

CONVERSION FACTORS

Multiply	By	To Obtain
BHP	33,479	Btu / hr
BHP	34.5	Lb / hr
BHP	0.069	GPM
BHP	139	EDR
EDR	0.000496	GPM
Lb / hr Steam	0.002	GPM
Lb / hr Condensate	960	Btu / hr
Lb / hr Condensate	4	EDR
PSI	2.31	Feet of Water (TDH)
Gallon of Water	8.345	Lbs. of Water
Ft ³	7.48	Gallons of Water
GPM	12,000	Tons of Refrigeration
To Obtain	By	Divide

METRIC CONVERSION FACTORS

Multiply	By	To Obtain
Inches	2.54	Centimeters
Feet of Water	2.24165	Centimeters of Mercury
Ft ³	28.32	Liters
In ³	16.39	Cm ³
Gallons	3.7853	Liters
GPM	0.06308	Liters / sec
Btu / hr	.252	Kilo-calories / hr
PSI	.0703	Kilogram / cm ²
To Obtain	By	Divide

USEFUL FORMULAS

Fluid Flow Calculation

$$\text{GPM} = \text{Btu / hr} \div (\Delta T \times 500 \times \text{Specific Gravity of Fluid})$$

Brake Horsepower Calculation

$$\text{BHP} = (\text{GPM} \times \text{TDH}) \div (3960 \times \text{Motor Efficiency})$$

Power Calculation

$$\text{Watts} = \text{Volts} \times \text{Amps} \times \text{Power Factor}$$

PROPERTIES OF SATURATED STEAM (APPROXIMATE)

Gauge Pressure At Sea Level	Temperature, °F	Heat in H ₂ O, BTU/lb	Latent Heat in Steam (Vaporization), BTU/lb	Volume of 1lb. Steam, Ft ³	Weight of H ₂ O, Lb/ft ³
29.7	32	0.0	1076	3306	62.4
29.4	59	27.0	1061	1248	62.3
28.9	79	47.0	1049	653	62.2
28	101	69	1037	341	62.0
26	125	93	1023	179	61.7
24	141	109	1014	120	61.4
22	152	120	1007	93	61.1
20	161	129	1002	75	60.9
18	169	137	997	63	60.8
16	176	144	993	55	60.6
14	182	150	989	48	60.5
12	187	155	986	43	60.4
10	192	160	983	39	60.3
8	197	165	980	36	60.2
6	201	169	977	33	60.1
4	205	173	975	31	60.0
2	209	177	972	29	59.9
1	210	178	971	28	59.9
0	212	180	970	27	59.8
0	212	180	970	27	59.8
1	216	184	968	25	59.8
2	219	187	966	24	59.7
3	222	190	964	22	59.6
4	225	193	962	21	59.5
5	227	195	960	20	59.4
6	230	198	958	19	59.4
7	232	200	957	19	59.3
8	235	203	955	18	59.2
9	237	205	954	17	59.2
10	240	208	952	16	59.2
15	250	219	945	14	58.8
20	259	228	939	12	58.5
25	267	236	934	10	58.3
30	274	243	929	9	58.1
35	281	250	924	8	57.9
40	287	256	920	8	57.7
45	293	262	915	7	57.5
50	298	268	912	7	57.4
55	303	273	908	6	57.2
60	308	277	905	6	57.0
70	316	286	898	5	56.8
80	324	294	892	5	56.5
90	332	302	886	4	56.3
100	338	309	881	4	56.0
125	353	325	868	3	55.5

Vacuum –
inches of
Mercury

Pressure –
PSI