Heat Loss from Pipe Chart of copper and PEX materials

DRAFT Only, not for distribution !

Use this chart to estimate BTU/Hr losses on hot water and re-circ piping in the system

Assumes 68°F as surrounding air temp and 5 or 8 FPS velocity

Copper

Type & Size of Pipe	Assumes bare copper with No Insulation		w/ ½" Foam
Copper M, L, K	Water Temperature °F	BTU/Hr. / Ft.	BTU/Hr. / Ft.
1/2"	120	14.8	6.2
-	125	16.5	6.7
-	130	18.3	7.3
-	135	20.2	7.9
-	140	22.0	8.5
3/4"	120	20.5	7.6
-	125	23.0	8.3
-	130	25.5	9.1
-	135	28.0	9.8
-	140	30.7	10.5
1"	120	25.5	9.0
-	125	28.6	9.9
-	130	31.7	10.8
-	135	35.0	11.7
-	140	38.3	12.6

PEX-a SDR 9

Type & Size of Pipe	Assumes bare PEX with No Insulation		w/ ½" Foam
PEX-a SDR 9	Water Temperature °F	BTU/Hr. / Ft.	BTU/Hr. / Ft.
1/2"	120	14	6.0
-	125	15	6.5
-	130	17	7.0
-	135	19	7.5
-	140	20	8.0
3/4"	120	19	7.5
-	125	21	8.0
-	130	24	9.0
-	135	26	9.5
-	140	28	10.5
1"	120	25	9.0
-	125	27	9.5
-	130	29	10.5
-	135	32	11.5
-	140	37	12.5

This chart uses extrapolated and rounded numbers used for estimating the heat loss of piping in a DHW re-circ system.
If a more accurate load calculation is desired/required, use a suitable 3rd party software to obtain that information !