**Instinct 110 Solo Features**
- Light weight construction for wall mounting
- Approved for zero clearance to combustibles
- 2" PVC, CPVC, PP venting up to 28 equivalent feet
- 3" PVC, CPVC, PP, or AL29-4C venting up to 100 equivalent feet
- 10 year limited warranty on heat exchanger
- Up to 6 year limited warranty on parts, except igniter
- Up to 3 year labor allowance

**Approvals**
- 95% AFUE Efficiency
- ENERGY STAR Qualified
- ANSI Z21.13 and CSA 4.9 Boiler Standards Compliance
- ASME Boiler Certification – ASME "H" Stamp
- SCAQMD 2012 Low NOx Certification

**Stainless Steel Fire Tube Heat Exchanger**
- 439 Stainless Steel heat exchanger construction for corrosion resistance
- High water content provides stable temperature control
- Self cleaning flue ways reduce maintenance
- Suitable for use with propylene glycol up to 50% concentration

**CTRLMax Control System**
- Graphical display with 5 navigation buttons
- EZ Setup allows quick and easy boiler settings adjustment
- Flexible configuration of 3 circulator outputs for custom applications
- Outdoor temperature reset to maximize efficiency
- Accepts two space heating call inputs with independent outdoor reset curves
- Domestic hot water priority with optional time-out
- Integrated cascade control for up to 6 Instinct boilers
- 0-10 VDC Modulation input
- Modbus building management system (BMS) interface, LonWorks® and BACnet® interface optional
- Adjustable warm weather shutdown
- Adjustable boiler freeze protection
- Logging function records sensor readings for system optimization and troubleshooting
- Describes lockouts in plain English and suggests solutions while storing last 8 errors

**Standard Equipment**
- Stainless steel premix burner
- Direct spark ignition with variable speed blower
- Full modulation with turndown ratio of 8:1
- Automatic air vent
- ASME 30 PSI pressure relief valve
- Temperature and Pressure gauge
- Outdoor temperature sensor
- Automatic low water cutoff feature with early warning
- High temperature manual reset limit safety control
- Terminal block for circulator output
- Low voltage terminal strip with removable jumpers for manual or automatic reset limits
- Swing out control for easy access and servicing
- Polypropylene condensate pan and internal flue pipe
- 3 in 1 Universal vent adapter directly accepts PVC, Polypropylene, Stainless steel connections with test ports

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**Project / Location:** 

**Consulting Engineer / Architect:** 

**Mechanical Contractor:** 

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*Date: 3/12/2020*
## Boiler Dimensions

<table>
<thead>
<tr>
<th>Letter</th>
<th>Connection</th>
<th>Dimension in[mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Boiler Width</td>
<td>21 5/8&quot; [550]</td>
</tr>
<tr>
<td>B</td>
<td>3&quot; Combustion Air Inlet</td>
<td>3 7/8&quot; [100]</td>
</tr>
<tr>
<td>C</td>
<td>3&quot; Vent Outlet</td>
<td>17 1/2&quot; [445]</td>
</tr>
<tr>
<td>D</td>
<td>3/4&quot; NPSC Relief Valve</td>
<td>2 1/4&quot; [57]</td>
</tr>
<tr>
<td>E</td>
<td>Vent / Combustion Air Connection Height</td>
<td>5 1/8&quot; [130]</td>
</tr>
<tr>
<td>F</td>
<td>Boiler Height</td>
<td>26&quot; [660]</td>
</tr>
<tr>
<td>G</td>
<td>1&quot; NPT Boiler Supply</td>
<td>2 1/4&quot; [57]</td>
</tr>
<tr>
<td>H</td>
<td>1&quot; NPT Boiler Return</td>
<td>4 3/4&quot; [120]</td>
</tr>
<tr>
<td>I</td>
<td>3/4&quot; NPT Gas Connection</td>
<td>4 3/8&quot; [110]</td>
</tr>
<tr>
<td>J</td>
<td>Condensate Drain</td>
<td>17 1/4&quot; [440]</td>
</tr>
<tr>
<td>K</td>
<td>Condensate Height</td>
<td>6 ¾&quot; [171.0]</td>
</tr>
<tr>
<td>L</td>
<td>3/4&quot; NPSC Relief Valve</td>
<td>7 3/4&quot; [195]</td>
</tr>
<tr>
<td>M</td>
<td>3&quot; Combustion Air Inlet &amp; 3&quot; Vent Outlet</td>
<td>3 7/8&quot; [100]</td>
</tr>
<tr>
<td>N</td>
<td>1&quot; NPT Boiler Return</td>
<td>3 1/2&quot; [90]</td>
</tr>
<tr>
<td>O</td>
<td>Condensate Drain</td>
<td>3 7/8&quot; [100]</td>
</tr>
<tr>
<td>P</td>
<td>1&quot; NPT Boiler Supply</td>
<td>7 5/8&quot; [195]</td>
</tr>
<tr>
<td>Q</td>
<td>3/4&quot; Gas Connection</td>
<td>11 1/2&quot; [295]</td>
</tr>
<tr>
<td>R</td>
<td>Boiler Depth</td>
<td>17 1/8&quot; [435]</td>
</tr>
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## Boiler Performance

<table>
<thead>
<tr>
<th>Instinct Model</th>
<th>Fuel</th>
<th>Input Modulation (MBH)</th>
<th>AFUE</th>
<th>DOE Heating Capacity (MBH)</th>
<th>Net AHRI (MBH)</th>
<th>Boiler Water Volume (gal)</th>
<th>Power</th>
<th>Shipping Weight (Lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solo 110</td>
<td>Natural Propane</td>
<td>13.75-110</td>
<td>95%</td>
<td>102</td>
<td>89</td>
<td>2</td>
<td>120/1/60 FLA: 10A</td>
<td>101</td>
</tr>
</tbody>
</table>

![Instinct Solo Pressure Drop Curve](image)