

## C299 - C300 - C301 - C302 BALANCING VALVES

TECHNICAL DATA SHEET 07/2017 - ENG

### FUNCTION

The balancing valve art. C299, C300, C301, C302 are used to adjust and balance the flow in heating and cooling systems. Examples of usage areas include mains, branch lines, shunt groups and cooling baffles.



Art. C299



Art. C300



Art. C301



Art. C302

### PRODUCTS

#### Articles

C299	Balancing valve with threaded connections
C300	Balancing valve with threaded connections
C301	Balancing valve with flanged connections
C302	Balancing valve with flanged connections

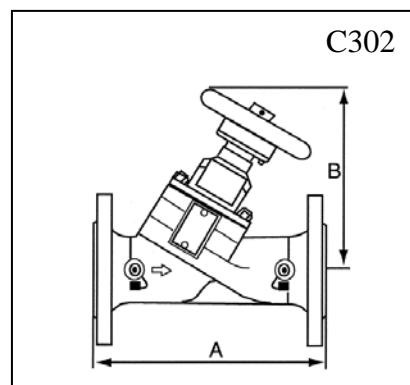
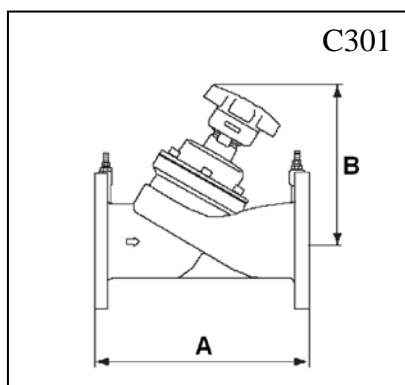
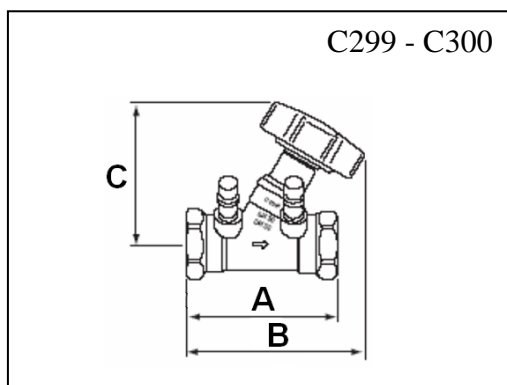
#### Sizes

G1/2", G3/4", G1", G1" 1/4, G1" 1/2, G2"
G1/2", G3/4", G1", G1" 1/4, G1" 1/2, G2"
DN 65, 80, 100, 125, 150
DN 200, 250, 300

### TECHNICAL FEATURES

	C299/C300	C301	C302
Body material	Brass	Cast iron	Cast iron
Gaskets	EPDM	EPDM/PTFE	EPDM/PTFE
Max. pressure	PN20	PN16	PN16
Max. working temperature	120°C	120°C	120°C
Min. working temperature	-----	-20°C	-20°C
Dimensions	15-50	65-150	200-300

### DIMENSIONS



CODE	CODE	A	B	C	Weight
C299 DN 15	C300 DN 15	86	111	95	0.53
C299 DN 20	C300 DN 20	90	126	96	0.58
C299 DN 25	C300 DN 25	102	133	97	0.77
C299 DN 32	C300 DN 32	120	139	97	1.20
C299 DN 40	C300 DN 40	132	146	108	1.50
C299 DN 50	C300 DN 50	154	158	111	2.30

CODE	A	B	Weight
C301 DN 65	290	225	14
C301 DN 80	310	240	20
C301 DN 100	350	260	26
C301 DN 125	400	290	40
C301 DN 150	480	300	50

CODE	A	B	Weight
C302 DN 200	600	525	124
C302 DN 250	730	575	181
C302 DN 300	850	645	260

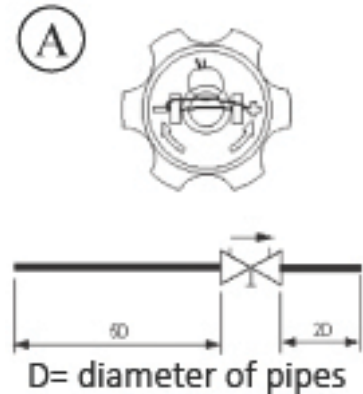
## INSTALLATION

To avoid turbulence which can affect the measuring accuracy the balancing valves should not be assembled close to branch lines and other regulating components or valves. It is recommended to respect the distances as shown in figure (A).

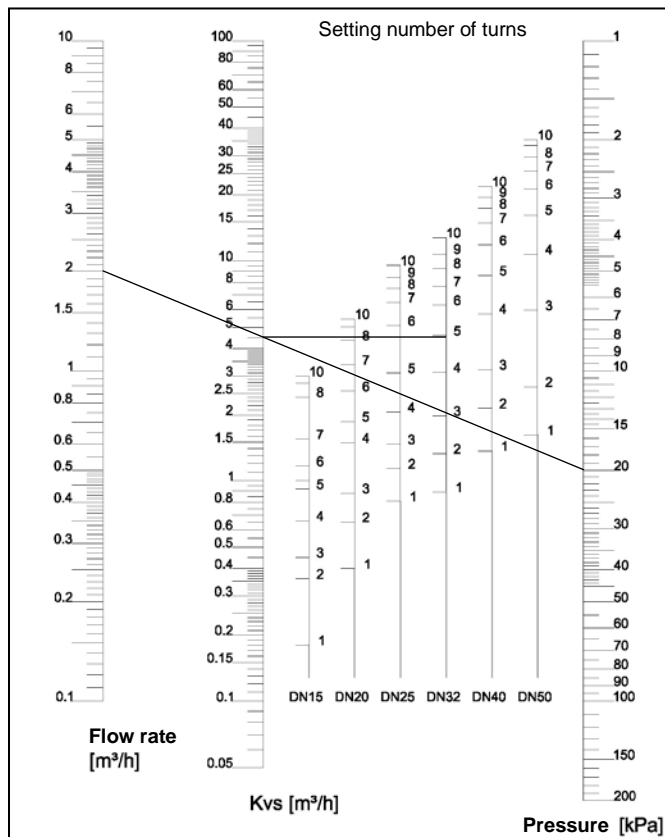
## PRE-SETTING

The valve is set at the desired flow or KV-value according to the diagram by means of the handwheel.

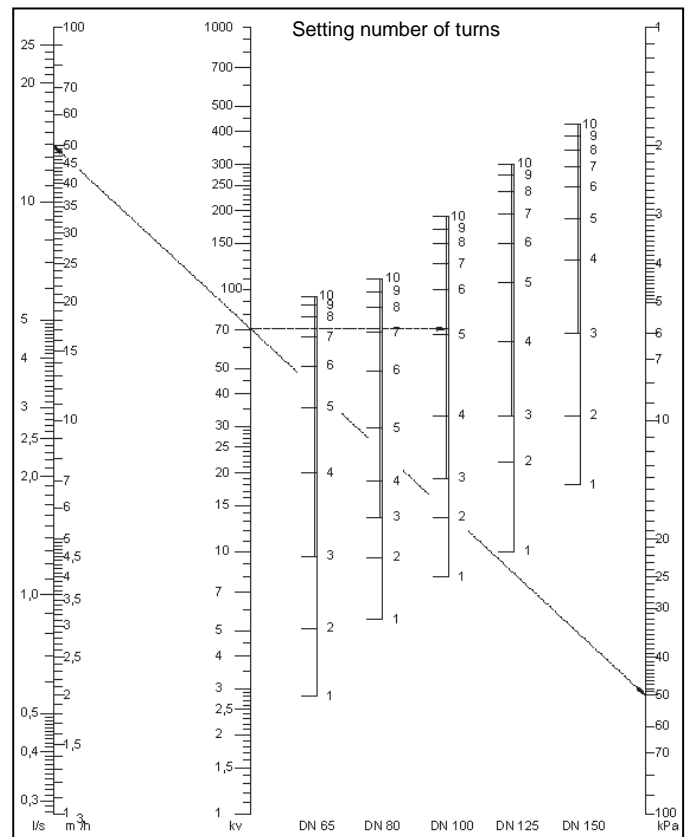
When the value of the valve is set, it can be locked by screwing down the inner spindle to its end position. After locking, the valve can be closed or re-opened maintaining the pre-set flow and KV-values.



### DN15-20-25-32-40-50



### DN65-80-100-125-150



## FLOW MEASUREMENT

The measuring instrument is connected to the valve measuring socket. This instrument is pre-programmed to integrate all hydraulic characteristics of our valves and set by means of testing rings to detect precisely the passage sections. The instrument also includes data from other valve manufacturers. All pressure drop and flow values can be read directly on the display.

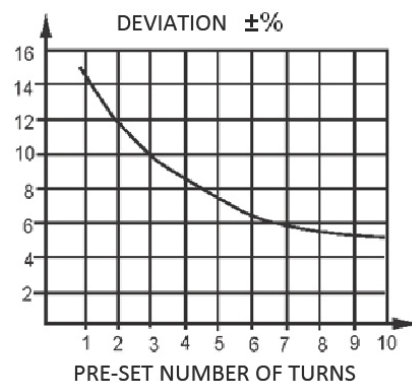
## PRE-SET VALUES

### C299 - C300 Kv VALUES

	DN15	DN20	DN25	DN32	DN40	DN50
1	0.22	0.40	0.81	0.78	1.37	1.62
2	0.36	0.65	1.14	1.33	2.14	2.68
3	0.45	0.88	1.47	1.98	3.21	5.97
4	0.66	1.49	2.06	3.11	5.76	10.70
5	0.92	1.87	3.10	4.58	8.59	16.16
6	1.19	2.56	5.09	6.29	11.80	21.23
7	1.55	3.38	6.48	7.66	14.90	25.60
8	2.41	4.36	7.48	9.27	17.30	29.50
9	2.79	5.02	8.45	10.74	19.50	33.50
10	2.99	5.45	9.56	12.77	21.80	35.50

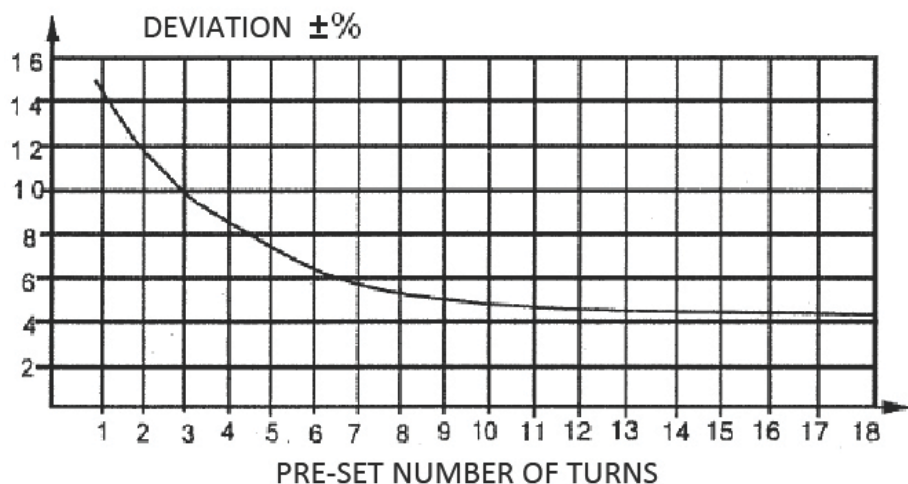
### C301 Kv VALUES

	DN65	DN80	DN100	DN125	DN150
1	2.8	5.5	8.0	10.0	18.0
2	5.1	9.5	13.5	22.0	33.0
3	9.6	13.5	19.0	33.0	68.0
4	20.0	18.5	33.0	63.0	130.0
5	35.5	29.5	67.0	106.0	186.0
6	51.0	49.0	99.5	150.0	246.0
7	66.0	68.5	125.0	194.0	294.0
8	78.5	85.0	150.0	236.0	340.0
9	87.0	98.0	170.0	273.0	385.0
10	93.5	110.0	190.0	301.0	425.0



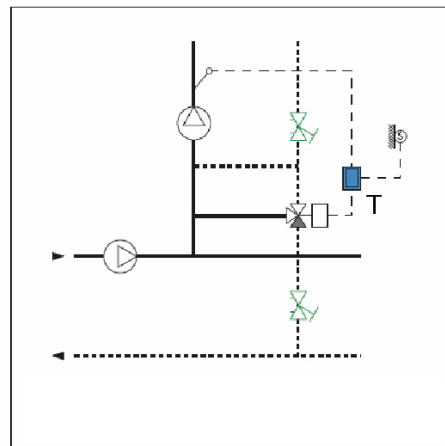
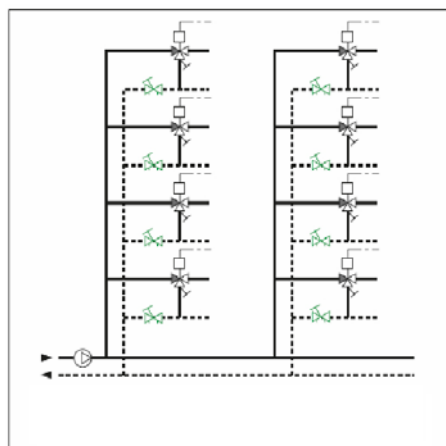
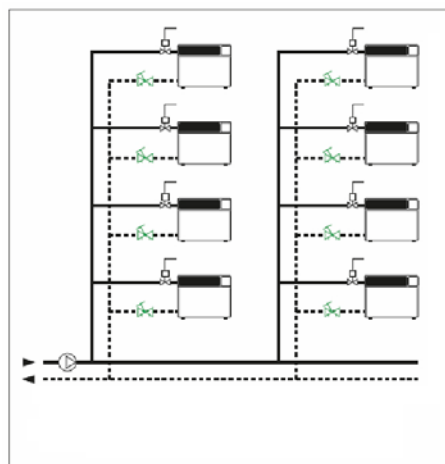
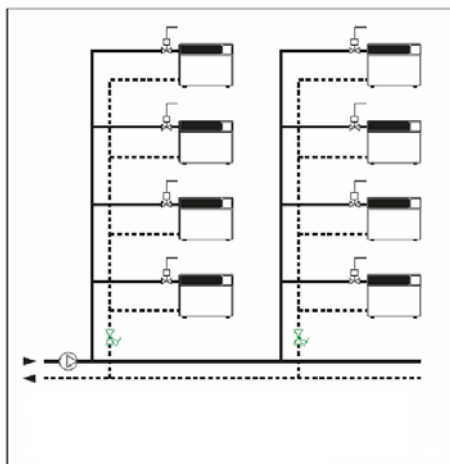
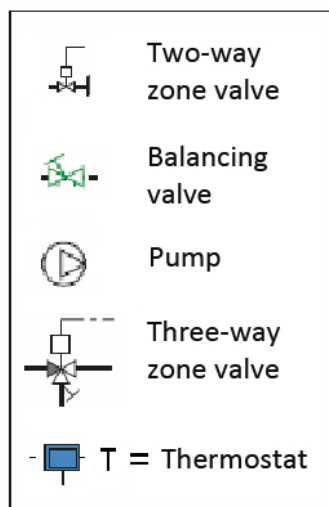
### C302 Kv VALUES

	DN200	DN250	DN300
2	40	100	100
3	57	138	155
4	72	176	210
5	120	301	341
6	185	426	471
7	250	594	610
8	315	762	749
9	390	889	872
10	470	1015	994
11	550	1113	1112
12	600	1211	1230
14			1369
16			1438
18			1521



The diagrams show the deviation percentage of the pre-set KV value. It is recommended to use a valve with a pre-set value above three turns.

## APPLICATION SCHEMES



## WORKING CONDITIONS

The limit values must not be exceeded in any way. Safe operation is therefore assured by respecting the general conditions and limits of operation described in this sheet.

## SAFETY



Please read the assembly and operating instructions carefully before starting the device to avoid accidents and system failures caused by improper use of the product. Please note that the warranty is void in the event of any unauthorised changes or tampering with the device during assembly and construction.

Assembly and inspection operations must be performed by qualified and authorized personnel, aware of the instructions here enclosed. Please make sure that the equipment is turned off before beginning any work on it.