

**PERFORMANCE OF STD.
SQ. CAGE MOTORS -
FLAMEPROOF RANGE**

 CONFIDENTIAL
**Marathon Electric Motors
(India) Limited**
 ROTATING MACHINES
 INDUSTRIAL PRODUCTS UNIT

 SPEC. NO. : C12R1ED418
 PAGE : 1 OF 13
 ISSUE : C
 DATE : 14.12.2007

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 2 | 415 | 50 |

Amb. Temp. : 45°C

| FRAME SIZE | KF90L | KF90L | KF90L | KF90L | KF112M | KF112M | KF132M |
|--|---------------|--------------|---------|---------|---------|---------|---------|
| OUTPUT (KW/HP) | 0.55/ 0.75 | 0.75/ 1.0 | 1.1/1.5 | 1.5/2.0 | 2.2/3.0 | 3.7/5.0 | 5.5/7.5 |
| F.L.RPM | 2840 | 2840 | 2850 | 2850 | 2880 | 2880 | 2880 |
| F.L.AMPS | 1.3 | 1.8 | 2.4 | 3.2 | 4.5 | 7.2 | 10.7 |
| EFFICIENCY (%) | 100% | 70 | 72 | 73.5 | 74.5 | 78 | 81 |
| | 75% | 68 | 70 | 73 | 73 | 75 | 79 |
| | 50% | 64 | 66 | 68 | 68 | 70 | 72.5 |
| POWER FACTOR | 100% | 0.82 | 0.83 | 0.85 | 0.85 | 0.88 | 0.89 |
| | 75% | 0.78 | 0.79 | 0.80 | 0.81 | 0.85 | 0.87 |
| | 50% | 0.70 | 0.70 | 0.69 | 0.68 | 0.80 | 0.80 |
| N.L.AMPS | 0.8 | 0.9 | 1.1 | 1.6 | 1.5 | 2.5 | 3.0 |
| SC / FLC | 5.5 | 6.0 | 6.0 | 6.0 | 6.5 | 6.5 | 6.5 |
| ST / FLT | 1.8 | 1.8 | 1.9 | 2.0 | 2.0 | 2.35 | 2.2 |
| POT / FLT | 2.4 | 2.4 | 2.5 | 2.5 | 2.5 | 2.7 | 2.6 |
| SAFE STALL TIME (COLD / HOT) | 12/10 | 12/10 | 12/10 | 14/11 | 13/11 | 12/10 | 13/11 |
| ROTOR GD ² (Kg-M ²) | 0.004 | 0.004 | 0.004 | 0.005 | 0.039 | 0.057 | 0.172 |
| MOTOR WT. (KG) | 22 | 22 | 22 | 22 | 30 | 30 | 35 |

| ISSUE DATE | A 17.02.96 | B 06.04.2001 | C 14.12.2007 | | |
|------------|---------------|-----------------|-----------------|--|--------------|
| SIGN. NAME | M.MANDAL | | K.G.CHOUDHURY | | RAJIV RANJAN |
| DATE | 14.12.2007 | | 14.12.2007 | | 14.12.2007 |
| | PREPARED BY | | CHECKED BY | | APPROVED BY |

* MOTOR WEIGHTS CONFIRMED BY DESPATCH DEPT.

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 SPEC. NO. : C12R1ED418
 PAGE : 2 OF 13
 ISSUE : C
 DATE : 14.12.2007

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 2 | 415 | 50 |

Amb. Temp. : 45°C

| FRAME SIZE | | KF132M | KF160L | KF160L | KF180L | KF180L | KF200L | KF225M |
|--|------|--------|--------|--------|---------|--------|--------|--------|
| OUTPUT (KW/HP) | | 7.5/10 | 11/15 | 15/20 | 18.5/25 | 22/30 | 30/40 | 37/50 |
| F.L.RPM | | 2880 | 2910 | 2910 | 2900 | 2930 | 2955 | 2960 |
| F.L.AMPS | | 14.1 | 20.7 | 28.4 | 34 | 40.5 | 53.3 | 63.6 |
| EFFICIENCY (%) | 100% | 82 | 85 | 86 | 86 | 87 | 89 | 90 |
| | 75% | 81 | 83 | 84 | 84 | 85 | 87 | 88 |
| | 50% | 78 | 80 | 80 | 80 | 81 | 85 | 86 |
| POWER FACTOR | 100% | 0.90 | 0.87 | 0.855 | 0.88 | 0.87 | 0.88 | 0.90 |
| | 75% | 0.88 | 0.83 | 0.81 | 0.85 | 0.84 | 0.85 | 0.87 |
| | 50% | 0.85 | 0.77 | 0.75 | 0.78 | 0.77 | 0.79 | 0.80 |
| N.L.AMPS | | 3.5 | 8.5 | 10.0 | 11.5 | 14.0 | 19.0 | 20.0 |
| SC / FLC | | 6.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| ST / FLT | | 2.3 | 1.70 | 1.7 | 1.8 | 1.8 | 1.9 | 2.0 |
| POT / FLT | | 2.7 | 2.4 | 2.4 | 2.5 | 2.5 | 2.6 | 2.7 |
| SAFE STALL TIME (COLD / HOT) | | 13/10 | 12/10 | 12/10 | 18/15 | 18/15 | 18/15 | 24/20 |
| ROTOR GD ² (Kg-M ²) | | 0.172 | 0.14 | 0.188 | 0.303 | 0.396 | 0.737 | 1.33 |
| MOTOR WT. (KG) | | 35 | 140 | 140 | 160 | 160 | 310 | 350 |

| ISSUE DATE | A | B | C | | | |
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| | 17.02.96 | 06.04.2001 | 14.12.2007 | | | |
| SIGN. NAME DATE | M.MANDAL 14.12.2007 | | K.G.CHOUDHURY 14.12.2007 | | RAJIV RANJAN 14.12.2007 | |
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SPEC. NO. : C12R1ED418
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Amb. Temp. : 45°C

| | | | | | |
|-------|------|--------------|------|-------|-----|
| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
| FLP | 13 | KF90L-KF315M | 2 | 415 | 50 |

| | | | | | | | | |
|--|------|--------|--------|--------|--------|---------|---------|--|
| FRAME SIZE | | KF225M | KF250M | KF280M | KF280M | KF315M | KF315M | |
| OUTPUT (KW/HP) | | 45/60 | 55/75 | 75/100 | 90/120 | 110/150 | 132/175 | |
| F.L.RPM | | 2965 | 2960 | 2970 | 2970 | 2970 | 2975 | |
| F.L.AMPS | | 77.3 | 93 | 126.7 | 153.8 | 184.8 | 220.6 | |
| EFFICIENCY (%) | 100% | 91 | 91.5 | 91.5 | 91.5 | 92 | 92.5 | |
| | 75% | 89 | 90 | 90 | 90 | 90 | 91 | |
| | 50% | 87 | 88 | 88 | 88 | 88 | 88 | |
| POWER FACTOR | 100% | 0.89 | 0.90 | 0.90 | 0.89 | 0.90 | 0.90 | |
| | 75% | 0.86 | 0.87 | 0.87 | 0.86 | 0.87 | 0.87 | |
| | 50% | 0.79 | 0.82 | 0.82 | 0.80 | 0.82 | 0.82 | |
| N.L.AMPS | | 25.0 | 26.0 | 35.0 | 48.0 | 47.0 | 55.0 | |
| SC / FLC | | 6.5 | 6.0 | 6.5 | 6.0 | 6.0 | 6.0 | |
| ST / FLT | | 1.75 | 1.7 | 1.85 | 1.8 | 1.7 | 1.7 | |
| POT / FLT | | 2.5 | 2.4 | 2.5 | 2.5 | 2.4 | 2.4 | |
| SAFE STALL TIME (COLD / HOT) | | 24/20 | 24/20 | 24/20 | 24/20 | 24/20 | 24/20 | |
| ROTOR GD ² (Kg-M ²) | | 1.48 | 1.72 | 3.44 | 3.63 | 6.08 | 6.90 | |
| MOTOR WT. (KG) | | 350 | 390 | 490 | 490 | 780 | 780 | |

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 SPEC. NO. : C12R1ED418
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 DATE : 14.12.2007

Amb. Temp. : 45°C

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 4 | 415 | 50 |

| FRAME SIZE | | KF90L | KF90L | KF90L | KF90L | KF90L | KF112M | |
|--|------|---------------|---------------|--------------|-------------|-------------|-------------|--|
| OUTPUT (KW/HP) | | 0.37/ 0.50 | 0.55/ 0.75 | 0.75/ 1.0 | 1.1/ 1.5 | 1.5/ 2.0 | 2.2/ 3.0 | |
| F.L.RPM | | 1420 | 1425 | 1420 | 1410 | 1410 | 1425 | |
| F.L.AMPS | | 0.95 | 1.33 | 1.9 | 2.6 | 3.6 | 5.0 | |
| EFFICIENCY (%) | 100% | 72 | 73.5 | 73 | 74 | 76 | 78 | |
| | 75% | 69 | 68 | 69 | 70 | 72 | 75 | |
| | 50% | 64 | 64 | 64 | 67 | 67 | 71 | |
| POWER FACTOR | 100% | 0.77 | 0.78 | 0.77 | 0.78 | 0.76 | 0.78 | |
| | 75% | 0.71 | 0.62 | 0.70 | 0.70 | 0.71 | 0.73 | |
| | 50% | 0.60 | 0.565 | 0.60 | 0.61 | 0.60 | 0.60 | |
| N.L.AMPS | | 0.7 | 0.95 | 1.2 | 1.5 | 2.1 | 3.2 | |
| SC / FLC | | 5.5 | 5.5 | 5.5 | 5.0 | 5.5 | 6.0 | |
| ST / FLT | | 1.8 | 1.9 | 1.9 | 2.0 | 2.1 | 2.3 | |
| POT / FLT | | 2.3 | 2.4 | 2.3 | 2.5 | 2.5 | 2.6 | |
| SAFE STALL TIME (COLD / HOT) | | 12/10 | 12/10 | 11/9 | 12/9 | 10/9 | 13/10 | |
| ROTOR GD ² (Kg-M ²) | | 0.010 | 0.010 | 0.010 | 0.010 | 0.013 | 0.048 | |
| MOTOR WT. (KG) | | 22 | 22 | 22 | 22 | 22 | 60 | |

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|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 4 | 415 | 50 |

| | | | | | | | | |
|--|------|---------|---------|----------|--------|--------|---------|--|
| FRAME SIZE | | KF112M | KF132M | KF132M | KF160L | KF160L | KF180L | |
| OUTPUT (KW/HP) | | 3.7/5.0 | 5.5/7.5 | 7.5/10.0 | 11/15 | 15/20 | 18.5/25 | |
| F.L.RPM | | 1435 | 1435 | 1440 | 1450 | 1460 | 1460 | |
| F.L.AMPS | | 7.7 | 11.0 | 14.6 | 20.5 | 27.6 | 34.4 | |
| EFFICIENCY (%) | 100% | 82 | 84 | 86 | 88 | 89 | 89 | |
| | 75% | 80 | 82 | 85 | 87 | 88 | 88 | |
| | 50% | 78 | 79 | 82 | 84 | 86 | 85 | |
| POWER FACTOR | 100% | 0.815 | 0.83 | 0.83 | 0.85 | 0.85 | 0.84 | |
| | 75% | 0.75 | 0.77 | 0.77 | 0.81 | 0.81 | 0.81 | |
| | 50% | 0.67 | 0.67 | 0.68 | 0.74 | 0.74 | 0.71 | |
| N.L.AMPS | | 4.2 | 6.0 | 7.5 | 10.5 | 13.0 | 14.0 | |
| SC / FLC | | 6.0 | 6.5 | 6.5 | 6.0 | 6.0 | 6.0 | |
| ST / FLT | | 2.3 | 2.1 | 2.2 | 2.2 | 2.1 | 2.2 | |
| POT / FLT | | 2.6 | 2.5 | 2.6 | 2.6 | 2.4 | 2.6 | |
| SAFE STALL TIME (COLD / HOT) | | 12/9 | 11/9 | 12/10 | 17/14 | 12/10 | 16/13 | |
| ROTOR GD ² (Kg-M ²) | | 0.069 | 0.137 | 0.172 | 0.238 | 0.32 | 0.564 | |
| MOTOR WT. (KG) | | 30 | 35 | 35 | 140 | 140 | 160 | |

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 SPEC. NO. : C12R1ED418
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| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 4 | 415 | 50 |

Amb. Temp. : 45°C

| | | | | | | | | |
|--|------|--------|--------|--------|--------|--------|--------|--|
| FRAME SIZE | | KF180L | KF200L | KF225M | KF225M | KF250M | KF280M | |
| OUTPUT (KW/HP) | | 22/30 | 30/40 | 37/50 | 45/60 | 55/75 | 75/100 | |
| F.L.RPM | | 1470 | 1475 | 1470 | 1470 | 1480 | 1480 | |
| F.L.AMPS | | 41 | 55 | 66.5 | 81 | 97.4 | 133.5 | |
| EFFICIENCY (%) | 100% | 89 | 89.5 | 90.5 | 91.5 | 93 | 92.5 | |
| | 75% | 88 | 88 | 89 | 90.5 | 92 | 91.5 | |
| | 50% | 86 | 86 | 87 | 89 | 90 | 90 | |
| POWER FACTOR | 100% | 0.84 | 0.85 | 0.855 | 0.845 | 0.845 | 0.845 | |
| | 75% | 0.80 | 0.82 | 0.815 | 0.79 | 0.815 | 0.80 | |
| | 50% | 0.70 | 0.76 | 0.74 | 0.72 | 0.75 | 0.72 | |
| N.L.AMPS | | 18.0 | 22.0 | 26.0 | 33.0 | 40 | 52 | |
| SC / FLC | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| ST / FLT | | 2.4 | 2.2 | 2.1 | 2.3 | 2.3 | 2.2 | |
| POT / FLT | | 2.7 | 2.65 | 2.4 | 2.65 | 2.7 | 2.6 | |
| SAFE STALL TIME (COLD / HOT) | | 14/12 | 13/11 | 24/20 | 24/20 | 30/25 | 32/27 | |
| ROTOR GD ² (Kg-M ²) | | 0.691 | 1.29 | 1.63 | 2.07 | 2.72 | 5.62 | |
| MOTOR WT. (KG) | | 160 | 310 | 350 | 350 | 390 | 490 | |

| | | | | | | |
|-----------------|------------------------|-----------------|-----------------------------|--|----------------------------|--|
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INDUSTRIAL PRODUCTS UNIT

SPEC. NO. : C12R1ED418
PAGE : 7 OF 13
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| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 4 | 415 | 50 |

Amb. Temp. : 45°C

| | | | | | | | | |
|--|------|--------|--------|---------|---------|--|--|--|
| FRAME SIZE | | KF280M | KF280M | KF315M | KF315M | | | |
| OUTPUT (KW/HP) | | 90/120 | 93/125 | 110/150 | 132/175 | | | |
| F.L.RPM | | 1485 | 1485 | 1485 | 1485 | | | |
| F.L.AMPS | | 157.5 | 163.8 | 190.3 | 225.8 | | | |
| EFFICIENCY (%) | 100% | 93.5 | 93.5 | 93.5 | 93.5 | | | |
| | 75% | 92.5 | 92.5 | 92.5 | 92.5 | | | |
| | 50% | 90 | 90 | 90 | 91 | | | |
| POWER FACTOR | 100% | 0.85 | 0.845 | 0.86 | 0.87 | | | |
| | 75% | 0.81 | 0.80 | 0.82 | 0.83 | | | |
| | 50% | 0.74 | 0.72 | 0.75 | 0.77 | | | |
| N.L.AMPS | | 72 | 75 | 73 | 75 | | | |
| SC / FLC | | 6.0 | 6.0 | 6.0 | 6.0 | | | |
| ST / FLT | | 2.3 | 2.3 | 2.3 | 2.3 | | | |
| POT / FLT | | 2.7 | 2.7 | 2.7 | 2.7 | | | |
| SAFE STALL TIME (COLD / HOT) | | 32/27 | 32/27 | 32/27 | 32/27 | | | |
| ROTOR GD ² (Kg-M ²) | | 6.51 | 7.10 | 7.83 | 8.81 | | | |
| MOTOR WT. (KG) | | 690 | 690 | 780 | 780 | | | |

| | | | | | | |
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Amb. Temp. : 45°C

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 6 | 415 | 50 |

| FRAME SIZE | | KF90L | KF90L | KF90L | KF112M | KF112M | KF132M | KF132M |
|--|------|---------------|--------------|---------|---------|---------|---------|---------|
| OUTPUT (KW/HP) | | 0.55/ 0.75 | 0.75/ 1.0 | 1.1/1.5 | 1.5/2.0 | 2.2/3.0 | 3.7/5.0 | 5.5/7.5 |
| F.L.RPM | | 896 | 910 | 910 | 950 | 950 | 955 | 960 |
| F.L.AMPS | | 1.81 | 1.9 | 3.1 | 3.9 | 5.5 | 7.8 | 11.4 |
| EFFICIENCY (%) | 100% | 56.5 | 72 | 72 | 77 | 78 | 83 | 84 |
| | 75% | 54 | 70 | 72.5 | 76 | 77 | 81 | 82 |
| | 50% | 41 | 67 | 70 | 72.5 | 74 | 78 | 78 |
| POWER FACTOR | 100% | 0.75 | 0.75 | 0.68 | 0.70 | 0.72 | 0.80 | 0.80 |
| | 75% | 0.72 | 0.69 | 0.64 | 0.64 | 0.65 | 0.78 | 0.78 |
| | 50% | 0.56 | 0.53 | 0.53 | 0.54 | 0.57 | 0.70 | 0.70 |
| N.L.AMPS | | 1.1 | 1.3 | 2.0 | 2.5 | 3.4 | 4.0 | 5.0 |
| SC / FLC | | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 6.0 |
| ST / FLT | | 2.1 | 1.7 | 1.9 | 2.2 | 2.1 | 2.2 | 2.2 |
| POT / FLT | | 2.4 | 2.2 | 2.3 | 2.5 | 2.5 | 2.6 | 2.6 |
| SAFE STALL TIME (COLD / HOT) | | 12/10 | 11/9 | 12/10 | 13/10 | 13/10 | 14/11 | 14/11 |
| ROTOR GD ² (Kg-M ²) | | 0.010 | 0.010 | 0.013 | 0.069 | 0.069 | 0.180 | 0.226 |
| MOTOR WT. (KG) | | 22 | 22 | 22 | 60 | 60 | 65 | 65 |

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SQ. CAGE MOTORS -
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Amb. Temp. : 45°C

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|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 6 | 415 | 50 |

| | | | | | | | | |
|--|------|--------|--------|--------|---------|--------|--------|--------|
| FRAME SIZE | | KF160L | KF160L | KF180L | KF200L | KF200L | KF225M | KF250M |
| OUTPUT (KW/HP) | | 7.5/10 | 11/15 | 15/20 | 18.5/25 | 22/30 | 30/40 | 37/50 |
| F.L.RPM | | 950 | 960 | 970 | 975 | 975 | 975 | 980 |
| F.L.AMPS | | 15.1 | 21.5 | 29 | 35.7 | 44.7 | 56.5 | 68.2 |
| EFFICIENCY (%) | 100% | 86.5 | 88 | 89 | 89 | 89 | 89 | 91 |
| | 75% | 85.5 | 87 | 88 | 88 | 88 | 88 | 90.5 |
| | 50% | 84 | 85 | 85 | 85 | 84 | 84 | 88 |
| POWER FACTOR | 100% | 0.80 | 0.81 | 0.81 | 0.81 | 0.77 | 0.83 | 0.83 |
| | 75% | 0.75 | 0.76 | 0.75 | 0.75 | 0.69 | 0.78 | 0.78 |
| | 50% | 0.68 | 0.69 | 0.68 | 0.68 | 0.60 | 0.70 | 0.70 |
| N.L.AMPS | | 6.8 | 9.0 | 13.0 | 17.0 | 22.0 | 24.0 | 24.5 |
| SC / FLC | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| ST / FLT | | 2.0 | 2.2 | 2.2 | 2.4 | 2.4 | 2.3 | 2.2 |
| POT / FLT | | 2.4 | 2.5 | 2.5 | 2.7 | 2.7 | 2.65 | 2.5 |
| SAFE STALL TIME (COLD / HOT) | | 22/18 | 22/18 | 22/18 | 13/11 | 13/11 | 25/21 | 30/25 |
| ROTOR GD ² (Kg-M ²) | | 0.303 | 0.443 | 1.03 | 1.80 | 2.07 | 3.43 | 4.29 |
| MOTOR WT. (KG) | | 140 | 140 | 160 | 310 | 310 | 350 | 490 |

| | | | | | | |
|-----------------|------------------------|-----------------|-----------------------------|--|----------------------------|--|
| ISSUE DATE | A 17.02.96 | B 06.04.2001 | C 14.12.2007 | | | |
| SIGN. NAME DATE | M.MANDAL 14.12.2007 | | K.G.CHOUDHURY 14.12.2007 | | RAJIV RANJAN 14.12.2007 | |
| | PREPARED BY | | CHECKED BY | | APPROVED BY | |

* MOTOR WEIGHTS CONFIRMED BY DESPATCH DEPT.

**PERFORMANCE OF STD.
SQ. CAGE MOTORS -
FLAMEPROOF RANGE**

CONFIDENTIAL
ALSTOM Limited
ROTATING MACHINES
INDUSTRIAL PRODUCTS UNIT

SPEC. NO. : C12R1ED418
PAGE : 10 OF 13
ISSUE : C
DATE : 14.12.2007

Amb. Temp. : 45°C

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 6 | 415 | 50 |

| | | | | | | | | |
|--|------|--------|--------|--------|--------|---------|--|--|
| FRAME SIZE | | KF280M | KF280M | KF315M | KF315M | KF315M | | |
| OUTPUT (KW/HP) | | 45/60 | 55/75 | 75/100 | 90/120 | 110/150 | | |
| F.L.RPM | | 985 | 985 | 985 | 985 | 985 | | |
| F.L.AMPS | | 84 | 102 | 131.3 | 157.5 | 196 | | |
| EFFICIENCY (%) | 100% | 92 | 92.5 | 93.5 | 93.5 | 93.5 | | |
| | 75% | 90.8 | 91.5 | 92.5 | 92.5 | 92.5 | | |
| | 50% | 89 | 89 | 91 | 91 | 91 | | |
| POWER FACTOR | 100% | 0.81 | 0.81 | 0.85 | 0.85 | 0.835 | | |
| | 75% | 0.75 | 0.76 | 0.80 | 0.80 | 0.79 | | |
| | 50% | 0.69 | 0.69 | 0.72 | 0.72 | 0.72 | | |
| N.L.AMPS | | 43 | 46 | 55 | 65 | 73 | | |
| SC / FLC | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | |
| ST / FLT | | 2.3 | 2.0 | 2.2 | 2.1 | 2.0 | | |
| POT / FLT | | 2.7 | 2.55 | 2.65 | 2.5 | 2.5 | | |
| SAFE STALL TIME (COLD / HOT) | | 34/28 | 34/28 | 34/28 | 34/28 | 34/28 | | |
| ROTOR GD ² (Kg-M ²) | | 6.70 | 8.50 | 13.40 | 15.07 | 15.91 | | |
| MOTOR WT. (KG) | | 690 | 690 | 780 | 780 | 780 | | |

| | | | | | | |
|------------|---------------|-----------------|-----------------|--|--------------|--|
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| DATE | 14.12.2007 | | 14.12.2007 | | 14.12.2007 | |
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SQ. CAGE MOTORS -
FLAMEPROOF RANGE**

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INDUSTRIAL PRODUCTS UNIT

SPEC. NO. : C12R1ED418
PAGE : 11 OF 13
ISSUE : C
DATE : 14.12.2007

Amb. Temp. : 45°C

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 8 | 415 | 50 |

| FRAME SIZE | | KF90L | KF90L | KF112M | KF112M | KF112M | KF132M | |
|--|------|---------------|---------------|--------------|-------------|-------------|-------------|--|
| OUTPUT (KW/HP) | | 0.37/ 0.50 | 0.55/ 0.75 | 0.75/ 1.0 | 1.1/ 1.5 | 1.5/ 2.0 | 2.2/ 3.0 | |
| F.L.RPM | | 680 | 680 | 690 | 700 | 710 | 720 | |
| F.L.AMPS | | 1.4 | 2.0 | 2.7 | 3.9 | 5.1 | 6.5 | |
| EFFICIENCY (%) | 100% | 61 | 63 | 69 | 70 | 71 | 76 | |
| | 75% | 59 | 61 | 67 | 68 | 69 | 73 | |
| | 50% | 55 | 57 | 63 | 64 | 65 | 68 | |
| POWER FACTOR | 100% | 0.60 | 0.60 | 0.55 | 0.56 | 0.58 | 0.62 | |
| | 75% | 0.53 | 0.52 | 0.50 | 0.50 | 0.54 | 0.57 | |
| | 50% | 0.42 | 0.40 | 0.40 | 0.41 | 0.45 | 0.48 | |
| N.L.AMPS | | 1.0 | 1.4 | 2.0 | 3.0 | 3.8 | 5.0 | |
| SC / FLC | | 3.5 | 3.5 | 5.5 | 5.5 | 6.0 | 6.0 | |
| ST / FLT | | 1.8 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | |
| POT / FLT | | 2.2 | 2.4 | 2.3 | 2.4 | 2.5 | 2.6 | |
| SAFE STALL TIME (COLD / HOT) | | 20/16 | 19/15 | 18/15 | 19/15 | 20/16 | 20/16 | |
| ROTOR GD ² (Kg-M ²) | | 0.010 | 0.013 | 0.048 | 0.069 | 0.069 | 0.180 | |
| MOTOR WT. (KG) | | 22 | 22 | 30 | 30 | 30 | 35 | |

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| DATE | 14.12.2007 | | 14.12.2007 | | 14.12.2007 | |
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**PERFORMANCE OF STD.
 SQ. CAGE MOTORS -
 FLAMEPROOF RANGE**

Amb. Temp. : 45°C

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 8 | 415 | 50 |

| | | | | | | | | |
|--|------|---------|---------|--------|--------|--------|---------|--------|
| FRAME SIZE | | KF160L | KF160L | KF160L | KF180L | KF200L | KF225M | KF225M |
| OUTPUT (KW/HP) | | 3.7/5.0 | 5.5/7.5 | 7.5/10 | 11/15 | 15/20 | 18.5/25 | 22/30 |
| F.L.RPM | | 725 | 725 | 725 | 730 | 730 | 735 | 735 |
| F.L.AMPS | | 8.7 | 12.7 | 16.8 | 24.1 | 32.6 | 41.1 | 47.6 |
| EFFICIENCY (%) | 100% | 83.5 | 83.5 | 84 | 87 | 86.5 | 87 | 88 |
| | 75% | 81 | 81 | 82 | 85.5 | 85 | 84 | 85 |
| | 50% | 79 | 79 | 79 | 83 | 81 | 80 | 82 |
| POWER FACTOR | 100% | 0.71 | 0.72 | 0.74 | 0.73 | 0.74 | 0.72 | 0.73 |
| | 75% | 0.65 | 0.65 | 0.68 | 0.66 | 0.69 | 0.64 | 0.66 |
| | 50% | 0.52 | 0.53 | 0.58 | 0.60 | 0.61 | 0.56 | 0.59 |
| N.L.AMPS | | 5.2 | 7.8 | 10.0 | 14.5 | 16.0 | 23.0 | 26.0 |
| SC / FLC | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| ST / FLT | | 1.9 | 2.0 | 1.70 | 1.80 | 1.80 | 2.10 | 2.20 |
| POT / FLT | | 2.2 | 2.4 | 2.2 | 2.3 | 2.2 | 2.5 | 2.6 |
| SAFE STALL TIME (COLD / HOT) | | 22/18 | 22/18 | 22/18 | 22/18 | 20/17 | 26/22 | 26/22 |
| ROTOR GD ² (Kg-M ²) | | 0.303 | 0.350 | 0.443 | 1.03 | 2.07 | 3.09 | 3.43 |
| MOTOR WT. (KG) | | 140 | 140 | 140 | 160 | 310 | 350 | 350 |

| | | | | | | |
|------------|---------------|-----------------|-----------------|--|--------------|--|
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**PERFORMANCE OF STD.
SQ. CAGE MOTORS -
FLAMEPROOF RANGE**

Amb. Temp. : 45°C

| BRAND | CODE | FRAME | POLE | VOLTS | C/S |
|-------|------|--------------|------|-------|-----|
| FLP | 13 | KF90L-KF315M | 8 | 415 | 50 |

| | | | | | | | | |
|--|------|--------|--------|--------|--------|--------|--|--|
| FRAME SIZE | | KF250M | KF280M | KF280M | KF315M | KF315M | | |
| OUTPUT (KW/HP) | | 30/40 | 37/50 | 45/60 | 55/75 | 75/100 | | |
| F.L.RPM | | 740 | 740 | 740 | 740 | 740 | | |
| F.L.AMPS | | 64.2 | 71.1 | 84.0 | 107.4 | 149.2 | | |
| EFFICIENCY (%) | 100% | 89 | 90.5 | 92 | 92.5 | 92 | | |
| | 75% | 88 | 89.5 | 91 | 91.5 | 90.5 | | |
| | 50% | 85 | 87 | 89 | 90 | 88 | | |
| POWER FACTOR | 100% | 0.73 | 0.80 | 0.81 | 0.77 | 0.76 | | |
| | 75% | 0.66 | 0.76 | 0.77 | 0.72 | 0.71 | | |
| | 50% | 0.59 | 0.66 | 0.70 | 0.64 | 0.63 | | |
| N.L.AMPS | | 33 | 36 | 40 | 55 | 77 | | |
| SC / FLC | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | |
| ST / FLT | | 1.9 | 2.0 | 2.1 | 2.1 | 2.0 | | |
| POT / FLT | | 2.3 | 2.4 | 2.5 | 2.5 | 2.4 | | |
| SAFE STALL TIME (COLD / HOT) | | 31/26 | 36/30 | 36/30 | 36/30 | 36/30 | | |
| ROTOR GD ² (Kg-M ²) | | 4.29 | 7.34 | 8.50 | 13.40 | 15.07 | | |
| MOTOR WT. (KG) | | 490 | 690 | 690 | 780 | 780 | | |

| | | | | | | |
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*** MOTOR WEIGHTS CONFIRMED BY DESPATCH DEPT.**

Amendment

Issue : A, Original Issue, Dt. 17.02.96

Issue : B, Format revised, Dt. 06.04.2001

Issue : C, Company's Name & signatory changed, Dt. 14.12.07