

APPENDIX D – TYPICAL EFFICIENCIES OF ELECTRIC MOTORS

Typical standard and EE motor efficiencies are listed in this Table. Note that efficiency varies with the size. Motor specification should meet or exceed applicable NEMA and UL requirements.

TYPICAL STANDARD MOTORS			TYPICAL ENERGY-EFFICIENT MOTORS		
FULL LOAD EFFICIENCIES OF NEMA DESIGN B INDUCTION MOTORS			FULL LOAD EFFICIENCIES OF THREE PHASE, FOUR POLE MOTORS		
HORSEPOWER	NORMAL EFFICIENCY RANGE	AVERAGE NOMINAL EFFICIENCY	HORSEPOWER	NORMAL EFFICIENCY RANGE	AVERAGE NOMINAL EFFICIENCY
1.0	68.0-78.0	73.0	1.0	80.0-84.0	83.0
1.5	68.0-80.0	75.0	1.5	81.0-84.0	83.0
2.0	72.0-81.0	77.0	2.0	81.0-84.0	83.0
3.0	74.0-83.0	80.0	3.0	83.5-89.5	86.5
5.0	78.0-85.0	82.0	5.0	85.0-90.2	87.6
7.5	80.0-87.0	84.0	7.5	86.0-91.0	88.5
10.0	81.0-88.0	85.0	10.0	87.5-91.7	89.6
15.0	83.0-89.0	86.0	15.0	89.5-92.4	91.0
20.0	84.0-89.0	87.5	20.0	90.0-93.0	91.5
25.0	85.0-90.0	88.0	25.0	91.0-94.1	92.6
30.0	86.0-90.5	88.5	30.0	91.0-94.5	92.8
40.0	87.0-91.5	89.5	40.0	91.5-94.5	93.0
50.0	88.0-92.0	90.0	50.0	91.5-95.0	93.2
60.0	88.5-92.0	90.5	60.0	91.5-95.0	93.2
75.0	89.5-92.5	91.0	75.0	92.0-95.0	93.5
100.0	90.0-93.0	91.5	100.0	93.0-95.0	94.0
125.0	90.5-93.0	92.0	125.0	93.0-95.4	94.2
150.0	91.0-93.5	92.5	150.0	93.0-95.8	94.4
200.0	91.5-94.0	93.0	200.0	94.0-96.2	95.1
250.0	91.5-94.5	93.5			

Energy Auditor/Technical Assistance Analysis Training Manual. State Energy Office, State of Florida