15.703	15.710
2510	15.710	15.718	15.726	15.734	15.742	15.750	15.758	15.765	15.773	15.781	15.789
2520	15.789	15.797	15.805	15.812	15.820	15.828	15.836	15.844	15.852	15.860	15.867
2530	15.867	15.875	15.883	15.891	15.899	15.907	15.915	15.922	15.930	15.938	15.946
2540	15.946	15.954	15.962	15.969	15.977	15.985	15.993	16.001	16.009	16.017	16.024
2550	16.024	16.032	16.040	16.048	16.056	16.064	16.071	16.079	16.087	16.095	16.103
2560	16.103	16.111	16.119	16.126	16.134	16.142	16.150	16.158	16.166	16.174	16.181
2570	16.181	16.189	16.197	16.205	16.213	16.221	16.228	16.236	16.244	16.252	16.260
2580	16.260	16.268	16.276	16.283	16.291	16.299	16.307	16.315	16.323	16.330	16.338
2590	16.338	16.346	16.354	16.362	16.370	16.378	16.385	16.393	16.401	16.409	16.417
2600	16.417	16.425	16.432	16.440	16.448	16.456	16.464	16.472	16.480	16.487	16.495
2610	16.495	16.503	16.511	16.519	16.527	16.534	16.542	16.550	16.558	16.566	16.574
2620	16.574	16.582	16.589	16.597	16.605	16.613	16.621	16.629	16.636	16.644	16.652
2630	16.652	16.660	16.668	16.676	16.683	16.691	16.699	16.707	16.715	16.723	16.731
2640	16.731	16.738	16.746	16.754	16.762	16.770	16.778	16.785	16.793	16.801	16.809
2650	16.809	16.817	16.825	16.832	16.840	16.848	16.856	16.864	16.872	16.879	16.887
2660	16.887	16.895	16.903	16.911	16.919	16.926	16.934	16.942	16.950	16.958	16.966
2670	16.966	16.973	16.981	16.989	16.997	17.005	17.013	17.020	17.028	17.036	17.044
2680	17.044	17.052	17.060	17.067	17.075	17.083	17.091	17.099	17.107	17.114	17.122
2690	17.122	17.130	17.138	17.146	17.154	17.161	17.169	17.177	17.185	17.193	17.200
2700	17.200	17.208	17.216	17.224	17.232	17.240	17.247	17.255	17.263	17.271	17.279
2710	17.279	17.286	17.294	17.302	17.310	17.318	17.326	17.333	17.341	17.349	17.357
2720	17.357	17.365	17.373	17.380	17.388	17.396	17.404	17.412	17.419	17.427	17.435
2730	17.435	17.443	17.451	17.458	17.466	17.474	17.482	17.490	17.498	17.505	17.513
2740	17.513	17.521	17.529	17.537	17.544	17.552	17.560	17.568	17.576	17.583	17.591
2750	17.591	17.599	17.607	17.615	17.622	17.630	17.638	17.646	17.654	17.661	17.669
2760	17.669	17.677	17.685	17.693	17.700	17.708	17.716	17.724	17.732	17.739	17.747
2770	17.747	17.755	17.763	17.771	17.778	17.786	17.794	17.802	17.810	17.817	17.825
2780	17.825	17.833	17.841	17.849	17.856	17.864	17.872	17.880	17.888	17.895	17.903
2790	17.903	17.911	17.919	17.926	17.934	17.942	17.950	17.958	17.965	17.973	17.981
2800	17.981	17.989	17.997	18.004	18.012	18.020	18.028	18.035	18.043	18.051	18.059
2810	18.059	18.067	18.074	18.082	18.090	18.098	18.105	18.113	18.121	18.129	18.137
2820	18.137	18.144	18.152	18.160	18.168	18.175	18.183	18.191	18.199	18.206	18.214
2830	18.214	18.222	18.230	18.238	18.245	18.253	18.261	18.269	18.276	18.284	18.292
2840	18.292	18.300	18.307	18.315	18.323	18.331	18.338	18.346	18.354	18.362	18.369
2850	18.369	18.377	18.385	18.393	18.400	18.408	18.416	18.424	18.431	18.439	18.447
2860	18.447	18.455	18.462	18.470	18.478	18.486	18.493	18.501	18.509	18.517	18.524
2870	18.524	18.532	18.540	18.548	18.555	18.563	18.571	18.579	18.586	18.594	18.602
2880	18.602	18.610	18.617	18.625	18.633	18.640	18.648	18.656	18.664	18.671	18.679
2890	18.679	18.687	18.695	18.702	18.710	18.718	18.725	18.733	18.741	18.749	18.756
2900	18.756	18.764	18.772	18.779	18.787	18.795	18.803	18.810	18.818	18.826	18.834
2910	18.834	18.841	18.849	18.857	18.864	18.872	18.880	18.887	18.895	18.903	18.911
2920	18.911	18.918	18.926	18.934	18.941	18.949	18.957	18.965	18.972	18.980	18.988
2930	18.988	18.995	19.003	19.011	19.018	19.026	19.034	19.042	19.049	19.057	19.065
2940	19.065	19.072	19.080	19.088	19.095	19.103	19.111	19.118	19.126	19.134	19.141
2950	19.141	19.149	19.157	19.165	19.172	19.180	19.188	19.195	19.203	19.211	19.218
2960	19.218	19.226	19.234	19.241	19.249	19.257	19.264	19.272	19.280	19.287	19.295
2970	19.295	19.303	19.310	19.318	19.326	19.333	19.341	19.349	19.356	19.364	19.372
2980	19.372	19.379	19.387	19.395	19.402	19.410	19.418	19.425	19.433	19.440	19.448
2990	19.448	19.456	19.463	19.471	19.479	19.486	19.494	19.502	19.509	19.517	19.525
3000	19.525	19.532	19.540	19.547	19.555	19.563	19.570	19.578	19.586	19.593	19.601
3010	19.601	19.609	19.616	19.624	19.631	19.639	19.647	19.654	19.662	19.670	19.677
3020	19.677	19.685	19.692	19.700	19.708	19.715	19.723	19.730	19.738	19.746	19.753
3030	19.753	19.761	19.769	19.776	19.784	19.791	19.799	19.807	19.814	19.822	19.829
3040	19.829	19.837	19.845	19.852	19.860	19.867	19.875	19.882	19.890	19.898	19.905
3050	19.905	19.913	19.920	19.928	19.936	19.943	19.951	19.958	19.966	19.973	19.981
3060	19.981	19.989	19.996	20.004	20.011	20.019	20.026	20.034	20.041	20.049	20.056
3070	20.056	20.064	20.072	20.079	20.087	20.094	20.102	20.109	20.117	20.124	20.132
3080	20.132	20.139	20.147	20.154	20.162	20.169	20.177	20.184	20.192	20.199	20.207
3090	20.207	20.214	20.222	20.229	20.237	20.244	20.252	20.259	20.266	20.274	20.281
3100	20.281	20.289	20.296	20.304	20.311	20.319	20.326	20.333	20.341	20.348	20.356
3110	20.356	20.363	20.371	20.378	20.385	20.393	20.400	20.407	20.415	20.422	20.430
3120	20.430	20.437	20.444	20.452	20.459	20.466	20.474	20.481	20.488	20.496	20.503
3130	20.503	20.510	20.518	20.525	20.532	20.540	20.547	20.554	20.562	20.569	20.576
3140	20.576	20.583	20.591	20.598	20.605	20.612	20.620	20.627	20.634	20.641	20.649
3150	20.649	20.656	20.663	20.670	20.678	20.685	20.692	20.699	20.706	20.714	20.721
3160	20.721	20.728	20.735	20.742	20.749	20.756	20.764	20.771	20.778	20.785	20.792
3170	20.792	20.799	20.806	20.813	20.821	20.828	20.835	20.842	20.849	20.856	20.863
3180	20.863	20.870	20.877	20.884	20.891	20.898	20.905	20.912	20.919	20.926	20.933
3190	20.933	20.940	20.947	20.954	20.961	20.968	20.975	20.982	20.989	20.996	21.003
3200	21.003	21.010	21.016	21.023	21.030	21.037	21.044	21.051	21.058	21.065	21.071
3210	21.071	21.078	21.085	21.092	21.099						

Type S °F (32 to 2642°F)

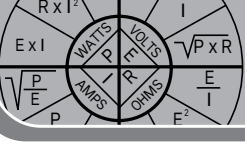
°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-50	-0.218										
-40	-0.194	-0.197	-0.199	-0.201	-0.204	-0.206	-0.208	-0.211	-0.213	-0.215	-0.218
-30	-0.170	-0.173	-0.175	-0.178	-0.180	-0.182	-0.185	-0.187	-0.190	-0.192	-0.194
-20	-0.145	-0.148	-0.150	-0.153	-0.155	-0.158	-0.160	-0.163	-0.165	-0.168	-0.170
-10	-0.119	-0.122	-0.124	-0.127	-0.129	-0.132	-0.135	-0.137	-0.140	-0.142	-0.145
0	-0.092	-0.095	-0.097	-0.100	-0.103	-0.106	-0.108	-0.111	-0.114	-0.116	-0.119

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type S °F (32 to 2642°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
0	-0.092	-0.089	-0.086	-0.084	-0.081	-0.078	-0.075	-0.073	-0.070	-0.067	-0.064
10	-0.064	-0.061	-0.058	-0.056	-0.053	-0.050	-0.047	-0.044	-0.041	-0.038	-0.035
20	-0.035	-0.033	-0.030	-0.027	-0.024	-0.021	-0.018	-0.015	-0.012	-0.009	-0.006
30	-0.006	-0.003	0.000	0.003	0.006	0.009	0.012	0.015	0.018	0.021	0.024
40	0.024	0.027	0.030	0.033	0.037	0.040	0.043	0.046	0.049	0.052	0.055
50	0.055	0.058	0.062	0.065	0.068	0.071	0.074	0.077	0.081	0.084	0.087
60	0.087	0.090	0.093	0.097	0.100	0.103	0.106	0.110	0.113	0.116	0.119
70	0.119	0.123	0.126	0.129	0.133	0.136	0.139	0.143	0.146	0.149	0.153
80	0.153	0.156	0.159	0.163	0.166	0.169	0.173	0.176	0.180	0.183	0.186
90	0.186	0.190	0.193	0.197	0.200	0.204	0.207	0.210	0.214	0.217	0.221
100	0.221	0.224	0.228	0.231	0.235	0.238	0.242	0.245	0.249	0.252	0.256
110	0.256	0.260	0.263	0.267	0.270	0.274	0.277	0.281	0.285	0.288	0.292
120	0.292	0.295	0.299	0.303	0.306	0.310	0.313	0.317	0.321	0.324	0.328
130	0.328	0.332	0.335	0.339	0.343	0.346	0.350	0.354	0.357	0.361	0.365
140	0.365	0.369	0.372	0.376	0.380	0.384	0.387	0.391	0.395	0.399	0.402
150	0.402	0.406	0.410	0.414	0.417	0.421	0.425	0.429	0.433	0.436	0.440
160	0.440	0.444	0.448	0.452	0.456	0.459	0.463	0.467	0.471	0.475	0.479
170	0.479	0.483	0.487	0.490	0.494	0.498	0.502	0.506	0.510	0.514	0.518
180	0.518	0.522	0.526	0.530	0.534	0.538	0.541	0.545	0.549	0.553	0.557
190	0.557	0.561	0.565	0.569	0.573	0.577	0.581	0.585	0.589	0.593	0.597
200	0.597	0.601	0.605	0.609	0.613	0.617	0.622	0.626	0.630	0.634	0.638
210	0.638	0.642	0.646	0.650	0.654	0.658	0.662	0.666	0.670	0.675	0.679
220	0.679	0.683	0.687	0.691	0.695	0.699	0.703	0.708	0.712	0.716	0.720
230	0.720	0.724	0.728	0.732	0.737	0.741	0.745	0.749	0.753	0.758	0.762
240	0.762	0.766	0.770	0.774	0.779	0.783	0.787	0.791	0.795	0.800	0.804
250	0.804	0.808	0.812	0.817	0.821	0.825	0.829	0.834	0.838	0.842	0.847
260	0.847	0.851	0.855	0.859	0.864	0.868	0.872	0.877	0.881	0.885	0.889
270	0.889	0.894	0.898	0.902	0.907	0.911	0.915	0.920	0.924	0.928	0.933
280	0.933	0.937	0.942	0.946	0.950	0.955	0.959	0.963	0.968	0.972	0.977
290	0.977	0.981	0.985	0.990	0.994	0.998	1.003	1.007	1.012	1.016	1.021
300	1.021	1.025	1.029	1.034	1.038	1.043	1.047	1.052	1.056	1.061	1.065
310	1.065	1.069	1.074	1.078	1.083	1.087	1.092	1.096	1.101	1.105	1.110
320	1.110	1.114	1.119	1.123	1.128	1.132	1.137	1.141	1.146	1.150	1.155
330	1.155	1.159	1.164	1.168	1.173	1.177	1.182	1.186	1.191	1.196	1.200
340	1.200	1.205	1.209	1.214	1.218	1.223	1.227	1.232	1.237	1.241	1.246
350	1.246	1.250	1.255	1.260	1.264	1.269	1.273	1.278	1.283	1.287	1.292
360	1.292	1.296	1.301	1.306	1.310	1.315	1.319	1.324	1.329	1.333	1.338
370	1.338	1.343	1.347	1.352	1.357	1.361	1.366	1.371	1.375	1.380	1.385
380	1.385	1.389	1.394	1.399	1.403	1.408	1.413	1.417	1.422	1.427	1.431
390	1.431	1.436	1.441	1.445	1.450	1.455	1.460	1.464	1.469	1.474	1.478
400	1.478	1.483	1.488	1.493	1.497	1.502	1.507	1.512	1.516	1.521	1.526
410	1.526	1.531	1.535	1.540	1.545	1.550	1.554	1.559	1.564	1.569	1.573
420	1.573	1.578	1.583	1.588	1.592	1.597	1.602	1.607	1.612	1.616	1.621
430	1.621	1.626	1.631	1.636	1.640	1.645	1.650	1.655	1.660	1.664	1.669
440	1.669	1.674	1.679	1.684	1.689	1.693	1.698	1.703	1.708	1.713	1.718
450	1.718	1.722	1.727	1.732	1.737	1.742	1.747	1.752	1.756	1.761	1.766
460	1.766	1.771	1.776	1.781	1.786	1.790	1.795	1.800	1.805	1.810	1.815
470	1.815	1.820	1.825	1.829	1.834	1.839	1.844	1.849	1.854	1.859	1.864
480	1.864	1.869	1.874	1.878	1.883	1.888	1.893	1.898	1.903	1.908	1.913
490	1.913	1.918	1.923	1.928	1.933	1.938	1.942	1.947	1.952	1.957	1.962
500	1.962	1.967	1.972	1.977	1.982	1.987	1.992	1.997	2.002	2.007	2.012
510	2.012	2.017	2.022	2.027	2.032	2.037	2.042	2.047	2.052	2.057	2.062
520	2.062	2.067	2.072	2.076	2.081	2.086	2.091	2.096	2.101	2.106	2.111
530	2.111	2.116	2.121	2.126	2.131	2.136	2.141	2.147	2.152	2.157	2.162
540	2.162	2.167	2.172	2.177	2.182	2.187	2.192	2.197	2.202	2.207	2.212
550	2.212	2.217	2.222	2.227	2.232	2.237	2.242	2.247	2.252	2.257	2.262
560	2.262	2.267	2.272	2.277	2.283	2.288	2.293	2.298	2.303	2.308	2.313
570	2.313	2.318	2.323	2.328	2.333	2.338	2.343	2.348	2.354	2.359	2.364
580	2.364	2.369	2.374	2.379	2.384	2.389	2.394	2.399	2.404	2.410	2.415
590	2.415	2.420	2.425	2.430	2.435	2.440	2.445	2.450	2.455	2.461	2.466
600	2.466	2.471	2.476	2.481	2.486	2.491	2.496	2.502	2.507	2.512	2.517
610	2.517	2.522	2.527	2.532	2.537	2.543	2.548	2.553	2.558	2.563	2.568
620	2.568	2.574	2.579	2.584	2.589	2.594	2.599	2.604	2.610	2.615	2.620
630	2.620	2.625	2.630	2.635	2.641	2.646	2.651	2.656	2.661	2.666	2.672
640	2.672	2.677	2.682	2.687	2.692	2.697	2.703	2.708	2.713	2.718	2.723
650	2.723	2.729	2.734	2.739	2.744	2.749	2.755	2.760	2.765	2.770	2.775
660	2.775	2.781	2.786	2.791	2.796	2.801	2.807	2.812	2.817	2.822	2.827
670	2.827	2.833	2.838	2.843	2.848	2.854	2.859	2.864	2.869	2.874	2.880
680	2.880	2.885	2.890	2.895	2.901	2.906	2.911	2.916	2.922	2.927	2.932
690	2.932	2.937	2.943	2.948	2.953	2.958	2.964	2.969	2.974	2.979	2.985
700	2.985	2.990	2.995	3.000	3.006	3.011	3.016	3.021	3.027	3.032	3.037
710	3.037	3.042	3.048	3.053	3.058	3.063	3.069	3.074	3.079	3.085	3.090
720	3.090	3.095	3.100	3.106	3.111	3.116	3.122	3.127	3.132	3.137	3.143
730	3.143	3.148	3.153	3.159	3.164	3.169	3.174	3.180	3.185	3.190	3.196
740	3.196	3.201	3.206	3.212	3.217	3.222	3.227	3.233	3.238	3.243	3.249
750	3.249	3.254	3.259	3.265	3.270	3.275	3.281	3.286	3.291	3.297	3.302
760	3.302	3.307	3.313	3.318	3.323	3.329	3.334	3.339	3.345	3.350	3.355
770	3.355	3.361	3.366	3.371	3.377	3.382	3.387	3.393	3.398	3.403	3.409
780	3.409	3.414	3.419	3.425	3.430	3.435	3.441	3.446	3.451	3.457	3.462
790	3.462	3.468	3.473	3.478	3.484	3.489	3.494	3.500	3.505	3.510	3.516
800	3.516	3.521	3.527	3.532	3.537	3.543	3.548	3.553	3.559	3.564	3.570
810	3.570	3.575	3.580	3.586	3.591	3.596	3.602	3.607	3.613	3.618	3.623
820	3.623	3.629	3.634	3.640	3.645	3.650	3.656	3.661	3.667	3.672	3.677
830	3.677	3.683	3.688	3.694	3.699	3.704	3.710	3.715	3.721	3.726	3.731
840	3.731	3.737	3.742	3.748	3.753	3.758	3.764	3.769	3.775	3.780	3.786
850	3.786	3.791	3.796	3.802	3.807	3.813	3.818	3.823	3.829	3.834	3.840
860	3.840	3.845	3.851	3.856	3.862	3.867	3.872	3.878	3.883	3.889	3.894
870	3.894	3.900	3.905	3.910	3.916	3.921	3.927	3.932	3.938	3.943	3.949
880	3.949	3.954	3.959	3.965	3.970	3.976	3.981	3.987	3.992	3.998	4.003
890	4.003	4.009	4.014	4.020	4.025	4.030	4.036	4.041	4.047	4.052	4.058
900	4.058	4.063	4.069	4.074	4.080	4.085	4.091	4.096	4.102	4.107	4.113
910	4.113	4.118	4.123	4.129	4.134	4.140	4.145	4.151	4.156	4.162	4.167
920	4.167	4.173	4.178	4.184	4.189	4.195	4.200	4.206	4.211	4.217	4.222
930	4.222	4.228	4.233	4.239	4.244	4.250	4.255	4.261	4.266	4.272	4.277
940	4.277	4.283	4.288	4.294	4.299	4.305	4.310	4.316	4.321	4.327	4.332
950	4.332	4.338	4.343	4.349	4.355	4.360	4.366	4.371	4.377	4.382	4.388
960	4.388	4.393	4.399	4.404	4.410	4.415	4.421	4.426	4.432	4.437	4.443
970	4.443	4.449	4.454	4.460	4.465	4.471	4.476	4.482	4.487	4.493	4.498
980	4.498	4.504	4.510	4.515	4.521	4.526	4.532	4.537	4.543	4.548	4.554
990	4.554	4.559	4.565	4.571	4.576	4.582	4.587	4.593	4.598	4.604	4.610
1000	4.610	4.615	4.621	4.626	4.632	4.637	4.643	4.648	4.654	4.660	4.665
1010	4.665	4.671	4.676	4.682	4.688	4.693	4.699	4.704	4.710	4.715	4.721
1020	4.721	4.727	4.732	4.738	4.743	4.749	4.755	4.760	4.766	4.771	4.777
1030	4.777	4.782	4.788	4.794	4.799	4.805	4.810	4.816	4.822	4.827	4.833
1040	4.833	4.838	4.844	4.850	4.855	4.861	4.866	4.872	4.878	4.883	4.889
1050	4.889	4.895	4.900	4.906	4.911	4.917	4.923	4.928	4.934	4.939	4.945
1060	4.945	4.951	4.956	4.962	4.968	4.973	4.979	4.984	4.990	4.996	5.001
1070	5.001	5.007	5.013	5.018	5.024	5.030	5.035	5.041	5.046	5.052	5.058
1080	5.058	5.063	5.069	5.075	5.080	5.086	5.092	5.097	5.103	5.109	5.114
1090	5.114	5.120	5.125	5.131	5.137	5.142	5.148	5.154	5.159	5.165	5.171
1100	5.171	5.176	5.182	5.188	5.193	5.199	5.205	5.210	5.216	5.222	5.227
1110	5.227	5.233	5.239	5.244	5.250	5.256	5.261	5.267	5.273	5.278	5.284
1120	5.284	5.290	5.295	5.301	5.307	5.312	5.318	5.324	5.330	5.335	5.341
1130	5.341	5.347	5.352	5.358	5.364	5.369	5.375	5.381	5.386	5.392	5.398
1140	5.398	5.404	5.409	5.415	5.421	5.426	5.432	5.438	5.443	5.449	5.455
1150	5.455	5.461	5.466	5.472	5.478	5.483	5.489	5.495	5.501	5.506	5.512
1160	5.512	5.518	5.523	5.529	5.535	5.541	5.546	5.552	5.558	5.563	5.569
1170	5.569	5.575	5.581	5.586	5.592	5.598	5.604	5.609	5.615	5.621	5.627
1180	5.627	5.632	5.638	5.644	5.649	5.655	5.661	5.667	5.672	5.678	5.684
1190	5.684	5.690	5.695	5.701	5.707	5.713	5.718	5.724	5.730	5.736	5.741
1200	5.741	5.747	5.753	5.759	5.764	5.770	5.776	5.782	5.788	5.793	5.799
1210	5.799	5.805	5.811	5.816	5.822	5.828	5.834	5.839	5.845	5.851	5.857
1220	5.857	5.863	5.868	5.874	5.880	5.886	5.891	5.897	5.903	5.909	5.915
1230	5.915	5.920	5.926	5.932	5.938	5.944	5.949	5.955	5.961	5.967	5.972
1240	5.972	5.978	5.984	5.990	5.996	6.001	6.007	6.013	6.019	6.025	6.030
1250	6.030	6.036	6.042	6.048	6.054	6.060	6.065	6.071	6.077	6.083	6.089
1260	6.089	6.094	6.100	6.106	6.112	6.118	6.124	6.129	6.135	6.141	6.147
1270	6.147	6.153	6.158	6.164	6.170	6.176	6.182	6.188	6.193	6.199	6.205
1280	6.205	6.211	6.217	6.223	6.228	6.234	6.240	6.246	6.252	6.258	6.264
1290	6.264	6.269	6.275	6.281	6.287	6.293	6.299	6.305	6.310	6.316	6.322
1300	6.322	6.328	6.334	6.340	6.346	6.351	6.357	6.363	6.369	6.375	6.381
1310	6.381	6.387	6.392	6.398	6.404	6.410	6.416	6.422	6.428	6.434	6.439
1320	6.439	6.445	6.451	6.457	6.463	6.469	6.475	6.481	6.486	6.492	6.498
1330	6.498	6.504	6.510	6.516	6.522	6.528	6.534	6.539	6.545	6.551	6.557
1340	6.557	6.563	6.569	6.575	6.581	6.587	6.593	6.598	6.604	6.610	6.616
1350	6.616	6.622	6.628	6.634	6.640	6.646	6.652	6.658	6.664	6.669	6.675
1360	6.675	6.681	6.687	6.693	6.699	6.705	6.711	6.717	6.723	6.729	6.735
1370	6.735	6.741	6.746	6.752	6.758	6.764	6.770	6.776	6.782	6.788	6.794
1380	6.794	6.800	6.806	6.812	6.818	6.824	6.830	6.836	6.842	6.847	6.853
1390	6.853	6.859	6.865	6.871	6.877	6.883	6.889	6.895	6.901	6.907	6.913
1400	6.913	6.919	6.925	6.931	6.937	6.943	6.949	6.955	6.961	6.967	6.973
1410	6.973	6.979	6.985	6.991	6.997	7.003	7.008	7.014	7.020	7.026	7.032
1420	7.032	7.038	7.044	7.050	7.056	7.062	7.068	7.074	7.080	7.086	7.092
1430	7.092	7.098	7.104	7.110	7.116	7.122	7.128	7.134	7.140	7.146	7.152
1440	7.152	7.158	7.164	7.170	7.176	7.182	7.188	7.194	7.200	7.206	7.212
1450	7.212	7.218	7.224	7.230	7.236	7.242	7.249	7.255	7.261	7.267	7.273
1460	7.273	7.279	7.285	7.291	7.297	7.303	7.309	7.315	7.321	7.327	7.333
1470	7.333	7.339	7.345	7.351	7.357	7.363	7.369	7.375	7.381	7.387	7.393
1480	7.393	7.399	7.405	7.411	7.418	7.424	7.430	7.436	7.442	7.448	7.454
1490	7.454	7.460	7.466	7.472	7.478	7.484	7.490	7.496	7.502	7.508	7.514

TRANSCAT CALL: 800-828-1470 FAX: 800-395-0543 WEB: www.transcat.com



Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type S °F (32 to 2642°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
1500	7.514	7.521	7.527	7.533	7.539	7.545	7.551	7.557	7.563	7.569	7.575
1510	7.575	7.581	7.587	7.593	7.600	7.606	7.612	7.618	7.624	7.630	7.636
1520	7.636	7.642	7.648	7.654	7.660	7.667	7.673	7.679	7.685	7.691	7.697
1530	7.697	7.703	7.709	7.715	7.721	7.728	7.734	7.740	7.746	7.752	7.758
1540	7.758	7.764	7.770	7.776	7.783	7.789	7.795	7.801	7.807	7.813	7.819
1550	7.819	7.825	7.832	7.838	7.844	7.850	7.856	7.862	7.868	7.874	7.881
1560	7.881	7.887	7.893	7.899	7.905	7.911	7.917	7.923	7.930	7.936	7.942
1570	7.942	7.948	7.954	7.960	7.966	7.973	7.979	7.985	7.991	7.997	8.003
1580	8.003	8.010	8.016	8.022	8.028	8.034	8.040	8.047	8.053	8.059	8.065
1590	8.065	8.071	8.077	8.083	8.090	8.096	8.102	8.108	8.114	8.121	8.127
1600	8.127	8.133	8.139	8.145	8.151	8.158	8.164	8.170	8.176	8.182	8.189
1610	8.189	8.195	8.201	8.207	8.213	8.219	8.226	8.232	8.238	8.244	8.250
1620	8.250	8.257	8.263	8.269	8.275	8.281	8.288	8.294	8.300	8.306	8.312
1630	8.312	8.319	8.325	8.331	8.337	8.343	8.350	8.356	8.362	8.368	8.375
1640	8.375	8.381	8.387	8.393	8.399	8.406	8.412	8.418	8.424	8.431	8.437
1650	8.437	8.443	8.449	8.455	8.462	8.468	8.474	8.480	8.487	8.493	8.499
1660	8.499	8.505	8.512	8.518	8.524	8.530	8.537	8.543	8.549	8.555	8.562
1670	8.562	8.568	8.574	8.580	8.587	8.593	8.599	8.605	8.612	8.618	8.624
1680	8.624	8.630	8.637	8.643	8.649	8.655	8.662	8.668	8.674	8.680	8.687
1690	8.687	8.693	8.699	8.706	8.712	8.718	8.724	8.731	8.737	8.743	8.749
1700	8.749	8.756	8.762	8.768	8.775	8.781	8.787	8.793	8.800	8.806	8.812
1710	8.812	8.819	8.825	8.831	8.837	8.844	8.850	8.856	8.863	8.869	8.875
1720	8.875	8.882	8.888	8.894	8.900	8.907	8.913	8.919	8.926	8.932	8.938
1730	8.938	8.945	8.951	8.957	8.964	8.970	8.976	8.983	8.989	8.995	9.001
1740	9.001	9.008	9.014	9.020	9.027	9.033	9.039	9.046	9.052	9.058	9.065
1750	9.065	9.071	9.077	9.084	9.090	9.096	9.103	9.109	9.115	9.122	9.128
1760	9.128	9.134	9.141	9.147	9.153	9.160	9.166	9.172	9.179	9.185	9.192
1770	9.192	9.198	9.204	9.211	9.217	9.223	9.230	9.236	9.242	9.249	9.255
1780	9.255	9.261	9.268	9.274	9.281	9.287	9.293	9.300	9.306	9.312	9.319
1790	9.319	9.325	9.331	9.338	9.344	9.351	9.357	9.363	9.370	9.376	9.382
1800	9.382	9.389	9.395	9.402	9.408	9.414	9.421	9.427	9.434	9.440	9.446
1810	9.446	9.453	9.459	9.465	9.472	9.478	9.485	9.491	9.497	9.504	9.510
1820	9.510	9.517	9.523	9.529	9.536	9.542	9.549	9.555	9.561	9.568	9.574
1830	9.574	9.581	9.587	9.594	9.600	9.606	9.613	9.619	9.626	9.632	9.638
1840	9.638	9.645	9.651	9.658	9.664	9.671	9.677	9.683	9.690	9.696	9.703
1850	9.703	9.709	9.716	9.722	9.728	9.735	9.741	9.748	9.754	9.761	9.767
1860	9.767	9.773	9.780	9.786	9.793	9.799	9.806	9.812	9.819	9.825	9.831
1870	9.831	9.838	9.844	9.851	9.857	9.864	9.870	9.877	9.883	9.889	9.896
1880	9.896	9.902	9.909	9.915	9.922	9.928	9.935	9.941	9.948	9.954	9.961
1890	9.961	9.967	9.973	9.980	9.986	9.993	9.999	10.006	10.012	10.019	10.025
1900	10.025	10.032	10.038	10.045	10.051	10.058	10.064	10.071	10.077	10.084	10.090
1910	10.090	10.097	10.103	10.110	10.116	10.123	10.129	10.136	10.142	10.149	10.155
1920	10.155	10.162	10.168	10.175	10.181	10.188	10.194	10.201	10.207	10.214	10.220
1930	10.220	10.227	10.233	10.240	10.246	10.253	10.259	10.266	10.272	10.279	10.285
1940	10.285	10.292	10.298	10.305	10.311	10.318	10.324	10.331	10.337	10.344	10.350
1950	10.350	10.357	10.363	10.370	10.376	10.383	10.390	10.396	10.403	10.409	10.416
1960	10.416	10.422	10.429	10.435	10.442	10.448	10.455	10.461	10.468	10.475	10.481
1970	10.481	10.488	10.494	10.501	10.507	10.514	10.520	10.527	10.533	10.540	10.547
1980	10.547	10.553	10.560	10.566	10.573	10.579	10.586	10.592	10.599	10.606	10.612
1990	10.612	10.619	10.625	10.632	10.638	10.645	10.651	10.658	10.665	10.671	10.678
2000	10.678	10.684	10.691	10.697	10.704	10.711	10.717	10.724	10.730	10.737	10.743
2010	10.743	10.750	10.757	10.763	10.770	10.776	10.783	10.789	10.796	10.803	10.809
2020	10.809	10.816	10.822	10.829	10.836	10.842	10.849	10.855	10.862	10.868	10.875
2030	10.875	10.882	10.888	10.895	10.901	10.908	10.915	10.921	10.928	10.934	10.941
2040	10.941	10.948	10.954	10.961	10.967	10.974	10.981	10.987	10.994	11.000	11.007
2050	11.007	11.014	11.020	11.027	11.033	11.040	11.047	11.053	11.060	11.066	11.073
2060	11.073	11.080	11.086	11.093	11.099	11.106	11.113	11.119	11.126	11.132	11.139
2070	11.139	11.146	11.152	11.159	11.166	11.172	11.179	11.185	11.192	11.199	11.205
2080	11.205	11.212	11.219	11.225	11.232	11.238	11.245	11.252	11.258	11.265	11.272
2090	11.272	11.278	11.285	11.291	11.298	11.305	11.311	11.318	11.325	11.331	11.338
2100	11.338	11.345	11.351	11.358	11.364	11.371	11.378	11.384	11.391	11.398	11.404
2110	11.404	11.411	11.418	11.424	11.431	11.437	11.444	11.451	11.457	11.464	11.471
2120	11.471	11.477	11.484	11.491	11.497	11.504	11.511	11.517	11.524	11.531	11.537
2130	11.537	11.544	11.550	11.557	11.564	11.570	11.577	11.584	11.590	11.597	11.604
2140	11.604	11.610	11.617	11.624	11.630	11.637	11.644	11.650	11.657	11.664	11.670
2150	11.670	11.677	11.684	11.690	11.697	11.704	11.710	11.717	11.724	11.730	11.737
2160	11.737	11.744	11.750	11.757	11.764	11.770	11.777	11.784	11.790	11.797	11.804
2170	11.804	11.810	11.817	11.824	11.830	11.837	11.844	11.850	11.857	11.864	11.870
2180	11.870	11.877	11.884	11.890	11.897	11.904	11.910	11.917	11.924	11.931	11.937
2190	11.937	11.944	11.951	11.957	11.964	11.971	11.977	11.984	11.991	11.997	12.004
2200	12.004	12.011	12.017	12.024	12.031	12.037	12.044	12.051	12.058	12.064	12.071
2210	12.071	12.078	12.084	12.091	12.098	12.104	12.111	12.118	12.124	12.131	12.138
2220	12.138	12.145	12.151	12.158	12.165	12.171	12.178	12.185	12.191	12.198	12.205
2230	12.205	12.211	12.218	12.225	12.232	12.238	12.245	12.252	12.258	12.265	12.272
2240	12.272	12.278	12.285	12.292	12.299	12.305	12.312	12.319	12.325	12.332	12.339
2250	12.339	12.346	12.352	12.359	12.366	12.372	12.379	12.386	12.392	12.399	12.406
2260	12.406	12.413	12.419	12.426	12.433	12.439	12.446	12.453	12.460	12.466	12.473
2270	12.473	12.480	12.486	12.493	12.500	12.507	12.513	12.520	12.527	12.533	12.540
2280	12.540	12.547	12.554	12.560	12.567	12.574	12.580	12.587	12.594	12.601	12.607
2290	12.607	12.614	12.621	12.627	12.634	12.641	12.648	12.654	12.661	12.668	12.675
2300	12.675	12.681	12.688	12.695	12.701	12.708	12.715	12.722	12.728	12.735	12.742
2310	12.742	12.748	12.755	12.762	12.769	12.775	12.782	12.789	12.796	12.802	12.809
2320	12.809	12.816	12.822	12.829	12.836	12.843	12.849	12.856	12.863	12.870	12.876
2330	12.876	12.883	12.890	12.896	12.903	12.910	12.917	12.923	12.930	12.937	12.944
2340	12.944	12.950	12.957	12.964	12.971	12.977	12.984	12.991	12.997	13.004	13.011
2350	13.011	13.018	13.024	13.031	13.038	13.045	13.051	13.058	13.065	13.072	13.078
2360	13.078	13.085	13.092	13.098	13.105	13.112	13.119	13.125	13.132	13.139	13.146
2370	13.146	13.152	13.159	13.166	13.173	13.179	13.186	13.193	13.199	13.206	13.213
2380	13.213	13.220	13.226	13.233	13.240	13.247	13.253	13.260	13.267	13.274	13.280
2390	13.280	13.287	13.294	13.301	13.307	13.314	13.321	13.328	13.334	13.341	13.348
2400	13.348	13.354	13.361	13.368	13.375	13.381	13.388	13.395	13.402	13.408	13.415
2410	13.415	13.422	13.429	13.435	13.442	13.449	13.456	13.462	13.469	13.476	13.483
2420	13.483	13.489	13.496	13.503	13.510	13.516	13.523	13.530	13.537	13.543	13.550
2430	13.550	13.557	13.563	13.570	13.577	13.584	13.590	13.597	13.604	13.611	13.617
2440	13.617	13.624	13.631	13.638	13.644	13.651	13.658	13.665	13.671	13.678	13.685
2450	13.685	13.692	13.698	13.705	13.712	13.719	13.725	13.732	13.739	13.746	13.752
2460	13.752	13.759	13.766	13.773	13.779	13.786	13.793	13.800	13.806	13.813	13.820
2470	13.820	13.826	13.833	13.840	13.847	13.853	13.860	13.867	13.874	13.880	13.887
2480	13.887	13.894	13.901	13.907	13.914	13.921	13.928	13.934	13.941	13.948	13.955
2490	13.955	13.961	13.968	13.975	13.982	13.988	13.995	14.002	14.009	14.015	14.022
2500	14.022	14.029	14.036	14.042	14.049	14.056	14.063	14.069	14.076	14.083	14.089
2510	14.089	14.096	14.103	14.110	14.116	14.123	14.130	14.137	14.143	14.150	14.157
2520	14.157	14.164	14.170	14.177	14.184	14.191	14.197	14.204	14.211	14.218	14.224
2530	14.224	14.231	14.238	14.245	14.251	14.258	14.265	14.272	14.278	14.285	14.292
2540	14.292	14.298	14.305	14.312	14.319	14.325	14.332	14.339	14.346	14.352	14.359
2550	14.359	14.366	14.373	14.379	14.386	14.393	14.400	14.406	14.413	14.420	14.426
2560	14.426	14.433	14.440	14.447	14.453	14.460	14.467	14.474	14.480	14.487	14.494
2570	14.494	14.501	14.507	14.514	14.521	14.528	14.534	14.541	14.548	14.554	14.561
2580	14.561	14.568	14.575	14.581	14.588	14.595	14.602	14.608	14.615	14.622	14.629
2590	14.629	14.635	14.642	14.649	14.655	14.662	14.669	14.676	14.682	14.689	14.696
2600	14.696	14.703	14.709	14.716	14.723	14.729	14.736	14.743	14.750	14.756	14.763
2610	14.763	14.770	14.777	14.783	14.790	14.797	14.803	14.810	14.817	14.824	14.830
2620	14.830	14.837	14.844	14.851	14.857	14.864	14.871	14.877	14.884	14.891	14.898
2630	14.898	14.904	14.911	14.918	14.925	14.931	14.938	14.945	14.951	14.958	14.965
2640	14.965	14.972	14.978	14.985	14.992	14.998	15.005	15.012	15.019	15.025	15.032
2650	15.032	15.039	15.045	15.052	15.059	15.066	15.072	15.079	15.086	15.092	15.099
2660	15.099	15.106	15.113	15.119	15.126	15.133	15.139	15.146	15.153	15.160	15.166
2670	15.166	15.173	15.180	15.186	15.193	15.200	15.207	15.213	15.220	15.227	15.233
2680	15.233	15.240	15.247	15.254	15.260	15.267	15.274	15.280	15.287	15.294	15.300
2690	15.300	15.307	15.314	15.321	15.327	15.334	15.341	15.347	15.354	15.361	15.367
2700	15.367	15.374	15.381	15.388	15.394	15.401	15.408	15.414	15.421	15.428	15.434
2710	15.434	15.441	15.448	15.455	15.461	15.468	15.475	15.481	15.488	15.495	15.501
2720	15.501	15.508	15.515	15.521	15.528	15.535	15.542	15.548	15.555	15.562	15.568
2730	15.568	15.575	15.582	15.588	15.595	15.602	15.608	15.615	15.622	15.628	15.635
2740	15.635	15.642	15.649	15.655	15.662	15.669	15.675	15.682	15.689	15.695	15.702
2750	15.702	15.709	15.715	15.722	15.729	15.735	15.742	15.749	15.755	15.762	15.769
2760	15.769	15.775	15.782	15.789	15.795	15.802	15.809	15.815	15.822	15.829	15.835
2770	15.835	15.842	15.849	15.855	15.862	15.869	15.875	15.882	15.889	15.895	15.902
2780	15.902	15.909	15.915	15.922	15.929	15.935	15.942	15.949	15.955	15.962	15.969
2790	15.969	15.975	15.982	15.989	15.995	16.002	16.009	16.015	16.022	16.029	16.035
2800	16.035	16.042	16.049	16.055	16.062	16.069	16.075	16.082	16.089	16.095	16.102
2810	16.102	16.108	16.115	16.122	16.128	16.135	16.142	16.148	16.155	16.162	16.168
2820	16.168	16.175	16.182	16.188	16.195	16.202	16.208	16.215	16.221	16.228	16.235
2830	16.235	16.241	16.248	16.255	16.261	16.268	16.275	16.281	16.288	16.294	16.301
2840	16.301	16.308	16.314	16.321	16.328	16.334	16.341	16.347	16.354	16.361	16.367
2850	16.367	16.374	16.381	16.387	16.394	16.400	16.407	16.414	16.420	16.427	16.434
2860	16.434	16.440	16.447	16.453	16.460	16.467	16.473	16.480	16.486	16.493	16.500
2870	16.500	16.506	16.513	16.520	16.526	16.533	16.539	16.546	16.553	16.559	16.566
2880	16.566	16.572	16.579	16.586	16.592	16.599	16.605	16.612	16.619	16.625	16.632
2890	16.632	16.638	16.645	16.652	16.658	16.665	16.671	16.678	16.685	16.691	16.698
2900	16.698	16.704	16.711	16.718	16.724	16.731	16.737	16.744	16.751	16.757	16.764
2910	16.764	16.770	16.777	16.783	16.790	16.797	16.803	16.810	16.816	16.823	16.829
2920	16.829	16.836	16.843	16.849	16.856	16.862	16.869	16.876	16.882	16.889	16.895
2930	16.895	16.902	16.908	16.915	16.922	16.928	16.935	16.941	16.948	16.954	16.961
2940	16.961	16.967	16.974	16.981	16.987	16.994	17.000	17.007	17.013	17.020	17.026
2950	17.026	17.033	17.040	17.046	17.053	17.059	17.066	17.072	17.079	17.085	17.092
2960	17.092	17.099	17.105	17.112	17.118	17.125	17.131	17.138	17.144	17.151	17.157
2970	17.157	17.164	17.171	17.177	17.184	17.190	17.197	17.203	17.210	17.216	17.223
2980	17.223	17.229	17.236	17.242	17.249	17.255	17.262	17.268	17.275	17.282	17.288
2990	17.288	17.295	17.301	17.308	17.314	17.321	17.327	17.334	17.340	17.347	17.353

Look no further than TRANSCAT for expert calibration of your test and measurement instruments.

Taking Calibration Further

Thermocouple Reference Tables - N.I.S.T to ITS-90 (Thermoelectric Voltage in mV)

Type S °F (32 to 2642°F) cont.

°F	0	1	2	3	4	5	6	7	8	9	10
3000	17.353	17.360	17.366	17.373	17.379	17.386	17.392	17.399	17.405	17.412	17.418
3010	17.418	17.425	17.431	17.438	17.444	17.451	17.457	17.464	17.470	17.477	17.483
3020	17.483	17.490	17.496	17.503	17.509	17.516	17.522	17.529	17.535	17.542	17.548
3030	17.548	17.555	17.561	17.568	17.574	17.581	17.587	17.594	17.600	17.607	17.613
3040	17.613	17.620	17.626	17.633	17.639	17.645	17.652	17.658	17.665	17.671	17.678
3050	17.678	17.684	17.691	17.697	17.704	17.710	17.717	17.723	17.729	17.736	17.742
3060	17.742	17.749	17.755	17.762	17.768	17.775	17.781	17.787	17.794	17.800	17.807
3070	17.807	17.813	17.819	17.826	17.832	17.839	17.845	17.852	17.858	17.864	17.871
3080	17.871	17.877	17.884	17.890	17.896	17.903	17.909	17.915	17.922	17.928	17.935
3090	17.935	17.941	17.947	17.954	17.960	17.966	17.973	17.979	17.985	17.992	17.998
3100	17.998	18.004	18.011	18.017	18.023	18.030	18.036	18.042	18.049	18.055	18.061
3110	18.061	18.068	18.074	18.080	18.086	18.093	18.099	18.105	18.112	18.118	18.124
3120	18.124	18.130	18.137	18.143	18.149	18.155	18.162	18.168	18.174	18.180	18.187
3130	18.187	18.193	18.199	18.205	18.211	18.218	18.224	18.230	18.236	18.242	18.248
3140	18.248	18.255	18.261	18.267	18.273	18.279	18.285	18.292	18.298	18.304	18.310
3150	18.310	18.316	18.322	18.328	18.334	18.341	18.347	18.353	18.359	18.365	18.371
3160	18.371	18.377	18.383	18.389	18.395	18.401	18.407	18.413	18.419	18.425	18.431
3170	18.431	18.437	18.443	18.449	18.455	18.461	18.467	18.473	18.479	18.485	18.491
3180	18.491	18.497	18.503	18.509	18.515	18.521	18.527	18.533	18.539	18.545	18.551
3190	18.551	18.557	18.562	18.568	18.574	18.580	18.586	18.592	18.598	18.603	18.609
3200	18.609	18.615	18.621	18.627	18.633	18.638	18.644	18.650	18.656	18.661	18.667
3210	18.667	18.673	18.679	18.684	18.690						

Type T °F (-328 to 662°F)

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-450	-6.254										
-440	-6.240	-6.242	-6.243	-6.245	-6.247	-6.248	-6.250	-6.251	-6.252	-6.253	-6.254
-430	-6.217	-6.220	-6.222	-6.225	-6.227	-6.230	-6.232	-6.234	-6.236	-6.238	-6.240
-420	-6.187	-6.191	-6.194	-6.197	-6.200	-6.203	-6.206	-6.209	-6.212	-6.215	-6.217
-410	-6.150	-6.154	-6.158	-6.162	-6.166	-6.170	-6.173	-6.177	-6.180	-6.184	-6.187
-400	-6.105	-6.110	-6.115	-6.119	-6.124	-6.128	-6.133	-6.137	-6.141	-6.146	-6.150
-390	-6.053	-6.059	-6.064	-6.069	-6.075	-6.080	-6.085	-6.090	-6.095	-6.100	-6.105
-380	-5.994	-6.001	-6.007	-6.013	-6.019	-6.025	-6.030	-6.036	-6.042	-6.047	-6.053
-370	-5.930	-5.937	-5.943	-5.950	-5.956	-5.963	-5.969	-5.976	-5.982	-5.988	-5.994
-360	-5.860	-5.867	-5.874	-5.881	-5.888	-5.896	-5.902	-5.909	-5.916	-5.923	-5.930
-350	-5.785	-5.792	-5.800	-5.808	-5.815	-5.823	-5.830	-5.838	-5.845	-5.853	-5.860
-340	-5.705	-5.713	-5.721	-5.729	-5.737	-5.745	-5.753	-5.761	-5.769	-5.777	-5.785
-330	-5.620	-5.629	-5.638	-5.646	-5.655	-5.663	-5.672	-5.680	-5.688	-5.697	-5.705
-320	-5.532	-5.541	-5.550	-5.559	-5.568	-5.577	-5.585	-5.594	-5.603	-5.612	-5.620
-310	-5.439	-5.448	-5.458	-5.467	-5.476	-5.486	-5.495	-5.504	-5.513	-5.523	-5.532
-300	-5.341	-5.351	-5.361	-5.371	-5.381	-5.391	-5.400	-5.410	-5.420	-5.429	-5.439
-290	-5.240	-5.250	-5.261	-5.271	-5.281	-5.291	-5.301	-5.312	-5.322	-5.332	-5.341
-280	-5.135	-5.145	-5.156	-5.167	-5.177	-5.188	-5.198	-5.209	-5.219	-5.230	-5.240
-270	-5.025	-5.036	-5.048	-5.059	-5.070	-5.081	-5.091	-5.102	-5.113	-5.124	-5.135
-260	-4.912	-4.923	-4.935	-4.946	-4.958	-4.969	-4.980	-4.992	-5.003	-5.014	-5.025
-250	-4.794	-4.806	-4.818	-4.830	-4.842	-4.854	-4.865	-4.877	-4.889	-4.900	-4.912
-240	-4.673	-4.685	-4.698	-4.710	-4.722	-4.734	-4.746	-4.759	-4.771	-4.783	-4.794
-230	-4.548	-4.561	-4.573	-4.586	-4.599	-4.611	-4.624	-4.636	-4.648	-4.661	-4.673
-220	-4.419	-4.432	-4.445	-4.458	-4.471	-4.484	-4.497	-4.510	-4.523	-4.535	-4.548
-210	-4.286	-4.300	-4.313	-4.326	-4.340	-4.353	-4.366	-4.380	-4.393	-4.406	-4.419
-200	-4.149	-4.163	-4.177	-4.191	-4.205	-4.218	-4.232	-4.246	-4.259	-4.273	-4.286
-190	-4.009	-4.023	-4.037	-4.052	-4.066	-4.080	-4.094	-4.108	-4.122	-4.136	-4.149
-180	-3.865	-3.879	-3.894	-3.908	-3.923	-3.937	-3.952	-3.966	-3.980	-3.995	-4.009
-170	-3.717	-3.732	-3.747	-3.762	-3.777	-3.791	-3.806	-3.821	-3.836	-3.850	-3.865
-160	-3.565	-3.581	-3.596	-3.611	-3.626	-3.642	-3.657	-3.672	-3.687	-3.702	-3.717
-150	-3.410	-3.426	-3.441	-3.457	-3.473	-3.488	-3.504	-3.519	-3.535	-3.550	-3.565
-140	-3.251	-3.267	-3.283	-3.299	-3.315	-3.331	-3.347	-3.363	-3.379	-3.394	-3.410
-130	-3.089	-3.105	-3.122	-3.138	-3.154	-3.171	-3.187	-3.203	-3.219	-3.235	-3.251
-120	-2.923	-2.940	-2.956	-2.973	-2.990	-3.006	-3.023	-3.040	-3.056	-3.072	-3.089
-110	-2.754	-2.771	-2.788	-2.805	-2.822	-2.839	-2.856	-2.873	-2.889	-2.906	-2.923
-100	-2.581	-2.598	-2.616	-2.633	-2.651	-2.668	-2.685	-2.702	-2.719	-2.737	-2.754
-90	-2.405	-2.423	-2.440	-2.458	-2.476	-2.493	-2.511	-2.529	-2.546	-2.564	-2.581
-80	-2.225	-2.244	-2.262	-2.280	-2.298	-2.316	-2.334	-2.351	-2.369	-2.387	-2.405
-70	-2.043	-2.061	-2.079	-2.098	-2.116	-2.134	-2.153	-2.171	-2.189	-2.207	-2.225
-60	-1.857	-1.875	-1.894	-1.913	-1.931	-1.950	-1.969	-1.987	-2.006	-2.024	-2.043
-50	-1.667	-1.686	-1.705	-1.724	-1.743	-1.762	-1.781	-1.800	-1.819	-1.838	-1.857
-40	-1.475	-1.494	-1.514	-1.533	-1.552	-1.572	-1.591	-1.610	-1.629	-1.648	-1.667
-30	-1.279	-1.299	-1.319	-1.338	-1.358	-1.378	-1.397	-1.417	-1.436	-1.456	-1.475
-20	-1.081	-1.101	-1.121	-1.141	-1.161	-1.181	-1.200	-1.220	-1.240	-1.260	-1.279
-10	-0.879	-0.900	-0.920	-0.940	-0.960	-0.980	-1.001	-1.021	-1.041	-1.061	-1.081
0	-0.675	-0.695	-0.716	-0.736	-0.757	-0.777	-0.798	-0.818	-0.839	-0.859	-0.879

°F	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
0	-0.675	-0.654	-0.633	-0.613	-0.592	-0.571	-0.550	-0.530	-0.509	-0.488	-0.467
10	-0.467	-0.446	-0.425	-0.404	-0.383	-0.362	-0.341	-0.320	-0.299	-0.278	-0.256
20	-0.256	-0.235	-0.214	-0.193	-0.171	-0.150	-0.129	-0.107	-0.086	-0.064	-0.043
30	-0.043	-0.022	0.000	0.022	0.043	0.065	0.086	0.108	0.130	0.151	0.173
40	0.173	0.195	0.216	0.238	0.260	0.282	0.303	0.325	0.347	0.369	0.391
50	0.391	0.413	0.435	0.457	0.479	0.501	0.523	0.545	0.567	0.589	0.611
60	0.611	0.634	0.656	0.678	0.700	0.723	0.745	0.767	0.790	0.812	0.834
70	0.834	0.857	0.879	0.902	0.924	0.947	0.969	0.992	1.015	1.037	1.060
80	1.060	1.083	1.105	1.128	1.151	1.174	1.196	1.219	1.242	1.265	1.288
90	1.288	1.311	1.334	1.357	1.380	1.403	1.426	1.449	1.472	1.496	1.519
100	1.519	1.542	1.565	1.588	1.612	1.635	1.658	1.682	1.705	1.729	1.752
110	1.752	1.776	1.799	1.823	1.846	1.870	1.893	1.917	1.941	1.964	1.988
120	1.988	2.012	2.036	2.060	2.083	2.107	2.131	2.155	2.179	2.203	2.227
130	2.227	2.251	2.275	2.299	2.323	2.347	2.371	2.395	2.420	2.444	2.468
140	2.468	2.492	2.517	2.541	2.565	2.590	2.614	2.639	2.663	2.687	2.712
150	2.712	2.737	2.761	2.786	2.810	2.835	2.860	2.884	2.909	2.934	2.958
160	2.958	2.983	3.008	3.033	3.058	3.082	3.107	3.132	3.157	3.182	3.207
170	3.207	3.232	3.257	3.282	3.307	3.333	3.358	3.383	3.408	3.433	3.459
180	3.459	3.484	3.509	3.534	3.560	3.585	3.610	3.636	3.661	3.687	3.712
190	3.712	3.738	3.763	3.789	3.814	3.840	3.866	3.891	3.917	3.943	3.968
200	3.968	3.994	4.020	4.046	4.071	4.097	4.123	4.149	4.175	4.201	4.227
210	4.227	4.253	4.279	4.305	4.331	4.357	4.383	4.409	4.435	4.461	4.487
220	4.487	4.513	4.540	4.566	4.592	4.618	4.645	4.671	4.697	4.724	4.750
230	4.750	4.776	4.803	4.829	4.856	4.882	4.909	4.935	4.962	4.988	5.015
240	5.015	5.042	5.068	5.095	5.122	5.148	5.175	5.202	5.228	5.255	5.282
250	5.282	5.309	5.336	5.363	5.389	5.416	5.443	5.470	5.497	5.524	5.551
260	5.551	5.578	5.605	5.632	5.660	5.687	5.714	5.741	5.768	5.795	5.823
270	5.823	5.850	5.877	5.904	5.932	5.959	5.986	6.014	6.041	6.068	6.096
280	6.096	6.123	6.151	6.178	6.206	6.233	6.261	6.288	6.316	6.343	6.371
290	6.371	6.399	6.426	6.454	6.482	6.510	6.537	6.565	6.593	6.621	6.648
300	6.648	6.676	6.704	6.732	6.760	6.788	6.816	6.844	6.872	6.900	6.928
310	6.928	6.956	6.984	7.012	7.040	7.068	7.096	7.124	7.152	7.181	7.209
320	7.209	7.237	7.265	7.294	7.322	7.350	7.378	7.407	7.435	7.463	7.492
330	7.492	7.520	7.549	7.577	7.606	7.634	7.663	7.691	7.720	7.748	7.777
340	7.777	7.805	7.834	7.863	7.891	7.920	7.949	7.977	8.006	8.035	8.064
350	8.064	8.092	8.121	8.150	8.179	8.208	8.237	8.266	8.294	8.323	8.352
360	8.352	8.381	8.410	8.439	8.468	8.497	8.526	8.555	8.585	8.614	8.643
370	8.643	8.672	8.701	8.730	8.759	8.789	8.818	8.847	8.876	8.906	8.935
380	8.935	8.964	8.994	9.023	9.052	9.082	9.111	9.141	9.170	9.200	9.229
390	9.229	9.259	9.288	9.318	9.347	9.377	9.406	9.436	9.466	9.495	9.525
400	9.525	9.555	9.584	9.614	9.644	9.673	9.703	9.733	9.763	9.793	9.822
410	9.822	9.852	9.882	9.912	9.942	9.972	10.002	10.032	10.062	10.092	10.122
420	10.122	10.152	10.182	10.212	10.242	10.272	10.302	10.332	10.362	10.392	10.423
430	10.423	10.453	10.483	10.513	10.543	10.574	10.604	10.634	10.664	10.695	10.725
440	10.725	10.755	10.786	10.816	10.847	10.877	10.907	10.938	10.968	10.999	11.029
450	11.029	11.060	11.090	11.121	11.151	11.182	11.213	11.243	11.274	11.304	11.335
460	11.335	11.366	11.396	11.427	11.458	11.489	11.519	11.550	11.581	11.612	11.643
470	11.643	11.673	11.704	11.735	11.766	11.797	11.828	11.859	11.890	11.920	11.951
480	11.951	11.982	12.013	12.044	12.075	12.106	12.138	12.169	12.200	12.231	12.262
490	12.262	12.293	12.324	12.355	12.386	12.418	12.449	12.480	12.511	12.543	12.574
500	12.574	12.605	12.636	12.668	12.699	12.730	12.762	12.793	12.824	12.856	12.887
510	12.887	12.919	12.950	12.982	13.013	13.045	13.076	13.108	13.139	13.171	13.202
520	13.202	13.234	13.265	13.297	13.328	13.360	13.392	13.423	13.455	13.487	13.518
530	13.518	13.550	13.582	13.614	13.645	13.677	13.709	13.741	13.772	13.804	13.836
540	13.836	13.868	13.900	13.932	13.964	13.995	14.027	14.059	14.091	14.123	14.155
550	14.155	14.187	14.219	14.251	14.283	14.315	14.347	14.379	14.411	14.444	14.476
560	14.476	14.508	14.540	14.572	14.604	14.636	14.669	14.701	14.733	14.765	14.797
570	14.797	14.830	14.862	14.894	14.926	14.959	14.991	15.023	15.056	15.088	15.121
580	15.121	15.153	15.185	15.218	15.250	15.283	15.315	15.347	15.380	15.412	15.445
590	15.445	15.477	15.510	15.543	15.575	15.608	15.640	15.673	15.705	15.738	15.771
600	15.771	15.803	15.836	15.869	15.901	15.934	15.967	15.999	16.032	16.065	16.098
610	16.098	16.130	16.163	16.196	16.229	16.262	16.295	16.327	16.360	16.393	16.426
620	16.426	16.459	16.492	16.525	16.558	16.591	16.624	16.657	16.690	16.723	16.756
630	16.756	16.789	16.822	16.855	16.888	16.921	16.954	16.987	17.020	17.053	17.086
640	17.086	17.120	17.153	17.186	17.219	17.252	17.286	17.319	17.352	17.385	17.418
650	17.418	17.452	17.485	17.518	17.552	17.585	17.618	17.652	17.685	17.718	17.752
660	17.752	17.785	17.819	17.852	17.886	17.919	17.952	17.986	18.019	18.053	18.086
670	18.086	18.120	18.153	18.187	18.221	18.254	18.288	18.321	18.355	18.389	18.422
680	18.422	18.456	18.490	18.523	18.557	18.591	18.624	18.658	18.692	18.725	18.759
690	18.759	18.793	18.827	18.861	18.894	18.928	18.962	18.996	19.030	19.064	19.097
700	19.097	19.131	19.165	19.199	19.233	19.267	19.301	19.335	19.369	19.403	19.437
710	19.437	19.471	19.505	19.539	19.573	19.607	19.641	19.675	19.709	19.743	19.777
720	19.777	19.811	19.845	19.879	19.913	19.947	19.982	20.016	20.050	20.084	20.118
730	20.118	20.152	20.187	20.221	20.255	20.289	20.323	20.358	20.392	20.426	20.460
740	20.460	20.495	20.529	20.563	20.597	20.632	20.666	20.700	20.735	20.769	20.803
750	20.803	20.838	20.872								

TRANSCAT
CALL: 800-828-1470
FAX: 800-395-0543 WEB: www.transcat.com