

# BRF

## HORIZONTAL OUTLET ROOF FANS / Backward Curved

### Fan Components and Material Properties

The mounting plate and fan cap of the BRF series horizontal discharge centrifugal fans are made of electrostatic powder coated sheet metal. The fan wheels of the models BRF 160-400 are made of high quality galvanized sheet steel which is resistant to corrosion. The fan wheels of the BRF 450-500-560 models are made of aluminum sheet. All models have an external rotor motor with closed structure. The device is capable of handling air at max.40°C.

### Fan Structure

The fan blades are aerodynamically curved and provide regular flow. The fans are composed of backward sloping and infrequently arranged fins.

### Benefits

Lightweight and compact housing for easy installation. Thanks to the aerodynamic wing structure, they work quietly. Speed can be adjusted with speed control devices.

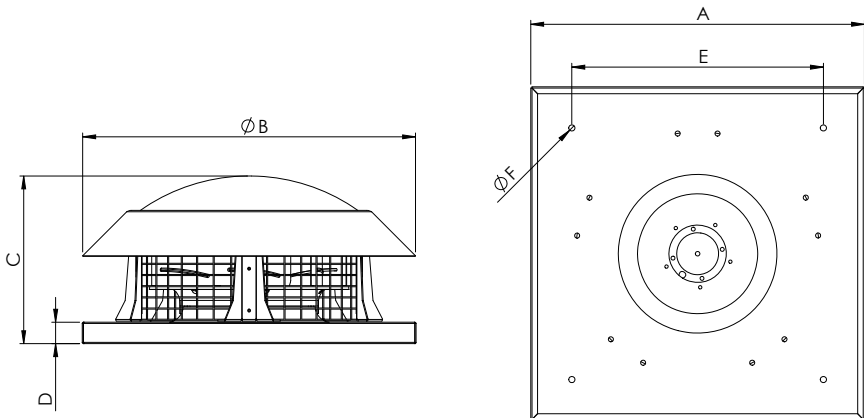
### Speed Control

Optional control devices can be provided. Speed control can be done with linear voltage regulator in 1~phase products (see BSC accessory). Speed control with frequency inverter can be done in 3~phase products (see BSC-F accessory)

### Usage Areas

In order to improve the indoor air quality, BRF roof fans operate at low noise level with an external rotor motor. It is used on the roofs of the places where the air is to be refreshed and the chimneys on the roofs of the bathrooms and wc's which are opened to the common shaft of the buildings.

### Technical Drawing and Tables

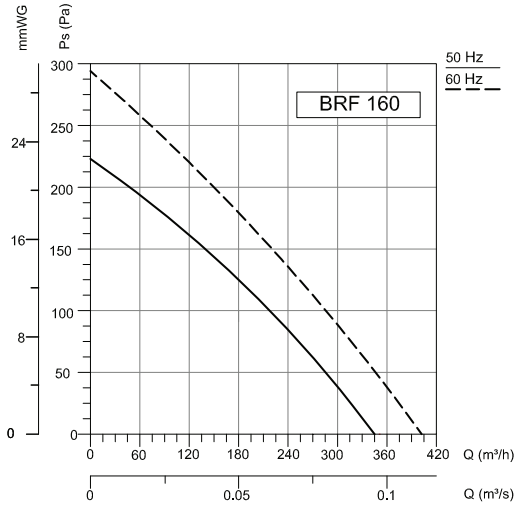


| TYPE    | A   | B   | C   | D  | E   | F  |
|---------|-----|-----|-----|----|-----|----|
| BRF 160 | 252 | 260 | 140 | 25 | 210 | 6  |
| BRF 180 | 252 | 260 | 140 | 25 | 210 | 6  |
| BRF 225 | 336 | 386 | 212 | 35 | 274 | 11 |
| BRF 250 | 370 | 386 | 225 | 35 | 290 | 11 |
| BRF 315 | 454 | 443 | 293 | 40 | 333 | 11 |
| BRF 355 | 595 | 595 | 285 | 40 | 450 | 11 |
| BRF 400 | 595 | 685 | 355 | 40 | 450 | 12 |
| BRF 450 | 664 | 685 | 400 | 40 | 450 | 12 |
| BRF 500 | 798 | 824 | 385 | 40 | 600 | 12 |
| BRF 560 | 798 | 824 | 400 | 40 | 600 | 12 |

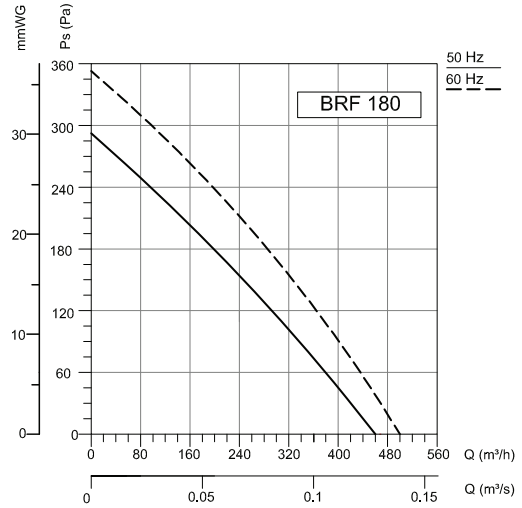
Dimensions are in (mm)

| TYPE    | VOLTAGE | FREQUENCY | POWER    | CURRENT   | CAPACITOR | SPEED     | AIR FLOW  | SOUND PRESSURE | INSULATION CLASS | PROTECTION CLASS | WEIGHT |
|---------|---------|-----------|----------|-----------|-----------|-----------|-----------|----------------|------------------|------------------|--------|
|         | V       | Hz        | W        | (A)       | (µF)      | r.p.m     | m³/h      | dB(A)          | Ins.cl.          | IP               | kg     |
| BRF 160 | 230     | 50/60     | 60       | 0,3       | 2         | 2600/3000 | 346/400   | 44-36          | B                | 44               | 3,5    |
| BRF 180 | 230     | 50/60     | 70/90    | 0,35/0,43 | 2,5       | 2500/2750 | 460/500   | 49-41          | B                | 44               | 3,7    |
| BRF 225 | 230     | 50/60     | 80/100   | 0,40/0,50 | 3         | 2750/3100 | 902/1020  | 50-42          | B                | 44               | 7      |
| BRF 250 | 230     | 50/60     | 125/175  | 0,61/0,91 | 6         | 2800/3180 | 1212/1375 | 52-44          | B                | 44               | 8      |
| BRF 315 | 230     | 50/60     | 130/150  | 0,8       | 6         | 1450/1740 | 2000/2400 | 47-39          | F                | 44               | 12,8   |
| BRF 355 | 230     | 50/60     | 200/245  | 1,05      | 6         | 1400/1680 | 2900/3500 | 46-38          | F                | 44               | 18     |
| BRF 400 | 230     | 50/60     | 310/460  | 1,56/2,27 | 10        | 1380/1560 | 4100/4600 | 51-43          | F                | 44               | 22     |
| BRF 450 | 230     | 50/60     | 430/655  | 2,2/3,2   | 10        | 1370/1525 | 5400/6000 | 52-44          | F                | 44               | 28     |
| BRF 500 | 380 Δ/Y | 50        | 840/580  | 1,95/1,12 | -         | 1360/1100 | 7600/6150 | 54-46          | F                | 44               | 45,5   |
| BRF 560 | 380 Δ/Y | 50        | 1440/840 | 2,8/1,6   | -         | 1300/950  | 9800/7150 | 66-58          | F                | 44               | 48     |

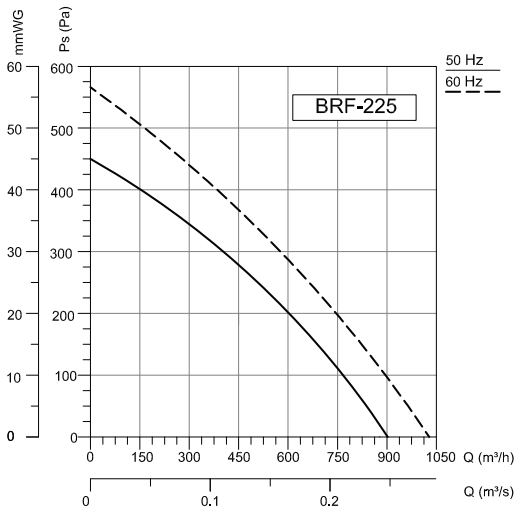
The sound level is measured at a distance of 4-10 m in open field condition.



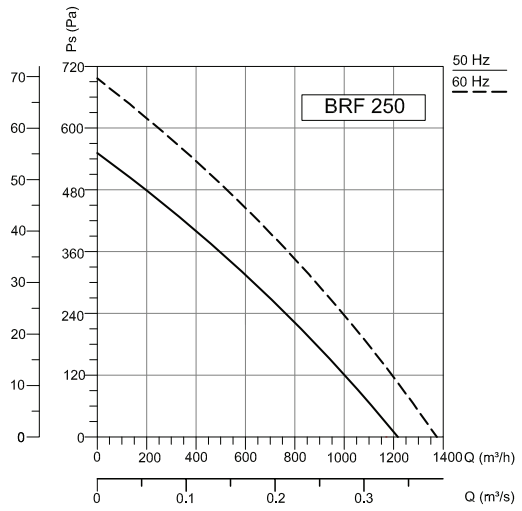
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 66  | 37 | 55  | 59  | 61  | 60   | 57   | 52   | 45   | dB(A) |
| L <sub>WA</sub> Surrounding | 67  | 38 | 56  | 60  | 62  | 61   | 58   | 53   | 46   | dB(A) |



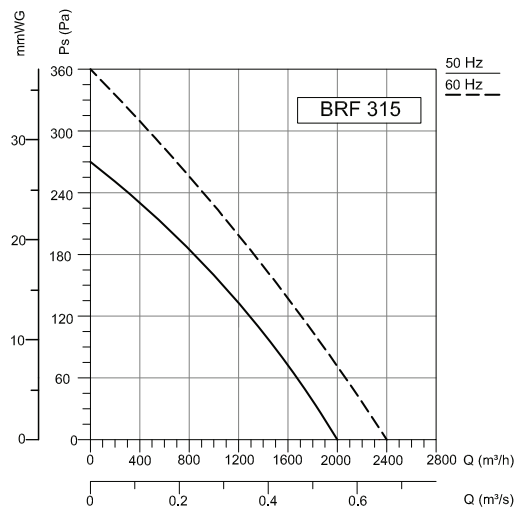
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 70  | 41 | 59  | 63  | 65  | 64   | 61   | 56   | 49   | dB(A) |
| L <sub>WA</sub> Surrounding | 71  | 42 | 60  | 64  | 66  | 65   | 62   | 57   | 50   | dB(A) |



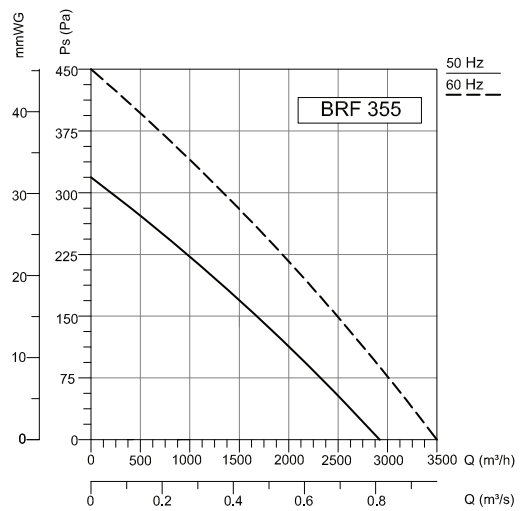
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 72  | 43 | 61  | 65  | 67  | 66   | 63   | 58   | 51   | dB(A) |
| L <sub>WA</sub> Surrounding | 73  | 44 | 60  | 66  | 68  | 67   | 64   | 59   | 52   | dB(A) |



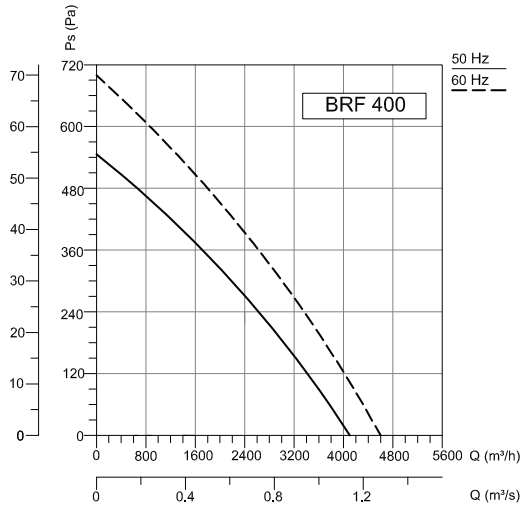
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 74  | 45 | 63  | 67  | 69  | 68   | 65   | 60   | 53   | dB(A) |
| L <sub>WA</sub> Surrounding | 75  | 46 | 62  | 68  | 70  | 69   | 66   | 61   | 54   | dB(A) |



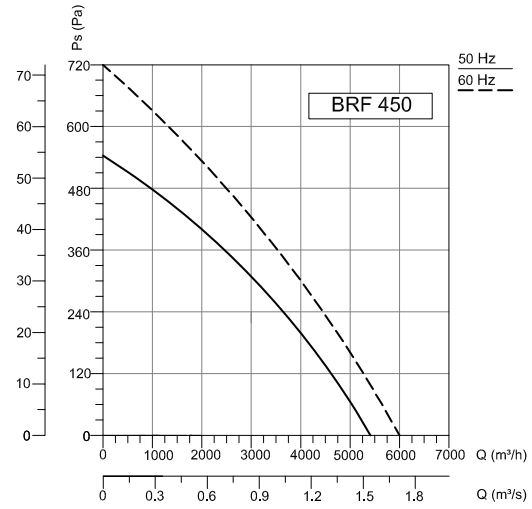
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 68  | 55 | 57  | 61  | 63  | 62   | 59   | 54   | 47   | dB(A) |
| L <sub>WA</sub> Surrounding | 70  | 57 | 59  | 63  | 65  | 64   | 61   | 56   | 49   | dB(A) |



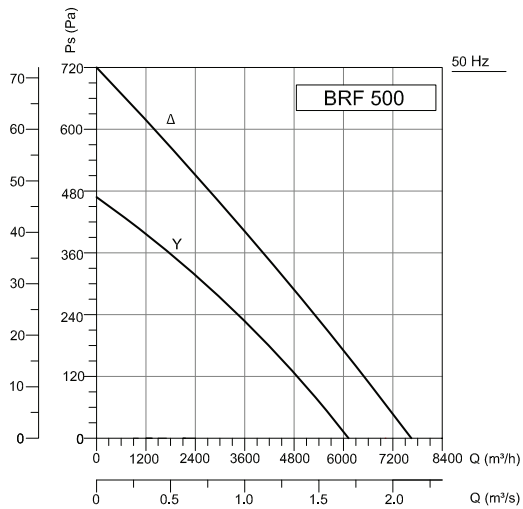
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 67  | 54 | 56  | 60  | 62  | 61   | 58   | 53   | 46   | dB(A) |
| L <sub>WA</sub> Surrounding | 69  | 56 | 58  | 62  | 64  | 63   | 60   | 55   | 48   | dB(A) |



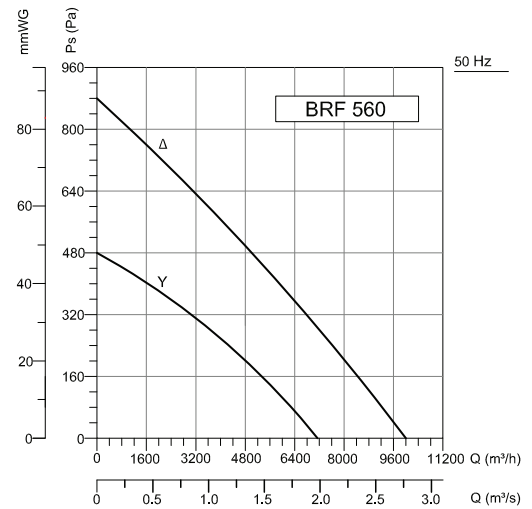
| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 75  | 37 | 59  | 61  | 50  | 62   | 04   | 03   | 02   | dB(A) |
| L <sub>WA</sub> Surrounding | 74  | 36 | 56  | 55  | 61  | 54   | 52   | 05   | 09   | dB(A) |



| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 70  | 37 | 04  | 50  | 53  | 52   | 08   | 03   | 00   | dB(A) |
| L <sub>WA</sub> Surrounding | 75  | 30 | 53  | 55  | 61  | 58   | 53   | 08   | 06   | dB(A) |



| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 75  | 34 | 59  | 69  | 61  | 55   | 57   | 04   | 05   | dB(A) |
| L <sub>WA</sub> Surrounding | 77  | 35 | 53  | 54  | 67  | 61   | 54   | 52   | 06   | dB(A) |



| Frequency                   | Tot | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz    |
|-----------------------------|-----|----|-----|-----|-----|------|------|------|------|-------|
| L <sub>WA</sub> Inlet       | 85  | 04 | 63  | 64  | 41  | 68   | 60   | 61   | 57   | dB(A) |
| L <sub>WA</sub> Surrounding | 87  | 04 | 60  | 68  | 42  | 49   | 64   | 69   | 50   | dB(A) |

Accessories

