**TECHNICAL DATA SHEET**

**451** SERIES

**TECHNICAL DATA**

- Number of stages: 1 thru 9
- Inlet connection: 16” (420 mm) flange, PN 10 DN 400
- Outlet connection: 14” (355 mm) flange, PN 10 DN 350
- Operating speed: 3570 rpm in direct drive (60Hz)
- Lubrication: Oil type with constant level
- Impeller diameter: 29” (736,5 mm)
- Impeller tip speed: 452 fps (138 m/sec)
- First critical speed: 4753 rpm (6 stages)
- Drive: Direct drive, gear box or V-belts
- Vibration tolerance: 1.34 mils peak-to-peak (4.5 mm/s RMS)
- Balance piston: From 3 to 9 stages
- Shaft end: 2” 3/4 (70 mm), inlet end drive standard

**MATERIALS OF CONSTRUCTION**

- Head, Sections, Bearing housings: Cast iron FGL 250
- Tie rods: 13/16” (20 mm) diameter cold drawn steel A60
- Joint sealing compound: RTV 15502 Silicone
- Seals (air): Graphit rings each end
- Seals (gas): Four carbon rings each end with inert gas injection
- Bearings: Ball bearings 6316 C3
- Shaft: Carbon steel C35 (stainless steel available)
- Impellers: Cast aluminium Al Si 10 Mg
- Baffle rings: Stainless steel
- Motor pedestal: UPN roll carbon steel.
- Base frame installation: Anchor bolts or antivibrations pads

<table>
<thead>
<tr>
<th>BLOWER SIZE</th>
<th>“A”</th>
<th>“B”</th>
<th>“C”</th>
<th>WEIGHT</th>
<th>Rotor moment of inertia WK (lb-ft²)</th>
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</thead>
<tbody>
<tr>
<td>451.01</td>
<td>23.06 (603)</td>
<td>106 (2900)</td>
<td>118 (3300)</td>
<td>5860</td>
<td>2650</td>
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<tr>
<td>451.02</td>
<td>31.42 (738)</td>
<td>122 (3100)</td>
<td>134 (3400)</td>
<td>7500</td>
<td>3400</td>
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<td>451.03</td>
<td>39.17 (955)</td>
<td>132 (3300)</td>
<td>144 (3560)</td>
<td>9170</td>
<td>4150</td>
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<td>451.04</td>
<td>46.93 (1192)</td>
<td>142 (3600)</td>
<td>154 (3900)</td>
<td>10340</td>
<td>4680</td>
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<td>451.05</td>
<td>54.68 (1388)</td>
<td>150 (3800)</td>
<td>162 (4100)</td>
<td>11980</td>
<td>5420</td>
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<tr>
<td>451.06</td>
<td>62.44 (1566)</td>
<td>158 (4000)</td>
<td>173 (4400)</td>
<td>13000</td>
<td>5910</td>
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<td>451.07</td>
<td>70.20 (1763)</td>
<td>161 (4100)</td>
<td>177 (4500)</td>
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<td>7360</td>
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<td>451.08</td>
<td>77.95 (1983)</td>
<td>165 (4200)</td>
<td>185 (4700)</td>
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<td>7875</td>
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<td>85.71 (2177)</td>
<td>172 (4500)</td>
<td>197 (5000)</td>
<td>18385</td>
<td>8320</td>
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</table>

DIMENSIONS ARE IN INCHES AND (MM)
ACTUAL DIMENSIONS MAY VARY SLIGHTLY TO SUIT APPLICATION

Inlet air condition: Phtr = 14.7 PSI
T = 68° F - R.H. = 36 %

MODEL 451 Working Area

Values, dimensions and reference in this brochure are approximate and intended as a guide only, not for construction and are subject to change without notice.

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