

Conversions

Imperial to Metric	Metric to Imperial
1 inch x 25.4 = mm	mm x 0.03937 = inch
1 in ² x 645.16 = mm ²	1 mm ² x 0.0015 = in ²
1 lb x 0.453 = kg	1 kg x 2.205 = lb
1 US gal x 3.785 = L	1 L x 0.264 = US gal
1 HP x 0.746 = kW	1 kW x 1.341 = HP
1 lb x 4.45 = N	1 N x 0.225 = lb
1 lb in x 0.113 = Nm	1 Nm x 8.85 = lb in
1 lb ft x 1.36 = Nm	1 Nm x 0.737 = lb ft
1 lb ft x .1383 = kgm	1 kgm x 7.233 = lb ft
1 lb in x .0115 = kgm	1 kgm x 86.798 = lb ft
1 lb in ² x 0.00029 = kgm ²	1 kgm ² (J) x 3418.0 = lb in ² (WR ²)
1 PSI x 0.0689 = bar	1 bar x 14.5 = PSI
1 PSI x 0.00689 = N/mm ²	1 N/mm ² x 145.04 = PSI
°F = 32 + 9/5 x °C	°C = 5/9 (°F-32)

Formulas

1 HP =	36 in.lbs @ 1750 RPM
1 HP =	54 in.lbs @ 1160 RPM
HP =	Force x FPM / 33,000
HP =	T (in.lbs) x RPM / 63,025
HP =	T (ft.lbs) x RPM / 5,252
T (in.lbs) =	63,025 x HP / RPM
T (ft.lbs) =	5,252 x HP / RPM
Feet/Minute =	0.2618 x Dia. (in) x RPM
Meters/Minute =	0.00314 x Dia. (mm) x RPM
RPM =	Feet/Minute / 0.2618 x Dia. (in)
RPM =	63,025 x HP / Torque
T =	Force x Lever Arm
F =	Torque / Radius

Thermal Ratings

HP	kW	Series - Size				
		KSS	K	C	F	S
2.95	2.2	1	1	0	1	1
5.36	4.0	2	2	1	2	2
7.38	5.5	3	3	2	3	3
12.34	9.2	—	4	3	4	4
14.75	11.0	—	5	4	5	—
20.12	15.0	—	6	5	6	—
29.50	22.0	—	7	6	—	—
40.23	30.0	—	8	7	—	—
53.64	40.0	—	9	8	—	—
67.05	50.0	—	10	9	—	—

Calculating HP

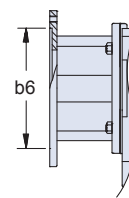
Use this equation to calculate the HP required for an application:

$$HP = \frac{1.732 \times \text{Volts} \times \text{Amps} \times \text{Eff} \times \text{PF}}{746}$$

Where: **Volts** = Motor Running Volts (i.e. 230V or 460V)
Amps = Measured Full Load Amps
Eff = Motor Efficiency
PF = Motor Power Factor

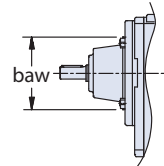
Tolerances

Motor Adapter (KSS, PSS, KL, K, C, F, S)



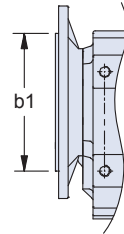
Bore (in)	Pilot Bore Diameter b6
1.96 — 3.15	+0.0007/-0.0005
3.15 — 4.72	+0.0008/-0.0006
4.72 — 7.09	+0.0010/-0.0007
7.09 — 9.84	+0.0012/-0.0008
9.84 — 12.40	+0.0014/-0.0009

Optional Input Shaft (K, C, F, S)



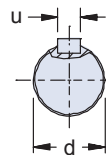
Diameter (in)	Pilot Diameter baw
3.15 — 4.72	+0.0007/-0.0005
4.72 — 7.09	+0.0008/-0.0006
7.09 — 9.06	+0.0010/-0.0007
9.06 — 12.40	+0.0012/-0.0008
12.40 — Up	+0.0014/-0.0009

Output – Flange Mount (KSS, KL, K, C, F, S)



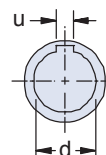
Diameter (in)	Pilot Diameter b1
>1.96 — 3.15	+0.0005/-0.0003
>3.15 — 4.72	+0.0005/-0.0004
>4.72 — 7.09	+0.0006/-0.0004
>7.09 — 9.84	+0.0006/-0.0005
>9.84 — 12.40	+0.0006/-0.0006
>12.40 — 15.74	+0.0007/-0.0007

Output – Solid Shaft (KSS, PSS, KL, K, C, F, S)



Diameter (in)	d	u
0.39 — 0.71	+0.0000/-0.0005	+0.0019 /-0.0000
0.71 — 1.18	+0.0000/-0.0006	
1.18 — 1.97	+0.0000/-0.0007	
1.97 — 3.15	+0.0000/-0.0008	
3.15 — Up	+0.0000/-0.0009	

Output – Hollow Bore (KSS, KL, K, C, F, S)



Bore (in)	d	u
0.39 — 0.71	+0.0007/-0.0000	+0.0019/ -0.0000
0.71 — 1.18	+0.0008/-0.0000	
1.18 — 1.97	+0.0010/-0.0000	
1.97 — 3.15	+0.0012/-0.0000	
3.15 — Up	+0.0014/-0.0000	