

# AXIAL FLOW FANS COMPONENT WEIGHTS

Detailed below are the weights of the components that make up various products, the details have been broken up as follows: -

## Housing/Casing Weights

- Table 1. - Single stage axial flow fans – AP, APS, APH, APEC & APPM
- Table 2. - Belt driven axial flow fans – APB
- Table 3. - Bifurcated axial flow fans – BFA
- Table 4. - Square plate axial flow fans – SQA & SQB
- Table 5. - Alpha/Beta Industrial roof units – RVLE, RSSL, RDLE & RDLS
- Table 6. - New Generation roof units – RVE, RSS, RDE, RDS
- Table 7. - High Capacity and Smoke Spill roof units – HC & SS

## Impeller Weights

- Table 8. – impeller weights from 315 to 2000mm diameter

## Motor Weights

- Table 9. – motor weights

## Ancillary Equipment Weights

- Table 10. – ancillary equipment weights

Note:- refer to Fantech for any fan/motor combination not listed including guide vanes.

## Example

To determine the weight of an AP Series axial flow fan - 1400mm diameter, 6 pole with 9 blade aluminium impeller 400 dia. hub and 30kW motor.

|   |             |
|---|-------------|
| 1. Casing weight, Table 1.<br>for D225M motor frame     | 256         |
| 2. 9 blade impeller weight, Table 8.                    | 53          |
| 3. 30kW, 16 rev/sec motor<br>Frame Size D225M, Table 9. | 330         |
| 4. 2 Matching Flanges & 2 Mounting Feet<br>Table 10.    | 73.6        |
|   | <hr/> 713kg |

Reminder Note: As motor weights can vary by a factor of 1.5:1 from one manufacturer to another, please check with our Sales Engineers if the unit weight is critical to the building design.

## HOUSING/CASING WEIGHTS



**Table 1.**

AP, APS, APH, APEC & APPM Series  
- single stage axial flow fans  
AP..CR Series - single stage x 2

| Model<br>AP, APS,<br>APH, APEC<br>& APPM | Motor Frame Size |               |      |               |      |      |      |      |
|--|------------------|---------------|------|---------------|------|------|------|------|
|  | D80/<br>D90      | D100/<br>D112 | D132 | D160/<br>D180 | D200 | D225 | D250 | D280 |
| 031                                      | 10               | 15            |      |               |      |      |      |      |
| 040                                      | 13               | 18            |      |               |      |      |      |      |
| 050                                      | 16               | 23            |      |               |      |      |      |      |
| 056                                      | 19               | 27            | 31   |               |      |      |      |      |
| 063                                      | 22               | 30            | 34   |               |      |      |      |      |
| 071                                      | 26               | 35            | 39   |               |      |      |      |      |
| 080                                      | 29               | 40            | 44   | 57            |      |      |      |      |
| 100                                      | 47               | 64            | 69   | 89            |      |      |      |      |
| 125                                      |                  |               | 88   | 172           | 209  | 227  | 239  | 283  |
| 140                                      |                  |               | 99   | 193           | 235  | 256  | 269  | 319  |
| 160                                      |                  |               | 113  | 221           | 270  | 294  | 310  | 367  |
| 180                                      |                  |               | 235  | 292           | 347  | 374  | 392  | 457  |
| 200                                      |                  |               | 261  | 325           | 386  | 417  | 437  | 510  |



**Table 3.**

BFA Series - bifurcated axial flow fans

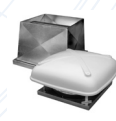
| Model<br>BFA | Motor Frame Size |               |      |               |               |
|--------------|------------------|---------------|------|---------------|---------------|
|              | D80/<br>D90      | D100/<br>D112 | D132 | D160/<br>D180 | D200/<br>D225 |
| 040          | 26               |               |      |               |               |
| 050          | 32               |               |      |               |               |
| 056          | 36               | 44            | 47   |               |               |
| 063          | 41               | 48            | 52   |               |               |
| 071          | 47               | 56            | 59   |               |               |
| 080          | 53               | 66            | 66   |               |               |
| 100          | 83               | 98            | 103  |               | 278           |
| 125          |                  | 122           | 128  | 171           | 346           |



**Table 4.**

SQA & SQB Series - square plate axial flow fans

| Model<br>SQA<br>& SQB | Motor Frame Size |               |      |               |
|-----------------------|------------------|---------------|------|---------------|
|                       | D80/<br>D90      | D100/<br>D112 | D132 | D160/<br>D180 |
| 031                   | 11               | 12            |      |               |
| 040                   | 14               | 15            |      |               |
| 050                   | 17               | 20            |      |               |
| 056                   | 21               | 23            | 29   |               |
| 063                   | 23               | 26            | 36   | 44            |
| 071                   | 26               | 29            | 40   | 49            |
| 080                   | 31               | 38            | 46   | 57            |
| 100                   | 50               | 56            | 72   | 87            |
| 125                   |                  | 72            | 91   | 111           |



**Table 5.**

RVLE, RSSL, RDLE & RDLS

Alpha/Beta Industrial axial flow roof units  
Motor Frame Size

| Model<br>RVLE, RSSL,<br>RDLE & RDLS | Motor Frame Size |               |      |               |               |
|-------------------------------------|------------------|---------------|------|---------------|---------------|
|                                     | D80/<br>D90      | D100/<br>D112 | D132 | D160/<br>D180 | D200/<br>D225 |
| 050                                 | 39               | 41            |      |               |               |
| 056                                 | 39               | 41            |      |               |               |
| 063                                 | 49               | 51            |      |               |               |
| 071                                 | 49               | 51            |      |               |               |
| 080                                 | 66               | 68            | 71   |               |               |
| 100                                 |                  | 90            | 94   |               |               |

# AXIAL FLOW FANS COMPONENT WEIGHTS



**Table 6.**  
RVE, RSS, RDE & RDS - New Generation axial flow roof units

| Model RDE/S & RVE/SS | Motor Frame Size |            |      |            |            |
|----------------------|------------------|------------|------|------------|------------|
|                      | D80/ D90         | D100/ D112 | D132 | D160/ D180 | D200/ D225 |
| 031                  | 20               | 25         |      |            |            |
| 040                  | 28               | 33         |      |            |            |
| 050                  | 38               | 44         |      |            |            |
| 056                  | 38               | 47         | 47   | 59         |            |
| 063                  | 55               | 63         | 63   | 78         |            |
| 071                  | 57               | 67         | 67   | 82         |            |
| 080                  | 71               | 85         | 86   | 100        |            |
| 100                  | 106              | 123        | 128  | 148        | 253        |
| 125                  | 153              | 174        | 174  | 282        | 338        |



**Table 7.**  
HC & SS Series - High Capacity & Smoke Spill axial flow roof units

| Model HC & SS | Motor Frame Size |            |      |            |      |      |      |      |
|---------------|------------------|------------|------|------------|------|------|------|------|
|               | D80/ D90         | D100/ D112 | D132 | D160/ D180 | D200 | D225 | D250 | D280 |
| 050           | 38               | 45         |      |            |      |      |      |      |
| 056           | 40               | 47         | 51   | 60         |      |      |      |      |
| 063           | 54               | 62         | 67   | 77         |      |      |      |      |
| 071           | 60               | 69         | 73   | 84         |      |      |      |      |
| 080           | 70               | 84         | 85   | 99         |      |      |      |      |
| 100           |                  | 122        | 127  | 147        | 238  | 252  |      |      |
| 125           |                  | 154        | 161  | 262        | 300  | 328  |      |      |
| 140           |                  |            | 192  | 310        | 350  | 371  | 384  | 435  |
| 160           |                  |            | 227  | 362        | 410  | 433  | 449  | 508  |
| 180           |                  |            | 361  | 418        | 473  | 500  | 518  | 583  |

## ANCILLARY EQUIPMENT WEIGHTS

**Table 10.**

Approximate ancillary equipment weights

| Fan Dia. mm | Matching Flanges kg, each | Mounting Feet kg, each | Inlet Cones |            | Wire Guards kg, each |
|-------------|---------------------------|------------------------|-------------|------------|----------------------|
|             |                           |                        | No Guard    | With Guard |                      |
| 315         | 0.7                       | 0.6                    | 2.5         | 3.6        | 1.1                  |
| 400         | 1.0                       | 1.0                    | 4.5         | 6.1        | 1.6                  |
| 500         | 1.3                       | 1.6                    | 6.2         | 8.4        | 2.2                  |
| 560         | 1.4                       | 2.1                    | 7.5         | 10.0       | 2.5                  |
| 630         | 1.6                       | 2.5                    | 9.0         | 11.6       | 2.6                  |
| 710         | 4.7                       | 2.7                    | 11.1        | 14.3       | 3.2                  |
| 800         | 5.2                       | 3.2                    | 14.4        | 17.9       | 3.5                  |
| 1000        | 7.4                       | 8.0                    | 20.0        | 26.1       | 6.1                  |
| 1250        | 9.1                       | 14                     | 29.0        | 36.8       | 7.8                  |
| 1400        | 17.8                      | 19                     | 29.7        | 39.3       | 9.6                  |
| 1600        | 20.3                      | 23                     | 51.3        | 60.9       | 9.6                  |
| 1800        | 22.8                      | 35                     | 81.2        | 93.7       | 12.5                 |
| 2000        | 25.3                      | 40                     | 83.2        | 95.7       | 12.5                 |

## IMPELLER WEIGHTS

**Table 8.**

Approximate impeller weights

| Hub Dia. mm | Number of blades | Max. Dia. mm | Weight, kg |       |             |     |
|-------------|------------------|--------------|------------|-------|-------------|-----|
|             |                  |              | GRP        | Alum. | Anti-Static |     |
| 131         | 3                | 800          | 1.3        | 2.1   | 1.3         |     |
|             | 6                |              | 1.7        | 3.2   | 1.7         |     |
| 150         | 5                | 900          | 1.1        | 2.6   | 1.1         |     |
|             | 10               |              | 2.1        | 4.1   | 2.1         |     |
| 181         | 3                | 900          | 1.9        | 2.8   | 1.9         |     |
|             | 6                |              | 2.3        | 3.9   | 2.3         |     |
|             | 9                |              | 2.8        | 5.0   | 2.8         |     |
| 250         | 7                | 1000         | 3.3        | 4.9   | 3.3         |     |
|             | 14               |              | 4.2        | 7.3   | 4.2         |     |
| 251         | 3                | 1000         | 3.3        | 4.2   | 3.3         |     |
|             | 6                |              | 3.7        | 5.4   | 3.7         |     |
|             | 9                |              | 4.1        | 6.5   | 4.1         |     |
| 255         | 12               | 1000         | 4.5        | 7.6   | 4.5         |     |
|             | 3                |              | 1300       | 5.0   | 7.9         | 5.2 |
|             | 6                |              |            | 6.3   | 11.9        | 6.6 |
| 350         | 3                | 1400         | 9.5        | 12.6  | 9.6         |     |
|             | 6                |              | 10.8       | 16.6  | 11.1        |     |
|             | 9                |              | 12.1       | 20.6  | 12.5        |     |
| 400         | 12               | 1800         | 13.4       | 24.6  | 14.0        |     |
|             | 3                |              | 19.0       | 27.0  | -           |     |
|             | 6                |              | 24.0       | 40.0  | -           |     |
| 550         | 9                | 2000         | 29.0       | 53.0  | -           |     |
|             | 3                |              | 25.0       | 33.0  | -           |     |
|             | 6                |              | 30.0       | 46.0  | -           |     |
| 550         | 9                | 2000         | 35.0       | 58.0  | -           |     |
|             | 12               |              | 40.0       | 71.0  | -           |     |

## MOTOR WEIGHTS

**Table 9.**

Approximate motor weights

| Motor Frame | Shaft Dia. mm | App. wt. kg | Motor kW ratings |        |         |        |
|-------------|---------------|-------------|------------------|--------|---------|--------|
|             |               |             | 48 r/s           | 24 r/s | 16 r/s  | 12 r/s |
| D71         | 14            | 11          | 0.37             | 0.37   | -       | -      |
| D71         | 14            | 16          | 0.55             | -      | -       | -      |
| D80         | 19            | 18          | 0.75             | 0.55   | 0.37    | -      |
| D80         | 19            | 22          | 1.1              | 0.75   | 0.55    | -      |
| D90S        | 24            | 25          | 1.5              | 1.1    | 0.75    | -      |
| D90L        | 24            | 30          | 2.2              | 1.5    | 1.1     | 0.55   |
| D100L       | 28            | 38          | 3                | 2.2    | 1.5     | 0.75   |
| D100L       | 28            | 44          | -                | 3      | -       | 1.1    |
| D112M       | 28            | 52          | 4                | 4      | 2.2     | 1.5    |
| D132S       | 38            | 73          | 5.5/7.5          | 5.5    | 3       | 2.2    |
| D132M       | 38            | 87          | -                | 7.5/10 | 4/5.5   | 3      |
| D160M       | 42            | 130         | 11/15            | 11     | 7.50    | 4/5.5  |
| D160L       | 42            | 150         | 18.50            | 15     | 11      | 7.50   |
| D180M       | 48            | 185         | 22               | 18.50  | -       | -      |
| D180L       | 48            | 200         | -                | 22     | 15      | 11     |
| D200L       | 55            | 265         | 30/37            | 30     | 18.5/22 | 15     |
| D225S       | 55/60         | 310         | -                | 37     | -       | 18.50  |
| D225M       | 55/60         | 330         | 45               | 45     | 30      | 22     |
| D250S       | 60/70         | 430         | -                | -      | 37      | 30     |
| D250M       | 60/65         | 430         | 55               | 55     | 45      | 37     |
| D280S       | 65/70         | 660         | 75               | 75     | 55      | 45     |
| D280M       | 65/80         | 700         | 90               | 90     | 75      | 55     |