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Innovation + Quality

Valves, controls + systems

Balancing and Control Valves

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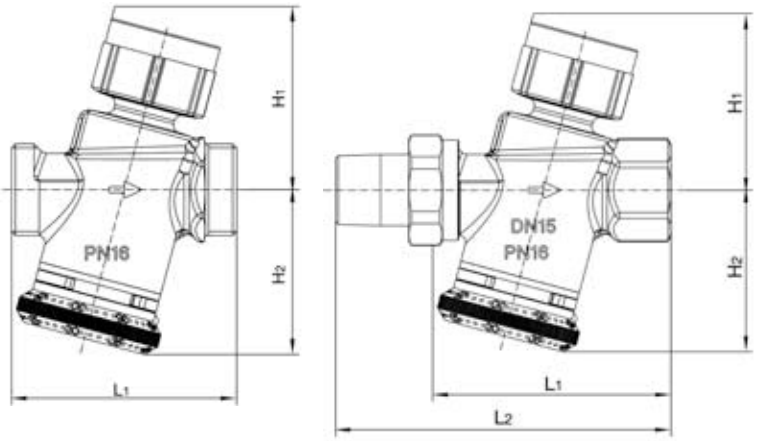
“Cocon Q”

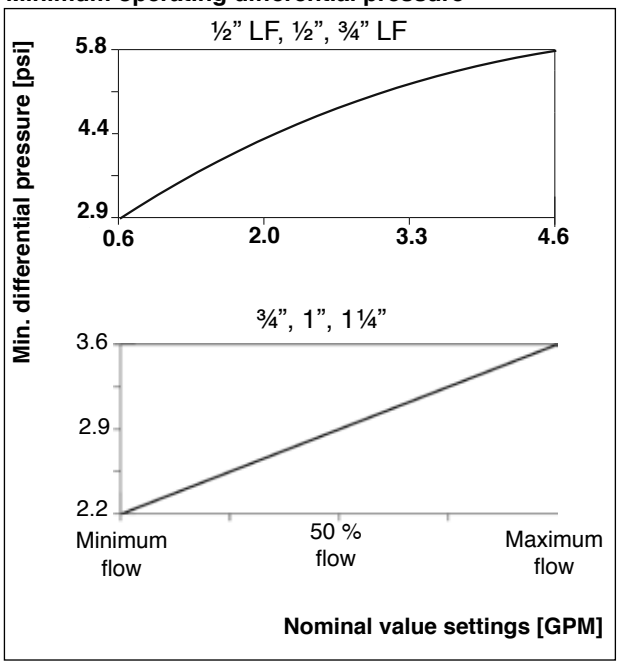
Pressure independent control valve



Size:	L1	L2	H1	H2
½”, ½” LF	2.75	3.9	2.0	1.9
¾” LF	2.9	4.2	2.0	1.9
¾”	3.4	4.6	2.3	2.1
1”	4.6	6.1	2.6	3.1
1¼”	4.9	6.5	2.6	3.1

See back for dimensions with actuators

Minimum operating differential pressure



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Oventrop Corporation
PO Box 789
East Granby, CT 06026
Phone: (860) 413-9173
www.oventrop-us.com

Product specification

Function:

The Oventrop pressure independent control valve “Cocon Q” maintains a valve authority of 100% and the desired flow over a wide range of differential pressures. The “Cocon Q” is ideal for variable flow applications and makes selection and commissioning easy. Select the valve with the flow range that satisfies the desired flow rate, and set the design flow rate on site with a quick turn of the hand wheel.

The valve is used for the hydronic balancing and temperature control of appliances or sections of the system in chilled ceiling, fan-coil, convector, central heating, and surface heating systems.

Performance data:

Maximum working temperature:	250°F (120°C)
Minimum working temperature:	14°F (-10°C)
Maximum working pressure:	232 psi (16 Bar)
Maximum differential pressure:	60 psi (4 Bar)
Minimum differential pressure:	2.2 to 6 psi (0.15 to 0.4 Bar)
Flow accuracy:	+/- 10%
Positioning accuracy:	0.1 GPM

Item numbers:

With test points		**Item number**	
Size	**Flow range**	**Male/female ports**	**Male ports**
½” LF	0.13 - 0.9 GPM	167 60 04	167 60 64
½”	0.7 - 4.6 GPM	167 62 04	167 62 64
¾” LF	0.7 - 4.6 GPM	167 60 06	167 60 66
¾”	0.8 - 5.7 GPM	167 61 06	167 61 66
1”	1.3 - 8.8 GPM	167 61 08	167 61 68
1¼”	2.6 - 15.8 GPM	167 61 10	167 61 70

Accessories:

Lead sealing locking wire:	108 90 91

oventrop

“Cocon Q”

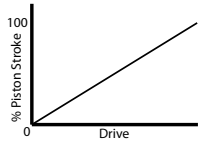
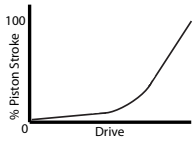
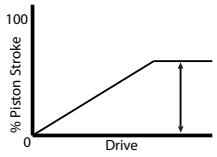
Pressure independent control valve

24V actuators with M30x1.5 connection

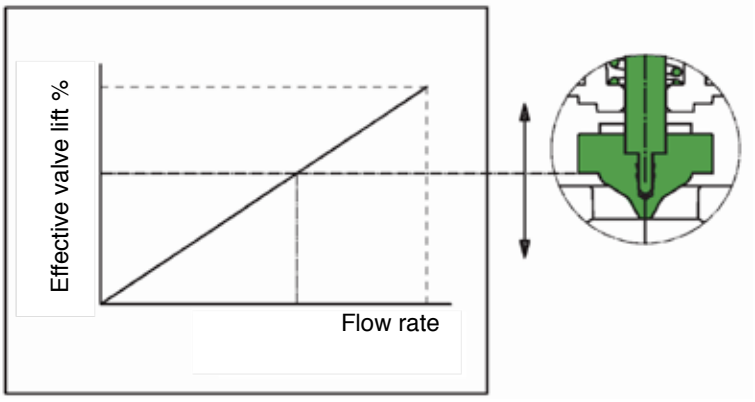
Item number	Model	Operating behavior (control signal)	Medium floating time	Maximum fluid temperature [F]	Allowable installation position	Actuator addition to H1 [in]
101 24 96*	Electrothermal, N.C., with end switch	On / Off	~ 4.5 minutes	212	Any	1.25
101 28 16*	Electrothermal, N.C.					
101 28 26*	Electrothermal, N.O.					
101 29 51*	Electrothermal, N.C.	0-10 V	~ 60 s/ mm			1.9
101 27 00	Electromotive, N.C. or N.O.	0-10 V, 0-5 V, 5-10 V	~ 15 s/ mm	203	Any, but not upside down	
101 27 01	Electromotive	Floating (3-point)				

*Not for use with 1” or 1¼” valves.

Proportional actuator characteristic lines

101 29 51	101 27 00	101 27 01
		

Valve characteristic line



Construction:

The “Cocon Q” has a brass body and is alloyed to resist dezincification (DZR). No dielectric fittings are required for installation. The valve stem is stainless steel and the flexible components are made of EPDM and PTFE. The “Cocon Q” offers a hand wheel mounted opposite and inline with the actuator. The actuator and hand wheel are oriented 15 degrees from vertical to allow for easier operation. The valve has integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports are located perpendicular to the hand wheel, on the same side of the valve, and are replaceable with blind plugs if not needed. Test ports are spaced 1.0 inch apart and extend 1.5 inches from the valve body. The hand wheel is adjustable while the valve is in operation with the actuator installed. The “Cocon Q” includes a locking clip stop to ensure the balanced position while in operation and to prevent hand wheel repositioning after setting.

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TYPICAL SPECIFICATIONS

Pressure independent control valves

½" (DN15) – 1¼" (DN32)

1.0 General – Furnish and install Oventrop balancing valves, as shown on the drawings and/or schedules, to ensure the accurate balancing of all flows in the hydronic heating and cooling systems. Water balancing and control shall meet the specified flows.

2.0 Construction

2.1 All control valves shall be of the pressure-independent design. All control valves shall have a constant control valve authority of 100% over the full allowable pressure and flow range. All control valves must offer a hand wheel mounted opposite and inline with the actuator. The actuator and hand wheel shall be oriented 15 degrees from vertical to allow for easier operation.

2.2 All control valves shall have documented measuring accuracy of +/- 10% within the normal setting range of the valve.

2.3 All control valves shall have integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports shall be located perpendicular to the hand wheel, on the same side of the valve, and shall be replaceable with blind plugs if not needed. Test ports shall be spaced no more than 1.0 inch apart and extend no more than 1.5 inches from the valve body.

2.4 All control valves shall have maximum body ratings no less than 232 psi (PN16) at 250 degrees F (120 C).

2.5 All control valves must include a locking clip stop to ensure the balanced position while in operation and to prevent hand wheel repositioning after setting.

2.6 All control valves ½" (DN15) through 1¼" (DN32) shall have hand wheel adjustment for precise readout on the opposite side of the valve from the actuator. The hand wheel shall be adjustable while the valve is in operation with the actuator installed. The hand wheel shall be marked in gallons per minute and shall have a minimum positioning accuracy of 0.1 GPM.

2.7 All control valves shall be manufactured by the company complying with international quality standard ISO 9001.

2.8 All control valves shall have a threaded connection of M30x1.5 for the actuator. All control valves shall have a stem travel of no less than 0.11 inches (2.8mm) over the full range of valve flow. All actuators shall be supplied by Oventrop. All actuators shall be capable of operating over the full flow and pressure range of the valve.

3.0 Material Characteristics – All control valves in sizes ½" (DN15) through 1¼" (DN32) shall have brass bodies and NPT threaded connections to match the piping system. All wetted brass parts shall be alloyed to resist dezincification (DZR). No dielectric fittings shall be required for installation. The valve stem shall be stainless steel. The flexible components shall be made of EPDM and PTFE.

4.0 Valve Sizing – All control valves shall be sized to perform in a normal operation range at a minimum differential pressure of 2.2 to 6 psi (0.15 to 0.4 Bar). All control valves shall have a maximum working differential pressure of no less than 60 psi (4 Bar). All control valves shall be selected based on their allowable flow range.

5.0 Manufacturer – Oventrop Corporation.

6.0 Warranty – Valves shall be free from material and workmanship defects for a period of 5 years from date of installation or from 5½ years from date of shipment, whichever comes first.

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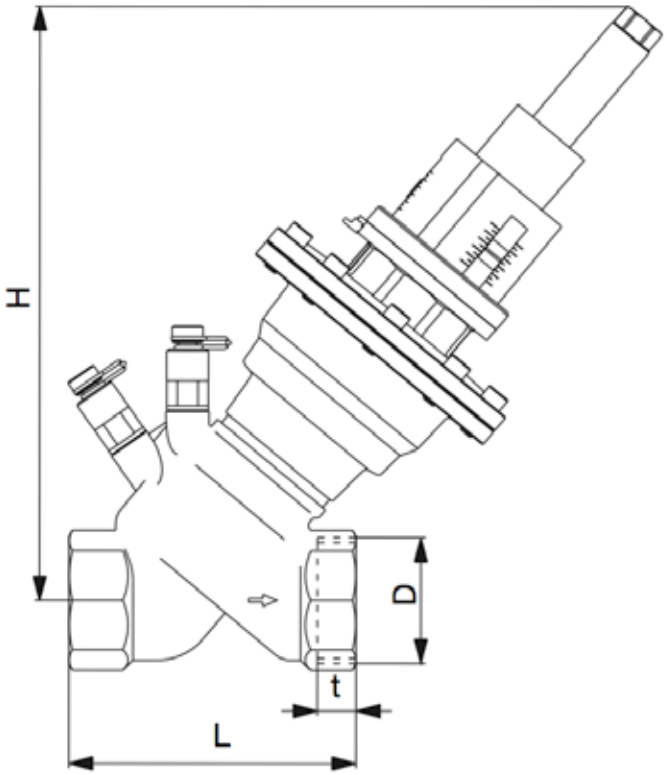
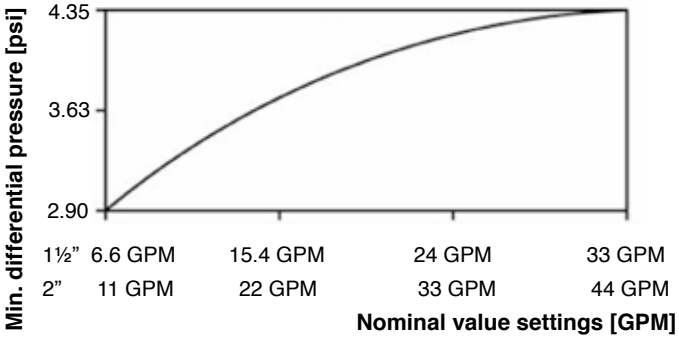
“Cocon Q”

Pressure independent control valve



Size	D	L	t	H
1½	1½	4.72	¾	9.65
2	2	5.9	1	10.0

Minimum operating differential pressure



Product specification

Function:

The Oventrop pressure independent control valve “Cocon Q” maintains a valve authority of 100% and the desired flow over a wide range of differential pressures. The “Cocon Q” is ideal for variable flow applications and makes selection and commissioning easy. Select the valve with the flow range that satisfies the desired flow rate, and set the design flow rate on site with a quick turn of the hand wheel.

The valve is used for the hydronic balancing and temperature control of appliances or sections of the system in chilled ceiling, fan-coil, convector, central heating, and surface heating systems.

Performance data:

Maximum working temperature:	250°F (120°C)
Minimum working temperature:	-4°F (-20°C)
Maximum working pressure:	232 psi (16 Bar)
Maximum differential pressure:	60 psi (4 Bar)
Minimum differential pressure:	2.9 to 4.35 psi (0.2 to 0.3 Bar)
Flow accuracy:	+/- 10%
Positioning accuracy:	1 GPM

Item numbers:

With test points

Size	Flow range	Item number
1½”	6.6 - 33 GPM	166 61 12
2”	11 - 44 GPM	166 61 16

Accessories:

Lead sealing locking wire: 108 90 91

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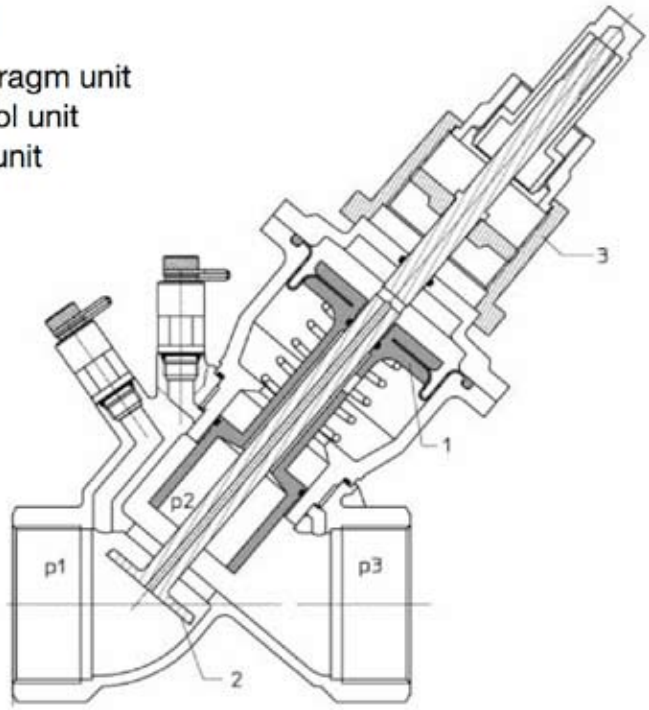
Pressure independent control valve

Legend:

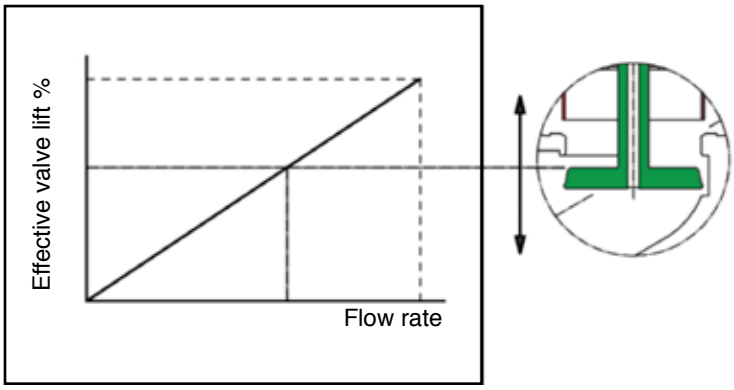
1. Diaphragm unit
2. Control unit
3. Flow unit



Construction:

The “Cocon Q” has a bronze body and the brass components are alloyed to resist dezincification (DZR). No dielectric fittings are required for installation. The valve stem is stainless steel and the flexible components are made of EPDM and PTFE. The “Cocon Q” offers a hand wheel mounted inline with the actuator. The valve has integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports are located on the same end and on the same side of the valve. Test ports are spaced 1.0 inch apart and extend 1.5 inches from the valve body. The “Cocon Q” includes a locking clip stop to ensure the balanced position while in operation and to prevent hand wheel repositioning after setting.

Valve characteristic line



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TYPICAL SPECIFICATIONS

Pressure independent control valves

1½" (DN40) – 2" (DN50)

1.0 General – Furnish and install Oventrop balancing valves, as shown on the drawings and/or schedules, to ensure the accurate balancing of all flows in the hydronic heating and cooling systems. Water balancing and control shall meet the specified flows.

2.0 Construction

2.1 All control valves shall be of the pressure-independent design. All control valves shall have a constant control valve authority of 100% over the full allowable pressure and flow range.

2.2 All control valves shall have documented measuring accuracy of +/- 10% within the normal setting range of the valve.

2.3 All control valves shall have integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports shall be located on the same end and on the same side of the valve. Test ports shall be spaced no more than 1.0 inch apart and extend no more than 1.5 inches from the valve body.

2.4 All control valves shall have maximum body ratings no less than 232 psi (PN16) at 250 degrees F (120 C).

2.5 All control valves must include a locking clip stop to ensure the balanced position while in operation and to prevent hand wheel repositioning after setting.

2.6 All control valves 1½" (DN40) through 2" (DN50) shall have hand wheel adjustment for precise readout. The hand wheel shall be marked in gallons per minute and shall have a minimum positioning accuracy of 1 GPM.

2.7 All control valves shall be manufactured by the company complying with international quality standard ISO 9001.

2.8 All actuators shall be supplied by Oventrop. All actuators shall be capable of operating over the full flow and pressure range of the valve.

3.0 Material Characteristics – All control valves in sizes 1½" (DN40) through 2" (DN50) shall have bronze bodies and NPT threaded connections to match the piping system. All wetted brass parts shall be alloyed to resist dezincification (DZR). No dielectric fittings shall be required for installation. The valve stem shall be stainless steel. The flexible components shall be made of EPDM and PTFE.

4.0 Valve Sizing – All control valves shall be sized to perform in a normal operation range at a minimum differential pressure of 2.9 to 4.35 psi (0.2 to 0.3 Bar). All control valves shall have a maximum working differential pressure of no less than 60 psi (4 Bar). All control valves shall be selected based on their allowable flow range.

5.0 Manufacturer – Oventrop Corporation.

6.0 Warranty – Valves shall be free from material and workmanship defects for a period of 5 years from date of installation or 5½ years from date of shipment, whichever comes first.

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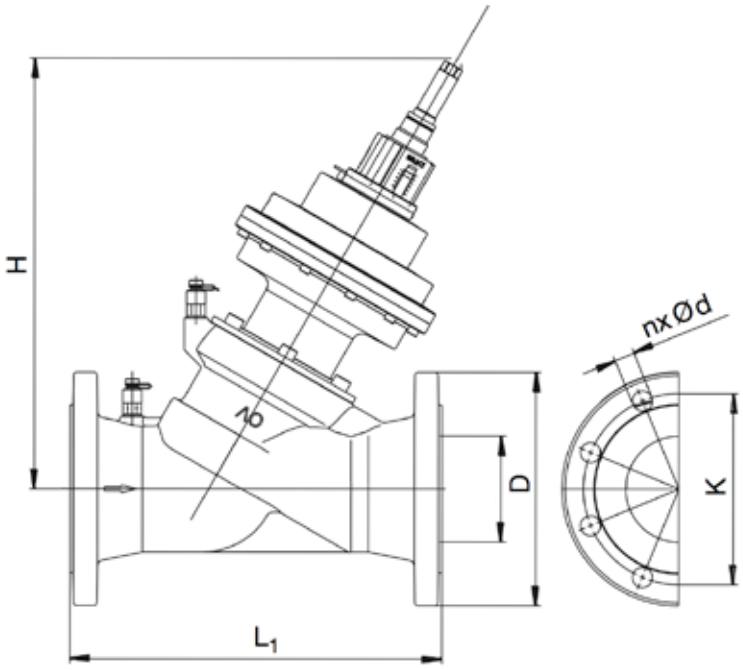
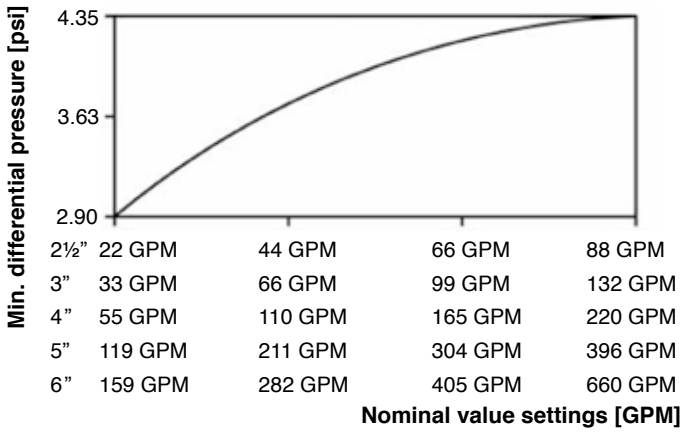
“Cocon Q”

Pressure independent control valve



Size	L1	H	D	K	n x Ød
2½	11.42	15.57	7.28	5.50	0.16x0.75
3	12.20	15.16	7.87	6.0	0.31x0.75
4	13.78	15.94	8.66	7.50	0.31x0.75
5	15.75	20.47	9.84	8.50	0.31x0.88
6	18.90	20.47	11.22	9.50	0.31x0.88

Minimum operating differential pressure



Product specification

Function:

The Oventrop pressure independent control valve “Cocon Q” maintains a valve authority of 100% and the desired flow over a wide range of differential pressures. The “Cocon Q” is ideal for variable flow applications and makes selection and commissioning easy. Select the valve with the flow range that satisfies the desired flow rate, and set the design flow rate on site with a quick turn of the hand wheel.

The valve is used for the hydronic balancing and temperature control of appliances or sections of the system in chilled ceiling, fan-coil, convector, central heating, and surface heating systems.

Performance data:

Maximum working temperature:	250°F (120°C)
Minimum working temperature:	14°F (-10°C)
Maximum working pressure:	232 psi (16 Bar)
Maximum differential pressure:	60 psi (4 Bar)
Minimum differential pressure:	2.9 to 4.35 psi (0.2 to 0.3 Bar)
Flow accuracy:	+/- 10%
Positioning accuracy:	1 GPM

Item numbers:

With test points

Size	Flow range	Item number
2½”	22 - 88 GPM	167 61 51
3”	33 - 132 GPM	167 61 52
4”	55 - 220 GPM	167 61 53
5”	119 - 396 GPM	167 61 54
6”	158 - 660 GPM	167 61 55

Accessories:

Lead sealing locking wire: 108 90 91

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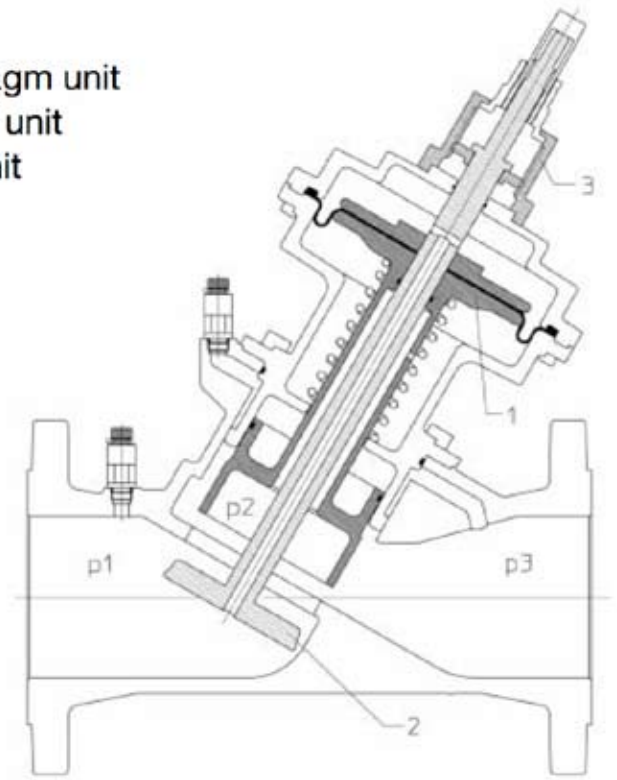
Pressure independent control valve

Legend:

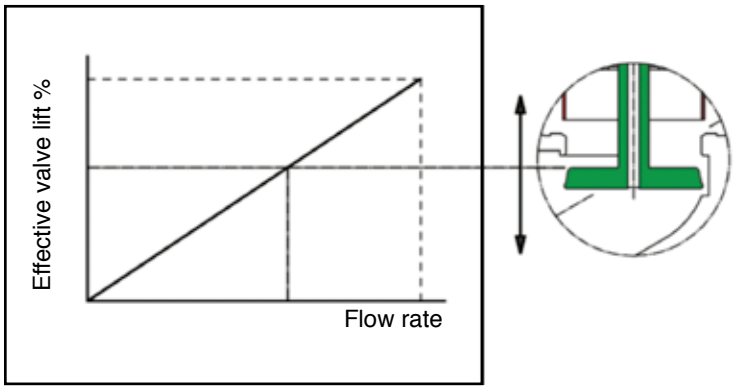
1. Diaphragm unit
2. Control unit
3. Flow unit



Construction:

The “Cocon Q” has a cast iron body and the brass components are alloyed to resist dezincification (DZR). No dielectric fittings are required for installation. The valve stem is stainless steel and the flexible components are made of EPDM and PTFE. The “Cocon Q” offers a hand wheel mounted inline with the actuator. The valve has integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports are located on the same end and on the same side of the valve. Test ports are spaced 1.0 inch apart and extend 1.5 inches from the valve body. The “Cocon Q” includes a locking clip stop to ensure the balanced position while in operation and to prevent hand wheel repositioning after setting.

Valve characteristic line



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TYPICAL SPECIFICATIONS

Pressure independent control valves

2½" (DN65) – 6" (DN150)

1.0 General – Furnish and install Oventrop balancing valves, as shown on the drawings and/or schedules, to ensure the accurate balancing of all flows in the hydronic heating and cooling systems. Water balancing and control shall meet the specified flows.

2.0 Construction

2.1 All control valves shall be of the pressure-independent design. All control valves shall have a constant control valve authority of 100% over the full allowable pressure and flow range. All control valves must offer a hand wheel mounted inline with the actuator.

2.2 All control valves shall have documented measuring accuracy of +/- 10% within the normal setting range of the valve.

2.3 All control valves shall have integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports shall be located on the same end and on the same side of the valve. Test ports shall be spaced no more than 1.0 inch apart and extend no more than 1.5 inches from the valve body.

2.4 All control valves shall have maximum body ratings no less than 232 psi (PN16) at 250 degrees F (120 C).

2.5 All control valves must include a locking clip stop to ensure the balanced position while in operation and to prevent hand wheel repositioning after setting.

2.6 All control valves 2½" (DN65) through 6" (DN150) shall have hand wheel adjustment for precise readout. The hand wheel shall be adjustable while the valve is in operation with the actuator installed. The hand wheel shall be marked in gallons per minute and shall have a minimum positioning accuracy of 1 GPM.

2.7 All control valves shall be manufactured by the company complying with international quality standard ISO 9001.

2.8 All actuators shall be supplied by Oventrop. All actuators shall be capable of operating over the full flow and pressure range of the valve.

3.0 Material Characteristics – All control valves in sizes 2½" (DN65) through 6" (DN150) shall have cast iron bodies and ANSI class 150 flanged connections to match the piping system. All wetted brass parts shall be alloyed to resist dezincification (DZR). No dielectric fittings shall be required for installation. The valve stem shall be stainless steel. The flexible components shall be made of EPDM and PTFE.

4.0 Valve Sizing – All control valves shall be sized to perform in a normal operation range at a minimum differential pressure of 2.9 to 4.35 psi (0.2 to 0.3 Bar). All control valves shall have a maximum working differential pressure of no less than 60 psi (4 Bar). All control valves shall be selected based on their allowable flow range.

5.0 Manufacturer – Oventrop Corporation.

6.0 Warranty – Valves shall be free from material and workmanship defects for a period of 5 years from date of installation or from 5½ years from date of shipment, whichever comes first.

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“Hydrocontrol” Calibrated Balancing Valve
Flow Specifications

“Hydrocontrol R”

“Hydrocontrol F”

“Hydrocontrol G”

NPT Connection	Solder Connection	DN	Size	Absolute Minimum Flow	Nominal Minimum Flow	Nominal Maximum Flow	Absolute Maximum Flow
				GPM			
106 10 04	106 05 51	15	½"	0.2	2.6	4.2	13.3
106 10 06	106 05 52	20	¾"	0.3	3.4	6.2	19.5
106 10 08	106 05 53	25	1"	0.4	6.2	9.6	30.4
106 10 10	106 05 54	32	1¼"	0.4	9.4	21.0	66.6
106 10 12	106 05 55	40	1½"	0.9	14.9	29.8	94.1
106 10 16	106 05 56	50	2"	2.1	22.4	42.0	132.7
Groove Connection	Flange Connection	DN	Size	Absolute Minimum Flow	Nominal Minimum Flow	Nominal Maximum Flow	Absolute Maximum Flow
				GPM			
-	106 29 46	20	¾"	0.1	2.2	5.2	16.3
-	106 29 47	25	1"	0.4	5.1	9.1	28.7
-	106 29 48	32	1¼"	0.3	8.1	18.5	58.4
-	106 29 49	40	1½"	0.7	12.3	29.1	92.0
-	106 29 50	50	2"	2.5	19.8	39.0	123.2
106 30 51	106 29 51	65	2½"	1.5	38.9	106.0	335.3
106 30 52	106 29 52	80	3"	1.8	59.7	132.2	418.1
106 30 53	106 29 53	100	4"	2.6	100.6	217.5	687.7
106 30 54	106 29 54	125	5"	4.2	112.0	317.0	1002.5
106 30 55	160 29 55	150	6"	4.3	220.3	437.4	1383.3
106 30 56	106 29 56	200	8"	38.3	222.9	881.3	2786.8
106 30 57	106 29 57	250	10"	53.6	292.1	1298.4	4105.7
106 30 58	106 29 58	300	12"	153.0	616.7	1731.1	5474.3

The nominal ranges of the valves are based on the flow rates of the valves at a pressure drop of 2 [fthd] across the valve. The upper limit is set with the valve wide open and the lower limit is chosen so that any measurement taken at the valve will have a tolerance of no greater than +/- 5%. If the flow rate desired falls within the range of two different size valves, chose the smaller of the two valves. The absolute minimum is calculated assuming a pressure drop across the valve of 1 [fthd] with the valve set at the lowest presetting. The absolute maximum is calculated assuming a pressure drop across the valve of 20 [fthd] with the valve wide open.

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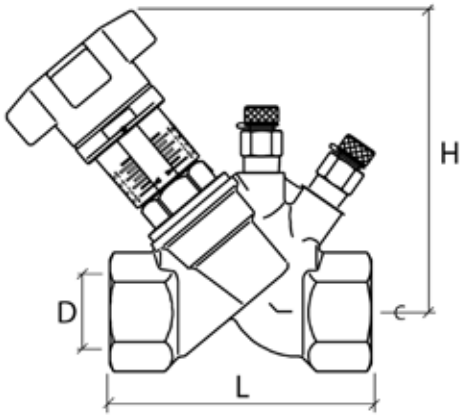
"Hydrocontrol R" Bronze
Double Regulating and Commissioning Valves
Thread Connection ½" - 2" (DN 15 - DN 50)



Dimensions in Inches

Size	Connection	Item no.	Weight	D	L	H
DN15 ½"	NPT	106 10 04	1.4 lbs.	½	3.15	4.49
DN20 ¾"	NPT	106 10 06	1.8 lbs.	¾	3.31	4.57
DN25 1"	NPT	106 10 08	2.5 lbs.	1	3.84	4.69
DN32 1¼"	NPT	106 10 10	3.0 lbs.	1¼	4.33	5.35
DN40 1½"	NPT	106 10 12	3.9 lbs.	1½	4.72	5.43
DN50 2"	NPT	106 10 16	6.0 lbs.	2	5.91	5.83

Installation Notes

When installing the valves, it is to be observed that the direction of flow conforms with the arrow on the valve body and that the valve is installed with a minimum of 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.

The double regulating and commissioning valves may be installed in either the supply or the return pipe.

Product Specification

Oventrop double regulating and commissioning valves "Hydrocontrol R" 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.

Specifications:
Maximum working temperature: 300°F
Maximum working pressure: 235 psi
Temperature range: -4°F to 300°F

Bonnet, stem and disc made of bronze/dezincification resistant brass.
Disc with PTFE seal.
Double EPDM O-ring stem seal.

Oventrop Corporation
PO Box 789
East Granby, CT 06026
Phone: (860) 413-9173
www.oventrop-us.com

"Hydrocontrol R"
Sweat or Thread Connection
½" to 2" Valves

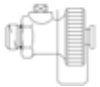
Cv Values for Various Handwheel Settings

Presetting or Handwheel Turns	½"	¾"	1"	1¼"	1½"	2"
0.5	0.40	0.58	1.08	1.20	3.09	3.13
1.0	0.53	0.84	1.77	2.40	4.80	5.88
1.5	0.66	1.08	2.42	3.37	6.67	8.31
2.0	0.84	1.33	3.00	4.67	8.53	10.66
2.5	1.14	1.57	3.59	5.91	10.12	13.55
3.0	1.56	1.86	4.29	6.98	11.65	16.55
3.5	1.98	2.37	5.14	7.97	13.02	19.01
4.0	2.38	3.00	6.00	8.88	14.37	21.51
4.5	2.77	3.63	6.92	10.06	16.05	24.07
5.0	3.14	4.24	7.81	11.27	17.74	26.66
5.5	3.56	4.97	8.51	12.44	20.17	28.49
6.0	3.95	5.69	9.20	13.60	22.62	30.04
6.5	4.33	6.33	9.78	14.88	24.36	32.27
7.0	4.51	6.64	10.34	16.17	26.10	34.20
7.5	-	-	-	17.47	27.47	36.16
8.0	-	-	-	18.73	28.86	38.06
8.5	-	-	-	19.97	29.59	40.35
9.0	-	-	-	21.14	30.34	42.65
9.5	-	-	-	22.01	31.16	44.13
10.0	-	-	-	22.62	31.99	45.09

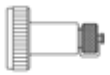
"Hydrocontrol" Valve Accessories

Set of 2 pressure test points
Item 106 02 81

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

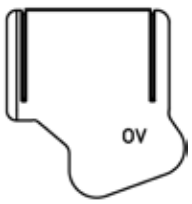


Fill and drain ball valve ¼"
Item 106 01 91



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

Flow meter
OV-DMC 2
Item 106 91 77



Insulation shell
for "Hydrocontrol R"

Size		Item no.
DN15	½"	106 00 81
DN20	¾"	106 00 82
DN25	1"	106 00 83
DN32	1¼"	106 00 84
DN40	1½"	106 00 85
DN50	2"	106 00 86

Oventrop Corporation
PO Box 789
East Granby, CT 06026
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www.oventrop-us.com

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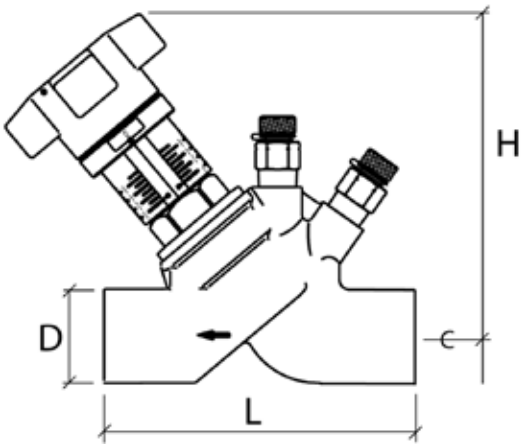
"Hydrocontrol R" Bronze
Double Regulating and Commissioning Valves
Sweat Connection ½" - 2" (DN 15 - DN 50)



Dimensions in Inches

Size	Connection	Item no.	Weight	D	L	H
DN15 ½"	solder	106 05 51	1.4 lbs.	½	3.51	4.49
DN20 ¾"	solder	106 05 52	1.6 lbs.	¾	3.81	4.57
DN25 1"	solder	106 05 53	1.8 lbs.	1	4.31	4.69
DN32 1¼"	solder	106 05 54	3.1 lbs.	1¼	5.03	5.35
DN40 1½"	solder	106 05 55	3.8 lbs.	1½	5.57	5.43
DN50 2"	solder	106 05 56	5.3 lbs.	2	6.60	5.83

Installation Notes

When installing the valves, it is to be observed that the direction of flow conforms with the arrow on the valve body and that the valve is installed with a minimum of 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.

The double regulating and commissioning valves may be installed in either the supply or the return pipe.

Product Specification

Oventrop double regulating and commissioning valves "Hydrocontrol R" 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.

Specifications:
Maximum working temperature: 300°F
Maximum working pressure: 235 psi
Temperature range: -4°F to 300°F

Bonnet, stem and disc made of bronze/dezincification resistant brass.
Disc with PTFE seal.
Double EPDM O-ring stem seal.

Oventrop Corporation
PO Box 789
East Granby, CT 06026
Phone: (860) 413-9173
www.oventrop-us.com

"Hydrocontrol R"
Sweat or Thread Connection
½" to 2" Valves

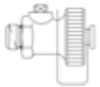
Cv Values for Various Handwheel Settings

Presetting or Handwheel Turns	½"	¾"	1"	1¼"	1½"	2"
0.5	0.40	0.58	1.08	1.20	3.09	3.13
1.0	0.53	0.84	1.77	2.40	4.80	5.88
1.5	0.66	1.08	2.42	3.37	6.67	8.31
2.0	0.84	1.33	3.00	4.67	8.53	10.66
2.5	1.14	1.57	3.59	5.91	10.12	13.55
3.0	1.56	1.86	4.29	6.98	11.65	16.55
3.5	1.98	2.37	5.14	7.97	13.02	19.01
4.0	2.38	3.00	6.00	8.88	14.37	21.51
4.5	2.77	3.63	6.92	10.06	16.05	24.07
5.0	3.14	4.24	7.81	11.27	17.74	26.66
5.5	3.56	4.97	8.51	12.44	20.17	28.49
6.0	3.95	5.69	9.20	13.60	22.62	30.04
6.5	4.33	6.33	9.78	14.88	24.36	32.27
7.0	4.51	6.64	10.34	16.17	26.10	34.20
7.5	-	-	-	17.47	27.47	36.16
8.0	-	-	-	18.73	28.86	38.06
8.5	-	-	-	19.97	29.59	40.35
9.0	-	-	-	21.14	30.34	42.65
9.5	-	-	-	22.01	31.16	44.13
10.0	-	-	-	22.62	31.99	45.09

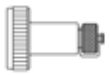
"Hydrocontrol" Valve Accessories

Set of 2 pressure test points
Item 106 02 81

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

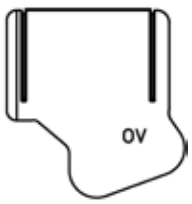


Fill and drain ball valve $^{1}/_{4}$"
Item 106 01 91



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

Flow meter
OV-DMC 2
Item 106 91 77



Insulation shell
for "Hydrocontrol R"

Size		Item no.
DN15	½"	106 00 81
DN20	¾"	106 00 82
DN25	1"	106 00 83
DN32	1¼"	106 00 84
DN40	1½"	106 00 85
DN50	2"	106 00 86

Oventrop Corporation
PO Box 789
East Granby, CT 06026
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www.oventrop-us.com

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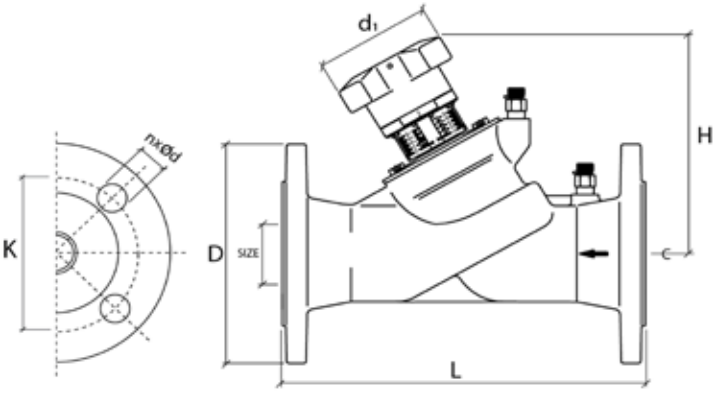
"Hydrocontrol F" Cast Iron Double Regulating and Commissioning Valves Flanged Connection ¾" - 12" (DN 20 - DN 300)



Dimensions in Inches

Size	Item no.	Weight	L	H max.	d1	D	K	n x Ød
DN20 ¾"	106 29 46	7.5 lbs.	5.91	4.65	2.76	4.13	2.75	4 x 0.62
DN25 1"	106 29 47	7.8 lbs.	6.30	4.65	2.76	4.53	3.12	4 x 0.62
DN32 1¼"	106 29 48	12.8 lbs.	7.09	5.35	2.76	5.51	3.50	4 x 0.62
DN40 1½"	106 29 49	13.7 lbs.	7.87	5.35	2.76	5.91	3.88	4 x 0.62
DN50 2"	106 29 50	18.6 lbs.	9.06	5.71	2.76	6.50	4.75	4 x 0.75
DN65 2½"	106 29 51	31.7 lbs	11.4	7.4	4.33	7.28	5.50	4 x 0.75
DN80 3"	106 29 52	39.8 lbs	12.2	8.0	4.33	7.83	6.0	4 x 0.75
DN100 4"	106 29 53	61.3 lbs	13.8	9.45	6.3	8.66	7.50	8 x 0.75
DN125 5"	106 29 54	89.9 lbs	15.8	11.1	6.3	9.84	8.50	8 x 0.88
DN150 6"	106 29 55	113.9 lbs	18.9	11.2	6.3	11.2	9.50	8 x 0.88
DN200 8"	106 29 56	361.9 lbs	23.6	18.4	11.8	13.4	11.75	8 x 0.88
DN250 10"	106 29 57	431.2 lbs	28.7	18.9	11.8	15.9	14.25	12 x 1.0
DN300 12"	106 29 58	581.9 lbs	33.5	20.3	11.8	18.1	17.0	12 x 1.0
DN350 14"	106 29 59	770.0 lbs	38.6	22.1	11.8	20.5	18.75	16 x 1.12

Installation Notes

When installing the valves, it is to be observed that the direction of flow conforms with the arrow on the valve body and that the valve is installed with a minimum of 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.

The double regulating and commissioning valves may be installed in either the supply or the return pipe.

Oventrop Corporation
PO Box 789
East Granby, CT 06026
Phone: (860) 413-9173
www.oventrop-us.com

Product Specification

Oventrop double regulating and commissioning valves "Hydrocontrol F" 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.

Specifications:
Maximum working temperature: 300°F
Maximum working pressure: 235 psi
Temperature range: 15°F to 300°F

Valve bodies manufactured from cast iron to ASME/ANSI B16.5 and flanged to 125 lb. standards. Valve body made of cast iron (GG 25 EN-GJL-250), hole circle of the flanged connection according to ANSI 150.

Bonnet, stem and disc made of bronze/dezincification resistant brass.
Disc with PTFE seal.
Double EPDM O-ring stem seal.

Hydrocontrol F—Flanged Connection—¾" to 12" valves
Cv Values for Various Handwheel Settings

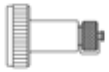
Presetting or Handwheel Turns	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"
0.5	0.26	0.97	0.97	1.94	3.83	2.21	2.67	3.96	6.40	6.50	-	-	-
1.0	0.49	1.55	2.01	3.80	6.70	4.19	5.12	9.94	14.48	17.70	-	-	-
1.5	0.73	2.13	3.12	5.55	8.42	6.51	8.14	16.28	22.56	29.37	-	-	-
2.0	0.97	2.72	4.22	7.21	11.10	11.63	13.78	21.51	30.93	41.00	56.86	81.4	232.56
2.5	1.21	3.29	5.33	8.59	13.45	17.44	21.69	27.91	40.41	62.70	72.09	98.84	290.70
3.0	1.45	3.86	6.43	10.10	15.59	27.91	30.35	41.16	55.52	110.49	97.67	127.91	360.47
3.5	1.79	4.63	7.57	11.59	18.09	39.53	40.70	60.47	73.66	157.50	132.56	174.42	441.86
4.0	2.33	5.51	8.67	13.23	21.33	50.58	52.03	83.72	94.24	194.33	175.58	226.74	558.14
4.5	2.95	6.51	9.85	14.99	23.90	60.47	64.19	108.14	120.41	236.80	239.53	313.95	662.79
5.0	3.59	7.72	10.99	16.87	26.40	70.93	75.12	130.23	149.13	277.80	302.67	413.95	767.44
5.5	4.22	8.65	12.33	19.33	28.84	81.41	87.73	153.29	184.53	316.74	372.09	511.63	872.09
6.0	4.85	9.19	13.60	22.24	31.26	90.70	101.16	172.09	215.47	349.30	445.35	606.98	982.56
6.5	5.30	9.53	14.90	24.30	32.92	98.84	113.43	190.73	253.55	379.88	555.58	705.81	1069.77
7.0	5.55	9.74	15.87	25.93	34.51	104.65	124.13	208.15	283.90	413.49	592.44	793.02	1151.16
7.5	-	-	16.63	27.29	35.91	109.88	133.14	220.98	311.80	444.19	650.00	883.72	1244.19
8.0	-	-	17.28	28.50	37.21	113.95	142.09	233.72	340.70	470.12	718.60	976.74	1325.58
8.5	-	-	17.93	29.26	38.44	-	-	-	-	-	767.44	1034.88	1406.98
9.0	-	-	18.57	29.97	39.60	-	-	-	-	-	842.44	1084.88	1500.00
9.5	-	-	19.22	30.63	40.70	-	-	-	-	-	881.98	1139.53	1569.77
10.0	-	-	19.86	31.26	41.86	-	-	-	-	-	894.19	1195.35	1651.16
10.5	-	-	-	-	-	-	-	-	-	-	906.98	1255.81	1720.93
11.0	-	-	-	-	-	-	-	-	-	-	918.60	1302.33	1779.07
11.5	-	-	-	-	-	-	-	-	-	-	931.86	1348.84	1825.58
12.0	-	-	-	-	-	-	-	-	-	-	947.09	1395.35	1860.47

"Hydrocontrol" Valve Accessories

Set of 2 pressure test points
Item 106 02 81

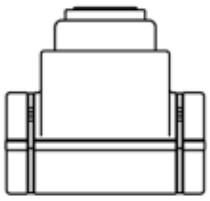
Extension piece for pressure test points
80mm Item 106 02 95

Fill and drain ball valve ¼"
Item 106 01 91



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

Flow meter
OV-DMC 2
Item 106 91 77



Insulation shell
for "Hydrocontrol F" & "G"

Size	Item no.
DN20 ¾"	106 25 81
DN25 1"	106 25 82
DN32 1¼"	106 25 83
DN40 1½"	106 25 84
DN50 2"	106 25 85
DN65 2½"	106 25 86
DN80 3"	106 25 87
DN100 4"	106 25 88
DN125 5"	106 25 89
DN150 6"	106 25 90

Oventrop Corporation
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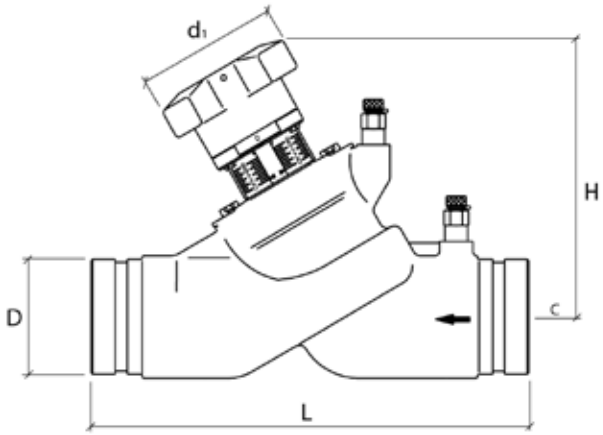
"Hydrocontrol G" Cast Iron
Double Regulating and Commissioning Valves
Grooved Connection 2½" - 12" (DN 65 - DN 300)



Dimensions in Inches

Size	Item no.	Weight	L	H	D	d1
DN65 2½"	106 30 51	19.6 lbs	11.4	7.4	2.9	4.3
DN80 3"	106 30 52	27.8 lbs	12.2	8.0	3.5	4.3
DN100 4"	106 30 53	45.2 lbs	13.8	9.45	4.5	6.3
DN125 5"	106 30 54	70.0 lbs	15.8	11.1	5.6	6.3
DN150 6"	106 30 55	95.7 lbs	18.9	11.2	6.6	6.3
DN200 8"	106 30 56	255.2 lbs	23.6	18.4	8.6	11.8
DN250 10"	106 30 57	377.3 lbs	28.7	18.9	10.8	11.8
DN300 12"	106 30 58	520.3 lbs	33.5	20.3	12.9	11.8

Installation Notes

When installing the valves, it is to be observed that the direction of flow conforms with the arrow on the valve body and that the valve is installed with a minimum of 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.

The double regulating and commissioning valves may be installed in either the supply or the return pipe.

Oventrop Corporation
PO Box 789
East Granby, CT 06026
Phone: (860) 413-9173
www.oventrop-us.com

Product Specification

Oventrop double regulating and commissioning valves "Hydrocontrol G" 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.

Specifications:
Maximum working temperature: 300°F
Maximum working pressure: 300 psi
Temperature range: 15°F to 300°F

Groove connections for couplings.

Valve bodies manufactured from cast iron to ASME/ANSI B16.5 and flanged to 125 lb. standards. Valve body made of cast iron (GG 25 EN-GJL-250), hole circle of the flanged connection according to ANSI 150.

Bonnet, stem and disc made of bronze/dezincification resistant brass.
Disc with PTFE seal.
Double EPDM O-ring stem seal.

oventrop

"Hydrocontrol G" Cast Iron
Cv Values 2½" - 12" Valves
Accessories

"Hydrocontrol G"—Grooved Connection—¾" to 12" valves
Cv Values for Various Handwheel Settings

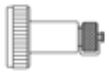
Presetting or Handwheel Turns	2½"	3"	4"	5"	6"	8"	10"	12"
0.5	2.21	2.67	3.96	6.40	6.50	-	-	-
1.0	4.19	5.12	9.94	14.48	17.70	-	-	-
1.5	6.51	8.14	16.28	22.56	29.37	-	-	-
2.0	11.63	13.78	21.51	30.93	41.00	56.86	81.4	232.56
2.5	17.44	21.69	27.91	40.41	62.70	72.09	98.84	290.70
3.0	27.91	30.35	41.16	55.52	110.49	97.67	127.91	360.47
3.5	39.53	40.70	60.47	73.66	157.50	132.56	174.42	441.86
4.0	50.58	52.03	83.72	94.24	194.33	175.58	226.74	558.14
4.5	60.47	64.19	108.14	120.41	236.80	239.53	313.95	662.79
5.0	70.93	75.12	130.23	149.13	277.80	302.67	413.95	767.44
5.5	81.41	87.73	153.29	184.53	316.74	372.09	511.63	872.09
6.0	90.70	101.16	172.09	215.47	349.30	445.35	606.98	982.56
6.5	98.84	113.43	190.73	253.55	379.88	555.58	705.81	1069.77
7.0	104.65	124.13	208.15	283.90	413.49	592.44	793.02	1151.16
7.5	109.88	133.14	220.98	311.80	444.19	650.00	883.72	1244.19
8.0	113.95	142.09	233.72	340.70	470.12	718.60	976.74	1325.58
8.5	-	-	-	-	-	767.44	1034.88	1406.98
9.0	-	-	-	-	-	842.44	1084.88	1500.00
9.5	-	-	-	-	-	881.98	1139.53	1569.77
10.0	-	-	-	-	-	894.19	1195.35	1651.16
10.5	-	-	-	-	-	906.98	1255.81	1720.93
11.0	-	-	-	-	-	918.60	1302.33	1779.07
11.5	-	-	-	-	-	931.86	1348.84	1825.58
12.0	-	-	-	-	-	947.09	1395.35	1860.47

"Hydrocontrol" Valve Accessories

Set of 2 pressure test points
Item 106 02 81

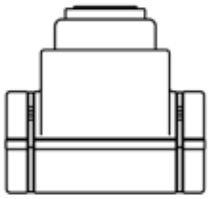
Extension piece for pressure test points
80mm Item 106 02 95

Fill and drain ball valve ¼"
Item 106 01 91



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

Flow meter
OV-DMC 2
Item 106 91 77



Insulation shell
for "Hydrocontrol F" & "G"

Size	Item no.
DN65 2½"	106 25 86
DN80 3"	106 25 87
DN100 4"	106 25 88
DN125 5"	106 25 89
DN150 6"	106 25 90

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TYPICAL SPECIFICATIONS
BALANCING VALVES
½" (DN15) – 12" (DN300)

1.0 General—Furnish and install Oventrop balancing valves, as shown on the drawings and/or schedules, to ensure the accurate balancing of all flows in the hydronic heating and cooling systems. Water balancing shall meet the specified flows with a maximum tolerance of +/- 10%. Upon completion, the balancing shall be documented in a report, which shall be submitted to the engineer for approval.

2.0 Balancing Valve Characteristics
2.1 All balancing valves shall be of the "Y" pattern globe style design. All balancing valves must offer a minimum of seven (7) full rotations of the handwheel for positioning accuracy of +/- 1%.
2.2 All balancing valves shall have documented measuring accuracy of +/- 7% within the normal setting range of the valve.
2.3 All balancing valves shall have integral self-sealing ports for measuring differential pressure and fluid temperature using standard pressure and temperature test probes. Test ports shall be located in line with the handwheel, on the same end of the valve and shall be removable to function as integral drain ports.
2.4 All balancing valves must offer 100% positive, leak-proof shutoff against the same fluid temperature and pressure ratings as the body. Minimum body ratings are 232 psi (PN16) at 300 degrees F (150 C).
2.5 All balancing valves must include a hidden memory stop to ensure return to the balanced position after shutoff. An enclosed anti-tamper lock feature shall prevent handwheel repositioning after setting.
2.6 All balancing valves ½" (DN15) through 12" (DN300) shall have digital/vernier adjustment for precise readout.
2.7 All balancing valves shall be manufactured by the company complying with international quality standard ISO 9001.
2.8 (Option) All balancing valves in sizes ½" (DN15) through 8" (DN200) shall be capable of being enclosed within factory contoured insulations with ASTM flame spread of 25 or less and a rating of E-84. Insulation "R" value shall be 4.5.
2.9 (Option) A valved hose bib fitting shall be available for installation on all ½" (DN15) through 12" (DN300) sizes. The hose bib fitting shall be capable of being placed on either side of the valve plug to accommodate draining and filling of horizontal or vertical coils.

3.0 Material Characteristics—All balancing valves in sizes ½" (DN15) through 2" (DN50) shall have bronze bodies and either solder or NPT threaded connections to match the piping system. Valve bodies in sizes 2½" (DN65) through 12" (DN300) shall be manufactured from cast iron equivalent to ASME/ANSI B16.5 and shall be flanged to 125 lb. standards. All wetted brass parts shall be alloyed to resist dezincification. No dielectric fittings shall be required for installation.

4.0 Valve Sizing—All balancing valves shall be sized to perform in a normal operation range between 25% and 100% of the full open position, at a minimum differential pressure between 1 to 3 ft. WG.

5.0 Manufacturer—Oventrop Corporation.

6.0 Warranty—Valves shall be free from material and workmanship defects for a period of 5 years from date of installation or from 5½ years from date of shipment, whichever comes first.

Oventrop reserves the right to make revisions to its products, their specifications, this bulletin, and related information without notice.

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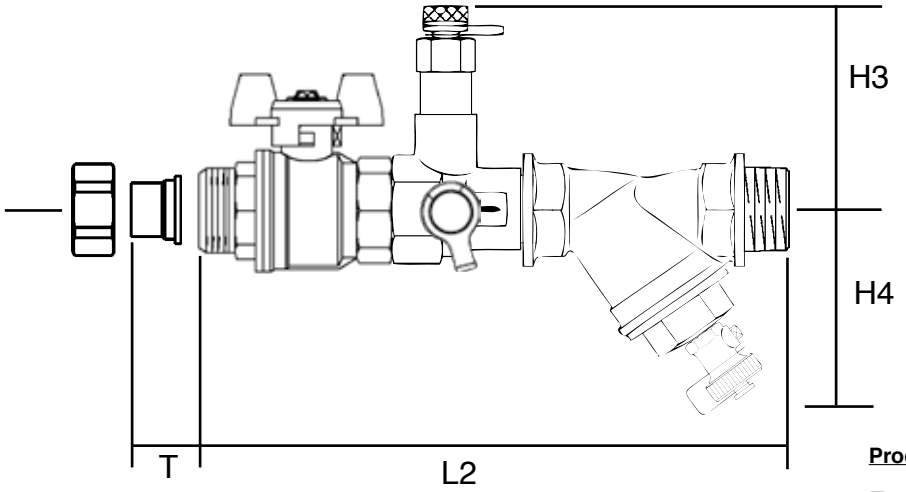
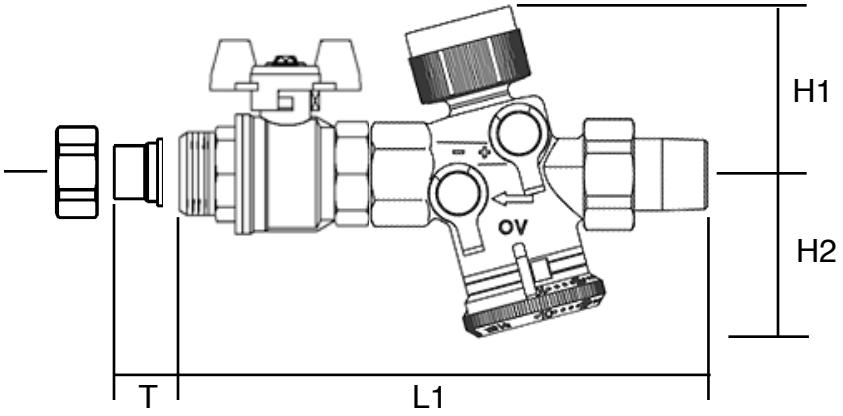
"Cocon Q" Fan Coil Kit
for pressure independent control

All dimensions are in inches





Size	L1	H1	H2	L2	H3	H4	T
½ LF	N/A						
½	N/A						
¾ LF	6 15/16	2	2	9 ¼	2 3/8	3 1/8	15/16
¾	N/A						
1	N/A						
1¼	N/A						

Product specification

Function:

The Oventrop pressure independent control valve "Cocon Q" maintains a valve authority of 100% and the desired flow over a wide range of differential pressures. The "Cocon Q" is ideal for variable flow applications and makes selection and commissioning easy. Select the valve with the flow range that satisfies the desired flow rate, and set the design flow rate on site with a quick turn of the hand wheel.

The valve is used for the hydronic balancing and temperature control of appliances or sections of the system in chilled ceiling, fan-coil, convector, central heating, and surface heating systems.

Performance data:

Maximum working temperature:	212°F (100°C)
Minimum working temperature:	14°F (-10°C)
Maximum working pressure:	232 psi (16 Bar)
Maximum differential pressure:	60 psi (4 Bar)
Minimum differential pressure:	2.2 to 6 psi (0.15 to 0.4 Bar)
Flow accuracy:	+/- 10%
Positioning accuracy:	0.1 GPM

Item numbers:

With test points

Size	**Flow range**	**Item number**
1/2" LF	0.13 - 0.9 GPM	N/A
1/2"	0.7 - 4.6 GPM	N/A
3/4" LF	0.7 - 4.6 GPM	167 90 06
3/4"	0.8 - 5.7 GPM	N/A
1"	1.3 - 8.8 GPM	N/A
1 1/4"	2.6 - 15.8 GPM	N/A

Accessories:

Lead sealing locking wire:	108 90 91

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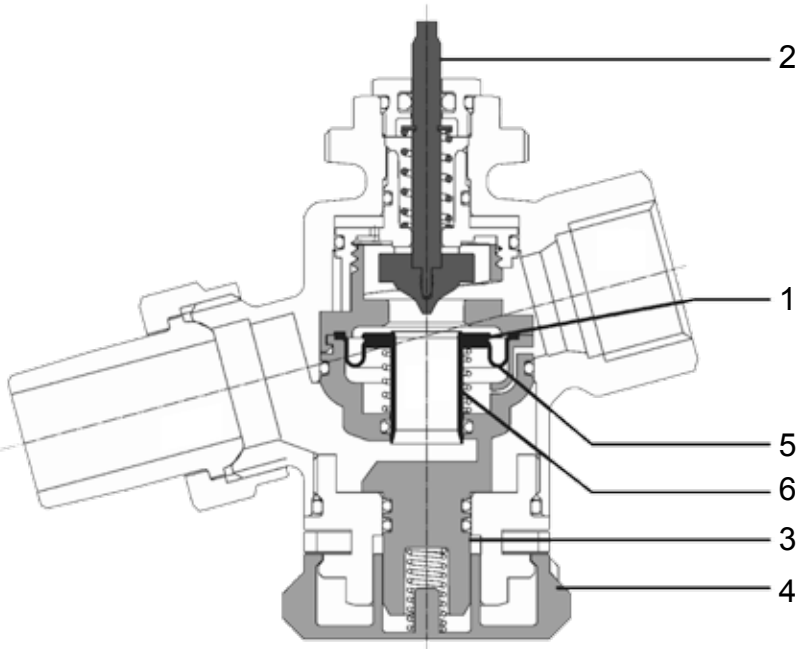
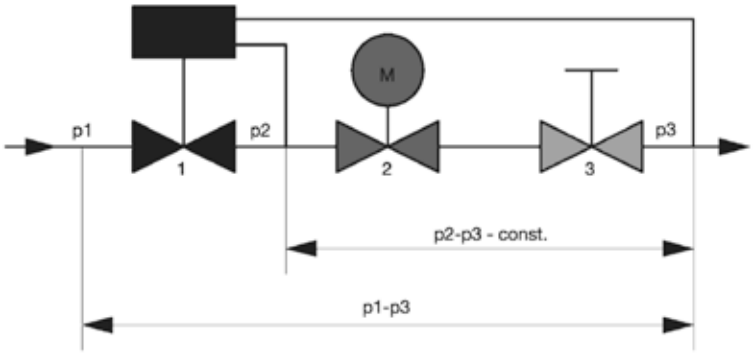
"Cocon Q" Fan Coil Kit
for pressure independent control

Pressure independent control valve "Cocon Q"



1 - Diaphragm unit
2 - Regulating valve
3 - Balancing valve unit
4 - Hand wheel
5 - Diaphragm
6 - Sleeve



Three valves in one unit

The integrated diaphragm unit (1) acts as a differential regulator and guarantees a constant differential pressure ("p2" – "p3") across the second valve section (regulating valve activated through the actuator or temperature controller (2) and across the third section, the on-site adjustable, automatic balancing valve unit (3).

Even at high differential pressure variations "p1" – "p3" during partial load conditions, the differential pressure "p2" – "p3" is kept at a constant level. This way, 100% valve authority is maintained.

The balancing valve unit hand wheel can be set, locked, and adjusted in the field without any tools.

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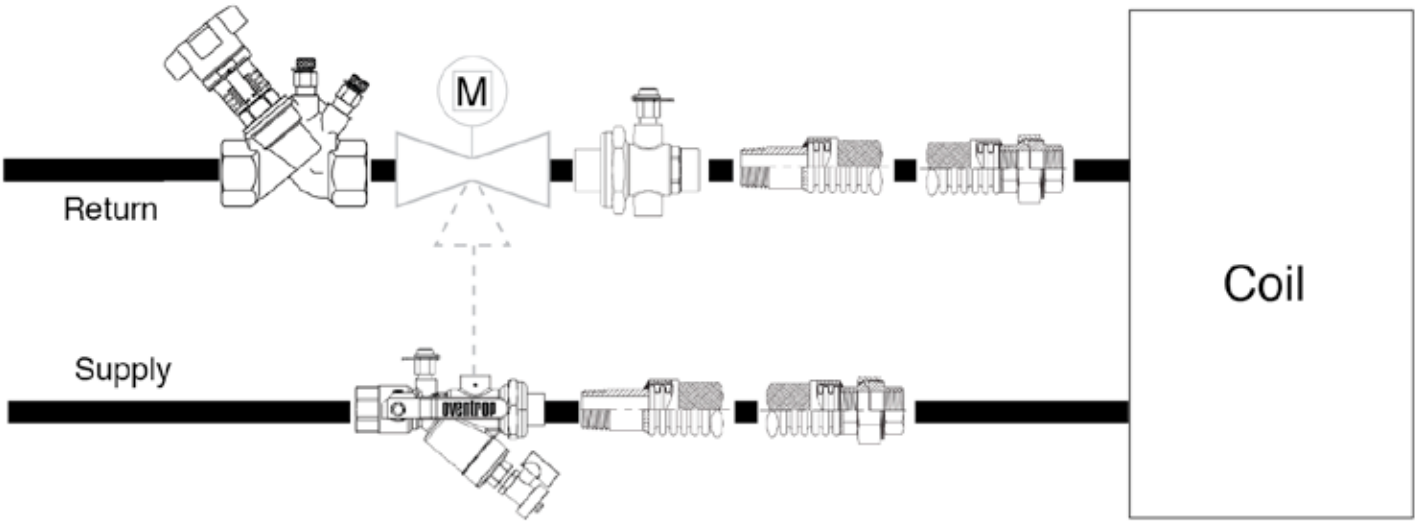
“Hydrocontrol-R” Coil Kit for Manual Balancing ½” - 2” Coil Kits



“Hydrocontrol R” Manual Balancing Valve Coil Kit		
Size	**Recommended Flow range [GPM]**	**Connection ends**
½”	2.6 - 4.2	F-NPT x F-NPT
¾”	3.4 - 6.2	Sweat x Sweat
1”	6.2 - 9.6	
1¼”	9.4 - 21	
1½”	15 - 30	
2”	22 - 42	

“Hydrocontrol-R” Coil Hookup Kit								
Components			**Body Size**					
			1661004	**1661006**	**1661008**	**1661010**	**1661012**	**1661016**
			½”	**¾”**	**1”**	**1¼”**	**1½”**	**2”**
Balancing Valve		**FNPT**	1061004	1061006	1061008	1061010	1061012	1061016
		SWT	1060551	1060552	1060553	1060554	1060555	1060556
Y-strainer Ball valve		**FNPT**	1668151	1668201	1668251	1668321	1668401	1668501
		SWT	1668153	1668203	1668253	1668323	1668403	1668503
Union Fitting		**FNPT**	1667151	1667201	1667251	1667321	1667401	1667501
		SWT	1667153	1667203	1667253	1667323	1667403	1667503
T	**½” tailpiece**	**FNPT**	1669111	1669211	1669311	-	-	-
		MNPT	1669112	1669212	1669312	1669412	1669512	-
		SWT	1669113	1669213	1669313	-	-	-
	¾” tailpiece	**FNPT**	1669121	1669221	1669321	-	-	-
		MNPT	1669122	1669222	1669322	1669422	1669522	-
		SWT	1669123	1669223	1669323	-	-	-
	1” tailpiece	**FNPT**	-	1669231	1669331	1669431	1669531	-
		MNPT	-	1669232	1669332	1669432	1669532	1669632
		SWT	-	1669233	1669333	1669433	1669533	-
	1¼” tailpiece	**FNPT**	-	-	-	1669441	1669541	1669641
		MNPT	-	-	-	1669442	1669542	1669642
		SWT	-	-	-	1669443	1669543	1669643
	1½” tailpiece	**FNPT**	-	-	-	1669451	1669551	1669651
		MNPT	-	-	-	1669452	1669552	1669652
		SWT	-	-	-	1669453	1669553	1669653
	2” tailpiece	**FNPT**	-	-	-	-	-	1669661
		MNPT	-	-	-	-	-	1669662
		SWT	-	-	-	-	-	1669663

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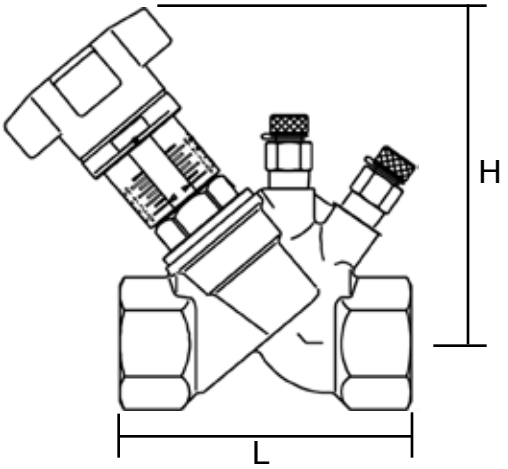
Return Side “Hydrocontrol” Coil Kit
Manual Balancing Valve
½” - 2” Coil Kits

Job Name: _____ Submitted by: _____ Date: _____

Spec Section: _____

Job Location: _____ Engineer/Architect: _____

Approval: _____ Date: _____

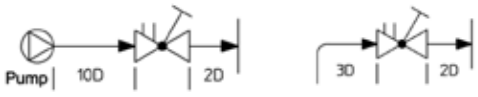


Coil Kit Dimensions in Inches

Dimension	½”	¾”	1”	1¼”	1½”	2”
L (F-NPT)	3.15	3.31	3.84	4.33	4.72	5.91
L (sweat)	3.51	3.81	4.31	5.03	5.57	6.60
H	4.49	4.57	4.69	5.35	5.43	5.83

“Hydrocontrol R” Manual Balancing Valve Coil Kit		
Size	**Recommended Flow range [GPM]**	**Connection ends**
½”	2.6 - 4.2	F-NPT x F-NPT
¾”	3.4 - 6.2	Sweat x Sweat
1”	6.2 - 9.6	
1¼”	9.4 - 21	
1½”	15 - 30	
2”	22 - 42	

Installation Notes
When installing the hydrocontrols, it is to be observed that the direction of flow conforms with the arrow on the valve body and that the valve is installed with a minimum of 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.



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www.oventrop-us.com

Specification
Oventrop “Hydrocontrol” coil kit is a balancing valve coil assembly for the return side of a fan coil unit or air handler. A sweat or female connection is available on the hydrocontrol valve.

“Hydrocontrol” valve made of corrosion-resistant bronze. Bonnet, stem and disc made of bronze/dezincification resistant brass. Disc with PTFE seal. Double EPDM O-ring stem seal.

Maximum working temperature: 300°F
Maximum working pressure: 235 psi

Using balancing valve for isolation:
The hand wheel can be limited to any setting. This can be done by inserting a 3 mm allen key into the hole on the top of the handle and turning clockwise until it stops. Once this has been done, the valve can be closed down for isolation of the coil without losing the balanced setting. When the valve is reopened, the handle will be turned until it reaches the preset limit.

Cv Values for Various Handwheel Settings

Presetting	½”	¾”	1”	1¼”	1½”	2”
0.5	0.40	0.58	1.08	1.20	3.09	3.13
1.0	0.53	0.84	1.77	2.40	4.80	5.88
1.5	0.66	1.08	2.42	3.37	6.67	8.31
2.0	0.84	1.33	3.00	4.67	8.53	10.66
2.5	1.14	1.57	3.59	5.91	10.12	13.55
3.0	1.56	1.86	4.29	6.98	11.65	16.55
3.5	1.98	2.37	5.14	7.97	13.02	19.01
4.0	2.38	3.00	6.00	8.88	14.37	21.51
4.5	2.77	3.63	6.92	10.06	16.05	24.07
5.0	3.14	4.24	7.81	11.27	17.74	26.66
5.5	3.56	4.97	8.51	12.44	20.17	28.49
6.0	3.95	5.69	9.20	13.60	22.62	30.04
6.5	4.33	6.33	9.78	14.88	24.36	32.27
7.0	4.51	6.64	10.34	16.17	26.10	34.20
7.5	-	-	-	17.47	27.47	36.16
8.0	-	-	-	18.73	28.86	38.06
8.5	-	-	-	19.97	29.59	40.35
9.0	-	-	-	21.14	30.34	42.65
9.5	-	-	-	22.01	31.16	44.13
10.0	-	-	-	22.62	31.99	45.09

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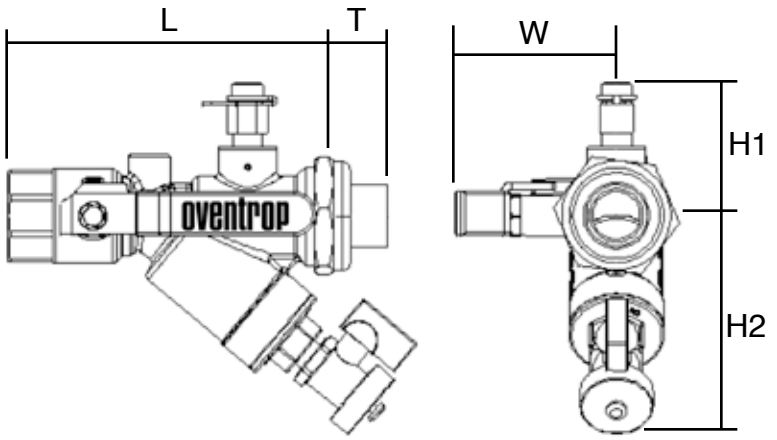
Supply Side Coil Kit
Strainer with PT Port and Drain
½" - 2" Coil Kits

Job Name: _____ Submitted by: _____ Date: _____

Spec Section: _____

Job Location: _____ Engineer/Architect: _____

Approval: _____ Date: _____



Specification

Oventrop strainer coil kit is an assembly for the supply side of a fan coil unit or air handler. Each assembly consists of a y-strainer, a ball valve, a PT port, and a drain. A union connection at the strainer is male, female, or sweat. A sweat or female connection is available on the ball valve end.

Oblique pattern strainer for vertical and horizontal installation. Bronze body, with wire basket made of stainless steel. Replaceable wire baskets. Wire basket: 20 mesh

Ball valve made of brass, ball made of nickel plated brass, PTFE seats, EPDM O-ring seal.

Fill and drain valve, with ball valve. Ball made of chrome plated brass, PTFE seats, O-ring seal.

Maximum working temperature: 250°F
Maximum working pressure: 400 psi (exc. 2", 275 psi)

Coil Kit Dimensions in Inches

Strainer Kit Sizes and Dimensions

Dimensions			Strainer Body Size					
			½"	¾"	1"	1¼"	1½"	2"
L		FNPT	3.9	5.4	5.4	7.6	7.5	9.3
		SWT	3.8	5.4	5.6	7.7	7.9	9.8
T	½" **Union Connection**	FNPT	1.0	1.0	1.0	-	-	-
		MNPT	1.0	1.0	1.0	1.0	1.0	-
		SWT	0.8	0.7	0.7	-	-	-
	¾" **Union Connection**	FNPT	1.0	1.0	1.0	-	-	-
		MNPT	1.0	1.0	1.0	1.2	1.2	-
		SWT	0.8	1.0	1.0	-	-	-
	1" Union Connection	FNPT	-	2.0	2.0	1.7	1.7	-
		MNPT	-	1.4	1.4	1.7	1.7	1.8
		SWT	-	1.3	1.3	1.7	1.7	-
	1¼" Union Connection	FNPT	-	-	-	1.7	1.7	1.6
		MNPT	-	-	-	1.7	1.7	1.8
		SWT	-	-	-	1.7	1.4	1.6
	1½" Union Connection	FNPT	-	-	-	1.7	1.7	1.6
		MNPT	-	-	-	1.7	1.7	1.6
		SWT	-	-	-	1.7	1.4	1.7
	2" Union Connection	FNPT	-	-	-	-	-	2.0
		MNPT	-	-	-	-	-	1.6
		SWT	-	-	-	-	-	1.6
H1			1.9	1.9	2.2	2.5	2.5	2.6
H2			2.9	2.9	3.6	3.1	3.1	3.7
W			2.5	2.5	2.6	3.1	3.1	3.7
Cv			4.7	4.7	9.1	24.6	24.6	35
Weight (lbs.)			0.9	0.9	2.3	5.0	5.0	8.8

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www.oventrop-us.com

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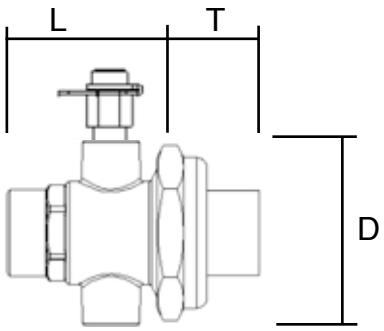
Return Side Union
½" - 2" Coil Kits

Job Name: _____ Submitted by: _____ Date: _____

Spec Section: _____

Job Location: _____ Engineer/Architect: _____

Approval: _____ Date: _____



Specification
Oventrop union for the return side of a fan coil unit or air handler. The fixed connection of the union is female or sweat. The union connection is available on the control valve side.

Union made of forged brass, O-ring seal for union
The union has an airvent and a pressure test point

Maximum working temperature: 250°F
Maximum working pressure: 400 psi

Coil Kit Dimensions in Inches

Union Kit Sizes and Dimensions								
Dimensions			Union Body Size					
			½"	¾"	1"	1¼"	1½"	2"
D			1.2	1.2	2.0	2.7	2.7	3.4
L		FNPT	2.0	1.9	2.2	2.6	2.8	2.8
		SWT	1.9	1.9	2.2	2.6	2.8	2.8
T	½" **Union Connection**	FNPT	1.0	1.0	1.0	-	-	-
		MNPT	1.0	1.0	1.0	1.0	1.0	-
		SWT	0.8	0.7	0.7	-	-	-
	¾" **Union Connection**	FNPT	1.0	1.0	1.0	-	-	-
		MNPT	1.0	1.0	1.0	1.2	1.2	-
		SWT	0.8	1.0	1.0	-	-	-
	1" Union Connection	FNPT	-	2.0	2.0	1.7	1.7	-
		MNPT	-	1.4	1.4	1.7	1.7	1.8
		SWT	-	1.3	1.3	1.7	1.7	-
	1¼" Union Connection	FNPT	-	-	-	1.7	1.7	1.6
		MNPT	-	-	-	1.7	1.7	1.8
		SWT	-	-	-	1.7	1.4	1.6
	1½" Union Connection	FNPT	-	-	-	1.7	1.7	1.6
		MNPT	-	-	-	1.7	1.7	1.6
		SWT	-	-	-	1.7	1.4	1.7
	2" Union Connection	FNPT	-	-	-	-	-	2.0
		MNPT	-	-	-	-	-	1.6
		SWT	-	-	-	-	-	1.6

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Stainless Steel flex hoses
for ½” - 2” Coil Kits

Job Name: Submitted by: Date:

Spec Section:

Job Location: Engineer/Architect:

Approval: Date:

Specification
Oventrop flex hoses are made of T321 stainless steel with a Series 300 single stainless steel braid.
The connections are made of T304 stainless steel and available in male NPT by female NPT union. All connections are welded.

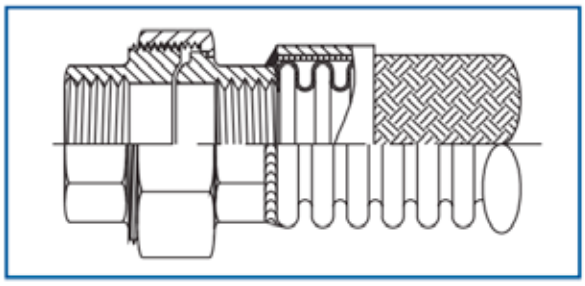
Maximum working temperature: 1250°F

Available lengths: 18”, 24”, 30”

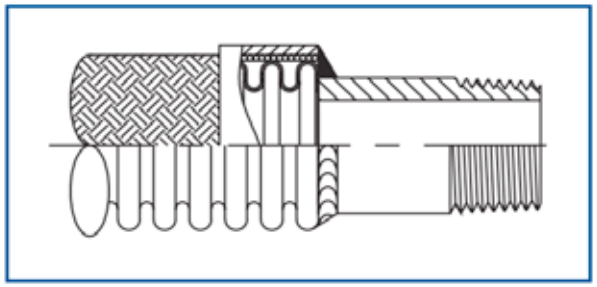
Nominal Hose I.D.	Hose Type	Hose O.D. [in]	Weight per inch [lbs]	Minimum Live Length for Vibration [in]	Minimum Bend Radius		Maximum Working Pressure [psi]	Maximum Test Pressure [psi]	Normal Burst Pressure [psi]
					Static Bend [in]	Intermittent Flexing [in]			
½”	Single Braid	0.71	0.015	4.75	1.772	5.433	1200	1800	4800
¾”		1.11	0.028	5.25	2.756	6.614	875	1313	3500
1”		1.34	0.043	5.50	3.346	7.480	900	1350	3600
1¼”		1.67	0.044	7.50	4.134	10.039	515	773	2060
1½”		2.03	0.071	8.00	5.118	11.614	435	653	1740
2”		2.44	0.088	9.50	6.299	12.598	425	638	1700

Flex Hose Connections

Female NPT Union



Male NPT



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East Granby, CT 06026
Phone (860) 413-9173
www.oventrop-us.com

oventrop Coil Kit Order Form

This form must be filled out completely with each order. Once completed, FAX this form to your local distributor.

Bill To:

Company Name	
Contact Name	
Address	
City	State/Province
Country	Zip/Postal Code
Phone No.	Fax No.
Email	

Ship To:

Order No.	Date
Company Name	
Contact Name	
Address	
City	State/Province
Country	Zip/Postal Code
Phone No.	Fax No.
Job Name/Tag	

☐ TOTAL NUMBER coil kits in this order.
For order of different sizes, end configurations and valve options, please fax additional order form with this sheet.

☐ Bag and tag. Fill instructions below or fax separate sheet if necesary.
1. Check here to include bag and tag and 2. include instructions or order will not be shipped bag and tag.

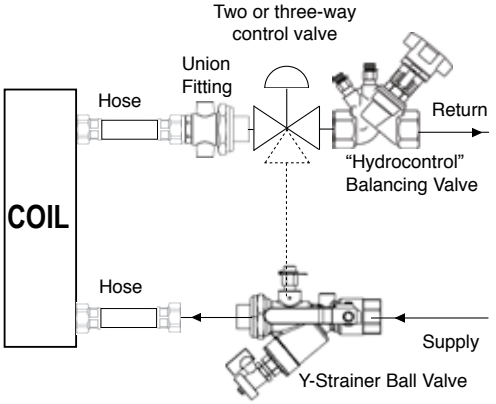
Kit No._____ Quantity _____

Component	Item number
Balancing Valve	
Y-Strainer	
- Tailpiece	
Union fitting	
- Tailpiece	
Hose size	
Hose length	18"☐ 24"☐ 30"☐

"Hydrocontrol-R" Coil Hookup Kit

Components			Body Size					
			1661004	1661006	1661008	1661010	1661012	1661016
			½"	¾"	1"	1¼"	1½"	2"
Balancing Valve		FNPT	1061004	1061006	1061008	1061010	1061012	1061016
		SWT	1060551	1060552	1060553	1060554	1060555	1060556
Y-strainer Ball valve		FNPT	1668151	1668201	1668251	1668321	1668401	1668501
		SWT	1668153	1668203	1668253	1668323	1668403	1668503
Union Fitting		FNPT	1667151	1667201	1667251	1667321	1667401	1667501
		SWT	1667153	1667203	1667253	1667323	1667403	1667503
T	½" tailpiece	FNPT	1669111	1669211	1669311	-	-	-
		MNPT	1669112	1669212	1669312	1669412	1669512	-
		SWT	1669113	1669213	1669313	-	-	-
	¾" tailpiece	FNPT	1669121	1669221	1669321	-	-	-
		MNPT	1669122	1669222	1669322	1669422	1669522	-
		SWT	1669123	1669223	1669323	-	-	-
	1" tailpiece	FNPT	-	1669231	1669331	1669431	1669531	-
		MNPT	-	1669232	1669332	1669432	1669532	1669632
		SWT	-	1669233	1669333	1669433	1669533	-
	1¼" tailpiece	FNPT	-	-	-	1669441	1669541	1669641
		MNPT	-	-	-	1669442	1669542	1669642
		SWT	-	-	-	1669443	1669543	1669643
	1½" tailpiece	FNPT	-	-	-	1669451	1669551	1669651
		MNPT	-	-	-	1669452	1669552	1669652
		SWT	-	-	-	1669453	1669553	1669653
	2" tailpiece	FNPT	-	-	-	-	-	1669661
		MNPT	-	-	-	-	-	1669662
		SWT	-	-	-	-	-	1669663

"Hydrocontrol" Coil Kit



Bag and tag instructions:

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Notes:

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Phone: (860) 413-9173
www.oventrop-us.com

3-OVBalanceControl-Book-121211