

## 11. MLE technical data

Grundfos MLE motors are equipped with NEMA standard C-face flanges.

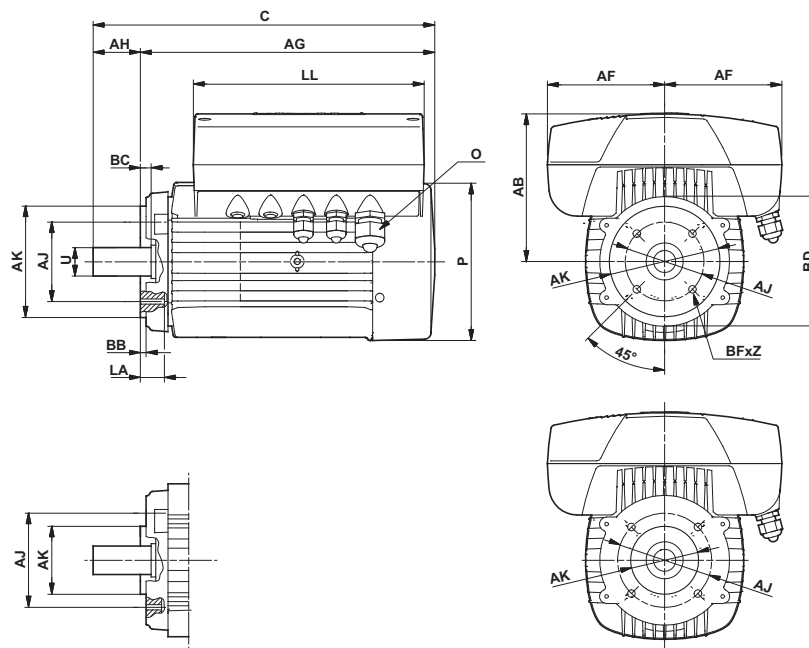
Grundfos MLE 10 Hp and smaller motors are recognized under the Component Recognition Program of Underwriters Laboratories Inc. for the United States and Canada. Grundfos MLE motors 15 to 30 Hp are UL Listed for the U.S.A.

MLE motors are equipped with a reinforced bearing system with locked bearings at the drive end, either a deep-groove ball bearing or an angular-contact bearing depending on the motor model.

This ensures an even uptake of the load in order to maximize the lifetime of the bearings, which are guaranteed for a minimum of 18,000 hours service life. At the non-drive end, the motors are fitted with bearings with axial clearance in order to meet production tolerances while allowing for thermal expansion during motor operation. This ensures trouble-free operation and long life.

# MLE single phase motors

## Dimensional sketch



TM03 1674-2705

### 2-pole dimensional data

| Power [Hp] | Short type designation | Stator housing [inches (mm)] |       |       |       |       |       |       | Shaft end [inches (mm)] |      |
|------------|------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------------------------|------|
|            |                        | P                            | AB    | AF    | AF    | C     | AG    | LL    | U                       | AH   |
| 0.5        | MLE71AB-2-56C-C        | 5.55                         | 5.51  | 4.13  | 4.13  | 8.70  | 7.52  | 6.65  | 0.62                    | 2.06 |
| 0.75       | MLE71BA-2-56C-C        | (141)                        | (140) | (105) | (105) | (221) | (191) | (169) | (16)                    | (52) |
| 1.0        | MLE80AA-2-56C-C        | 5.55                         | 5.51  | 4.13  | 4.13  | 10.67 | 9.09  | 6.65  | 0.62                    | 2.06 |
| 1.5        | MLE80BA-2-56C-C        | (141)                        | (140) | (105) | (105) | (271) | (231) | (169) | (16)                    | (52) |

| Power [Hp] | Short type designation | Flange [inches (mm)] |       |      |       |           |            | Cable entries [mm]              |
|------------|------------------------|----------------------|-------|------|-------|-----------|------------|---------------------------------|
|            |                        | LA                   | AJ    | AK   | BD    | BF        | BB         | O                               |
| 0.5        | MLE71AB-2-56C-C        | 0.47                 | 3.35  | 2.76 | 4.13  | M6 x 4 mm | 0.10 (2.5) | 2xM16 + 1xM20 + 1xknock out M16 |
| 0.75       | MLE71BA-2-56C-C        | (12)                 | (85)  | (70) | (105) |           |            |                                 |
| 1.0        | MLE80AA-2-56C-C        | 0.47                 | 3.94  | 3.15 | 4.72  | M6 x 4 mm | 0.12 (3)   | 2xM16 + 1xM20 + 1xknock out M16 |
| 1.5        | MLE80BA-2-56C-C        | (12)                 | (100) | (80) | (120) |           |            |                                 |

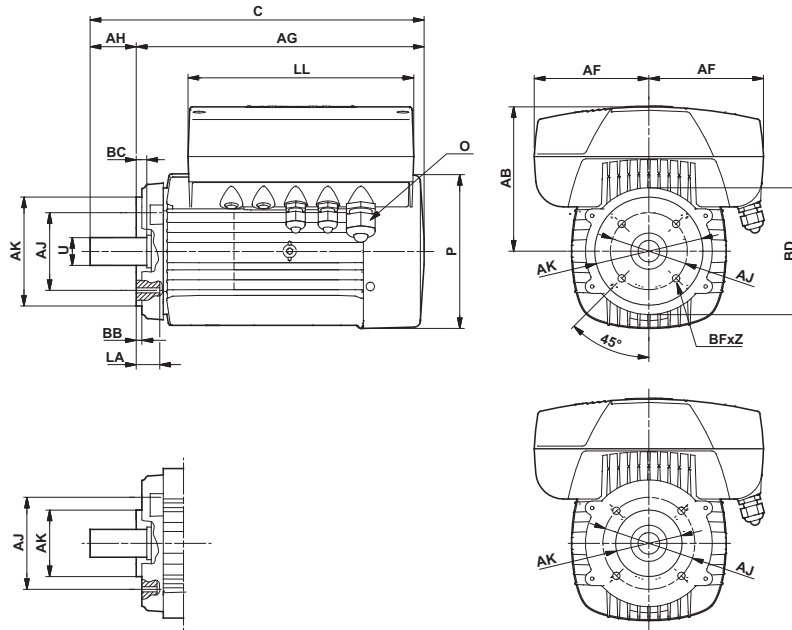
### 4-pole dimensional data

| Power [hp] | Short type designation | Stator housing [inches (mm)] |       |       |       |       |       |       | Shaft end [inches (mm)] |      |
|------------|------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------------------------|------|
|            |                        | P                            | AB    | AF    | AF    | C     | AG    | LL    | U                       | AH   |
| 0.35       | MLE71AB-4-56C-C        | 5.55                         | 5.51  | 4.13  | 4.13  | 8.70  | 7.52  | 6.65  | 0.62                    | 2.06 |
| 0.5        | MLE71BA-4-56C-C        | (141)                        | (140) | (105) | (105) | (221) | (191) | (169) | (16)                    | (52) |
| 0.75       | MLE80AA-4-56C-C        | 5.55                         | 5.51  | 4.13  | 4.13  | 10.67 | 9.09  | 6.65  | 0.62                    | 2.06 |
| 1.0        | MLE80BA-4-56C-C        | (141)                        | (140) | (105) | (105) | (271) | (231) | (169) | (16)                    | (52) |

| Power [hp] | Short type designation | Flange [inches (mm)] |       |      |       |           |            | Cable entries [mm]              |
|------------|------------------------|----------------------|-------|------|-------|-----------|------------|---------------------------------|
|            |                        | LA                   | AJ    | AK   | BD    | BF        | BB         | O                               |
| 0.35       | MLE71AB-4-56C-C        | 0.47                 | 3.35  | 2.76 | 4.13  | M6 x 4 mm | 0.10 (2.5) | 2xM16 + 1xM20 + 1xknock out M16 |
| 0.5        | MLE71BA-4-56C-C        | (12)                 | (85)  | (70) | (105) |           |            |                                 |
| 0.75       | MLE80AA-4-56C-C        | 0.47                 | 3.94  | 3.15 | 4.72  | M6 x 4 mm | 0.12 (3)   | 2xM16 + 1xM20 + 1xknock out M16 |
| 1.0        | MLE80BA-4-56C-C        | (12)                 | (100) | (80) | (120) |           |            |                                 |

# MLE three phase motors 1 - 10 Hp

## Dimensional sketch



TM03 1674 2705

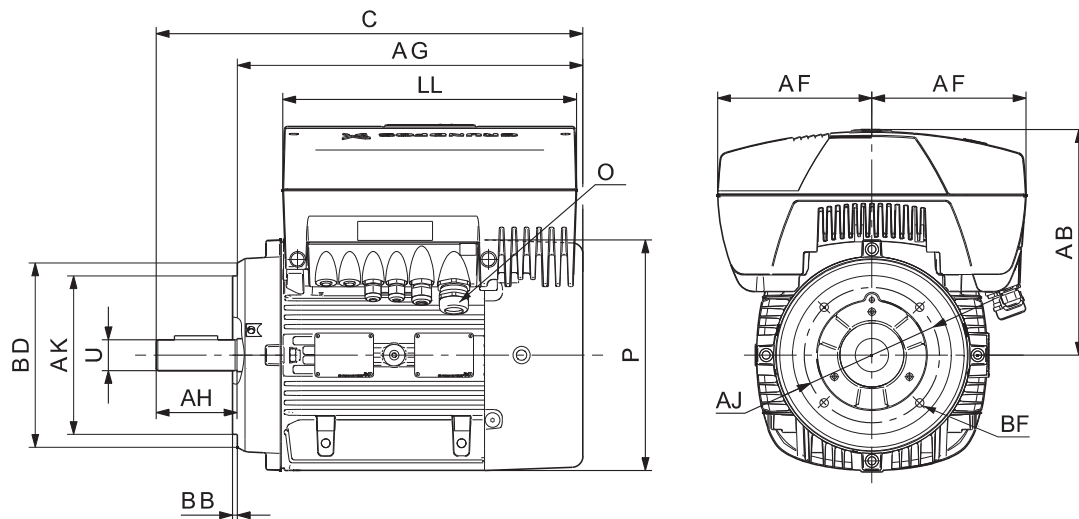
## Dimensional data

| P2 [Hp] | Short type designation | Stator housing [inches (mm)] |               |               |               |                |                |                | Shaft end [inches (mm)] |              |
|---------|------------------------|------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|-------------------------|--------------|
|         |                        | P                            | AB            | AF            | AF            | C              | AG             | LL             | U                       | AH           |
| 1.00    | MLE90CC-2-56C-G3       | 7.00<br>(178)                | 6.57<br>(167) | 5.20<br>(132) | 5.20<br>(132) | 15.00<br>(381) | 12.95<br>(329) | 10.24<br>(260) | 0.62<br>(16)            | 2.06<br>(52) |
| 1.50    | MLE90CC-2-56C-G3       |                              |               |               |               |                |                |                |                         |              |
| 2.00    | MLE90CC-2-56C-G3       |                              |               |               |               |                |                |                |                         |              |
| 3.00    | MLE90FA-2-182TC-G3     | 7.00<br>(178)                | 6.57<br>(167) | 5.20<br>(132) | 5.20<br>(132) | 16.05<br>(408) | 13.31<br>(338) | 10.24<br>(260) | 1.12<br>(28)            | 2.62<br>(67) |
| 5.00    | MLE112CA-2-184TC-G3    | 8.66<br>(220)                | 7.40<br>(188) | 5.71<br>(145) | 5.71<br>(145) | 18.25<br>(464) | 15.51<br>(394) | 11.81<br>(300) | 1.12<br>(28)            | 2.62<br>(67) |
| 7.50    | MLE132DA-2-215TC-G3    | 8.66<br>(220)                | 7.40<br>(188) | 5.71<br>(145) | 5.71<br>(145) | 18.75<br>(476) | 15.51<br>(394) | 11.81<br>(300) | 1.37<br>(35)            | 3.12<br>(79) |
| 10.0    | MLE132FA2-215-TC-G3    | 10.24<br>(260)               | 8.39<br>(213) | 5.71<br>(145) | 5.71<br>(145) | 18.07<br>(459) | 14.92<br>(379) | 11.81<br>(300) | 1.37<br>(35)            | 3.12<br>(79) |

| P2 [Hp] | Short type designation | Flange [inches (mm)] |               |               |               |         |             |             | Cable entries [mm]              |
|---------|------------------------|----------------------|---------------|---------------|---------------|---------|-------------|-------------|---------------------------------|
|         |                        | LA                   | AJ            | AK            | BD            | BF      | BB          | Z           | O                               |
| 1.00    | MLE90CC-2-56C-G3       | 0.59<br>(15)         | 5.87<br>(149) | 4.5<br>(114)  | 6.50<br>(165) | 3/8"-16 | 0.16<br>(4) | 0.16<br>(4) | 2xM16 + 1xM25 + 2xknock out M16 |
| 1.50    | MLE90CC-2-56C-G3       |                      |               |               |               |         |             |             |                                 |
| 2.00    | MLE90CC-2-56C-G3       |                      |               |               |               |         |             |             |                                 |
| 3.00    | MLE90FA-2-182TC-G3     | 0.75<br>(19)         | 7.24<br>(184) | 8.50<br>(216) | 8.50<br>(216) | 1/2"-13 | -           | 0.16<br>(4) | 2xM16 + 1xM25 + 2xknock out M16 |
| 5.00    | MLE112CA-2-184TC-G3    | 0.63<br>(16)         | 7.24<br>(184) | 8.50<br>(216) | 8.50<br>(216) | 1/2"-13 | -           | 0.16<br>(4) | 2xM16 + 1xM25 + 2xknock out M16 |
| 7.50    | MLE132DA-2-215TC-G3    | 0.63<br>(16)         | 7.24<br>(184) | 8.50<br>(216) | 8.50<br>(216) | 1/2"-13 | -           | 0.16<br>(4) | 2xM16 + 1xM25 + 2xknock out M16 |
| 10.0    | MLE132FA2-215-TC-G3    | 0.63<br>(16)         | 7.24<br>(184) | 8.50<br>(216) | 8.50<br>(216) | 1/2"-13 | -           | 0.16<br>(4) | 2xM16 + 1xM25 + 2xknock out M16 |

## MLE three phase motors 15 - 30 Hp

## Dimensional sketch



TM04 5498 3309

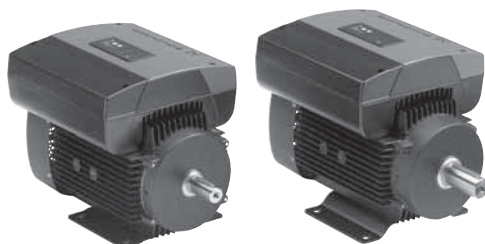
## Dimensional data

| P2<br>[Hp] | Short type<br>designation | Stator housing [inches (mm)] |                |               |               |                |                |                | Shaft end [inches] |              |
|------------|---------------------------|------------------------------|----------------|---------------|---------------|----------------|----------------|----------------|--------------------|--------------|
|            |                           | P                            | AB             | AF            | AF            | C              | AG             | LL             | U                  | AH           |
| 15         | MLE160 254TC              | 13.39<br>(340)               | 12.13<br>(308) | 8.27<br>(210) | 8.27<br>(210) | 22.56<br>(573) | 18.78<br>(477) | 15.75<br>(400) | 1.62<br>(41)       | 3.75<br>(95) |
| 20         | MLE160 256TC              | 13.39<br>(340)               | 12.13<br>(308) | 8.27<br>(210) | 8.27<br>(210) | 22.56<br>(573) | 18.78<br>(477) | 15.75<br>(400) | 1.62<br>(41)       | 3.75<br>(95) |
| 25         | MLE160 284TSC             | 13.39<br>(340)               | 12.13<br>(308) | 8.27<br>(210) | 8.27<br>(210) | 24.53<br>(623) | 22.72<br>(577) | 15.75<br>(400) | 1.62<br>(41)       | 3.75<br>(95) |
| 30         | MLE180 286TSC             | 13.39<br>(340)               | 12.13<br>(308) | 8.27<br>(210) | 8.27<br>(210) | 24.53<br>(623) | 22.72<br>(577) | 15.75<br>(400) | 1.62<br>(41)       | 3.75<br>(95) |

| P2<br>[Hp] | Short type<br>designation | Flange [inches (mm)] |                |                |    |             | Cable entries [mm]                      |
|------------|---------------------------|----------------------|----------------|----------------|----|-------------|---|
|            |                           | AJ                   | AK             | BD             | BF | BB          | O                                       |
| 15         | MLE160 254TC              | 7.25<br>(184)        | 8.50<br>(216)  | 9.88<br>(251)  | ½" | 0.26<br>(7) | 1xM40 + 1xM20 + 2xM16 + 2xknock out M16 |
| 20         | MLE160 256TC              | 7.25<br>(184)        | 8.50<br>(216)  | 9.88<br>(251)  | ½" | 0.26<br>(7) | 1xM40 + 1xM20 + 2xM16 + 2xknock out M16 |
| 25         | MLE160 284TSC             | 9.00<br>(229)        | 10.50<br>(267) | 10.75<br>(273) | ½" | 0.32<br>(8) | 1xM40 + 1xM20 + 2xM16 + 2xknock out M16 |
| 30         | MLE180 286TSC             | 9.00<br>(229)        | 10.50<br>(267) | 10.75<br>(273) | ½" | 0.32<br>(8) | 1xM40 + 1xM20 + 2xM16 + 2xknock out M16 |

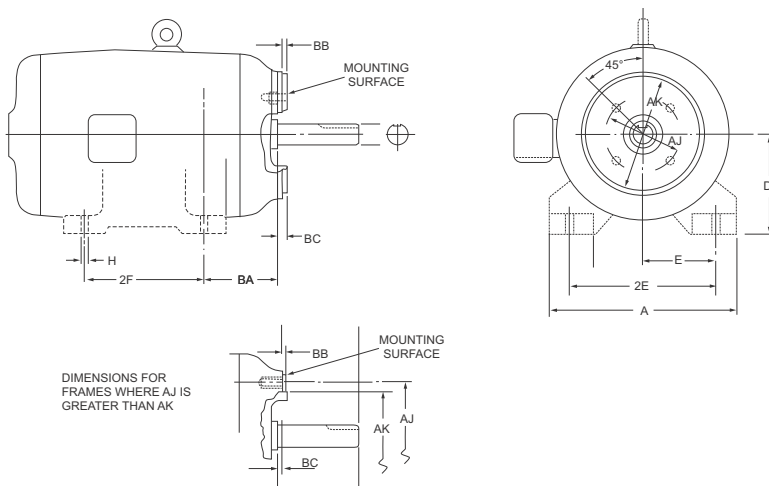
## MLE motors for CRE-H and CRNE-H

(C-Face mounting with foot)



GR9035

### Dimensional sketch



TM05 3012 0812

### Dimensional data

| Power [Hp]                                | Voltage [V] | Phase | NEMA frame size | Foot dimensions [inches] |      |      |       |       |         |      |
|---|-------------|-------|-----------------|--------------------------|------|------|-------|-------|---------|------|
|   |             |       |                 | A                        | D    | E    | 2E    | 2F    | BA + BC | H    |
| <b>1-phase 2-pole MLE motor with foot</b> |             |       |                 |                          |      |      |       |       |         |      |
| 0.5                                       | 208-230     | 1     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 0.75                                      | 208-230     | 1     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 1   | 208-230     | 1     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 1.5                                       | 208-230     | 1     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| <b>3-phase 2-pole MLE motor with foot</b> |             |       |                 |                          |      |      |       |       |         |      |
| 1.5                                       | 3x208-230   | 3     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 2   | 3x208-230   | 3     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 3   | 3x208-230   | 3     | 182TC           | 8.90                     | 4.50 | 3.75 | 7.50  | 4.50  | 2.87    | 0.41 |
| 5   | 3x208-230   | 3     | 184TC           | 8.90                     | 4.50 | 3.75 | 7.50  | 5.50  | 2.87    | 0.41 |
| 7.5                                       | 3x208-230   | 3     | 215TC           | 9.96                     | 5.25 | 4.25 | 8.50  | 7.00  | 3.75    | 0.41 |
| 1   | 3x460-480   | 3     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 1.5                                       | 3x460-480   | 3     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 2   | 3x460-480   | 3     | 56C             | 6.00                     | 3.50 | 2.44 | 4.88  | 3.00  | 2.56    | 0.34 |
| 3   | 3x460-480   | 3     | 182TC           | 8.90                     | 4.50 | 3.75 | 7.50  | 4.50  | 2.87    | 0.41 |
| 5   | 3x460-480   | 3     | 184TC           | 8.90                     | 4.50 | 3.75 | 7.50  | 5.50  | 2.87    | 0.41 |
| 7.5                                       | 3x460-480   | 3     | 215TC           | 9.96                     | 5.25 | 4.25 | 8.50  | 7.00  | 3.75    | 0.41 |
| 10  | 3x460-480   | 3     | 215TC           | 9.60                     | 5.25 | 4.25 | 8.50  | 7.00  | 3.75    | 0.41 |
| 15  | 3x460-480   | 3     | 254T            | 11.30                    | 6.25 | 5.00 | 10.00 | 8.25  | 4.50    | 0.53 |
| 20  | 3x460-480   | 3     | 256T            | 11.30                    | 6.25 | 5.00 | 10.00 | 10.00 | 4.50    | 0.53 |
| 25  | 3x460-480   | 3     | 284TS           | 12.30                    | 7.00 | 5.50 | 11.00 | 9.50  | 5.00    | 0.53 |
| 30  | 3x460-480   | 3     | 286TS           | 12.30                    | 7.00 | 5.50 | 11.00 | 11.00 | 5.00    | 0.53 |

## MLE technical data

## 2 pole

| Hp    | Short type designation | Voltage [V] | Ph | NEMA frame Size | Service Factor | Motor full load efficiency [%] | Full load current amps ** [A] | Service factor current amps [A] | Power factor | Full load speed [rpm] | Sound pressure level dB(A) |
|-------|------------------------|-------------|----|-----------------|----------------|--------------------------------|-------------------------------|---------------------------------|--------------|-----------------------|----------------------------|
| 1/2   | MLE71AB-2-56C-C        | 208-230     | 1  | 56C             | 1.0            | 71.0*                          | 2.8 - 2.5                     | -                               | 0.96         | 3400                  | 63                         |
| 3/4   | MLE71BA-2-56C-C        | 208-230     | 1  | 56C             | 1.0            | 74.0*                          | 3.9 - 3.5                     | -                               | 0.97         | 3400                  | 63                         |
| 1     | MLE80AA-2-56C-C        | 208-230     | 1  | 56C             | 1.0            | 76.0*                          | 5.2 - 4.7                     | -                               | 0.97         | 3400                  | 62                         |
| 1     | MLE90CC-2-56C-G        | 460-480     | 3  | 56C             | 1.25           | 77.0                           | 1.7                           | 2.10                            | 0.73         | 3500                  | 65                         |
| 1 1/2 | MLE80BA-2-56C-C        | 208-230     | 1  | 56C             | 1.0            | 77.0*                          | 7.5 - 6.8                     | -                               | 0.97         | 3400                  | 63                         |
| 1 1/2 | MLE90CC-2-56C-G        | 208-230     | 3  | 56C             | 1.0            | 82.5                           | 4.35 - 4.05                   | -                               | 0.94         | 3480                  | 65                         |
| 1 1/2 | MLE90CC-2-56C-G        | 460-480     | 3  | 56C             | 1.15           | 84.0                           | 2.2                           | 2.50                            | 0.83         | 3480                  | 65                         |
| 2     | MLE90CC-2-56C-G        | 208-230     | 3  | 56C             | 1.0            | 84.0                           | 5.75 - 5.25                   | -                               | 0.95         | 3460                  | 70                         |
| 2     | MLE90CC-2-56C-G        | 460-480     | 3  | 56C             | 1.15           | 85.5                           | 2.7                           | 3.10                            | 0.87         | 3460                  | 70                         |
| 3     | MLE90FA-2-182TC-G      | 208-230     | 3  | 182TC           | 1.0            | 85.5                           | 8.3 - 7.6                     | -                               | 0.95         | 3460                  | 70                         |
| 3     | MLE90FA-2-182TC-G      | 460-480     | 3  | 182TC           | 1.15           | 86.5                           | 3.7                           | 4.30                            | 0.91         | 3460                  | 70                         |
| 5     | MLE112CA-2-184TC-G     | 208-230     | 3  | 184TC           | 1.0            | 87.5                           | 13.8 - 13.3                   | -                               | 0.94         | 3470                  | 75                         |
| 5     | MLE112CA-2-184TC-G     | 460-480     | 3  | 184TC           | 1.15           | 88.5                           | 6.1                           | 7.00                            | 0.92         | 3470                  | 75                         |
| 7 1/2 | MLE132DA-2-215TC-G     | 208-230     | 3  | 215TC           | 1.0            | 88.5                           | 20.0 - 18.5                   | -                               | 0.94         | 3450                  | 80                         |
| 7 1/2 | MLE132DA-2-215TC-G     | 460-480     | 3  | 215TC           | 1.15           | 88.5                           | 8.9                           | 10.3                            | 0.94         | 3470                  | 80                         |
| 10    | MLE132FA-2-215TC-G     | 460-480     | 3  | 215TC           | 1.15           | 89.5                           | 11.6                          | 13.4                            | 0.93         | 3500                  | 80                         |
| 15    | MLE160AA-2- 254TC-F    | 460-480     | 3  | 254TC           | 1.15           | 90.2                           | 18.0                          | 20.6                            | 0.89         | 3500                  | 68                         |
| 20    | MLE160AB-2- 256TC-F    | 460-480     | 3  | 256TC           | 1.15           | 90.2                           | 24.0                          | 27.5                            | 0.89         | 3540                  | 68                         |
| 25    | MLE160AC-2- 284TC-F    | 460-480     | 3  | 284TC           | 1.15           | 91.0                           | 30.5                          | 35.0                            | 0.88         | 3540                  | 70                         |
| 30    | MLE180AA-2- 286TC-F    | 460-480     | 3  | 286TC           | 1.15           | 91.0                           | 36.5                          | 42.0                            | 0.88         | 3540                  | 70                         |

## 4 pole

| Hp  | Short type designation | Voltage [V] | Ph | NEMA frame Size | Service Factor | Motor full load efficiency [%] | Full load current amps ** [A] | Service factor current amps [A] | Power factor | Full load speed [rpm] | Sound pressure level dB(A) |
|-----|------------------------|-------------|----|-----------------|----------------|--------------------------------|-------------------------------|---------------------------------|--------------|-----------------------|----------------------------|
| 1/3 | MLE71AB-4-56C-C        | 208-230     | 1  | 56C             | 1.0            | 67.0*                          | 2.0 - 1.9                     | -                               | 0.94         | 1690                  | 44                         |
| 1/2 | MLE71BA-4-56C-C        | 208-230     | 1  | 56C             | 1.0            | 70.0*                          | 2.8 - 2.5                     | -                               | 0.96         | 1690                  | 45                         |
| 3/4 | MLE80AA-4-56C-C        | 208-230     | 1  | 56C             | 1.0            | 72.0*                          | 4.0 - 3.7                     | -                               | 0.96         | 1690                  | 46                         |
| 1   | MLE80BA-4-56C-C        | 208-230     | 1  | 56C             | 1.0            | 73.0*                          | 5.4 - 4.9                     | -                               | 0.97         | 1690                  | 49                         |

\* This is the combined efficiency of the motor and variable frequency drive.

\*\* At 460 volts for 460-480 volt motors.