



3/8" Walls												
Item	Nom Pipe Size	Pipe OD	Insulation ID			Insulation Wall			Calculated OD			R Value
			Min	Targ	Max	Min	Targ	Max	Min	Targ	Max	
IPAPT01438	3/16" Copper	0.250	0.310	0.345	0.380	0.300	0.363	0.425	0.910	1.070	1.230	2.8
IPAPT03838	1/4" Copper	0.375	0.420	0.460	0.500	0.300	0.363	0.425	1.020	1.185	1.350	2.8
IPAPT01238	3/8" Copper	0.500	0.560	0.600	0.640	0.300	0.363	0.425	1.160	1.325	1.490	2.6
IPAPT05838	1/2" Copper	0.625	0.710	0.750	0.790	0.300	0.363	0.425	1.310	1.475	1.640	2.6
IPAPT03438	5/8" Copper	0.750	0.810	0.860	0.910	0.300	0.363	0.425	1.410	1.585	1.760	2.4
IPAPT07838	3/4" Copper	0.875	0.940	0.995	1.050	0.300	0.363	0.425	1.540	1.720	1.900	2.4
IPAPT11838	1" Copper	1.125	1.200	1.255	1.310	0.300	0.363	0.425	1.800	1.980	2.160	2.3
IPAPT13838	1-1/4" Copper	1.375	1.450	1.510	1.570	0.300	0.363	0.425	2.050	2.235	2.420	2.2
IPAPT15838	1-1/2" Copper	1.625	1.710	1.770	1.830	0.350	0.413	0.475	2.410	2.595	2.780	2.5
IPAPT11038	1 1/2" IPS	1.900	1.970	2.030	2.090	0.350	0.413	0.475	2.670	2.855	3.040	2.4
IPAPT21838	2" Copper	2.125	2.220	2.280	2.340	0.350	0.413	0.475	2.920	3.105	3.290	2.4
IPAPT20038	2" IPS	2.375	2.470	2.540	2.610	0.350	0.413	0.475	3.170	3.365	3.560	2.4
IPAPT25838	2-1/2" Copper	2.625	2.720	2.800	2.880	0.350	0.413	0.475	3.420	3.625	3.830	2.4
IPAPT21038	2-1/2" IPS	2.875	2.980	3.060	3.140	0.350	0.413	0.475	3.680	3.885	4.090	2.4
IPAPT31838	3" Copper	3.125	3.230	3.310	3.390	0.350	0.413	0.475	3.930	4.135	4.340	2.4
IPAPT30038	3" IPS	3.500	3.610	3.685	3.760	0.350	0.413	0.475	4.310	4.510	4.710	2.3
1/2" Walls												
Item	Nom Pipe Size	Pipe OD	Insulation ID			Insulation Wall			Calculated OD			R Value
			Min	Targ	Max	Min	Targ	Max	Min	Targ	Max	
IPAPT01412	3/16" Copper	0.250	0.310	0.345	0.380	0.360	0.423	0.485	1.030	1.190	1.350	3.8
IPAPT03812	1/4" Copper	0.375	0.420	0.460	0.500	0.360	0.423	0.485	1.140	1.305	1.470	3.3
IPAPT01212	3/8" Copper	0.500	0.560	0.600	0.640	0.380	0.443	0.505	1.320	1.485	1.650	3.3
IPAPT05812	1/2" Copper	0.625	0.710	0.750	0.790	0.400	0.463	0.525	1.510	1.675	1.840	3.4
IPAPT03412	5/8" Copper	0.750	0.810	0.860	0.910	0.420	0.483	0.545	1.650	1.825	2.000	3.3
IPAPT07812	3/4" Copper	0.875	0.940	0.995	1.050	0.430	0.493	0.555	1.800	1.980	2.160	3.3
IPAPT11812	1" Copper	1.125	1.200	1.255	1.310	0.450	0.513	0.575	2.100	2.280	2.460	3.3
IPAPT13812	1-1/4" Copper	1.375	1.450	1.510	1.570	0.460	0.523	0.585	2.370	2.555	2.740	3.2
IPAPT15812	1-1/2" Copper	1.625	1.710	1.770	1.830	0.470	0.533	0.595	2.650	2.835	3.020	3.2
IPAPT11012	1 1/2" IPS	1.900	1.970	2.030	2.090	0.480	0.543	0.605	2.930	3.115	3.300	3.1
IPAPT21812	2" Copper	2.125	2.220	2.280	2.340	0.490	0.553	0.615	3.200	3.385	3.570	3.2
IPAPT20012	2" IPS	2.375	2.470	2.540	2.610	0.500	0.563	0.625	3.470	3.665	3.860	3.2
IPAPT25812	2-1/2" Copper	2.625	2.720	2.800	2.880	0.500	0.563	0.625	3.720	3.925	4.130	3.2
IPAPT21012	2-1/2" IPS	2.875	2.980	3.060	3.140	0.500	0.563	0.625	3.980	4.185	4.390	3.2
IPAPT31812	3" Copper	3.125	3.230	3.310	3.390	0.500	0.563	0.625	4.230	4.435	4.640	3.2
IPAPT30012	3" IPS	3.500	3.610	3.685	3.760	0.500	0.563	0.625	4.610	4.810	5.010	3.1
IPAPT35812	3-1/2" Copper	3.625	3.740	3.810	3.880	0.500	0.563	0.625	4.740	4.935	5.130	3.1
IPAPT41812R	4" Copper	4.125	4.250	4.335	4.420	0.500	0.563	0.625	5.250	5.460	5.670	3.1
IPAPT40012R	4" IPS	4.500	4.600	4.690	4.780	0.500	0.563	0.625	5.600	5.815	6.030	3.0
IPAPT50012R	5: IPS	5.563	5.670	5.760	5.850	0.500	0.563	0.625	6.670	6.885	7.100	3.0
IPAPT60012R	6" IPS	6.625	6.730	6.830	6.930	0.500	0.563	0.625	7.730	7.955	8.180	3.0
IPAPT80012R	8" IPS	8.625	8.730	8.830	8.930	0.500	0.563	0.625	9.730	9.955	10.180	2.9
3/4" Walls												
Item	Nom Pipe Size	Pipe OD	Insulation ID			Insulation Wall			Calculated OD			R Value
			Min	Targ	Max	Min	Targ	Max	Min	Targ	Max	
IPAPT01434	3/16" Copper	0.250	0.310	0.345	0.385	0.590	0.653	0.715	1.490	1.650	1.815	6.4
IPAPT03834	1/4" Copper	0.375	0.420	0.460	0.500	0.620	0.683	0.745	1.660	1.825	1.990	5.9
IPAPT01234	3/8" Copper	0.500	0.560	0.600	0.640	0.620	0.683	0.745	1.800	1.965	2.130	5.5
IPAPT05834	1/2" Copper	0.625	0.710	0.750	0.790	0.660	0.723	0.785	2.030	2.195	2.360	5.6
IPAPT03434	5/8" Copper	0.750	0.810	0.860	0.910	0.680	0.743	0.805	2.170	2.345	2.520	5.5
IPAPT07834	3/4" Copper	0.875	0.940	0.995	1.050	0.700	0.763	0.825	2.340	2.520	2.700	5.4
IPAPT11834	1" Copper	1.125	1.200	1.255	1.310	0.740	0.803	0.865	2.680	2.860	3.040	5.4
IPAPT13834	1-1/4" Copper	1.375	1.450	1.510	1.570	0.750	0.813	0.875	2.950	3.135	3.320	5.3

*These specifications are based on the measurement methods employed by Armacell. Other methods may not result in the same values and cannot be used to determine if the product is within the given tolerance.

IPAPT15834	1-1/2" Copper	1.625	1.710	1.770	1.830	0.750	0.813	0.875	3.210	3.395	3.580	5.1
IPAPT11034	1 1/2" IPS	1.900	1.970	2.030	2.090	0.750	0.813	0.875	3.470	3.655	3.840	4.9
IPAPT21834	2" Copper	2.125	2.220	2.280	2.340	0.750	0.813	0.875	3.720	3.905	4.090	4.8
IPAPT20034	2" IPS	2.375	2.580	2.680	2.780	0.750	0.813	0.875	4.080	4.305	4.530	5.2
IPAPT25834	2-1/2" Copper	2.625	2.720	2.800	2.880	0.750	0.813	0.875	4.220	4.425	4.630	4.7
IPAPT21034	2-1/2" IPS	2.875	3.080	3.180	3.280	0.750	0.813	0.875	4.580	4.805	5.030	5.0
IPAPT31834	3" Copper	3.125	3.230	3.310	3.390	0.750	0.813	0.875	4.730	4.935	5.140	4.6
IPAPT30034	3" IPS	3.500	3.700	3.800	3.900	0.750	0.813	0.875	5.200	5.425	5.650	4.9
IPAPT35834	3-1/2" Copper	3.625	3.740	3.810	3.880	0.750	0.813	0.875	5.240	5.435	5.630	4.5
IPAPT41834R	4" Copper	4.125	4.250	4.335	4.420	0.750	0.813	0.875	5.750	5.960	6.170	4.5
IPAPT40034R	4" IPS	4.500	4.750	4.850	4.950	0.750	0.813	0.875	6.250	6.475	6.700	4.8
IPAPT50034R	5: IPS	5.563	5.810	5.910	6.010	0.750	0.813	0.875	7.310	7.535	7.760	4.7
IPAPT60034R	6" IPS	6.625	6.880	6.980	7.080	0.750	0.813	0.875	8.380	8.605	8.830	4.6
IPAPT80034R	8" IPS	8.625	8.880	8.980	9.080	0.750	0.813	0.875	10.380	10.605	10.830	4.5

1" Walls

Item	Nom Pipe Size	Pipe OD	Insulation ID			Insulation Wall			Calculated OD			R Value
			Min	Targ	Max	Min	Targ	Max	Min	Targ	Max	
IPAPT01410	3/16" Copper	0.250	0.310	0.345	0.385	0.750	0.813	0.875	1.810	1.970	2.135	8.3
IPAPT03810	1/4" Copper	0.375	0.420	0.460	0.500	0.750	0.813	0.875	1.920	2.085	2.250	7.3
IPAPT01210	3/8" Copper	0.500	0.560	0.600	0.640	0.790	0.853	0.915	2.140	2.305	2.470	7.2
IPAPT05810	1/2" Copper	0.625	0.710	0.750	0.790	0.830	0.893	0.955	2.370	2.535	2.700	7.2
IPAPT03410	5/8" Copper	0.750	0.810	0.860	0.910	0.850	0.913	0.975	2.510	2.685	2.860	7.0
IPAPT07810	3/4" Copper	0.875	0.940	0.995	1.050	0.880	0.943	1.005	2.700	2.880	3.060	7.0
IPAPT11810	1" Copper	1.125	1.200	1.255	1.310	0.920	1.013	1.105	3.040	3.280	3.520	7.2
IPAPT13810	1-1/4" Copper	1.375	1.450	1.510	1.570	0.970	1.063	1.155	3.390	3.635	3.880	7.2
IPAPT15810	1-1/2" Copper	1.625	1.710	1.770	1.830	1.000	1.093	1.185	3.710	3.955	4.200	7.2
IPAPT11010	1 1/2" IPS	1.900	1.970	2.030	2.090	1.000	1.093	1.185	3.970	4.215	4.460	6.9
IPAPT21810	2" Copper	2.125	2.220	2.280	2.340	1.000	1.093	1.185	4.220	4.465	4.710	6.8
IPAPT20010	2" IPS	2.375	2.580	2.680	2.780	1.000	1.093	1.185	4.580	4.865	5.150	7.1
IPAPT25810	2-1/2" Copper	2.625	2.720	2.800	2.880	1.000	1.093	1.185	4.720	4.985	5.250	6.5
IPAPT21010	2-1/2" IPS	2.875	3.080	3.180	3.280	1.000	1.093	1.185	5.080	5.365	5.650	6.8
IPAPT31810	3" Copper	3.125	3.230	3.310	3.390	1.000	1.093	1.185	5.230	5.495	5.760	6.3
IPAPT30010	3" IPS	3.500	3.700	3.800	3.900	1.000	1.093	1.185	5.700	5.985	6.270	6.6
IPAPT35810	3-1/2" Copper	3.625	3.740	3.810	3.880	1.000	1.093	1.185	5.740	5.995	6.250	6.2
IPAPT41810R	4" Copper	4.125	4.250	4.335	4.420	1.000	1.093	1.185	6.250	6.520	6.790	6.1
IPAPT40010R	4" IPS	4.500	4.750	4.850	4.950	1.000	1.093	1.185	6.750	7.035	7.320	6.4
IPAPT50010R	5: IPS	5.563	5.810	5.910	6.010	1.000	1.093	1.185	7.810	8.095	8.380	6.2
IPAPT60010R	6" IPS	6.625	6.880	6.980	7.080	1.000	1.093	1.185	8.880	9.165	9.450	6.1
IPAPT80010R	8" IPS	8.625	8.880	8.980	9.080	1.000	1.093	1.185	10.880	11.165	11.450	5.9
IPAPT10010R	10" IPS	10.750	11.005	11.105	11.205	1.000	1.093	1.185	13.005	13.290	13.575	5.8

1-1/2" Walls

Item	Nom Pipe Size	Pipe OD	Insulation ID			Insulation Wall			Calculated OD			R Value
			Min	Targ	Max	Min	Targ	Max	Min	Targ	Max	
IPAPT03815	1/4" Copper	0.375	0.420	0.460	0.500	1.408	1.500	1.592	3.236	3.460	3.684	13.7
IPAPT01215	3/8" Copper	0.500	0.560	0.600	0.640	1.408	1.500	1.592	3.376	3.600	3.824	12.7
IPAPT05815	1/2" Copper	0.625	0.710	0.750	0.790	1.408	1.500	1.592	3.526	3.750	3.974	12.0
IPAPT03415	5/8" Copper	0.750	0.810	0.860	0.910	1.408	1.500	1.592	3.626	3.860	4.094	11.3
IPAPT07815	3/4" Copper	0.875	0.940	0.995	1.050	1.408	1.500	1.592	3.756	3.995	4.234	10.8
IPAPT11815	1" Copper	1.125	1.200	1.255	1.310	1.408	1.500	1.592	4.016	4.255	4.494	10.1
IPAPT13815	1-1/4" Copper	1.375	1.450	1.510	1.570	1.408	1.500	1.592	4.266	4.510	4.754	9.6
IPAPT15815	1-1/2" Copper	1.625	1.710	1.770	1.830	1.408	1.500	1.592	4.526	4.770	5.014	9.2
IPAPT11015	1 1/2" IPS	1.900	1.970	2.030	2.090	1.408	1.500	1.592	4.786	5.030	5.274	8.7
IPAPT21815	2" Copper	2.125	2.220	2.280	2.340	1.408	1.500	1.592	5.036	5.280	5.524	8.6
IPAPT20015	2" IPS	2.375	2.580	2.680	2.780	1.408	1.500	1.592	5.396	5.680	5.964	8.8
IPAPT25815	2-1/2" Copper	2.625	2.720	2.800	2.880	1.408	1.500	1.592	5.536	5.800	6.064	8.2

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Updated 1/9/2017

IPAPT21015	2-1/2" IPS	2.875	3.080	3.180	3.280	1.408	1.500	1.592	5.896	6.180	6.464	8.4
IPAPT31815	3" Copper	3.125	3.230	3.310	3.390	1.408	1.500	1.592	6.046	6.310	6.574	7.9
IPAPT30015	3" IPS	3.500	3.700	3.800	3.900	1.408	1.500	1.592	6.516	6.800	7.084	8.1
IPAPT35815	3-1/2" Copper	3.625	3.740	3.810	3.880	1.408	1.500	1.592	6.556	6.810	7.064	7.7
IPAPT41815R	4" Copper	4.125	4.250	4.335	4.420	1.408	1.500	1.592	7.066	7.335	7.604	7.5
IPAPT40015R	4" IPS	4.500	4.750	4.850	4.950	1.408	1.500	1.592	7.566	7.850	8.134	7.8
IPAPT50015R	5" IPS	5.563	5.810	5.910	6.010	1.408	1.500	1.592	8.626	8.910	9.194	7.5
IPAPT61815R	6" Copper	6.125	6.375	6.475	6.575	1.408	1.500	1.592	9.191	9.475	9.759	7.4
IPAPT60015R	6" IPS	6.625	6.880	6.980	7.080	1.408	1.500	1.592	9.696	9.980	10.264	7.3
IPAPT80015R	8" IPS	8.625	8.880	8.980	9.080	1.408	1.500	1.592	11.696	11.980	12.264	7.0
IPAPT10015R	10" IPS	10.750	11.005	11.105	11.205	1.408	1.500	1.592	13.821	14.105	14.389	6.8

2" Walls

Item	Nom Pipe Size	Pipe OD	Insulation ID			Insulation Wall			Calculated OD			R Value
			Min	Targ	Max	Min	Targ	Max	Min	Targ	Max	
IPAPT03820	1/4" Copper	0.375	0.420	0.460	0.500	1.900	2.000	2.100	4.220	4.460	4.700	19.7
IPAPT01220	3/8" Copper	0.500	0.560	0.600	0.640	1.900	2.000	2.100	4.360	4.600	4.840	18.2
IPAPT05820	1/2" Copper	0.625	0.710	0.750	0.790	1.900	2.000	2.100	4.510	4.750	4.990	17.2
IPAPT03420	5/8" Copper	0.750	0.810	0.860	0.910	1.900	2.000	2.100	4.610	4.860	5.110	16.2
IPAPT07820	3/4" Copper	0.875	0.940	0.995	1.050	1.900	2.000	2.100	4.740	4.995	5.250	15.5
IPAPT11820	1" Copper	1.125	1.200	1.255	1.310	1.900	2.000	2.100	5.000	5.255	5.510	14.5
IPAPT13820	1-1/4" Copper	1.375	1.450	1.510	1.570	1.900	2.000	2.100	5.250	5.510	5.770	13.7
IPAPT15820	1-1/2" Copper	1.625	1.710	1.770	1.830	1.900	2.000	2.100	5.510	5.770	6.030	13.1
IPAPT11020	1 1/2" IPS	1.900	1.970	2.030	2.090	1.900	2.000	2.100	5.770	6.030	6.290	12.4
IPAPT21820	2" Copper	2.125	2.220	2.280	2.340	1.900	2.000	2.100	6.020	6.280	6.540	12.2
IPAPT20020	2" IPS	2.375	2.580	2.680	2.780	1.900	2.000	2.100	6.380	6.680	6.980	12.3
IPAPT25820	2-1/2" Copper	2.625	2.720	2.800	2.880	1.900	2.000	2.100	6.520	6.800	7.080	11.6
IPAPT21020	2-1/2" IPS	2.875	3.080	3.180	3.280	1.900	2.000	2.100	6.880	7.180	7.480	11.7
IPAPT31820	3" Copper	3.125	3.230	3.310	3.390	1.900	2.000	2.100	7.030	7.310	7.590	11.1
IPAPT30020	3" IPS	3.500	3.700	3.800	3.900	1.900	2.000	2.100	7.500	7.800	8.100	11.2
IPAPT35820	3-1/2" Copper	3.625	3.740	3.810	3.880	1.900	2.000	2.100	7.540	7.810	8.080	10.7
IPAPT41820R	4" Copper	4.125	4.250	4.335	4.420	1.900	2.000	2.100	8.050	8.335	8.620	10.5
IPAPT40020R	4" IPS	4.500	4.750	4.850	4.950	1.900	2.000	2.100	8.550	8.850	9.150	10.7
IPAPT50020R	5" IPS	5.563	5.810	5.910	6.010	1.900	2.000	2.100	9.610	9.910	10.210	10.2
IPAPT60020R	6" IPS	6.625	6.880	6.980	7.080	1.900	2.000	2.100	10.680	10.980	11.280	9.9
IPAPT80020R	8" IPS	8.625	8.880	8.980	9.080	1.900	2.000	2.100	12.680	12.980	13.280	9.5
IPAPT10020R	10" IPS	10.750	11.005	11.105	11.205	1.900	2.000	2.100	14.805	15.105	15.405	9.2

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