


Square shaded-pole motors (Q-motors)

| | |
|------------------------|-----|
| Standard design | 302 |
| Multi-function design | 304 |
| Frigo design | 305 |
| Plug terminal design | 306 |
| UL and CSA design | 307 |
| Air performance curves | 308 |

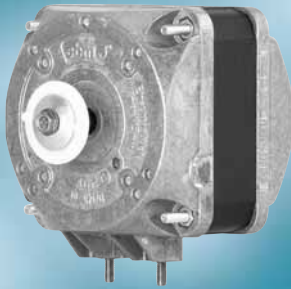


| Table of options | | Standard | Multi-function | Frigo | Plug terminal | UL and CSA |
|-------------------|--|----------|----------------|----------|---------------|------------|
| | | Page 302 | Page 304 | Page 305 | Page 306 | Page 307 |
| |  = available ex stock | | | | | |
| Foot measure | 18 mm (height 48 mm) | | ● | ● | | |
| | 26 mm (height 51 mm) | ● | ● | | ● | ● |
| Mount | A side (3 x M4, Ø 71.4 mm) | | ● | | | |
| | B side (3 x M4, Ø 71.4 mm) | | ● | ● | | |
| | Thread ends, A side (4 x M4) | ● | ● | ● | ● | ● |
| Electr. terminals | Jacketed cable (3 x 0.5 mm ²) | 450 mm | 1500 mm | 1500 mm | | |
| | Plug terminal (3 x 0.5 mm ²) | | | | ● | |
| | UL jacketed cable (3 x AWG20) | | | | | 450 mm |



Square shaded-pole motors

Standard design

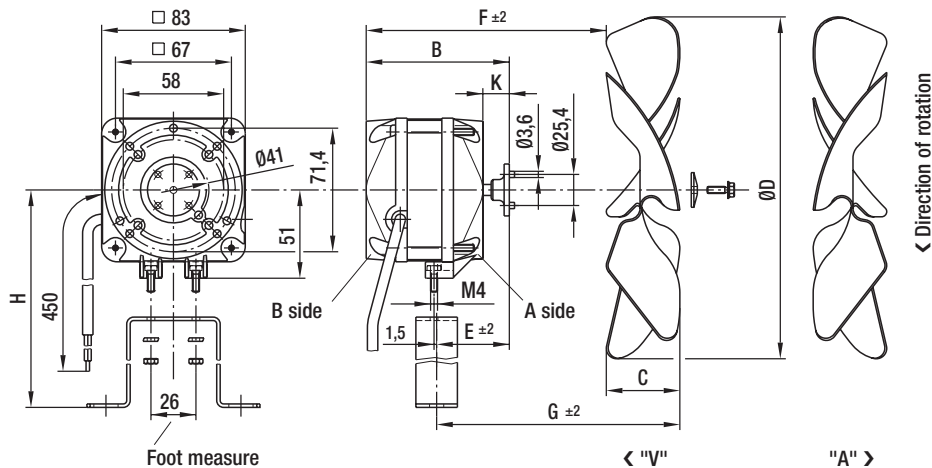


- **Foot mounting:** Track dimension 26 mm (height 51 mm)
- **Type of protection:** IP 42
- **Electrical connection:** Jacketed cable 3 x 0.5 mm² with brass lead tips
- **Product conforming to standard:** CE
- **Approvals:** VDE
- **Curves:** Page 308

| Nominal data | Combination: Motor axial impeller | Curve | Nominal voltage | Frequency | Speed/rpm | Power output | Power input | Current draw | Perm. amb. temp. | Mass | Dimensions | | |
|--------------------------------|--------------------------------------|-------|-----------------|-----------|-----------|--------------|-------------|--------------|------------------|------|------------|----|-----|
| | | | | | | | | | | | VAC | Hz | rpm |
| M4Q045-BD01 -01 | A | Ⓐ | 1~ 230 | 50 | 1300 | 5 | 29 | 0.19 | -30 to +40 | 0.9 | 76 | 42 | 15 |
| | | Ⓑ | 1~ 230 | 60 | 1550 | 5 | 26 | 0.17 | -30 to +40 | | | | |
| M4Q045-CA01 -01 | B | Ⓒ | 1~ 230 | 50 | 1300 | 7 | 31 | 0.20 | -30 to +40 | 1.1 | 82 | 42 | 15 |
| | | Ⓓ | 1~ 230 | 60 | 1550 | 8 | 30 | 0.20 | -30 to +40 | | | | |
| M4Q045-CA03 -51 | C | Ⓔ | 1~ 230 | 50 | 1300 | 10 | 36 | 0.25 | -30 to +40 | 1.2 | 82 | 42 | 15 |
| | | Ⓕ | 1~ 230 | 60 | 1550 | 9 | 34 | 0.22 | -30 to +40 | | | | |
| M4Q045-CF01 -01 | D | Ⓖ | 1~ 230 | 50 | 1300 | 16 | 60 | 0.42 | -30 to +40 | 1.3 | 87 | 42 | 15 |
| | | Ⓗ | 1~ 230 | 60 | 1550 | 16 | 58 | 0.36 | -30 to +40 | | | | |
| M4Q045-DA01 -01 ⁽¹⁾ | E | Ⓙ | 1~ 230 | 50 | 1300 | 18 | 70 | 0.48 | -30 to +40 | 1.6 | 93 | 54 | 15 |
| | | Ⓚ | 1~ 230 | 60 | 1550 | 18 | 62 | 0.42 | -30 to +40 | | | | |
| M4Q045-DA05 -01 ⁽¹⁾ | F | Ⓚ | 1~ 230 | 50 | 1300 | 23 | 86 | 0.62 | -30 to +40 | 1.6 | 93 | 54 | 15 |
| | | Ⓛ | 1~ 230 | 60 | 1550 | 25 | 80 | 0.55 | -30 to +40 | | | | |
| M4Q045-EA01 -01 ⁽¹⁾ | G | Ⓜ | 1~ 230 | 50 | 1300 | 25 | 90 | 0.62 | -30 to +40 | 2.0 | 103 | 59 | 16 |
| | | Ⓝ | 1~ 230 | 60 | 1550 | 26 | 80 | 0.55 | -30 to +40 | | | | |
| M4Q045-EF01 -01 ⁽¹⁾ | H | Ⓞ | 1~ 230 | 50 | 1300 | 34 | 110 | 0.75 | -30 to +40 | 2.2 | 125 | 79 | 33 |
| | | Ⓟ | 1~ 230 | 60 | 1550 | 34 | 100 | 0.65 | -30 to +40 | | | | |

subject to alterations

(1) Foot mounting possible on A or B side



Valid for all designs:

- **Material:** Housing made of die-cast aluminium
Stator pack: Coated in black
- **Direction of air flow:** "V" or "A" (depending on axial impeller used)
- **Direction of rotation:** Counter-clockwise, seen on shaft end
- **Insulation class:** "B"
- **Mounting position:** Any, preferably horizontal
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearing:** Self-adjusting calotte sleeve bearing (mean service life of 30,000 hours in horizontal installation position)
- **Motor protection:** Impedance protection (combination A-C) or thermal overload protector internally switched (combination D-H)
- **Protection class:** I
- **Mounting:** Guard grille and wall ring are mounted onto the protruding thread ends of the A side. The Q-motor can also be screwed on via the mounting flanges (integrated in the bearing shields).
- **Axial impeller mounting:** Mounted to the motor shaft using a plastic adapter with pulling peg and an M4 screw (combination A-D) or M5 (combination E-H) screw.
- **Power specifications:** At 60 Hz, the blade angle of the axial impellers must be reduced by 6° each.

| Axial impellers | | Blade angle 22° ± 1°30' | | | | Blade angle 28° ± 1°30' | | | | Blade angle 34° ± 1°30' | | | |
|-----------------|-----|-------------------------|-----|------|---------------------|-------------------------|-----|------|---------------------|-------------------------|-----|------|---------------------|
| Ø D | H | F | G | C | m³/h ⁽²⁾ | F | G | C | m³/h ⁽²⁾ | F | G | C | m³/h ⁽²⁾ |
| 154 | 90 | 61 | 56 | 27.5 | 60 | 56 | 59 | 32.0 | 100 | 54 | 62 | 37.0 | 140 |
| 172 | 103 | 58 | 57 | 31.0 | 120 | 55 | 59 | 36.0 | 180 | 53 | 63 | 42.0 | 230 |
| 200 | 123 | 58 | 58 | 32.0 | 190 | 55 | 60 | 37.5 | 300 | — | — | — | — |
| 200 | 123 | 65 | 58 | 32.0 | 190 | 62 | 60 | 37.5 | 300 | 59 | 64 | 45.0 | 400 |
| 230 | 123 | 64 | 62 | 35.0 | 500 | — | — | — | — | — | — | — | — |
| 230 | 123 | 64 | 62 | 35.0 | 500 | 60 | 65 | 43.0 | 630 | 52 | 68 | 50.0 | 820 |
| 254 | 135 | 64 | 62 | 37.0 | 580 | — | — | — | — | — | — | — | — |
| 254 | 135 | 70 | 62 | 37.0 | 580 | 65 | 66 | 45.0 | 840 | — | — | — | — |
| 254 | 135 | 76 | 74 | 37.0 | 580 | 72 | 78 | 45.0 | 840 | 67 | 80 | 52.0 | 1070 |
| 300 | 160 | 75 | 79 | 43.0 | 1000 | — | — | — | — | — | — | — | — |
| 300 | 160 | 75 | 79 | 43.0 | 1000 | 67 | 81 | 53.5 | 1400 | — | — | — | — |
| 300 | 160 | 86 | 84 | 43.0 | 1000 | 77 | 86 | 53.5 | 1400 | — | — | — | — |
| 300 | 160 | 108 | 104 | 43.0 | 1000 | 104 | 106 | 53.5 | 1400 | 95 | 112 | 61.0 | 1700 |

⁽²⁾ established at counterpressure of 20 Pa

Square shaded-pole motors

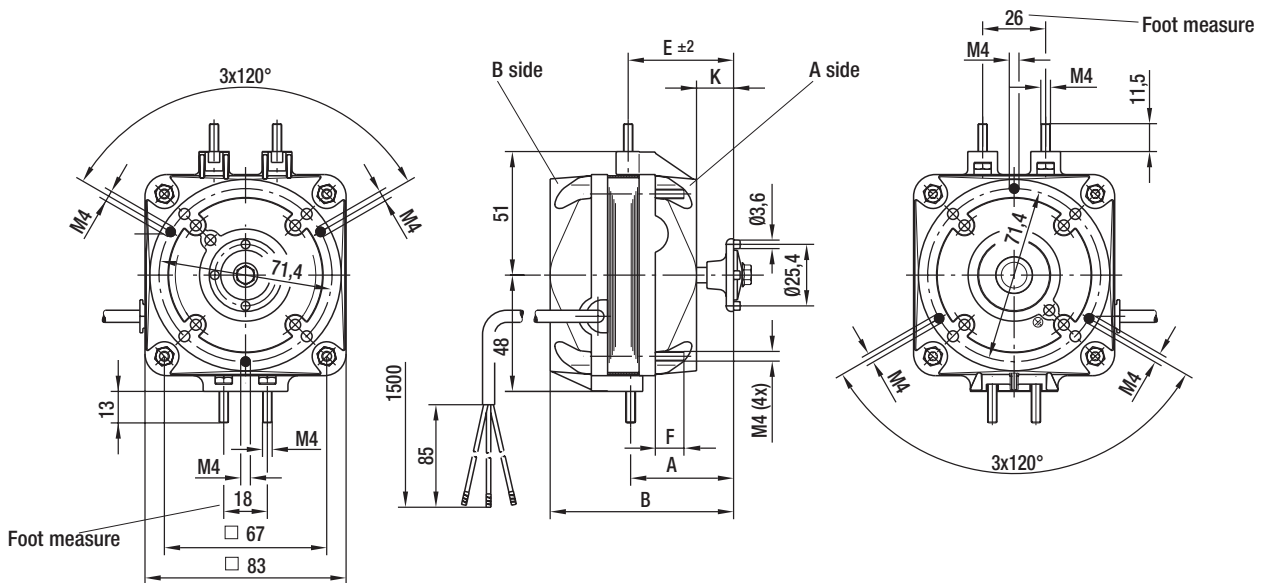
Multi-function design



- **Foot mounting:** Track dimension 26 mm (height 51 mm) or 18 mm (height 48 mm) possible
- **Bearing shields:** A and B-sides, tapped holes 3 x M4, diameter of pitch circle 71.4 mm; mounting of guard grille and wall ring on A-side bearing shield; opposite M4 are securely installed in the feet (knurled hex nuts are not included in delivery scope)
- **Type of protection:** IP 42
- **Electrical connection:** Jacketed cable 3 x 0.5 mm² with brass lead tips
- **Product conforming to standard:** CE
- **Approvals:** VDE
- **Curves:** Page 308

| Nominal data | Combination: Motor axial impeller | Curve | Nominal voltage | Frequency | Speed/rpm | Power output | Power input | Current draw | Perm. amb. temp. | Mass | Dimensions | | | | |
|-----------------|--------------------------------------|-------|-----------------|-----------|-----------|--------------|-------------|--------------|------------------|------|------------|-------|------|----|------|
| | | | | | | | | | | | Type | p.302 | VAC | Hz | rpm |
| M4Q045-BD01 -75 | A | Ⓐ | 1~ 230 | 50 | 1300 | 5 | 29 | 0.19 | -30 to +40 | 0.9 | 43 | 76 | 43.5 | 12 | 15.0 |
| | | Ⓑ | 1~ 230 | 60 | 1550 | 5 | 26 | 0.17 | -30 to +40 | | | | | | |
| M4Q045-CA01 -75 | B | Ⓒ | 1~ 230 | 50 | 1300 | 7 | 31 | 0.20 | -30 to +40 | 1.1 | 49 | 82 | 43.5 | 10 | 15.0 |
| | | Ⓓ | 1~ 230 | 60 | 1550 | 8 | 30 | 0.20 | -30 to +40 | | | | | | |
| M4Q045-CA03 -75 | C | Ⓔ | 1~ 230 | 50 | 1300 | 10 | 36 | 0.25 | -30 to +40 | 1.2 | 49 | 82 | 43.5 | 10 | 15.0 |
| | | Ⓕ | 1~ 230 | 60 | 1550 | 9 | 34 | 0.22 | -30 to +40 | | | | | | |
| M4Q045-CF01 -75 | D | Ⓖ | 1~ 230 | 50 | 1300 | 16 | 60 | 0.42 | -30 to +40 | 1.3 | 54 | 87 | 43.5 | 10 | 15.0 |
| | | Ⓗ | 1~ 230 | 60 | 1550 | 16 | 58 | 0.36 | -30 to +40 | | | | | | |
| M4Q045-DA01 -75 | E | Ⓙ | 1~ 230 | 50 | 1300 | 18 | 70 | 0.48 | -30 to +40 | 1.6 | 59 | 93 | 43.5 | 10 | 15.0 |
| | | Ⓚ | 1~ 230 | 60 | 1550 | 18 | 62 | 0.42 | -30 to +40 | | | | | | |
| M4Q045-DA05 -75 | F | Ⓛ | 1~ 230 | 50 | 1300 | 23 | 86 | 0.62 | -30 to +40 | 1.6 | 59 | 93 | 43.5 | 10 | 15.0 |
| | | Ⓛ | 1~ 230 | 60 | 1550 | 25 | 80 | 0.55 | -30 to +40 | | | | | | |
| M4Q045-EA01 -75 | G | Ⓜ | 1~ 230 | 50 | 1300 | 25 | 90 | 0.62 | -30 to +40 | 2.0 | 69 | 103 | 44.0 | 10 | 15.5 |
| | | Ⓝ | 1~ 230 | 60 | 1550 | 26 | 80 | 0.55 | -30 to +40 | | | | | | |
| M4Q045-EF01 -75 | H | Ⓟ | 1~ 230 | 50 | 1300 | 34 | 110 | 0.75 | -30 to +40 | 2.2 | 92 | 125 | 61.0 | 10 | 33.0 |
| | | Ⓟ | 1~ 230 | 60 | 1550 | 34 | 100 | 0.65 | -30 to +40 | | | | | | |

subject to alterations



Square shaded-pole motors

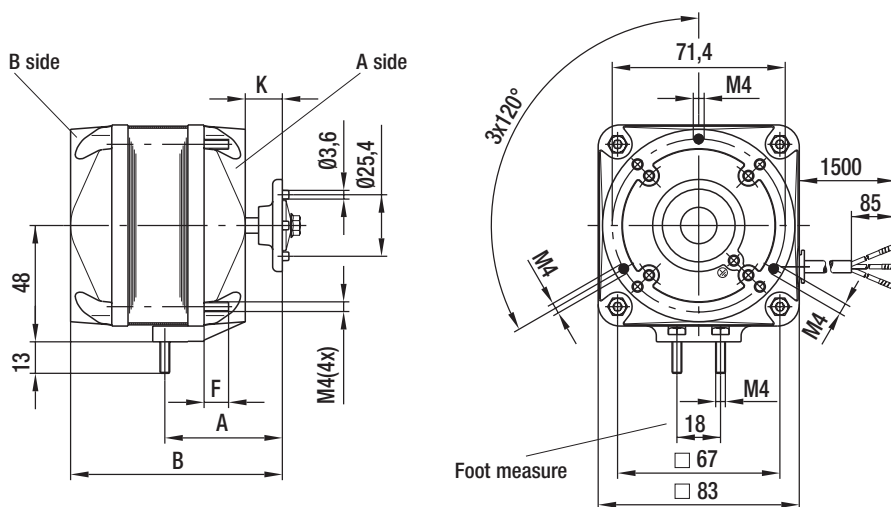
Frigo design (specially for spare parts requirements)



- **Foot mounting:** Track dimension 18 mm (height 48 mm)
- **Bearing shields:** B-side, tapped holes 3 x M4, diameter of pitch circle 71.4 mm; mounting of guard grille and wall ring on A-side bearing shield; M4 knurled hex nuts (2x) are enclosed in loose form
- **Type of protection:** IP 42
- **Electrical connection:** Jacketed cable 3 x 0.5 mm² with brass lead tips
- **Product conforming to standard:** CE
- **Approvals:** VDE
- **Curves:** Page 308

| Nominal data | Combination: Motor axial impeller | Curve | Nominal voltage | Frequency | Speed/rpm | Power output | Power input | Current draw | Perm. amb. temp. | Mass | Dimensions | | | |
|-----------------|--------------------------------------|------------|------------------|-----------|--------------|--------------|-------------|--------------|--------------------------|------|------------|-------|-----|----|
| | | | | | | | | | | | Type | p.302 | VAC | Hz |
| M4Q045-BD01 -A4 | A | (A) (B) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 5 5 | 29 26 | 0.19 0.17 | -30 to +40 -30 to +40 | 0.9 | 48.5 | 76 | 12 | 15 |
| M4Q045-CA01 -N4 | B | (C) (D) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 7 8 | 31 30 | 0.20 0.20 | -30 to +40 -30 to +40 | 1.1 | 48.5 | 82 | 10 | 15 |
| M4Q045-CA03 -A4 | C | (E) (F) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 10 9 | 36 34 | 0.25 0.22 | -30 to +40 -30 to +40 | 1.2 | 48.5 | 82 | 10 | 15 |
| M4Q045-CF01 -A4 | D | (G) (H) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 16 16 | 60 58 | 0.42 0.36 | -30 to +40 -30 to +40 | 1.3 | 48.5 | 87 | 10 | 15 |
| M4Q045-DA01 -A4 | E | (I) (J) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 18 18 | 70 62 | 0.48 0.42 | -30 to +40 -30 to +40 | 1.6 | 48.5 | 93 | 10 | 15 |
| M4Q045-DA05 -A4 | F | (K) (L) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 23 25 | 86 80 | 0.62 0.55 | -30 to +40 -30 to +40 | 1.6 | 48.5 | 93 | 10 | 15 |
| M4Q045-EA01 -A4 | G | (M) (N) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 25 26 | 90 80 | 0.62 0.55 | -30 to +40 -30 to +40 | 2.0 | 49.0 | 103 | 10 | 16 |
| M4Q045-EF01 -A4 | H | (O) (P) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 34 34 | 110 100 | 0.75 0.65 | -30 to +40 -30 to +40 | 2.2 | 66.0 | 125 | 10 | 33 |

subject to alterations



Square shaded-pole motors

UL and CSA design



- **Description:** Designs with UL/CSA approvals; connection lines, temperature monitor and dynamo wire are UL/CSA-approved components
- **Foot mounting:** Track dimension 26 mm (height 51 mm)
- **Type of protection:** IP 42
- **Electrical connection:** Jacketed cable 3 x AWG20 with brass lead tips
- **Product conforming to standard:** UL547, UL1004, CSA C22.2 No. 100, CSA C22.2 No. 77, CE
- **Approvals:** UL, CSA
- **Curves:** Page 308
- **Drawing:** See standard design on page 302

| Nominal data | | Combination: Motor axial impeller | Curve | Nominal voltage | Frequency | Speed/rpm | Power output | Power input | Current draw | Perm. amb. temp. | Mass | Dimensions | | |
|------------------------|-------|--------------------------------------|------------------|-----------------|--------------|-----------|--------------|--------------|--------------------------|------------------|------|------------|----|-----|
| Type | p.302 | | | | | | | | | | | VAC | Hz | rpm |
| M4Q045-BD03 -04 (2) | A | (A) (B) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 5 5 | 29 26 | 0.38 0.35 | -30 to +40 -30 to +40 | 0.9 | 76 | 42 | 15 | |
| M4Q045-BD01 -04 (2) | A | (A) (B) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 5 5 | 29 26 | 0.19 0.17 | -30 to +40 -30 to +40 | 0.9 | 76 | 42 | 15 | |
| M4Q045-CA17 -04 (2) | B | (C) (D) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 7 8 | 31 30 | 0.40 0.40 | -30 to +40 -30 to +40 | 1.1 | 82 | 42 | 15 | |
| M4Q045-CA01 -04 (2) | B | (C) (D) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 7 8 | 31 30 | 0.20 0.20 | -30 to +40 -30 to +40 | 1.1 | 82 | 42 | 15 | |
| M4Q045-CA27 -04 (2) | C | (E) (F) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 10 9 | 36 34 | 0.50 0.45 | -30 to +40 -30 to +40 | 1.2 | 82 | 42 | 15 | |
| M4Q045-CA25 -04 (2) | C | (E) (F) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 10 9 | 36 34 | 0.25 0.22 | -30 to +40 -30 to +40 | 1.2 | 82 | 42 | 15 | |
| M4Q045-CF07 -04 (2) | D | (G) (H) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 16 16 | 60 58 | 0.80 0.74 | -30 to +40 -30 to +40 | 1.3 | 87 | 42 | 15 | |
| M4Q045-CF01 -04 (2) | D | (G) (H) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 16 16 | 60 58 | 0.42 0.36 | -30 to +40 -30 to +40 | 1.3 | 87 | 42 | 15 | |
| M4Q045-DA11 -04 (1)(3) | E | (I) (J) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 18 18 | 70 62 | 0.98 0.87 | -30 to +40 -30 to +40 | 1.6 | 93 | 54 | 15 | |
| M4Q045-DA01 -04 (1)(3) | E | (I) (J) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 18 18 | 70 62 | 0.48 0.42 | -30 to +40 -30 to +40 | 1.6 | 93 | 54 | 15 | |
| M4Q045-DA13 -04 (1)(3) | F | (K) (L) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 23 25 | 86 80 | 1.25 1.10 | -30 to +40 -30 to +40 | 1.6 | 93 | 54 | 15 | |
| M4Q045-DA05 -04 (1)(3) | F | (K) (L) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 23 25 | 86 80 | 0.62 0.55 | -30 to +40 -30 to +40 | 1.6 | 93 | 54 | 15 | |
| M4Q045-EA03 -04 (1)(3) | G | (M) (N) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 25 26 | 90 80 | 1.25 1.10 | -30 to +40 -30 to +40 | 2.0 | 103 | 59 | 16 | |
| M4Q045-EA01 -04 (1)(3) | G | (M) (N) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 25 26 | 90 80 | 0.62 0.55 | -30 to +40 -30 to +40 | 2.0 | 103 | 59 | 16 | |
| M4Q045-EF03 -04 (1)(3) | H | (O) (P) | 1~ 115 1~ 115 | 50 60 | 1300 1550 | 34 34 | 110 100 | 1.50 1.35 | -30 to +40 -30 to +40 | 2.2 | 125 | 79 | 33 | |
| M4Q045-EF01 -04 (1)(3) | H | (O) (P) | 1~ 230 1~ 230 | 50 60 | 1300 1550 | 34 34 | 110 100 | 0.75 0.65 | -30 to +40 -30 to +40 | 2.2 | 125 | 79 | 33 | |

subject to alterations

(1) A and B-side foot mounting possible

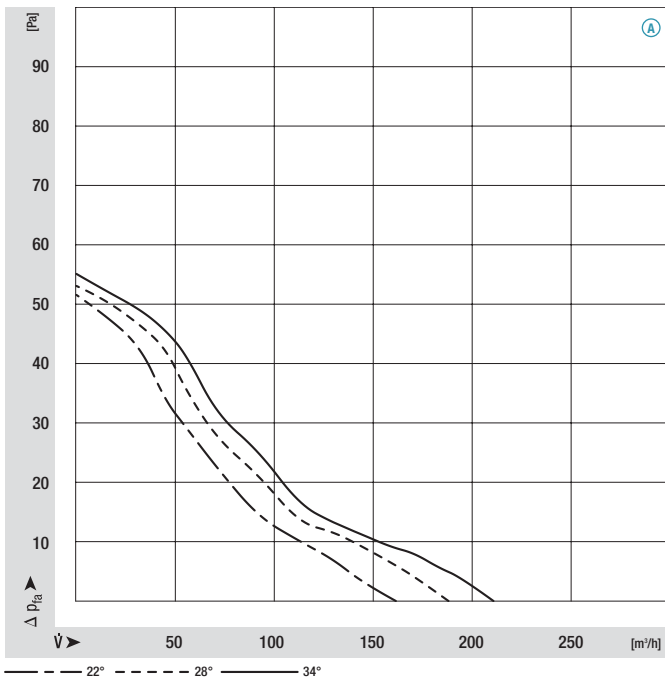
(2) File No. E 171165

(3) File No. E 76226

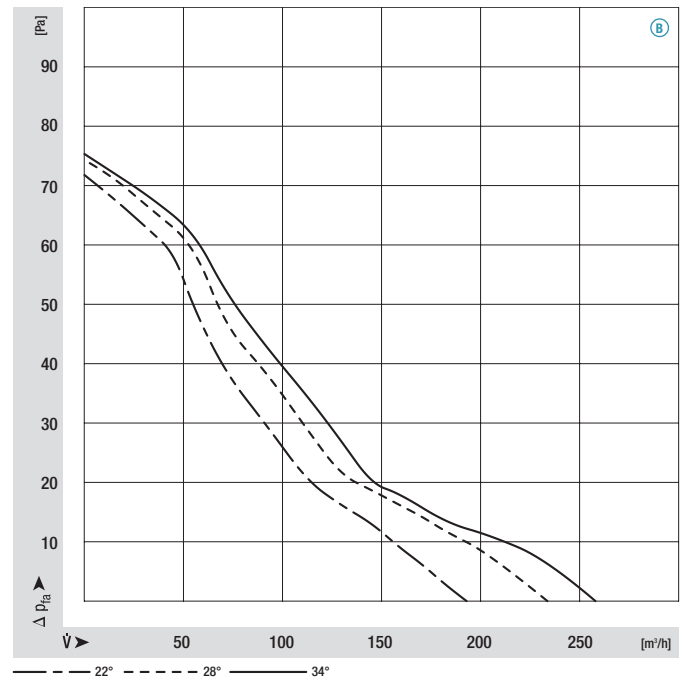
Square shaded-pole motors

Air performance curves (measured in wall ring)

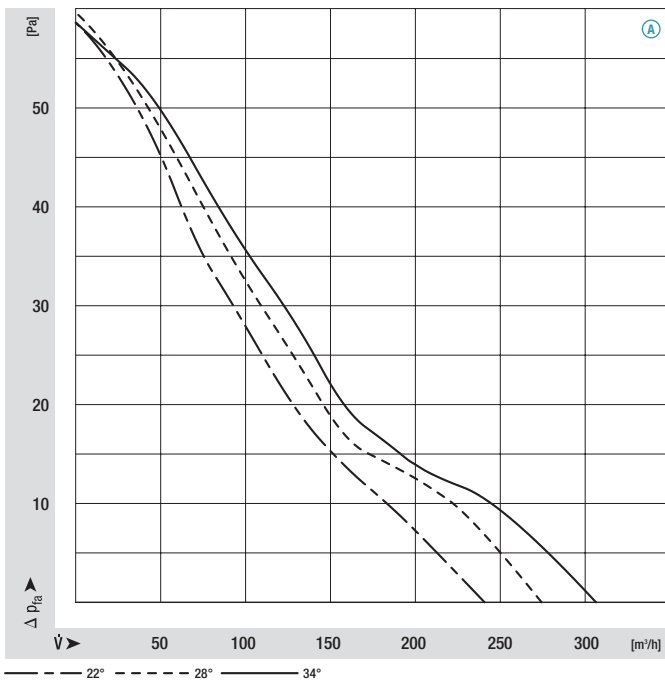
M4Q045-BD01-**, Ø 154, 50 Hz



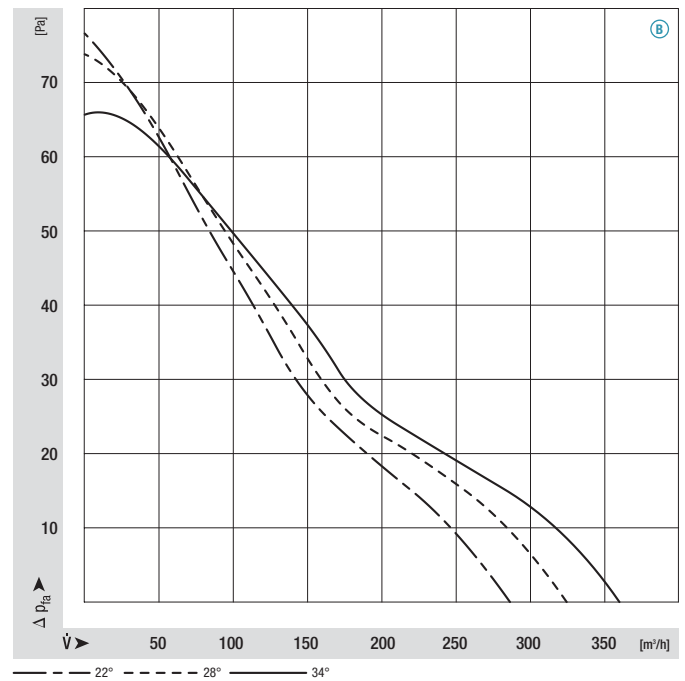
M4Q045-BD01-**, Ø 154, 60 Hz



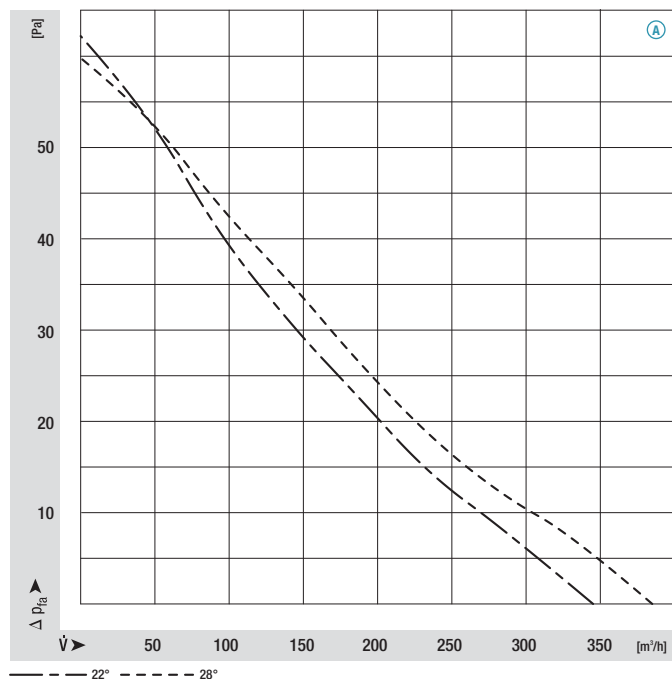
M4Q045-BD01-**, Ø 172, 50 Hz



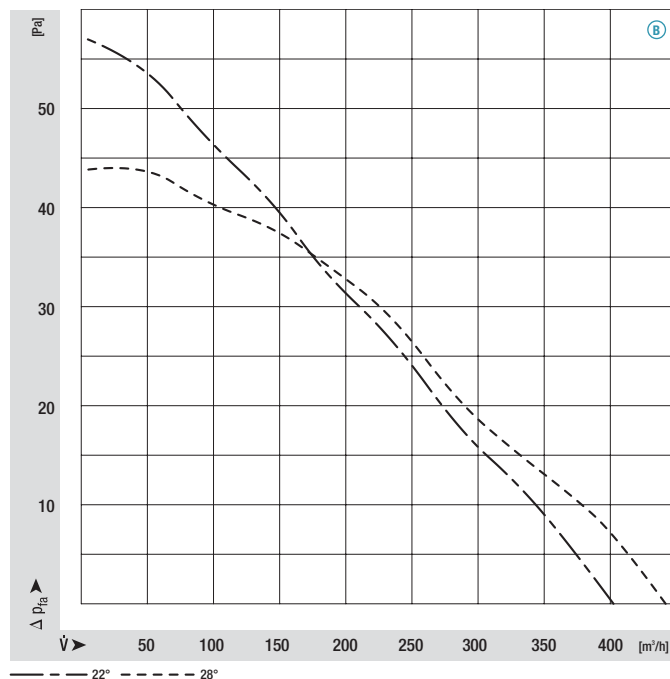
M4Q045-BD01-**, Ø 172, 60 Hz



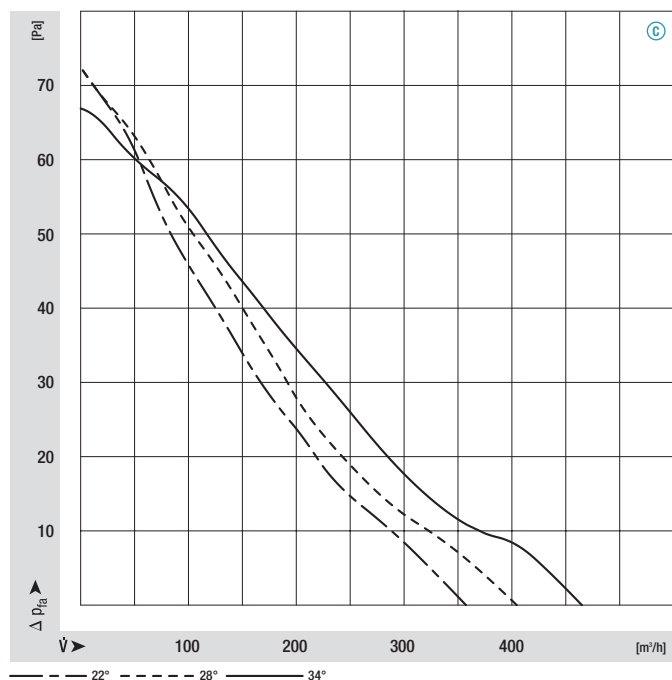
M4Q045-BD01-**, Ø 200, 50 Hz



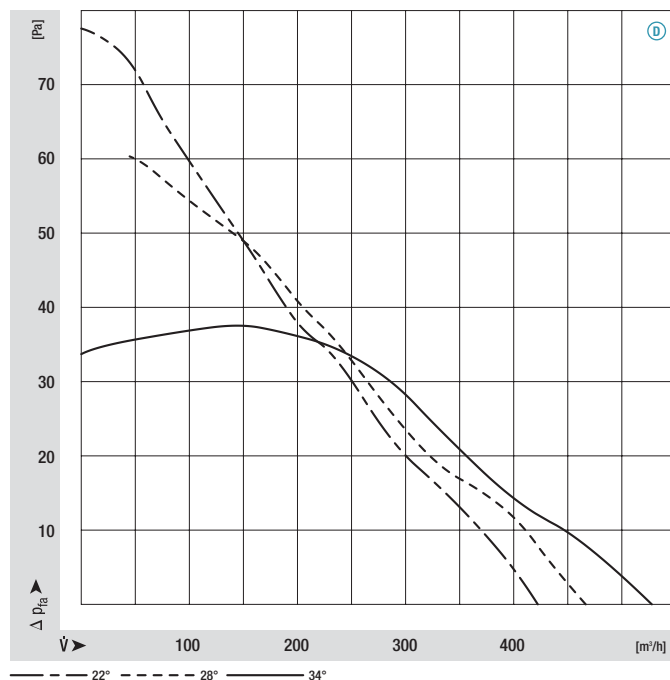
M4Q045-BD01-**, Ø 200, 60 Hz



M4Q045-CA01-**, Ø 200, 50 Hz



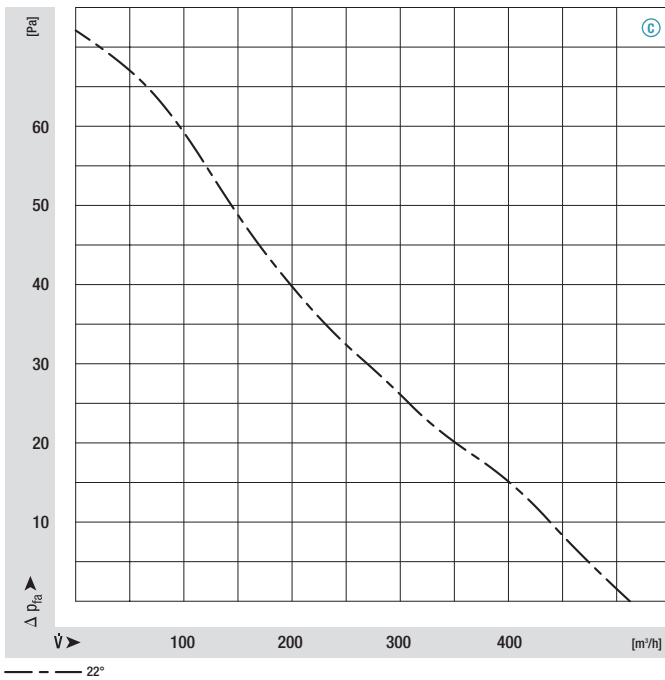
M4Q045-CA01-**, Ø 200, 60 Hz



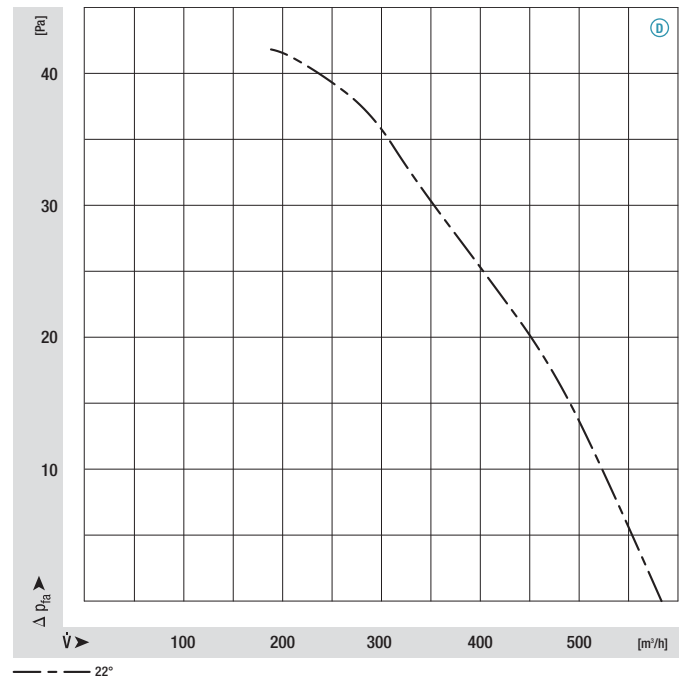
Square shaded-pole motors

Air performance curves (measured in wall ring)

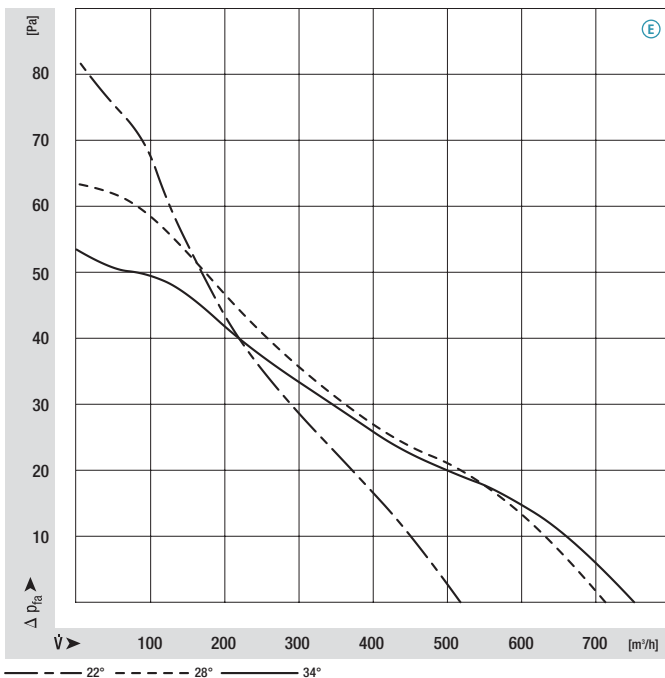
M4Q045-CA01-**, Ø 230, 50 Hz



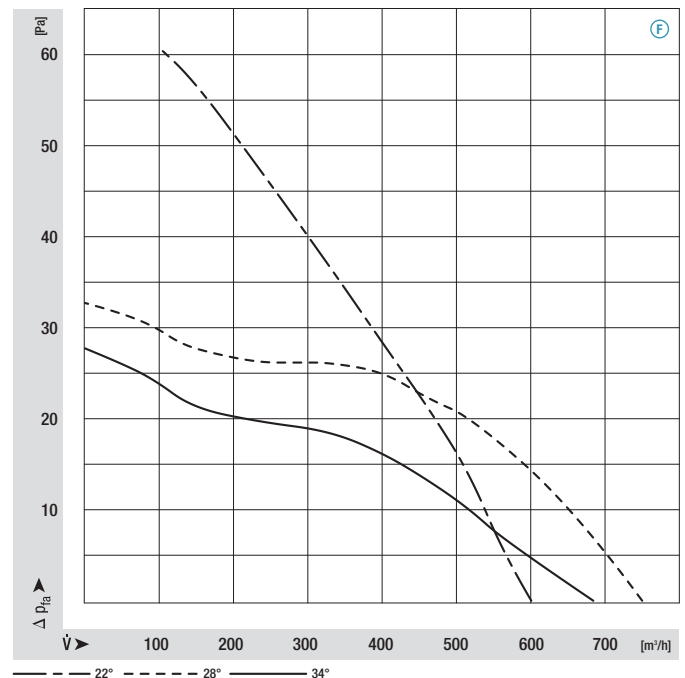
M4Q045-CA01-**, Ø 230, 60 Hz



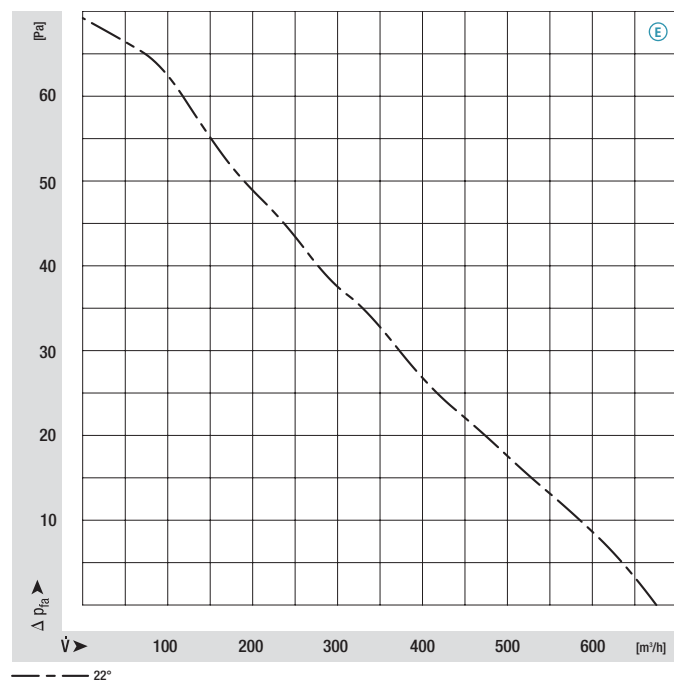
M4Q045-CA03-**, Ø 230, 50 Hz



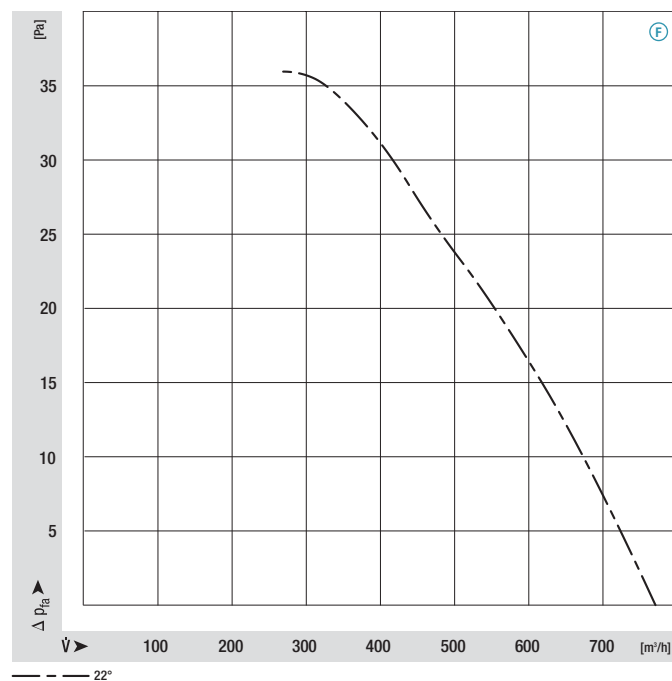
M4Q045-CA03-**, Ø 230, 60 Hz



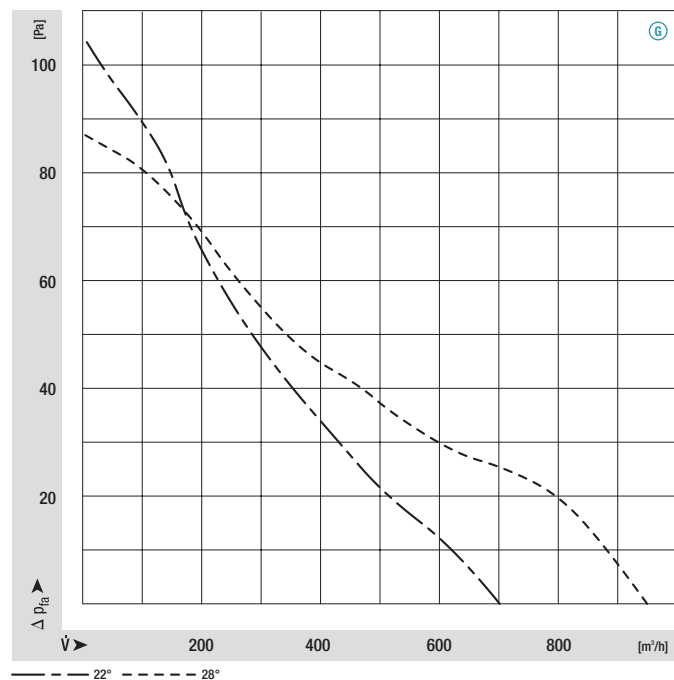
M4Q045-CA03-**, Ø 254, 50 Hz



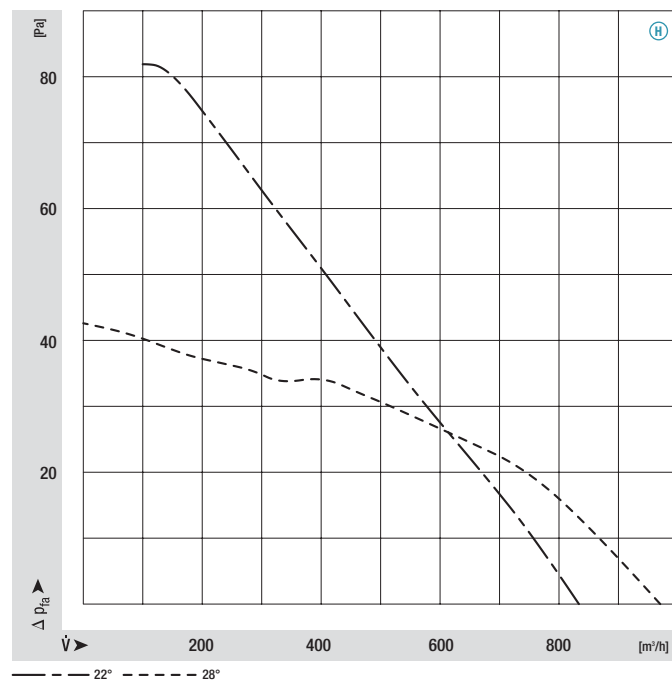
M4Q045-CA03-**, Ø 254, 60 Hz



M4Q045-CF01-**, Ø 254, 50 Hz



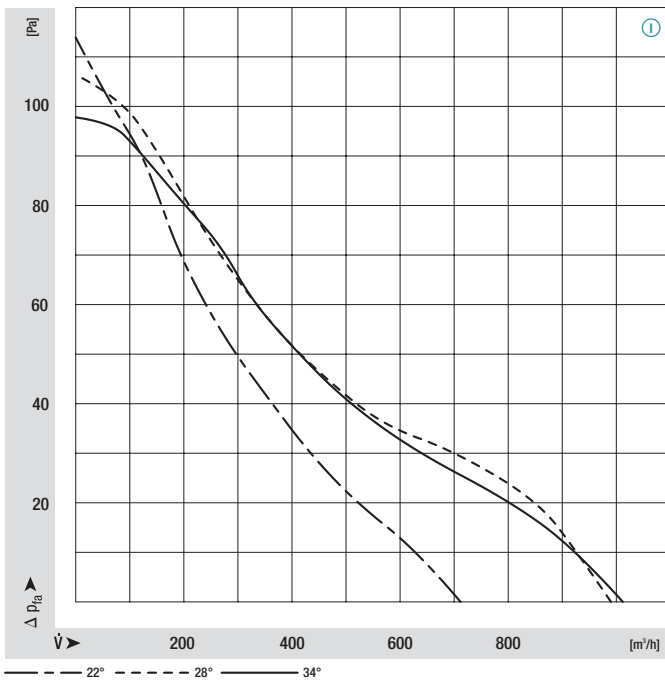
M4Q045-CF01-**, Ø 254, 60 Hz



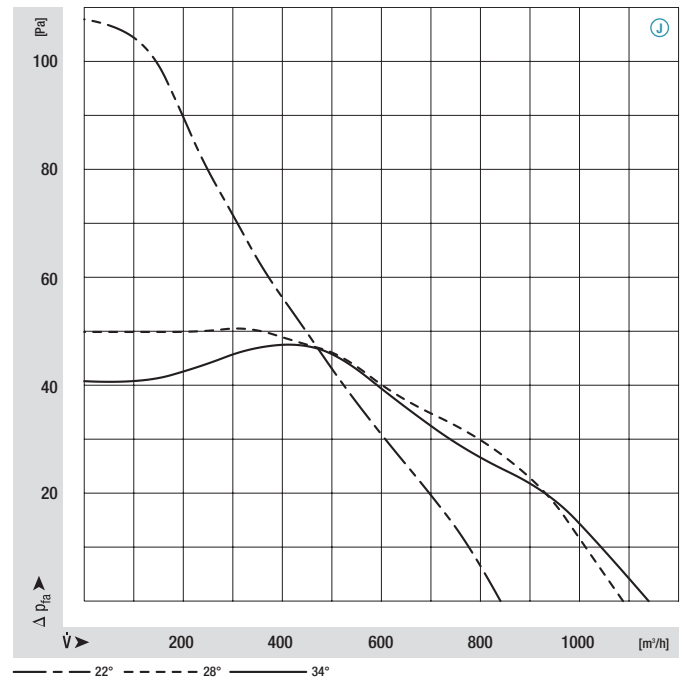
Square shaded-pole motors

Air performance curves (measured in wall ring)

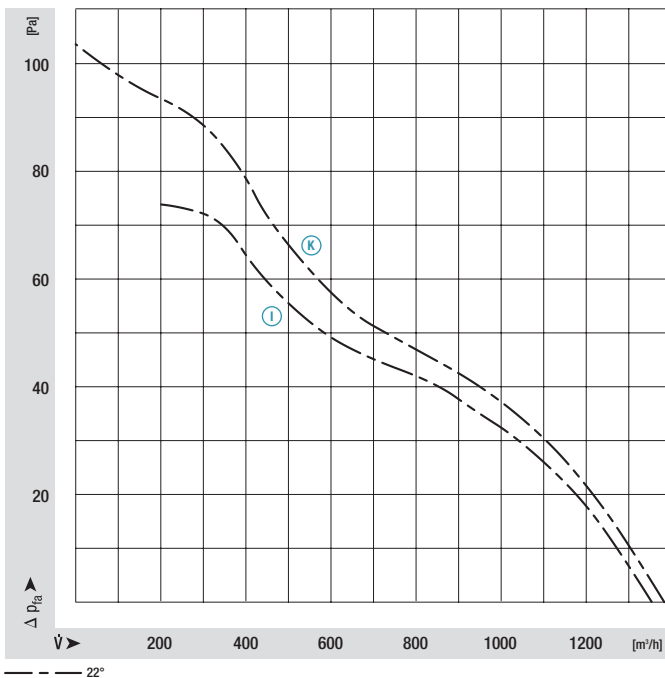
M4Q045-DA01-**, Ø 254, 50 Hz



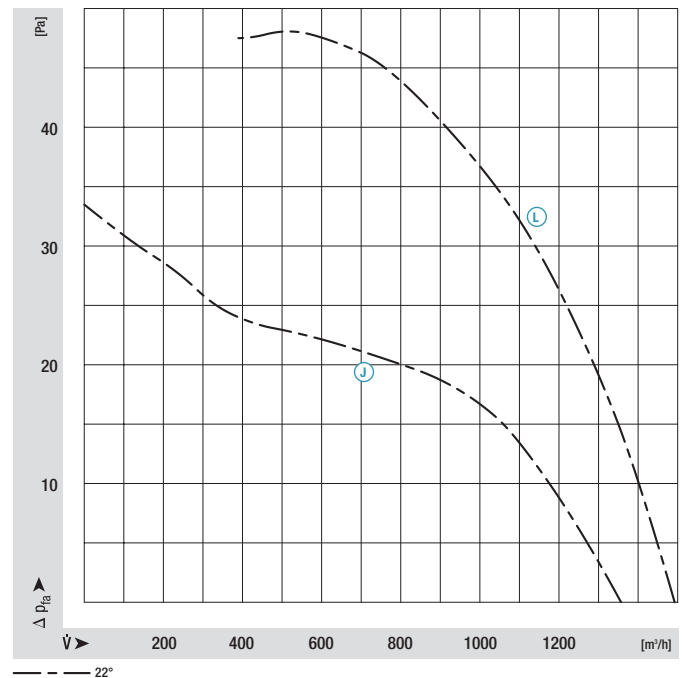
M4Q045-DA01-**, Ø 254, 60 Hz



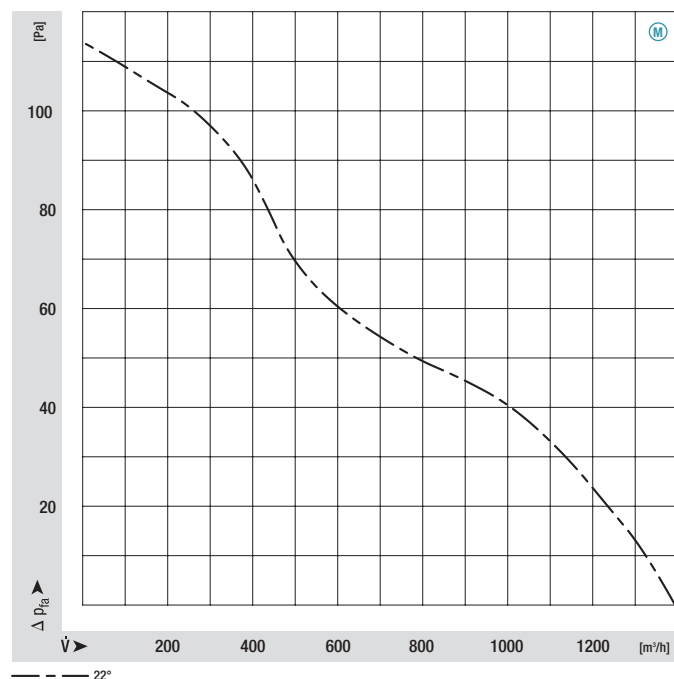
I M4Q045-DA01-** / K -DA05-**, Ø 300, 50 Hz



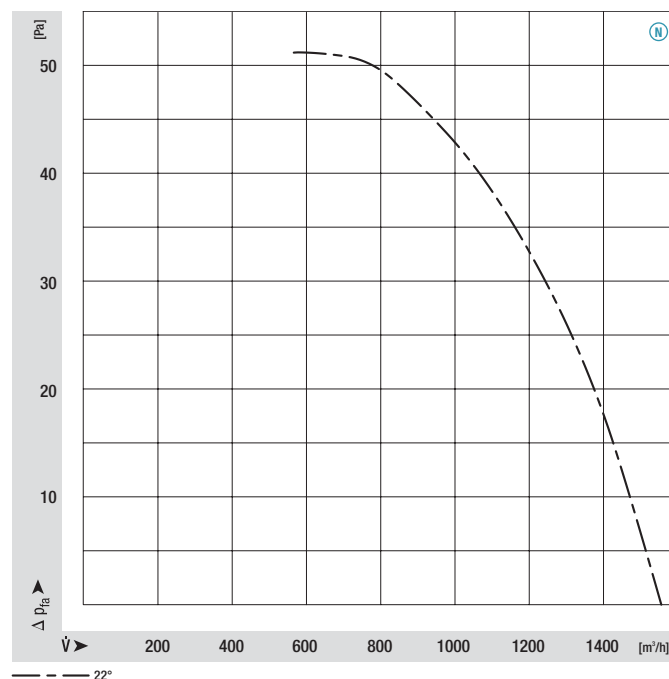
J M4Q045-DA01-** / L -DA05-**, Ø 300, 60 Hz



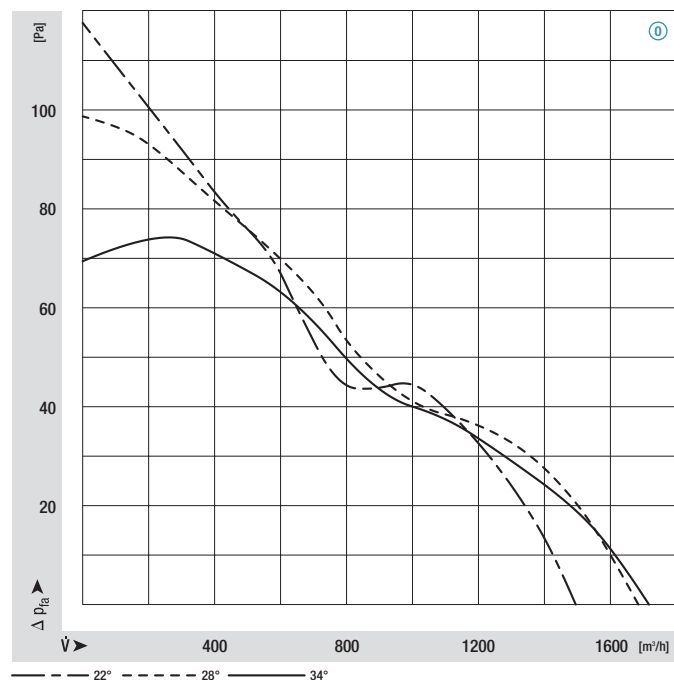
M4Q045-EA01-**, Ø 300, 50 Hz



M4Q045-EA01-**, Ø 300, 60 Hz



M4Q045-EF01-**, Ø 300, 50 Hz



M4Q045-EF01-**, Ø 300, 60 Hz

