



# oventrop

Hydrocontrol MTR Lead free brass  
Double Regulating and Commissioning Valves  
Thread Connection 1/2"-LF - 2" (DN 15LF - DN 50)

Job Name: \_\_\_\_\_

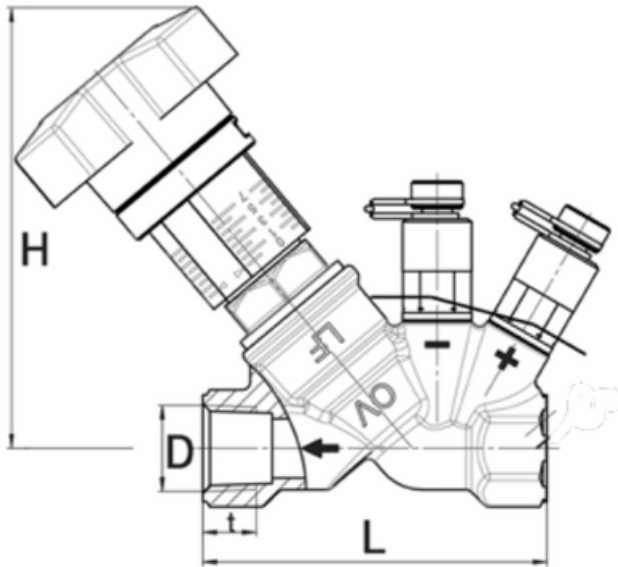
Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

Spec Section: \_\_\_\_\_

Job Location: \_\_\_\_\_

Engineer/Architect: \_\_\_\_\_

Approval: \_\_\_\_\_ Date: \_\_\_\_\_



## Dimensions in Inches

| Size        | Connection | Item no.  | Cv    | D     | L   | H   |
|-------------|------------|-----------|-------|-------|-----|-----|
| DN15LF 1/2" | FNPT       | 166 04 64 | 0.64  | 1/2   | 3.4 | 4.5 |
| DN15MF 1/2" | FNPT       | 166 04 34 | 1.39  | 1/2   | 3.4 | 4.5 |
| DN15 1/2"   | FNPT       | 166 04 04 | 2.55  | 1/2   | 3.4 | 4.5 |
| DN20 3/4"   | FNPT       | 166 04 06 | 4.93  | 3/4   | 3.8 | 4.6 |
| DN25 1"     | FNPT       | 166 04 08 | 9.98  | 1     | 4.0 | 4.7 |
| DN32 1 1/4" | FNPT       | 166 04 10 | 18.44 | 1 1/4 | 4.7 | 5.3 |
| DN40 1 1/2" | FNPT       | 166 04 12 | 27.14 | 1 1/2 | 5.2 | 5.4 |
| DN50 2"     | FNPT       | 166 04 16 | 54.52 | 2     | 6.4 | 5.8 |

## Product Specification

Oventrop double regulating and commissioning valves Hydrocontrol MTR are installed in the pipework of central hot water heating and cooling systems and serve to achieve a hydronic balance between the various circuits of the system.

The balance is achieved by a presetting with memory position. The calculated flow rate or pressure loss for each individual pipe can be preset centrally and regulated precisely. The required values of presetting can be obtained from the flow charts. All intermediate values are infinitely adjustable. The selected presetting can be read off two scales. The Oventrop double regulating and commissioning valves have two threaded ports which are equipped with the pressure test points for measuring the differential pressure across an integrated venturi. These valves are compliant with ANSI/NSF 372.

## Specifications:

Maximum working temperature: 300 °F

Maximum working pressure: 360 psi

Bonnet, stem and disc made of bronze/dezincification resistant brass.

Disc with PTFE seal.

Double EPDM O-ring stem seal.

| Size        | Connection | Item no.  | Minimum Flow [GPM] | Maximum Flow [GPM] |
|-------------|------------|-----------|--------------------|--------------------|
| DN15LF 1/2" | FNPT       | 166 04 64 | 0.4                | 1.3                |
| DN15MF 1/2" | FNPT       | 166 04 34 | 1                  | 2.8                |
| DN15 1/2"   | FNPT       | 166 04 04 | 1.7                | 5.5                |
| DN20 3/4"   | FNPT       | 166 04 06 | 2                  | 7                  |
| DN25 1"     | FNPT       | 166 04 08 | 3.8                | 12                 |
| DN32 1 1/4" | FNPT       | 166 04 10 | 7                  | 25                 |
| DN40 1 1/2" | FNPT       | 166 04 12 | 10                 | 35                 |
| DN50 2"     | FNPT       | 166 04 16 | 21                 | 50                 |

$$GPM = \frac{\sqrt{PSID}}{Cv}$$

Oventrop Corporation

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www.oventrop.com

Job Name: \_\_\_\_\_

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_

Spec Section: \_\_\_\_\_

Job Location: \_\_\_\_\_

Engineer/Architect: \_\_\_\_\_

\_\_\_\_\_

Approval: \_\_\_\_\_ Date: \_\_\_\_\_

**Pressure drop [PSI] measured at the valve  
for select flow rates [GPM]**

| Flow rate-GPM | DN15LF 1/2" | DN15MF 1/2" | DN15 1/2" | DN20 3/4" | DN25 1" | DN32 1 1/4" | DN40 1 1/2" | DN50 2" |
|---------------|-------------|-------------|-----------|-----------|---------|-------------|-------------|---------|
| 0.25          | 0.15        |             |           |           |         |             |             |         |
| 0.33          | 0.27        |             |           |           |         |             |             |         |
| 0.5           | 0.61        | 0.13        |           |           |         |             |             |         |
| 0.75          | 1.38        | 0.29        |           |           |         |             |             |         |
| 1             | 2.46        | 0.52        | 0.15      |           |         |             |             |         |
| 1.25          | 3.84        | 0.81        | 0.24      |           |         |             |             |         |
| 1.5           | 5.53        | 1.16        | 0.35      |           |         |             |             |         |
| 1.75          | 7.52        | 1.58        | 0.47      | 0.13      |         |             |             |         |
| 2             | 9.83        | 2.06        | 0.61      | 0.16      |         |             |             |         |
| 2.5           |             | 3.23        | 0.96      | 0.26      |         |             |             |         |
| 3             |             | 4.64        | 1.38      | 0.37      |         |             |             |         |
| 4             |             | 8.26        | 2.46      | 0.66      | 0.16    |             |             |         |
| 5             |             | 12.9        | 3.84      | 1.03      | 0.25    |             |             |         |
| 6             |             |             | 5.53      | 1.48      | 0.36    |             |             |         |
| 7             |             |             | 7.52      | 2.02      | 0.49    | 0.14        |             |         |
| 8             |             |             | 9.83      | 2.63      | 0.64    | 0.19        |             |         |
| 9             |             |             | 12.44     | 3.33      | 0.81    | 0.24        |             |         |
| 10            |             |             |           | 4.11      | 1       | 0.29        | 0.14        |         |
| 12            |             |             |           | 5.92      | 1.45    | 0.42        | 0.2         |         |
| 15            |             |             |           | 9.26      | 2.26    | 0.66        | 0.31        |         |
| 20            |             |             |           |           | 4.02    | 1.18        | 0.54        |         |
| 25            |             |             |           |           | 6.28    | 1.84        | 0.85        | 0.21    |
| 30            |             |             |           |           | 9.04    | 2.65        | 1.22        | 0.3     |

**Hydrocontrol Valve Accessories**



Set of 2 pressure test points  
Item 106 02 81



Extension piece for pressure test points  
80mm Item 106 02 95



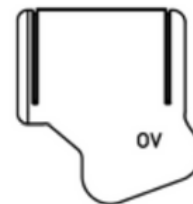
Fill and drain ball valve 1/4"  
Item 106 01 91



Measuring adapter  
for fill and drain ball valve  
Item 106 02 98



Flow meter  
OVD-MC 3  
Item 106 92 78



Insulation Shell  
for Hydrocontrol MTR

| Size        | Item no.  |
|-------------|-----------|
| DN15 1/2"   | 106 00 81 |
| DN20 3/4"   | 106 00 82 |
| DN25 1"     | 106 00 83 |
| DN32 1 1/4" | 106 00 84 |
| DN40 1 1/2" | 106 00 85 |
| DN50 2"     | 106 00 86 |

Job Name: \_\_\_\_\_

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_

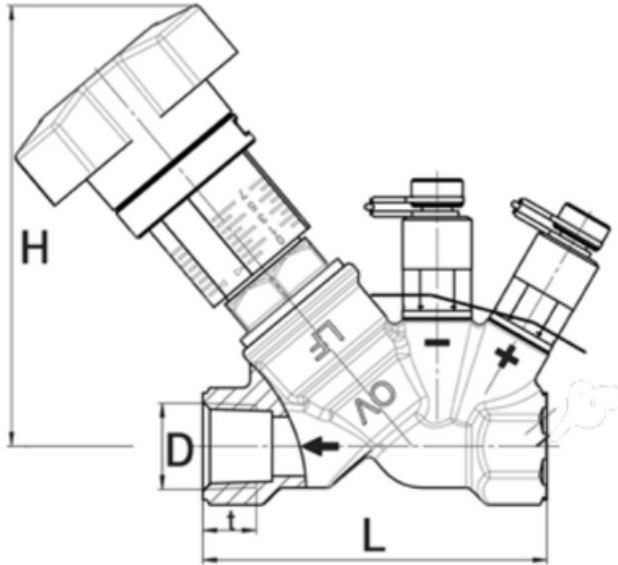
Spec Section: \_\_\_\_\_

Job Location: \_\_\_\_\_

Engineer/Architect: \_\_\_\_\_

\_\_\_\_\_

Approval: \_\_\_\_\_ Date: \_\_\_\_\_



**Dimensions in Inches**

| Size      | Connection | Item no.  | Cv    | D   | L   | H   |
|-----------|------------|-----------|-------|-----|-----|-----|
| DN15LF ½" | FNPT       | 166 04 64 | 0.64  | ½   | 3.4 | 4.5 |
| DN15MF ½" | FNPT       | 166 04 34 | 1.39  | ½   | 3.4 | 4.5 |
| DN15 ½"   | FNPT       | 166 04 04 | 2.55  | 1/2 | 3.4 | 4.5 |
| DN20 ¾"   | FNPT       | 166 04 06 | 4.93  | 3/4 | 3.8 | 4.6 |
| DN25 1"   | FNPT       | 166 04 08 | 9.98  | 1   | 4.0 | 4.7 |
| DN32 1 ¼" | FNPT       | 166 04 10 | 18.44 | 1 ¼ | 4.7 | 5.3 |
| DN40 1 ½" | FNPT       | 166 04 12 | 27.14 | 1 ½ | 5.2 | 5.4 |
| DN50 2"   | FNPT       | 166 04 16 | 54.52 | 2   | 6.4 | 5.8 |

#### Product Specification

Oventrop double regulating and commissioning valves Hydrocontrol MTR are installed in the pipework of central hot water heating and cooling systems and serve to achieve a hydronic balance between the various circuits of the system.

The balance is achieved by a presetting with memory position. The calculated flow rate or pressure loss for each individual pipe can be preset centrally and regulated precisely. The required values of presetting can be obtained from the flow charts. All intermediate values are infinitely adjustable. The selected presetting can be read off two scales. The Oventrop double regulating and commissioning valves have two threaded ports which are equipped with the pressure test points for measuring the differential pressure across an integrated venturi. These valves are compliant with ANSI/NSF 372.

#### Specifications:

Maximum working temperature: 300 °F

Maximum working pressure: 235 psi

Bonnet, stem and disc made of bronze/dezincification resistant brass.

Disc with PTFE seal.

Double EPDM O-ring stem seal.

| Size      | Connection | Item no.  | Minimum Flow [GPM] | Maximum Flow [GPM] |
|-----------|------------|-----------|--------------------|--------------------|
| DN15LF ½" | FNPT       | 166 04 64 | 0.4                | 1.3                |
| DN15MF ½" | FNPT       | 166 04 34 | 1                  | 2.8                |
| DN15 ½"   | FNPT       | 166 04 04 | 1.7                | 5.5                |
| DN20 ¾"   | FNPT       | 166 04 06 | 2                  | 7                  |
| DN25 1"   | FNPT       | 166 04 08 | 3.8                | 12                 |
| DN32 1 ¼" | FNPT       | 166 04 10 | 7                  | 25                 |
| DN40 1 ½" | FNPT       | 166 04 12 | 10                 | 35                 |
| DN50 2"   | FNPT       | 166 04 16 | 21                 | 50                 |

$$\text{GPM} = \frac{\sqrt{\text{PSID}}}{\text{Cv}}$$

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Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

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Spec Section: \_\_\_\_\_

Job Location: \_\_\_\_\_

Engineer/Architect: \_\_\_\_\_

\_\_\_\_\_

Approval: \_\_\_\_\_ Date: \_\_\_\_\_

**Pressure drop [PSI] measured at the valve  
for select flow rates [GPM]**

| Flow rate-GPM | DN15LF 1/2" | DN15MF 1/2" | DN15 1/2" | DN20 3/4" | DN25 1" | DN32 1 1/4" | DN40 1 1/2" | DN50 2" |
|---------------|-------------|-------------|-----------|-----------|---------|-------------|-------------|---------|
| 0.25          | 0.15        |             |           |           |         |             |             |         |
| 0.33          | 0.27        |             |           |           |         |             |             |         |
| 0.5           | 0.61        | 0.13        |           |           |         |             |             |         |
| 0.75          | 1.38        | 0.29        |           |           |         |             |             |         |
| 1             | 2.46        | 0.52        | 0.15      |           |         |             |             |         |
| 1.25          | 3.84        | 0.81        | 0.24      |           |         |             |             |         |
| 1.5           | 5.53        | 1.16        | 0.35      |           |         |             |             |         |
| 1.75          | 7.52        | 1.58        | 0.47      | 0.13      |         |             |             |         |
| 2             | 9.83        | 2.06        | 0.61      | 0.16      |         |             |             |         |
| 2.5           |             | 3.23        | 0.96      | 0.26      |         |             |             |         |
| 3             |             | 4.64        | 1.38      | 0.37      |         |             |             |         |
| 4             |             | 8.26        | 2.46      | 0.66      | 0.16    |             |             |         |
| 5             |             | 12.9        | 3.84      | 1.03      | 0.25    |             |             |         |
| 6             |             |             | 5.53      | 1.48      | 0.36    |             |             |         |
| 7             |             |             | 7.52      | 2.02      | 0.49    | 0.14        |             |         |
| 8             |             |             | 9.83      | 2.63      | 0.64    | 0.19        |             |         |
| 9             |             |             | 12.44     | 3.33      | 0.81    | 0.24        |             |         |
| 10            |             |             |           | 4.11      | 1       | 0.29        | 0.14        |         |
| 12            |             |             |           | 5.92      | 1.45    | 0.42        | 0.2         |         |
| 15            |             |             |           | 9.26      | 2.26    | 0.66        | 0.31        |         |
| 20            |             |             |           |           | 4.02    | 1.18        | 0.54        |         |
| 25            |             |             |           |           | 6.28    | 1.84        | 0.85        | 0.21    |
| 30            |             |             |           |           | 9.04    | 2.65        | 1.22        | 0.3     |

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Extension piece for pressure test points  
80mm Item 106 02 95



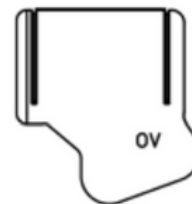
Fill and drain ball valve 1/4"  
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