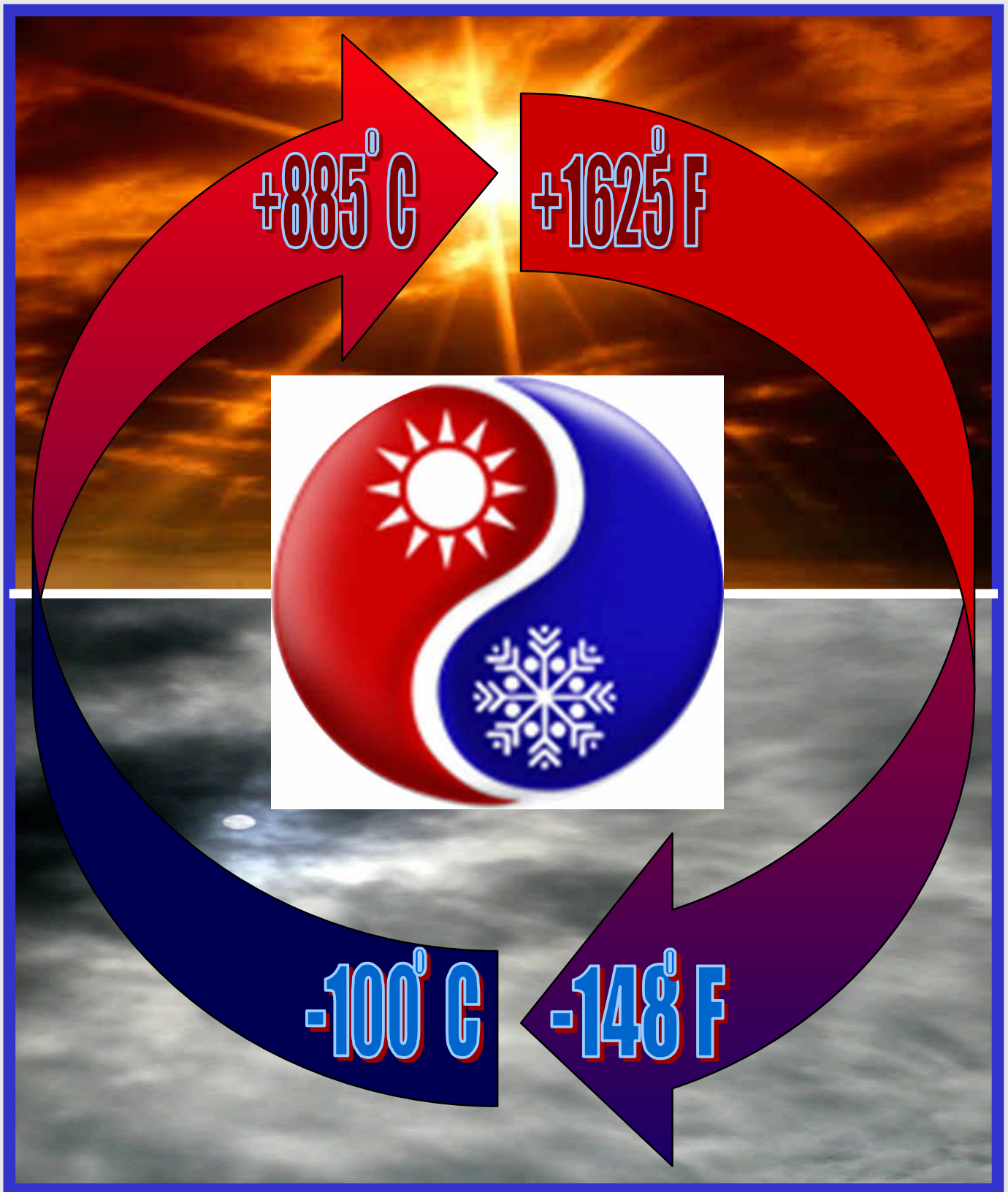


PlusICE[®]

Phase Change Materials

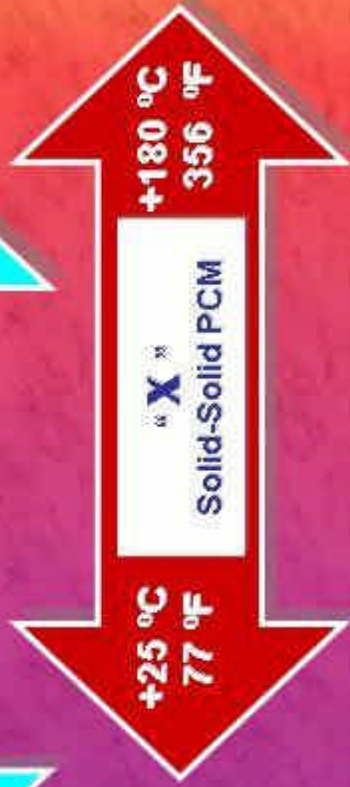


PCM

PHASE CHANGE MATERIAL PRODUCTS LIMITED



PlusICE Range



Temperature Range

PCM		PlusICE PCM (HYDRATED SALT) (S) RANGE											2013-1	
PCM Type	Phase Change Temperature		Density		Latent Heat Capacity		Volumetric Heat Capacity		Specific Heat Capacity		Thermal Conductivity		Max Operating	Max Operating
	(°C)	(°F)	(kg/m ³)	(lb / ft ³)	(kJ/kg)	(Btu / lb)	(MJ/m ³)	(Btu / ft ³)	(kJ/kg K)	(Btu / lb °F)	(W/m K)	(Btu / ft ² h°F)	Temp (°C)	Temp (°F)
HYDRATED SALT BASED PCM SOLUTIONS														
S117	117	243	1,450	90.5	160	69	232	6,227	2.61	0.618	0.700	0.405	140	284
S89	89	192	1,550	96.8	151	65	234	6,282	2.48	0.588	0.670	0.387	120	248
S83	83	181	1,600	99.9	141	61	226	6,055	2.31	0.547	0.620	0.358	120	248
S72	72	162	1,666	104.0	127	55	212	5,679	2.13	0.505	0.580	0.335	120	248
S70	70	158	1,680	104.9	110	47	185	4,960	2.10	0.497	0.570	0.329	120	248
S58	58	136	1,505	94.0	145	62	218	5,857	2.55	0.604	0.690	0.399	120	248
S50	50	122	1,601	99.9	100	43	160	4,297	1.59	0.377	0.430	0.249	120	248
S46	46	115	1,587	99.1	210	90	333	8,945	2.41	0.571	0.450	0.260	56	133
S44	44	111	1,584	98.9	100	43	158	4,251	1.61	0.381	0.430	0.249	120	248
S34	34	93	2,100	131.1	115	49	242	6,482	2.10	0.497	0.520	0.301	70	158
S32	32	90	1,460	91.1	200	86	292	7,837	1.91	0.452	0.510	0.295	60	140
S30	30	86	1,304	81.4	190	82	248	6,650	1.90	0.450	0.480	0.277	60	140
S27	27	81	1,530	95.5	183	79	280	7,515	2.20	0.521	0.540	0.312	60	140
S25	25	77	1,530	95.5	180	77	275	7,392	2.20	0.521	0.540	0.312	60	140
S23	23	73	1,530	95.5	175	75	268	7,186	2.20	0.521	0.540	0.312	60	140
S21	22	72	1,530	95.5	170	73	260	6,981	2.20	0.521	0.540	0.312	60	140
S19	19	66	1,520	94.9	160	69	243	6,527	1.90	0.450	0.430	0.249	60	140
S17	17	63	1,525	95.2	160	69	244	6,549	1.90	0.450	0.430	0.249	60	140
S15	15	59	1,510	94.3	160	69	242	6,485	1.90	0.450	0.430	0.249	60	140
S13	13	55	1,515	94.6	160	69	242	6,506	1.90	0.450	0.430	0.249	60	140
S10	10	50	1,470	91.8	155	67	228	6,115	1.90	0.450	0.430	0.249	60	140
S8	8	46	1,475	92.1	150	65	221	5,938	1.90	0.450	0.440	0.254	60	140
S7	7	45	1,700	106.1	150	65	255	6,844	1.85	0.438	0.400	0.231	60	140
PCM Products has a policy of continues product and product data improvement and reserves the right to change design and specifications without notice														



PlusICE PCM (ORGANIC) (A) RANGE

2013-1

PCM Type	Phase Change Temperature		Density		Latent Heat Capacity		Volumetric Heat Capacity		Specific Heat Capacity		Thermal Conductivity		Max Operating	Max Operating
	(°C)	(°F)	(kg/m ³)	(lb / ft ³)	(kJ/kg)	(Btu / lb)	(MJ/m ³)	(Btu / ft ³)	(kJ/kg K)	(Btu / lb°F)	(W/m K)	(Btu / ft ² h°F)	Temp (°C)	Temp (°F)
ORGANIC PCM SOLUTIONS														
A164*	164	327	1,500	93.6	290	125	435	11,675	2.42	0.573	nd	n/d	280	536
A155	155	311	900	56.2	100	43	90	2,416	2.2	0.521	0.230	0.133	250	482
A144	144	291	880	54.9	115	49	101	2,716	2.2	0.521	0.230	0.133	250	482
A133	133	271	880	54.9	126	54	111	2,976	2.2	0.521	0.230	0.133	250	482
A118**	118	244	1,450	90.5	340	146	493	13,232	2.7	0.640	nd	nd	300	572
A95	95	203	900	56.2	205	88	185	4,952	2.2	0.521	0.220	0.127	300	572
A82	82	180	850	53.1	155	67	132	3,536	2.21	0.524	0.220	0.127	300	572
A70	70	158	890	55.6	173	74	154	4,133	2.2	0.521	0.230	0.133	300	572
A62	62	144	910	56.8	145	62	132	3,542	2.2	0.521	0.220	0.127	300	572
A60H	60	140	800	49.9	212	91	170	4,552	2.15	0.509	0.180	0.104	400	752
A60	60	140	910	56.8	145	62	132	3,542	2.22	0.526	0.220	0.127	300	572
A58H	58	136	820	51.2	243	105	199	5,348	2.85	0.675	0.180	0.104	300	572
A58	58	136	910	56.8	132	57	120	3,224	2.22	0.526	0.220	0.127	300	572
A55	55	131	905	56.5	135	58	122	3,279	2.22	0.526	0.220	0.127	300	572
A53H	53	127	810	50.6	166	71	134	3,609	2.02	0.479	0.180	0.104	300	572
A53	53	127	910	56.8	130	56	118	3,175	2.22	0.526	0.220	0.127	300	572
A52	52	126	810	50.6	222	95	180	4,826	2.15	0.509	0.180	0.104	300	572
A50	50	122	810	50.6	218	94	177	4,739	2.15	0.509	0.180	0.104	300	572
A48	48	118	810	50.6	234	101	190	5,087	2.85	0.675	0.180	0.104	300	572
A46	46	115	910	56.8	155	67	141	3,786	2.22	0.526	0.220	0.127	300	572
A44	44	111	805	50.3	242	104	195	5,229	2.15	0.509	0.180	0.104	400	752
A43	43	109	780	48.7	165	71	129	3,454	2.37	0.561	0.180	0.104	300	572
A42	42	108	905	56.5	105	45	95	2,550	2.22	0.526	0.210	0.121	300	572
A40	40	104	810	50.6	230	99	186	5,000	2.43	0.576	0.180	0.104	300	572
A39	39	102	900	56.2	105	45	95	2,536	2.22	0.526	0.220	0.127	280	536
A37	37	99	810	50.6	235	101	190	5,109	2.85	0.675	0.180	0.104	300	572
A36	36	97	790	49.3	217	93	171	4,601	2.37	0.561	0.180	0.104	300	572
A32	32	90	845	52.8	130	56	110	2,948	2.20	0.521	0.210	0.121	300	572
A29	29	84	810	50.6	226	97	183	4,913	2.15	0.509	0.180	0.104	300	572
A28	28	82	789	49.3	155	67	122	3,282	2.22	0.526	0.210	0.121	280	536
A26	26	79	790	49.3	150	65	119	3,181	2.22	0.526	0.210	0.121	280	536
A25H	25	77	810	50.6	226	97	183	4,913	2.15	0.509	0.180	0.104	400	752
A25	25	77	785	49.0	150	65	118	3,160	2.26	0.535	0.180	0.104	280	536
A24	24	75	790	49.3	145	62	115	3,075	2.22	0.526	0.180	0.104	280	536
A23	23	73	785	49.0	145	62	114	3,055	2.22	0.526	0.180	0.104	280	536
A22H	22	72	820	51.2	216	93	177	4,754	2.85	0.675	0.180	0.104	400	752
A22	22	72	785	49.0	145	62	114	3,055	2.22	0.526	0.180	0.104	250	482
A17	17	63	785	49.0	150	65	118	3,160	2.22	0.526	0.180	0.104	250	482
A16	16	61	760	47.4	213	92	162	4,345	2.37	0.561	0.180	0.104	250	482
A15	15	59	790	49.3	130	56	103	2,756	2.26	0.535	0.180	0.104	250	482
A9	9	48	775	48.4	140	60	109	2,912	2.16	0.512	0.210	0.121	220	428
A8	8	46	773	48.3	150	65	116	3,112	2.16	0.512	0.210	0.121	220	428
A6	6	43	770	48.1	150	65	116	3,100	2.17	0.514	0.210	0.121	220	428
A4	4	39	766	47.8	200	86	153	4,112	2.18	0.516	0.210	0.121	220	428
A3	3	37	765	47.8	200	86	153	4,107	2.20	0.521	0.210	0.121	200	392
A2	2	36	765	47.8	200	86	172	4,616	2.20	0.521	0.210	0.121	200	392

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PCM Type	Phase Change Temperature		Density		Latent Heat Capacity		Volumetric Heat Capacity		Specific Heat Capacity		Thermal Conductivity	
	(°C)	(°F)	(kg/m ³)	(lb / ft ³)	(kJ/kg)	(Btu / lb)	(MJ/m ³)	(Btu / ft ³)	(kJ/kg K)	(Btu / lb°F)	(W/m K)	(Btu / ft ² h°F)
EUTECTIC PCM SOLUTIONS												
E0	0	32	1,000	62.4	332	143	332	8,911	4.186	0.992	0.580	0.335
E-2	-2.0	28	1,070	66.8	306	132	327	8,777	3.80	0.900	0.580	0.335
E-3	-3.7	25	1,060	66.2	312	134	331	8,884	3.84	0.910	0.600	0.347
E-6	-6.0	21	1,110	69.3	275	118	305	8,186	3.83	0.907	0.560	0.324
E-10	-10.0	14	1,140	71.2	286	123	326	8,750	3.33	0.789	0.560	0.324
E-11	-11.6	11	1,090	68.0	301	129	328	8,804	3.55	0.841	0.570	0.329
E-12	-12.3	10	1,110	69.3	250	108	278	7,462	3.47	0.822	0.560	0.324
E-14	-14.8	5	1,220	76.2	243	105	296	7,945	3.51	0.832	0.530	0.306
E-15	-15.0	5	1,060	66.2	303	130	321	8,616	3.87	0.917	0.530	0.306
E-19	-18.7	-2	1,125	70.2	282	121	344	9,233	3.29	0.779	0.580	0.335
E-21	-20.6	-5	1,240	77.4	263	113	326	8,750	3.13	0.741	0.510	0.295
E-22	-22.0	-8	1,180	73.7	234	101	276	7,408	3.34	0.791	0.570	0.329
E-26	-26.0	-15	1,250	78.0	260	112	325	8,723	3.67	0.869	0.580	0.335
E-29	-29.0	-20	1,420	88.6	222	95	264	7,086	3.69	0.874	0.640	0.370
E-32	-32.0	-26	1,290	80.5	243	105	313	8,401	2.95	0.699	0.560	0.324
E-34	-33.6	-28	1,205	75.2	240	103	286	7,676	3.05	0.723	0.540	0.312
E-37	-36.5	-34	1,500	93.6	213	92	302	8,106	3.15	0.746	0.540	0.312
E-50	-49.8	-58	1,325	82.7	218	94	283	7,596	3.28	0.777	0.560	0.324
E-75	-75.0	-103	902	56.3	102	44	92	2,469	2.43	0.576	0.170	0.098
E-78	-78.0	-108	880	54.9	115	49	101	2,716	1.96	0.464	0.140	0.081
E-90	-90.0	-130	786	49.1	90	39	71	1,906	2.56	0.606	0.140	0.081
E-114	-114.0	-173	782	48.8	107	46	84	2,255	2.39	0.566	0.170	0.098

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PCM Type	Phase Change Temperature		Density		Latent Heat Capacity		Volumetric Heat Capacity		Specific Heat Capacity		Thermal Conductivity	
	(°C)	(°F)	(kg/m ³)	(lb / ft ³)	(kJ/kg)	(Btu / lb)	(MJ/m ³)	(Btu / ft ³)	(kJ/kg K)	(Btu / lb°F)	(W/m K)	(Btu / ft ² h°F)
SOLID-SOLID PCM SOLUTIONS												
X25	25	77	1,055	65.9	110	47	116	3,115	1.63	0.386	0.360	0.208
X30	30	86	1,050	65.5	105	45	110	2,959	1.65	0.391	0.360	0.208
X40	40	104	1,046	65.3	125	54	131	3,509	1.67	0.396	0.360	0.208
X55	55	131	1,060	66.2	115	49	122	3,272	1.62	0.384	0.360	0.208
X70	70	158	1,085	67.7	125	54	136	3,640	1.57	0.372	0.360	0.208
X80	80	176	1,193	74.5	140	60	167	4,483	1.52	0.360	0.360	0.208
X90	90	194	1,200	74.9	135	58	162	4,348	1.51	0.358	0.360	0.208
X95	95	203	1,215	75.9	140	60	170	4,565	1.51	0.358	0.360	0.208
X120	120	248	1,245	77.7	180	77	224	6,015	1.50	0.355	0.360	0.208
X130	130	266	1,280	79.9	260	112	333	8,932	1.47	0.348	0.360	0.208
X165	165	329	1,304	81.4	230	99	300	8,050	1.43	0.339	0.360	0.208
X180	180	356	1,330	83.0	280	120	372	9,995	1.40	0.332	0.360	0.208
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Note: For other temperatures please consult our technical team.												

		PlusICE PCM TEMPERATURE (H) RANGE											2013-1	
PCM Type	Phase Change Temperature		Density		Latent Heat Capacity		Volumetric Heat Capacity		Specific Heat Capacity		Thermal Conductivity		Maximum Temperature	
	(°C)	(°F)	(kg/m ³)	(lb / ft ³)	(kJ/kg)	(Btu / lb)	(MJ/m ³)	(Btu / ft ³)	(kJ/kg K)	(Btu / lb°F)	(W/m K)	(Btu / ft ² h°F)	(°C)	(°F)
HIGH TEMPERATURE PCM SOLUTIONS														
H105	104	219	1,700	106	125	54	213	5,704	1.500	0.355	0.500	0.289	390	734
H115	114	237	2,200	137	100	43	220	5,905	1.505	0.357	0.503	0.291	390	734
H120	120	248	2,220	139	120	52	266	7,150	1.510	0.358	0.506	0.292	390	734
H160	162	324	1,910	119	105	45	201	5,383	1.505	0.357	0.509	0.294	200	392
H190	191	376	2,300	144	170	73	391	10,494	1.510	0.358	0.512	0.296	500	932
H220	220	428	2,000	125	100	43	200	5,368	1.515	0.359	0.515	0.298	390	734
H230	227	441	1,553	97	105	45	163	4,377	1.520	0.360	0.518	0.299	300	572
H250	250	482	2,380	149	280	120	666	17,886	1.525	0.361	0.521	0.301	600	1,112
H255	254	489	2,380	149	270	116	643	17,247	1.530	0.362	0.524	0.303	600	1,112
H280	282	540	2,250	140	160	69	360	9,662	1.535	0.364	0.527	0.305	500	932
H285	285	545	2,200	137	85	37	187	5,019	1.540	0.365	0.530	0.306	390	734
H290	292	558	2,200	137	150	65	330	8,857	1.545	0.366	0.533	0.308	500	932
H300	302	576	1,900	119	130	56	247	6,629	1.550	0.367	0.537	0.310	500	932
H305	305	581	1,570	98	150	65	236	6,321	1.555	0.368	0.541	0.313	350	662
H320	320	608	2,100	131	70	30	147	3,945	1.500	0.355	0.545	0.315	390	734
H325	327	621	2,110	132	80	34	169	4,531	1.505	0.357	0.549	0.317	390	734
H335	334	633	2,110	132	80	34	169	4,531	1.510	0.358	0.553	0.320	390	734
H355	353	667	2,060	129	230	99	474	12,717	1.520	0.360	0.556	0.321	1300	2,372
H380	382	720	2,050	128	225	97	461	12,380	1.525	0.361	0.559	0.323	1300	2,372
H395	395	743	2,330	145	215	92	501	13,445	1.530	0.362	0.562	0.325	800	1,472
H425	425	797	2,100	131	220	95	462	12,400	1.535	0.364	0.565	0.327	1400	2,552
H430	430	806	2,160	135	125	54	270	7,247	1.540	0.365	0.568	0.328	1400	2,552
H485	483	901	2,220	139	200	86	444	11,917	1.545	0.366	0.571	0.330	800	1,472
H500	500	932	2,220	139	300	129	666	17,875	1.550	0.367	0.569	0.329	800	1,472
H500A	500	932	2,140	134	140	60	300	8,041	1.555	0.368	0.567	0.328	1400	2,552
H525	525	977	2,350	147	155	67	364	9,776	1.560	0.370	0.565	0.327	1000	1,832
H535	535	995	2,320	145	130	56	302	8,095	1.565	0.371	0.563	0.325	1000	1,832
H610	610	1,130	2,070	129	410	176	849	22,779	1.570	0.372	0.561	0.324	1300	2,372
H640	640	1,184	2,380	149	338	145	804	21,591	1.575	0.373	0.559	0.323	800	1,472
H650	652	1,206	2,450	153	300	129	735	19,727	1.580	0.374	0.557	0.322	800	1,472
H690	687	1,269	2,400	150	250	108	600	16,104	1.585	0.375	0.560	0.324	800	1,472
H695	695	1,283	2,460	154	280	120	689	18,487	1.590	0.377	0.563	0.325	800	1,472
H700	699	1,290	2,410	150	250	108	603	16,171	1.595	0.378	0.566	0.327	800	1,472
H705	706	1,303	2,430	152	250	108	608	16,305	1.600	0.379	0.569	0.329	800	1,472
H705A	705	1,301	2,040	127	452	194	922	24,749	1.595	0.378	0.573	0.331	1400	2,552
H725	725	1,337	2,210	138	602	259	1,330	35,708	1.590	0.377	0.577	0.334	1300	2,372
H755	755	1,391	2,160	135	466	200	1,007	27,016	1.585	0.375	0.581	0.336	800	1,472
H845	845	1,553	2,530	158	276	119	698	18,742	1.580	0.374	0.585	0.338	900	1,652
H885	885	1,625	2,290	143	236	102	540	14,505	1.575	0.373	0.589	0.340	900	1,652

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