NHB Series Application Drawings

NHB-55  NHB-80  NHB-110  NHB-150

Guide Only

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Navien
20 Goodyear
Irvine, CA 92618
800-519-8794
www.Navien.com

Air Elimination
Zone Valve
Pressure Relief Valve
Mixing Valve
WYE Strainer w/Blowdown
Full-port Ball Valve
Check Valve
Circulator
Expansion Tank
Purge Valve
Backflow Preventor
NHB Series Application Drawings

NHB-55  NHB-80  NHB-110  NHB-150

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Required boiler circulator is field supplied. Refer to installation manual for proper size to match boiler model.

NHB Series Condensing Boiler
Navien NHB Boiler
With 3 Zone Pumps
Navien NHB Series Primary Manifold
& Indirect Water Heater

Drawn By: BF  NHB-3ZP-PM-IDWH-BF01  December 1, 2014
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Required boiler circulator is field supplied. Refer to installation manual for proper size to match boiler model.

NHB Series Condensing Boiler
Navien NHB Boiler
With 3 Zone Valves
Navien NHB Series Primary Manifold & Indirect Water Heater

Drawn By: BF  NHB-3ZV-PM-IDWH-BF01  December 1, 2014
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Required boiler circulator is field supplied. Refer to installation manual for proper size to match boiler model.

NHB Series Condensing Boiler
Navien NHB Boiler
With 3 Zone Valves with
Navien NHB Series Primary Manifold

Drawn By: BF  NHB-3ZV-PM-BF01  December 1, 2014
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NHB Series Condensing Boiler

Navien NHB Boiler With 3 Zone Valves

Drawn By: BF  NHB-3ZV-BF01  December 1, 2014
Proper dirt separation must be used when applying the Navien NHB boiler with systems that contain ferrous or ferric materials. Installation requires proper means of cleaning and flushing system piping prior to start-up to avoid potentiality subjecting the NHB boiler to system contaminants. Proper air elimination & system maintenance is required to maintain Navien warranties.

Required boiler circulator is field supplied. Refer to installation manual for proper size to match boiler model.

Navien NHB Boiler Application
Two-Pipe Direct Return

Dirt Separator
WYE Strainer w/ Blowdown

Cast Iron Baseboard
Cast Iron Fin Tube
Cast Iron Radiators

NHB Series Boiler
Proper dirt separation must be used when applying the Navien NHB boiler with systems that contain ferrous or ferric materials.

Installation requires proper means of cleaning and flushing system piping prior to start-up to avoid potentiality subjecting the NHB boiler to system contaminants.

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Required boiler circulator is field supplied. Refer to installation manual for proper size to match boiler model.
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Installation requires proper means of cleaning and flushing system piping prior to start-up to avoid potentiality subjecting the NHB boiler to system contaminants.
Proper air elimination & system maintenance is required to maintain Navien warranties.

Required boiler circulator is field supplied. Refer to installation manual for proper size to match boiler model.

Navien NHB Boiler Application
One-Pipe (Monoflo) Distribution System

Dirt Separator
WYE Strainer w/ Blowdown

Navien NHB Series Boiler

20 Goodyear
Irvine, CA 92618
800-519-8794
www.navien.com

Drawn By: BF
NHB-CI—PM-MONO-BF01
December 1, 2014
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Recommended System & Header Pipe Sizes - Total BTU (2 - 4 Ft/Sec.)

- 1" - 55,000 to 110,000 BTU's
- 1 ¼" - 85,000 to 160,000 BTU's
- 1 ½" - 115,000 to 230,000 BTU's
- 2" - 200,000 to 400,000 BTU's
- 2 ½" - 300,000 to 610,000 BTU's
- 3" - 435,000 to 875,000 BTU's

Navien NHB-110/150
Two Multiple Boiler Application

Drawn By: BF  NHB-110-150-2MULT-BF01  March 1, 2017
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### Recommended System & Header Pipe Sizes - Total BTU (2-4 Ft/Sec.)

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<th>Size</th>
<th>1&quot; - 55,000 to 110,000 BTU's</th>
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</thead>
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</tr>
</tbody>
</table>

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Navien Communication Cable (1 Less than total boiler count required)
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Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

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<thead>
<tr>
<th>Pipe Size</th>
<th>BTU Range</th>
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<tbody>
<tr>
<td>1&quot;</td>
<td>55,000 to 110,000 BTU's</td>
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- 3" - 435,000 to 875,000 BTU’s

NHB Series Condensing Boiler
Navien NHB-110/150
Five to Sixteen Multiple Boiler Application

Drawn By: BF  NHB-110-150-5+MULT-BF01  March 1, 2017
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**Recommended System & Header Pipe Sizes - Total BTU (2 - 4 Ft/Sec.)**

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</tr>
</tbody>
</table>

**Navien NHB-110/150**

Two Multiple Boiler Application With One Indirect Water Heater

Drawn By: BF

Navien Communication Cable
(1 Less than total boiler count required)

20 Goodyear
Irvine, CA 92618
800-519-8794
www.navien.com
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**Recommended System & Header Pipe Sizes - Total BTU (2-4 Ft/Sec.)**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>BTU Range</th>
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<tbody>
<tr>
<td>1&quot;</td>
<td>55,000 to 110,000 BTU's</td>
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<td>435,000 to 875,000 BTU's</td>
</tr>
</tbody>
</table>

---

**Navien NHB Series Condensing Boiler**

Navien NHB-110/150
Two Multiple Boiler Application
With Two Indirect Water Heaters

**NHB Series Condensing Boiler**

20 Goodyear
Irvine, CA 92618
800-519-8794
www.navien.com

**Drawn By:** BF  **NHB-110-150-2MULT-2IND-BF01**  **March 1, 2017**
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**Recommended System & Header Pipe Sizes - Total BTU (2-4 Ft/Sec.)**

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- **Navien Communication Cable** (1 Less than total boiler count required)
- **System Fill**
- **Supply Sensor**
- **Return Sensor**
- **Gas Condensate**
- **Outdoor Sensor**
- **Supply(s)**
- **Return(s)**
- **System**

---

**Navien NHB-110/150**

*Three Multiple Boiler Application With One Indirect Water Heater*

**NHB Series Condensing Boiler**

**Navien Communication Cable** (1 Less than total boiler count required)

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**Navien NHB-110-150-3MULT-1IND-BF01**

Drawn By: BF  March 1, 2017
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<table>
<thead>
<tr>
<th>System Supply(s)</th>
<th>Supply Sensor</th>
<th>Return Sensor</th>
<th>System Return(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Fill</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler 1 (Master)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler 3</td>
<td></td>
<td></td>
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<tr>
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**Recommended System & Header Pipe Sizes - Total BTU (2-4 Ft/Sec.)**

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- 3" - 435,000 to 875,000 BTU's

**NHB Series Condensing Boiler**

Navien NHB-110/150
Three Multiple Boiler Application
With Two Indirect Water Heaters

Drawn By: BF  NHB-110-150-3MULT-2IND-BF01  March 1, 2017
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NHB Series Condensing Boiler

Navien NHB-110/150
Four Multiple Boiler Application
With One Indirect Water Heater

Drawn By: BF | NHB-110-150-4MULT-1IND-BF01 | March 1, 2017
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**Navien NHB Series Condensing Boiler**

Navien NHB-110/150
Four Multiple Boiler Application
With Two Indirect Water Heaters

Drawn By: BF  NHB-110-150-4MULT-2IND-BF01  March 1, 2017
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  - 3" - 435,000 to 875,000 BTU's

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**Navien NHB-110/150**

Five to Sixteen Multiple Boiler Application With One Indirect Water Heater

**Navien Communication Cable**
(1 Less than total boiler count required)

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**Boiler 1** (Master)
**Boiler 2**
**Boiler 3**
**Boiler 4**
**Boiler 5-16**

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**Gas Condensate**

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**System Fill**

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**Supply Sensor**

---

**Return Sensor**

---

**System Supply(s)**

---

**System Return(s)**

---

**Outdoor Sensor**

---

**Navien Communication Cable**

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**Recommended System & Header Pipe Sizes**

- **Total BTU (2-4 Ft/Sec.)**
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**NHB Series Condensing Boiler**

Navien NHB-110/150
Five to Sixteen Multiple Boiler Application With Two Indirect Water Heaters

Drawn By: BF  NHB-110-150-5+MULT-2IND-BF01 March 1, 2017

20 Goodyear
Irvine, CA 92618
800-519-8794
www.navien.com
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</table>

**Recommended Boiler Pipe Sizes:**

- **NHB-110** - 1" Minimum (1" boiler connection)
- **NHB-150** - 1¼" Minimum (1" boiler connection)

**Navien NHB-110/150**

Two Multiple Boiler Application

Drawn By: BF
NHB-110-150-2MULT-BF01A
March 1, 2017
Recommended System & Header Pipe Sizes - Total BTU (2 - 4 Ft/Sec.)

1" - 55,000 to 110,000 BTU's
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Recommended Boiler Pipe Sizes:
- NHB-110 - 1" Minimum (1" boiler connection)
- NHB-150 - 1 ¼" Minimum (1" boiler connection)

NHB Series Condensing Boiler

Navien NHB-110/150
Three Multiple Boiler Application

Drawn By: BF  NHB-110-150-3MULT-BF01A  March 1, 2017
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- 2 ½" - 300,000 to 610,000 BTU’s
- 3" - 435,000 to 875,000 BTU’s

**Recommended Boiler Pipe Sizes:**

- NHB-110 - 1" Minimum (1" boiler connection)
- NHB-150 - 1 ½" Minimum (1" boiler connection)

**Recommended System & Header Pipe Sizes (2-4 Ft/Sec.)**

- 2" - 200,000 to 400,000 BTU’s
- 2 ½" - 300,000 to 610,000 BTU’s
- 3" - 435,000 to 875,000 BTU’s

**Gas**

**Condensate**

**System Fill**

**WYE Strainer w/Blowdown**

**Outdoor Sensor**

**System Supply(s)**

**Supply Sensor**

**Return Sensor**

**Return(s)**

**System Return(s)**

**Navien Communication Cable**

(1 Less than total boiler count required)

**Boiler 1** (Master)

**Boiler 2**

**Boiler 3**

**Boiler 4**

**Navien NHB-110/150**

Four Multiple Boiler Application

March 1, 2017

NHB-110-150-4MULT-BF01A

March 1, 2017

Navien Communication Cable

(1 Less than total boiler count required)
This drawing is intended only as a guide and not as a replacement for professionally engineered project drawings. This concept system drawing does not imply compliance with local building codes. Actual installation may vary depending on installation location & parameters and it must be done in accordance to all local building codes. Verify with local building officials before commencement of system installation.

**Recommended System & Header Pipe Sizes - Total BTU (2- 4 Ft/Sec.)**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>BTU Range</th>
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</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>55,000 to 110,000 BTU's</td>
</tr>
<tr>
<td>1 ¼&quot;</td>
<td>85,000 to 160,000 BTU's</td>
</tr>
<tr>
<td>1 ½&quot;</td>
<td>115,000 to 230,000 BTU's</td>
</tr>
<tr>
<td>2&quot;</td>
<td>200,000 to 400,000 BTU's</td>
</tr>
<tr>
<td>2 ½&quot;</td>
<td>300,000 to 610,000 BTU's</td>
</tr>
<tr>
<td>3&quot;</td>
<td>435,000 to 875,000 BTU's</td>
</tr>
</tbody>
</table>

**Recommended Boiler Pipe Sizes:**

- NHB-110 - 1" Minimum (1" boiler connection)
- NHB-150 - 1 ½" Minimum (1" boiler connection)

**System Fill**

**Outdoor Sensor**

**NHB Series Condensing Boiler**

Navien NHB-110/150
Five to Sixteen Multiple Boiler Application

Drawn By: BF | NHB-110-150-5+MULT-BF01A | March 1, 2017