

Convert

written by Mbsm | 30 janvier 2022

- **UNIT Convert Table**
- **1 watt = 3.41 Btu/hr**
- **1 watt = 0.86 kcal/hr**
- **1 kcal/hr = 3.97 Btu/hr**

- **1 Kcal/hr = 1.163 W**
- **1 Hp = 746 W**
- **1 Ton = 12000 BTU = 3.517 Wk = 3517 W = 3040 KCAL/H**
- **1 Hp = 8000 BTU**
- **26000 BTU = 2 Ton**
- **16000 BTU = 1 1/2 Ton**

- **KCal/h * 1.163 = Watt**
- **KCal/h * 3.968 = Btu/h**
- **W * 3.412 = Btu/h**
- **W * 0.86 = Kcal/H**

MECHANIC HORSEPOWER (HP(I))	ELECTRIC HORSEPOWER (HP(E))	METRIC HORSEPOWER (HP(M))	
0.1KW	0.080HP	0.080HP	0.082HP
0.1KW	0.121HP	0.121HP	0.122HP
0.1KW	0.161HP	0.161HP	0.163HP
0.2KW	0.241HP	0.241HP	0.245HP
0.3KW	0.335HP	0.335HP	0.340HP
0.4KW	0.496HP	0.496HP	0.503HP
0.6KW	0.738HP	0.737HP	0.748HP
0.8KW	1.006HP	1.005HP	1.020HP
1.0KW	1.341HP	1.340HP	1.360HP
1.1KW	1.475HP	1.475HP	1.496HP

MECHANIC HORSEPOWER (HP(I))	ELECTRIC HORSEPOWER (HP(E))	METRIC HORSEPOWER (HP(M))	
1.5KW	2.012HP	2.011HP	2.039HP
2.0KW	2.682HP	2.681HP	2.719HP
2.2KW	2.950HP	2.949HP	2.991HP
3.0KW	4.023HP	4.021HP	4.079HP
4.0KW	5.364HP	5.362HP	5.438HP
5.5KW	7.376HP	7.373HP	7.478HP
7.5KW	10.058HP	10.054HP	10.197HP
11.0KW	14.751HP	14.745HP	14.956HP
15.0KW	20.115HP	20.107HP	20.394HP
18.5KW	24.809HP	24.799HP	25.153HP
22.0KW	29.502HP	29.491HP	29.912HP
30.0KW	40.231HP	40.214HP	40.789HP
37.0KW	49.618HP	49.598HP	50.306HP
45.0KW	60.346HP	60.322HP	61.183HP
55.0KW	73.756HP	73.727HP	74.779HP
75.0KW	100.577HP	100.536HP	101.972HP
90.0KW	120.692HP	120.643HP	122.366HP
110.0KW	147.512HP	147.453HP	149.558HP
132.0KW	177.015HP	176.944HP	179.470HP
160.0KW	214.564HP	214.477HP	217.540HP
200.0KW	268.204HP	268.097HP	271.924HP
250.0KW	335.256HP	335.121HP	339.906HP
315.0KW	422.422HP	422.252HP	428.281HP
355.0KW	476.063HP	475.871HP	482.666HP
400.0KW	536.409HP	536.193HP	543.849HP
500.0KW	670.511HP	670.242HP	679.811HP

MECHANIC HORSEPOWER (HP(I))	ELECTRIC HORSEPOWER (HP(E))	METRIC HORSEPOWER (HP(M))	
560.0KW	750.972HP	750.670HP	761.388HP
630.0KW	844.844HP	844.504HP	856.562HP
710.0KW	952.126HP	951.743HP	965.332HP
800.0KW	1072.818HP	1072.386HP	1087.698HP
900.0KW	1206.920HP	1206.435HP	1223.660HP
1000.0KW	1341.022HP	1340.483HP	1359.622HP

HVAC metrics:

$$SEER = (1 \times EER_{100\%} + 42 \times EER_{75\%} + 45 \times EER_{50\%} + 12 \times EER_{25\%}) / 100$$

$$EER = BTU_{cooling} / W$$

$$HSPF = BTU_{heating} / W$$

$$COP = Q \text{ (useful heat)} / W \text{ (input work)}$$

$$ACH = CFM \times 60 / \text{Area} \times \text{Height}_{ceiling}$$

$$\text{Total Heat (BTU/hr.)} = 4.5 \times CFM \times \Delta h \text{ (std. air)}$$

$$\text{Sensible Heat (BTU/hr)} = 1.1 \times CFM \times \Delta t \text{ (std. air)}$$

$$\text{Latent Heat (BTU/hr)} = 0.69 \times CFM \times \Delta gr. \text{ (std. air)}$$

$$1 \text{ HP} = 746 \text{ Watts}$$

$$1 \text{ kW} = 3413 \text{ BTU}$$