



CALCULATING ENERGY SAVINGS PAYBACK

Savings = (Hours Operation/Year) (Power Cost) (*Kilowatts Saved)

$$*Kw \text{ saved} = HP \times .746 \left[\frac{1}{\text{Existing Motor Eff.}} - \frac{1}{\text{PE Eff.}} \right]$$

PREMIUM EFFICIENT



AC MOTORS

Annual Savings--- based on
\$.08 per kilowatt hour, 7200
hours of operation per year.

EXAMPLE: 25 HP, 1800 RPM, PE vs. Std. Eff.

$$\frac{\text{PE Net } \$1472 - \text{Std. Eff. Net } \$1149}{(7200 \text{ Hrs/Year}) (\$.08/\text{Kwh}) (1.8877)}$$

$$\text{Payback} = \frac{\$323}{\$1087} = .30 \text{ Years}$$

EXAMPLE: 25 HP, 1800 RPM, PE vs. EE Eff

$$\frac{\text{PE Net } \$1472 - \text{EE Eff. Net } \$1262}{(7200 \text{ Hrs/Year}) (\$.08/\text{Kwh}) (0.2588)}$$

$$\text{Payback} = \frac{\$210}{\$149} = 1.41 \text{ Years}$$

Premium Efficient TEFC- CM100 and CM300 A-C Motor								
HP	RPM	PE Nominal Efficiency *	EE Nominal Efficiency	Kilowatts Saved	Energy Savings Per Year	Std. Nominal Efficiency	Kilowatts Saved	Energy Savings Per Year
1	1800	86.5%	82.5%	0.0418	\$ 24.09	74.0%	0.1457	\$ 83.91
1.5	1800	87.5%	84.0%	0.0533	\$ 30.69	75.5%	0.2033	\$ 117.08
2	1800	87.5%	84.0%	0.0710	\$ 40.92	78.5%	0.1955	\$ 112.60
3	1800	88.5%	87.5%	0.0289	\$ 16.65	75.5%	0.4354	\$ 250.80
5	1800	90.2%	87.5%	0.1276	\$ 73.50	80.0%	0.5272	\$ 303.69
7.5	1800	91.0%	89.5%	0.1030	\$ 59.35	81.5%	0.7167	\$ 412.81
10	1800	91.7%	89.5%	0.2000	\$ 115.18	82.5%	0.9072	\$ 522.55
15	1800	92.4%	91.0%	0.1863	\$ 107.32	82.5%	1.4532	\$ 837.07
20	1800	93.0%	91.0%	0.3526	\$ 203.09	84.0%	1.7189	\$ 990.08
25	1800	93.6%	92.4%	0.2588	\$ 149.05	85.5%	1.8877	\$ 1,087.29
30	1800	93.6%	92.4%	0.3105	\$ 178.86	86.5%	1.9626	\$ 1,130.44
40	1800	94.1%	93.0%	0.3751	\$ 216.04	86.5%	2.7862	\$ 1,604.83
50	1800	94.5%	93.0%	0.6366	\$ 366.70	88.5%	2.6760	\$ 1,541.37
60	1800	95.0%	93.6%	0.7047	\$ 405.92	88.5%	3.4605	\$ 1,993.24
75	1800	95.0%	94.1%	0.5633	\$ 324.45	88.5%	4.3256	\$ 2,491.55
100	1800	95.4%	94.5%	0.7447	\$ 428.97	88.5%	6.0967	\$ 3,511.71
125	1800	95.8%	94.5%	1.3390	\$ 771.29	88.5%	8.0290	\$ 4,624.72
150	1800	96.2%	95.0%	1.4693	\$ 846.32	90.2%	7.7375	\$ 4,456.79
200	1800	96.2%	95.0%	1.9591	\$ 1,128.43	91.7%	7.6109	\$ 4,383.89
250	1800	96.2%	95.0%	2.4488	\$ 1,410.54	93.0%	6.6707	\$ 3,842.32
300	1800	96.5%	95.4%	2.6741	\$ 1,540.28	93.0%	8.7281	\$ 5,027.36

*Additional features may affect efficiency.

Premium Efficient TEFC- CM100 and CM300 A-C Motor

HP	RPM	PE Nominal Efficiency *	EE Nominal Efficiency	Kilowatts Saved	Energy Savings Per Year	Std. Nominal Efficiency	Kilowatts Saved	Energy Savings Per Year
1.5	3600	87.5%	82.5%	0.0775	\$ 44.64	78.5%	0.1466	\$ 84.45
2	3600	87.5%	84.0%	0.0710	\$ 40.92	78.5%	0.1955	\$ 112.60
3	3600	88.5%	85.5%	0.0887	\$ 51.11	72.0%	0.5795	\$ 333.80
5	3600	90.2%	87.5%	0.1276	\$ 73.50	78.5%	0.6163	\$ 355.01
7.5	3600	90.2%	88.5%	0.1192	\$ 68.63	77.0%	1.0634	\$ 612.49
10	3600	91.7%	89.5%	0.2000	\$ 115.18	81.5%	1.0182	\$ 586.45
15	3600	91.7%	90.2%	0.2029	\$ 116.89	81.5%	1.5272	\$ 879.68
20	3600	92.4%	90.2%	0.3938	\$ 226.85	81.5%	2.1596	\$ 1,243.91
25	3600	93.0%	91.0%	0.4407	\$ 253.87	81.5%	2.8297	\$ 1,629.89
30	3600	93.0%	91.0%	0.5289	\$ 304.64	81.5%	3.3956	\$ 1,955.87
40	3600	94.1%	91.7%	0.8299	\$ 478.05	84.0%	3.8129	\$ 2,196.21
50	3600	94.1%	92.4%	0.7293	\$ 420.07	86.5%	3.4827	\$ 2,006.04
60	3600	95.0%	93.0%	1.0132	\$ 583.63	86.5%	4.6299	\$ 2,666.81
75	3600	95.0%	93.0%	1.2666	\$ 729.53	86.5%	5.7873	\$ 3,333.51
100	3600	95.0%	93.6%	1.1745	\$ 676.53	87.5%	6.7308	\$ 3,876.96
125	3600	95.4%	94.5%	0.9309	\$ 536.21	88.5%	7.6209	\$ 4,389.64
150	3600	96.2%	94.5%	2.0925	\$ 1,205.30	90.2%	7.7375	\$ 4,456.79
200	3600	96.2%	95.0%	1.9591	\$ 1,128.43	91.7%	7.6109	\$ 4,383.89
250	3600	96.2%	95.4%	1.6257	\$ 936.41	93.0%	6.6707	\$ 3,842.32
1	1200	84.0%	80.0%	0.0444	\$ 25.58	70.0%	0.1776	\$ 102.31
1.5	1200	87.5%	85.5%	0.0299	\$ 17.23	74.0%	0.2333	\$ 134.38
2	1200	88.5%	86.5%	0.0390	\$ 22.45	77.0%	0.2518	\$ 145.03
3	1200	89.5%	87.5%	0.0572	\$ 32.92	75.5%	0.4637	\$ 267.08
5	1200	89.5%	87.5%	0.0953	\$ 54.87	78.5%	0.5840	\$ 336.38
7.5	1200	91.7%	89.5%	0.1500	\$ 86.39	78.5%	1.0260	\$ 590.96
10	1200	91.7%	89.5%	0.2000	\$ 115.18	80.0%	1.1898	\$ 685.31
15	1200	92.4%	90.2%	0.2954	\$ 170.14	81.5%	1.6197	\$ 932.93
20	1200	92.4%	90.2%	0.3938	\$ 226.85	84.0%	1.6147	\$ 930.08
25	1200	93.0%	91.7%	0.2843	\$ 163.75	84.0%	2.1486	\$ 1,237.60
30	1200	93.6%	91.7%	0.4954	\$ 285.36	85.5%	2.2652	\$ 1,304.74
40	1200	94.1%	93.0%	0.3751	\$ 216.04	86.5%	2.7862	\$ 1,604.83
50	1200	94.1%	93.0%	0.4688	\$ 270.05	87.5%	2.9899	\$ 1,722.18
60	1200	95.0%	93.6%	0.7047	\$ 405.92	88.5%	3.4605	\$ 1,993.24
75	1200	95.0%	93.6%	0.8809	\$ 507.40	88.5%	4.3256	\$ 2,491.55
100	1200	95.0%	94.1%	0.7510	\$ 432.60	88.5%	5.7675	\$ 3,322.06
125	1200	95.4%	94.1%	1.3504	\$ 777.82	89.5%	6.4436	\$ 3,711.52
150	1200	95.4%	95.0%	0.4939	\$ 284.47	90.2%	6.7621	\$ 3,894.94
200	1200	96.2%	95.0%	1.9591	\$ 1,128.43	91.7%	7.6109	\$ 4,383.89

*Additional features may affect efficiency.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846