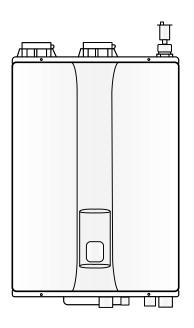
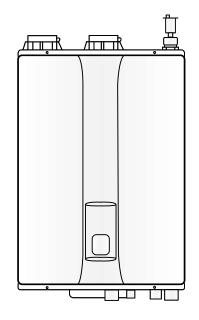
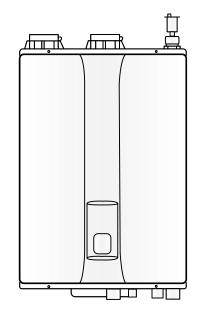
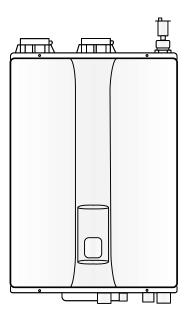
# NHB Series Application Drawings









**NHB-55** 

**NHB-80** 

NHB-110

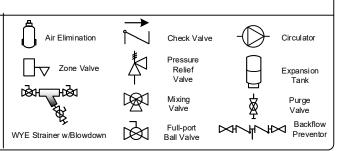
NHB-150

# **Mavien**

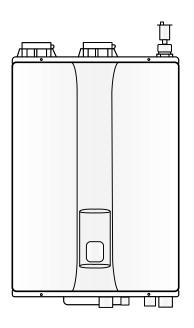
20 Goodyear Irvine, CA 92618 800-519-8794 www.Navien.com

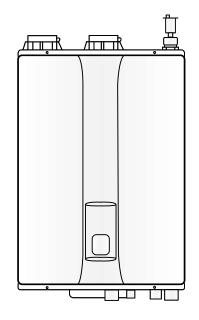
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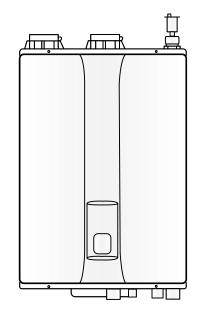
These drawing are intended as a guide only and not as a replacement for professionally engineered project drawings. These concept system drawings do not imply compliance with local building codes. Actual installations may vary depending on installation location & parameters and it must be done in accordance with all local building codes. Verify with local building officials before commencement of system installations.

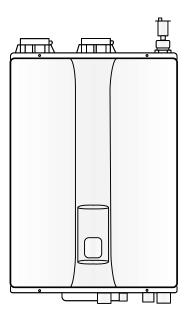


# NHB Series Application Drawings









**NHB-55** 

**NHB-80** 

NHB-110

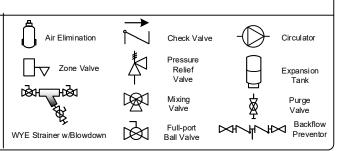
NHB-150

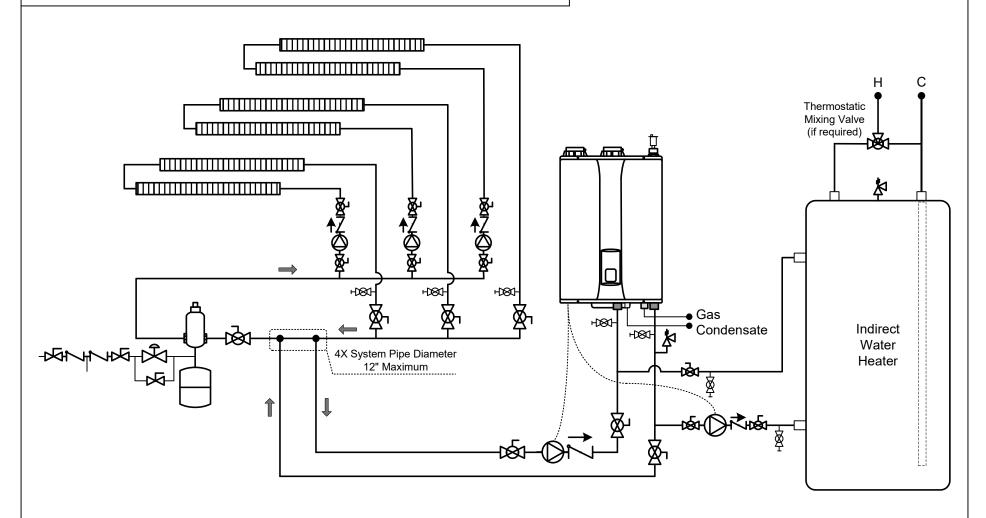
# **Mavien**

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

### **Guide Only**

These drawing are intended as a guide only and not as a replacement for professionally engineered project drawings. These concept system drawings do not imply compliance with local building codes. Actual installations may vary depending on installation location & parameters and it must be done in accordance with all local building codes. Verify with local building officials before commencement of system installations.







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

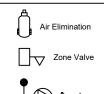
# NHB Series Condensing Boiler

Navien NHB Boiler
With 3 Zone Pumps & Indirect Water Heater

Drawn By: BF

NHB-3ZP-IDWH-BF01

December 1, 2014



w/Aquastat & Check Valve





Check Valve

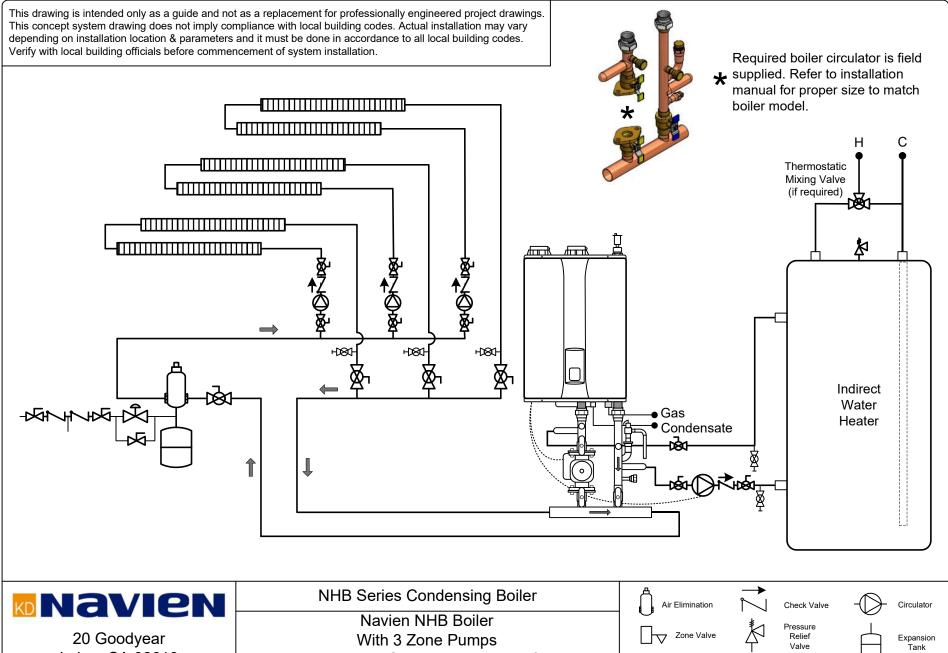


Expansion Tank

Circulator

Purge Valve Backflow

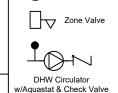
Valve Full-port Ball Valve Backflo Prevent



Irvine, CA 92618 800-519-8794 www.navien.com Navien NHB Series Primary Manifold & Indirect Water Heater

Drawn By: BF NHB-3ZP-PM-IDWH-BF01

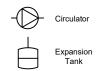
December 1, 2014





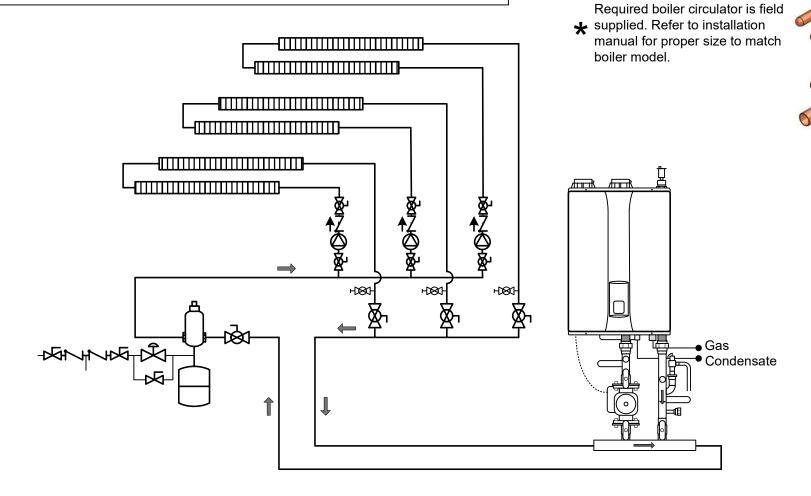








Purge Valve





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

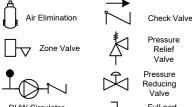
# NHB Series Condensing Boiler

Navien NHB Boiler With 3 Zone Pumps with Navien NHB Series Primary Manifold

Drawn By: BF

NHB-3ZP-PM-BF01

December 1, 2014



w/Aquastat & Check Valve



Pressure Reducing Valve

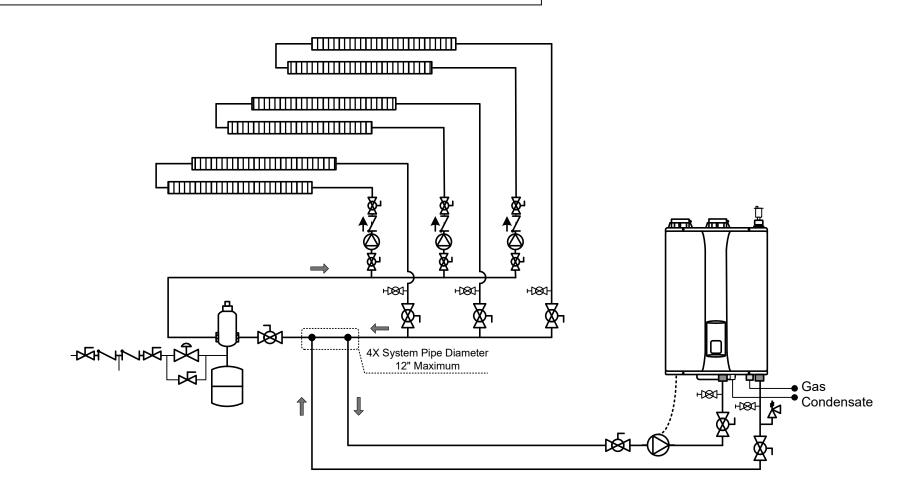






Valve





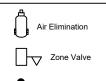


20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com

# NHB Series Condensing Boiler

Navien NHB Boiler With 3 Zone Pumps

Drawn By: BF NHB-3ZP-BF01 December 1, 2014



**DHW Circulator** 

w/Aquastat & Check Valve











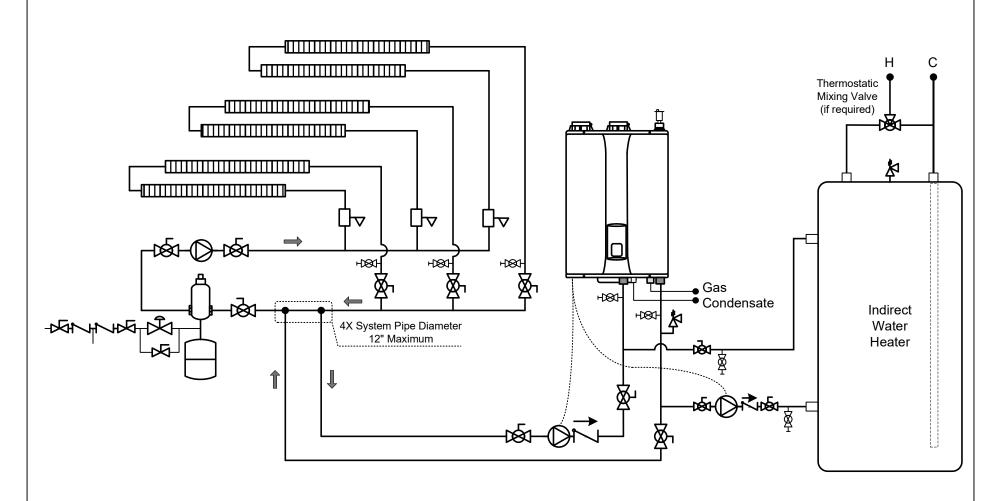
Check Valve

Full-port Ball Valve











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

# NHB Series Condensing Boiler

Navien NHB Boiler With 3 Zone Valves & Indirect Water Heater

Drawn By: BF

NHB-3ZV-IDWH-BF01

December 1, 2014



w/Aquastat & Check Valve





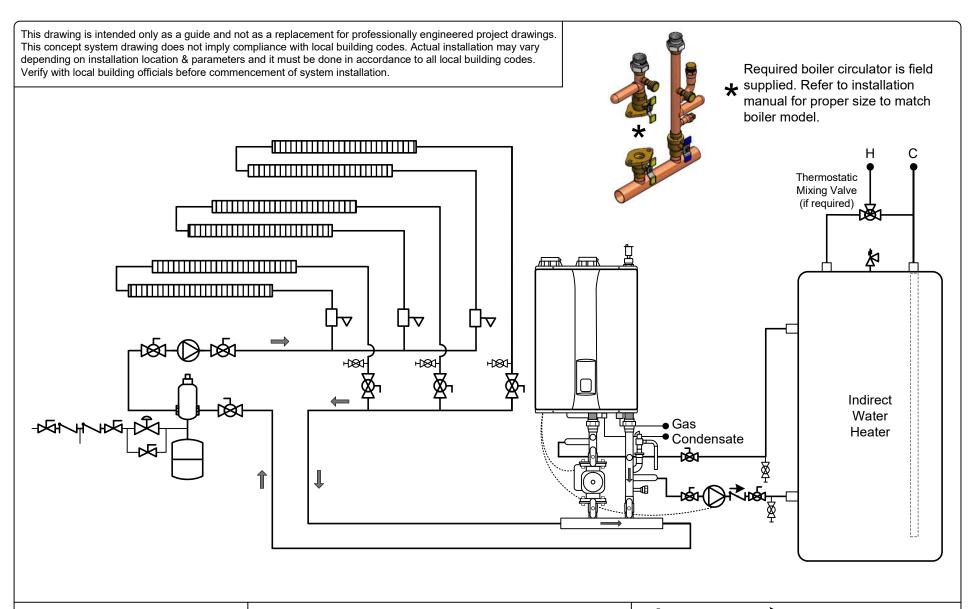




Purge Valve

Tank

Circulator





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

# 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

Manifold
er

December 1, 2014

DHW Circulator
W/Aquastat & Check Valve



Valve



Tank
Purge
Valve

Circulator

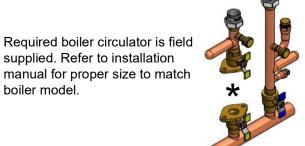
Expansion

Full-port Ball Valve

Valve

Backflow
Preventer

> boiler model. -<del>/////R</del> Gas Condensate



# **Navien**

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

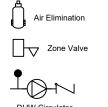
# NHB Series Condensing Boiler

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

Drawn By: BF

NHB-3ZV-PM-BF01

December 1, 2014



w/Aquastat & Check Valve

\* supplied. Refer to installation



Check Valve



Valve Pressure Reducing

Relief

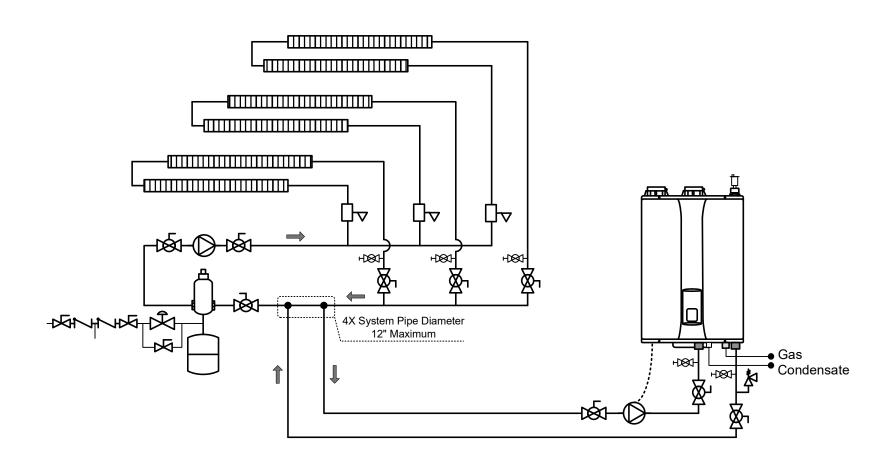
Valve

Full-port Ball Valve



Expansion Tank

Purge Valve





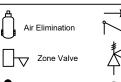
20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com

# NHB Series Condensing Boiler

Navien NHB Boiler With 3 Zone Valves

NHB-3ZV-BF01 Drawn By: BF

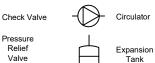
December 1, 2014



**DHW Circulator** 

w/Aquastat & Check Valve







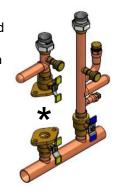


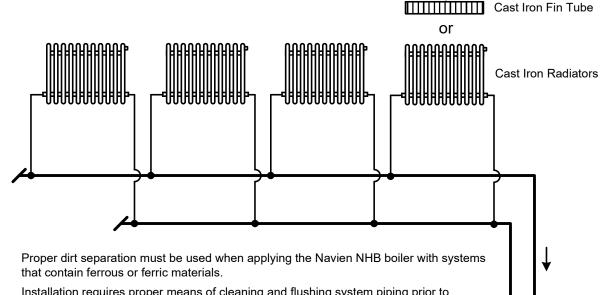


Purge Valve

Full-port Ball Valve

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





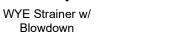
Installation requires proper means of cleaning and flushing system piping prior to start-up to avoid potentiality subjecting the NHB boiler to system contaminants.

Proper air elimination & system maintenance is required to maintain Navien warranties.



**Dirt Separator** 







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

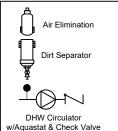
#### NHB Series Boiler

or

Navien NHB Boiler Application Two-Pipe Direct Return

NHB-CI-2P-PM-DR-BF01

December 1, 2014







Ball Valve

Gas

Condensate





Circulator

Expansion

Drawn By: BF

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 Required boiler circulator is field depending on installation location & parameters and it must be done in accordance to all local building codes. ♣ supplied. Refer to installation Verify with local building officials before commencement of system installation. manual for proper size to match boiler model. Cast Iron Baseboard or Cast Iron Fin Tube or Cast Iron Radiators Gas Condensate 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. WYE Strainer w/ **Dirt Separator** Blowdown NHB Series Boiler navien Air Elimination Check Valve Circulator Pressure 20 Goodyear Navien NHB Boiler Application Relief Expansion Valve Tank Irvine, CA 92618 Two-Pipe Reverse Return Mixing 800-519-8794 Valve www.navien.com Full-port **DHW Circulator** Drawn By: BF NHB-CI-2P-PM-RR-BF01 December 1, 2014 Ball Valve

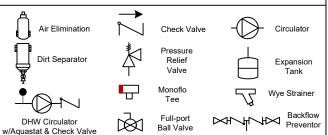
w/Aquastat & Check Valve

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 Required boiler circulator is field depending on installation location & parameters and it must be done in accordance to all local building codes. ♣ supplied. Refer to installation Verify with local building officials before commencement of system installation. manual for proper size to match boiler model. Cast Iron Baseboard or Cast Iron Fin Tube or Cast Iron Radiators Gas Condensate 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. WYE Strainer w/ **Dirt Separator** Blowdown NHB Series Boiler navien Air Elimination Check Valve Circulator Pressure

20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com Navien NHB Boiler Application One-Pipe (Monoflo) Distribution System

Drawn By: BF NHB-CI—PM-MONO-BF01

December 1, 2014



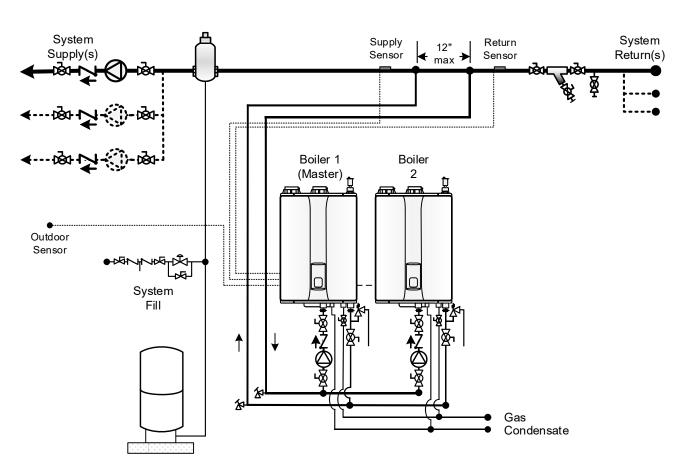
#### Recommended System & Header Pipe Sizes-Total BTU (2-4 Ft/Sec.)

1" – 55,000 to 110,000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2" - 200,000 to 400,000 BTU's 2 ½" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



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

# **Navien**

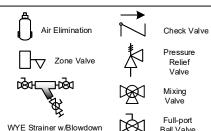
20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com

### NHB Series Condensing Boiler

Navien NHB-110/150
Two Multiple Boiler Application

Drawn By: BF NHB-110-150-2MULT-BF01

March 1, 2017





Purge Valve Backflow Preventor

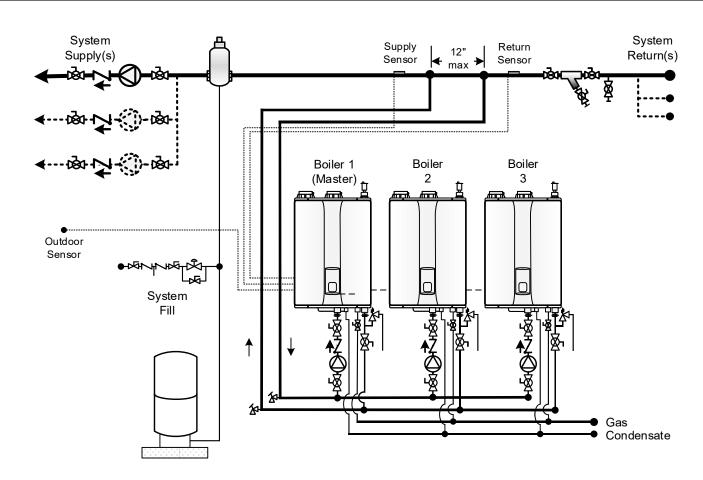
#### Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

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2" - 200.000 to 400.000 BTU's 2 1/2" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



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

# navien

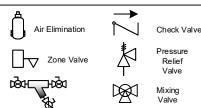
20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com

### NHB Series Condensing Boiler

Navien NHB-110/150 Three Multiple Boiler Application

Drawn By: BF NHB-110-150-3MULT-BF01

March 1, 2017



WYE Strainer w/Blowdown





Expansion Tank

Circulator

Purge

Backflow

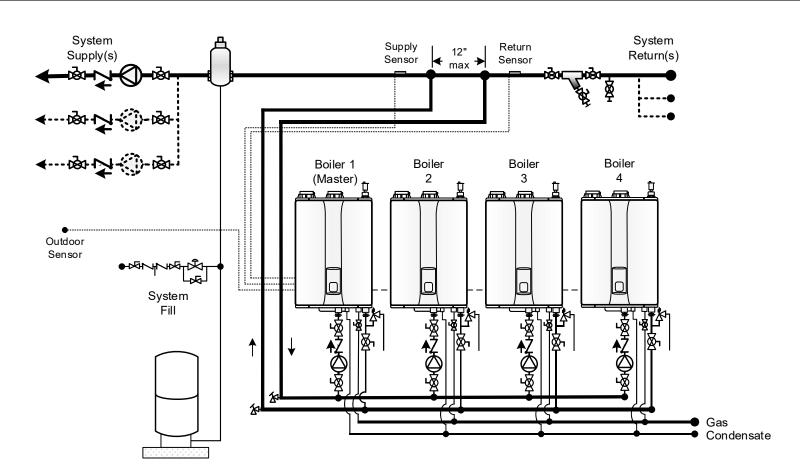
#### Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

1" - 55.000 to 110.000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2" - 200.000 to 400.000 BTU's 2 1/2" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



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

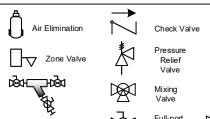
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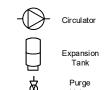
20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com

### NHB Series Condensing Boiler

Navien NHB-110/150 Four Multiple Boiler Application

Drawn By: BF NHB-110-150-4MULT-BF01 March 1, 2017





Backflow

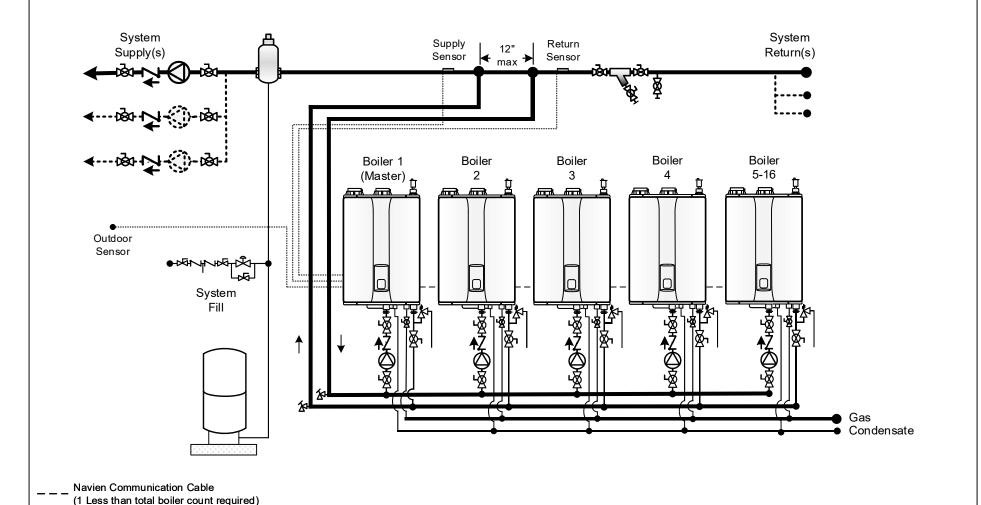
Full-port WYE Strainer w/Blowdown

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

1" - 55.000 to 110.000 BTU's

1 1/4" - 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 1/2" - 300,000 to 610,000 BTU's 3" - 435,000 to 875,000 BTU's



# navien

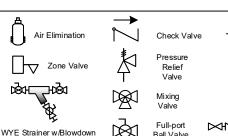
20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com

### 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



Circulator

Expansion

Tank

Purge

Backflow

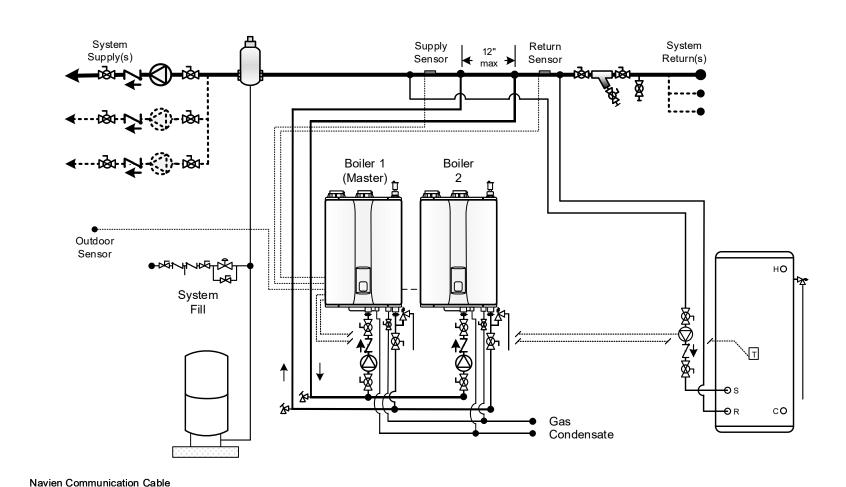
#### Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

1" - 55.000 to 110.000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2" - 200.000 to 400.000 BTU's 2 1/2" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



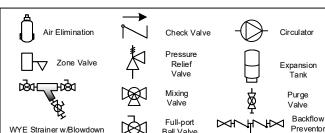
navien

(1 Less than total boiler count required)

20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com NHB Series Condensing Boiler

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

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



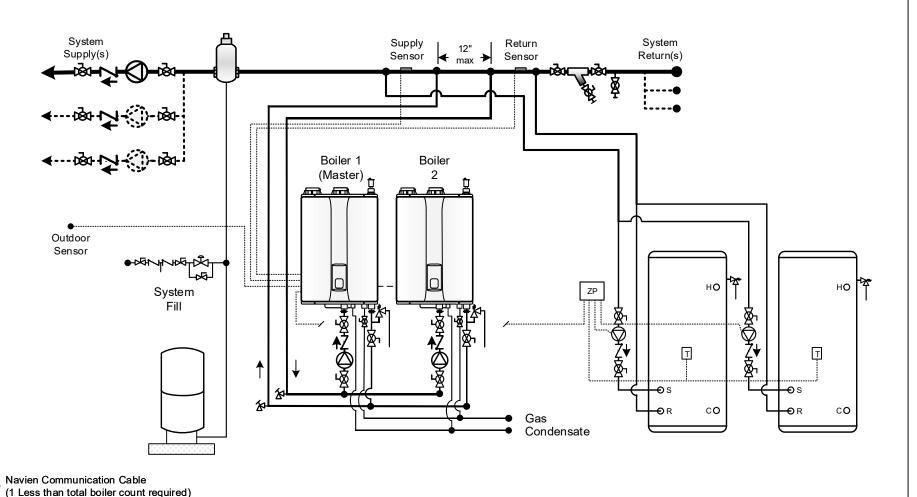
#### Recommended System & Header Pipe Sizes-Total BTU (2-4 Ft/Sec.)

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2 1/2" - 300,000 to 610,000 BTU's

2" - 200.000 to 400.000 BTU's

1 ½" - 115,000 to 230,000 BTU's 3" - 435,000 to 875,000 BTU's

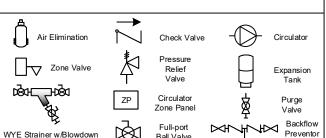


navien

20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com NHB Series Condensing Boiler

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

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



Ball Valve

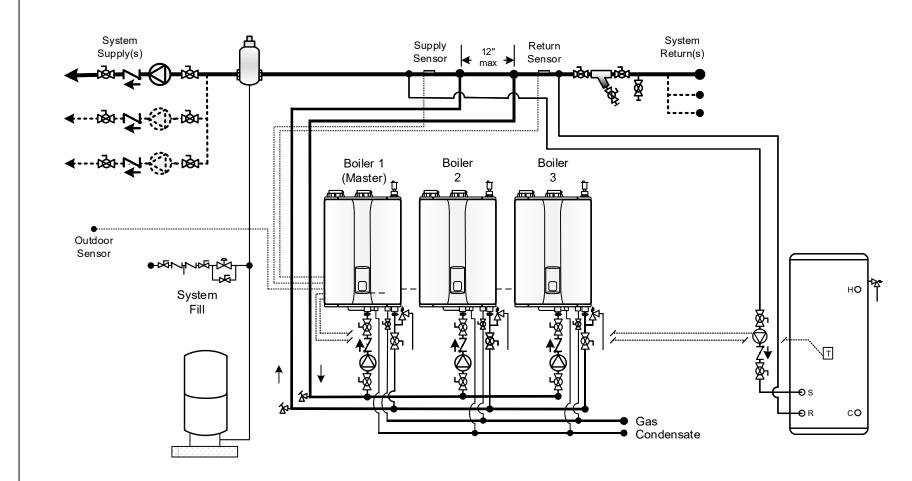
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1 ½" - 115,000 to 230,000 BTU's

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



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

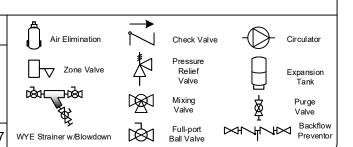
# Mavien

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

#### NHB Series Condensing Boiler

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

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



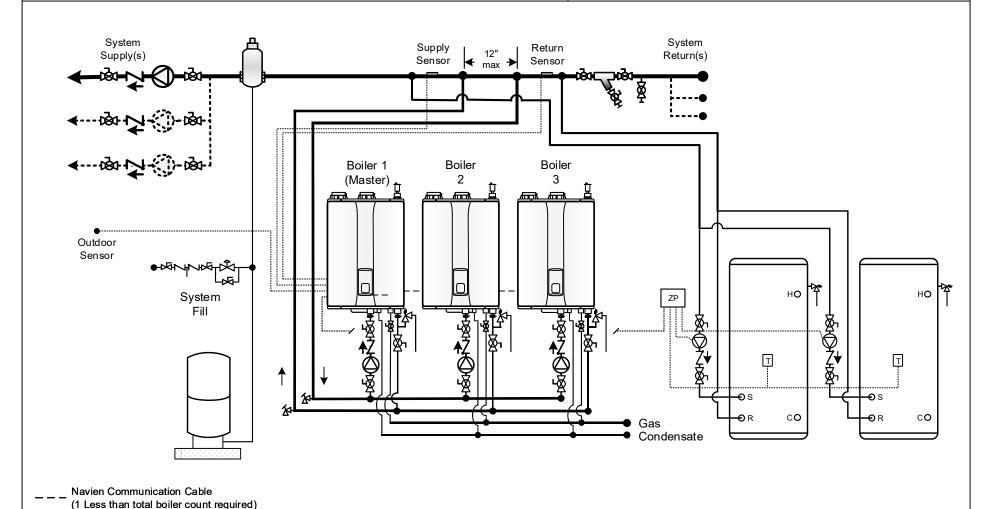
#### Recommended System & Header Pipe Sizes-Total BTU (2-4 Ft/Sec.)

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2" - 200.000 to 400.000 BTU's

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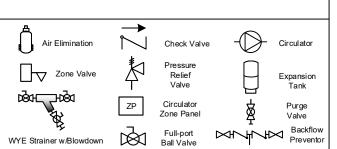
# navien

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

### NHB Series Condensing Boiler

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

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



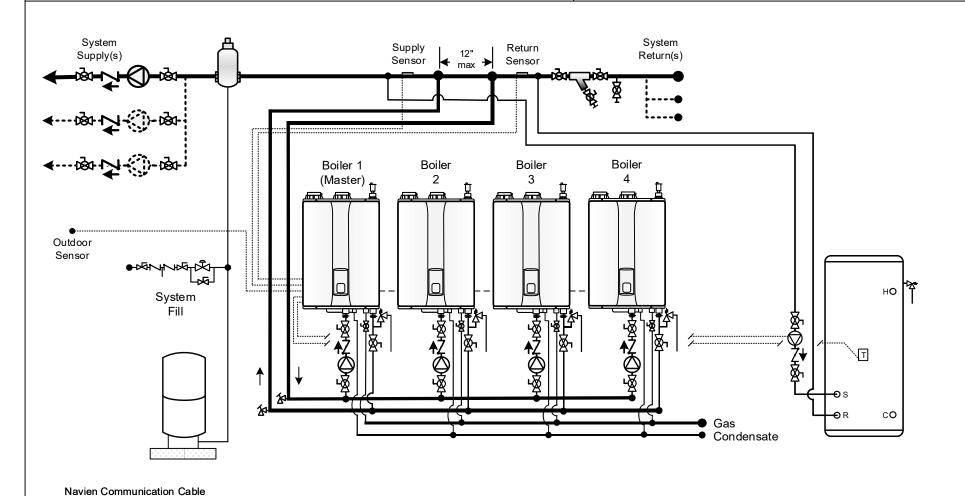
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1" – 55,000 to 110,000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2" - 200,000 to 400,000 BTU's 2 ½" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



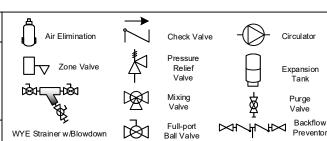
Mavien

(1 Less than total boiler count required)

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

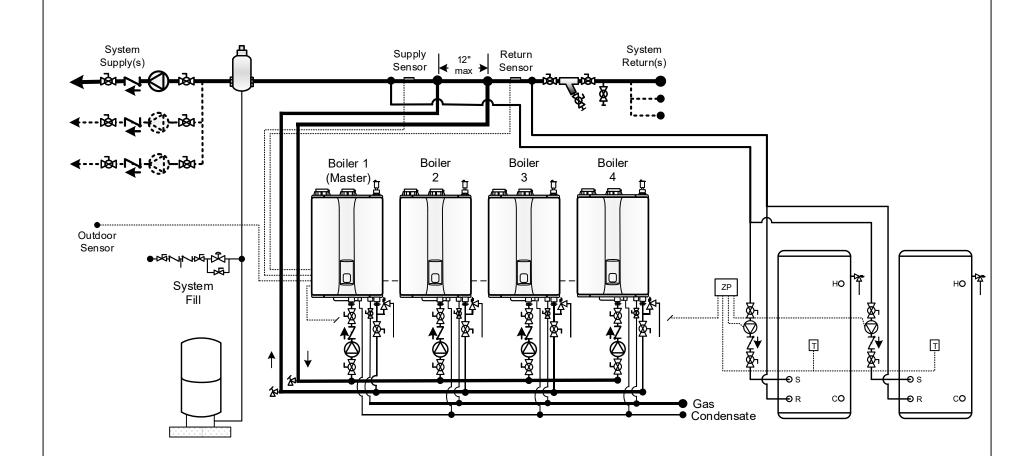


#### Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

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2" - 200,000 to 400,000 BTU's 2½" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's 3" - 435,000 to 875,000 BTU's



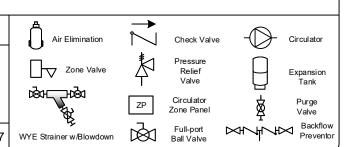
**Navien** 

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

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



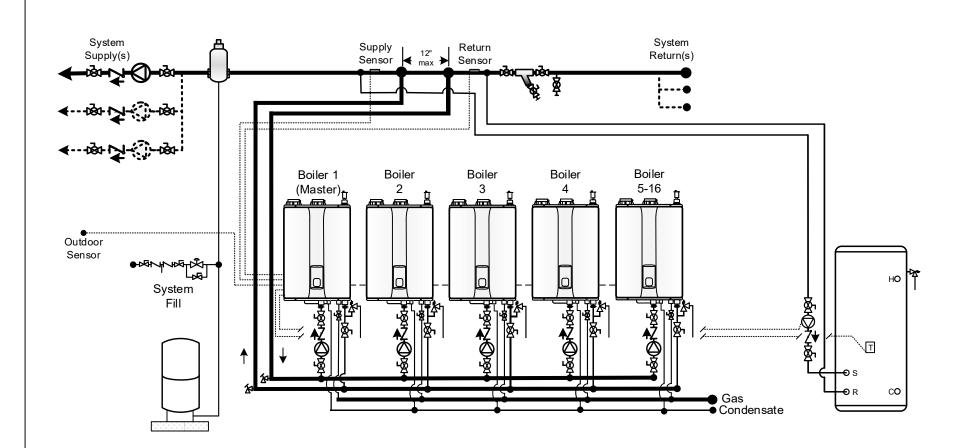
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1" - 55.000 to 110.000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2" - 200.000 to 400.000 BTU's 2 1/2" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



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

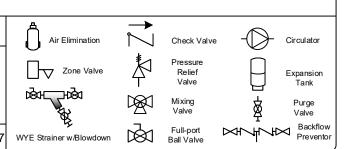


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### NHB Series Condensing Boiler

Navien NHB-110/150 Five to Sixteen Multiple Boiler Application With One Indirect Water Heater

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



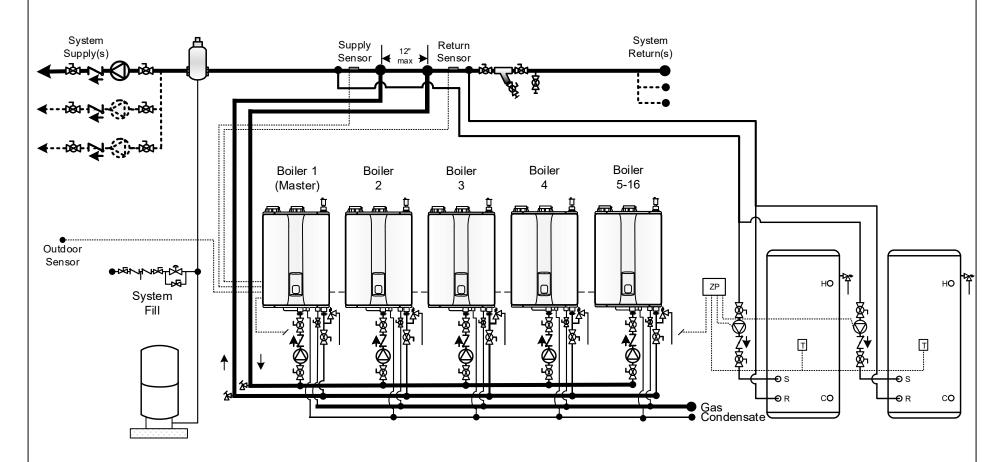
#### Recommended System & Header Pipe Sizes-Total BTU (2-4 Ft/Sec.)

2" - 200.000 to 400.000 BTU's

1" - 55.000 to 110.000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2 1/2" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's 3" - 435,000 to 875,000 BTU's



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

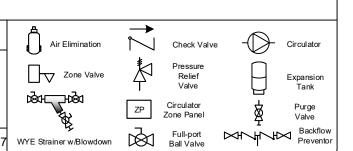
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### NHB Series Condensing Boiler

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

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

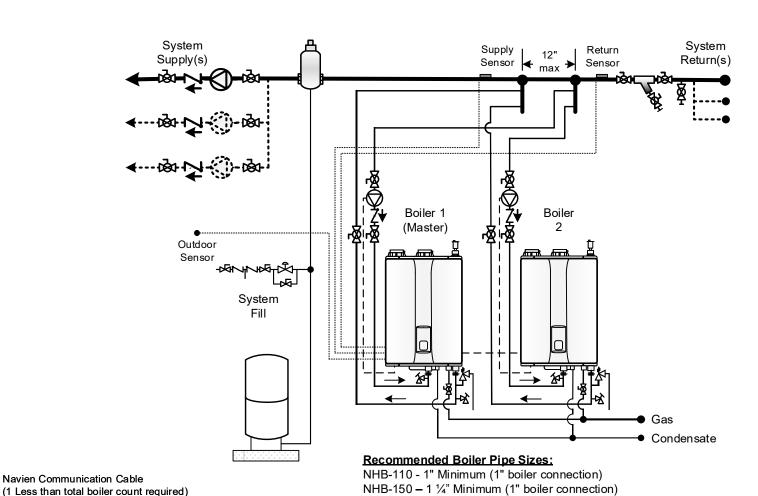


#### Recommended System & Header Pipe Sizes-Total BTU (2-4 Ft/Sec.)

1" - 55,000 to 110,000 BTU's 1 1/4" - 85,000 to 160,000 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

1 ½" - 115,000 to 230,000 BTU's

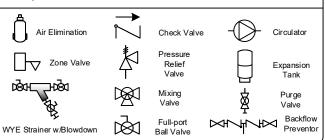


**Navien** 

20 Goodyear Irvine, CA 92618 800-519-8794 www.navien.com NHB Series Condensing Boiler

Navien NHB-110/150
Two Multiple Boiler Application

Drawn By: BF NHB-110-150-2MULT-BF01A March 1, 2017

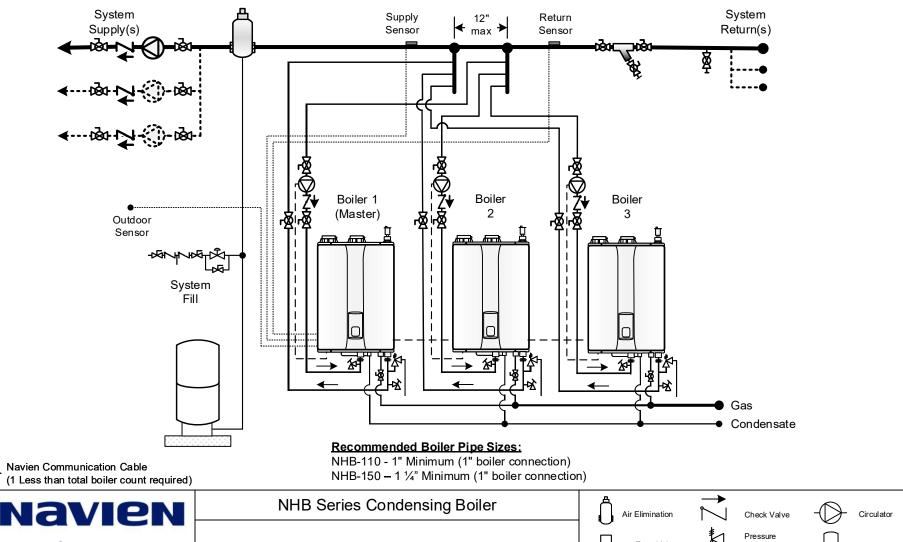


#### Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

1" - 55.000 to 110.000 BTU's 1 1/4" - 85,000 to 160,000 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

1 ½" - 115,000 to 230,000 BTU's

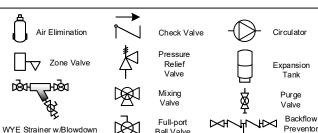


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Navien NHB-110/150 Three Multiple Boiler Application

Drawn By: BF NHB-110-150-3MULT-BF01A

March 1, 2017



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

1" – 55,000 to 110,000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

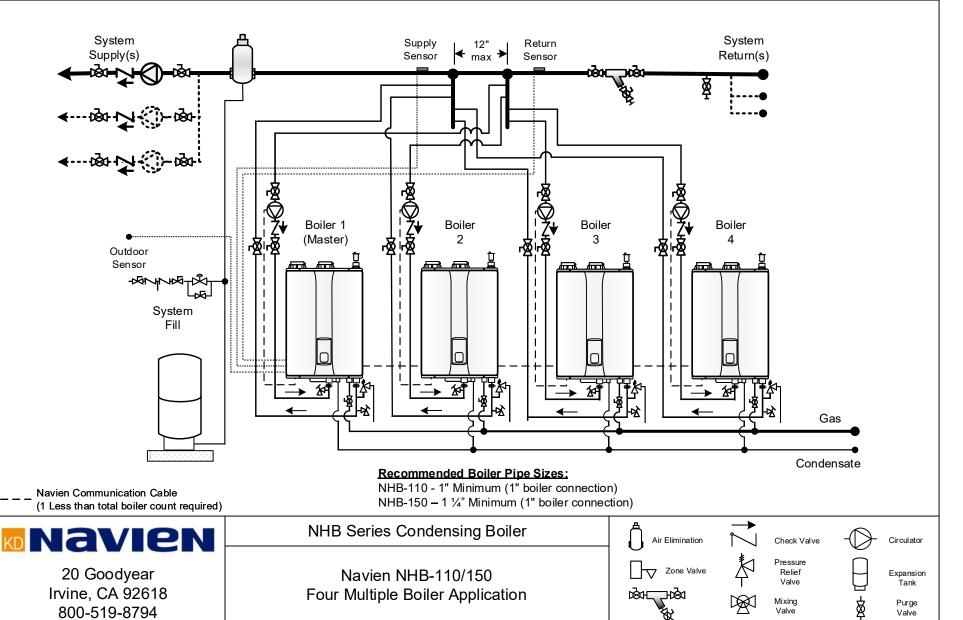
2" - 200,000 to 400,000 BTU's 2 ½" - 300,000 to 610,000 BTU's

Backflow

Full-port

1 ½" - 115,000 to 230,000 BTU's

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



March 1, 2017

WYE Strainer w/Blowdown

Drawn By: BF NHB-110-150-4MULT-BF01A

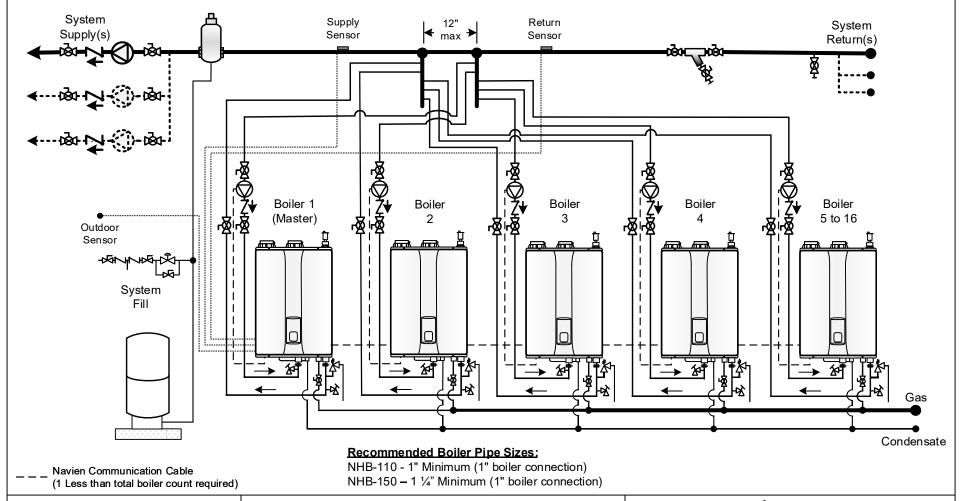
#### Recommended System & Header Pipe Sizes-Total BTU (2- 4 Ft/Sec.)

1" - 55.000 to 110.000 BTU's 1 1/4" - 85,000 to 160,000 BTU's

2" - 200.000 to 400.000 BTU's 2 ½" - 300,000 to 610,000 BTU's

1 ½" - 115,000 to 230,000 BTU's

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



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### 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

