

Lüfter + Kühlkörper

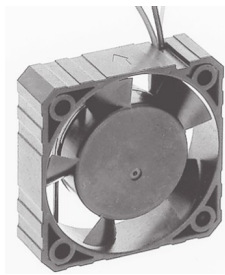
Preise siehe shop.griederbauteile.ch

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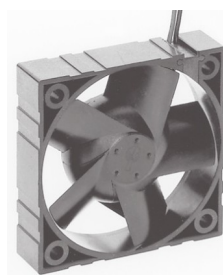
Retro Bauteile sind nur noch solange Vorrat lieferbar.

Ultra-Flach Lüfter

Bürstenlos (elektronische Kommutierung)
Keine Funkstörspannungen
Lange Laufzeit, da kleinere Drehzahl
Gehäuse und Flügel aus Polycarbonat



F41MM



F62MM



F80MM

Baureihe F41MM (41 x 41mm)

| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm | Volumen L/m in | Schalldruck DB | Luftrichtung | Microneel |
|----------------------------|------------------|-----------|--------------|----------------|----------------|--------------|-----------|
| FLA.41MM5 | 5 | 113mA | 5'400 | 140 | 20 | Sog | |
| FLA.41MM12 | 12 | 63mA | 5'000 | 125 | 18 | | |
| FLA.41MM24 | 24 | 36mA | 5'400 | 140 | 20 | | |

Baureihe F62MM (62 x 62mm)

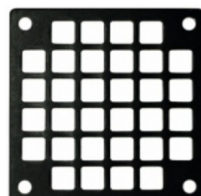
| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm | Volumen L/m in | Schalldruck DB | Luftrichtung | Microneel |
|----------------------------|------------------|-----------|--------------|----------------|----------------|--------------|-----------|
| FLA.62MM5 | 5 | 168mA | 3'450 | 360 | 28 | Sog | |
| FLA.62MM12 | 12 | 70mA | | | 27 | | |
| FLA.62MM24 | 24 | 41mA | | | 27 | | |

Baureihe F80MM (80 x 80mm)

| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm | Volumen L/m in | Schalldruck DB | Luftrichtung | Microneel |
|----------------------------|------------------|-----------|--------------|----------------|----------------|--------------|-----------|
| FLA.80MM5 | 5 | 1000mA | 3'600 | 1000 | 34 | Sog | |
| FLA.80MM12 | 12 | 420mA | | | | | |
| FLA.80MM24 | 24 | 210mA | | | | | |

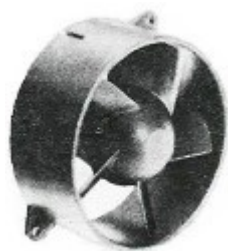
Fingerschutz-Gitter

Passend zu Microneel Serien



| Best.Nr. | Passend zu Fan Grössen | | | | | |
|--------------------------|------------------------|--|--|--|--|--|
| FLG.360 | 40x40mm + 41x41mm | | | | | |
| FLG.480 | 52 x 52mm | | | | | |
| FLG.6000 | 62 x 62mm | | | | | |

DC Lüfter



FLB.72JM220



FLA.365xx
FLA.464xx
FLA.465xx
FLA.484xx
FLA.485xx



FLA.F62MMx



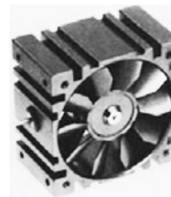
FLA.F41MMx



FLA.F80MMx



FLA.60268



FLA.571xx
FLA.579xx

5V DC



| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm (min-1) | Volumen | Schalldruck DB | Luft | Grösse | Tiefe | Marke | Serie |
|---------------------------|------------------|-----------|----------------------|------------|----------------|------|-----------|-------|----------|-----------|
| FLA.41MM5 | 5 | 113mA | 5'400 | 140 l/min | 20 | Sog | 41 x 41mm | 12mm | Micronel | F41MM |
| FLA.62MM5 | | 168mA | 3'450 | 360 l/min | 28 | Sog | 62 x 62mm | 15mm | | F62MM |
| FLA.80MM5 | | 1000mA | 3'600 | 1000 l/min | 34 | Sog | 80 x 80mm | 18mm | | F80MM |
| FLA.25S05 | | 115mA | 13'000 | 3.0 CFM | 31 | | 25 x 25mm | 6mm | Sunon | MC25060V1 |

6V DC



| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm (min-1) | Volumen | Schalldruck DB | Luft | Grösse | Tiefe | Marke | Serie |
|---------------------------|------------------|-----------|----------------------|-----------|----------------|-------|-----------|-------|----------|-------|
| FLA.365M6 | 6 | 300mA | 12'800 | 250 l/min | 53 | Druck | 40 x 40mm | 45mm | Micronel | D360 |
| FLA.464M6 | | 33mA | 4'200 | 260 l/min | 27 | Sog | 52 x 52mm | 36mm | | D460 |
| FLA.571M6 | | 60mA | 3'650 | 422 l/min | 24 | Sog | 62 x 62mm | 36mm | | D570 |
| FLA.579M6 | | 60mA | 3'700 | 540 l/min | 37 | Druck | 62 x 62mm | 36mm | | D570 |

12V DC



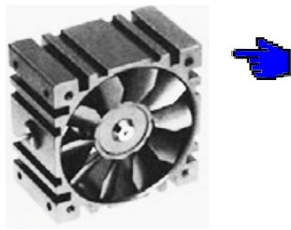
| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm (min-1) | Volumen | Schalldruck DB | Luft | Grösse | Tiefe | Marke | Serie |
|----------------------------|------------------|-----------|----------------------|------------|----------------|-------|-------------|--------|-----------|------------|
| FLA.1230 | 12 | 0.8W | 7'500 | 1.4 l/sec | 20 | | 30 x 30mm | 10mm | ETRI | 260DM1 |
| FLA.1235 | | 1.1W | 7'000 | 2.6 l/sec | 22 | | 35 x 35mm | 10mm | | 263DH1 |
| FLA.S5012 | | 1.1W | 4'800 | 18.66 m³/h | 26 | | 50 x 50mm | 10mm | Sunon | |
| FLA.41MM12 | | 63mA | 5'000 | 125 l/min | 18 | Sog | 41 x 41mm | 12mm | Micronel | F41MM |
| FLA.60268 | | 125mA | 5'500 | 6.97 m³/h | 41 | | 50 x 50mm | 15mm | Y.S. Tech | BD125015MB |
| FLA.484M12 | | 330mA | 11'000 | 610 l/min | 55 | Druck | 52 x 52mm | 60mm | Micronel | D480 |
| FLA.485M12 | | 330mA | 11'000 | 720 l/min | 58 | Druck | 52 x 52mm | 60mm | | D480 |
| FLC.1206N | | 200mA | 4'900 | 39 m³/h | 35 | | 60 x 60mm | 25mm | NMB | 2410ML |
| FLA.571M12 | | 35mA | 3'650 | 422 l/min | 24 | Sog | 62 x 62mm | 36mm | Micronel | D570 |
| FLA.62MM12 | | 70mA | 3'450 | 360 l/min | 27 | Sog | 62 x 62mm | 15mm | | F62MM |
| FLA.579M12 | | 35mA | 3'700 | 540 l/min | 37 | Druck | 62 x 62mm | 36mm | | D570 |
| FLC.1208N | | 230mA | 3'250 | 66 m³/h | 34 | | 80 x 80mm | 25.4mm | NMB | 3110KL |
| FLA.80MM12 | | 420mA | 3'600 | 1000 l/min | 34 | Sog | 80 x 80mm | 18mm | Micronel | F80MM |
| FLC.1209N | | 315mA | 3'200 | 93 m³/h | 41 | | 92 x 92mm | 25.4mm | NMB | 3610KL |
| FLC.1212N | | 570mA | 2'400 | 153 m³/h | 39 | | 119 x 119mm | 25.5mm | | 4710KL |

24V DC

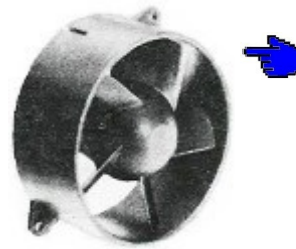


| Best.Nr. | Nennspannung VDC | Nennstrom | Drehzahl Rpm (min-1) | Volumen | Schalldruck DB | Luft | Grösse | Tiefe | Marke | Serie |
|----------------------------|------------------|-----------|----------------------|------------|----------------|-------|-------------|--------|----------|--------|
| FLA.364M24 | 24 | 42mA | 12'800 | 250 l/min | 45 | Sog | 40 x 40mm | 45mm | Micronel | D360 |
| FLA.41MM24 | | 36mA | 5'400 | 140 l/min | 20 | Sog | 41 x 41mm | 12mm | | F41MM |
| FLA.484M24 | | 150mA | 11'000 | 610 l/min | 55 | Sog | 52 x 52mm | 60mm | | D480 |
| FLA.485M24 | | 150mA | 11'000 | 720 l/min | 58 | Druck | 52 x 52mm | 60mm | | D480 |
| FLC.2406N | | 100mA | 4'900 | 39 m³/h | 35 | | 60 x 60mm | 25mm | NMB | 2410ML |
| FLA.62MM24 | | 41mA | 3'450 | 360 l/min | 27 | Sog | 62 x 62mm | 15mm | Micronel | F62MM |
| FLC.2408N | | 120mA | 3'250 | 66 m³/h | 34 | | 80 x 80mm | 25.4mm | NMB | 3110KL |
| FLA.80MM24 | | 210mA | 3'600 | 1000 l/min | 34 | Sog | 80 x 80mm | 18mm | Micronel | F80MM |
| FLC.2409N | | 160mA | 3'200 | 93 m³/h | 41 | | 92 x 92mm | 25.4mm | NMB | 3610KL |
| FLC.2412N | | 240mA | 2'400 | 153 m³/h | 39 | | 119 x 119mm | 25.5mm | | 4710KL |

AC Lüfter



FLB.579M12



FLB.72JM220

12V + 24V AC

| Best.Nr. | Nennspannung VAC | Nennstrom | Drehzahl Rpm (min-1) | Volumen | Schalldruck DB | Luft | Grösse | Tiefe | Marke | Serie |
|------------|------------------|-----------|----------------------|-----------|----------------|-------|-----------|-------|----------|-------|
| FLB.579M12 | 12 | 260mA | 2950 | 420 l/min | 30 | Druck | 62 x 62mm | 36mm | Micronel | A570 |
| FLB.579M24 | 24 | 130mA | | | | | | | | |
| FLB.72JM24 | | | 280mA | 2750 | 1030 l/min | 24 | Sog | | | A72 |
| | | | | | | | | | | |

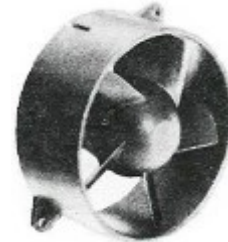
AC Lüfter



FLC.120N25



FLC.108N
FLC.109N
FLC.120N38



FLB.72JM220



FLB.M220

230V AC

| Best.Nr. | Nennspannung VAC | Nennstrom | Drehzahl Rpm (min-1) | Volumen | Schalldruck DB | Luft | Grösse | Tiefe | Marke | Serie |
|------------|------------------|------------|----------------------|----------|----------------|------|-------------|--------|-------|--------|
| FLC.108N | 230 | 72mA | 2800 | 48 m³/h | 33 | | 80 x 80mm | 38mm | NMB | 3115PS |
| FLC.109N | | 81mA | 2600 | 48 m³/h | 34 | | 92 x 92mm | 25.4mm | | 3610PS |
| FLC.120N25 | | 0.1A/0.09A | 2300 | 108 m³/h | 23/38 | | 120 x 120mm | 25mm | | 4710PS |
| FLC.120N38 | | 130mA | 2650 | 170 m³/h | 37 | | 120 x 120mm | 38mm | | 4715MS |
| FLC.150N | | 160mA | 2700 | 333 m³/h | 52 | | 150 x 172mm | 38mm | | 5915PC |

Passende Anschlusskabel zu NMB Lüfter

| Best.Nr. | Länge |
|----------|-------|
| FLC.K10 | 1m |
| FLC.K15 | 1.5m |

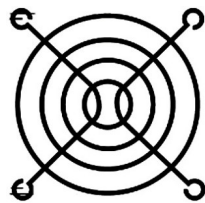
Passendes C-Modul zu Lüfter Micronel

| Best.Nr. |
|----------|
| FLB.M220 |

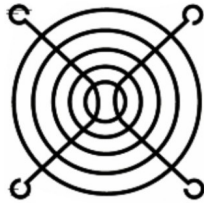
passend zu FLB.72JM220

Passende Fingerschutz-Gitter zu NMB Lüfter → Seite 5

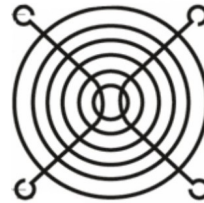
Fingerschutz-Gitter
Passend zu NMB Serien



FLC.G106



FLC.G108



FLC.G109



FLC.G120

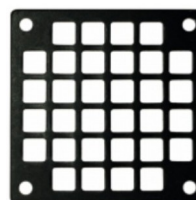
| Best.Nr. | Passend zu Fan Grössen | Passend zu NMB Serien |
|-----------------|------------------------|--|
| FLC.G106 | 60 x 60mm | 2406KL, 2408NL, 2410ML, 2412PS |
| FLC.G108 | 80 x 80mm | 3108NL, 3110KL, 3110PS, 3112KL, 3115FS, 3115PS |
| FLC.G109 | 92 x 92mm | 3610KL, 3610PS, 3612KL, 3615KL |
| FLC.G120 | 120 x 120mm | 4710KL, 4710PS, 4712KL, 4715FS, 4715KL, 4715MS, 4715SL, 5015KL, 5020KL |

Kunststoff-Filter und passende Filtermatten
Passend zu NMB Gitter



| Best.Nr. Kunststoff-Filter | Best.Nr. Ersatz-Filtermatten | Passend zu Fan Grössen | Passend zu obigen Fingerschutz-Gitter |
|----------------------------|------------------------------|------------------------|---------------------------------------|
| FLC.KF108 | FLC.FM 108 | 80 x 80mm | FLC.G108 |
| FLC.KF109 | FLC.FM 109 | 92 x 92mm | FLC.G109 |
| FLC.KF120 | FLC.FM 120 | 120 x 120mm | FLC.G120 |

Schutzgitter
Passend zu Micronel Lüfter



| Best.Nr. Kunststoff-Filter | Passend zu Fan Grössen |
|----------------------------|------------------------|
| FLG.360 | 40 x 40mm + 41 x 41mm |
| FLG.480 | 52 x 52mm |
| FLG.6000 | 62 x 62mm |

Dämpfungsglied für Lüfter

Mittels dieses Dämpfungsgliedes kann der Lüfter ohne Werkzeug befestigt werden.

Geeignet für Bohrungen: Ø 3.5mm bis 4.5mm



| Best.Nr. |
|---------------|
| FLC.DG |


















Kühlkörper



| Best.Nr. | Wärme-Widerstand Rth (K/W) | Für Halbleiter Bauform | Breite mm | Länge mm | Höhe mm | |
|-------------|----------------------------|-------------------------------------|-----------|----------|---------|----------|
| FKI.18 | 18 | DIL-18 | | | | IC |
| FKI.20 | 20 | DIL-20 | | | | IC |
| FKI.28 | 28 | DIL-28 | | | | IC |
| FKI.40 | 20 | DIL-40 | | | | IC |
| FKA.A85A | | TO-18 | Ø15 | | 5 | |
| FKA.A48C | 48 | | Ø16.3 | | 9.5 | |
| FKG.A12K | 8 | SOT9 SOT32 TO3 TO66 TO220 | 46 | 46 | 12.7 | Finger |
| FKG.A25K | 6 | | 46 | 46 | 25.4 | Finger |
| FKB.A30A | 30 | SOT32 | 12 | 25 | 15 | U |
| FKB.B21A | 21 | | 25.4 | 18 | 12.7 | |
| FKB.B25A | 25 | | 25.4 | 18 | 8 | |
| FKB.E20S | 20 | SOT32 TO220 | 25.4 | 33.8 | 12.7 | Aufsteck |
| FKB.F25C | 14 | | 22 | 35.6 | 6.7 | |
| FKB.G14C | 21 | | 22 | 35.6 | 6.7 | |
| FKB.B15C | 15 | | 25.4 | 30 | 12.7 | |
| FKB.B18C | 18 | | 25.4 | 30 | 8 | |
| FKA.B48C | 48 | TO5 TO39 | Ø 18.3 | | 9.5 | |
| FKA.B60A | 60 | | Ø 19 | | 8 | |
| FKA.B33D | 40 | | Ø 29 | | 11 | |
| FKA.C80 | 80 | TO92 | 9.5 | 15 | 3.5 | |
| FKB.H40A | 25 | TO202 | 25 | 19 | 12.5 | Aufsteck |
| FKB.H40B | 25 | | 25 | 20.5 | 7 | Aufsteck |
| FYS | 26.8 | TO202 TO220 | 12.7 | 18 | 25.4 | |
| FKB.A29C | 20 | TO220 | 14 | 25 | 15 | U |
| FKB.A25C | 17 | | 17 | 35 | 13 | U |
| FKB.C40C | 40 | | 12.6 | 25 | 6.5 | |
| FKT.COOLKIT | | Raspberry PI Kühlkörper Coolink Kit | | | | |

Profil-Kühlkörper



| Best.Nr. | Wärme-Widerstand Rth (K/W) | Für Halbleiter Bauform | Breite | Länge | Höhe | |
|------------|--|------------------------|---------|-------|------|---|
| FKC.A37K | 8.7 | TO220 | 29 | 37.5 | 12 |  |
| FKC.B50 | 7.2 | SOT93 TO220 | 29 | 50 | 11.5 |  |
| FKE.A37 | 5.5 | SOT32 | 54 | 37.5 | 22.5 |  |
| FKE.B37 | 4.1 | TO220 | 70 | 37.5 | 25 |  |
| FKF.A84 | 3.9 | SOT93 TO220 | 50 | 84 | 28 |  |
| FKF.A84N | 3.6 | SOT93 TO220 | 55 | 84 | 28 |  |
| FKF.B50 | 4.8 | 3x TO220 | 46 | 50 | 33 |  |
| FKF.B100 | 3.1 | 7x TO220 | 46 | 100 | 33 | |
| FKF.B1000 | | SOT93 TO220 | 46 | 1m | 33 | |
| FKP.A37K | 3.2 | SOT9 TO3 TO66 | 65 | 37.5 | 27 |  |
| FKP.A75 | 2.5 | | 65 | 75 | 27 | |
| FKP.B37K | 2.7 | SOT9 TO3 TO66 | 97 | 37.5 | 25 |  |
| FKP.B75 | 1.8 | | 97 | 75 | 25 | |
| FKP.E37K | 2.7 | SOT9 TO3 TO66 | 100/120 | 37.5 | 32 |  |
| FKP.E75 | 2.1 | | 100/120 | 75 | 32 | |
| FKP.E1000 | | | 100/120 | 1m | 32 | |
| FKP.F37K | 1.7 | SOT9 TO3 TO66 | 92/115 | 37.5 | 63 |  |
| FKP.F50K | 1.5 | SOT9 TO3 TO66 | 92/115 | 50 | 63 | |
| FKP.F75 | 1.2 | | 92/115 | 75 | 63 | |
| FKP.F1000 | | | 92/115 | 1m | 63 | |
| FKP.G75 | 1.4 | | 125 | 75 | 65 |  |
| FKP.K37K | 4.8 | SOT9 TO3 TO66 | 70 | 37.5 | 15 |  |
| FKP.K50K | 4.5 | SOT9 TO3 TO66 | 70 | 50 | 15 | |
| FKP.K75 | 3.8 | | 70 | 75 | 15 | |
| FKP.Q50K | 2.5 | SOT9 TO3 TO66 | 88 | 37.5 | 25 |  |
| FKP.Q1000 | | SOT9 TO3 TO66 | 88 | 1m | 25 | |
| FKP.R37K | 2.4 | SOT9 TO3 TO66 | 88 | 37.5 | 35 |  |
| FKP.R50K | 2.2 | SOT9 TO3 TO66 | 88 | 50 | 35 | |
| FKP.R75 | 1.8 | | 88 | 75 | 35 | |
| FKP.R75.ML | gleiche Abmessungen wie der FKP.R75 mit 2x M4 Bohrungen | | | | | |
| FKP.U37K | 1.6 | TO3 | 100 | 37.5 | 50 |  |
| FKP.U50K | 1.3 | TO3 | 100 | 50 | 50 | |
| FKP.W1000 | | SOT9 TO3 TO66 | 107 | 1m | 107 |  |

Wärmeleitpaste



| Best.Nr. | | | |
|----------|-----|--|--|
| FKZ.20S | 20g | | |
| FKZ.50 | 50g | | |



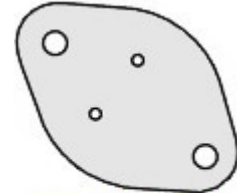
Montagematerial



| Best.Nr. | Beschrieb | Passend zu |
|----------|------------------------|----------------|
| FKY.G4 | Glimmer-Isolierscheibe | DO-4 |
| FKY.G13 | Glimmer-Isolierscheibe | DO-13 |
| FKS.G9 | Montagesatz | SOT-9 |
| FKY.G3PH | Glimmer-Isolierscheibe | SOT-3, TO-3P |
| FKY.G9 | Glimmer-Isolierscheibe | SOT-9 |
| FKY.G126 | Glimmer-Isolierscheibe | SOT-32, TO-126 |
| FKS.G126 | Montagesatz | |
| FKY.G3P | Glimmer-Isolierscheibe | SOT-93, TO-3P |
| FKS.G3P | Montagesatz | |
| FKY.G3 | Glimmer-Isolierscheibe | TO-3 |
| FKW.3 | Isolierkappe | |
| FKY.G3K | Kapton | |
| FKS.G3 | Montagesatz | |
| FKY.G66 | Glimmer-Isolierscheibe | TO-66 |
| FKW.66 | Isolierkappe | |
| FKS.G66 | Montagesatz | |
| FKY.G220 | Glimmer-Isolierscheibe | TO-220 |



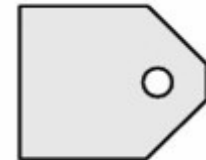
FKW.3



FKY.G3



FKY.G3K



FKY.G3P



FKY.G220

Isolierbuchsen

| | | |
|--------|---------------|---------|
| FKY.E1 | Isolierbuchse | 6-32UNC |
| FKY.D1 | | M3 |
| FKY.D4 | | M3 |



FKY.D4