

Rush Industrial Sales

Biggin House, 126 Station Road, Tempsford, Sandy, Beds, SG19 2AY



Tel: 01767 640779

Fax: 01767 640617

email: sales@rushind.com

www.rushind.com

RUSH

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Motor Start Capacitors: 120-150V/220-275V

120-150V Motor Start

220-275V Motor Start



Internal Style



Internal Style
(for Brook Motors)

Internal Style

metal can with plastic sleeve and push-on tags

| Cap. [μF] | Type | Size LxØ[mm] | Code |
|---------------------------|------|-----------------|---------|
| 100-130 | int | 68x37 | 101-010 |
| 100-130 | int | 82x38 | 101-020 |
| 120-150 | int | 68x37 | 101-030 |
| 120-150 | int | 82x38 | 101-040 |
| 130-165 | int | 91x40 | 101-050 |
| 160-200 | int | 68x37 | 101-060 |
| 160-200 | int | 91x40 | 101-070 |
| 190-240 | int | 68x37 | 101-080 |
| 200-250 | int | 76x36 | 101-090 |
| 240-320 | int | 68x37 | 101-100 |
| 320-400 | int | 120x40 | 101-110 |
| 400-500 | int | 82x38 | 101-140 |
| <i>For Newman Motors:</i> | | | |
| 340-408 | int | 76x45 | 101-120 |
| 350-450 | int | 91x47 | 101-130 |
| 450-550 | int | 91x47 | 101-150 |
| 540-660 | int | 91x47 | 101-160 |
| 690-850 | int | 91x47 | 101-180 |
| <i>For Baldor Motors:</i> | | | |
| 650-780 | int | 120x47 | 101-170 |
| 860-950 | int | 120x47 | 101-190 |

Internal Style

metal can with plastic sleeve and push-on tags

| Cap. [μF] | Type | Size LxØ[mm] | Code |
|-------------------------|------|-----------------|---------|
| 20-30 | int | 91x40 | 102-010 |
| 30-40 | int | 60x25 | 102-020 |
| 30-40 | int | 68x37 | 102-022 |
| 30-40 | int | 91x40 | 102-030 |
| 40-70 | int | 68x37 | 102-040 |
| 60-80 | int | 68x37 | 102-070 |
| 80-110 | int | 82x38 | 102-080 |
| 108-140 | int | 91x40 | 102-100 |
| 120-150 | int | 91x40 | 102-110 |
| 138-182 | int | 91x40 | 102-120 |
| 160-200 | int | 120x47 | 102-140 |
| 180-225 | int | 120x47 | 102-150 |
| 200-250 | int | 120x47 | 102-170 |
| 250-312 | int | 120x47 | 102-180 |
| <i>For Brook Motors</i> | | | |
| 50-65 | int | 76x36 | 102-060 |
| 90-115 | int | 91x40 | 102-090 |
| 160 | int | 100x45 | 102-130 |
| 200 | int | 100x45 | 102-160 |

External Style

External Style

sealed metal can with side-entry twin-core flex

| Cap. | Type | Size | Code |
|---------|------|--------|---------|
| 100-130 | ext | 105x40 | 111-010 |
| 120-150 | ext | 105x40 | 111-020 |
| 130-165 | ext | 105x40 | 111-030 |
| 160-200 | ext | 105x40 | 111-040 |
| 190-240 | ext | 105x40 | 111-050 |
| 240-320 | ext | 105x40 | 111-060 |
| 320-400 | ext | 129x40 | 111-070 |
| 400-500 | ext | 105x40 | 111-080 |
| 600-750 | ext | 129x50 | 111-090 |



External Style

| Cap. | Type | Size | Code |
|---------|------|--------|---------|
| 30-40 | ext | 105x40 | 112-010 |
| 40-70 | ext | 105x40 | 112-020 |
| 40-70 | ext | 105x40 | 112-030 |
| 60-80 | ext | 105x40 | 112-040 |
| 80-110 | ext | 105x40 | 112-050 |
| 90-120 | ext | 105x40 | 112-060 |
| 108-140 | ext | 105x40 | 112-070 |
| 120-150 | ext | 105x40 | 112-080 |
| 138-182 | ext | 105x40 | 112-090 |
| 160-200 | ext | 129x50 | 112-100 |
| 180-225 | ext | 129x50 | 112-110 |
| 200-250 | ext | 129x50 | 112-120 |
| 250-312 | ext | 129x50 | 112-130 |

PF Style

plastic can with flying leads

| Cap. | Type | Size | Code |
|---------|------|-------|---------|
| 90-120 | PF | 63x38 | 121-010 |
| 120-150 | PF | 63x38 | 121-020 |
| 160-200 | PF | 80x30 | 121-030 |



PF-Style

PF Style

plastic can with flying leads

For Tuscan Motors:

| Cap. | Type | Size | Code |
|---------|------|-------|---------|
| 40-70 | PF | 63x38 | 122-010 |
| 60-72 | PF | 63x38 | 122-020 |
| 80-110 | PF | 63x38 | 122-030 |
| 108-140 | PF | 63x38 | 122-040 |

Motor Start Capacitors: 280-350V (Internal, External and Extra Heavy Duty PF2-Style)

280-350V Motor Start

Internal Style

metal can with plastic sleeve and push-on tags



Internal Style

| Cap. [μ F] | Type | Size Lx \emptyset [mm] | Code |
|--------------------|------|-----------------------------|---------|
| 25-40 | int | 68x37 | 103-010 |
| 40-50 | int | 82x38 | 103-020 |
| 40-50 | int | 91x40 | 103-030 |
| 51-68 | int | 82x38 | 103-040 |
| 68-90 | int | 91x40 | 103-041 |
| 90-115 | int | 91x40 | 103-050 |
| 105-130 | int | 120x40 | 103-070 |
| 130-165 | int | 120x47 | 103-080 |
| 160-200 | int | 120x47 | 103-090 |
| 200-250 | int | 120x47 | 103-100 |

For Brook Motors:

| | | | |
|-----|-----|--------|---------|
| 100 | int | 100x45 | 103-060 |
|-----|-----|--------|---------|

External Style

sealed metal can with side-entry twin-core flex
(with stud for ABB motors)



External Style

| | | | |
|---------|-----|--------|---------|
| 25-40 | ext | 105x40 | 113-010 |
| 37-51 | ext | 105x40 | 113-020 |
| 40-50 | ext | 105x40 | 113-030 |
| 51-68 | ext | 105x40 | 113-040 |
| 68-90 | ext | 105x40 | 113-050 |
| 90-115 | ext | 114x40 | 113-060 |
| 105-130 | ext | 114x40 | 113-070 |
| 130-165 | ext | 129x50 | 113-080 |
| 160-200 | ext | 129x50 | 113-090 |
| 200-250 | ext | 129x50 | 113-100 |

Extra Heavy Duty PF2 Style

metal can with plastic sleeve, top cover
and two side-entry flying leads



Extra Heavy Duty Style

| | | | |
|---------|-----|--------|---------|
| 70-90 | PF2 | 123x64 | 123-010 |
| 90-115 | PF2 | 123x64 | 123-020 |
| 120-150 | PF2 | 123x64 | 123-030 |
| 160-200 | PF2 | 123x64 | 123-040 |
| 200-250 | PF2 | 123x64 | 123-050 |

Motor Run Capacitors

440V Motor Run

440V Motor Run (cont.)



PC1S - Style



PT2S - Style



PFS - Style



MT2S - Style



MM8S - Style

| Cap. [μF] | Style | Size LxØ[mm] | Code |
|-----------|-------|--------------|---------|
| 0.5 | PFS | 31x17 | 150-010 |
| 1 | PFS | 45x18 | 150-040 |
| 1 | PT2S | 53x30 | 150-060 |
| 1 | PC1S | 53x30 | 150-030 |
| 1.5 | PFS | 53x30 | 150-070 |
| 1.5 | PT1S | 51x30 | 150-090 |
| 2 | PFS | 53x30 | 150-130 |
| 2 | MT2S | 50x35 | 150-110 |
| 2 | PC1S | 53x30 | 150-120 |
| 2.5 | PFS | 53x30 | 150-180 |
| 2.5 | PT1S | 51x30 | 150-200 |
| 2.5 | PC1S | 53x25 | 150-170 |
| 3 | PFS | 53x30 | 150-230 |
| 3 | PT2S | 53x30 | 150-260 |
| 3 | PC1S | 53x30 | 150-220 |
| 3.5 | PFS | 53x30 | 150-280 |
| 3.5 | PT2S | 53x30 | 150-290 |
| 3.5 | PC1S | 76x30 | 150-270 |
| 4 | PFS | 53x30 | 150-310 |
| 4 | PT2S | 53x30 | 150-320 |
| 4 | PC1S | 53x30 | 150-300 |
| 5 | PFS | 76x30 | 151-020 |
| 5 | PT2S | 76x30 | 151-030 |
| 5 | PC1S | 76x30 | 151-010 |
| 6 | PFS | 76x35 | 151-060 |
| 6 | PT2S | 76x35 | 151-070 |
| 6 | PC1S | 76x35 | 151-050 |
| 7 | PC1S | 76x30 | 151-100 |
| 8 | PFS | 76x35 | 151-140 |
| 8 | PT2S | 76x35 | 151-160 |
| 8 | PC1S | 76x35 | 151-110 |
| 9 | MT2S | 72x38 | 151-180 |
| 10 | PFS | 98x35 | 152-060 |
| 10 | PT2S | 98x35 | 152-070 |
| 10 | PC1S | 98x35 | 152-030 |
| 11 | PT1S | 70x40 | 152-090 |
| 12 | PFS | 98x35 | 152-130 |
| 12 | PT2S | 98x35 | 152-150 |
| 12 | PC1S | 98x35 | 152-100 |
| 14 | PT2S | 76x35 | 152-189 |
| 14 | PC1S | 98x40 | 152-170 |
| 15 | PFS | 98x40 | 152-250 |
| 15 | PT2S | 98x40 | 152-260 |
| 15 | PC1S | 98x40 | 152-220 |
| 16 | PT2S | 98x40 | 152-320 |
| 16 | PC1S | 98x40 | 152-290 |
| 18 | PC1S | 98x35 | 152-340 |

| Cap. [μF] | Style | Size LxØ[mm] | Code |
|-----------|-------|--------------|---------|
| 20 | PT2S | 98x45 | 153-040 |
| 20 | PC1S | 98x45 | 153-010 |
| 25 | PT2S | 98x45 | 153-110 |
| 25 | PC1S | 98x45 | 153-080 |
| 30 | PT2S | 98x50 | 153-200 |
| 30 | PC1S | 98x50 | 153-150 |
| 35 | PT2S | 116x45 | 154-030 |
| 35 | PC1S | 100x50 | 154-010 |
| 40 | PT2S | 100x50 | 154-090 |
| 40 | MC1S | 124x50 | 154-050 |
| 40 | PC1S | 100x50 | 154-070 |
| 45 | PC1S | 120x50 | 154-110 |
| 50 | PT2S | 100x50 | 155-050 |
| 50 | PC1S | 98x64 | 155-010 |
| 55 | PT2S | 100x50 | 155-080 |
| 55 | PC1S | 100x50 | 155-070 |
| 60 | PT2S | 120x50 | 155-110 |
| 60 | PC1S | 123x64 | 155-090 |
| 70 | MT2S | 130x65 | 155-140 |
| 70 | PC1S | 123x64 | 155-150 |
| 80 | PT2S | 120x50 | 155-220 |
| 80 | PC1S | 123x76 | 155-200 |

440V Power Electrics

high current, heavy duty motor runs

| Cap. [μF] | Style | Size LxØ[mm] | Code |
|-----------|-------|--------------|---------|
| 5 | MT2S | 78x45 | 160-010 |
| 20 | MC1S | 98x45 | 160-030 |
| 25 | MFS | 98x45 | 160-040 |
| 30 | MT2S | 130x45 | 160-060 |
| 40 | MT2S | 130x45 | 160-080 |
| 50 | MM5SR | 123x64 | 160-090 |
| 60 | MM5SR | 123x64 | 160-100 |
| 80 | MM8SR | 123x76 | 160-110 |
| 100 | MM8SR | 123x76 | 160-130 |
| 100 | PFSR | 123x76 | 160-140 |

Style Key:

- P Heat-resistant plastic can
- M Metal can
- T1 1/4" push-on tags (single)
- T2 1/4" push-on tags (double)
- F Two flying leads (top entry)
- F2 Two flying leads (side entry)
- C1 Twin-core cable (top entry)
- C2 Twin-core cable (side entry)
- S Mounting stud on base
- R Discharge resistor fitted

Sheet Insulation (Class F)

Many firms now use 2-thou nomex N.M.N which is generally cheaper than the equivalent D.M.D while giving increased performance.

These materials are all highest quality West European. The sheet insulation is laminated by Polifibra in Italy using Du Pont film and paper.

N.M.M.

Polimex (Nomex-Mylar-Nomex)

| Lamination Thickness [thou] | Roll Width [mm] |
|--------------------------------|--------------------|
| 3.1.3 | 914 |
| 3.2.3 | 914 |
| 3.3.3 | 914 |
| 3.5.3 | 914 |
| 3.7.3 | 914 |
| 3.10.3 | 914 |
| 3.14.3 | 914 |
| 2.1.2 | 914 |
| 2.2.2 | 914 |
| 2.3.2 | 914 |
| 2.5.2 | 914 |
| 2.7.2 | 914 |
| 2.10.2 | 914 |
| 2.14.2 | 914 |

D.M.D.

ThermF (Dacron-Mylar-Dacron)

| Lamination Thickness [thou] | Roll Width [mm] |
|--------------------------------|--------------------|
| 2.3.2 | 1000 |
| 2.5.2 | 1000 |
| 2.7.2 | 1000 |
| 2.10.2 | 1000 |
| 2.14.2 | 1000 |

Translucent White Polyester (PET)

| Thickness [thou/μm] | Roll Width [mm] |
|------------------------|--------------------|
| 7½/190 | 914 |
| 10/250 | 914 |

50m full-width or half-width rolls available,
or slit to order as required.

Betatherm-155 Cable

Betatherm cable is manufactured by Studer AG in Switzerland to a specification equivalent to Radox-155.

Helpful hint for Zyrad users: You should consider changing to Betatherm; it's a lot less bulky and has far superior stripping characteristics at more or less the same price.

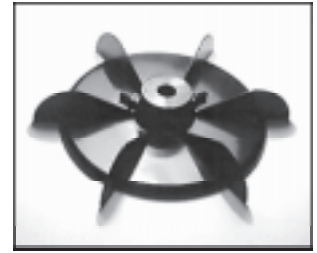
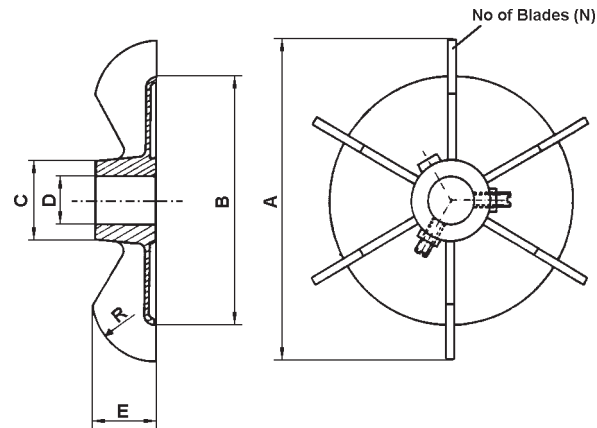
Betatherm-155 Cable (Class F)

| CSA [mm ²] | Length per Spool [m] |
|---------------------------|----------------------------|
| 0.25 | 200 |
| 0.50 | 200 |
| 0.75 | 200 |
| 1.00 | 100 |
| 1.50 | 100 |
| 2.50 | 100 |
| 4.00 | 100 |
| 6.00 | 100 |
| 10.00 | 50 |
| 16.00 | 50 |
| 25.00 | 25 |
| 35.00 | 25 |
| 50.00 | 25 |
| 70.00 | 25 |
| 95.00 | 25 |
| 120.00 | 25 |

In black (all sizes) or red (6mm and below).

Polypropylene Grub-Screw Fans (PG-Style)

These fans are fitted with two grub-screws to enable secure fixing directly onto the shaft. They have a flat profile. **Available with pilot bores!**

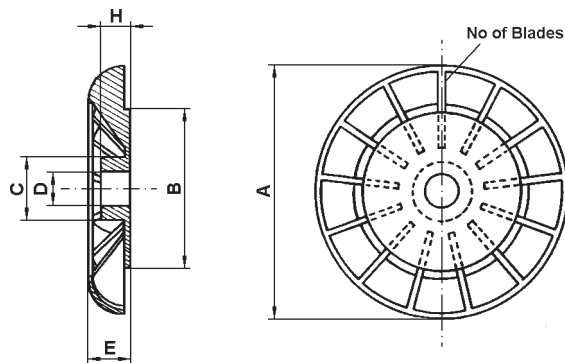


PG-Style

| Pilot Type (Frame.Style.Bore) | Normal Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | N (Blades) | R [mm] | Code Pilot Type | Code Normal Type |
|----------------------------------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|--------------------|---------------------|
| 56.PG.7 | 56.PG.12 | 86 | 63 | 16 | 7/12 | 18 | 6 | 18 | 214-010 | 214-020 |
| 63.PG.7 | 63.PG.15 | 97 | 74 | 20 | 7/15 | 20 | 6 | 20 | 214-030 | 214-040 |
| 71.PG.11 | 71.PG.17 | 114 | 88 | 22 | 11/17 | 22 | 6 | 22 | 214-050 | 214-060 |
| 80.PG.11 | 80.PG.20 | 130 | 102 | 26 | 11/20 | 25 | 6 | 25 | 214-070 | 214-080 |
| 90.PG.14 | 90.PG.25 | 150 | 118 | 30 | 14/25 | 28 | 6 | 28 | 214-090 | 214-100 |
| 100.PG.14 | 100.PG.30 | 164 | 128 | 36 | 14/30 | 28 | 6 | 28 | 214-110 | 214-120 |
| 112.PG.14 | 112.PG.30 | 186 | 148 | 36 | 14/30 | 27 | 6 | 27 | 214-130 | 214-140 |

Polypropylene Flat Fans (PF-Style)

These fans have a flat and quite thin profile, with large hubs that can be bored to fit bigger shafts.

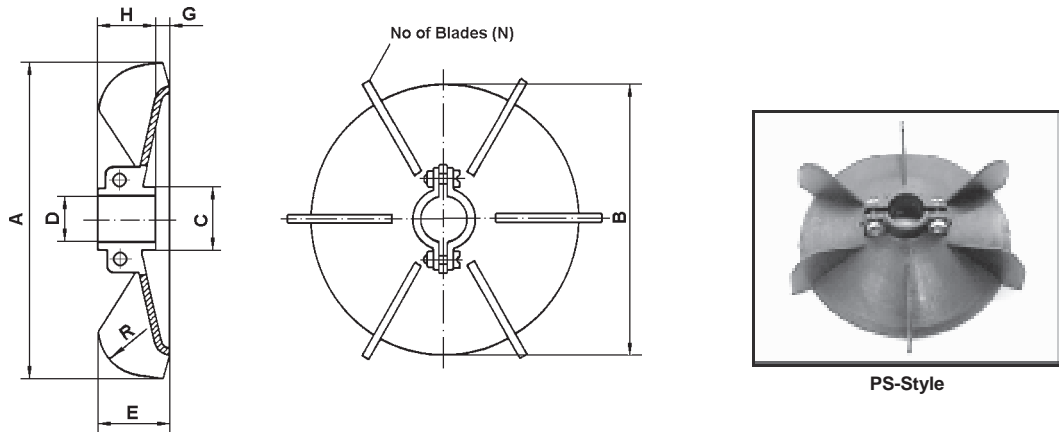


PF-Style

| Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | H [mm] | N (Blades) | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|---------|
| 56.PF.12 | 86 | 58 | 20 | 12 | 14 | 10 | 13 | 213-010 |
| 63.PF.15 | 100 | 71 | 23 | 15 | 16 | 13 | 13 | 213-020 |
| 71.PF.17 | 120 | 80 | 28 | 17 | 20 | 17 | 13 | 213-030 |
| 80.PF.20 | 130 | 92 | 31 | 20 | 25 | 20 | 13 | 213-040 |
| 90.PF.20 | 150 | 110 | 27 | 20 | 26 | 20 | 13 | 213-050 |
| 100.PF.30 | 174 | 123 | 45 | 30 | 33 | 28 | 10 | 213-060 |

Polypropylene Screw-Clamp Fans (PS-Style)

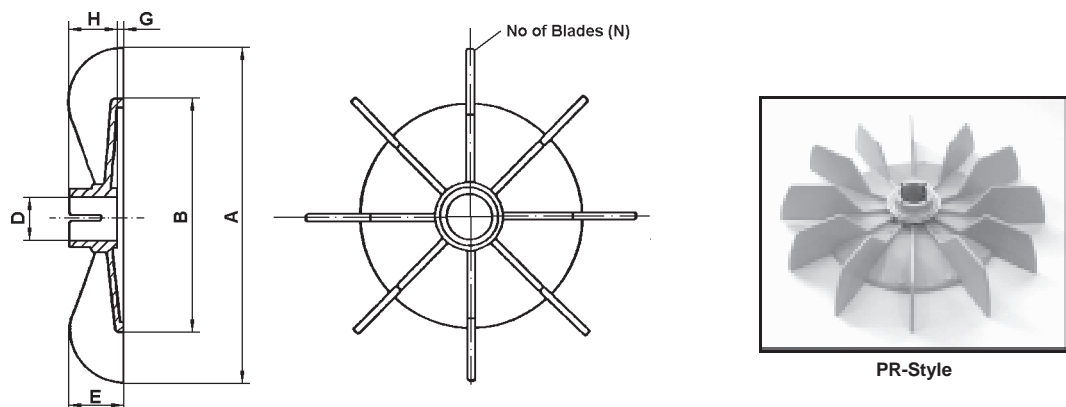
These have a split boss so that the fan can be clamped to the shaft by tightening two screws. This allows for slight variation in shaft diameter.



| Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | G [mm] | H [mm] | N (Blades) | R [mm] | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|---------|
| 63.PS.15 | 105 | 90 | 19 | 15 | 24 | 5 | 18 | 6 | 14 | 211-010 |
| 71.PS.17 | 125 | 105 | 22 | 17 | 30 | 8 | 20 | 6 | 15 | 211-030 |
| 80.PS.20 | 135 | 115 | 25 | 20 | 32 | 7 | 25 | 6 | 20 | 211-040 |
| 90.PS.25 | 160 | 135 | 31 | 25 | 37 | 12 | 25 | 6 | 32 | 211-050 |
| 100.PS.30 | 180 | 153 | 36 | 30 | 42 | 12 | 28 | 6 | 30 | 211-060 |
| 112.PS.30 | 194 | 150 | 36 | 30 | 43 | 12 | 31 | 6 | 27 | 211-070 |
| 132.PS.40 | 229 | 160 | 45 | 40 | 44 | 12 | 32 | 6 | 40 | 211-080 |
| 160.PS.45 | 290 | 220 | 53 | 45 | 52 | 12 | 32 | 8 | 50 | 211-090 |

Polypropylene Ring-Clamp Fans (PR-Style)

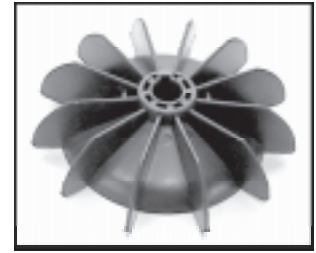
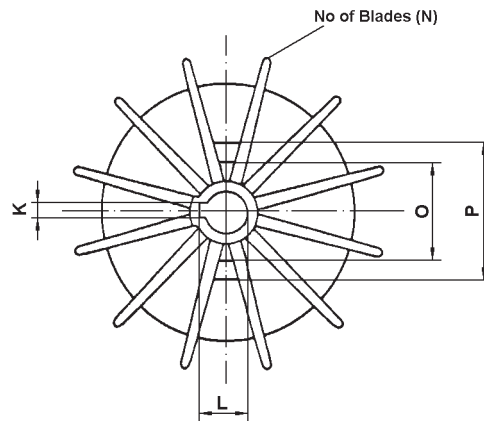
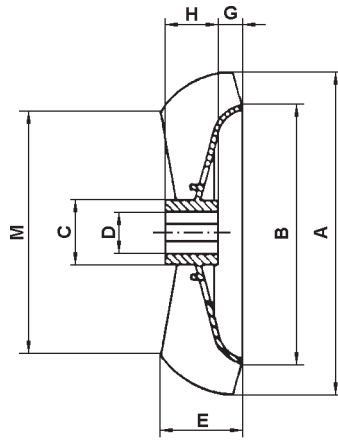
These fans are one piece with a **particularly flat profile** and are held on tight by a separate metal clamp around the split boss (rather like a jubilee clip).



| Type (Frame.Style.Bore) | A [mm] | B [mm] | D [mm] | E [mm] | G [mm] | H [mm] | N (Blades) | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|---------|
| 56.PR.11 | 91 | 63 | 11 | 20 | 1 | 19 | 12 | 212-010 |
| 63.PR.14 | 110 | 80 | 14 | 20 | 1 | 19 | 12 | 212-020 |
| 71.PR.14 | 129 | 87 | 14 | 23 | 1 | 22 | 12 | 212-030 |
| 80.PR.19 | 144 | 99 | 19 | 28 | 2 | 26 | 12 | 212-040 |
| 90.PR.24 | 158 | 106 | 24 | 30 | 2 | 28 | 12 | 212-050 |

One-piece Polypropylene Plastic Fans (PK/P-Style)

These fans are fitted to many motors as original equipment.

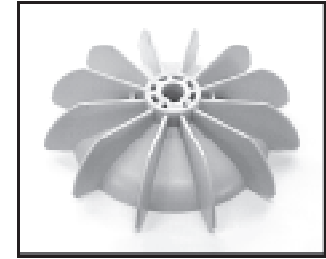
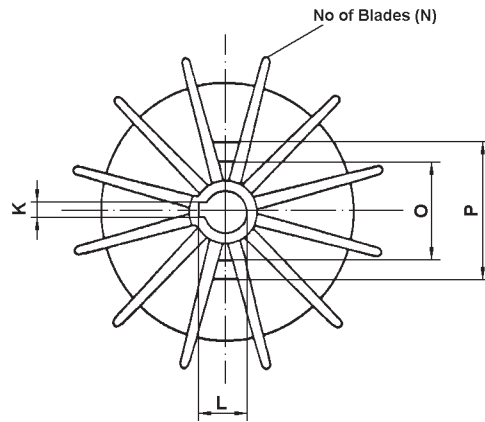
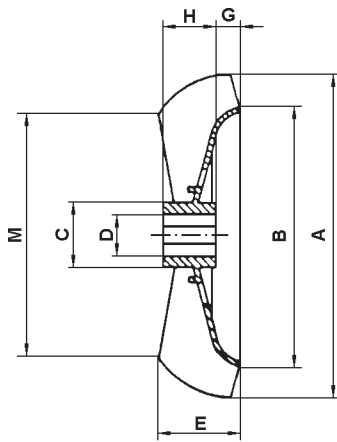


PK-Style

| Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | G [mm] | H [mm] | K [mm] | L [mm] | M [mm] | N (Blades) | O [mm] | P [mm] | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|-----------|---------|
| 56.PK.11 | 99 | 80 | 22 | 11 | 25 | 7 | 16 | 4 | 12.8 | 71 | 12 | 36 | 50 | 210-010 |
| 63.PK.11 | 115 | 90 | 18 | 11 | 29 | 7.5 | 18.5 | 4 | 12.8 | 80 | 12 | 40 | 54 | 210-020 |
| 63.PK.14 | 115 | 90 | 18 | 14 | 29 | 7.5 | 18.5 | 5 | 16.3 | 80 | 12 | 40 | 54 | 210-030 |
| 71.PK.11 | 130 | 102 | 28 | 11 | 32 | 8 | 20 | 4 | 12.8 | 90 | 12 | 42 | 60 | 210-040 |
| 71.PK.14 | 130 | 102 | 28 | 14 | 32 | 8 | 20 | 5 | 16.3 | 90 | 12 | 42 | 60 | 210-050 |
| 80.PK.11 | 146 | 116 | 25 | 11 | 35 | 8 | 22 | 4 | 12.8 | 105 | 12 | 40 | 60 | 210-060 |
| 80.PK.14 | 146 | 116 | 25 | 14 | 35 | 8 | 22 | 5 | 16.3 | 105 | 12 | 40 | 60 | 210-070 |
| 80.PK.15 | 146 | 116 | 25 | 15 | 35 | 8 | 22 | 5 | 17.3 | 105 | 12 | 40 | 60 | 210-080 |
| 80.PK.19 | 146 | 116 | 25 | 19 | 35 | 8 | 22 | 6 | 21.7 | 105 | 12 | 40 | 60 | 210-090 |
| 90.PK.14 | 167 | 135 | 30 | 14 | 43 | 13 | 24 | 5 | 16.3 | 122 | 12 | 50 | 70 | 210-110 |
| 90.PK.19 | 167 | 135 | 30 | 19 | 43 | 13 | 24 | 6 | 21.7 | 122 | 12 | 50 | 70 | 210-120 |
| 90.PK.24 | 167 | 135 | 30 | 24 | 43 | 13 | 24 | 6 | 26.7 | 122 | 12 | 50 | 70 | 210-130 |
| 100.PK.14 | 185 | 152 | 30 | 14 | 48 | 16 | 24 | 5 | 16.3 | 127 | 12 | 60 | 80 | 210-140 |
| 100.PK.24 | 185 | 152 | 30 | 24 | 48 | 16 | 24 | 6 | 26.7 | 127 | 12 | 60 | 80 | 210-150 |
| 100.PK.25 | 185 | 152 | 30 | 25 | 48 | 16 | 24 | 6 | 27.7 | 127 | 12 | 60 | 80 | 210-160 |
| 100.PK.30 | 185 | 152 | 37 | 30 | 48 | 16 | 24 | 6 | 32.7 | 127 | 12 | 60 | 80 | 210-170 |
| 112.P.14 | 209 | 170 | 38 | 14 | 52 | 16 | 28 | - | - | 140 | 12 | 70 | 90 | 210-180 |
| 112.PK.20 | 209 | 170 | 38 | 20 | 52 | 16 | 28 | 6 | 22.7 | 140 | 12 | 70 | 90 | 210-190 |
| 112.PK.24 | 209 | 170 | 38 | 24 | 52 | 16 | 28 | 6 | 26.7 | 140 | 12 | 70 | 90 | 210-200 |
| 112.PK.28 | 209 | 170 | 38 | 28 | 52 | 16 | 28 | 6 | 30.7 | 140 | 12 | 70 | 90 | 210-210 |
| 112.PK.30 | 209 | 170 | 38 | 30 | 52 | 16 | 28 | 6 | 32.7 | 140 | 12 | 70 | 90 | 210-220 |
| 132.PK.20 | 245 | 200 | 44 | 20 | 55 | 15 | 32 | 6 | 22.7 | 173 | 14 | 85 | 109 | 210-230 |
| 132.PK.30 | 245 | 200 | 44 | 30 | 55 | 15 | 32 | 6 | 32.7 | 173 | 14 | 85 | 109 | 210-240 |
| 132.PK.35 | 245 | 200 | 44 | 35 | 55 | 15 | 32 | 6 | 37.7 | 173 | 14 | 85 | 109 | 210-250 |
| 132.PK.40 | 245 | 200 | 44 | 40 | 55 | 15 | 32 | 8 | 43.1 | 173 | 14 | 85 | 109 | 210-260 |
| 160.PK.45 | 295 | 240 | 54 | 45 | 58 | 17.5 | 34 | 10 | 48.4 | 204 | 16 | 90 | 120 | 210-270 |
| 180.PK.50 | 335 | 282 | 60 | 50 | 65 | 20 | 36 | 10 | 53.4 | 218 | 16 | 106 | 140 | 210-280 |
| 200.PK.65 | 376 | 313 | 74 | 65 | 78 | 17 | 45 | 10 | 68.5 | 245 | 16 | 97 | 135 | 210-290 |

One-piece Glass Reinforced Plastic Fans High Temperature (GK-Style)

These are exactly the same design as the one-piece polypropylene fans (PK-Style) but made of a much higher grade reinforced plastic.



GK-Style

| Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | G [mm] | H [mm] | K [mm] | L [mm] | M [mm] | N (Blades) | O [mm] | P [mm] | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|-----------|---------|
| 56.GK.11 | 99 | 80 | 22 | 11 | 25 | 7 | 16 | 4 | 12.8 | 71 | 12 | 36 | 50 | 220-010 |
| 63.GK.14 | 115 | 90 | 18 | 14 | 29 | 7.5 | 18.5 | 5 | 16.3 | 80 | 12 | 40 | 54 | 220-020 |
| 71.GK.11 | 130 | 102 | 28 | 11 | 32 | 8 | 20 | 4 | 12.8 | 90 | 12 | 42 | 60 | 220-030 |
| 71.GK.14 | 130 | 102 | 28 | 14 | 32 | 8 | 20 | 5 | 16.3 | 90 | 12 | 42 | 60 | 220-040 |
| 80.GK.19 | 146 | 116 | 25 | 19 | 35 | 8 | 22 | 6 | 21.7 | 105 | 12 | 40 | 60 | 220-050 |
| 90.GK.19 | 167 | 135 | 30 | 19 | 43 | 13 | 24 | 6 | 21.7 | 122 | 12 | 50 | 70 | 220-060 |
| 90.GK.24 | 167 | 135 | 30 | 24 | 43 | 13 | 24 | 6 | 26.7 | 122 | 12 | 50 | 70 | 220-070 |
| 100.GK.24 | 185 | 152 | 30 | 24 | 48 | 16 | 24 | 6 | 26.7 | 127 | 12 | 60 | 80 | 220-080 |
| 100.GK.25 | 185 | 152 | 30 | 25 | 48 | 16 | 24 | 6 | 27.7 | 127 | 12 | 60 | 80 | 220-090 |
| 100.GK.30 | 185 | 152 | 37 | 30 | 48 | 16 | 24 | 6 | 32.7 | 127 | 12 | 60 | 80 | 220-100 |
| 112.GK.20 | 209 | 170 | 38 | 20 | 52 | 16 | 28 | 6 | 22.7 | 140 | 12 | 70 | 90 | 220-110 |
| 112.GK.25 | 209 | 170 | 38 | 25 | 52 | 16 | 28 | 6 | 30.7 | 140 | 12 | 70 | 90 | 220-120 |
| 112.GK.30 | 209 | 170 | 38 | 30 | 52 | 16 | 28 | 6 | 32.7 | 140 | 12 | 70 | 90 | 220-130 |
| 132.GK.20 | 245 | 200 | 44 | 20 | 55 | 15 | 32 | 6 | 22.7 | 173 | 14 | 85 | 109 | 220-140 |
| 132.GK.40 | 245 | 200 | 44 | 40 | 55 | 15 | 32 | 8 | 43.1 | 173 | 14 | 85 | 109 | 220-150 |
| 180.GK.50 | 335 | 282 | 60 | 50 | 65 | 20 | 36 | 10 | 53.4 | 218 | 16 | 106 | 140 | 220-160 |

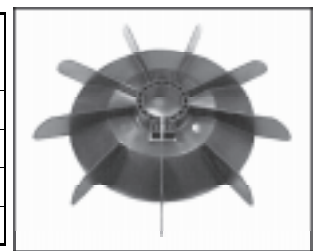
Big Polypropylene Fans (PKB/PSB-Style)

These are polypropylene fans for frame sizes 200 and above.



PKB-Style

| Type (Frame.Style.Bore) | o/d [mm] | N (Blades) | No of Poles | Code |
|----------------------------|-------------|---------------|-------------|---------|
| 200-225.PKB.62 | 300 | 9 | 4-poles | 215-010 |
| 250-280.PKB.70 | 400 | 9 | 4/6/8-poles | 215-020 |
| 280.PSB.75 | 515 | 9 | 4/6-poles | 215-030 |
| 315.PSB.85 | 509 | 9 | 4/6-poles | 215-040 |

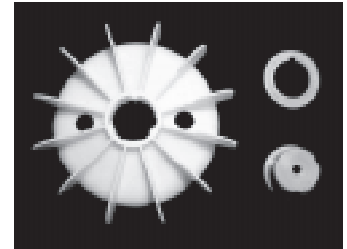
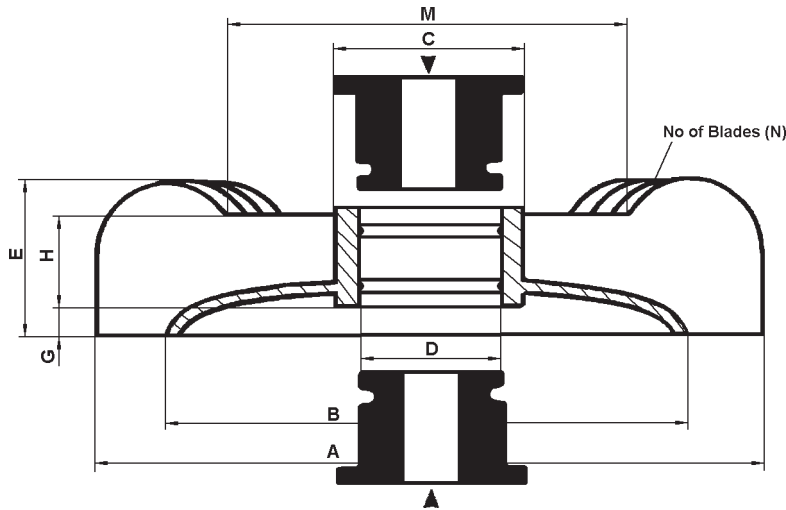


PSB-Style

Yellow Fans with Interchangeable Red Bushes (Cs-Style)

These fans can be convenient for fitting awkward shafts. A red bush of the correct bore size is pressed into the centre of the yellow blade section to give a complete fan. Any of the red bushes can be held easily in a lathe and bored out as required. All bushes are keyed except for the pilot bored bushes.

(Note that in use each fan must be fitted with a bush)



Cs-Style with Bushes

Yellow Fans

| Type (Style.Frame) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | G [mm] | H [mm] | M [mm] | N (Blades) | Code |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|---------|
| Cs.71 | 123 | 99 | 33 | 27 | 26 | 10 | 15 | 75 | 12 | 230-010 |
| Cs.80 | 132 | 104 | 33 | 27 | 25 | 10 | 15 | 79 | 12 | 230-020 |
| Cs.90 | 165 | 131 | 50 | 42 | 32 | 13 | 18 | 95 | 12 | 230-030 |
| Cs.100 | 171 | 147 | 50 | 42 | 36 | 10 | 18 | 99 | 12 | 230-040 |
| Cs.112 | 212 | 174 | 63 | 56 | 46 | 15 | 24 | 124 | 12 | 230-050 |
| Cs.132 | 247 | 203 | 63 | 56 | 56 | 17 | 24 | 134 | 12 | 230-060 |
| Cs.160 | 296 | 244 | 76 | 69 | 56 | 17 | 29 | 172 | 12 | 230-070 |
| Cs.180 | 335 | 276 | 76 | 69 | 55 | 17 | 29 | 214 | 12 | 230-080 |

Red Bushes

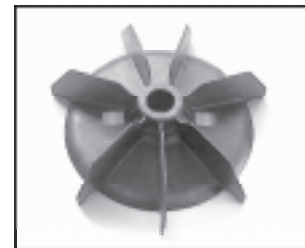
| Yellow Fan Size (Style.Frame) | Red Bush Size (bore in mm or inches) | Code |
|----------------------------------|------------------------------------------------------------|----------------------------------------------------|
| Cs.71 Cs.80 | 14 16 19 20 22 pilot(5mm) 1/2" 5/8" | 231-005/010/015/020/025/030 035/040 |
| Cs.90 Cs.100 | 24 25 30 pilot(17.5mm) 1/2" 5/8" 3/4" 7/8" | 231-045/050/055/060 065/070/075/080 |
| Cs.112 Cs.132 | 28 30 32 38 40 45 pilot(19.5mm) 3/4" 7/8" 1 1/8" 1 3/8" | 231-085/090/095/100/105/110/115 120/125/130/135 |
| Cs.160 Cs.180 | 42 45 50 pilot(29mm) 1 3/8" 1 5/8" 1 7/8" | 231-140/145/150/155 160/165/170 |

ABB Fans

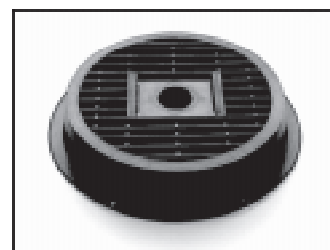
| Type | | o/d [mm] | Bore [mm] | N (Blades) | Code |
|--------------------------------|--|-------------|--------------|---------------|---------|
| MT63, 2-8 pole | | 88 | 13 | 10 | 900-010 |
| MT71, 2-8 pole | | 108 | 13 | 10 | 900-020 |
| MT80, 2 pole | | 112 | 16 | 10 | 900-030 |
| MT80, 4-8 pole MT90, 2 pole | | 128 | 16 | 10 | 900-040 |
| MT90, 4-8 pole | | 146 | 16 | 10 | 900-050 |
| MT100, 2 pole | | 146 | 23 | 10 | 900-060 |
| MT100, 4-8 pole | | 162 | 23 | 10 | 900-070 |
| MBT/M2AA112, 2 pole | | 140 | 23 | 7 | 900-080 |
| M2AA112, 4-8 pole | | 195 | 23 | 7 | 900-090 |
| MBT112, 4-8 pole | | 173 | 23 | 7 | 900-100 |
| MBT/M2AA132, 2 pole | | 171 | 27 | 7 | 900-110 |
| M2AA132, 4-8 pole | | 220 | 27 | 7 | 900-120 |
| MBT132, 4-8 pole | | 200 | 27 | 7 | 900-130 |
| MBT/M2AA/BA160, 2 pole | | 165 | 40 | 7 | 900-140 |
| MBT/M2AA/BA180, 2 pole | | 179 | 40 | 7 | 900-145 |
| MBT/M2AA/BA160/180, 4 pole | | 224 | 40 | 7 | 900-150 |
| MBT/M2AA/BA180, 6-8 pole | | 280 | 40 | 7 | 900-160 |
| M2AA/BA200, 2 pole | | 248 | 49 | 7 | 900-170 |
| M2AA/BA200, 4-8 pole | | 248 | 49 | 7 | 900-180 |
| M2AA/BA225/250, 2 pole | | 280 | 60 | 7 | 900-200 |
| M2AA/BA225/250, 4-8 pole | | 280 | 60 | 7 | 900-210 |



MT-Style Fan



M2AA-Style Fan



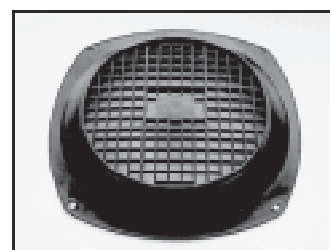
MT-Style Fan Cover

ABB Fan Covers

| Type | | dimension [mm] | Code |
|---------|--|------------------------|---------|
| MT63 | | 117 (o/d) | 910-010 |
| MT71 | | 135 (o/d) | 910-020 |
| MT80 | | 154 (o/d) | 910-030 |
| MT90 | | 173 (o/d) | 910-040 |
| MT100 | | 194 (o/d) | 910-050 |
| M2AA112 | | 218 (square) | 910-060 |
| M2AA132 | | 259 (square) | 910-070 |
| MBT112 | | 228 (pcd fixing holes) | 910-080 |
| MBT132 | | 254 (pcd fixing holes) | 910-090 |



M2AA-Style Fan Cover



MBT-Style Fan Cover

ABB Terminal Blocks

| Type | Code |
|-------------------|---------|
| MT63/71/80/90/100 | 920-020 |

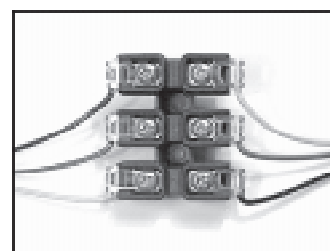
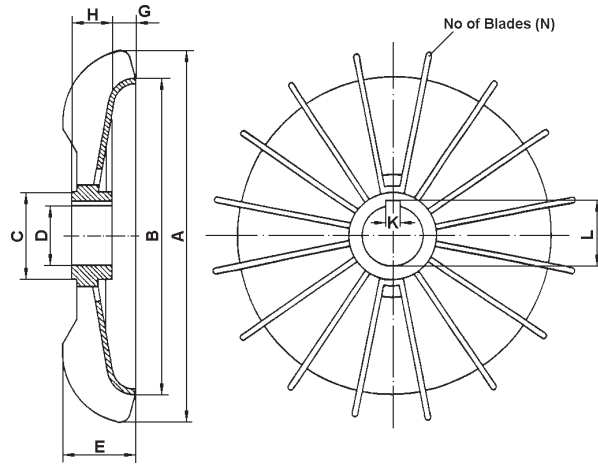


ABB-Terminal Block

One-piece Aluminium Fans (AK/A-Style)

These are one-piece fans, die-cast and cleaned but otherwise unworked.
The bores should be machined. (280 and 315 frames are sand-cast)

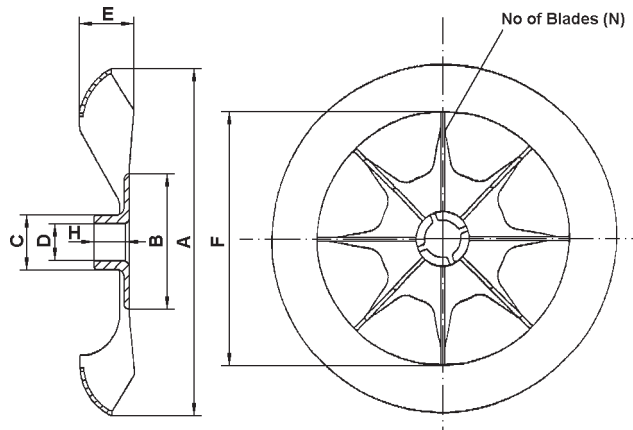


AK-Style

| Pilot Type (Frame.Style.Bore) | Normal Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | G [mm] | H [mm] | K [mm] | L [mm] | N (Blades) | Code Pilot Type | Code Normal Type |
|----------------------------------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|--------------------|---------------------|
| - | 132.AK.37 | 246 | 200 | 52 | -/37 | 55 | 18 | 32 | -/6 | -/40 | 14 | - | 201-010 |
| - | 160.AK.44 | 296 | 240 | 60 | -/44 | 58 | 18 | 34 | -/8 | -/48 | 16 | - | 201-020 |
| 180.A.30 | 180.AK.48 | 332 | 282 | 70 | 30/48 | 66 | 19 | 40 | -/10 | -/52 | 15 | 201-030 | 201-040 |
| 200.A.35 | 200.AK.57 | 372 | 310 | 89 | 35/57 | 77 | 21 | 48 | -/12 | -/60 | 15 | 201-050 | 201-060 |
| 225.A.35 | 225.AK.62 | 410 | 350 | 89 | 35/62 | 80 | 30 | 48 | -/15 | -/66 | 15 | 201-070 | 201-080 |
| 250.A.35 | 250.AK.69 | 460 | 392 | 94 | 35/69 | 84 | 26 | 52 | -/18 | -/73 | 15 | 201-090 | 201-100 |
| 280.A.45 | 280.A.69 | 510 | 430 | 120 | 45/69 | 101 | 22 | 57 | -/- | -/- | 16 | 201-110 | 201-120 |
| 315 A 45 | 315 A 60 | 501 | 510 | 112 | 45/60 | 115 | 51 | 60 | / | / | 16 | 201 130 | 201 140 |

Aluminium Ring-Clamp Fans (AR-Style)

These are one-piece fans with a particularly flat profile. They are clamped tight to the shaft by a separate metal ring around the split boss.

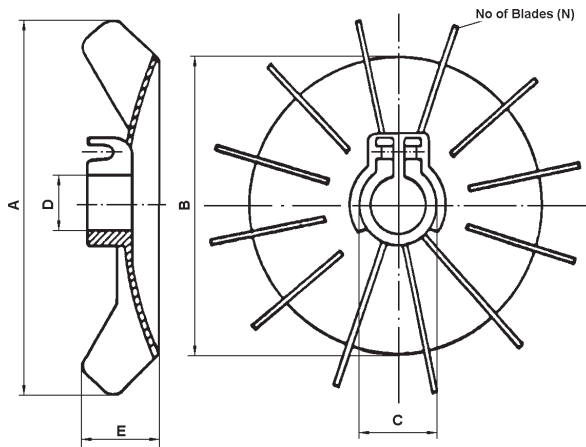


AR-Style

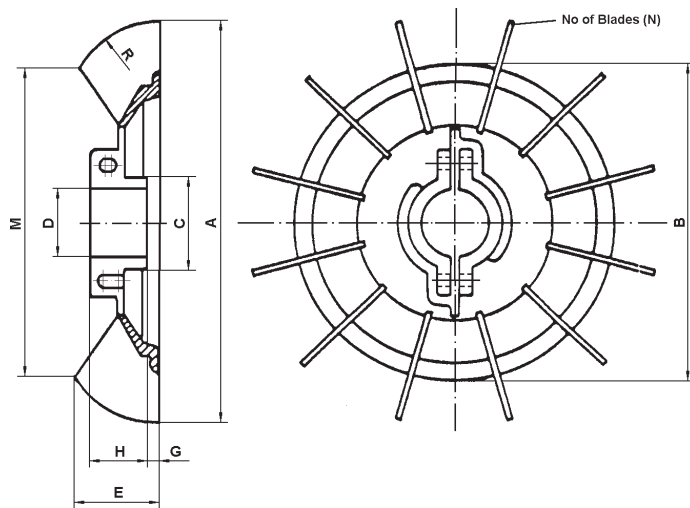
| Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | H [mm] | N (Blades) | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|---------|
| 63.AR.14 | 115 | 48 | 20 | 14 | 20 | 82 | 14 | 8 | 203-010 |
| 71.AR.14 | 132 | 50 | 20 | 14 | 22 | 96 | 14 | 8 | 203-020 |
| 80.AR.19 | 147 | 55 | 24 | 19 | 24 | 112 | 16 | 8 | 203-030 |
| 90.AR.24 | 166 | 60 | 28 | 24 | 27 | 126 | 19 | 8 | 203-040 |
| 100.AR.28 | 184 | 70 | 35 | 28 | 30 | 145 | 21 | 8 | 203-050 |
| 112.AR.28 | 202 | 76 | 35 | 28 | 30 | 158 | 23 | 8 | 203-060 |
| 132.AR.38 | 236 | 90 | 46 | 38 | 35 | 180 | 23 | 8 | 203-070 |

Aluminium Screw-Clamp Fans (AS-Style)

A split boss allows these fans to be nipped up tight. The fans must however be a neat fit on the shaft to avoid breaking the aluminium lugs.



AS-Style (Frames 63 to 112)



AS-Style (Frames 132/160)

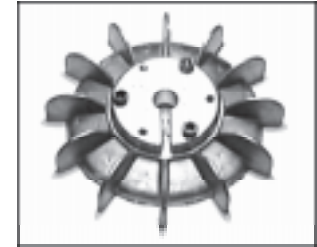
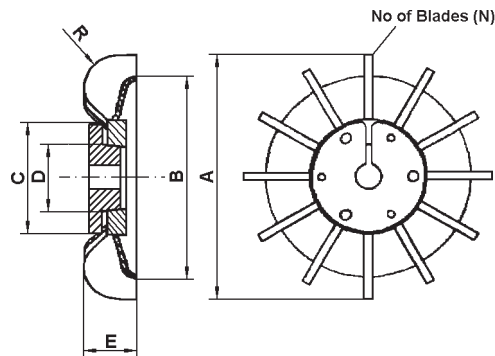
| Type (Frame.Style.Bore) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | G [mm] | H [mm] | M [mm] | N (Blades) | R [mm] | Code |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|---------|
| 63.AS.10 | 102 | 74 | 18 | 10 | 20 | - | - | - | 12 | - | 202-010 |
| 71.AS.14 | 117 | 91 | 22 | 14 | 23 | - | - | - | 12 | - | 202-020 |
| 80.AS.19 | 137 | 116 | 28 | 19 | 29 | - | - | - | 12 | - | 202-030 |
| 90.AS.24 | 158 | 125 | 33 | 24 | 32 | - | - | - | 12 | - | 202-040 |
| 100.AS.28 | 173 | 135 | 37 | 28 | 35 | - | - | - | 12 | - | 202-050 |
| 112.AS.28 | 180 | 142 | 37 | 28 | 36 | - | - | - | 12 | - | 202-060 |
| 132.AS.37 | 215 | 160 | 50 | 37 | 42 | 6 | 30 | 167 | 12 | 45 | 202-070 |
| 160.AS.44 | 264 | 210 | 55 | 44 | 52 | 12 | 35 | 200 | 12 | 55 | 202-080 |

Aluminium Eze-Fans with Interchangeable Bushes (AE-Style)

These fans can be convenient for fitting awkward shafts. When a bush of the correct bore size is screwed to the centre of the Eze-Fan blade section to give a complete fan an ingenious taper-lock design locks the fan tightly to the shaft.

Any of the bushes can be held easily in a lathe and bored out as required.

(Note that in use each fan must be fitted with a bush)



AE-Style

Fans

| Type (Style.Frame) | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | N (Blades) | R [mm] | Code |
|-----------------------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|---------|
| AE.71 | 124 | 97 | 55 | 34 | 25 | 12 | 12 | 240-010 |
| AE.80 | 132 | 97 | 55 | 34 | 25 | 12 | 12 | 240-020 |
| AE.90 (small) | 149 | 97 | 55 | 34 | 29 | 12 | 12 | 240-030 |
| AE.90 | 166 | 132 | 68 | 46 | 32 | 12 | 19 | 240-040 |
| AE.100/112 | 170 | 140 | 68 | 46 | 37 | 12 | 19 | 240-050 |
| AE.132 (small) | 216 | 167 | 95 | 70 | 45 | 12 | 27 | 240-060 |
| AE.132 | 246 | 194 | 95 | 70 | 55 | 12 | 33 | 240-070 |
| AE.160 | 298 | 236 | 108 | 77 | 55 | 12 | 33 | 240-080 |
| AE.180 | 333 | 263 | 108 | 77 | 55 | 12 | 33 | 240-090 |
| AE.200 | 355 | 283 | 146 | 114 | 60 | 12 | 43 | 240-100 |
| AE.225 (small) | 381 | 283 | 146 | 114 | 60 | 12 | 43 | 240-110 |
| AE.225 | 406 | 283 | 146 | 114 | 60 | 12 | 43 | 240-120 |
| AE.250 | 431 | 283 | 146 | 114 | 60 | 12 | 43 | 240-130 |

Bushes

| Eze-Fan Type (Style.Frame) | Eze-Hub Bush Size (bore in mm or inch) | max shaft size [mm] | Code |
|-------------------------------|-------------------------------------------|------------------------|-----------------------------|
| AE.71 | unbored | | 241-005 |
| AE.80 | 14, 15, 16, 19, 20, 22 | 28 | 010/015/020/025/030/035 |
| AE.90 (small) | 1/2", 5/8" | | 040/045 |
| AE.90 | unbored, 24, 25, 30 | 39 | 241-050/055/060/065 |
| AE.100/112 | 1/2", 5/8", 3/4", 7/8" | | 070/075/080/085 |
| AE.132 (small) | unbored, 28, 30, 32, 40, 45 | 61 | 241-090/095/100/105/110/115 |
| AE.132 | 7/8", 1 1/8", 1 3/8" | | 120/125/130 |
| AE.160 | unbored, 42, 45, 50 | 66 | 241-135/140/145/150 |
| AE.180 | 1 3/8", 1 5/8", 1 7/8" | | 155/160/165 |
| AE.200 | unbored | | 241-170 |
| AE.225 (small) | 2", 2 1/8", 2 3/8" | 104 | 175/180/185 |
| AE.225 | 2 7/8", 3 3/8" | | 190/195 |
| AE.250 | | | |

Black Plastic Air Cowls

| Type (Frame) | | o/d [mm] | depth [mm] | Code |
|-----------------|--|-------------|---------------|---------|
| 56 | | 108 | 53 | 310-010 |
| 63 | | 121 | 61 | 310-020 |
| 71 | | 136 | 70 | 310-030 |
| 80 | | 154 | 75 | 310-040 |
| 90 | | 174 | 86 | 310-050 |



Plastic Cowl

Regular Steel Air Cowls

Extra-Deep Steel Air Cowls

(brake motors / forced ventilation)

| Type (Frame) | | o/d [mm] | depth [mm] | Code |
|-----------------|--|-------------|---------------|---------|
| 56 | | 108 | 53 | 300-010 |
| 63 | | 121 | 61 | 300-020 |
| 71 | | 136 | 70 | 300-030 |
| 80 | | 154 | 75 | 300-040 |
| 90 | | 174 | 86 | 300-050 |
| 100 | | 192 | 95 | 300-060 |
| 112 | | 216 | 99 | 300-070 |
| 132 | | 255 | 117 | 300-080 |
| 160 | | 307 | 136 | 300-090 |
| 180 | | 345 | 155 | 300-100 |
| 200 | | 382 | 178 | 300-110 |
| 225 | | 430 | 192 | 300-120 |
| 250 | | 477 | 220 | 300-130 |
| 280 | | 533 | 238 | 300-140 |
| 315 | | 597 | 257 | 300-150 |

| Type (Frame) | | o/d [mm] | depth [mm] | Code |
|-----------------|--|-------------|---------------|---------|
| 56 | | 108 | 100 | 301-056 |
| 63 | | 121 | 110 | 301-063 |
| 71 | | 136 | 126 | 301-071 |
| 80 | | 154 | 140 | 301-080 |
| 90 | | 174 | 140 | 301-090 |
| 100 | | 192 | 155 | 301-100 |
| 112 | | 216 | 170 | 301-112 |
| 132 | | 255 | 170 | 301-132 |
| 160 | | 307 | 170 | 301-160 |
| 180 | | 345 | 170 | 301-180 |
| 200 | | 382 | 200 | 301-200 |
| 225 | | 430 | 230 | 301-225 |
| 250 | | 477 | 270 | 301-250 |
| 280 | | 533 | 270 | 301-280 |



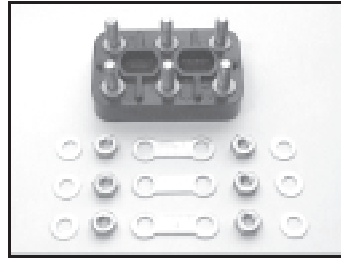
Regular Style



Extra-Deep Style

Terminal Blocks (6-pin) in Steel or Brass

(supplied complete with nuts, washers, and jumpers)

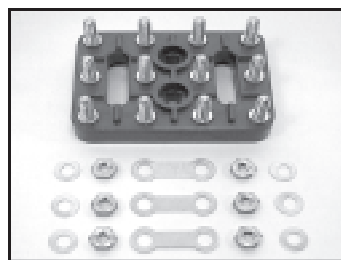


6-pin Terminal Block

| Type (Length.Width.Thread) | | Acceptable distance between locating holes in motor terminal box (slotted holes in block) [mm] | Code Steel | Code Brass |
|-------------------------------|--|------------------------------------------------------------------------------------------------------------|---------------|---------------|
| 40.25.M3 | | 14 to 16 | 400-010 | 400-015 |
| 40.25.M4 | | 14 to 16 | 400-020 | 400-030 |
| 50.32.M4 | | 15 to 20 | 400-040 | 400-050 |
| 56.36.M5 | | 17 to 23 | 400-060 | 400-070 |
| 70.45.M6 | | 20 to 30 | 400-080 | 400-090 |
| 94.58.M8 | | 30 to 40 | 400-100 | 400-110 |
| 115.70.M10 | | 38 to 50 | 400-120 | 400-130 |
| 126.81.M12 | | 40 to 50 | - | 400-140 |
| 146.92.M14 | | 45 to 62 | - | 400-150 |
| 165.103.M16 | | 54 to 74 | - | 400-160 |
| 240.150.M20 | | 80 to 100 | - | 400-170 |

Terminal Blocks (12-pin) in Brass

(supplied complete with nuts, washers, and jumpers)



12-pin Terminal Block

| Type (Length.Width.Thread) | | Acceptable distance between locating holes in motor terminal box (slotted holes in block) [mm] | Code |
|-------------------------------|--|------------------------------------------------------------------------------------------------------------|---------|
| 63.46.M4 | | 14 to 22 | 400-180 |
| 72.52.M5 | | 17 to 23 | 400-190 |
| 90.65.M6 | | 20 to 30 | 400-200 |

Heater Bands

220V Heater Bands Class F (155°C)

| Type | Length [mm] | Length [in] | Watts | Code |
|------|----------------|----------------|-------|---------|
| 00b | 203 | 8 | 8 | 603-005 |
| 0b | 305 | 12 | 25 | 603-010 |
| 1b | 432 | 17 | 26 | 603-015 |
| 2b | 686 | 27 | 21 | 603-020 |
| 3b | 686 | 27 | 40 | 603-025 |
| 4b | 762 | 30 | 26 | 603-030 |
| 5b | 1016 | 40 | 42 | 603-035 |
| 6b | 1067 | 42 | 54 | 603-040 |
| 7b | 1473 | 58 | 65 | 603-045 |
| 8b | 1702 | 67 | 99 | 603-050 |

110V Heater Bands Class F (155°C)

| Type | Length [mm] | Length [in] | Watts | Code |
|------|----------------|----------------|-------|---------|
| 00a | 203 | 8 | 8 | 601-005 |
| 0a | 305 | 12 | 22 | 601-010 |
| 1a | 432 | 17 | 27 | 601-015 |
| 2a | 686 | 27 | 21 | 601-020 |
| 3a | 686 | 27 | 40 | 601-025 |
| 4a | 762 | 30 | 25 | 601-030 |
| 5a | 1016 | 40 | 39 | 601-035 |
| 6a | 1067 | 42 | 50 | 601-040 |
| 7a | 1473 | 58 | 67 | 601-045 |
| 8a | 1702 | 67 | 103 | 601-050 |

240V Heater Bands BASEEFA Ex(N) T3, Zone 2

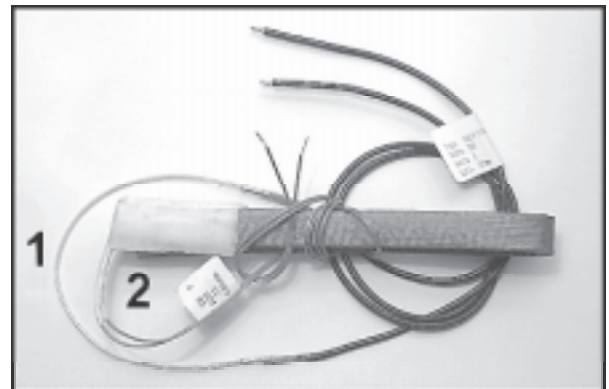
| Type | Length [mm] | Length [in] | Watts | Code |
|------|----------------|----------------|-------|---------|
| 0b | 305 | 12 | 9 | 604-005 |
| 1b | 432 | 17 | 12 | 604-010 |
| 2b | 686 | 27 | 20 | 604-015 |
| 5b | 1016 | 40 | 29 | 604-025 |
| 7b | 1473 | 58 | 42 | 604-030 |
| 8b | 1702 | 67 | 48 | 604-035 |

110V Heater Bands BASEEFA Ex(N) T3, Zone 2

| Type | Length [mm] | Length [in] | Watts | Code |
|------|----------------|----------------|-------|---------|
| 0a | 305 | 12 | 9 | 602-005 |
| 1a | 432 | 17 | 12 | 602-010 |
| 2a | 686 | 27 | 20 | 602-015 |
| 5a | 1016 | 40 | 29 | 602-025 |
| 7a | 1473 | 58 | 42 | 602-030 |
| 8a | 1702 | 67 | 48 | 602-035 |

50V Heater Bands Class F (155°C)

| Type | Length [mm] | Length [in] | Watts | Code |
|-------|----------------|----------------|-------|---------|
| 0/50V | 305 | 12 | 24 | 600-005 |
| 1/50V | 432 | 17 | 25 | 600-010 |
| 2/50V | 686 | 27 | 20 | 600-015 |
| 5/50V | 1016 | 40 | 39 | 600-030 |
| 7/50V | 1473 | 58 | 63 | 600-040 |
| 8/50V | 1702 | 67 | 87 | 600-045 |



Heater Bands: 1) Type 00
2) Type 0 to 8

Relays

Klixon Relays:

| | Code |
|----------------------------------------------------------------------------------------|-------------|
| 2CR4-120 Klixon start relay 2.0A max pick-up current / 1.7A min drop-out current . . . | 510-120 |
| 2CR4-130 Klixon start relay 3.0A/2.5A | 510-130 |
| 2CR4-175 Klixon start relay 7.6A/6.3A | 510-175 |
| 2CR4-182 Klixon start relay 8.3A/6.8A | 510-182 |
| 2CR4-199 Klixon start relay 10.0A/8.3A | 510-199 |
| 2CR4-210 Klixon start relay 12.2A/10.1A | 510-210 |
| 2CR4-234 Klixon start relay 17.0A/14.0A | 510-234 |
| 2CR4-258 Klixon start relay 21.9A/18.1A | 510-258 |
| 2CR4-266 Klixon start relay 23.6A/19.5A | 510-266 |
| 2CR4-285 Klixon start relay 31.5A/26.0A | 510-285 |

Lafert Relays:

| | |
|---------------------------------------------|---------|
| LM/M 90 L2 Lafert relay 240V/50Hz | 510-360 |
| LM 100 S4 Lafert relay 230V/50Hz | 510-365 |
| LM 100 C2 Lafert relay 240V/50Hz | 510-370 |

LCR Relays:

| | |
|-----------------------|---------|
| SRE/240/2.5 | 510-400 |
|-----------------------|---------|

(This relay is a 240V universal electronic start relay designed for external mounting.)

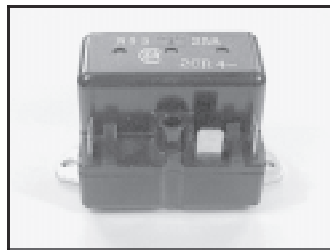
ABB-Relays:

| | |
|---------------------------------------------|---------|
| ABB Electronic Relay 240V (black) | 940-010 |
| ABB Electronic Relay 110V (white) | 940-020 |

| | |
|--------------------------------|---------|
| ABB-Rectifier | 940-030 |
|--------------------------------|---------|



LCR-Relay



Klixon/Lafert-Relay

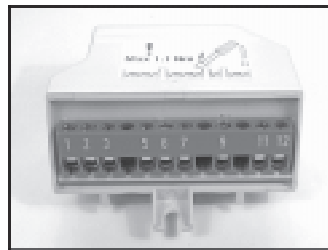


ABB-Relay



ABB-Rectifier

Thermistors, Cut-Outs and Cut-Ins

Thermistors:

| | |
|----------------------------------------------------------------|--|
| singles: 60°C to 180°C (10°C intervals; 500mm leads) | |
| triples: 130°C, 140°C, 160°C (500-150-500mm leads) | |

Thermal Cut-Outs - normally closed (thermostats for insertion into windings):

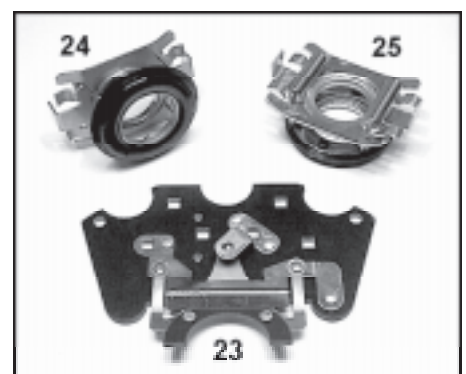
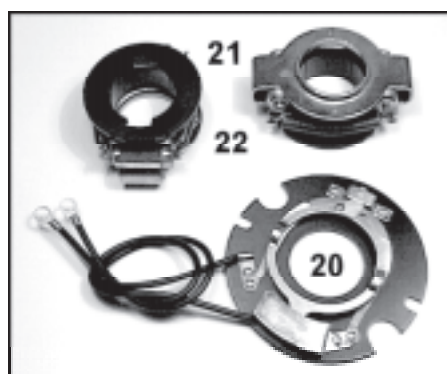
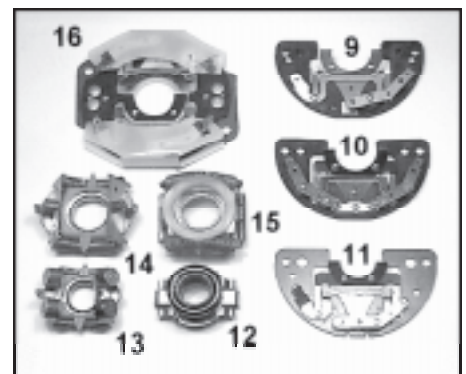
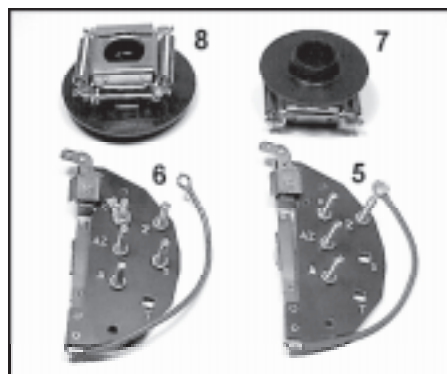
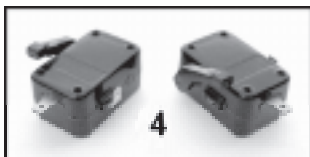
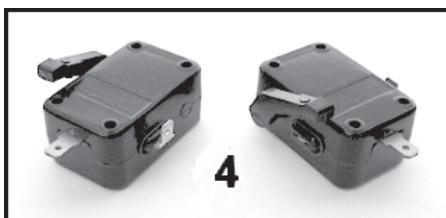
| | |
|----------------------------------------------|--|
| 105°C, 120°C, 135°C, 150°C (13Amp) | |
| 140°C (4Amp) | |
| 120°C, 140°C, 160°C (1.6Amp) | |

Thermal Cut-Ins - normally open:

| | |
|----------------------------------------|--|
| 140°C, 150°C, 160°C (1.6Amp) | |
|----------------------------------------|--|

Centrifugal Switches

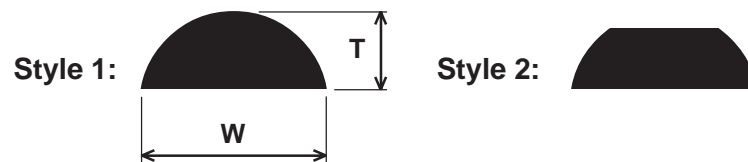
| Picture | Description | Price | Code |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------|---------|
| Pic. 1 | S-7001 Torq static switch (6203 bearings) 2 x single throw contacts | | 500-010 |
| | S-7025 Torq static switch (6203 bearings) 1 x single throw, 1 x double throw contact | | 500-020 |
| Pic. 2 | S-7501 Torq static switch (6204 bearings) 2 x single throw contacts | | 500-030 |
| | S-7502 Torq static switch (6204 bearings) 1 x single throw, 1 x double throw contact | | 500-040 |
| Pic. 3 | S-8001 Torq static switch (6205 bearings) 2 x single throw contacts | | 500-050 |
| | S-8007 Torq static switch (6205 bearings) 1 x single throw, 1 x double throw contact | | 500-060 |
| Pic. 4 | D-9001 Torq large dustite switch | | 500-070 |
| Pic. 5 | KK7361 single throw for Doncaster motors (note: KA7581 is new long, thin switch) | | 500-080 |
| Pic. 6 | KK7365 double throw for Doncaster motors (note: KA7594 is new long, thin switch) | | 500-090 |
| Pic. 7 | KK6618 2-pole flyer for Doncaster motors (3/4" shaft; 53mm o/d) | | 500-100 |
| Pic. 8 | KK6619 4-pole flyer for Doncaster motors (3/4" shaft; 68.6mm o/d) | | 500-110 |
| Pic. 9 | Brook type 1 single contact switch for Tuscan/Brook (23mm i/d horseshoe) | | 500-119 |
| Pic. 9 | Brook type 2 single contact switch with grease plate extensions (23mm i/d horseshoe) | | 500-120 |
| Pic. 10 | Brook type 3 twin contact switch (23mm i/d horseshoe) | | 500-130 |
| Pic. 12 | Brook 15mm 2 pole/50Hz flyer | | 500-150 |
| Pic. 13 | Brook 15mm 4 pole/50Hz flyer | | 500-160 |
| Pic. 14 | Brook 20mm 2 pole/50Hz flyer | | 500-170 |
| Pic. 15 | Brook 20mm 4 pole/50Hz flyer | | 500-180 |
| <small>(Note for these 20mm flyers, 4 pressing diameters are available to suit shaft sizes: A 19.83mm; B 19.05mm; C 20.34mm; D 20.83mm)</small> | | | |
| Pic. 16 | BCP ED112/132 stator switch | | 500-190 |
| Pic. 17 | BCC25 single contact single throw switch (GEC fractional 1½ hp and below) | | 500-200 |
| Pic. 18 | BCC25 double contact single throw switch (GEC fractional 1½ hp and below) | | 500-210 |
| Pic. 19 | BCC25 2-pole flyer (change springs for 4-pole; 23mm i/d) | | 500-220 |
| Pic. 20 | GEC D90/100 stator switch (GEC 2 & 3 hp) | | 500-230 |
| Pic. 21 | GEC D90/100 2-pole flyer (GEC 2 & 3 hp) | | 500-240 |
| Pic. 22 | GEC D90/100 4-pole flyer (GEC 2 & 3 hp) | | 500-250 |
| Pic. 23 | Newman Elf Y2 stator switch | | 500-270 |
| Pic. 24 | Newman Elf 2 pole/50Hz flyer (0.740" bore) | | 500-280 |
| Pic. 25 | Newman Elf 4 pole/50Hz flyer (0.740" bore) | | 500-290 |



Hard Maple Wood Wedges

We now have wood wedges in stock, imported directly from the U.S.A. - all are hard maple, tumbled, and waxed. They are sold in 500' bundles (200 x 30" lengths/bundle).

| code | width (W) [in] | thickness (T) [in] | style |
|---------|-------------------|-----------------------|-------|
| 550-121 | 5/32" | 5/64" | 1 |
| 550-133 | 7/32" | 3/32" | 1 |
| 550-134 | 1/4" | 3/32" | 1 |
| 550-251 | 5/32" | 1/8" | 2 |
| 550-254 | 1/4" | 1/8" | 2 |
| 550-256 | 5/16" | 1/8" | 2 |
| 550-258 | 3/8" | 1/8" | 2 |



Other sizes and shapes available to special order.

Recent Product Introductions

Capacitance meter

Raytek non-contact thermometer with lazer sighting

Raytek non-contact thermometer without lazer sighting

PT100 2-wire sensor (blue/blue)

PT100 3-wire sensor (2-black/1-red)

Oil Seals, Gamma Seals and V-Rings

Oil Seals

Large stocks held in different i/d, o/d, and widths.
Seals are priced by o/d only, for any i/d or width.

| Outside dia. up to and including | |
|----------------------------------|------------|
| metric | imperial |
| up to 38 mm | up to 1.5" |
| up to 50 mm | up to 2" |
| up to 64 mm | up to 2.5" |
| up to 75 mm | up to 3" |
| up to 90 mm | up to 3.5" |
| up to 100 mm | up to 4" |
| up to 115 mm | up to 4.5" |
| up to 130 mm | up to 5" |
| up to 140 mm | up to 5.5" |
| up to 150 mm | up to 6" |
| up to 165 mm | up to 6.5" |
| up to 180 mm | up to 7" |
| up to 190 mm | up to 7.5" |
| up to 200 mm | up to 8" |

Gamma Seals

(also known as RB or Stefa seals)

| Size (mm) | | | Code |
|-----------|-----|-------|---------|
| i/d | o/d | width | |
| 12 | 26 | 3.5 | 699-010 |
| 15 | 30 | 4 | 699-020 |
| 17 | 32 | 4 | 699-030 |
| 20 | 35 | 4 | 699-040 |
| 25 | 40 | 4 | 699-050 |
| 30 | 47 | 4.5 | 699-060 |
| 35 | 52 | 4.5 | 699-070 |
| 40 | 57 | 4.5 | 699-080 |
| 45 | 62 | 4.5 | 699-090 |
| 50 | 70 | 5.5 | 699-100 |
| 55 | 75 | 5.5 | 699-110 |
| 60 | 80 | 5.5 | 699-120 |
| 65 | 85 | 5.5 | 699-130 |
| 70 | 90 | 5.5 | 699-140 |
| 75 | 95 | 5.5 | 699-150 |
| 80 | 100 | 5.5 | 699-160 |

V-Ring seals to 100mm dia.

Bearings - ball and roller to 200mm o/d in C3 clearance

Waved Washers to 170mm o/d

Some Other Items

- Capacitor plastic terminal cover
- Capacitor spring clip (⁵/₈", ³/₄", 1", 1¹/₈", 1¹/₄", 1¹/₂", 2") ...
- 6amp terminal strip, nylon-6, 110°C rated
- 10amp terminal strip, nylon-6, 110°C rated
- 16amp terminal strip, nylon-6, 110°C rated
- tying twine - 5 x 1mm strands (1000m)

Useful information

Carrying current of open wire at 30°C/80°C

| wire [mm ²] | current (30°C) [A] | current (80°C) [A] |
|-------------------------|--------------------|--------------------|
| 0.25 | 13 | 9 |
| 0.34 | 15 | 10 |
| 0.50 | 19 | 13 |
| 0.75 | 25 | 18 |
| 1.00 | 30 | 21 |
| 1.50 | 38 | 27 |
| 2.50 | 52 | 37 |
| 4.00 | 70 | 50 |
| 6.00 | 92 | 66 |
| 10.00 | 132 | 95 |
| 16.00 | 176 | 126 |
| 25.00 | 235 | 169 |
| 35.00 | 296 | 213 |

Thermistor colour codes

| | |
|-------|-------------|
| 60°C | grey/white |
| 70°C | brown/white |
| 80°C | white/white |
| 90°C | green/green |
| 100°C | red/red |
| 110°C | brown/brown |
| 120°C | grey/grey |
| 130°C | blue/blue |
| 140°C | blue/white |
| 145°C | black/white |
| 150°C | black/black |
| 155°C | black/blue |
| 160°C | blue/red |
| 170°C | green/white |
| 180°C | red/white |

Thermal classifications

| | |
|---|-----------|
| Y | 90°C max |
| A | 105°C max |
| E | 120°C max |
| B | 130°C max |
| F | 155°C max |
| H | 180°C max |
| N | 200°C max |
| R | 220°C max |
| S | 240°C max |

Thermistor tip

Reckon on a 15°C temperature lag between the thermistor or embedded cut-out and the winding temperature. e.g. to protect windings to Class F (155°C) use a 140°C thermistor/cut-out.

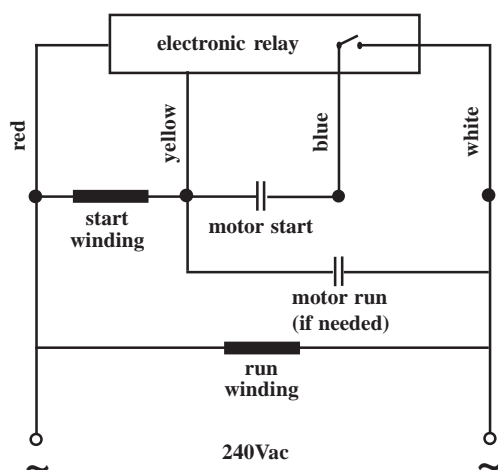
Capacitor tip

Early failure of start capacitors may be due to too short a time between successive starts, excessively long run-up time, or too high an ambient temperature. Either replace each start capacitor with two start capacitors (each of ½ the capacitance) connected in parallel; use higher voltage rating capacitors; or both.

LCR Electronic Start Relay

Type: SRE/240/2.5

This relay will start any 240V single phase motor up to and including 2.5kW provided it is fitted with a start capacitor. The relay monitors voltage across the start capacitor and switches the start winding out of circuit when a preset voltage has been reached.

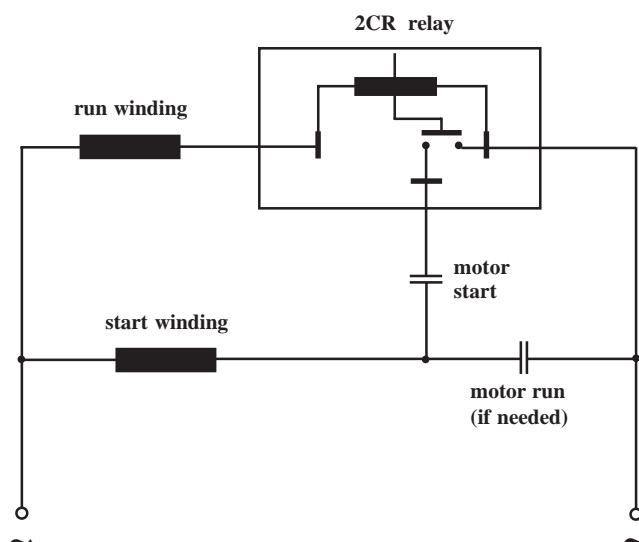


Klixon Electro-Mechanical Relay

1) Switch closes when the surge current through the run winding - and hence the relay coil - rises to the value $I_{pick-up}$. This connects the motor start capacitor.

2) Switch re-opens when this surge current falls to $I_{drop-out}$ as the motor picks up speed. The start capacitor is now disconnected and the motor will continue to run normally.

Start capacitors used with this relay should **always** be fitted with a discharge resistor to remove residual voltage.



Rush Industrial Sales

Biggin House, 126 Station Road, Tempsford, Sandy, Beds, SG19 2AY



Tel: 01767 640779

Fax: 01767 640617

email: sales@rushind.com

www.rushind.com

RUSH

Motor Start Capacitors:

120-150V and 220-275V: Internal, External, and PF-Style ... Page 2

280-350V: Internal, External, and Extra Heavy Duty-Style ... Page 3

Motor Run Capacitors ... Page 4

Power Electric Capacitors ... Page 4

Sheet Insulation ... Page 5

Lead-out Cable ... Page 6

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Polypropylene Flat Fans (PF-Style) ... Page 7

Polypropylene Screw-Clamp Fans (PS-Style) ... Page 8

Polypropylene Ring-Clamp Fans (PR-Style) ... Page 8

One-piece Polypropylene Fans (PK/P-Style) ... Page 9

One-piece Glass Reinforced Plastic Fans (GK-Style) ... Page 10

Big Polypropylene Fans (PKB/PSB-Style) ... Page 10

Yellow Fans with Interchangeable Red Boss (Cs-Style) ... Page 11

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Aluminium Fans:

One-piece Aluminium Fans (AK/A-Style) ... Page 13

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