# RDHBM Series Box-type Fan

Professional HVAC Fan &Motors Manufacturer





Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

# Type Code

ADHBM 8 - 8 - 001

- Series Number
- Width of Impeller
- Diameter of Impeller
- ATBM Series/ADHBM Series
  RDHBM Series

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# The RDHBM Series Box-type Fan

## Aluminum Frame Structure

Channel steel base,not easy to be deformed.
Aluminum frame,easy to be installed,strong structure and low weight.
High quality painted steel plate and Cold Rolled Steel painted with static electronic process can prolong fan life.
Fine seam disposition.Low air leakage.
The box board is made of foaming technology and sound insulation cotton.

## Scientific Cabinet Design

Save every possible space.
Confirm strict tolerance of the parts to meet the precision.
Save every possible space to broaden inlet size which introduces the air-stream smoothly.
Motor position and belt length have been arranged without any redundancy.
Access door and side board used as one can save the cabinet size.

## High quality parts with high reliability

Heavy duly fan shaft has been turned and grounded and designed at the maximum speed 150%.
Casting iron pulley has long life.
Bearing life is L10: 100000 hours.
Wheel balance level G2.5.
The maximum pressure: 250Pa. no deformation and vibration during using.
Human—oriented design concept benefits the maintenance work.
Access door and side board used as one can save the cabinet size.
Access door designed in both sides and can be opened tool free.

## Elegant Shape

Introduce the air-stream according to hydromechanics features to improve fan efficiency and low down noise.
Hyperbolic curve venturi inlet which meets the hydromechanics requirement can reduce airflow noise.
One time shaped inlet cone can avoid turbulence successfully.
Wheel inlet cone perfectly matches the fan inlet can avoid turbulence successfully.
Spoiler used near the outlet can reduce turbulence successfully.
The avoidance of resonance design can reduce the noise caused by it.

## Precise Wheel Balancing

Each wheel must be statically and dynamically balanced to the level of G2.5.
Extend bearing life, decrease shaft vibration and fan noise.

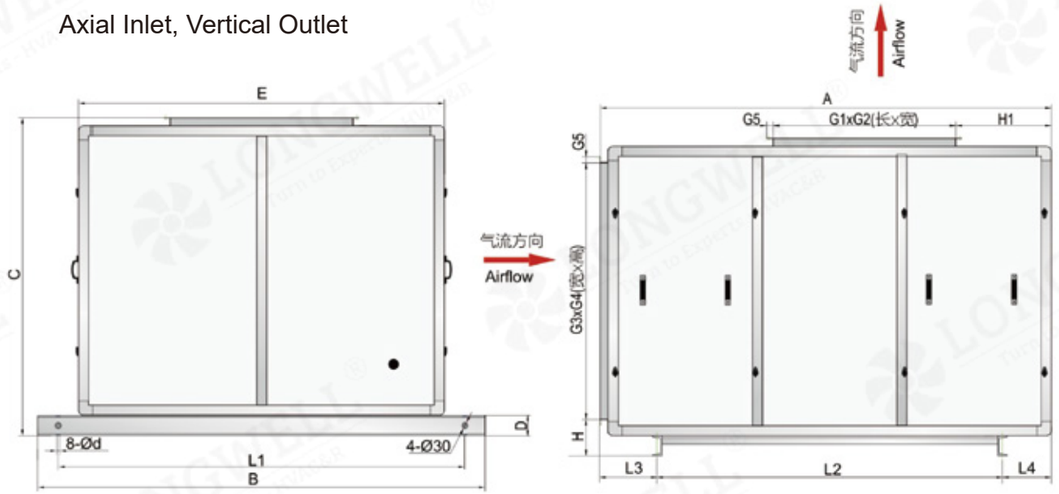
Dual-purpose fans are double inlet centrifugal cabinet fan, The wheel of RDHBM is backward inclined type .The structure of the fan is aluminum frame with insulated painted steep wail housing. You may find our fan not only light but also elegant with low noise. We took the consideration of saving every space so as to reduce fan weight without influence its function which is useful in transportation and installation. What's more, our dual-purpose fans have been designed with human-oriented concept which shows our human-oriented human-machine interface . lionking is devoted to providing our clients with safe, reliable, easily-operated, and elegant ventilation equipment, and also human-oriented ventilation concepts.

All kinds of general ventilation, filtered supply, light industry process ventilation and smoke exhaust application etc. Double-speed motor and VFD motor can be used upon request.

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# RDHBM Series Fan Overall Dimension

Axial Inlet, Vertical Outlet



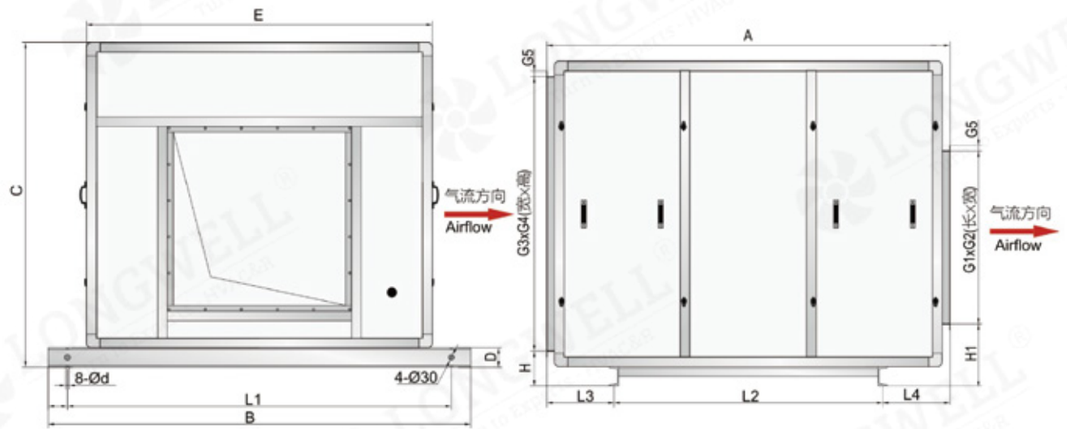

Unit:mm

| Model | A | B | C | D | E | H | H1 | G1 | G2 | G3 | G4 | G5 | L1 | L2 | L3 | L4 | d |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RDHBM 8-8 | 1000 | 990 | 600 | 50 | 690 | 111 | 215 | 256 | 256 | 388 | 568 | 30 | 850 | 600 | 220 | 180 | 15 |
| RDHBM 9-9 | 1040 | 1020 | 640 | 50 | 720 | 111 | 214 | 288 | 288 | 428 | 598 | 30 | 880 | 660 | 210 | 170 | 15 |
| RDHBM 10-10 | 1090 | 1050 | 680 | 50 | 750 | 111 | 240 | 322 | 322 | 468 | 628 | 30 | 910 | 680 | 225 | 185 | 15 |
| RDHBM 11-11 | 1210 | 1100 | 733 | 63 | 800 | 125 | 252 | 361 | 361 | 508 | 678 | 30 | 960 | 750 | 240 | 220 | 15 |
| RDHBM 12-12 | 1310 | 1270 | 808 | 63 | 970 | 134 | 281 | 404 | 404 | 536 | 828 | 30 | 1130 | 880 | 235 | 195 | 15 |
| RDHBM 14-14 | 1390 | 1350 | 868 | 63 | 1050 | 134 | 306 | 453 | 453 | 623 | 908 | 30 | 1210 | 1000 | 215 | 175 | 15 |
| RDHBM 16-16 | 1560 | 1560 | 1035 | 80 | 1260 | 151 | 334.5 | 507 | 507 | 773 | 1118 | 30 | 1420 | 1070 | 265 | 225 | 15 |
| RDHBM 18-18 | 1690 | 1630 | 1110 | 80 | 1330 | 151 | 368 | 569 | 569 | 848 | 1188 | 30 | 1470 | 1170 | 280 | 240 | 15 |
| RDHBM 20-20 | 1790 | 1800 | 1185 | 80 | 1400 | 151 | 395 | 638 | 638 | 1258 | 923 | 30 | 1600 | 1240 | 295 | 255 | 15 |
| RDHBM 22-22 | 1965 | 1850 | 1315 | 100 | 1450 | 171 | 424 | 715 | 715 | 1308 | 1033 | 30 | 1650 | 1330 | 338 | 298 | 18 |
| RDHBM 24-24 | 2090 | 2000 | 1420 | 100 | 1600 | 171 | 477 | 801 | 801 | 1138 | 1458 | 30 | 1800 | 1320 | 405 | 365 | 18 |
| RDHBM 28-28 | 2220 | 2200 | 1560 | 100 | 1800 | 181 | 470 | 898 | 898 | 1638 | 1258 | 30 | 2000 | 1700 | 280 | 240 | 18 |
| RDHBM 32-32 | 2470 | 2400 | 1690 | 100 | 2010 | 181 | 528 | 1007 | 1007 | 1848 | 1388 | 30 | 2200 | 1790 | 360 | 320 | 18 |
| RDHBM 35-35 | 2690 | 2600 | 1870 | 100 | 2210 | 181 | 587 | 1130 | 1130 | 2048 | 1568 | 30 | 2400 | 2100 | 315 | 275 | 18 |
| RDHBM 39-39 | 2840 | 2750 | 2000 | 100 | 2360 | 181 | 625 | 1267 | 1267 | 2198 | 1698 | 30 | 2550 | 2200 | 340 | 300 | 18 |



# RDHBM Series Fan Overall Dimension

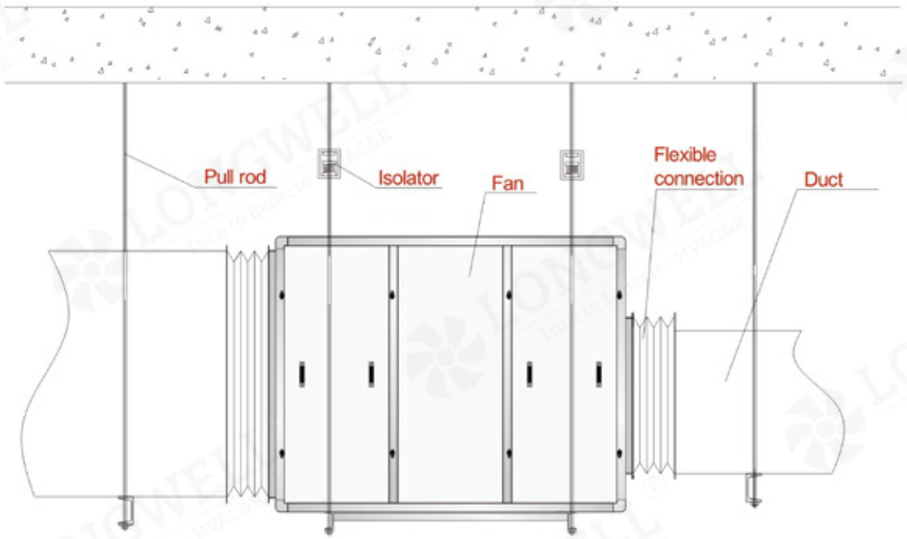
Axial Inlet and Axial Outlet



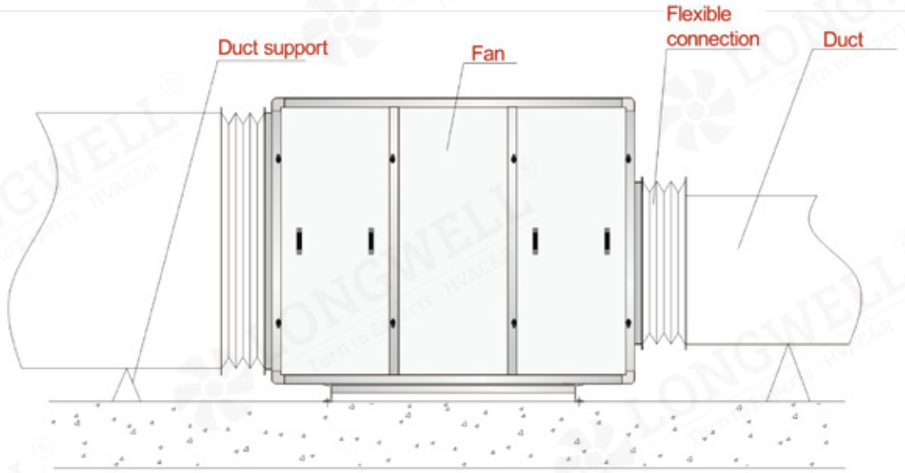

Unit:mm

| Model | A | B | C | D | E | H | H1 | G1 | G2 | G3 | G4 | G5 | L1 | L2 | L3 | L4 | d |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RDHBM 8-8 | 960 | 990 | 625 | 50 | 690 | 111 | 162 | 256 | 256 | 453 | 568 | 30 | 850 | 600 | 180 | 180 | 15 |
| RDHBM 9-9 | 1000 | 1020 | 670 | 50 | 720 | 111 | 159 | 288 | 288 | 498 | 598 | 30 | 880 | 650 | 175 | 175 | 15 |
| RDHBM 10-10 | 1050 | 1050 | 710 | 50 | 750 | 111 | 162 | 322 | 322 | 538 | 628 | 30 | 910 | 680 | 185 | 185 | 15 |
| RDHBM 11-11 | 1120 | 1100 | 813 | 63 | 800 | 124 | 174 | 361 | 361 | 628 | 678 | 30 | 960 | 720 | 200 | 200 | 15 |
| RDHBM 12-12 | 1250 | 1270 | 878 | 63 | 970 | 134 | 182 | 404 | 404 | 673 | 828 | 30 | 1130 | 850 | 200 | 200 | 15 |
| RDHBM 14-14 | 1300 | 1350 | 953 | 63 | 1050 | 134 | 185 | 453 | 453 | 748 | 908 | 30 | 1210 | 930 | 185 | 185 | 15 |
| RDHBM 16-16 | 1480 | 1560 | 1130 | 80 | 1260 | 151 | 279 | 507 | 507 | 908 | 1118 | 30 | 1420 | 1060 | 210 | 210 | 15 |
| RDHBM 18-18 | 1550 | 1630 | 1220 | 80 | 1330 | 151 | 280 | 569 | 569 | 998 | 1188 | 30 | 1470 | 1100 | 225 | 225 | 15 |
| RDHBM 20-20 | 1600 | 1800 | 1310 | 80 | 1400 | 151 | 280 | 638 | 638 | 1258 | 1088 | 30 | 1600 | 1160 | 220 | 220 | 15 |
| RDHBM 22-22 | 1750 | 1850 | 1460 | 100 | 1450 | 171 | 320 | 715 | 715 | 1308 | 1218 | 30 | 1650 | 1300 | 225 | 225 | 18 |
| RDHBM 24-24 | 1880 | 2000 | 1590 | 100 | 1600 | 171 | 319 | 801 | 801 | 1458 | 1348 | 30 | 1794 | 1320 | 280 | 280 | 18 |
| RDHBM 28-28 | 2100 | 2200 | 1685 | 100 | 1800 | 181 | 319 | 898 | 898 | 1420 | 1635 | 30 | 2000 | 1400 | 350 | 350 | 18 |
| RDHBM 32-32 | 2280 | 2400 | 1855 | 100 | 2010 | 181 | 319 | 1007 | 1007 | 1848 | 1593 | 30 | 2200 | 1600 | 340 | 340 | 18 |
| RDHBM 35-35 | 2500 | 2600 | 2180 | 100 | 2210 | 181 | 338 | 1130 | 1130 | 2048 | 1793 | 30 | 2400 | 1700 | 400 | 400 | 18 |
| RDHBM 39-39 | 2650 | 2750 | 2210 | 100 | 2360 | 181 | 342 | 1267 | 1267 | 2198 | 1948 | 30 | 2550 | 1900 | 375 | 375 | 18 |

# RDHBM Ceiling Installation Schematic Diagram




# RDHBM Floor Installation Schematic Diagram








# RDHBM 11-11 Box-type Fan

## *Noise Spectrum*

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

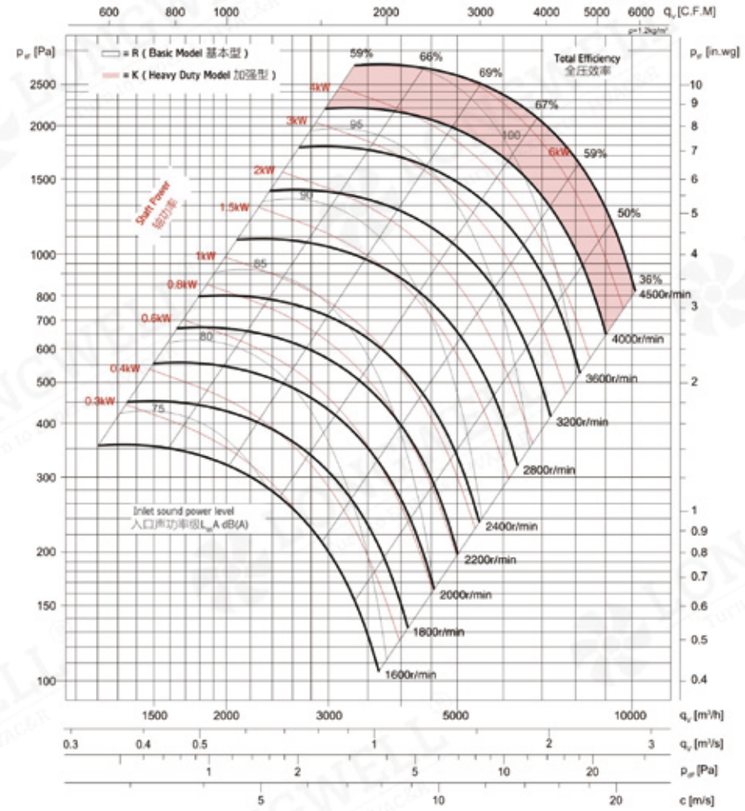
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 59% | -50 | -34 | -32 | -25 | -25 | -27 | -30 | -40 | dB(A) |
| 66% | -51 | -34 | -33 | -25 | -25 | -28 | -30 | -40 | dB(A) |
| 69% | -51 | -34 | -34 | -25 | -25 | -28 | -30 | -40 | dB(A) |
| 67% | -51 | -36 | -35 | -24 | -25 | -27 | -30 | -40 | dB(A) |
| 59% | -51 | -37 | -35 | -25 | -25 | -28 | -30 | -40 | dB(A) |
| 50% | -51 | -38 | -35 | -25 | -25 | -28 | -30 | -40 | dB(A) |
| 36% | -51 | -39 | -35 | -25 | -25 | -28 | -30 | -40 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

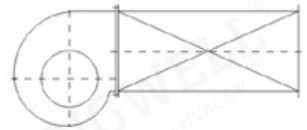
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 59% | -23 | -11 | -10 | -5 | -6 | -8 | -11 | -21 | dB(A) |
| 66% | -24 | -11 | -11 | -5 | -5 | -8 | -11 | -21 | dB(A) |
| 69% | -24 | -11 | -12 | -5 | -5 | -8 | -10 | -21 | dB(A) |
| 67% | -23 | -11 | -12 | -4 | -6 | -8 | -11 | -21 | dB(A) |
| 59% | -21 | -11 | -11 | -5 | -5 | -9 | -11 | -21 | dB(A) |
| 50% | -21 | -11 | -13 | -5 | -5 | -8 | -11 | -20 | dB(A) |
| 36% | -21 | -12 | -13 | -5 | -5 | -8 | -10 | -20 | dB(A) |

## *Performance Curves*

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 280mm | 0.069kg·m² | 4500r/min | 100kg |

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# RDHBM 12-12 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

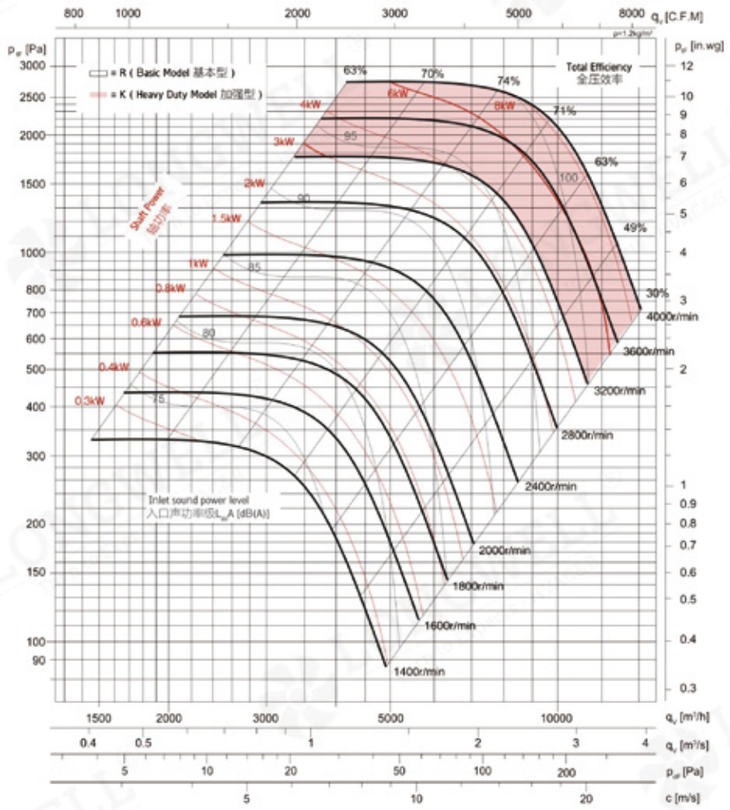
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 63% | -43 | -37 | -35 | -22 | -28 | -30 | -34 | -41 | dB(A) |
| 70% | -44 | -42 | -40 | -21 | -30 | -30 | -34 | -42 | dB(A) |
| 74% | -44 | -43 | -40 | -22 | -29 | -29 | -33 | -41 | dB(A) |
| 71% | -45 | -41 | -39 | -23 | -27 | -27 | -31 | -41 | dB(A) |
| 63% | -45 | -42 | -39 | -23 | -27 | -27 | -30 | -40 | dB(A) |
| 49% | -48 | -44 | -41 | -22 | -28 | -28 | -32 | -40 | dB(A) |
| 30% | -48 | -43 | -39 | -23 | -27 | -27 | -30 | -38 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

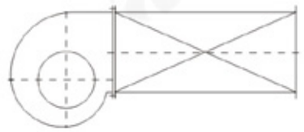
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 63% | -16 | -14 | -13 | -2 | -9 | -10 | -14 | -22 | dB(A) |
| 70% | -17 | -19 | -18 | -1 | -11 | -11 | -15 | -23 | dB(A) |
| 74% | -17 | -20 | -18 | -2 | -9 | -9 | -14 | -22 | dB(A) |
| 71% | -17 | -16 | -16 | -3 | -8 | -8 | -12 | -21 | dB(A) |
| 63% | -15 | -16 | -14 | -4 | -7 | -7 | -11 | -21 | dB(A) |
| 49% | -18 | -17 | -19 | -2 | -9 | -9 | -12 | -21 | dB(A) |
| 30% | -18 | -16 | -17 | -3 | -8 | -7 | -11 | -18 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 315mm | 0.11kg·m² | 4000r/min | 142kg |



# RDHBM 14-14 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

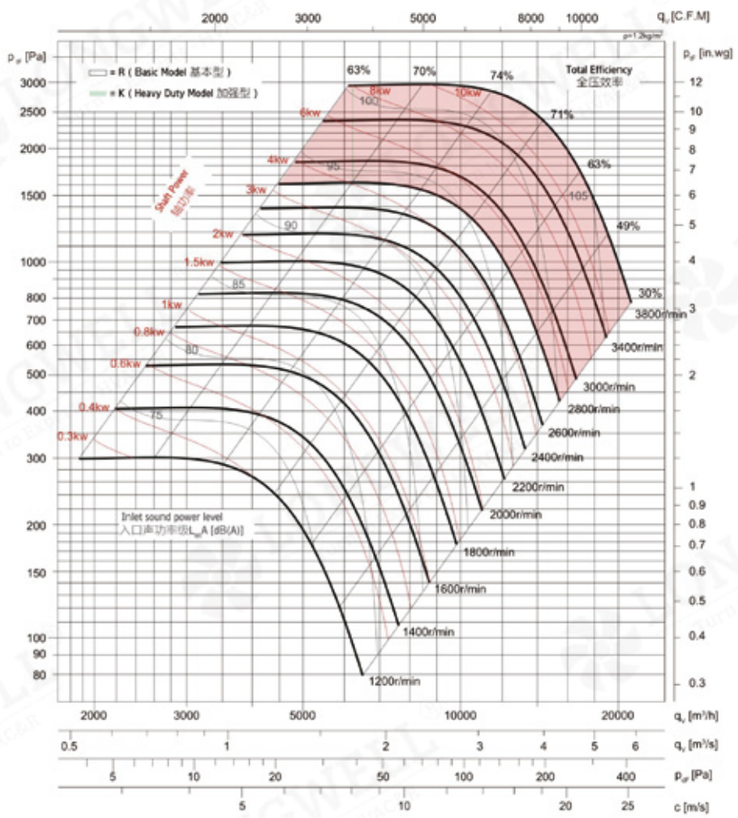
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 63% | -43 | -37 | -35 | -22 | -28 | -30 | -34 | -41 | dB(A) |
| 70% | -44 | -42 | -40 | -21 | -30 | -30 | -34 | -42 | dB(A) |
| 74% | -44 | -43 | -40 | -22 | -29 | -29 | -33 | -41 | dB(A) |
| 71% | -45 | -41 | -39 | -23 | -27 | -27 | -31 | -41 | dB(A) |
| 63% | -45 | -42 | -39 | -23 | -27 | -27 | -30 | -40 | dB(A) |
| 49% | -48 | -44 | -41 | -22 | -28 | -28 | -32 | -40 | dB(A) |
| 30% | -48 | -43 | -39 | -23 | -27 | -27 | -30 | -38 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

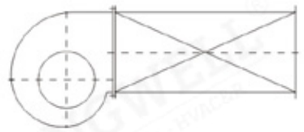
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 63% | -16 | -14 | -13 | -2 | -9 | -10 | -14 | -22 | dB(A) |
| 70% | -17 | -19 | -18 | -1 | -11 | -11 | -15 | -23 | dB(A) |
| 74% | -17 | -20 | -18 | -2 | -9 | -9 | -14 | -22 | dB(A) |
| 71% | -17 | -16 | -16 | -3 | -8 | -8 | -12 | -21 | dB(A) |
| 63% | -15 | -16 | -14 | -4 | -7 | -7 | -11 | -21 | dB(A) |
| 49% | -18 | -17 | -19 | -2 | -9 | -9 | -12 | -21 | dB(A) |
| 30% | -18 | -16 | -17 | -3 | -8 | -7 | -11 | -18 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 355mm | 0.2kg·m² | 3800r/min | 173kg |

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# RDHBM 16-16 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

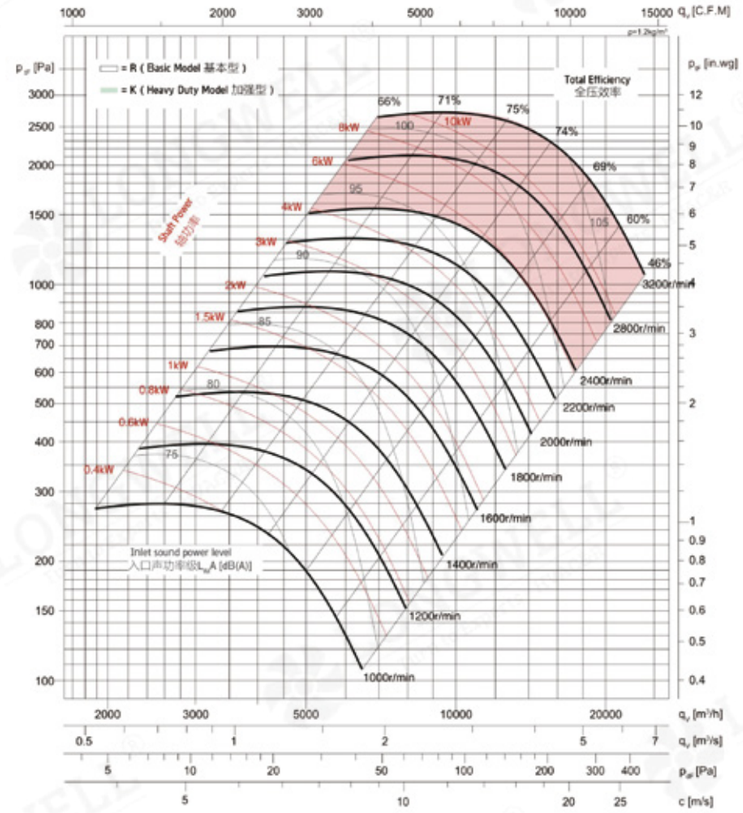
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -43 | -36 | -31 | -23 | -28 | -29 | -32 | -39 | dB(A) |
| 71% | -45 | -38 | -33 | -22 | -28 | -29 | -33 | -39 | dB(A) |
| 75% | -52 | -44 | -39 | -22 | -27 | -29 | -34 | -41 | dB(A) |
| 74% | -53 | -45 | -40 | -22 | -27 | -29 | -34 | -42 | dB(A) |
| 69% | -53 | -45 | -40 | -22 | -27 | -28 | -33 | -42 | dB(A) |
| 60% | -55 | -46 | -41 | -22 | -29 | -29 | -34 | -43 | dB(A) |
| 46% | -54 | -44 | -40 | -22 | -28 | -28 | -32 | -40 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

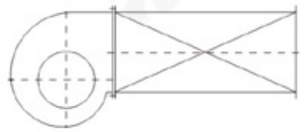
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -16 | -13 | -9 | -3 | -8 | -10 | -13 | -19 | dB(A) |
| 71% | -18 | -15 | -11 | -2 | -8 | -10 | -14 | -20 | dB(A) |
| 75% | -25 | -21 | -17 | -2 | -8 | -10 | -14 | -21 | dB(A) |
| 74% | -25 | -19 | -17 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 69% | -23 | -18 | -15 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 60% | -25 | -19 | -19 | -2 | -9 | -10 | -15 | -23 | dB(A) |
| 46% | -24 | -17 | -17 | -2 | -8 | -9 | -13 | -20 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 400mm | 0.34kg·m² | 3200r/min | 210kg |

# RDHBM 18-18 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

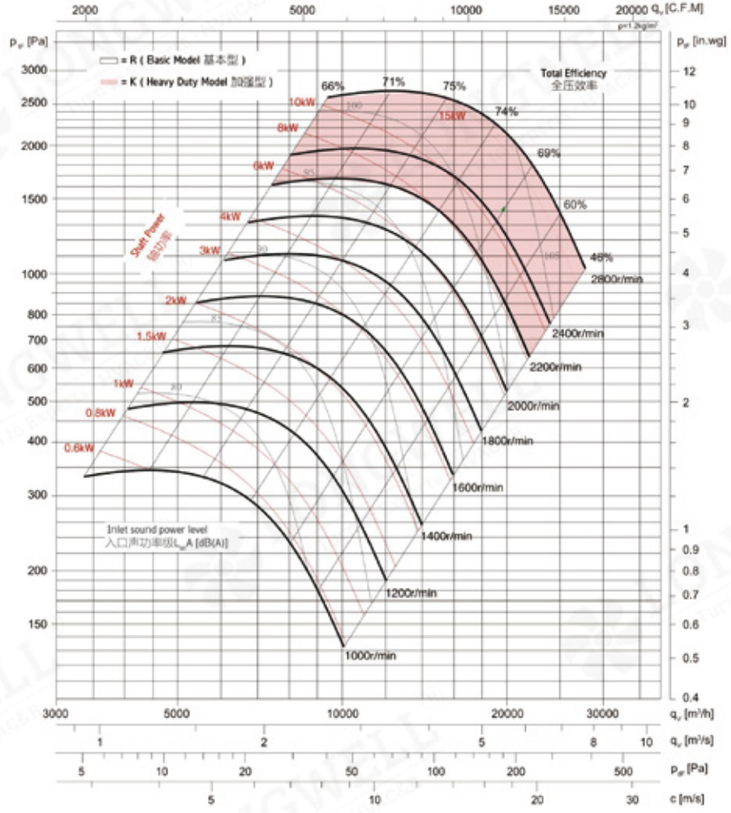
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -43 | -36 | -31 | -23 | -28 | -29 | -32 | -39 | dB(A) |
| 71% | -45 | -38 | -33 | -22 | -28 | -29 | -33 | -39 | dB(A) |
| 75% | -52 | -44 | -39 | -22 | -27 | -29 | -34 | -41 | dB(A) |
| 74% | -53 | -45 | -40 | -22 | -27 | -29 | -34 | -42 | dB(A) |
| 69% | -53 | -45 | -40 | -22 | -27 | -28 | -33 | -42 | dB(A) |
| 60% | -55 | -46 | -41 | -22 | -29 | -29 | -34 | -43 | dB(A) |
| 46% | -54 | -44 | -40 | -22 | -28 | -28 | -32 | -40 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

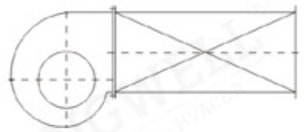
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -16 | -13 | -9 | -3 | -8 | -10 | -13 | -19 | dB(A) |
| 71% | -18 | -15 | -11 | -2 | -8 | -10 | -14 | -20 | dB(A) |
| 75% | -25 | -21 | -17 | -2 | -8 | -10 | -14 | -21 | dB(A) |
| 74% | -25 | -19 | -17 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 69% | -23 | -18 | -15 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 60% | -25 | -19 | -19 | -2 | -9 | -10 | -15 | -23 | dB(A) |
| 46% | -24 | -17 | -17 | -2 | -8 | -9 | -13 | -20 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 450mm | 0.51kg·m² | 2800r/min | 268kg |

# RDHBM 20-20 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

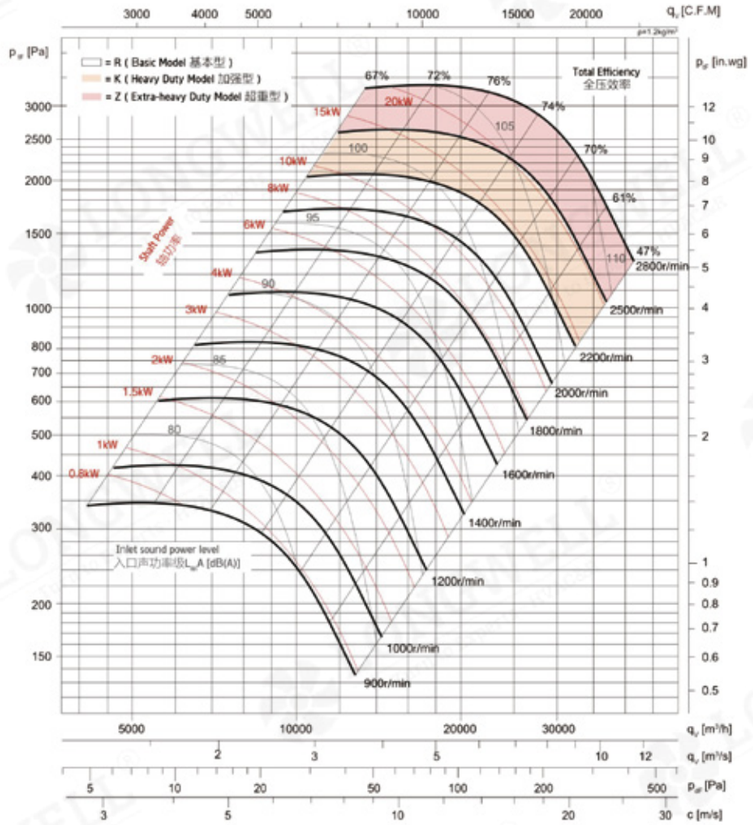
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -43 | -36 | -31 | -23 | -28 | -29 | -32 | -39 | dB(A) |
| 71% | -45 | -38 | -33 | -22 | -28 | -29 | -33 | -39 | dB(A) |
| 75% | -52 | -44 | -39 | -22 | -27 | -29 | -34 | -41 | dB(A) |
| 74% | -53 | -45 | -40 | -22 | -27 | -29 | -34 | -42 | dB(A) |
| 69% | -53 | -45 | -40 | -22 | -27 | -28 | -33 | -42 | dB(A) |
| 60% | -55 | -46 | -41 | -22 | -29 | -29 | -34 | -43 | dB(A) |
| 46% | -54 | -44 | -40 | -22 | -28 | -28 | -32 | -40 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

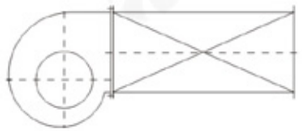
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -16 | -13 | -9 | -3 | -8 | -10 | -13 | -19 | dB(A) |
| 71% | -18 | -15 | -11 | -2 | -8 | -10 | -14 | -20 | dB(A) |
| 75% | -25 | -21 | -17 | -2 | -8 | -10 | -14 | -21 | dB(A) |
| 74% | -25 | -19 | -17 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 69% | -23 | -18 | -15 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 60% | -25 | -19 | -19 | -2 | -9 | -10 | -15 | -23 | dB(A) |
| 46% | -24 | -17 | -17 | -2 | -8 | -9 | -13 | -20 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 500mm | 0.88kg·m² | 2800r/min | 305kg |





# RDHBM 22-22 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

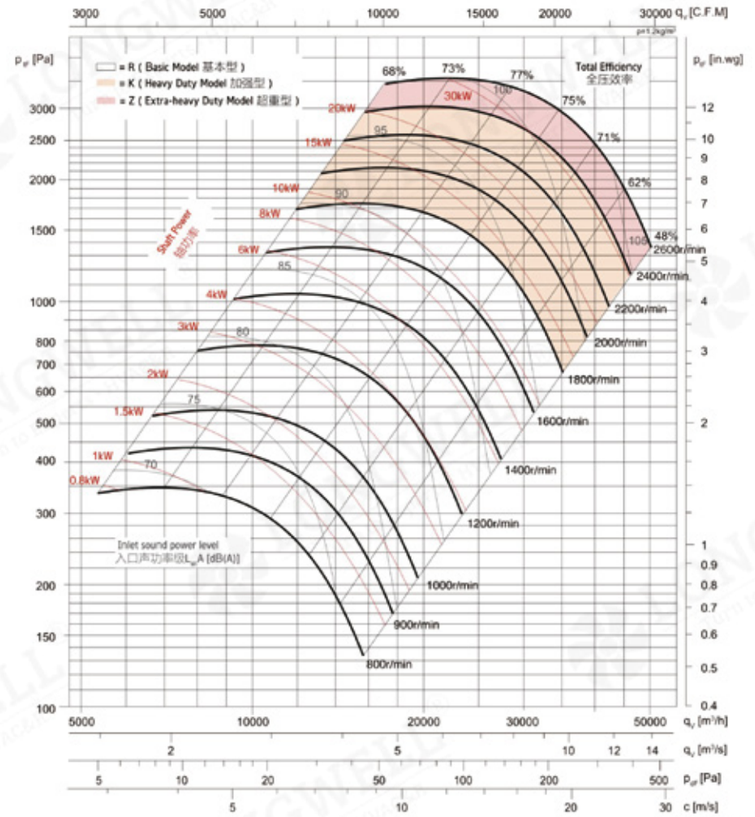
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -43 | -36 | -31 | -23 | -28 | -29 | -32 | -39 | dB(A) |
| 71% | -45 | -38 | -33 | -22 | -28 | -29 | -33 | -39 | dB(A) |
| 75% | -52 | -44 | -39 | -22 | -27 | -29 | -34 | -41 | dB(A) |
| 74% | -53 | -45 | -40 | -22 | -27 | -29 | -34 | -42 | dB(A) |
| 69% | -53 | -45 | -40 | -22 | -27 | -28 | -33 | -42 | dB(A) |
| 60% | -55 | -46 | -41 | -22 | -29 | -29 | -34 | -43 | dB(A) |
| 46% | -54 | -44 | -40 | -22 | -28 | -28 | -32 | -40 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

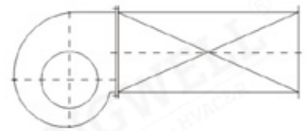
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 66% | -16 | -13 | -9 | -3 | -8 | -10 | -13 | -19 | dB(A) |
| 71% | -18 | -15 | -11 | -2 | -8 | -10 | -14 | -20 | dB(A) |
| 75% | -25 | -21 | -17 | -2 | -8 | -10 | -14 | -21 | dB(A) |
| 74% | -25 | -19 | -17 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 69% | -23 | -18 | -15 | -2 | -7 | -9 | -14 | -23 | dB(A) |
| 60% | -25 | -19 | -19 | -2 | -9 | -10 | -15 | -23 | dB(A) |
| 46% | -24 | -17 | -17 | -2 | -8 | -9 | -13 | -20 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 560mm | 1.42kg·m² | 2600r/min | 435kg |

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# RDHBM 24-24 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

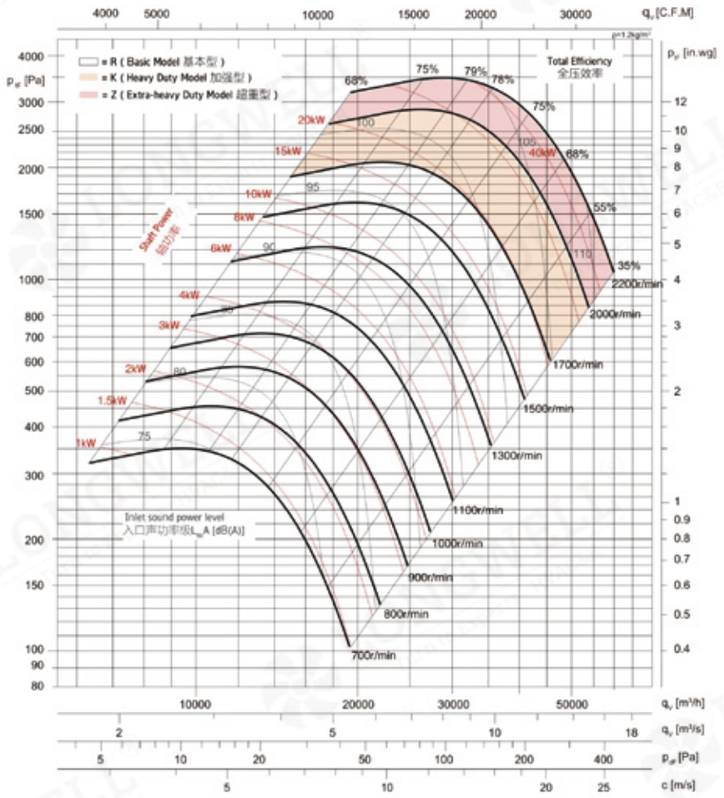
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -49 | -42 | -25 | -28 | -25 | -28 | -35 | -43 | dB(A) |
| 75% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 79% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 78% | -48 | -43 | -25 | -27 | -25 | -28 | -36 | -45 | dB(A) |
| 75% | -48 | -22 | -25 | -27 | -25 | -28 | -35 | -45 | dB(A) |
| 68% | -49 | -21 | -26 | -27 | -25 | -27 | -33 | -44 | dB(A) |
| 55% | -49 | -42 | -26 | -28 | -25 | -27 | -31 | -42 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

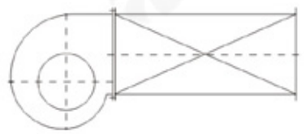
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -24 | -21 | -4 | -8 | -6 | -9 | -16 | -24 | dB(A) |
| 75% | -23 | -21 | -4 | -7 | -6 | -8 | -16 | -24 | dB(A) |
| 79% | -23 | -21 | -5 | -8 | -5 | -8 | -16 | -24 | dB(A) |
| 78% | -23 | -21 | -4 | -7 | -6 | -9 | -17 | -26 | dB(A) |
| 75% | -23 | -20 | -4 | -8 | -6 | -8 | -16 | -26 | dB(A) |
| 68% | -22 | -18 | -5 | -8 | -5 | -8 | -14 | -24 | dB(A) |
| 55% | -22 | -19 | -5 | -8 | -6 | -8 | -12 | -23 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 630mm | 2.32kg·m² | 2200r/min | 480kg |

# RDHBM 28-28 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

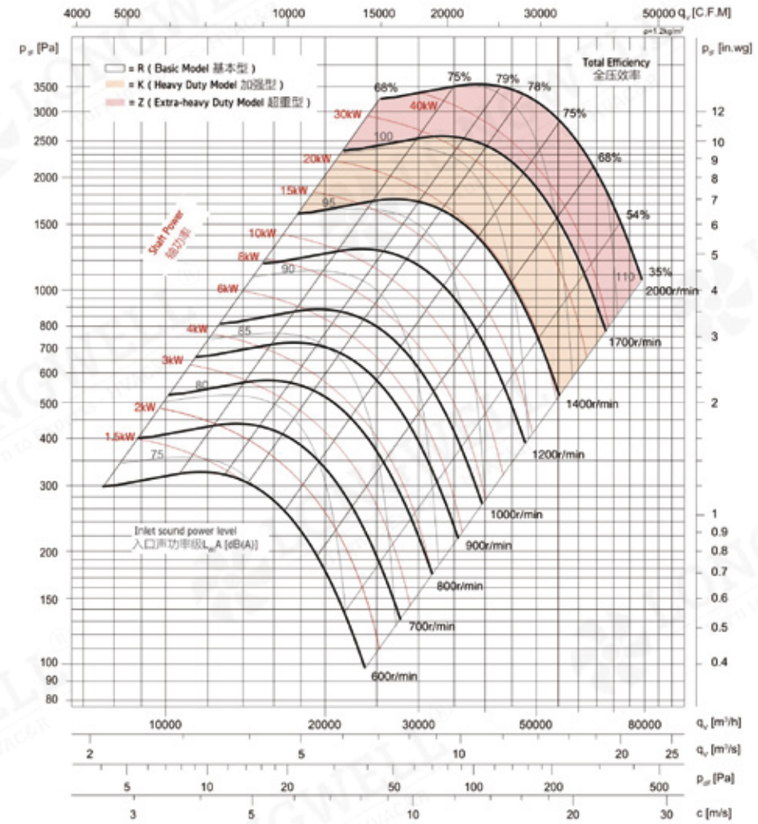
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -49 | -42 | -25 | -28 | -25 | -28 | -35 | -43 | dB(A) |
| 75% | -48 | -22 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 79% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 78% | -48 | -43 | -25 | -27 | -25 | -28 | -36 | -45 | dB(A) |
| 75% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -45 | dB(A) |
| 68% | -49 | -21 | -26 | -27 | -25 | -27 | -33 | -44 | dB(A) |
| 55% | -49 | -42 | -26 | -28 | -25 | -27 | -31 | -42 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

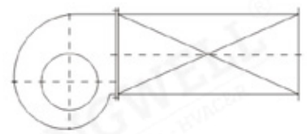
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -24 | -21 | -4 | -8 | -6 | -9 | -16 | -24 | dB(A) |
| 75% | -23 | -21 | -4 | -7 | -6 | -8 | -16 | -24 | dB(A) |
| 79% | -23 | -21 | -5 | -8 | -5 | -8 | -16 | -24 | dB(A) |
| 78% | -23 | -21 | -4 | -7 | -6 | -9 | -17 | -26 | dB(A) |
| 75% | -23 | -20 | -4 | -8 | -6 | -8 | -16 | -26 | dB(A) |
| 68% | -22 | -18 | -5 | -8 | -5 | -8 | -14 | -24 | dB(A) |
| 55% | -22 | -19 | -5 | -8 | -6 | -8 | -12 | -23 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 710mm | 4.75kg·m² | 2000r/min | 670kg |

# RDHBM 32-32 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

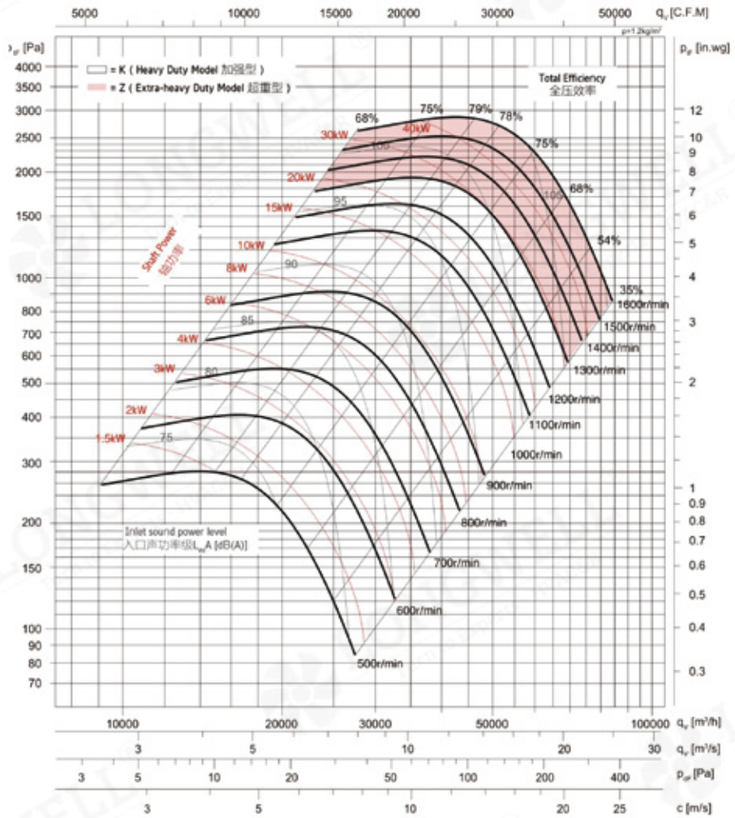
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -49 | -42 | -25 | -28 | -25 | -28 | -35 | -43 | dB(A) |
| 75% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 79% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 78% | -48 | -43 | -25 | -27 | -25 | -28 | -36 | -25 | dB(A) |
| 75% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -45 | dB(A) |
| 68% | -49 | -41 | -26 | -27 | -25 | -27 | -33 | -44 | dB(A) |
| 55% | -49 | -42 | -26 | -28 | -25 | -27 | -31 | -42 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

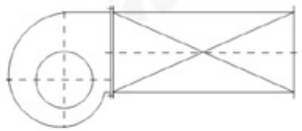
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -24 | -21 | -4 | -8 | -6 | -9 | -16 | -24 | dB(A) |
| 75% | -23 | -21 | -4 | -7 | -6 | -8 | -16 | -24 | dB(A) |
| 79% | -23 | -21 | -5 | -8 | -5 | -8 | -16 | -24 | dB(A) |
| 78% | -23 | -21 | -4 | -7 | -6 | -9 | -17 | -26 | dB(A) |
| 75% | -23 | -20 | -4 | -8 | -6 | -8 | -16 | -26 | dB(A) |
| 68% | -22 | -18 | -5 | -8 | -5 | -8 | -14 | -24 | dB(A) |
| 55% | -22 | -19 | -5 | -8 | -6 | -8 | -12 | -23 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 800mm | 9.25kg·m² | 1600r/min | 750kg |





# RDHBM 35-35 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

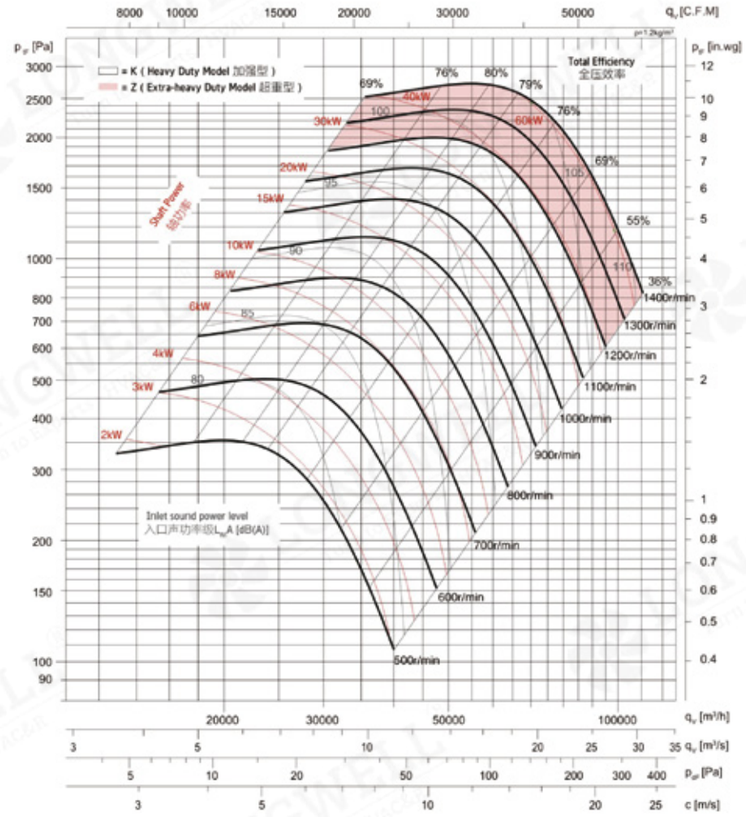
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -49 | -42 | -25 | -28 | -25 | -28 | -35 | -43 | dB(A) |
| 75% | -48 | -22 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 79% | -48 | -22 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 78% | -48 | -43 | -25 | -27 | -25 | -28 | -36 | -45 | dB(A) |
| 75% | -48 | -22 | -25 | -27 | -25 | -28 | -35 | -45 | dB(A) |
| 68% | -49 | -41 | -26 | -27 | -25 | -27 | -33 | -44 | dB(A) |
| 55% | -49 | -42 | -26 | -28 | -25 | -27 | -31 | -42 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

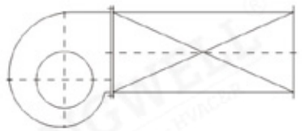
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -24 | -21 | -4 | -8 | -6 | -9 | -16 | -24 | dB(A) |
| 75% | -23 | -21 | -4 | -7 | -6 | -8 | -16 | -24 | dB(A) |
| 79% | -23 | -21 | -5 | -8 | -5 | -8 | -16 | -24 | dB(A) |
| 78% | -23 | -21 | -4 | -7 | -6 | -9 | -17 | -26 | dB(A) |
| 75% | -23 | -20 | -4 | -8 | -6 | -8 | -16 | -26 | dB(A) |
| 68% | -22 | -18 | -5 | -8 | -5 | -8 | -14 | -24 | dB(A) |
| 55% | -22 | -19 | -5 | -8 | -6 | -8 | -12 | -23 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 900mm | 13.8kg·m² | 1400r/min | 985kg |

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# RDHBM 39-39 Box-type Fan

## Noise Spectrum

Relative A sound power level for one meters from the cabinet $L_{W(1m)}$(A) at octave centre frequencies

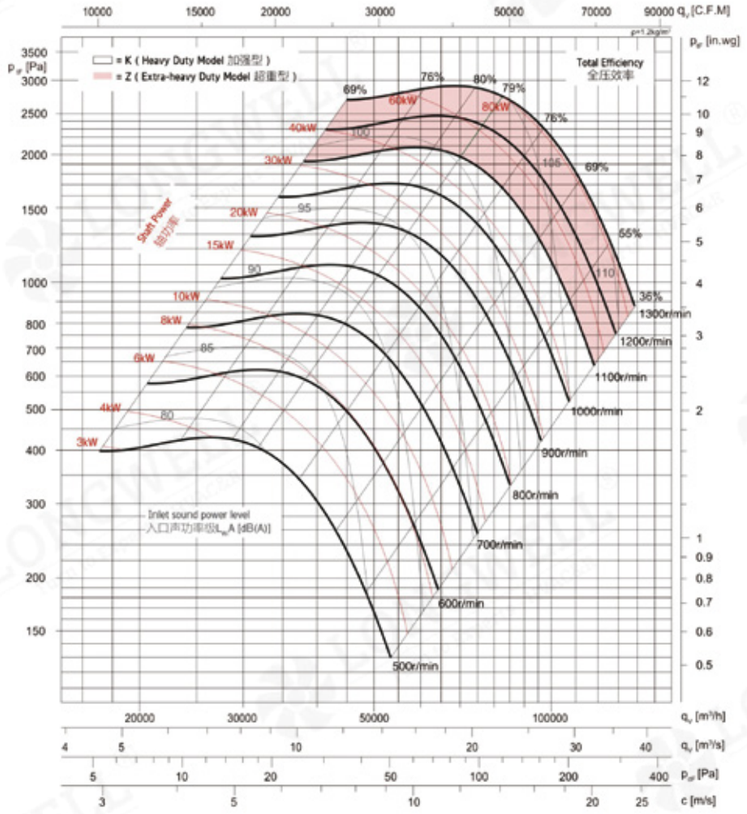
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -49 | -42 | -25 | -28 | -25 | -28 | -35 | -43 | dB(A) |
| 75% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -43 | dB(A) |
| 79% | -48 | -42 | -25 | -27 | -25 | -28 | -15 | -43 | dB(A) |
| 78% | -48 | -43 | -25 | -27 | -25 | -28 | -36 | -45 | dB(A) |
| 75% | -48 | -42 | -25 | -27 | -25 | -28 | -35 | -45 | dB(A) |
| 68% | -49 | -41 | -26 | -27 | -25 | -27 | -33 | -44 | dB(A) |
| 55% | -49 | -42 | -26 | -28 | -25 | -27 | -31 | -42 | dB(A) |

Relative A sound power level for outlet side $L_{Wo}$(A) at octave centre frequencies

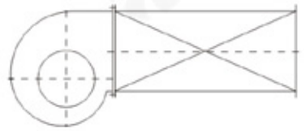
| Total Efficiency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Hz |
|---|---|---|---|---|---|---|---|---|---|
| 68% | -24 | -21 | -4 | -8 | -6 | -9 | -16 | -24 | dB(A) |
| 75% | -23 | -21 | -4 | -7 | -6 | -8 | -16 | -24 | dB(A) |
| 79% | -23 | -21 | -5 | -8 | -5 | -8 | -16 | -24 | dB(A) |
| 78% | -23 | -21 | -4 | -7 | -6 | -9 | -17 | -26 | dB(A) |
| 75% | -23 | -20 | -4 | -8 | -6 | -8 | -16 | -26 | dB(A) |
| 68% | -22 | -18 | -5 | -8 | -5 | -8 | -14 | -24 | dB(A) |
| 55% | -22 | -19 | -5 | -8 | -6 | -8 | -12 | -23 | dB(A) |

## Performance Curves

Type B:free inlet,ducted outlet.Power rating(KW)does not include transmission losses.Performance ratings do not include the effects of cabinet and accessories.The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.Values shown are for inlet Lwi A sound power levels for installation type B:free inlet,ducted outlet.




Measured in installation B according to AMCA 211:



| Wheel Diameter | Moment of Inertia | Speed Limit | Fan Weight |
|---|---|---|---|
| 1000mm | 24.8kg·m² | 1300r/min | 1150kg |