Twin City Fan

INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

AEREOIL FANS

BAE-SWSI | BAE-DWDI
This catalogue features the new BAE aerofoil impeller design. It includes both the SWSI (single width, single inlet) and the DWDI (double width, double inlet) designs. The newly designed aerofoil blades offer higher efficiencies and better sound characteristics than our previous designs.

Please discuss your particular application with the Twin City Fan & Blower representative for your area.

Twin City Fan & Blower has established itself as a leader in the design and manufacture of quality air moving equipment and continues to advance by implementing a philosophy that stresses quality in all of its operations. Our products are known for their rugged construction and reliability of operation. Twin City Fan & Blower offers flexibility in design and construction of fans coupled with superior service before and after the sale.

**Models**

**BAE SWSI & BAE DWDI**

*Featuring the E-Series Impeller*

This catalogue features the new BAE aerofoil impeller design. It includes both the SWSI (single width, single inlet) and the DWDI (double width, double inlet) designs. The newly designed aerofoil blades offer higher efficiencies and better sound characteristics than our previous designs.

Please discuss your particular application with the Twin City Fan & Blower representative for your area.

Twin City Fan & Blower has established itself as a leader in the design and manufacture of quality air moving equipment and continues to advance by implementing a philosophy that stresses quality in all of its operations. Our products are known for their rugged construction and reliability of operation. Twin City Fan & Blower offers flexibility in design and construction of fans coupled with superior service before and after the sale.

**Model BAE SWSI**

**Sizes**

311 mm to 2495 mm impeller diameters

**Performance**

Airflow to 110 m$^3$/sec
Static pressure to 5000 Pa

**Arrangements**

Available in Arrangements 1, 3, 4, 8, 9, 9F, 10

**Model BAE DWDI**

**Sizes**

311 mm to 2495 mm impeller diameters

**Performance**

Airflow to 198 m$^3$/sec
Static pressure to 3500 Pa

**Arrangements**

Available in Arrangements 3, 3F
Impeller Construction
High efficiency, non-overloading aerofoil impellers are provided on all sizes and arrangements. Impellers shall have precision spun, flat inlet cones to allow higher efficiencies over the performance range of the fan. Aluminium impellers using extruded aluminium blades are provided as standard on sizes 245 and smaller and are available as an option on larger units.

The BAE-DW impellers shall have staggered blades for improved sound characteristics. All hollow blade impellers shall be continuously welded around all edges. All impellers shall be statically and dynamically balanced on precision electronic balancers to a Balance Quality Grade G6.3 (3.8 mm/s rms) per ANSI/AMCA 204 or better.

Housing Construction
All fan housings are continuously welded to provide strength and durability for extended service life — a necessity in all commercial and industrial installations.

All housings are reinforced with rigid bracing to increase structural integrity. The support angles are intermittently welded and caulked between welds to prevent bleed-through corrosion. Precisely positioned cut-off plates and aerodynamically spun inlet cones provide high efficiency and smooth airflow through the fan. The housing construction and dimensions are exactly the same as our current BAF fan design.

All fans are available in standard discharge configuration. BAE-SW fans Class I and II, sizes 270 and smaller in Arrangements 1, 4, and 9 are field rotatable to any standard discharge position. To help reduce overall heights, all BAE-DW fans feature a non-rotatable housing design as standard.

Shaft
Shafts are AISI Grade 1040 or 1045 hot-rolled steel accurately turned, ground, polished, and ring gauged for accuracy. Shafts are generously sized for a first critical speed of at least 1.43 times the maximum speed for the class.

Bearings
Bearings are heavy duty, grease lubricated, spherical roller or anti-friction ball (BAE-DW bearings are adapter mounted), self-aligning, pillow block type, selected for minimum average bearing life L10 in excess of 40,000 hours at the maximum fan RPM.

Mechanical Run Test & Final Vibration Check
All fans are assembled for a mechanical run test and final balance prior to shipment. Vibration readings are taken on both fan bearings in the axial, horizontal, and vertical directions at the specified speed. Fans are balanced to 3.8 mm/s. peak or less (G6.3 specification).
Arrangement 8
SWSI — Single Width, Single Inlet
Arrangement 8 is a modified version of Arrangement 1 used for direct drive. The Arrangement 1 bearing pedestal is extended to accommodate the motor. A flexible coupling connects the fan and motor shaft. Refer to the typical direct drive speeds under Arrangement 4.
Recommended for 185 kW and larger applications.

<table>
<thead>
<tr>
<th>Synchronous Speed</th>
<th>Full Load Speed</th>
<th>Synchronous Speed</th>
<th>Full Load Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600</td>
<td>3500</td>
<td>3000</td>
<td>2900</td>
</tr>
<tr>
<td>1800</td>
<td>1750</td>
<td>1500</td>
<td>1450</td>
</tr>
<tr>
<td>1200</td>
<td>1170</td>
<td>1000</td>
<td>975</td>
</tr>
<tr>
<td>900</td>
<td>870</td>
<td>750</td>
<td>725</td>
</tr>
</tbody>
</table>

The actual full load speed of the motor can vary slightly depending upon motor HP, motor design and motor manufacturer.
Arrangement 9
SWSI — Single Width, Single Inlet
Arrangement 9 is available as belt driven only. A motor slide base is mounted on the side of the bearing pedestal. This arrangement permits the unit to ship as a complete assembly with the motor and drive mounted. Typically, the motor is mounted on the left side of the pedestal for CW rotation fans and on the right side for CCW rotation fans.

Arrangement 9F
SWSI — Single Width, Single Inlet (Not Shown)
Arrangement 9F is available when a unit requires a motor that is too large to mount on the side of the bearing pedestal. The fan base is extended to accommodate the motor, for horizontal mounting, similar to an Arrangement 1 fan. Typically, the motor is mounted on the left side of the pedestal for CW rotation fans and on the right side for CCW rotation fans. Arrangement 9F is not suitable for mounting vibration isolators directly under the fan.

Arrangement 10
SWSI — Single Width, Single Inlet
Arrangement 10 is available in sizes from 122 through 600 as belt driven only. An Arrangement 10 unit has an adjustable motor base mounted inside the bearing pedestal. This arrangement offers a more compact design than the Arrangement 9 and is suitable for roof or outdoor installations with a weather cover. For Class I and II fans, sizes 122 through 365, Arrangement 10 units are commonly referred to as Ventilating Sets. (Refer to Catalogue 600 for more details.)

Arrangement 3
DWDI fans are generally supplied in Arr. 3 for V-belt drive. The impeller is mounted between the bearings and supported by the fan housing. Since both bearings are located in the airstream, standard DWDI fans should be used for clean air applications with air temperatures limited to 50°C. The motor can be mounted in any of the four standard motor positions: W, X, Y or Z.

Arrangement 3F (Not Shown)
Arr. 3F offers an integral extended base to accommodate the motor. The base is pre-punched to accept vibration isolators. Arr. 3F is available to Size 660 and for motor positions W and Z as standard. For motor positions X and Y, consult factory.
Spark Resistant Construction
Fan applications may involve the handling of potentially explosive or flammable particles, fumes or vapors. Such applications require careful consideration by the system designer to insure the safe handling of such gases. Twin City Fan & Blower offers the following classifications of spark resistant construction per AMCA Standard 99-0401. It is the specifier or the user’s responsibility to specify the type of spark resistant construction with full recognition of the potential hazards and the degree of protection required.

Type A  All parts of the fan in contact with the airstream must be made of non-ferrous material — usually aluminium and limited to 120°C operation.

Type B  The fan shall have a non-ferrous impeller and non-ferrous ring about the opening through which the shaft passes — usually aluminium impeller and anti-spark track and limited to 120°C construction.

Type C  The fan shall be so constructed that the shift of the impeller or shaft will not permit two ferrous parts of the fan to rub or strike. This is accomplished with an aluminium inlet cone and anti-spark track. This construction is limited to 260°C. Construction to 425°C is available using a steel inlet cone with copper/bronze lining.

Notes:
1. Bearings shall be placed outside the airstream. Therefore, spark resistant construction is not available on Arrangement 3 or 7.
2. The user shall electrically earth all fan parts.

Special Metals
To suit the demanding applications of today’s industry, Twin City Fan & Blower offers a variety of material for construction, including aluminium and stainless steel. We offer AWS and ASME certified welding procedures and welding technicians to assure quality construction when using special metals as well.

Split Housings
All fans are designed to permit impeller removal through the fan inlet. To suit installation as well as transportation requirements, Twin City Fan & Blower offers horizontal split, pie-shaped, as well as other special split housing designs. Pie-shaped split housings allow fan impeller and shaft removal without disconnecting ductwork.

Notes:
1. Bearings shall be placed outside the airstream. Therefore, spark resistant construction is not available on Arrangement 3 or 7.
2. The user shall electrically earth all fan parts.

Swingout Construction
Swingout fans are ideal for applications requiring frequent cleaning and inspection of the fan impeller and interior of the housing such as found in spray painting booth exhaust. Refer to Catalogue GA200 for other types of easy access fans offered by Twin City Fan & Blower.
Designation for Rotation and Discharge

Direction of rotation is determined from drive side of the fan. On single inlet fans, the drive side is always considered the side opposite the fan inlet. On double inlet fans with drives on both sides, the drive side is that with the higher power drive unit. The direction of discharge is determined in accordance with the diagrams shown above. The angle of discharge references the vertical axis of the fan and is designated in degrees above or below that reference axis. On fans inverted for ceiling suspension or side-wall mounting, the discharge is determined when the fan is resting on the floor.

Motor Positions

The drawing above illustrates the AMCA motor position standards for Arrangement 1 and 3 fans (Arrangement 1 shown). The location of the motor is determined by facing the drive side of the fan and designating the motor position by letters W, X, Y, or Z, in accordance with the diagram shown above.

Illustrations reprinted from AMCA Publication 99 Standards Handbook, with the express written permission from the Air Movement and Control Association International, Inc., 30 West University Drive, Arlington Heights, IL 60004-1983.
Volume Control Devices
Outlet dampers, variable inlet vanes, and variable frequency drives are three popular devices used to control volume for fan systems.

Variable Inlet Vanes
Variable inlet vanes cause the entering air to spin in the direction of impeller rotation, resulting in reduction in volume, static pressure and absorbed power and thus providing an infinite number of fan curves approximately parallel to the original fan curve. Variable inlet vanes cost about 50% to 80% more than outlet dampers but offer significant savings in energy. Because of their simplicity, inlet vanes can be more reliable when compared to variable frequency drives.

There are two types of variable inlet vanes: nested (internal type) and bolted on (external type).

Nested inlet vanes are built into the fan inlet cone and offer the advantage of saving space and lower cost as opposed to the external type. They are available on all fan sizes 165 and larger. Twin City Fan & Blower offers cantilevered vanes to size 890 Class II fans to minimize insertion losses and noise associated with centre hub design.

External inlet vanes are bolted to the inlet of the fan and are available from size 122 through size 890. Use of external vanes should be considered for hostile environments since operating linkages are shielded from the airstream. Both types of inlet vanes are available to 300°C construction.

Outlet Dampers
The closing of the damper adds to the resistance that the fan is working against. This moves the operating point to the left of the initial rating point. The savings in power depends on the relative position on the fan curve and is usually much less than offered by other methods. Outlet dampers are typically the least expensive option and should be considered when infrequent operation at lesser capacity is desired or when handling hot, humid or particulate laden air.

There are two types of outlet dampers: parallel blade and opposed blade.

Parallel blade dampers are recommended for systems where air volume is modulated between full-open to about 75% of open.

Opposed blade dampers cost about 10% more and are recommended for systems where volume is modulated over the entire range. Opposed blades reduce air volume in a closer relationship to the control arm movement.
Variable Frequency Drive (VFD)
A VFD changes the fan speed and can provide the greatest potential for energy savings, although at highest initial cost. A VFD should be considered for extended operation at part load conditions, especially below 70% of the full volume operation.

Access Doors
Bolted, quick opening, and raised bolted access doors are available for impeller inspection or maintenance.

Drain
Threaded pipe coupling welded to the lowest point in the housing scroll. All fans come with a drain hole in the bottom of the housing.

Shaft Seal
A shaft seal reduces leakage and protects the bearings from a contaminated airstream. It is constructed of non-asbestos woven fibrous materials (ceramic felt) compressed between an aluminium cover plate and the fan housing. A ceramic felt shaft seal does not make the fan gas tight. A variety of special seals is available for low leakage applications requiring more positive protection, including mechanical type stuffing boxes.

Flanged Inlet
A punched inlet flange is available for duct mounting.

Flanged Outlet (DWDI Class I & II)
A punched or un-punched flange is welded to the fan outlet. An un-punched flanged outlet is standard on all SWSI and DWDI Class III and IV fans.

Inlet/Outlet Companion Flanges
Companion flanges are used for installing the fan to flexible sleeve connections and are punched to match the fan’s inlet or outlet.

Inlet and Outlet Screens
Safety screens are available for mounting in the fan inlet or outlet in non-ducted applications.

Special Paint & Protective Coatings
Twin City Fan & Blower has an in-house, specialty coating facility to handle any type of coating requirement. Refer to Engineering Supplement ES-35 for more details.
Belt Guards
A belt guard protects personnel from the moving drive parts. Both standard and totally enclosed type guards are available.

Shaft and Bearing Guards (SWSI)
Solid sheet metal guards cover shaft and bearings and come with extended lube lines to a common point out either side of the guard. A guard spanning the shaft between the bearings is also available to provide easy access to bearings for lubrication and vibration monitoring.

Unitary Base
A structural steel base provides common support to fan, motor and drive including guards. This style of base is designed for use without isolators and requires adequate foundation integrity for proper operation.

Vibration Isolation Bases
Heavy structural base for fan, motor and drive is designed for use with spring or rubber-in-shear type isolators. Use of flexible connectors at inlet and outlet is required on fans with isolators.

V-Belt Drives
V-belt drives offer an economical yet flexible means of transmitting power to the fans. There are two types of V-belt drives.

• Adjustable Pitch or Variable Speed Drives
  An adjustable pitch drive offers easy adjustment of speed. The motor pulley pitch can be adjusted when the fan is at rest which can offer speed variation of about 10% from the design speed. This style of sheave can result in higher vibration so adjustable pitch drives are not recommended for use on motors over 7.5 kW or wherever low vibration is required.

• Fixed Pitch or Constant Speed Drives
  This type of drive offers low cost and lowest vibration levels. Speed change can often be accomplished by changing only one of the sheaves.

Bearing Upgrades
Unit roller or split pillow block, double row roller bearings are available. Split pillow block roller bearings are not available for fans with less than 36 mm diameter bearings and are not recommended for fans with light loadings. Refer to Engineering Data Letters FE-1200 and FE-1300 for the correct type of bearings, selection criteria, maintenance, etc.

Other Accessories Available
• Variation in impeller diameter and width
• Inlet boxes
• Bearings RTD
• Piezometer ring airflow measuring system
• Consult factory for other accessories
Piezometer Ring (Airflow Measuring System)

A piezometer ring is available on model BAE fans, as well as other Twin City Fan housed and plenum fans, as part of an airflow measuring system, based on the principle of a flow nozzle. The inlet cone of the fan is used as the flow nozzle. The flow can be calculated by measuring the pressure drop through the inlet cone. No tubes or sensors are inserted in the high velocity airstream which could obstruct airflow.

The system consists of a piezometer ring mounted at the throat and a static pressure tapping mounted on the face of the inlet cone. A differential pressure transducer and digital display can also be provided.

The pressure drop is measured from the tapping located on the face of the inlet cone to the piezometer ring in the throat. The inlet tapping is connected to the high-pressure side of the transducer and the piezometer ring is connected to the low-pressure side. Based on Twin City Fan laboratory tests, the system was determined to be accurate within +/-5%.

Refer to Twin City Fan Engineering Supplement ES-105.

Performance Correction for Temperature & Altitude

The performance curves in this catalogue are based on fans handling standard air at a density of 1.2 kg/m³. This is equivalent to air at 21°C at sea level (101.325 kPa barometric pressure). When specified performance is at a density different than standard, it must be converted to the equivalent standard conditions before the fan can be selected from the performance curves. The equivalent standard conditions can be calculated by using the Temperature and Altitude Density Ratios shown in the table below.

<table>
<thead>
<tr>
<th>AIR TEMP °C</th>
<th>0</th>
<th>300</th>
<th>600</th>
<th>900</th>
<th>1200</th>
<th>1500</th>
<th>1800</th>
<th>2100</th>
<th>2400</th>
<th>2800</th>
<th>3200</th>
<th>3500</th>
<th>3800</th>
<th>4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.32</td>
<td>97.77</td>
<td>94.32</td>
<td>90.97</td>
<td>87.71</td>
<td>84.55</td>
<td>81.99</td>
<td>79.49</td>
<td>75.62</td>
<td>71.91</td>
<td>65.76</td>
<td>57.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>0.876</td>
<td>0.758</td>
<td>0.706</td>
<td>0.680</td>
<td>0.656</td>
<td>0.636</td>
<td>0.617</td>
<td>0.587</td>
<td>0.558</td>
<td>0.510</td>
<td>0.448</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>0.736</td>
<td>0.701</td>
<td>0.658</td>
<td>0.617</td>
<td>0.567</td>
<td>0.519</td>
<td>0.476</td>
<td>0.417</td>
<td>0.382</td>
<td>0.335</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>0.683</td>
<td>0.669</td>
<td>0.645</td>
<td>0.600</td>
<td>0.578</td>
<td>0.544</td>
<td>0.517</td>
<td>0.492</td>
<td>0.450</td>
<td>0.395</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175</td>
<td>0.654</td>
<td>0.631</td>
<td>0.609</td>
<td>0.587</td>
<td>0.566</td>
<td>0.546</td>
<td>0.529</td>
<td>0.513</td>
<td>0.488</td>
<td>0.464</td>
<td>0.424</td>
<td>0.373</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>0.619</td>
<td>0.597</td>
<td>0.576</td>
<td>0.556</td>
<td>0.536</td>
<td>0.517</td>
<td>0.501</td>
<td>0.486</td>
<td>0.462</td>
<td>0.439</td>
<td>0.402</td>
<td>0.353</td>
<td></td>
<td></td>
</tr>
<tr>
<td>225</td>
<td>0.588</td>
<td>0.567</td>
<td>0.547</td>
<td>0.528</td>
<td>0.509</td>
<td>0.491</td>
<td>0.476</td>
<td>0.461</td>
<td>0.439</td>
<td>0.417</td>
<td>0.382</td>
<td>0.335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>0.560</td>
<td>0.540</td>
<td>0.521</td>
<td>0.503</td>
<td>0.485</td>
<td>0.467</td>
<td>0.453</td>
<td>0.439</td>
<td>0.418</td>
<td>0.397</td>
<td>0.365</td>
<td>0.318</td>
<td></td>
<td></td>
</tr>
<tr>
<td>275</td>
<td>0.535</td>
<td>0.516</td>
<td>0.498</td>
<td>0.480</td>
<td>0.463</td>
<td>0.446</td>
<td>0.433</td>
<td>0.420</td>
<td>0.399</td>
<td>0.380</td>
<td>0.347</td>
<td>0.305</td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>0.511</td>
<td>0.493</td>
<td>0.476</td>
<td>0.459</td>
<td>0.442</td>
<td>0.426</td>
<td>0.414</td>
<td>0.410</td>
<td>0.381</td>
<td>0.363</td>
<td>0.332</td>
<td>0.291</td>
<td></td>
<td></td>
</tr>
<tr>
<td>350</td>
<td>0.470</td>
<td>0.454</td>
<td>0.438</td>
<td>0.422</td>
<td>0.407</td>
<td>0.392</td>
<td>0.380</td>
<td>0.369</td>
<td>0.351</td>
<td>0.334</td>
<td>0.305</td>
<td>0.268</td>
<td></td>
<td></td>
</tr>
<tr>
<td>375</td>
<td>0.452</td>
<td>0.436</td>
<td>0.421</td>
<td>0.406</td>
<td>0.391</td>
<td>0.377</td>
<td>0.366</td>
<td>0.355</td>
<td>0.337</td>
<td>0.321</td>
<td>0.293</td>
<td>0.258</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>0.435</td>
<td>0.420</td>
<td>0.405</td>
<td>0.391</td>
<td>0.377</td>
<td>0.363</td>
<td>0.352</td>
<td>0.341</td>
<td>0.325</td>
<td>0.309</td>
<td>0.292</td>
<td>0.248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>425</td>
<td>0.420</td>
<td>0.405</td>
<td>0.391</td>
<td>0.377</td>
<td>0.364</td>
<td>0.350</td>
<td>0.340</td>
<td>0.330</td>
<td>0.313</td>
<td>0.298</td>
<td>0.273</td>
<td>0.239</td>
<td></td>
<td></td>
</tr>
<tr>
<td>450</td>
<td>0.405</td>
<td>0.391</td>
<td>0.377</td>
<td>0.364</td>
<td>0.351</td>
<td>0.338</td>
<td>0.328</td>
<td>0.318</td>
<td>0.302</td>
<td>0.287</td>
<td>0.263</td>
<td>0.231</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>0.379</td>
<td>0.366</td>
<td>0.353</td>
<td>0.340</td>
<td>0.328</td>
<td>0.316</td>
<td>0.307</td>
<td>0.297</td>
<td>0.283</td>
<td>0.269</td>
<td>0.246</td>
<td>0.216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>550</td>
<td>0.356</td>
<td>0.344</td>
<td>0.331</td>
<td>0.320</td>
<td>0.308</td>
<td>0.297</td>
<td>0.288</td>
<td>0.279</td>
<td>0.266</td>
<td>0.253</td>
<td>0.231</td>
<td>0.203</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>0.336</td>
<td>0.324</td>
<td>0.313</td>
<td>0.302</td>
<td>0.291</td>
<td>0.280</td>
<td>0.272</td>
<td>0.264</td>
<td>0.251</td>
<td>0.238</td>
<td>0.218</td>
<td>0.191</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Maximum RPM, Impeller Weights & $WR^2$ (moment of inertia in kg-m$^2$)

**SWSI**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>SWS ALUMINUM</th>
<th>SW STEEL</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CLASS I</td>
<td>CLASS II</td>
<td>CLASS III</td>
<td>CLASS IV</td>
</tr>
<tr>
<td></td>
<td>MAX. RPM</td>
<td>IMPPELLER WEIGHT (kg)</td>
<td>WR$^2$ (kg-m$^2$)</td>
<td>MAX. RPM</td>
</tr>
<tr>
<td>122</td>
<td>3990</td>
<td>4.3 0.04</td>
<td>5206</td>
<td>4.3 0.04</td>
</tr>
<tr>
<td>135</td>
<td>3256</td>
<td>4.6 0.06</td>
<td>4260</td>
<td>4.6 0.06</td>
</tr>
<tr>
<td>150</td>
<td>3260</td>
<td>6.2 0.09</td>
<td>4253</td>
<td>6.2 0.09</td>
</tr>
<tr>
<td>165</td>
<td>2673</td>
<td>7.1 0.14</td>
<td>3487</td>
<td>7.6 0.17</td>
</tr>
<tr>
<td>182</td>
<td>2207</td>
<td>7.7 0.26</td>
<td>2879</td>
<td>8.2 0.26</td>
</tr>
<tr>
<td>200</td>
<td>2014</td>
<td>9.5 0.31</td>
<td>2637</td>
<td>9.5 0.31</td>
</tr>
<tr>
<td>222</td>
<td>1814</td>
<td>13.6 0.51</td>
<td>2367</td>
<td>13.6 0.51</td>
</tr>
<tr>
<td>245</td>
<td>1647</td>
<td>15.9 0.88</td>
<td>2149</td>
<td>15.9 0.88</td>
</tr>
<tr>
<td>270</td>
<td>1474</td>
<td>18.2 1.2</td>
<td>1923</td>
<td>18.2 1.2</td>
</tr>
<tr>
<td>300</td>
<td>1327</td>
<td>22.3 1.9</td>
<td>1731</td>
<td>24.5 1.9</td>
</tr>
<tr>
<td>330</td>
<td>1206</td>
<td>28.2 2.9</td>
<td>1573</td>
<td>30.5 2.9</td>
</tr>
<tr>
<td>365</td>
<td>1080</td>
<td>33.2 4.3</td>
<td>1409</td>
<td>36.9 4.3</td>
</tr>
<tr>
<td>402</td>
<td>979</td>
<td>38.6 6.4</td>
<td>1278</td>
<td>42.3 0.7</td>
</tr>
<tr>
<td>445</td>
<td>886</td>
<td>57.3 9.8</td>
<td>1156</td>
<td>61.4 10.7</td>
</tr>
<tr>
<td>490</td>
<td>804</td>
<td>74.5 16.5</td>
<td>1050</td>
<td>74.5 16.5</td>
</tr>
<tr>
<td>542</td>
<td>727</td>
<td>103 26.6</td>
<td>948</td>
<td>103 26.6</td>
</tr>
<tr>
<td>600</td>
<td>657</td>
<td>116 39.2</td>
<td>857</td>
<td>116 39.2</td>
</tr>
<tr>
<td>660</td>
<td>597</td>
<td>157 58.0</td>
<td>779</td>
<td>157 58.0</td>
</tr>
<tr>
<td>730</td>
<td>540</td>
<td>187 86.3</td>
<td>705</td>
<td>227 113</td>
</tr>
<tr>
<td>807</td>
<td>488</td>
<td>227 127</td>
<td>637</td>
<td>261 146</td>
</tr>
<tr>
<td>890</td>
<td>443</td>
<td>352 238</td>
<td>578</td>
<td>402 271</td>
</tr>
<tr>
<td>962</td>
<td>401</td>
<td>411 348</td>
<td>523</td>
<td>473 398</td>
</tr>
</tbody>
</table>

| SIZE | SWS STEEL | | |
|------|----------|----------|---------------|---------------|
|      | CLASS I | CLASS II | CLASS III | CLASS IV |
|      | MAX. RPM | IMPPELLER WEIGHT (kg) | WR$^2$ (kg-m$^2$) | MAX. RPM | IMPPELLER WEIGHT (kg) | WR$^2$ (kg-m$^2$) | MAX. RPM | IMPPELLER WEIGHT (kg) | WR$^2$ (kg-m$^2$) |
| 122  | NA       | NA       | NA          | NA          | NA | NA | NA |
| 135  | NA       | NA       | NA          | NA          | NA | NA | NA |
| 150  | NA       | NA       | NA          | NA          | NA | NA | NA |
| 165  | NA       | NA       | NA          | NA          | NA | NA | NA |
| 182  | NA       | NA       | NA          | NA          | NA | NA | NA |
| 200  | NA       | NA       | NA          | NA          | NA | NA | NA |
| 222  | 245      |          |            |            |    |    |    |
| 270  | 1474     | 45.0 2.9 | 1923       | 45.0 2.9 | 2423 | 55.0 3.5 | 2756 | 61.4 3.8 |
| 300  | 1327     | 56.4 4.5 | 1731       | 56.4 4.5 | 2181 | 67.3 5.2 | 2480 | 72.7 5.8 |
| 330  | 1206     | 68.6 6.8 | 1573       | 68.2 6.8 | 1982 | 84.1 7.7 | 2255 | 90.5 8.6 |
| 365  | 1080     | 98.1 11.6| 1409       | 98.2 12   | 1775 | 114 12.3| 2040 | 114 12.9 |
| 402  | 979      | 115 16.9 | 1278       | 114 16.9 | 1610 | 131 19.0| 1850 | 131 18.7 |
| 445  | 886      | 155 26.1 | 1156       | 154 26.1| 1456 | 199 34.3| 1673 | 211 35.7 |
| 490  | 804      | 178 37.7 | 1050       | 177 37.7| 1322 | 242 53.0| 1520 | 256 55.1 |
| 542  | 727      | 258 60.0 | 948        | 276 65.0| 1194 | 335 87.1| 1373 | 368 95.3 |
| 600  | 657      | 316 94.6 | 857        | 317 94.6| 1080 | 389 126| 1241 | 428 141 |
| 660  | 597      | 428 144 | 779        | 433 144| 982  | 515 189| 1128 | 561 212 |
| 730  | 540      | 496 222 | 705        | 501 222| 868  | 632 304| 1020 | 685 329 |
| 807  | 488      | 585 327 | 637        | 635 356| 802  | 735 447| 922  | 799 485 |
| 890  | 443      | 880 595 | 578        | 882 595| 728  | 1070 765| 837  | 1135 819 |
| 962  | 401      | 1020 863| 523        | 1026 863| 654  | 1350 1229| NA  | NA | NA |
## Maximum RPM, Impeller Weights & WR²

### (moment of inertia in kg-m²)

#### DW DI

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CLASS I</th>
<th>CLASS II</th>
<th>CLASS III</th>
<th>CLASS IV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX. RPM</td>
<td>IMPELLER WEIGHT (kg)</td>
<td>WR² (kg-m²)</td>
<td>MAX. RPM</td>
</tr>
<tr>
<td>122</td>
<td>3957</td>
<td>6.4</td>
<td>0.05</td>
<td>5158</td>
</tr>
<tr>
<td>135</td>
<td>3374</td>
<td>6.7</td>
<td>0.07</td>
<td>4388</td>
</tr>
<tr>
<td>150</td>
<td>3232</td>
<td>9.9</td>
<td>0.10</td>
<td>4213</td>
</tr>
<tr>
<td>165</td>
<td>2761</td>
<td>11.4</td>
<td>0.16</td>
<td>3599</td>
</tr>
<tr>
<td>182</td>
<td>2248</td>
<td>13.2</td>
<td>0.44</td>
<td>2930</td>
</tr>
<tr>
<td>200</td>
<td>2051</td>
<td>16.4</td>
<td>0.46</td>
<td>2674</td>
</tr>
<tr>
<td>222</td>
<td>1837</td>
<td>20.5</td>
<td>0.76</td>
<td>2385</td>
</tr>
<tr>
<td>245</td>
<td>1668</td>
<td>24.1</td>
<td>1.3</td>
<td>2175</td>
</tr>
<tr>
<td>270</td>
<td>1541</td>
<td>28.2</td>
<td>1.9</td>
<td>2009</td>
</tr>
<tr>
<td>300</td>
<td>1387</td>
<td>36.4</td>
<td>3.2</td>
<td>1808</td>
</tr>
<tr>
<td>330</td>
<td>1261</td>
<td>49.1</td>
<td>5.1</td>
<td>1644</td>
</tr>
<tr>
<td>365</td>
<td>1114</td>
<td>49.5</td>
<td>6.5</td>
<td>1452</td>
</tr>
<tr>
<td>402</td>
<td>1010</td>
<td>60.5</td>
<td>9.9</td>
<td>1317</td>
</tr>
<tr>
<td>445</td>
<td>914</td>
<td>86.8</td>
<td>14.9</td>
<td>1191</td>
</tr>
<tr>
<td>490</td>
<td>830</td>
<td>111</td>
<td>24.6</td>
<td>1082</td>
</tr>
<tr>
<td>542</td>
<td>750</td>
<td>154</td>
<td>39.8</td>
<td>977</td>
</tr>
<tr>
<td>600</td>
<td>678</td>
<td>173</td>
<td>58.5</td>
<td>883</td>
</tr>
<tr>
<td>660</td>
<td>616</td>
<td>225</td>
<td>83.1</td>
<td>803</td>
</tr>
<tr>
<td>730</td>
<td>557</td>
<td>270</td>
<td>124</td>
<td>726</td>
</tr>
<tr>
<td>807</td>
<td>504</td>
<td>330</td>
<td>185</td>
<td>856</td>
</tr>
<tr>
<td>890</td>
<td>457</td>
<td>514</td>
<td>348</td>
<td>596</td>
</tr>
<tr>
<td>982</td>
<td>414</td>
<td>609</td>
<td>515</td>
<td>539</td>
</tr>
</tbody>
</table>

#### DW STEEL

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CLASS I</th>
<th>CLASS II</th>
<th>CLASS III</th>
<th>CLASS IV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX. RPM</td>
<td>IMPELLER WEIGHT (kg)</td>
<td>WR² (kg-m²)</td>
<td>MAX. RPM</td>
</tr>
<tr>
<td>122</td>
<td>3957</td>
<td>6.4</td>
<td>0.05</td>
<td>5158</td>
</tr>
<tr>
<td>135</td>
<td>3374</td>
<td>6.7</td>
<td>0.07</td>
<td>4388</td>
</tr>
<tr>
<td>150</td>
<td>3232</td>
<td>9.9</td>
<td>0.10</td>
<td>4213</td>
</tr>
<tr>
<td>165</td>
<td>2761</td>
<td>11.4</td>
<td>0.16</td>
<td>3599</td>
</tr>
<tr>
<td>182</td>
<td>2248</td>
<td>13.2</td>
<td>0.44</td>
<td>2930</td>
</tr>
<tr>
<td>200</td>
<td>2051</td>
<td>16.4</td>
<td>0.46</td>
<td>2674</td>
</tr>
<tr>
<td>222</td>
<td>1837</td>
<td>20.5</td>
<td>0.76</td>
<td>2385</td>
</tr>
<tr>
<td>245</td>
<td>1668</td>
<td>24.1</td>
<td>1.3</td>
<td>2175</td>
</tr>
<tr>
<td>270</td>
<td>1541</td>
<td>28.2</td>
<td>1.9</td>
<td>2009</td>
</tr>
<tr>
<td>300</td>
<td>1387</td>
<td>36.4</td>
<td>3.2</td>
<td>1808</td>
</tr>
<tr>
<td>330</td>
<td>1261</td>
<td>49.1</td>
<td>5.1</td>
<td>1644</td>
</tr>
<tr>
<td>365</td>
<td>1114</td>
<td>49.5</td>
<td>6.5</td>
<td>1452</td>
</tr>
<tr>
<td>402</td>
<td>1010</td>
<td>60.5</td>
<td>9.9</td>
<td>1317</td>
</tr>
<tr>
<td>445</td>
<td>914</td>
<td>86.8</td>
<td>14.9</td>
<td>1191</td>
</tr>
<tr>
<td>490</td>
<td>830</td>
<td>111</td>
<td>24.6</td>
<td>1082</td>
</tr>
<tr>
<td>542</td>
<td>750</td>
<td>154</td>
<td>39.8</td>
<td>977</td>
</tr>
<tr>
<td>600</td>
<td>678</td>
<td>173</td>
<td>58.5</td>
<td>883</td>
</tr>
<tr>
<td>660</td>
<td>616</td>
<td>225</td>
<td>83.1</td>
<td>803</td>
</tr>
<tr>
<td>730</td>
<td>557</td>
<td>270</td>
<td>124</td>
<td>726</td>
</tr>
<tr>
<td>807</td>
<td>504</td>
<td>330</td>
<td>185</td>
<td>856</td>
</tr>
<tr>
<td>890</td>
<td>457</td>
<td>514</td>
<td>348</td>
<td>596</td>
</tr>
<tr>
<td>982</td>
<td>414</td>
<td>609</td>
<td>515</td>
<td>539</td>
</tr>
</tbody>
</table>
### Features & Weights

#### SWSI Class I

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HOUSING SIDES SCROLL SHAFT DIAMETER &amp; BEARINGS</th>
<th>BARE FAN WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SHFT DIAM. BEARING TYPE</td>
<td>SHFT DIAM. BEARING TYPE</td>
</tr>
<tr>
<td>122</td>
<td>2.0 2.0 25 B 1 B</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>2.0 2.0 25 B 1 B</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>2.0 2.0 25 B 1 B</td>
<td></td>
</tr>
<tr>
<td>165</td>
<td>2.0 2.0 25 B 1 B</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>2.0 2.0 30 B 30 B</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>2.0 2.0 38 B 38 B</td>
<td></td>
</tr>
<tr>
<td>222</td>
<td>2.5 2.0 38 B 38 B</td>
<td></td>
</tr>
<tr>
<td>245</td>
<td>2.5 2.0 38 B 38 B</td>
<td></td>
</tr>
<tr>
<td>270</td>
<td>2.5 2.0 42 B 38 B</td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>3.0 2.5 50 B 42 B</td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>3.0 2.5 50 B 42 B</td>
<td></td>
</tr>
<tr>
<td>365</td>
<td>3.0 2.5 50 B 50 B</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>3.0 2.5 55 B 50 B</td>
<td></td>
</tr>
<tr>
<td>445</td>
<td>3.0 2.5 65 B 50 B</td>
<td></td>
</tr>
<tr>
<td>490</td>
<td>3.0 2.5 70 B 55 B</td>
<td></td>
</tr>
<tr>
<td>542</td>
<td>3.0 2.5 75 B 65 R</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>3.0 2.5 75 B 75 B</td>
<td></td>
</tr>
<tr>
<td>660</td>
<td>3.0 2.5 90 R 75 R</td>
<td></td>
</tr>
<tr>
<td>730</td>
<td>3.0 3.0 90 R 90 R</td>
<td></td>
</tr>
<tr>
<td>807</td>
<td>3.0 3.0 100 R 100 R</td>
<td></td>
</tr>
<tr>
<td>890</td>
<td>5.0 3.0 100 R 100 R</td>
<td></td>
</tr>
<tr>
<td>982</td>
<td>5.0 3.0 125 SR 125 SR</td>
<td></td>
</tr>
</tbody>
</table>

Bearing Types:  B = Ball Bearing    R = Unit Roller Bearings    SR = Spherical Roller Bearings with Split Pillow Block Housings

#### SWSI Class II

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HOUSING SIDES SCROLL SHAFT DIAMETER &amp; BEARINGS</th>
<th>BARE FAN WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SHFT DIAM. BEARING TYPE</td>
<td>SHFT DIAM. BEARING TYPE</td>
</tr>
<tr>
<td>122</td>
<td>2.0 2.0 25 B 25 B</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>2.0 2.0 25 B 25 B</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>2.0 2.0 30 B 30 B</td>
<td></td>
</tr>
<tr>
<td>165</td>
<td>2.0 2.0 30 B 30 B</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>2.0 2.0 38 B 38 B</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>2.0 2.0 38 B 38 B</td>
<td></td>
</tr>
<tr>
<td>222</td>
<td>2.5 2.0 38 B 38 B</td>
<td></td>
</tr>
<tr>
<td>245</td>
<td>2.5 2.0 42 B 42 B</td>
<td></td>
</tr>
<tr>
<td>270</td>
<td>2.5 2.0 42 B 42 B</td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>3.0 2.5 50 B 50 B</td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>3.0 2.5 55 B 55 B</td>
<td></td>
</tr>
<tr>
<td>365</td>
<td>3.0 2.5 65 B 65 B</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>3.0 2.5 65 B 65 B</td>
<td></td>
</tr>
<tr>
<td>445</td>
<td>3.0 2.5 70 R 70 R</td>
<td></td>
</tr>
<tr>
<td>490</td>
<td>3.0 2.5 70 R 70 R</td>
<td></td>
</tr>
<tr>
<td>542</td>
<td>3.0 2.5 90 R 75 R</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>3.0 2.5 90 R 90 R</td>
<td></td>
</tr>
<tr>
<td>660</td>
<td>3.0 2.5 100 R 100 R</td>
<td></td>
</tr>
<tr>
<td>730</td>
<td>3.0 3.0 100 R 100 R</td>
<td></td>
</tr>
<tr>
<td>807</td>
<td>3.0 3.0 115 SR 115 SR</td>
<td></td>
</tr>
<tr>
<td>890</td>
<td>5.0 3.0 125 SR 125 SR</td>
<td></td>
</tr>
<tr>
<td>982</td>
<td>5.0 3.0 140 SR 140 SR</td>
<td></td>
</tr>
</tbody>
</table>

Bearing Types:  B = Ball Bearing    R = Unit Roller Bearings    SR = Spherical Roller Bearings with Split Pillow Block Housings
### Features & Weights

**SWSI Class III**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HOUSING</th>
<th>SHAFT DIAMETER &amp; BEARINGS</th>
<th>BARE FAN WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SIDES</td>
<td>SCROLL</td>
<td>SHAFT DIA.</td>
</tr>
<tr>
<td>122</td>
<td>3.0</td>
<td>NA</td>
<td>42</td>
</tr>
<tr>
<td>135</td>
<td>3.0</td>
<td>NA</td>
<td>50</td>
</tr>
<tr>
<td>150</td>
<td>3.0</td>
<td>NA</td>
<td>50</td>
</tr>
<tr>
<td>165</td>
<td>5.0</td>
<td>NA</td>
<td>55</td>
</tr>
<tr>
<td>182</td>
<td>5.0</td>
<td>NA</td>
<td>55</td>
</tr>
<tr>
<td>200</td>
<td>5.0</td>
<td>NA</td>
<td>65</td>
</tr>
<tr>
<td>222</td>
<td>5.0</td>
<td>NA</td>
<td>70</td>
</tr>
<tr>
<td>245</td>
<td>5.0</td>
<td>NA</td>
<td>70</td>
</tr>
<tr>
<td>270</td>
<td>5.0</td>
<td>NA</td>
<td>75</td>
</tr>
<tr>
<td>300</td>
<td>5.0</td>
<td>NA</td>
<td>90</td>
</tr>
<tr>
<td>330</td>
<td>5.0</td>
<td>NA</td>
<td>90</td>
</tr>
<tr>
<td>365</td>
<td>5.0</td>
<td>NA</td>
<td>100</td>
</tr>
<tr>
<td>402</td>
<td>5.0</td>
<td>NA</td>
<td>115</td>
</tr>
<tr>
<td>445</td>
<td>5.0</td>
<td>NA</td>
<td>125</td>
</tr>
<tr>
<td>490</td>
<td>5.0</td>
<td>NA</td>
<td>125</td>
</tr>
<tr>
<td>542</td>
<td>5.0</td>
<td>NA</td>
<td>140</td>
</tr>
</tbody>
</table>

Bearing Types:  
- **B** = Ball Bearing  
- **R** = Unit Roller Bearings  
- **SR** = Spherical Roller Bearings with Split Pillow Block Housings

**SWSI Class IV**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HOUSING</th>
<th>SHAFT DIAMETER &amp; BEARINGS</th>
<th>BARE FAN WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SIDES</td>
<td>SCROLL</td>
<td>SHAFT DIA.</td>
</tr>
<tr>
<td>122</td>
<td>3.0</td>
<td>NA</td>
<td>42</td>
</tr>
<tr>
<td>135</td>
<td>3.0</td>
<td>NA</td>
<td>50</td>
</tr>
<tr>
<td>150</td>
<td>3.0</td>
<td>NA</td>
<td>50</td>
</tr>
<tr>
<td>165</td>
<td>5.0</td>
<td>NA</td>
<td>55</td>
</tr>
<tr>
<td>182</td>
<td>5.0</td>
<td>NA</td>
<td>65</td>
</tr>
<tr>
<td>200</td>
<td>5.0</td>
<td>NA</td>
<td>70</td>
</tr>
<tr>
<td>222</td>
<td>5.0</td>
<td>NA</td>
<td>70</td>
</tr>
<tr>
<td>245</td>
<td>5.0</td>
<td>NA</td>
<td>75</td>
</tr>
<tr>
<td>270</td>
<td>5.0</td>
<td>NA</td>
<td>90</td>
</tr>
<tr>
<td>300</td>
<td>5.0</td>
<td>NA</td>
<td>90</td>
</tr>
<tr>
<td>330</td>
<td>5.0</td>
<td>NA</td>
<td>100</td>
</tr>
<tr>
<td>365</td>
<td>5.0</td>
<td>NA</td>
<td>115</td>
</tr>
<tr>
<td>402</td>
<td>5.0</td>
<td>NA</td>
<td>125</td>
</tr>
<tr>
<td>445</td>
<td>5.0</td>
<td>NA</td>
<td>125</td>
</tr>
<tr>
<td>490</td>
<td>5.0</td>
<td>NA</td>
<td>140</td>
</tr>
</tbody>
</table>

Bearing Types:  
- **B** = Ball Bearing  
- **R** = Unit Roller Bearings  
- **SR** = Spherical Roller Bearings with Split Pillow Block Housings
## Features & Weights

### DWDI Class I & II

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HOUSING</th>
<th>SHAFT DIAMETER &amp; BEARINGS</th>
<th>BARE FAN WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SIDES</td>
<td>SCROLL</td>
<td>SHAFT DIAMETER</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>2.5</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>2.5</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>3.0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>3.0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>3.0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>3.0</td>
<td>125</td>
</tr>
</tbody>
</table>

Bearing Types:  B = Ball Bearing  R = Unit Roller Bearings  SR = Spherical Roller Bearings with Split Pillow Block Housings

### DWDI Class III & IV

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HOUSING</th>
<th>SHAFT DIAMETER &amp; BEARINGS</th>
<th>BARE FAN WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SIDES</td>
<td>SCROLL</td>
<td>SHAFT DIAMETER</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Bearing Types:  B = Ball Bearing  R = Unit Roller Bearings  SR = Spherical Roller Bearings with Split Pillow Block Housings
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for Inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet Lwa sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

Fan Efficiency Grade = FEG 90
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

Fan Efficiency Grade = FEG 90
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

Fan Efficiency Grade = FEG 90
**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet Lwa sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Fan Efficiency Grade = FEG 90

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwiA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwiA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

Fan Efficiency Grade = FEG 80

---

PERFORMANCE CURVES

---

**BAE-DW 150**

---

---
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**BAE-DW 182**

**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
BAE-DW 245

Performance Curves

Fan Efficiency Grade = FEG 85

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Fan Efficiency Grade = FEG 90

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

Fan Efficiency Grade = FEG 90
BAE-DW 330

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwiA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

Fan Efficiency Grade = FEG 90
Fan Efficiency Grade = FEG 90

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
BAE-DW 490

**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Fan Efficiency Grade = FEG 90

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**BAE-DW 600**

**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet Lwa sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

**Fan Efficiency Grade = FEG 90**
**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

**Fan Efficiency Grade = FEG 90**
PERFORMANCE CURVES

BAE-DW 807

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
Performance Curves

BAE-DW 890

Notes:
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet Lwa sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Notes:**

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.
**Arrangement 9, SWSI Rotatable, Class I & II**

![DIAGRAM](image)

**NOTES:**
1. Discharge angles are included on all discharges except "TAD" and "DBD."
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. Shaft diameter is increased to 1.187 on Hi-Temp. fans which require shaft coolers.
4. Standard Arr. 9 motor location is on the left for "CW" rotation units and on the right for "CCW" rotation. Dimension "FR" equals max. motor frame.

### DIMENSIONAL DATA

<table>
<thead>
<tr>
<th>SIZE</th>
<th>HG</th>
<th>HH</th>
<th>HJ</th>
<th>HK</th>
<th>HN</th>
<th>J</th>
<th>K</th>
<th>KL</th>
<th>KS CLASS I</th>
<th>KS CLASS II</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>Q</th>
<th>SD CLASS I</th>
<th>SD CLASS II</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>330</td>
<td>248</td>
<td>11</td>
<td>337</td>
<td>368</td>
<td>25</td>
<td>90L</td>
<td>406</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>203</td>
<td>686</td>
<td>248</td>
<td>425</td>
<td>254</td>
</tr>
<tr>
<td>135</td>
<td>363</td>
<td>275</td>
<td>11</td>
<td>370</td>
<td>400</td>
<td>25</td>
<td>112M</td>
<td>445</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>222</td>
<td>778</td>
<td>273</td>
<td>467</td>
<td>387</td>
</tr>
<tr>
<td>150</td>
<td>403</td>
<td>303</td>
<td>11</td>
<td>411</td>
<td>451</td>
<td>25</td>
<td>112M</td>
<td>483</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>241</td>
<td>806</td>
<td>303</td>
<td>516</td>
<td>427</td>
</tr>
<tr>
<td>165</td>
<td>443</td>
<td>335</td>
<td>11</td>
<td>451</td>
<td>483</td>
<td>25</td>
<td>132M</td>
<td>521</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>260</td>
<td>916</td>
<td>334</td>
<td>393</td>
<td>359</td>
</tr>
<tr>
<td>182</td>
<td>492</td>
<td>370</td>
<td>11</td>
<td>495</td>
<td>533</td>
<td>32</td>
<td>160M</td>
<td>572</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>286</td>
<td>1064</td>
<td>368</td>
<td>630</td>
<td>434</td>
</tr>
<tr>
<td>200</td>
<td>538</td>
<td>405</td>
<td>14</td>
<td>543</td>
<td>578</td>
<td>32</td>
<td>160M</td>
<td>635</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>318</td>
<td>1099</td>
<td>402</td>
<td>686</td>
<td>467</td>
</tr>
<tr>
<td>222</td>
<td>598</td>
<td>449</td>
<td>14</td>
<td>603</td>
<td>648</td>
<td>32</td>
<td>160L</td>
<td>692</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>346</td>
<td>1149</td>
<td>449</td>
<td>762</td>
<td>519</td>
</tr>
<tr>
<td>245</td>
<td>659</td>
<td>494</td>
<td>14</td>
<td>662</td>
<td>711</td>
<td>32</td>
<td>160L</td>
<td>756</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>378</td>
<td>1194</td>
<td>495</td>
<td>838</td>
<td>568</td>
</tr>
<tr>
<td>270</td>
<td>727</td>
<td>543</td>
<td>14</td>
<td>724</td>
<td>775</td>
<td>38</td>
<td>180M</td>
<td>838</td>
<td></td>
<td></td>
<td>2.0</td>
<td>2.0</td>
<td></td>
<td>419</td>
<td>1314</td>
<td>545</td>
<td>926</td>
<td>627</td>
</tr>
</tbody>
</table>

**DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.**
NOTES:
1. Discharge angles are included on all discharges.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. Standard Arr. 9 motor location is on the left for "CW" rotation units and on the right for "CCW" rotation. Dimension "FR" equals max. motor frame.
4. For fans with inlet box at 90 degrees or 270 degrees, use "BAU" discharge dimension "DF" for centerline height.
Arrangement 1 & 9, Non-Rotatable, Class I & II (cont'd.)

NOTES:
1. Discharge angles are included on all discharges.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. Standard Arr. 9 motor location is on the left for "CW" rotation units and on the right for "CCW" rotation. Dimension "FR" equals max. motor frame.
4. For fans with inlet box at 90 degrees or 270 degrees, use "BAU" discharge dimension "DF" for centerline height.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>Q</th>
<th>SD</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>683</td>
<td>403</td>
<td>29</td>
<td>1132</td>
<td>402</td>
<td>50</td>
<td>50</td>
<td>146</td>
</tr>
<tr>
<td>330</td>
<td>749</td>
<td>441</td>
<td>29</td>
<td>1227</td>
<td>445</td>
<td>50</td>
<td>55</td>
<td>146</td>
</tr>
<tr>
<td>365</td>
<td>749</td>
<td>480</td>
<td>29</td>
<td>1262</td>
<td>488</td>
<td>50</td>
<td>65</td>
<td>148</td>
</tr>
<tr>
<td>402</td>
<td>762</td>
<td>530</td>
<td>35</td>
<td>1313</td>
<td>540</td>
<td>55</td>
<td>65</td>
<td>146</td>
</tr>
<tr>
<td>445</td>
<td>803</td>
<td>581</td>
<td>35</td>
<td>1410</td>
<td>597</td>
<td>65</td>
<td>70</td>
<td>159</td>
</tr>
<tr>
<td>490</td>
<td>813</td>
<td>645</td>
<td>35</td>
<td>1462</td>
<td>657</td>
<td>70</td>
<td>75</td>
<td>159</td>
</tr>
<tr>
<td>542</td>
<td>930</td>
<td>702</td>
<td>48</td>
<td>1646</td>
<td>727</td>
<td>75</td>
<td>90</td>
<td>171</td>
</tr>
<tr>
<td>600</td>
<td>924</td>
<td>778</td>
<td>48</td>
<td>1697</td>
<td>805</td>
<td>75</td>
<td>90</td>
<td>171</td>
</tr>
<tr>
<td>660</td>
<td>991</td>
<td>842</td>
<td>60</td>
<td>1851</td>
<td>883</td>
<td>90</td>
<td>100</td>
<td>197</td>
</tr>
<tr>
<td>730</td>
<td>1067</td>
<td>943</td>
<td>60</td>
<td>2008</td>
<td>978</td>
<td>90</td>
<td>100</td>
<td>210</td>
</tr>
</tbody>
</table>

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
Arrangement 1, SWSI Non-Rotatable, Class I & II

NOTES:
1. Discharge angles are included on all discharges.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. Frame supports vary in construction by size and by discharge position.
4. For fans with inlet box at 90 degrees or 270 degrees, use "BAU" discharge dimension "DF" for centerline height.
Arrangement 3, SWSI Non-Rotatable, Class I & II

NOTES:
1. Discharge angles are included on all discharges.
2. Inlet bearing bar support is removable.
3. “CW” rotation is shown. “CCW” rotation is similar but opposite.
4. Bearing bar supports may extend beyond base angles. See Drawing AC1000851 for dimensions if space limitations are required for mounting fan.

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
Arrangement 3, SWSI Non-Rotatable, Class I & II (cont’d.)

DIMENSIONAL DATA

NOTES:
1. Discharge angles are included on all discharges.
2. Inlet bearing bar support is removable.
3. "CW" rotation is shown. "CCW" rotation is similar but opposite.
4. Bearing bar supports may extend beyond base angles. See Drawing AC1000851 for dimensions if space limitations are required for mounting fan.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>Q</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>171</td>
<td>16</td>
<td>254</td>
<td>254</td>
<td>164</td>
</tr>
<tr>
<td>135</td>
<td>187</td>
<td>16</td>
<td>268</td>
<td>268</td>
<td>181</td>
</tr>
<tr>
<td>150</td>
<td>210</td>
<td>16</td>
<td>295</td>
<td>305</td>
<td>200</td>
</tr>
<tr>
<td>165</td>
<td>222</td>
<td>22</td>
<td>311</td>
<td>321</td>
<td>221</td>
</tr>
<tr>
<td>182</td>
<td>245</td>
<td>22</td>
<td>351</td>
<td>372</td>
<td>245</td>
</tr>
<tr>
<td>200</td>
<td>270</td>
<td>22</td>
<td>389</td>
<td>389</td>
<td>268</td>
</tr>
<tr>
<td>222</td>
<td>298</td>
<td>22</td>
<td>424</td>
<td>424</td>
<td>298</td>
</tr>
<tr>
<td>245</td>
<td>327</td>
<td>22</td>
<td>459</td>
<td>468</td>
<td>329</td>
</tr>
<tr>
<td>270</td>
<td>355</td>
<td>22</td>
<td>483</td>
<td>492</td>
<td>362</td>
</tr>
</tbody>
</table>

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
**Arrangement 3, SWSI Non-Rotatable, Class I & II**

**NOTES:**
1. Discharge angles are included on all discharges.
2. Inlet bearing bar support is removable.
3. “CW” rotation is shown. “CCW” rotation is similar but opposite.
4. Frame supports vary in construction by size and by discharge position.
5. Bearing bar supports may extend beyond base angles. See Drawing AC1000851 for dimensions if space limitations are required for mounting fan.

**DIMENSIONAL DATA**

| SIZE (MM) | A (X4) | AH | B | BA | BH | C | DA | DB | DC | DD | DE | DF | DG | DX | G | GA | GB | GC | GD | DE | DF | DG | DX | G | GA | GB | GC |
|----------|--------|----|---|----|----|---|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|---|----|----|----|----|----|
| 300      | 808    | 438| 605| 65 x 65 | 14 |   | 803 | 605 |   | 660 | 660 | 724 | 749 | 870 | 38 |   |   | 1041 | 3.0 | 2.5 | 521 |
| 330      | 892    | 484| 662| 65 x 65 | 14 |   | 883 | 667 |   | 705 | 686 | 724 | 787 | 946 | 38 |   |   | 1118 | 3.0 | 2.5 | 559 |
| 365      | 983    | 537| 734| 65 x 65 | 14 |   | 978 | 737 |   | 775 | 749 | 800 | 851 | 902 | 1041 | 38 |   |   | 1219 | 3.0 | 2.5 | 610 |
| 402      | 1083   | 592| 808| 75 x 75 | 21 | 1078 | 813 |   | 826 | 858 | 895 | 940 | 1003 | 1156 | 38 |   |   | 1334 | 3.0 | 2.5 | 667 |
| 445      | 1197   | 656| 894| 75 x 75 | 21 | 1191 | 899 |   | 921 | 902 | 978 | 1016 | 1099 | 1270 | 38 |   |   | 1435 | 3.0 | 2.5 | 718 |
| 490      | 1319   | 715| 981| 75 x 75 | 21 | 1311 | 991 |   | 984 | 991 | 1073 | 1118 | 1207 | 1391 | 51 |   |   | 1562 | 3.0 | 2.5 | 781 |
| 542      | 1457   | 808| 1089| 75 x 100 | 21 | 1451 | 1094 | 1073 | 1105 | 1181 | 1245 | 1327 | 1530 | 51 |   |   | 1702 | 3.0 | 2.5 | 851 |
| 600      | 1613   | 887| 1202| 75 x 100 | 21 | 1604 | 1211 | 1143 | 1219 | 1302 | 1372 | 1461 | 1683 | 51 |   |   | 1854 | 3.0 | 2.5 | 927 |
| 660      | 1770   | 994| 1328| 90 x 125 | 21 | 1762 | 1332 | 1257 | 1334 | 1416 | 1499 | 1600 | 1861 | 64 |   |   | 2032 | 3.0 | 2.5 | 1016 |
| 730      | 1962   | 1083| 1462| 90 x 125 | 21 | 1949 | 1473 | 1378 | 1448 | 1568 | 1638 | 1765 | 2051 | 64 |   |   | 2235 | 3.0 | 3.0 | 1118 |

**SIZE (INCHES)**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>H</th>
<th>HA</th>
<th>B</th>
<th>HC</th>
<th>HD</th>
<th>HE</th>
<th>HF</th>
<th>HG</th>
<th>HH</th>
<th>HL</th>
<th>HM</th>
<th>HP</th>
<th>HO</th>
<th>J</th>
<th>K</th>
<th>KL</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>734</td>
<td>605</td>
<td>1024</td>
<td>845</td>
<td>697</td>
<td>654</td>
<td>616</td>
<td>578</td>
<td>540</td>
<td>1197</td>
<td>849</td>
<td>870</td>
<td>—</td>
<td>406</td>
<td></td>
<td>338</td>
</tr>
<tr>
<td>330</td>
<td>791</td>
<td>667</td>
<td>1129</td>
<td>929</td>
<td>766</td>
<td>721</td>
<td>678</td>
<td>635</td>
<td>592</td>
<td>1296</td>
<td>903</td>
<td>954</td>
<td>—</td>
<td>435</td>
<td>367</td>
<td>127</td>
</tr>
<tr>
<td>365</td>
<td>861</td>
<td>737</td>
<td>1242</td>
<td>1019</td>
<td>851</td>
<td>800</td>
<td>753</td>
<td>705</td>
<td>657</td>
<td>1410</td>
<td>975</td>
<td>1045</td>
<td>—</td>
<td>484</td>
<td>402</td>
<td>127</td>
</tr>
<tr>
<td>402</td>
<td>962</td>
<td>813</td>
<td>1367</td>
<td>1119</td>
<td>940</td>
<td>881</td>
<td>829</td>
<td>776</td>
<td>724</td>
<td>1537</td>
<td>1056</td>
<td>1157</td>
<td>—</td>
<td>521</td>
<td>446</td>
<td>127</td>
</tr>
<tr>
<td>445</td>
<td>1048</td>
<td>899</td>
<td>1508</td>
<td>1233</td>
<td>972</td>
<td>914</td>
<td>857</td>
<td>800</td>
<td>1666</td>
<td>1127</td>
<td>1272</td>
<td>—</td>
<td>576</td>
<td>489</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>490</td>
<td>1134</td>
<td>991</td>
<td>1669</td>
<td>1369</td>
<td>1140</td>
<td>1072</td>
<td>1008</td>
<td>945</td>
<td>881</td>
<td>1837</td>
<td>1230</td>
<td>1394</td>
<td>—</td>
<td>621</td>
<td>532</td>
<td>140</td>
</tr>
<tr>
<td>542</td>
<td>1292</td>
<td>1084</td>
<td>1838</td>
<td>1506</td>
<td>1264</td>
<td>1186</td>
<td>1116</td>
<td>1046</td>
<td>978</td>
<td>2004</td>
<td>1329</td>
<td>1518</td>
<td>—</td>
<td>675</td>
<td>596</td>
<td>152</td>
</tr>
<tr>
<td>600</td>
<td>1407</td>
<td>1211</td>
<td>2032</td>
<td>1662</td>
<td>1397</td>
<td>1313</td>
<td>1235</td>
<td>1157</td>
<td>1080</td>
<td>2191</td>
<td>1417</td>
<td>1713</td>
<td>1670</td>
<td>730</td>
<td>656</td>
<td>152</td>
</tr>
<tr>
<td>660</td>
<td>1581</td>
<td>1332</td>
<td>2237</td>
<td>1832</td>
<td>1534</td>
<td>1443</td>
<td>1356</td>
<td>1268</td>
<td>1181</td>
<td>2408</td>
<td>1575</td>
<td>1896</td>
<td>1835</td>
<td>818</td>
<td>730</td>
<td>178</td>
</tr>
<tr>
<td>730</td>
<td>1718</td>
<td>1473</td>
<td>2472</td>
<td>2023</td>
<td>1700</td>
<td>1597</td>
<td>1502</td>
<td>1407</td>
<td>1311</td>
<td>2646</td>
<td>1719</td>
<td>2086</td>
<td>2026</td>
<td>886</td>
<td>799</td>
<td>191</td>
</tr>
</tbody>
</table>

**DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.**
Arrangement 3, SWSI Non-Rotatable, Class I & II

NOTES:
1. Discharge angles are included on all discharges.
2. Inlet bearing bar support is removable.
3. "CW" rotation is shown. "CCW" rotation is similar but opposite.
4. Frame supports vary in construction by size and by discharge position.
5. Bearing bar supports may extend beyond base angles. See Drawing AC1000851 for dimensions if space limitations are required for mounting fan.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>O</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CL I</td>
<td>CL II</td>
<td>CL I</td>
<td>CL II</td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>403</td>
<td>29</td>
<td>537</td>
<td>540</td>
<td>402</td>
</tr>
<tr>
<td>330</td>
<td>441</td>
<td>29</td>
<td>565</td>
<td>581</td>
<td>445</td>
</tr>
<tr>
<td>365</td>
<td>480</td>
<td>29</td>
<td>603</td>
<td>626</td>
<td>489</td>
</tr>
<tr>
<td>402</td>
<td>530</td>
<td>35</td>
<td>641</td>
<td>664</td>
<td>540</td>
</tr>
<tr>
<td>445</td>
<td>581</td>
<td>35</td>
<td>697</td>
<td>741</td>
<td>597</td>
</tr>
<tr>
<td>490</td>
<td>645</td>
<td>35</td>
<td>768</td>
<td>784</td>
<td>657</td>
</tr>
<tr>
<td>542</td>
<td>702</td>
<td>48</td>
<td>848</td>
<td>857</td>
<td>727</td>
</tr>
<tr>
<td>600</td>
<td>778</td>
<td>48</td>
<td>902</td>
<td>937</td>
<td>805</td>
</tr>
<tr>
<td>660</td>
<td>842</td>
<td>60</td>
<td>1013</td>
<td>1037</td>
<td>883</td>
</tr>
<tr>
<td>730</td>
<td>943</td>
<td>60</td>
<td>1105</td>
<td>1118</td>
<td>978</td>
</tr>
</tbody>
</table>

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
Arrangement 3, SWSI Non-Rotatable, Class I & II

**NOTES:**
1. Discharge angles are included on all discharges.
2. Inlet bearing bar support is removable.
3. "CW" rotation is shown. "CCW" rotation is similar but opposite.
4. Frame supports vary in construction by size and by discharge position.
5. Bearing bar supports may extend beyond base angles. See Drawing AC1000851 for dimensions if space limitations are required for mounting fan.

**DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.**
Arrangement 1, SWSI Non-Rotatable, Class III

NOTES:
1. Discharge angles are included on all discharges.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. For fans size 182-330 (except TAD 182-200) with inlet box at 90 degrees or 270 degrees, use "BAU" discharge dimension "DF" for centerline height.

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
Arrangement 1, SWSI Non-Rotatable, Class III (cont’d.)

NOTES:
1. Discharge angles are included on all discharges.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. For fans size 182-330 (except TAD 182-200) with inlet box at 90 degrees or 270 degrees, use "BAU" discharge dimension "DF" for centerline height.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>Q</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>191</td>
<td>165</td>
<td>22</td>
<td>481</td>
<td>164</td>
<td>38</td>
<td>89</td>
</tr>
<tr>
<td>135</td>
<td>203</td>
<td>181</td>
<td>22</td>
<td>508</td>
<td>181</td>
<td>38</td>
<td>89</td>
</tr>
<tr>
<td>150</td>
<td>241</td>
<td>203</td>
<td>22</td>
<td>573</td>
<td>200</td>
<td>45</td>
<td>102</td>
</tr>
<tr>
<td>165</td>
<td>241</td>
<td>222</td>
<td>22</td>
<td>589</td>
<td>221</td>
<td>45</td>
<td>102</td>
</tr>
<tr>
<td>182</td>
<td>267</td>
<td>245</td>
<td>22</td>
<td>656</td>
<td>245</td>
<td>45</td>
<td>127</td>
</tr>
<tr>
<td>200</td>
<td>292</td>
<td>270</td>
<td>22</td>
<td>699</td>
<td>268</td>
<td>50</td>
<td>127</td>
</tr>
<tr>
<td>222</td>
<td>349</td>
<td>292</td>
<td>29</td>
<td>797</td>
<td>298</td>
<td>50</td>
<td>140</td>
</tr>
<tr>
<td>245</td>
<td>387</td>
<td>321</td>
<td>29</td>
<td>884</td>
<td>329</td>
<td>60</td>
<td>165</td>
</tr>
<tr>
<td>270</td>
<td>438</td>
<td>353</td>
<td>29</td>
<td>960</td>
<td>362</td>
<td>60</td>
<td>165</td>
</tr>
<tr>
<td>300</td>
<td>483</td>
<td>397</td>
<td>35</td>
<td>1073</td>
<td>402</td>
<td>65</td>
<td>197</td>
</tr>
<tr>
<td>330</td>
<td>533</td>
<td>435</td>
<td>35</td>
<td>1153</td>
<td>445</td>
<td>70</td>
<td>197</td>
</tr>
</tbody>
</table>

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
# DIMENSIONAL DATA

## Arrangement 1, SWSI Non-Rotatable, Class III

### NOTES:
1. Discharge angles are included on all discharges.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. For fans with inlet box at 90 degrees or 270 degrees, use "BAU" discharge dimension "DF" for centerline height.

### DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.

## Table 1

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>AH</th>
<th>AB</th>
<th>BA</th>
<th>BH</th>
<th>C</th>
<th>DA</th>
<th>DB</th>
<th>DC</th>
<th>DD</th>
<th>DE</th>
<th>DF</th>
<th>DG</th>
<th>DX</th>
<th>Q</th>
<th>GA</th>
<th>GB</th>
<th>GC</th>
</tr>
</thead>
<tbody>
<tr>
<td>365</td>
<td>988</td>
<td>551</td>
<td>737</td>
<td>75</td>
<td>75</td>
<td>21</td>
<td>978</td>
<td>737</td>
<td>743</td>
<td>749</td>
<td>800</td>
<td>851</td>
<td>902</td>
<td>1064</td>
<td>38</td>
<td>38</td>
<td>1245</td>
<td>5</td>
</tr>
<tr>
<td>402</td>
<td>1087</td>
<td>619</td>
<td>811</td>
<td>75</td>
<td>100</td>
<td>21</td>
<td>1078</td>
<td>813</td>
<td>806</td>
<td>838</td>
<td>895</td>
<td>940</td>
<td>1003</td>
<td>1156</td>
<td>50</td>
<td>50</td>
<td>1334</td>
<td>5</td>
</tr>
<tr>
<td>445</td>
<td>1202</td>
<td>683</td>
<td>897</td>
<td>75</td>
<td>100</td>
<td>21</td>
<td>1191</td>
<td>899</td>
<td>921</td>
<td>902</td>
<td>978</td>
<td>1016</td>
<td>1099</td>
<td>1270</td>
<td>50</td>
<td>50</td>
<td>1435</td>
<td>5</td>
</tr>
<tr>
<td>490</td>
<td>1324</td>
<td>741</td>
<td>984</td>
<td>75</td>
<td>100</td>
<td>21</td>
<td>1311</td>
<td>991</td>
<td>984</td>
<td>991</td>
<td>1073</td>
<td>1118</td>
<td>1207</td>
<td>1391</td>
<td>50</td>
<td>50</td>
<td>1562</td>
<td>5</td>
</tr>
<tr>
<td>542</td>
<td>1462</td>
<td>835</td>
<td>1092</td>
<td>90</td>
<td>125</td>
<td>21</td>
<td>1451</td>
<td>1094</td>
<td>1073</td>
<td>1105</td>
<td>1181</td>
<td>1245</td>
<td>1327</td>
<td>1543</td>
<td>65</td>
<td>65</td>
<td>1880</td>
<td>5</td>
</tr>
<tr>
<td>600</td>
<td>1618</td>
<td>914</td>
<td>1205</td>
<td>90</td>
<td>125</td>
<td>21</td>
<td>1604</td>
<td>1211</td>
<td>1143</td>
<td>1219</td>
<td>1302</td>
<td>1372</td>
<td>1461</td>
<td>1695</td>
<td>65</td>
<td>65</td>
<td>2032</td>
<td>5</td>
</tr>
<tr>
<td>660</td>
<td>1775</td>
<td>1021</td>
<td>1329</td>
<td>100</td>
<td>150</td>
<td>21</td>
<td>1762</td>
<td>1332</td>
<td>1257</td>
<td>1334</td>
<td>1416</td>
<td>1499</td>
<td>1600</td>
<td>1873</td>
<td>65</td>
<td>65</td>
<td>2235</td>
<td>5</td>
</tr>
<tr>
<td>730</td>
<td>1965</td>
<td>1110</td>
<td>1465</td>
<td>100</td>
<td>150</td>
<td>21</td>
<td>1949</td>
<td>1473</td>
<td>1378</td>
<td>1448</td>
<td>1568</td>
<td>1638</td>
<td>1765</td>
<td>2064</td>
<td>65</td>
<td>65</td>
<td>2235</td>
<td>5</td>
</tr>
<tr>
<td>807</td>
<td>2173</td>
<td>1223</td>
<td>1619</td>
<td>100</td>
<td>150</td>
<td>21</td>
<td>2168</td>
<td>1630</td>
<td>1511</td>
<td>1600</td>
<td>1715</td>
<td>1829</td>
<td>1943</td>
<td>2273</td>
<td>65</td>
<td>65</td>
<td>2451</td>
<td>5</td>
</tr>
<tr>
<td>890</td>
<td>2394</td>
<td>1303</td>
<td>1781</td>
<td>100</td>
<td>150</td>
<td>21</td>
<td>2372</td>
<td>1778</td>
<td>1664</td>
<td>1759</td>
<td>1873</td>
<td>1988</td>
<td>2159</td>
<td>2496</td>
<td>65</td>
<td>65</td>
<td>2731</td>
<td>5</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>AH</th>
<th>AB</th>
<th>BA</th>
<th>BH</th>
<th>C</th>
<th>DA</th>
<th>DB</th>
<th>DC</th>
<th>DD</th>
<th>DE</th>
<th>DF</th>
<th>DG</th>
<th>DX</th>
<th>Q</th>
<th>GA</th>
<th>GB</th>
<th>GC</th>
</tr>
</thead>
<tbody>
<tr>
<td>365</td>
<td>1473</td>
<td>737</td>
<td>1243</td>
<td>1021</td>
<td>854</td>
<td>802</td>
<td>754</td>
<td>706</td>
<td>659</td>
<td>1400</td>
<td>1059</td>
<td>959</td>
<td>1400</td>
<td>1059</td>
<td>470</td>
<td>410</td>
<td>178</td>
<td>20</td>
</tr>
<tr>
<td>402</td>
<td>1626</td>
<td>813</td>
<td>1376</td>
<td>1134</td>
<td>941</td>
<td>883</td>
<td>830</td>
<td>778</td>
<td>725</td>
<td>1534</td>
<td>1035</td>
<td>1184</td>
<td>1534</td>
<td>1035</td>
<td>533</td>
<td>461</td>
<td>203</td>
<td>20</td>
</tr>
<tr>
<td>445</td>
<td>1788</td>
<td>899</td>
<td>1518</td>
<td>1248</td>
<td>973</td>
<td>916</td>
<td>859</td>
<td>802</td>
<td>802</td>
<td>1691</td>
<td>1141</td>
<td>1299</td>
<td>1691</td>
<td>1141</td>
<td>576</td>
<td>503</td>
<td>203</td>
<td>25</td>
</tr>
<tr>
<td>490</td>
<td>1924</td>
<td>991</td>
<td>1669</td>
<td>1370</td>
<td>1141</td>
<td>1073</td>
<td>1010</td>
<td>946</td>
<td>883</td>
<td>1840</td>
<td>1232</td>
<td>1421</td>
<td>1840</td>
<td>1232</td>
<td>619</td>
<td>546</td>
<td>229</td>
<td>25</td>
</tr>
<tr>
<td>542</td>
<td>2083</td>
<td>1094</td>
<td>1849</td>
<td>1521</td>
<td>1267</td>
<td>1187</td>
<td>1118</td>
<td>1048</td>
<td>978</td>
<td>2026</td>
<td>1343</td>
<td>1584</td>
<td>2026</td>
<td>1343</td>
<td>699</td>
<td>613</td>
<td>229</td>
<td>28</td>
</tr>
<tr>
<td>600</td>
<td>2273</td>
<td>1211</td>
<td>2042</td>
<td>1676</td>
<td>1399</td>
<td>1314</td>
<td>1237</td>
<td>1158</td>
<td>1081</td>
<td>2224</td>
<td>1468</td>
<td>1740</td>
<td>2224</td>
<td>1468</td>
<td>756</td>
<td>670</td>
<td>241</td>
<td>32</td>
</tr>
<tr>
<td>660</td>
<td>2499</td>
<td>1332</td>
<td>2239</td>
<td>1834</td>
<td>1537</td>
<td>1445</td>
<td>1357</td>
<td>1270</td>
<td>1183</td>
<td>2411</td>
<td>1576</td>
<td>1923</td>
<td>2411</td>
<td>1576</td>
<td>843</td>
<td>744</td>
<td>254</td>
<td>32</td>
</tr>
<tr>
<td>730</td>
<td>2711</td>
<td>1473</td>
<td>2473</td>
<td>2024</td>
<td>1702</td>
<td>1599</td>
<td>1503</td>
<td>1408</td>
<td>1313</td>
<td>2648</td>
<td>1721</td>
<td>2113</td>
<td>2648</td>
<td>1721</td>
<td>911</td>
<td>813</td>
<td>267</td>
<td>32</td>
</tr>
<tr>
<td>807</td>
<td>2940</td>
<td>1620</td>
<td>2731</td>
<td>2232</td>
<td>1883</td>
<td>1767</td>
<td>1662</td>
<td>1557</td>
<td>1453</td>
<td>2903</td>
<td>1873</td>
<td>2321</td>
<td>2903</td>
<td>1873</td>
<td>988</td>
<td>889</td>
<td>267</td>
<td>32</td>
</tr>
<tr>
<td>890</td>
<td>3178</td>
<td>1778</td>
<td>2991</td>
<td>2453</td>
<td>2073</td>
<td>1948</td>
<td>1832</td>
<td>1716</td>
<td>1600</td>
<td>3199</td>
<td>2070</td>
<td>2542</td>
<td>3199</td>
<td>2070</td>
<td>1068</td>
<td>970</td>
<td>279</td>
<td>enq</td>
</tr>
</tbody>
</table>

| DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST. |
Arrangement 3, DWDI Non-Rotatable, Class I & II

NOTES:
1. Inlet bearing bar supports are removable.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. For optional flanged outlet and downblast discharge see Drawing AC14895.
4. Bearing bar supports may extend beyond base angles. See Drawing AC1000648 for dimensions if space limitations are required for mounting fan.

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.
Arrangement 3, DWDI Non-Rotatable, Class I & II (cont'd.)

**NOTES:**
1. Inlet bearing bar supports are removable.
2. "CW" rotation is shown. "CCW" rotation is similar but opposite.
3. For optional flanged outlet connection and downblast discharge see Drawing AC14896.
4. Bearing bar supports may extend beyond base angles. See Drawing AC1000648 for dimensions if space limitations are required for mounting fan.

**DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.**
Fans shall be Model BAE Aerofoil, as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

**PERFORMANCE** — Fans shall be tested in accordance with AMCA 210 and AMCA 300 test codes for air moving devices and shall be licensed to bear the AMCA certified ratings seal for both sound and air.

Fans shall have a sharply rising pressure characteristic extending through the operating range and continuing to rise beyond the efficiency peak to ensure quiet and stable operation. Fans shall have a non-overloading design with self-limiting power characteristics and shall reach a peak in the normal selection area. All fans shall be capable of operating over the minimum pressure class limits, as specified in AMCA Standard 99-2408-69.

**HOUSING** — BAE fan housings shall be of heavy gauge, continuously welded construction. Housings with lock seams or partially welded construction are not acceptable. Discharge flanges are to be provided for rigidity and duct connection. Housings shall be suitably braced to prevent vibration or pulsation. Housings shall have tapered spun, aerodynamically designed inlet cones or shrouds providing stable flow and high rigidity.

Class I and II sizes 270 and smaller, excluding Arrangement 3, shall be of the rotatable design, convertible to 8 standard discharge configurations.

**IMPELLER** — Impellers shall be of the non-overloading type. Impellers shall have a precision spun, flat inlet cone to allow higher efficiencies over the performance range of the fan. Sizes 245 and smaller shall have aerofoil-shaped, extruded aluminum blades. Sizes 270 and larger shall have die-formed aerofoil steel blades with the option of extruded aluminum blades. All hollow blade impellers shall be continuously welded around all edges. All impellers shall be statically and dynamically balanced on precision electronic balancers to a Balance Quality Grade G6.3 (3.8 mm/s rms) per ANSI/AMCA 204 or better.

**SHAFT** — Shafts shall be AISI 1040 or 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

**BEARINGS** — Bearings shall be heavy duty, grease lubricated, spherical roller or adapter mounted anti-friction ball, self-aligning, pillow block type and selected for a minimum average bearing life L10 in excess of 40,000 hours at the maximum fan RPM.

**DRIVE** — Motor sheaves shall be cast iron, variable pitch on applications 7.5 kW and smaller, and fixed pitch on 11 kW and larger. Drives and belts shall be located external to the fan casing and rated for 150% of the required motor rating.

**FINISH AND COATING** — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and deburred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant.

**ACCESSORIES** — When specified, accessories such as belt guards, weather covers, access doors, companion flanges, variable inlet vanes, outlet dampers, inlet boxes, shaft coolers, shaft seals, inlet screens, etc., shall be provided by Twin City Fan & Blower to maintain one source responsibility.

When specified, fans shall be supplied with internal or nested type variable inlet vanes for impeller diameters 420 mm and larger. Cantilevered vane blades are to be used through Size 660 to minimize air performance insertion losses and noise. The operating mechanism shall be out of the inlet airstream.

**FACTORY RUN TEST** — All fans prior to shipment shall be completely assembled and test run as a unit at the specified operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204 “Balance Quality and Vibration Levels for Fans” to Balance Quality Grade G6.3 (3.8 mm/s rms). Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

**GUARANTEE** — The manufacturer shall guarantee the workmanship and materials for its BAE aerofoil fans for at least twelve (12) months from start-up or eighteen (18) months from shipment, whichever occurs first.
Fans shall be Model BAE Aerofoil, as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

**PERFORMANCE** — Fans shall be tested in accordance with AMCA 210 and AMCA 300 test codes for air moving devices and shall be licensed to bear the AMCA certified ratings seal for both sound and air.

Fans shall have a sharply rising pressure characteristic extending through the operating range and continuing to rise beyond the efficiency peak to ensure quiet and stable operation. Fans shall have a non-overloading design with self-limiting power characteristics and shall reach a peak in the normal selection area. All fans shall be capable of operating over the minimum pressure class limits, as specified in AMCA Standard 99-2408-69.

**HOUSING** — BAE fan housings shall be of heavy gauge, continuously welded construction. Housings with lock seams or partially welded construction are not acceptable. Housings shall be suitably braced to prevent vibration or pulsation. Housings shall have spun, aerodynamically designed inlet cones or inlet venturies for smooth airflow into the impellers.

**IMPELLERS** — Impellers shall have a precision spun, flat inlet cone to allow higher efficiencies over the performance range of the fan. Sizes 245 and smaller shall have aerofoil-shaped, extruded aluminum blades. Sizes 270 and larger shall have die-formed aerofoil steel blades with the option of extruded aluminum blades. All hollow blade impellers shall be continuously welded around all edges. All impellers shall be statically and dynamically balanced on precision electronic balancers to a Balance Quality Grade G6.3 (3.8 mm/s rms) per ANSI/AMCA 204 or better.

**SHAFT** — Shafts shall be AISI 1040 or 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

**BEARINGS** — Bearings shall be heavy duty, grease lubricated, spherical roller or adapter mounted anti-friction ball, self-aligning, pillow block type and selected for a minimum average bearing life L10 in excess of 40,000 hours at the maximum fan RPM.

**DRIVE** — Motor sheaves shall be cast iron, variable pitch on applications 7.5 kW and smaller, and fixed pitch on 11 kW and larger. Drives and belts shall be located external to the fan casing and rated for 150% of the required motor rating.

**FINISH AND COATING** — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and deburred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant.

**ACCESSORIES** — When specified, accessories such as belt guards, weather covers, access doors, companion flanges, variable inlet vanes, outlet dampers, inlet boxes, shaft coolers, shaft seals, inlet screens, etc., shall be provided by Twin City Fan & Blower to maintain one source responsibility. When specified, fans shall be supplied with internal or nested type variable inlet vanes for impeller diameters 420 mm and larger. Cantilevered vane blades are to be used through Size 660 to minimize air performance insertion losses and noise. The operating mechanism shall be out of the inlet airstream. Double width fans shall have interconnecting linkage to ensure operation in unison.

**FACTORY RUN TEST** — All fans prior to shipment shall be completely assembled and test run as a unit at the specified operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204 “Balance Quality and Vibration Levels for Fans” to Balance Quality Grade G6.3, (3.8 mm/s rms). Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

**GUARANTEE** — The manufacturer shall guarantee the workmanship and materials for its BAE aerofoil fans for at least twelve (12) months from start-up or eighteen (18) months from shipment, whichever occurs first.
INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS  |  UTILITY SETS  |  PLENUM & PLUG FANS  |  INLINE CENTRIFUGAL FANS
MIXED FLOW FANS  |  TUBEAXIAL & VANEAXIAL FANS  |  PROPELLER WALL FANS  |  PROPELLER ROOF VENTILATORS
CENTRIFUGAL ROOF & WALL EXHAUSTERS  |  CEILING VENTILATORS  |  GRAVITY VENTILATORS  |  DUCT BLOWERS
RADIAL BLADED FANS  |  RADIAL TIP FANS  |  HIGH EFFICIENCY INDUSTRIAL FANS  |  PRESSURE BLOWERS
LABORATORY EXHAUST FANS  |  FILTERED SUPPLY FANS  |  MANCOOLERS  |  FIBERGLASS FANS  |  CUSTOM FANS

©2018 Twin City Fan Companies, Ltd., Minneapolis, MN. All rights reserved. Catalog illustrations cover the general appearance of Twin City Fan & Blower products at the time of publication and we reserve the right to make changes in design and construction at any time without notice.