

ALBION

# Hydronics

Issue 07



It's all at Albion

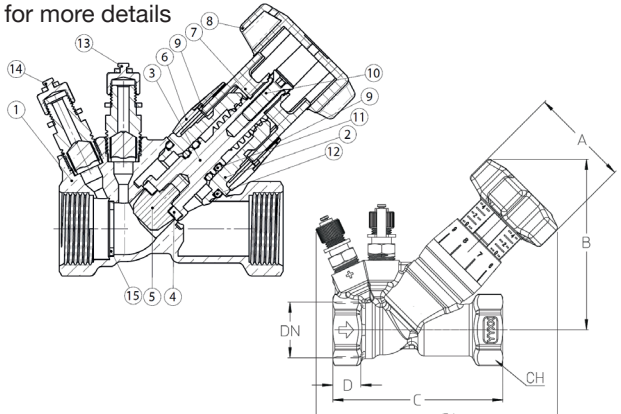
# ART 22

## DZR Fixed Orifice Double Regulating Valve (FODRV)



### Features

- BSP Parallel (ISO 228/1)
- Handwheel with shut off function and clear 360° reading
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Conforms to BS 5154
- Available with press ends - See ART 22 PRS datasheet for more details

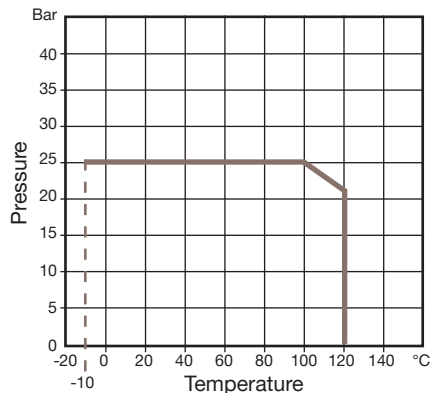


### Technical data

Max pressure: 25 Bar  
Working temp:  $-10^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$

DN	1/2" L	1/2" ML	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	50	50	50	50	50	50	50	50
B	83	83	83	82	84	87	107	103
C	72.5	72.5	72.5	82	95	122	138	161
C1	113	113	113	116.5	130	131	149	164
D	12.5	12.5	12.5	12.5	14.5	16	16	16
CH	25	25	25	31	38	47	55	66
KV	0.533	0.738	2.00	3.88	7.28	13.39	18.60	30.10
Kvs	0.6	1.1	2.3	5.3	9.2	19.0	22.1	42.3
Kgs	0.38	0.38	0.38	0.43	0.52	0.86	1.34	1.47

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem for shutter	DZR Brass CW602N-M
4	Shutter Gasket	EPDM
5	Disc	DZR Brass CW602N-M
6	Fixed Index	POM
7	Entrainer	Nylon 6
8	Knob	Nylon 6
9	Tenth Turn Index	POM
10	Memory Screw	Steel
11	Stem O-Ring	EPDM
12	Bonnet O-Ring	EPDM
13	Outlet Binder Point	Brass
14	Inlet Binder Point	Brass
15	Fixed Orifice	DZR Brass CW602N-M



V1. Dimensions in mm

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# ART 22 PRS

## DZR Fixed Orifice Double Regulating Valve (FODRV)



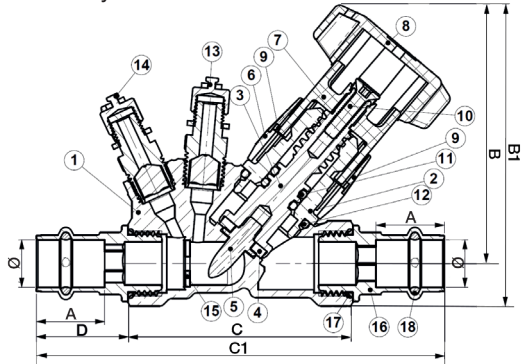
### Features

- Universal M & V Profile with 15mm to 35mm
- Dedicated M Profile 42mm & 54mm
- Handwheel with shut off function and clear 360° reading
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Conforms to BS 5154
- 5 year warranty

### Technical data

Max pressure: DN15 24 Bar  
 DN22 & DN28 20 Bar  
 DN35 to DN54 17 Bar

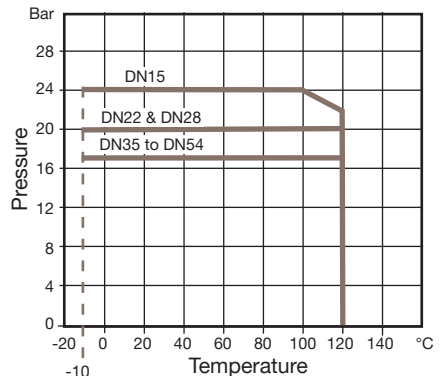
Working temp: -10°C to 120°C



DN	15L	15ML	15	22	28	35	42	54
Ø	15.3	15.3	15.3	22.4	28.3	35.3	42.4	55.6
A	22	22	22	25	27	27	32	33
B	83.4	83.4	83.4	82.2	84.2	86.9	106.7	103.6
B1	97.1	97.1	97.1	99.5	104.4	111.9	136.2	138.6
C	72.5	72.5	72.5	82	95	122	138	161
C1	131.5	131.5	131.5	150	167	194	223	255
D	29.5	29.5	29.5	34	36	36	42.5	47
Kv	0.533	0.738	2.00	3.88	7.28	13.39	18.60	30.10
Kvs	0.6	1.1	2.3	5.3	9.2	19.0	22.1	42.3
Kgs	0.48	0.48	0.46	0.56	0.73	1.16	1.73	2.05

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem for Shutter	DZR Brass CW602N-M
4	Shutter Gasket	EPDM
5	Disc	DZR Brass CW602N-M
6	Fixed Index	POM
7	Entrainer	Nylon 6
8	Knob	Nylon 6
9	1/10 Turn Index	POM
10	Memory Screw	Steel
11	Stem O-Ring	EPDM
12	Bonnet O-Ring	EPDM
13	Outlet Binder Point	Brass
14	Inlet Binder Point	Brass
15	Fixed Orifice	DZR Brass CW602N-M
16	Joint	DZR Brass CW511L-DW

N.	Part Name	Materials
17	O-Ring	EPDM
18	O-Ring	EPDM



V1. Dimensions in mm

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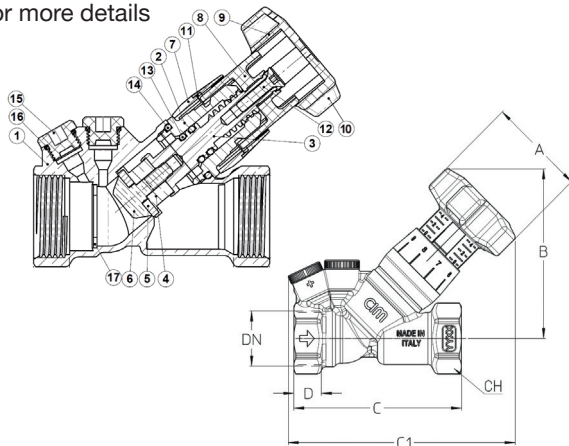
# ART 23

## DZR Double Regulating Valve (DRV)



### Features

- BSP Parallel (ISO 228/1)
- Handwheel with shut off function and clear 360° reading
- Available with press ends - See ART 23 PRS datasheet for more details

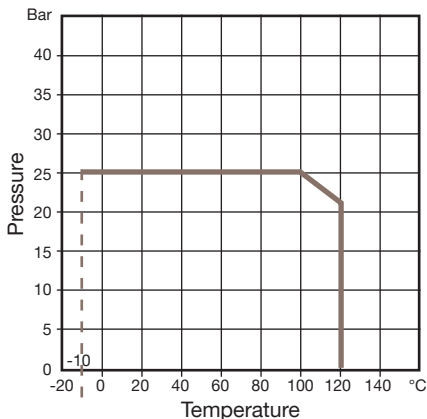


### Technical data

Max pressure: 25 Bar  
Working temp: -10°C to +120°C

DN	1/2" L	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	50	50	50	50	50	50	50
B	83	83	82	84	87	107	103
C	72.5	72.5	82	95	122	138	161
C1	107	107	110.5	124	131	149	164
D	12.5	12.5	12.5	14.5	16	16	16
CH	25	25	31	38	47	55	66
KV	0.533	2.00	3.88	7.28	13.39	18.60	30.10
Kgs	0.36	0.36	0.42	0.50	0.85	1.33	1.46

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem for shutter	DZR Brass CW602N-M
4	Adaptor for shutter	Brass
5	Shutter Gasket	EPDM
6	Disc	DZR Brass CW602N-M
7	Fixed Index	POM
8	Entrainer	Nylon 6
9	Knob	Nylon 6
10	Handwheel	Plastic
11	Tenth Turn Index	POM
12	Memory Screw	Steel
13	Stem O-Ring	EPDM
14	Bonnet O-Ring	EPDM
15	Cap	Nylon
16	O-Ring	EPDM
17	Fixed Orifice	DZR Brass CW602N-M



V1. Dimensions in mm

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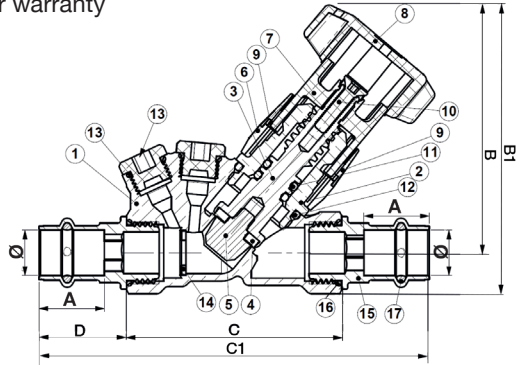
# ART 23 PRS

## DZR Double Regulating Valve (DRV)



### Features

- Universal M & V Profile with 15mm to 35mm
- Dedicated M Profile 42mm & 54mm
- Handwheel with shut off function and clear 360° reading
- Conforms to BS 5154
- 5 year warranty



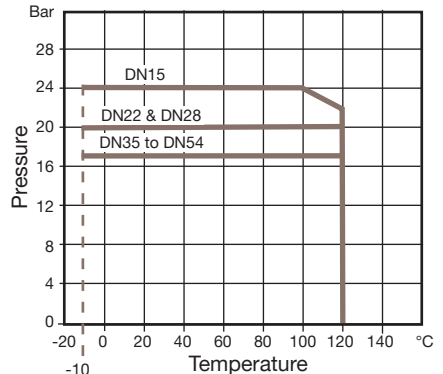
### Technical data

Max pressure: DN15 24 Bar  
 DN22 & DN28 20 Bar  
 DN35 to DN54 17 Bar

Working temp: -10°C to 120°C

DN	15L	15	22	28	35	42	54
Ø	15.3	15.3	22.4	28.3	35.3	42.4	55.6
A	22	22	25	27	27	32	33
B	83.4	83.4	82.2	84.2	86.9	106.7	103.6
B1	97.1	97.1	99.5	104.4	111.9	136.2	138.6
C	72.5	72.5	82	95	122	138	161
C1	131.5	131.5	150	167	194	223	255
D	29.5	29.5	34	36	36	42.5	47
Kv	0.533	2.00	3.88	7.28	13.39	18.60	30.10
Kgs	0.45	0.46	0.55	0.72	1.15	1.71	2.03

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem for Shutter	DZR Brass CW602N-M
4	Shutter Gasket	EPDM
5	Disc	DZR Brass CW602N-M
6	Fixed Index	POM
7	Entrainer	Nylon 6
8	Knob	Nylon 6
9	1/10 Turn Index	POM
10	Memory Screw	Steel
11	Stem O-Ring	EPDM
12	Bonnet O-Ring	EPDM
13	Plug with O-Ring NBR	Nylon 6.6 / NBR 70SH
14	Fixed Orifice	DZR Brass CW602N-M
15	Joint	DZR Brass CW511L-DW
16	O-Ring	EPDM
17	O-Ring	EPDM



V1. Dimensions in mm

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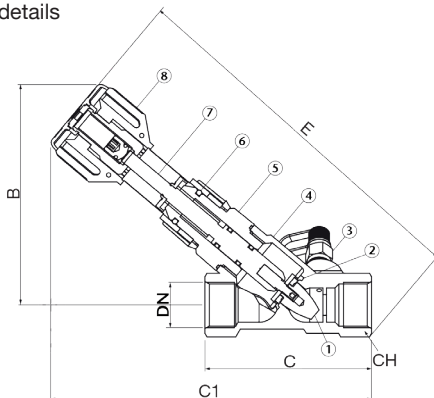
# ART 25

## DZR Fixed Orifice Double Regulating Valve (FODRV)



### Features

- BSP Parallel (ISO 7/1)
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Position indicator
- Supplied with 2 fitted test points
- EPDM cone seating gives tight shut off
- Available with press ends - See ART 25 PRS datasheet for more details



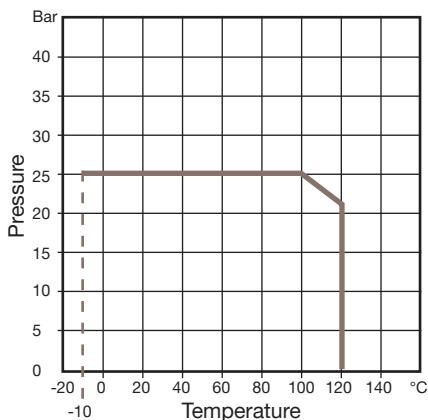
### Technical data

Max pressure: 25 Bar

Working temp:  $-10^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	51	51	51	51	57	57
B	111	128	138	141.5	181	190.5
C	85	97	113	144	163	193
C1	163	187	188	208.5	260	281.5
E	184	215	223	244	308	337
CH	28	33	40	51	56	71
Kv	1.75	3.77	6.96	15.83	21.05	43.90
Kvs	1.80	4.10	7.50	16.60	23.00	47.40
Kgs	0.70	0.98	1.14	1.66	2.50	3.74

N.	Part Name	Materials
1	Cone	DZR Brass
2	Cone Seat	EPDM Rubber
3	Pressure Test Point	DZR Brass
4	Body	DZR Brass
5	Bonnet	DZR Brass
6	O-Ring	Nitrile Rubber
7	Stem	DZR Brass
8	Handwheel	Nylon 6



V1. Dimensions in mm

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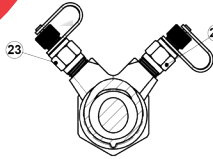
# ART 25 PRS

## DZR Fixed Orifice Double Regulating Valve (FODRV)



### Features

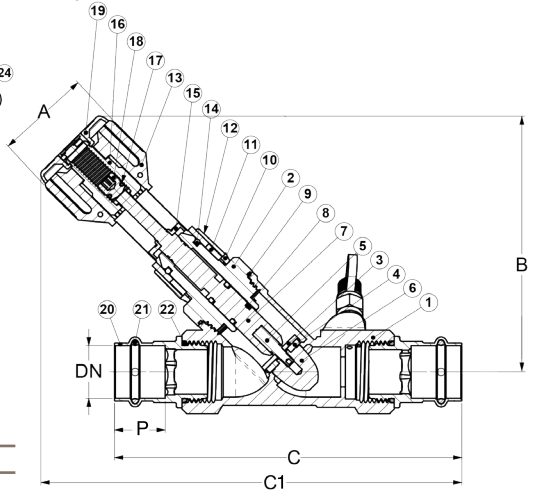
- Universal M & V Profile 15mm to 35mm
- Dedicated M Profile 42mm & 54mm
- Conforms to BS 5154
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- 5 year warranty



### Technical data

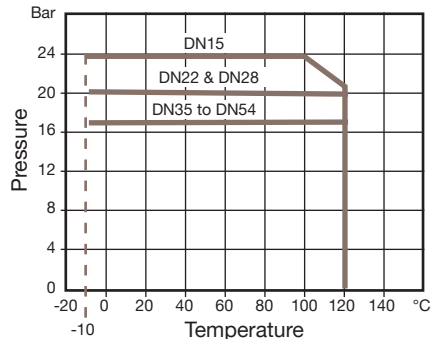
Max pressure: DN15 24 Bar  
 DN22 & DN28 20 Bar  
 DN 35 to DN54 17 Bar

Working temp:  $-10^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$



N.	Part Name	Materials
1	Body	DZR Brass
2	Bonnet	DZR Brass
3	Gasket Support	DZR Brass
4	Gasket	EPDM
5	Stem for Shutter	DZR Brass
6	Shutter	DZR Brass
7	Stem	DZR Brass
8	O-Ring	EPDM PEROX
9	O-Ring	EPDM PEROX
10	Turn Index	Hostaform
11	Outdistance	Nylon
12	1/10 Turn Index	Hostaform
13	Knob	Hostaform
14	Pin	Steel
15	Index	Hostaform
16	Entrainer	Brass
17	Stem Gaskets O-Ring	NBR 70SH
18	Memory	Brass
19	Cup	Hostaform
20	Adaptor	DZR Brass
21	O-Ring (Delta)	EPDM 70 PEROX
22	O-Ring	EPDM 70 PEROX
23	Binder Point Blue	
24	Binder Point Red	

DN	15	22	28	35	42	54
A	51	51	51	51	57	57
B	111	129	138	142	181	190
C	144	165	185	216	248	295
C1	192	217	224	245	302	326
P	22	25	27	27	32	37
CH	28	33	40	43	56	71
Kv	1.75	3.77	6.96	15.83	21.05	43.90
Kvs	1.80	4.10	7.50	16.60	23.00	47.40
Kgs	0.87	1.20	1.48	2.15	3.09	4.76



V1. Dimensions in mm

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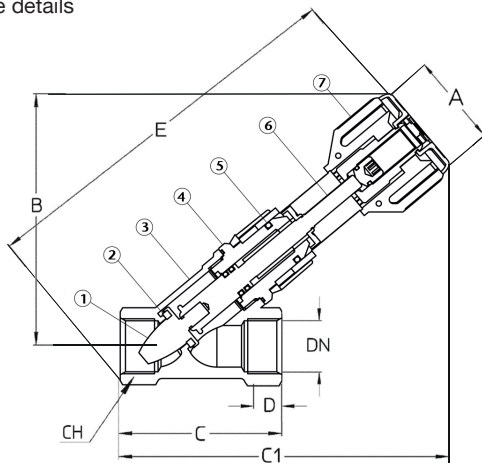
# ART 26

## DZR Double Regulating Valve (DRV)



### Features

- BSP Parallel (ISO 7/1)
- Position indicator
- Non rising stem
- EPDM cone seating gives tight shut off
- 1/2" available in standard and low flow versions
- Available with press ends - See ART 26 PRS datasheet for more details



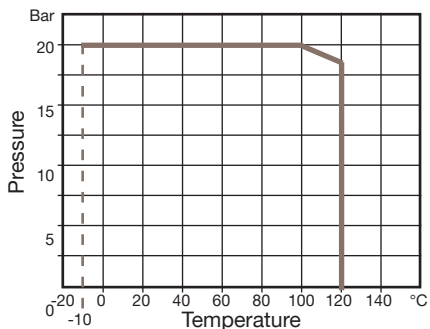
### Technical data

Max pressure: 20 Bar

Working temp: -10°C to +120°C

DN	1/2"L	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	51	51	51	51	51	57	57
B	104	104	121	133	141	181	190
C	68	68	77	91	108	116	143
C1	138	138	156.5	161	172	213	231.5
D	16.5	16.5	18	21	23	23	26
E	161	161	187	200	219	275	300
CH	28	28	33	40	51	56	71
Kv	1.28	3.91	7.28	11.76	21.60	28.46	50.52
Kgs	0.48	0.48	0.65	0.85	1.28	1.84	2.86

N.	Part Name	Materials
1	Cone	DZR Brass
2	Cone Seat	EPDM Rubber
3	Body	DZR Brass
4	Bonnet	DZR Brass
5	O-Ring	Nitrile Rubber
6	Stem	DZR Brass
7	Handwheel	Nylon 6



V1. Dimensions in mm

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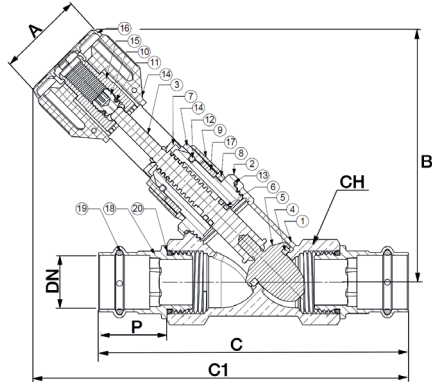
# ART 26 PRS

## DZR Brass Double Regulating Valve (DRV)



### Features

- Universal M & V Profile with 15mm to 35mm
- Dedicated M Profile 42mm & 54mm
- Handwheel with shut off function and clear 360° reading
- Conforms to BS 5154
- 5 year warranty



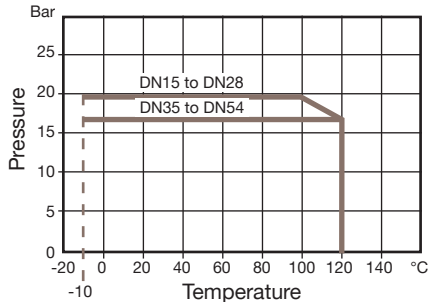
### Technical data

Max pressure: DN15 to DN28 20 Bar  
 DN35 to DN54 17 Bar  
 Working temp: -10°C to 120°C

DN	15	22	28	35	42	54
A	51	51	51	51	57	57
B	104.5	121	133	141	181	190
C	118	136	148	164	184.5	227
C1	163	182.5	190	199.5	251	278.5
P	22	25	27	27	32	37
CH	28	33	40	51	56	71
Kv	3.9	7.3	11.8	21.6	28.5	50.5
Kgs	0.54	0.76	1.02	1.45	2.14	3.22

N.	Part Name	Materials
1	Body	DZR Brass
2	Bonnet	DZR Brass CW602N
3	Stem	DZR Brass CW602N
4	Gasket	EPDM
5	Shutter	DZR Brass CW602N
6	O-Ring	EPDM PEROX
7	Blue Index	POM
8	Blue Turn Index	POM
9	1/10 Turn Index	POM
10	Memory	Brass CW617N
11	Stem Gasket O-Ring	NBR 70Sh
12	Pin	Steel
13	O-Ring	EPDM PEROX
14	Knob	PA6 Fiberglass (15%)
15	Entrainer	Brass CW617N
16	Cap Blue	POM
17	Thickness	Nylon

N.	Part Name	Materials
18	Joint	DZR Brass CW511L
19	O-Ring	EPDM PEROX
20	O-Ring	EPDM PEROX



V1. Dimensions in mm

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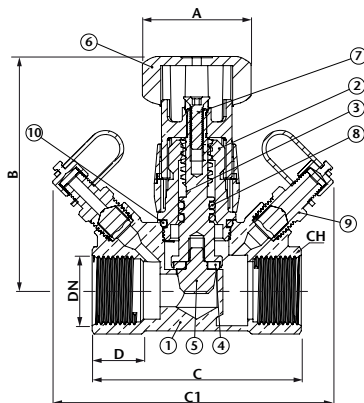
# ART 28

## DZR Variable Orifice Double Regulating Valve (VODRV)



### Features

- BSP Parallel (ISO 7/1) or NPT (ANSI B1.20.1)
- Position indicator
- Supplied with 2 fitted test points
- EPDM cone seating gives tight shut off
- Conforms to BS 7350 / BS 5154



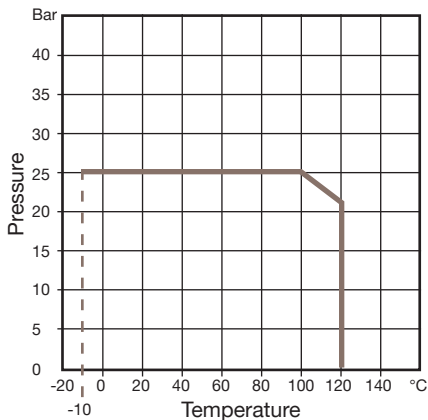
### Technical data

Max pressure: 25 Bar

Working temp: -10°C to +120°C

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	50	50	50	50	50	50
B	87.5	89.5	91.5	99	99	100
C	77	80	87	108	115	124
C1	106	107	107	123	129	132
D	17	18.5	21	22.5	23	26.5
CH	25	31	38	48	55	66
Kv	1.75	2.87	4.08	6.71	10.40	15.06
Kgs	0.38	0.44	0.54	0.96	1.12	1.35

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem	DZR Brass CW602N-M
4	Gasket	EPDM
5	Cone	DZR Brass CW602N-M
6	Handwheel	Nylon 6
7	Screw	DZR Brass CW602N-M
8	O-Ring	EPDM
9	Binder Point	DZR Brass CW602N-M
10	O-Ring	EPDM



V1. Dimensions in mm

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# ART 250 PN16

## PN16 Ductile Iron Double Regulating Valve (DRV)



### Features

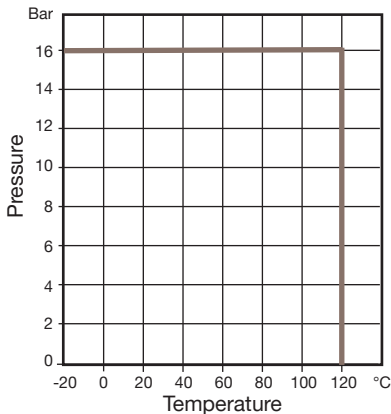
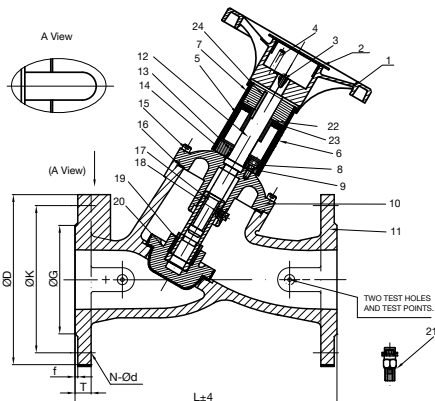
- Flange mounting PN16 only
- Flange conforms to BS EN1092 PN16
- Position indicator
- Supplied with 2 test points and extensions
- EPDM cone seating gives tight shut off
- Conforms to BS 7350 / BS 5152



### Technical data

Max pressure: 16 Bar

Working temp: -20°C to +120°C



DN	50	65	80	100	125	150	200	250	300
D	165	185	200	220	250	285	340	405	460
K	125	145	160	180	210	240	295	355	410
n-Ød	4-19	4-19	8-19	8-19	8-19	8-23	12-23	12-28	12-28
T	19	19	19	19	19	19	20	22	24.5
G	99	118	132	156	184	211	266	319	370
f	3	3	3	3	3	3	3	3	4
L	230	290	310	350	400	480	600	730	850
A	370	430	440	470	520	570	730	830	950
Kv	48.2	82.6	117.4	211.4	381.5	462.4	790.0	1135	2022
Kgs	12.4	15.8	20.8	29.8	41.7	55.6	125.5	194	288

N.	Part Name	Materials
1	Handwheel	Aluminium Alloy / Steel
2	Handwheel Cover	Plastic
3	Handwheel Lock Screw	Stainless Steel 304
4	Adjusting Screw	Stainless Steel 304
5	Indication Tube	Plastic
6	Transparent Scale	Plastic
7	Connection Tube	ABS Plastic
8, 15	Hexagon Socket Screw	Carbon Steel
9, 13	O-Ring	EPDM
10	Cover	Cast Iron
11	Body	Ductile Iron

N.	Part Name	Materials
12	Stem	Stainless Steel 410
14	Packing Gland	Stainless Steel 410
16	Graphite Gland	Graphite
17	Stem Nut	HPb59-1
18	Positional Screw	Stainless Steel 304
19	Nut Cover	HPb59-1
20	Disc wrapped in rubber	Cast Iron + EPDM
21	Test Points	
22	Drive Plate	Stainless Steel 410
23	Screw	Carbon Steel
24	Flat Key	Stainless Steel 410

V1. Dimensions in mm

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# ART 250 PN16

## DN350-450 PN16 Ductile Iron Double Regulating Valve (DRV)



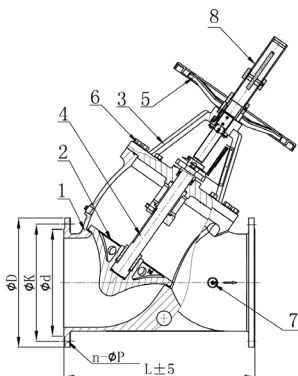
### Features

- Flange mounting PN16 only
- Flange conforms to BS EN1092 PN16
- Position indicator
- Supplied with 2 test points and extensions
- EPDM cone seating gives tight shut off
- Maximum differential pressure 500kPa

### Technical data

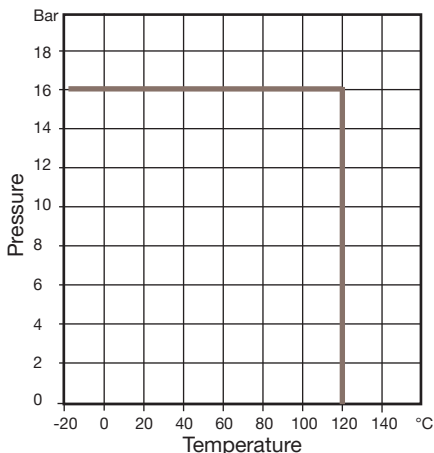
Max pressure: 16 Bar

Working temp: -20°C to +120°C



DN	350	400	450
D	520	580	640
K	470	525	585
n-ØP	16-Ø28	16-Ø31	20-Ø31
d	429	480	548
L	772	858	938
Kgs	350	475	810

N.	Part Name	Materials
1	Body	Ductile Iron
2	Disc	Ductile Iron + EPDM
3	Cover	Cast Iron
4	Shaft	Stainless Steel 410
5	Handwheel	Cast Iron
6	Bolt	Carbon Steel
7	Plug	Carbon Steel
8	Locking Devices	Carbon Steel



V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.



# ART 250 HP PN25

## PN25 Ductile Iron Double Regulating Valve (DRV)



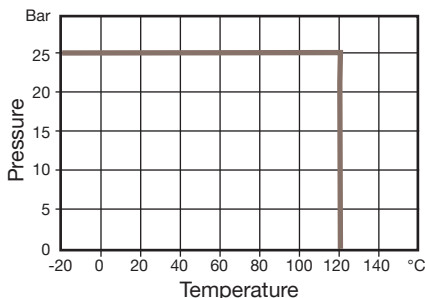
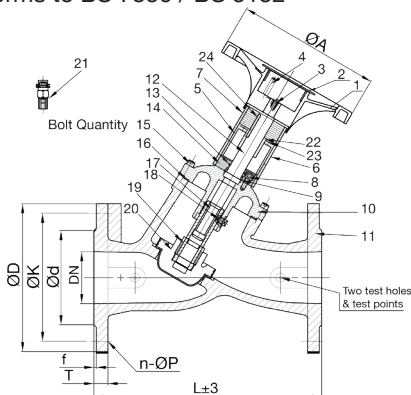
### Features

- Flange mounting PN25 only
- Flange conforms to BS EN1092 PN25
- Position indicator
- Supplied with 2 test points and extensions
- EPDM cone seating gives tight shut off
- Conforms to BS 7350 / BS 5152

### Technical data

Max pressure: 25 Bar

Working temp: -20°C to +120°C



DN	50	65	80	100	125	150	200
L	230	290	310	350	400	480	600
D	165	185	200	235	270	300	360
K	125	145	160	190	220	250	310
d	99	118	132	156	184	211	274
n-ØP	4-Ø19	8-Ø19	8-Ø19	8-Ø23	8-Ø28	8-Ø28	12-Ø28
T	19	19	19	19	19	20	22
f	3	3	3	3	3	3	3
A	180	180	180	250	250	250	350
Bolt Qty	6	6	6	6	8	8	12
Kvs	48.2	82.6	117.4	211.4	381.5	462.4	790.0
Kgs	14.4	18.4	24.2	34.5	48.3	64.4	123

N.	Part Name	Materials
1	Handwheel	Aluminium Alloy / Steel
2	Handwheel Cover	Plastic
3	Handwheel Lock Screw	Stainless Steel 304
4	Adjusting Screw	Stainless Steel 304
5	Indication Tube	Plastic
6	Indicator Mask	Plastic
7	Connect Bushing	Plastic
8, 15	Screw	Steel
9, 13	O-Ring	EPDM
10	Cover	Cast Iron
11	Body	Ductile Iron
12	Stem	Stainless Steel 410

N.	Part Name	Materials
14	Packing Gland	Stainless Steel 410
16	Gasket	Graphite
17	Stem Nut	HPb59-1
18	Positional Screw	Stainless Steel 304
19	Nut Cover	HPb59-1
20	Disc	Cast Iron + EPDM
21	Test Points	
22	Drive Plate	Stainless Steel 410
23	Screw	Carbon Steel
24	Flat Key	Stainless Steel 410

V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

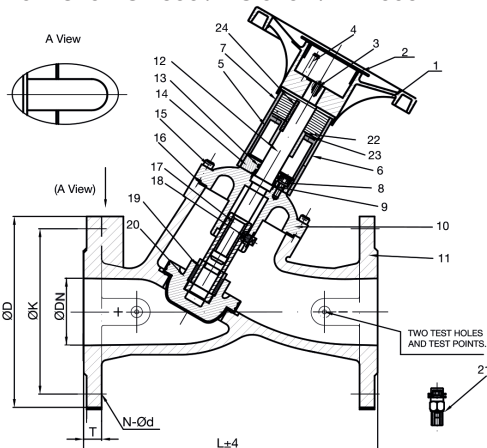
# ART 250 ANSI

## ANSI Ductile Iron Double Regulating Valve (DRV)



### Features

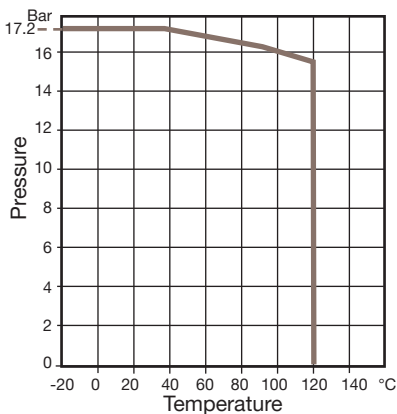
- Flange ANSI 150 (B16.42)
- Position indicator
- Supplied with 2 test points and extensions
- EPDM cone seating gives tight shut off
- Conforms to BS 7350 / BS 5152 / API 598



### Technical data

Max pressure: 17.2 Bar

Working temp: -20°C to +120°C



DN	50	65	80	100	125	150	200	250	300
D	152	178	191	229	254	279	343	406	483
K	121	140	152	191	216	241	299	362	432
n-Ød	4-	4-	4-	8-	8-	8-	8-	12-	12-
Ø19	Ø19	Ø19	Ø19	Ø22.4	Ø22.4	Ø22.4	Ø25.4	Ø25.4	
T	16	18	19	24	24	25	29	30	32
L	230	290	310	350	400	480	600	730	850
Kvs	48.2	82.6	117.4	211.4	381.5	462.4	790.0	1135	2022
Kgs	12.5	16.0	21.0	30.0	42.0	56.0	126.0	195.0	289.0

N.	Part Name	Materials
1	Handwheel	Aluminium Alloy / Steel
2	Handwheel Cover	Plastic
3	Handwheel Lock Screw	Stainless Steel 304
4	Adjusting Screw	Stainless Steel 304
5	Indication Tube	Plastic
6	Transparent Scale	Plastic
7	Connection Tube	ABS Plastic
8, 15	Hexagon Socket Screw	Carbon Steel
9, 13	O-Ring	EPDM
10	Cover	Cast Iron
11	Body	Ductile Iron
12	Stem	Stainless Steel 410

N.	Part Name	Materials
14	Packing Gland	Stainless Steel 410
16	Graphite Gland	Graphite
17	Stem Nut	HPb59-1
18	Positional Screw	Stainless Steel 304
19	Nut Cover	HPb59-1
20	Disc - rubber wrapped	Cast Iron + EPDM
21	Test Points	
22	Drive Plate	Stainless Steel 410
23	Screw	Carbon Steel
24	Flat Key	Stainless Steel 410

V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 255

## PN16 Ductile Iron Fixed Orifice Double Regulating Valve (FODRV)



### Features

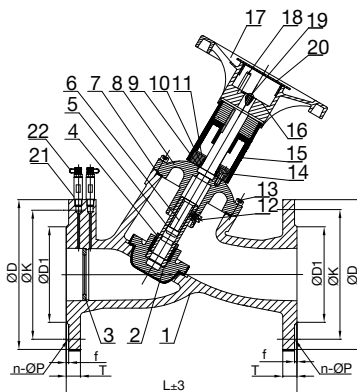
- Flanged PN16
- Position indicator
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Supplied with 2 fitted test points
- Extensions are included but not fitted
- EPDM cone seating gives tight shut off
- Conforms to BS 7350 / BS 5152



### Technical data

Max pressure: 16 Bar

Working temp:  $-20^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$



DN	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
DN	50	65	80	100	125	150	200	250	300
D	165	185	200	220	250	285	340	405	460
K	125	145	160	180	210	240	295	355	410
n-Ød	4-Ø19	4-Ø19	8-Ø19	8-Ø19	8-Ø19	8-Ø23	12-Ø23	12-Ø28	12-Ø28
C	19	19	19	19	19	19	20	22	24.5
G	99	118	132	156	184	211	266	319	370
f	3	3	3	3	3	3	3	3	4
L	230	290	310	350	400	480	600	730	850
Kv	38	57	79	137	260	415	612	971	1412
Kvs	47.5	88.6	125	228	341	487	826	1218	1794
Kgs	12.5	16.0	21.0	30.1	42.0	56.0	126.0	195.0	289.0

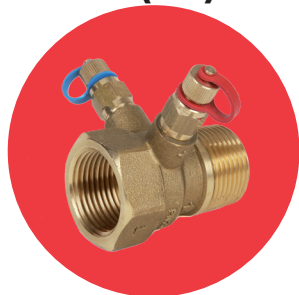
N.	Part Name	Materials	N.	Part Name	Materials
1	Body	Ductile Iron	13	Screw	Steel
2	Disc	Cast Iron + EPDM	14	Screw	Steel
3	Orifice Plate	Brass	15	Indicator Kit	ABS
4	Stem Nut Cover	Brass	16	Handwheel Sticker	
5	Stem Nut	Brass	17	Handwheel	Aluminium Alloy / Steel
6	Stem	Stainless Steel 410	18	Screw	Stainless Steel 304
7	Graphite Gasket	Graphite	19	Handwheel Lock Screw	Stainless Steel 304
8	Cover	Cast Iron	20	Handwheel Cover	Plastic
9	O-Ring	EPDM	21	Extension Tube	Stainless Steel 304
10	O-Ring	EPDM	22	Test Points	Brass
11	Gland Cover	Stainless Steel 410			
12	Positioning Screw	Stainless Steel 304			

V1. Dimensions in mm

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# ART 27

## PN20 DZR Brass Orifice Plate (OP)



### Features

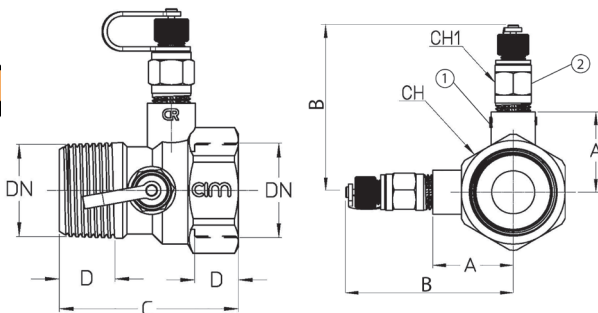
- BSP Parallel (1/2") Taper (3/4" - 2") (ISO 7/1)
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Can be close coupled to a double regulating valve
- Supplied with 2 fitted test points
- 1/2" available in Std, Med, Low, Ultra Low and Ultra Ultra Low flow versions



### Technical data

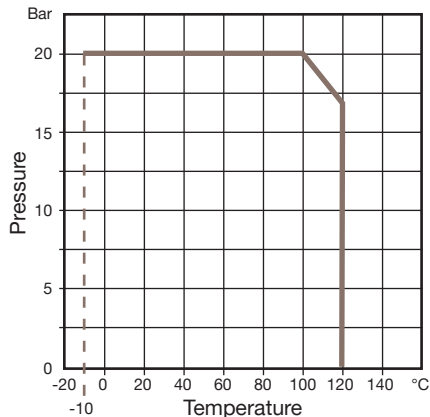
Max pressure: 20 Bar

Working temp:  $-10^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$



DN	1/2"UUL	1/2"UL	1/2"L	1/2"M	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	25	25	25	25	25	28	31	36	39	45
B	59	59	59	59	59	62	65	70	73	79
C	66.5	66.5	66.5	66.5	66.5	66.5	63.5	71	71	79.5
D	17	17	17	17	17	17	19	22	21	26
CH	28	28	28	28	28	34	40	51	56	71
CH1	14	14	14	14	14	14	14	14	14	14
Kvs	0.10	0.23	0.47	0.98	1.80	4.06	7.45	16.63	23.00	47.35
kgs	0.23	0.23	0.23	0.23	0.23	0.27	0.32	0.47	0.53	0.81

N.	Part Name	Materials
1	Body	DZR Brass
2	Binder Test Point	DZR Brass

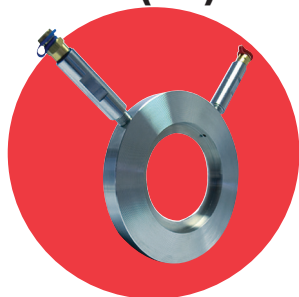


V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 270 PN16

## PN16 Stainless Steel Orifice Plate (OP)



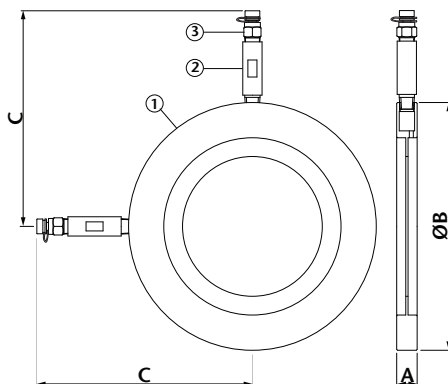
### Technical data

Max pressure: 16 Bar

Working temp: -10°C to +120°C

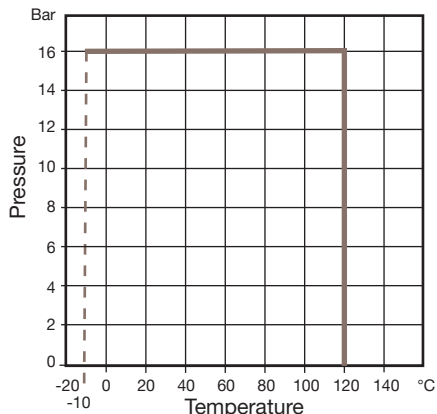
### Features

- Wafer pattern
- Fits between BS EN1092 flanges PN16
- Flow characteristics confirmed to BS 7350
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Can be close coupled to a double regulating valve
- Supplied with 2 extensions and test points



DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A	20	20	20	20	20	20	20	20	20	20	20	30	30	30
B	108	127	144	164	194	220	275	333	385	445	495	555	617	734
C	136	145	153	164	178	192	219	248	274	304	329	359	390	449
Kv	71.6	145.5	219.0	386.0	572.0	807.0	1416	1975	2990	3598	4675	5706	7449	11597
Kvs	57	104	137	241	345	516	863	1218	1794	2128	2766	3375	4407	6861
kgs	1.3	1.8	2.1	2.5	3.0	3.4	4.5	6.0	8.0	12.0	15.3	28.0	30.0	39.5

N.	Part Name	Materials
1	Body	Stainless Steel 304
2	Extension	Stainless Steel 304
3	Pressure Test Point	Brass Hpb59-1

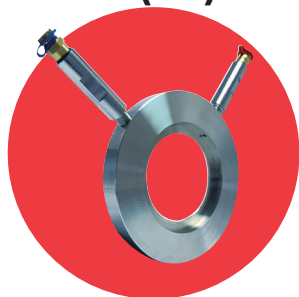


V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 270 HP PN25

## PN25 Stainless Steel Orifice Plate (OP)



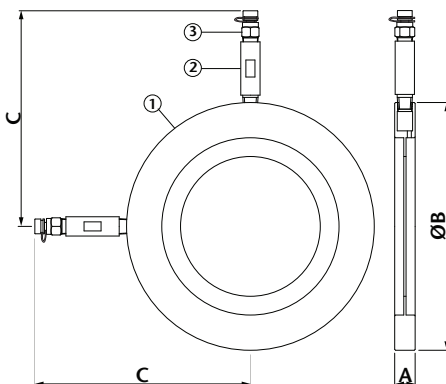
### Technical data

Max pressure: 25 Bar

Working temp: -10°C to +120°C

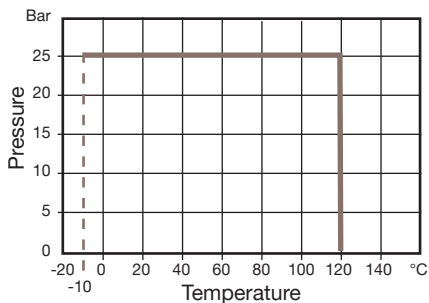
### Features

- Wafer pattern
- Fits between BS EN1092 flanges PN25
- Flow characteristics confirmed to BS 7350
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Can be close coupled to a double regulating valve
- Supplied with 2 extensions and test points



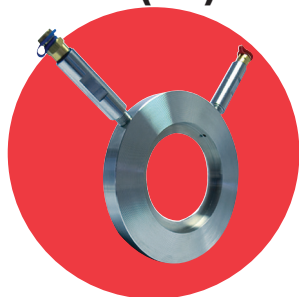
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A	22	22	22	22	22	22	22	22	22	22	22	32	32	32
B	108	127	142	168	194	224	284	340	400	457	514	564	624	730
C	136	145	153	166	179	194	224	252	282	310	339	364	394	447
Kv	71.6	145.5	219.0	386.0	572.0	807.0	1416	1975	2990	3598	4675	5706	7449	11597
Kvs	57	104	137	241	345	516	863	1218	1794	2128	2766	3375	4407	6861
kgs	1.1	1.3	1.7	2.2	3.3	3.6	5.5	6.1	11.0	13.8	16.8	30.8	33.0	43.5

N.	Part Name	Materials
1	Body	Stainless Steel 304
2	Extension	Stainless Steel 304
3	Pressure Test Point	Brass Hpb59-1



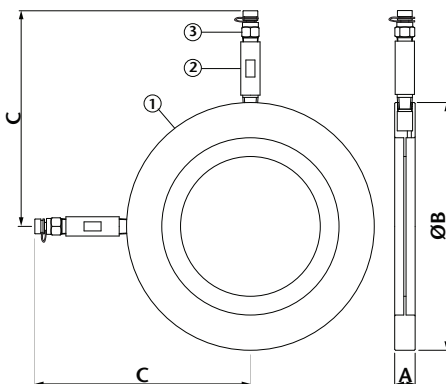
# ART 270 ANSI

## ANSI Stainless Steel Orifice Plate (OP)



### Features

- Wafer pattern
- Fits between ANSI 150 flanges
- Flow characteristics confirmed to BS 7350
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Can be close coupled to a double regulating valve
- Supplied with 2 extensions and test points



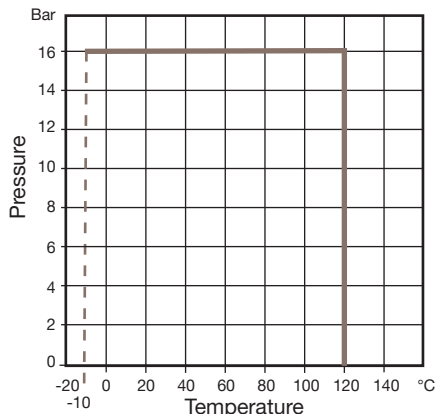
### Technical data

Max pressure: 16 Bar

Working temp:  $-10^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A	20	20	20	20	20	20	20	20	20	20	20	30	30	30
B	104	123	136	174	195	221	278	337	407	449	512	547	604	716
C	136	145	153	164	178	192	219	248	274	304	329	359	390	449
Kv	71.6	145.5	219.0	386.0	572.0	807.0	1416	1975	2990	3598	4675	5706	7449	11597
Kvs	57	104	137	241	345	516	863	1218	1794	2128	2766	3375	4407	6861
kgs	1.1	1.3	1.7	2.5	3.5	4.0	5.8	6.5	11.4	14.2	17.0	30.8	33.0	43.5

N.	Part Name	Materials
1	Body	Stainless Steel 304
2	Extension	Stainless Steel 304
3	Pressure Test Point	Brass Hpb59-1



V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 299

## Brass Test Points / Binder Points Pair - Red & Blue



### Features

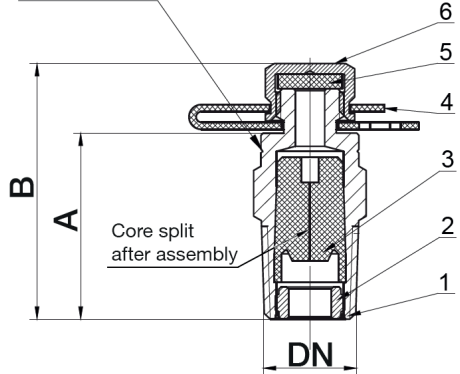
- Male BSP Taper
- Self Sealing pressure / temperature binder test point

### Technical data

Max pressure: 35 Bar

Working temp: -10°C to +135°C

R1/4 thread identification line



DN	1/4"	1/2"
A	32.27	36.14
B	35.77	39.64

N.	Part Name	Materials
1	Body	1/4" DZR Brass CW602N 1/2" Brass CW617N
2	Retaining Ring	DZR Brass CW602N
3	Rubber Plug	EPDM
4	Strap	PU
5	Rubber Ring	EPDM
6	Cap	DZR Brass CW602N

The test point is designed for use with 'needle' type push-in probes.

The body of the test point houses a self-sealing elastomeric core which minimises leakage when the test probe is withdrawn.

The cap contains a sealing washer to prevent the ingress of debris into the test point and to provide an extra seal against any possible seepage.

A coloured plastic strap retains the cap when pressure measurements are being taken. This is an important feature when installed in ceiling voids, for example, avoiding the cap being lost. The RED and BLUE straps are a visual indicator to show which is the upstream (+ RED) and the downstream (- BLUE) pressure points, important when connecting a manometer or other differential pressure measurement device.

Note: It is advisable to apply silicone oil or grease to the probe prior to insertion to avoid causing damage to the elastomer core.

**Safety Note:** Test point maximum recommended temperature: +135°C.

We do not suggest this product is used on water applications above boiling point as the sudden venting of the system to atmospheric pressure can be extremely dangerous.



# ART 298

## Brass Test Point with Stainless Steel Extension. Pair - Red & Blue

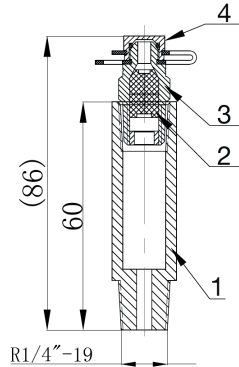


### Features

- 1/4" Male BSP Taper
- Self Sealing pressure / temperature binder test point

### Technical data

Max pressure: 16 Bar  
 25 Bar option also available  
 Working temp: -10°C to +120°C



N.	Part Name	Materials
1	Extension Tube	Stainless Steel 304
2	Sealing Part	EPDM
3	Test Point	Brass CW602N
4	Cap	Brass CW602N

The test point is designed for use with 'needle' type push-in probes.

The body of the test point houses a self-sealing elastomeric core which minimises leakage when the test probe is withdrawn.

The cap contains a sealing washer to prevent the ingress of debris into the test point and to provide an extra seal against any possible seepage.

A coloured plastic strap retains the cap when pressure measurements are being taken. This is an important feature when installed in ceiling voids, for example, avoiding the cap being lost. The RED and BLUE straps are a visual indicator to show which is the upstream (+ RED) and the downstream (- BLUE) pressure points, important when connecting a manometer or other differential pressure measurement device.

Note: It is advisable to apply silicone oil or grease to the probe prior to insertion to avoid causing damage to the elastomer core.

**Safety Note:** Test point maximum recommended temperature: 120°C.

We do not suggest this product is used on water applications above boiling point as the sudden venting of the system to atmospheric pressure can be extremely dangerous.

# ART 32

## DZR Brass Thermostatic Balancing Valve with Anti Legionella Device



### Features

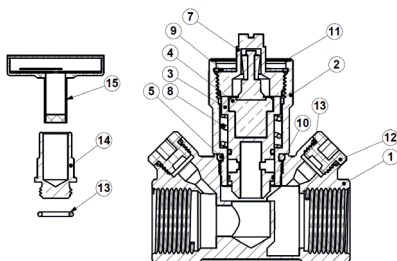
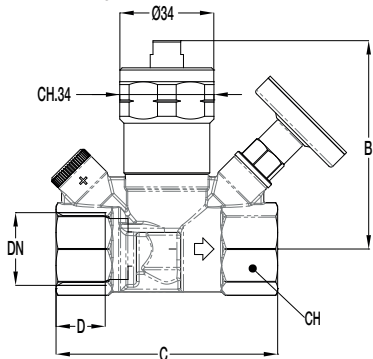
- BSP Parallel (ISO 7/1)
- Fluid: water
- Automatic Legionella Disinfectant feature
- Improves efficiency of DHW systems
- Automatically responds to changes in system temperature and flow requirements
- Reduces heat loss through lower circulation of hot water
- Keeps temperature evenly distributed and reduces dead-legs



### Technical data

Max pressure (Static): 25 Bar  
 Working temp: +40°C to +60°C  
 Max Inlet temp: 90°C  
 Anti Legionella Temp: 70°C

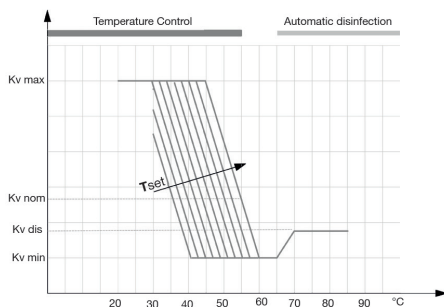
DN	1/2"	3/4"	1"
B	73	75	77
C	77	80	87
D	17	18.5	21
CH	25	31	38
KV Max	1.5	3.1	3.6
KV Nom	0.6	0.7	0.8
KV Dis	0.5	0.5	0.5
KV Min	0.25	0.25	0.25
Kgs	0.49	0.55	0.65



### N. Part Name Materials

1	Body	DZR Brass CW602N-M
2	Bonnet	Brass CW510L-DW
3	Shutter	Brass CW510L-DW
4	Thermostatic Element	
5	O-Ring	EDPM PEROX
6	O-Ring	EDPM PEROX
7	Ring Nut	Brass CW617N-DW
8	Spring	INOX AISI 302
9	Seeger	Steel
10	O-Ring	EPDM PEROX
11	Index	Aluminium
12	Plug	Nylon 6.6
13	O-Ring	EPDM PEROX
14	Temperature Gauge Sheath	Brass CW501L-DW
15	Temperature Gauge	Brass CW501L-DW

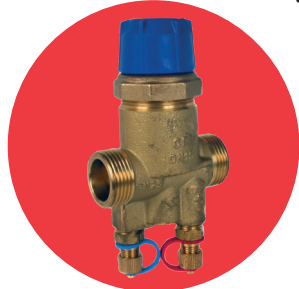
### Regulating Characteristics



V1. Dimensions in mm

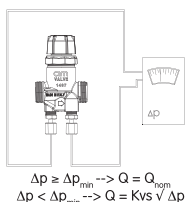
This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 20C (Compact) PN25 Pressure Independent Control Valve (PICV or PIBCV)



## Features

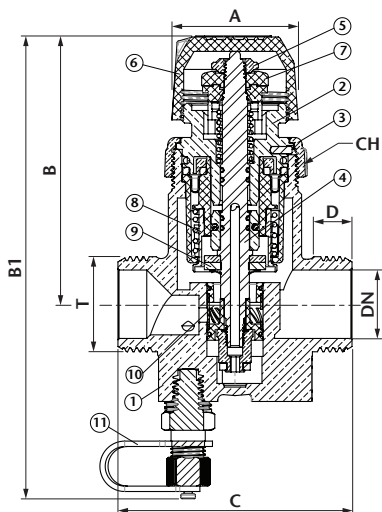
- BSP Parallel (ISO 228/1)
- Easy flow selection via preset dial
- Automatic flow balancing with fluctuating pressures
- Flow modulation along whole control actuator stroke (ART C21V, C22V, C23E)
- Reduction of commissioning, improved energy saving
- Phased installation and system future proofing
- Union tail pieces BSPM 2 required per valve



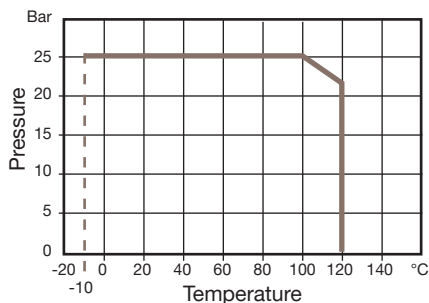
## Technical data

Max pressure: 25 Bar  
 Working temp: -10°C to +120°C  
 Max Differential Pressure: 8 Bar (800kPa)

DN	10LF	10HF	15LF	15HF	20HF	25HF
A	35	35	35	35	35	35
B	75	75	75	75	85	83
B1	130	130	130	130	150	146
C	53	53	65	65	82	104
D	9	9	11	11	12	13
T	G.1/2"	G.1/2"	G.3/4"	G.3/4"	G.1"	G.1 1/4"
CH	39	39	39	39	39	39
Flow (l/s)	0.012-	0.024-	0.024-	0.027-	0.042-	0.076-
	0.042	0.097	0.097	0.134	0.250	0.447
Min ΔP (kPa)	15-	13-	13-	12.5-	18-	18-
	16	16.5	16.5	19.5	26	37
Kvs	0.11-	0.24-	0.24-	0.27-	0.35-	0.64-
	0.37	0.86	0.86	1.09	1.77	2.65
Kgs	0.45	0.45	0.49	0.49	0.79	0.96

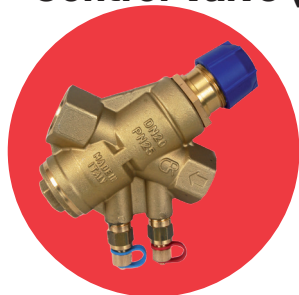


N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Fixing Ring	DZR Brass CW602N-M
4	Stem	Stainless Steel
5	Locking Nut	Brass
6	Plastic Cap	Plastic
7	Dial	Plastic
8	DPC Controller	DZR Brass CW602N-M
9	Gasket	EPDM
10	Regulator	DZR Brass CW602N-M
11	Binder	DZR Brass CW602N-M



# ART 20

## PN25 Pressure Independent Control Valve (PICV or PIBCV)



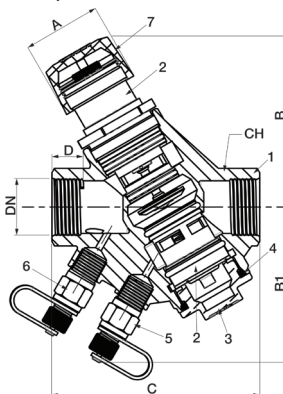
### Features

- BSP Parallel (ISO 228/1)
- Easy flow selection via preset dial
- Automatic flow balancing with fluctuating pressures
- Flow modulation along whole control actuator stroke (ART C21V, C22V, C23E)
- Reduction of commissioning, improved energy saving
- Phased installation and system future proofing
- Easy flush due to simple removal of control cartridge



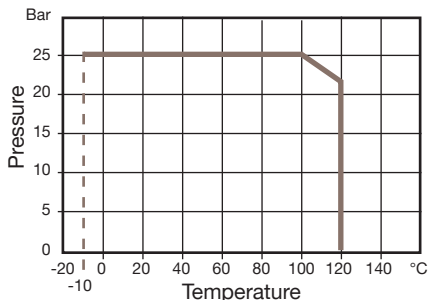
### Technical data

Max pressure: 25 Bar  
 Working temp: -10°C to +120°C  
 Max Differential Pressure: 4 Bar (400kPa)



DN	15LF	15HF	20LF	20HF	25LF	25HF	32	40	50
A	35	35	35	35	35	35	35	35	35
B	81	81	81	81	81	81	87	120	130
B1	72	72	72	72	72	72	76	87	93
C	96	96	97	97	103	103	128	144	155
D	14	14	15	15	16	16	19	17	20
CH	27	27	32	32	39	39	47	54	69
Flow (l/s)	0.022-	0.068-	0.036-	0.081-	0.064-	0.081-	0.129-	0.562-	0.612-
	0.174	0.479	0.292	0.566	0.478	0.566	0.849	1.974	2.385
Min ΔP (kPa)	14.5-16	14-18	14.5-16	14-22	14-16	14-22	14.5-18	16-26	19-32
Kvs	0.21-1.57	0.65-4.06	0.34-2.63	0.78-4.34	0.62-4.30	0.78-4.34	1.22-7.20	5.06-13.94	5.05-15.18
Kgs	0.88	0.88	0.86	0.86	1.02	1.02	1.46	2.55	3.20

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Plug	DZR Brass CW602N-M
4	O-Ring	EPDM
5	Blue Binder Point	DZR Brass CW602N-M
6	Red Binder Point	DZR Brass CW602N-M
7	Plastic Cap	Plastic



V1. Dimensions in mm

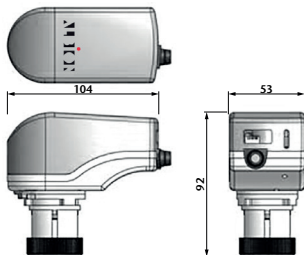
This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART C21V, C22V, C23E Control Actuator



## Features

- To fit PICV ART 20C all sizes
- To fit PICV ART 20 DN15-32

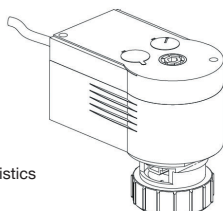


Model	C23E Modulating	C21V 3 Position	C22V 3 Position
Technical code	ADPI20C23EN	ADPI20C21VN	ADPI20C22VN
Voltage	24V AC	24V AC	230V AC
Control signal	0-10Vdc/4-20mA	3 position	3 position
Frequency	50 Hz	50 Hz	50 Hz
Power	5 VA	5 VA	5 VA
Closing and opening times	18.5 sec/mm	18.5 sec/mm	18.5 sec/mm
Degree / Class of protection	IP54	IP54	IP54
Actuator stroke	6.5mm	6.5mm	6.5mm
Actuating force	200 N	200 N	200 N
Cable length	1m	1m	1m
Connection	M30x1.5	M30x1.5	M30x1.5

# ART C22VL, C23EL Control Actuator

## Features

- To fit PICV ART 20 DN40-50



\* Linear flow characteristics

Model	C23EL Modulating / 3 Position	C22VL 3 Position
Technical code	ADPI20C23ELC	
ADPI20C22VLC		
Voltage	24V AC/DC	24V AC/DC
230V AC		
Control signal	0-10V DC*	3 positions
3 positions		
Frequency	50...60 Hz	50...60 Hz
50...60 Hz		
Closing and opening times	60/120 sec	60-120 sec
60-120 sec		
Degree / Class of protection	IP54	IP54
IP54		
Actuator stroke	0...8mm	0...8mm
0...8mm		
Actuating force	500 N	500 N
500 N		
Cable length	1.2m	1.2m
1.2m		
Connection	M30	M30
M30		

V1. Dimensions in mm.

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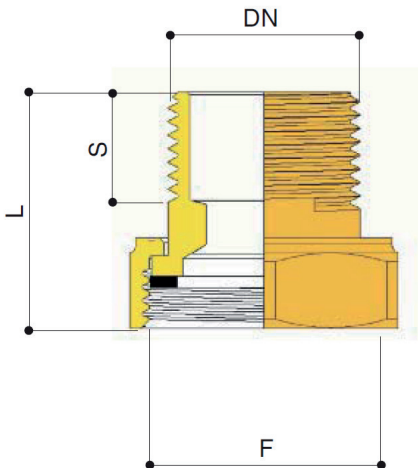
# ART 20C Union Tail Pcs

## 2 Piece Union and Gasket



### Features

- To suit ART 20C valves DN10-25
- Two required per ART 20C

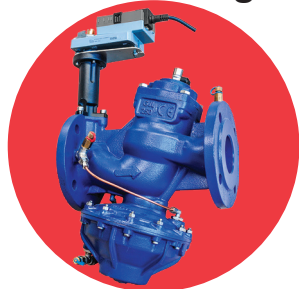


DN	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"
F	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"
L	28	28	33	34	37	42	60
S	10	11	11	15	15	20	20

Part Name	Materials
Union	Brass CW617N
Gasket	Fibre Washer

# ART 200

## Pressure Independent Control & Balancing Valve (PICV or PIBCV)



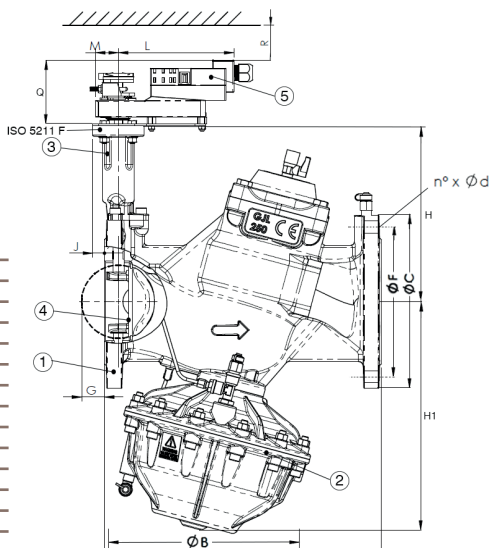
### Features

- Available as actuated PICV or manual CFR
- Automatic flow balancing in the event of fluctuating pressure conditions in system braches
- Linear regulations with Equal Percentage option
- Flow rate measurement incorporated
- Isolation shut-off facility
- Water Hammer protection features for valve and actuator
- Gearbox allows position lock and flow reading

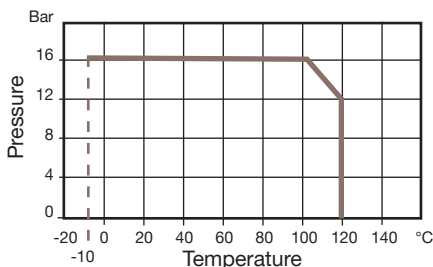
### Technical data

Max pressure: 16 Bar  
 Working temp: -10°C to +120°C  
 Max Differential Pressure: 400kPa

DN	65	80	100	125	150
A	290	310	350	400	480
H	205	214	224	272	301
H1	217	281	295	317	341
B	200	242	242	242	242
J	15	15	15	28	28
G	17	25	30	46	56
C	185	200	220	250	285
F	145	160	180	210	240
n x D	4x18	8x18	8x18	8x18	8x22
ISO 5211	F05	F05	F05	F07	F07
R	>100	>100	>100	>100	>100
L	160	160	160	160	160
M	35	35	35	35	35
Q	84	84	84	84	84
Flow (l/s)	1.222-7.222	1.306-10	3.167-22.917	3.639-34.722	5.278-44.444
Min ΔP (kPa)	30 (50)	30 (50)	30 (70)	30 (70)	30 (70)
Kvs (M <sup>3</sup> /hr)	66.3	96.6	278	332.1	427.5
Kgs	23.3	29.8	35.3	48.1	77.1



N.	Part Name	Materials
1	Body	Cast Iron
2	Diaphragm	EPDM
3	Overtorque Safety Spring	Spring Steel 2FD
4	Control Valve Disc	Brass
5	Electric Actuator	Plastic Casing

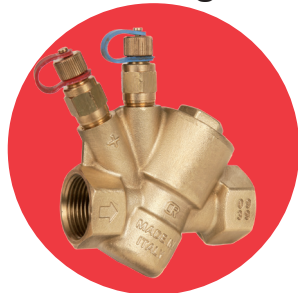


V1. Dimensions in mm

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# ART 29

## Threaded Automatic Flow Balancing Valve Constant Flow Regulator (CFR)



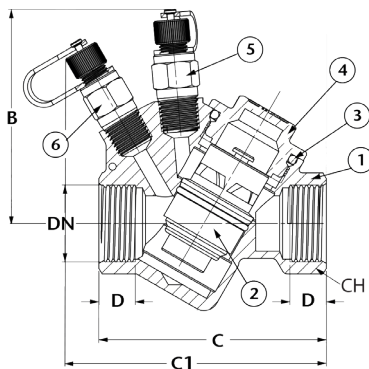
### Features

- BSP Parallel (ISO 228/1)
- Wide cartridge selection available
- 0.007 l/s to 3.154 l/s
- Easy removable cartridges for inspection on cleaning
- System balancing is assured automatically even under fluctuating pressures
- Decrease in installation cost due to fewer valves required and no commissioning costs
- Self cleaning cartridge design

### Technical data

Max pressure: 25 Bar

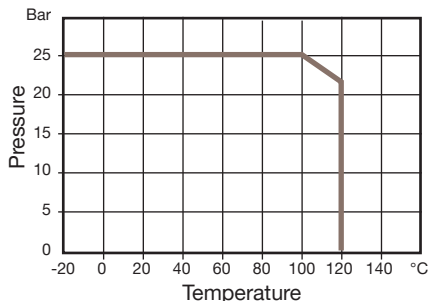
Working temp: -20°C to +120°C



DN	15	20	25	25L	32	40	50
B	74	74	74	93	93	93	93
C	78	78	85	123	123	123	132
C1	87	88	93	125	125	125	130
D	11.5	15.0	17.0	17.0	19.5	19.5	24.0
CH	25	31	38	40	46	52	64
kgs	0.51	0.52	0.60	0.60	1.50	1.57	1.67

Note: 25L is 25 Large. This is a 32mm body and cartridge but the valve has a 1" BSP connection for increased flow rates.

N.	Part Name	Materials
1	Body	DZR Brass
2	Cartridge	DZR Brass
3	O-Ring	EPDM
4	Plug	DZR Brass
5	Blue Binder Point	DZR Brass
6	Red Binder Point	DZR Brass





# ART 29

## Threaded Automatic Flow Balancing Valve Constant Flow Regulator (CFR)



### Cartridge - Technical Data

Cartridges are available in two pressure classes:

- Low pressure up to 350Kpa in DZR brass (CA1210);
- High pressure up to 600Kpa in nickel plated DZR brass (CA 1210H).

### Cartridge for valves from DN15 to DN25 (0.007 l/s to 0.680 l/s)

Cart. Code (Max 350kPa)	Cart Code (Max 600kPa)	Flow (l/s)	Flow (l/h)	Flow Rate (gpm)	Min p (kPa)	Kvs
CA1150	-	0.007	25	0.11	7	0.09
CA1170	-	0.010	35	0.15	7	0.14
CA1190	-	0.012	46	0.20	7	0.16
CA1210	CA1210H	0.015	55	0.24	7	0.21
CA1230	CA1230H	0.021	75	0.33	8	0.27
CA1260	CA1260H	0.023	84	0.37	9	0.28
CA1290	CA1290H	0.029	104	0.46	10	0.33
CA1300	CA1300H	0.032	114	0.50	10	0.36
CA1320	CA1320H	0.036	129	0.57	11	0.39
CA1350	CA1350H	0.043	154	0.68	11	0.46
CA1370	CA1370H	0.049	175	0.77	12	0.51
CA1400	CA1400H	0.057	204	0.90	12	0.59
CA1430	CA1430H	0.067	241	1.06	12	0.70
CA1460	CA1460H	0.078	279	1.23	12	0.81
CA1490	CA1490H	0.089	320	1.41	13	0.89
CA1510	CA1510H	0.097	350	1.54	13	0.97
CA1540	CA1540H	0.111	400	1.76	13	1.11
CA1570	CA1570H	0.132	477	2.10	14	1.27
CA1620	CA1620H	0.151	545	2.40	14	1.46
CA1725	CA1725H	0.171	615	2.71	14	1.64
CA1730	CA1730H	0.186	670	2.95	14	1.79
CA1735	CA1735H	0.204	736	3.24	14	1.97
CA1740	CA1740H	0.222	799	3.52	16	2.00
CA1745	CA1745H	0.242	870	3.83	19	2.00
CA1750	CA1750H	0.260	936	4.12	21	2.01
CA2070	CA2070H	0.283	1020	4.49	22	2.17
CA2074	CA2074H	0.300	1081	4.76	22	2.30
CA2077	CA2077H	0.332	1195	5.26	22	2.55
CA2082	CA2082H	0.371	1335	5.88	23	2.78
CA2086	CA2086H	0.412	1483	6.53	23	3.09
CA2088	CA2088H	0.439	1581	6.96	23	3.30
CA2092	CA2092H	0.493	1774	7.81	24	3.62
CA2094	CA2094H	0.509	1833	8.07	24	3.74
CA2099	CA2099H	0.578	2080	9.16	25	4.16
CA2103	CA2103H	0.625	2251	9.91	26	4.41
CA2106	CA2106H	0.644	2319	10.21	27	4.46
CA2109	CA2109H	0.680	2448	10.78	28	4.63
CA3073	CA3073H	0.187	674	2.97	12	1.95
CA3082	CA3082H	0.239	861	3.79	12	2.49
CA3089	CA3089H	0.283	1020	4.49	12	2.94

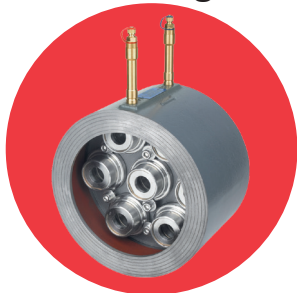
### Cartridge for valves from DN25L to DN50 (0.187 l/s to 3.154 l/s)

Cod. (Max 350kPa)	Cod. (Max 600kPa)	Flow (l/s)	Flow (l/h)	Flow Rate (gpm)	Min p (kPa)	Kvs
CA3094	CA3094H	0.315	1136	5.00	12	3.28
CA3096	CA3096H	0.331	1190	5.24	12	3.44
CA3098	CA3098H	0.353	1272	5.60	13	3.53
CA3102	CA3102H	0.375	1349	5.94	13	3.74
CA3107	CA3107H	0.413	1485	6.54	13	4.12
CA3111	CA3111H	0.435	1567	6.90	14	4.19
CA3112	CA3112H	0.453	1631	7.18	14	4.36
CA3118	CA3118H	0.504	1815	7.99	14	4.85
CA3124	CA3124H	0.556	2001	8.81	15	5.17
CA3125	CA3125H	0.568	2044	9.00	16	5.11
CA3129	CA3129H	0.603	2171	9.56	16	5.43
CA3132	CA3132H	0.631	2271	10.00	17	5.51
CA3135	CA3135H	0.661	2380	10.48	17	5.77
CA3138	CA3138H	0.694	2498	11.00	18	5.89
CA3142	CA3142H	0.733	2639	11.62	18	6.22
CA3148	CA3148H	0.797	2871	12.64	19	6.59
CA3156	CA3156H	0.886	3191	14.05	21	6.96
CA3161	CA3161H	0.946	3407	15.00	22	7.26
CA3163	CA3163H	0.968	3486	15.35	22	7.43
CA4148	CA4148H	1.009	3635	16.00	20	8.13
CA4152	CA4152H	1.023	3681	16.21	21	8.03
CA4156	CA4156H	1.136	4090	18.00	21	8.92
CA4164	CA4164H	1.199	4315	19.00	21	9.42
CA4168	CA4168H	1.262	4540	20.00	22	9.68
CA4173	CA4173H	1.325	4770	21.00	22	10.17
CA4176	CA4176H	1.388	4995	22.00	23	10.42
CA4182	CA4182H	1.514	5450	24.00	24	11.12
CA4191	CA4191H	1.640	5905	26.00	25	11.81
CA4194	CA4194H	1.816	6539	29.00	26	12.82
CA4200	CA4200H	1.893	6815	30.00	27	13.11
CA4205	CA4205H	2.019	7265	32.00	28	13.73
CA4211	CA4211H	2.145	7720	34.00	30	14.10
CA4217	CA4217H	2.271	8175	36.00	31	14.68
CA4222	CA4222H	2.397	8630	38.00	33	15.02
CA4229	CA4229H	2.523	9085	40.00	34	15.58
CA4235	CA4235H	2.650	9540	42.00	36	15.90
CA4241	CA4241H	2.776	9990	44.00	38	16.21
CA4248	CA4248H	2.902	10445	46.00	40	16.51
CA4250	CA4250H	3.028	10900	48.00	42	16.82
CA4262	CA4262H	3.154	11355	50.00	44	17.12

See IOM for full installation notes.

# ART 229

## Wafer Automatic Flow Balancing Valve Constant Flow Regulator (CFR)



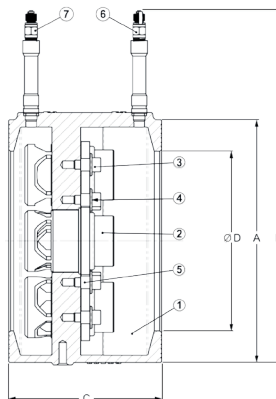
### Features

- Automatic system balance
- Self cleaning cartridge design
- Energy saving due to elimination of excessive flow
- Increased comfort due to accurate flow distribution
- Wafer mount between flanges
- Assures system balance even with fluctuating pressures
- Supplies with 100mm test points

### Technical data

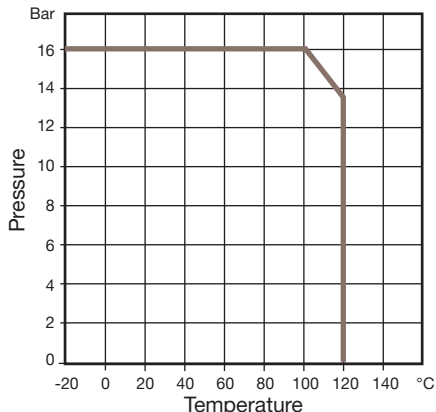
Max pressure: 16 Bar

Working temp: -20°C to +120°C



DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	800
A	100	119	131	163	193	216	271	326	383	443	496	545	601	715	880
B	218	237	249	281	311	334	389	440	501	561	614	663	719	833	998
C	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
D	80	80	80	100	125	150	200	260	315	355	405	455	508	610	760
Max carters.	1	1	1	2	3	4	7	12	15	19	26	33	40	56	85
Kgs	3.41	4.91	4.79	6.90	9.00	11.73	18.75	23.44	33.41	44.21	51.63	57.47	67.75	88.90	127.30

N.	Part Name	Materials
1	Body	Cast Iron GGG40
2	Cartridge	AISI 304
3	Screw	AISI 304
4	Washer	AISI 304
5	Socket	AISI 304
6	Red Binder Point	Brass
7	Blue Binder Point	Brass



# ART 229

## Wafer Automatic Flow Balancing Valve Constant Flow Regulator (CFR)



### Cartridge - Technical Data

Cartridges are available in two materials having the same high pressure class up to 600Kpa.

- AISI 304 (CA5179H)
- AISI 316 for high resistance to corrosion (CA5179HR).

Working temperature -20°C to +120°C

### Cartridge for valves from DN50 to DN800 (1.061 l/s to 12.500 l/s)

Cart. Code	Cart. Code	Flow (l/s)	Flow (l/h)	Flow Rate (gpm)	Min p (kPa)	Kvs
CA5179H	CA5179HR	1.061	3820	16.82	13	10.6
CA5184H	CA5184HR	1.092	3931	17.31	13	10.9
CA5189H	CA5189HR	1.125	4049	17.83	13	11.2
CA5194H	CA5194HR	1.166	4199	18.49	13	11.7
CA5200H	CA5200HR	1.222	4399	19.37	13	12.2
CA5206H	CA5206HR	1.289	4640	20.43	14	12.4
CA5213H	CA5213HR	1.375	4951	21.80	14	13.2
CA5220H	CA5220HR	1.475	5310	23.38	14	14.2
CA5227H	CA5227HR	1.583	5700	25.10	14	15.2
CA5235H	CA5235HR	1.725	6209	27.34	14	16.6
CA5243H	CA5243HR	1.809	6511	28.67	14	17.4
CA5251H	CA5251HR	1.967	7081	31.18	14	18.9
CA5260H	CA5260HR	2.195	7901	34.79	15	20.4
CA5269H	CA5269HR	2.472	8900	39.19	16	22.3
CA5279H	CA5279HR	2.889	10399	45.79	19	23.9
CA5287H	CA5287HR	3.154	11355	50.00	21	24.2
CA5292H	CA5292HR	3.470	12491	55.00	23	26.1
CA5298H	CA5298HR	3.722	13399	59.00	24	27.4
CA5303H	CA5303HR	4.100	14762	65.00	27	28.4
CA5308H	CA5308HR	4.444	15999	70.45	29	29.7
CA6285H	CA6285HR	4.733	17037	75.02	34	29.2
CA6292H	CA6292HR	5.041	18148	79.91	34	31.1
CA6301H	CA6301HR	5.221	18797	82.77	35	31.8
CA6305H	CA6305HR	5.408	19467	85.72	35	32.9
CA6312H	CA6312HR	5.684	20464	90.11	35	34.6
CA6319H	CA6319HR	5.980	21527	94.79	36	35.6
CA6326H	CA6326HR	6.236	22449	98.85	36	37.4
CA6332H	CA6332HR	6.523	23482	103.40	36	39.1
CA6338H	CA6338HR	6.814	24531	108.02	37	40.3
CA6344H	CA6344HR	7.117	25621	112.82	38	41.6
CA6349H	CA6349HR	7.369	26528	116.81	38	43.0
CA6356H	CA6356HR	7.690	27686	121.981	38	44.9
CA6362H	CA6362HR	8.099	29157	128.39	38	47.3
CA6367H	CA6367HR	8.321	29954	131.90	39	48.0
CA6373H	CA6373HR	8.605	30976	136.40	39	49.6
CA6379H	CA6379HR	8.961	32260	142.05	40	51.0
CA5385H	CA6385HR	9.324	33565	147.80	40	53.0
CA6391H	CA6391HR	9.709	34953	153.91	40	55.3
CA6393H	CA6393HR	10.093	36336	160.00	42	56.1
CA6398H	CA6398HR	10.468	37685	165.94	43	57.5
CA6400H	CA6400HR	10.724	38607	170.00	44	58.2
CA6407H	CA6407HR	11.381	40971	180.41	46	60.4
CA6407HH	CA6407HHR	12.500	45000	198.00	49	64.3

CA...H - AISI 304 Stainless Steel. Maximum differential pressure 600kPa.

CA...HR - AISI 316 Stainless Steel for high resistance to corrosion. Maximum differential pressure 600kPa.

# EasyLink PICV

## H Block complete with PICV

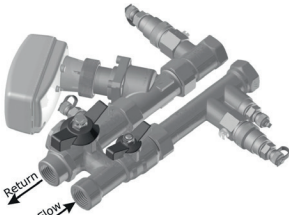


### Features

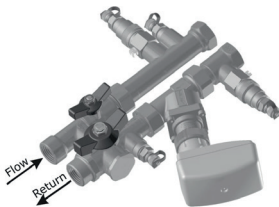
- Fitted with PICV
- For direct mounting to terminal units in heating and cooling applications at 40mm centres
- Integral Venturi metering station for accurate flow verification. Kv-signal values: 0.198-0.598-1.394-2.361
- Material DZR Brass CW602N
- Integrated union joints for easy valve alignment
- Tee handle isolation valves for flow, return and bypass
- Drains on the flow and return
- PT plugs across the PICV to measure DP
- PT plug on the flow side for measuring the DP across the terminal unit
- Left and right hand versions available
- Thermic actuators available on request

### Technical data

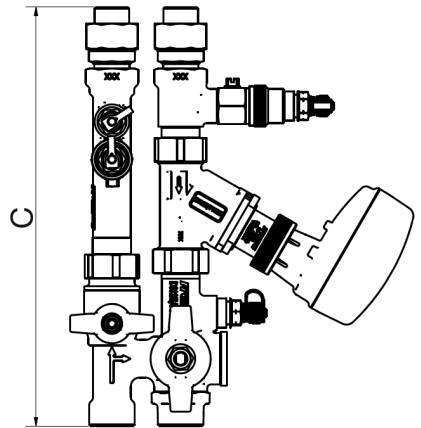
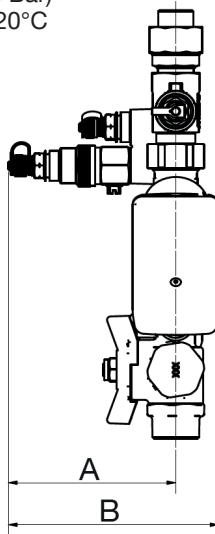
Max pressure: 20 Bar  
 Differential pressure: 800 kPa (8 Bar)  
 Working temp: 0°C to +120°C



Right hand version



Left hand version



Part Name	Material
Body	DZR Brass CW602N
O-Rings	EPDM

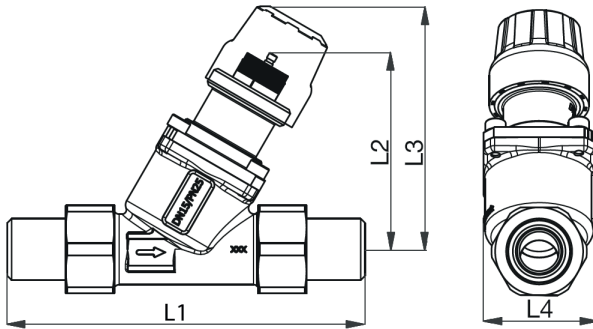
### KV values (\*Accuracy KV signal: +/- 5%)

DN	DN15
A	95
B	120
C	244

KV signal*	KV max
0.198	0.262
0.598	0.723
1.394	2.309
2.361	4.399

# EasyLink PICV

## H Block complete with PICV



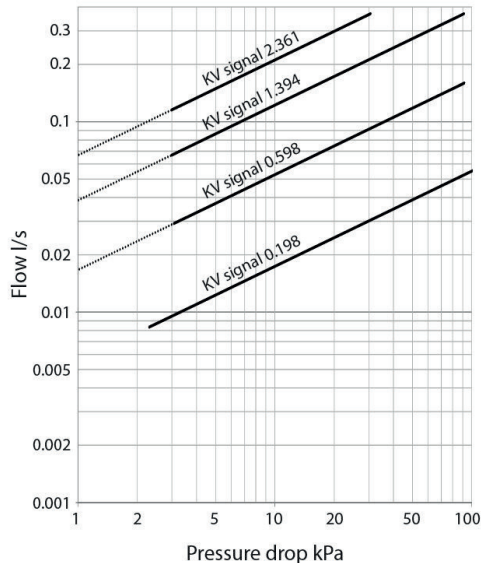
DN	DN15
<b>Thread</b>	<b>G 3/4"</b>
L1	122
L2	68
L3	83
L4	38
Kgs (Basic)	0.38
Kgs (P/T)	0.47

Part Name	Material
Body	DZR Brass CW602N
O-Rings	EPDM
Spring	Stainless Steel
DP Controller	PPS 40% glass
Diaphragm	HNBR

### PICV's Available

Stroke	mm	DN15 LOW		DN15 HIGH	
		2.5mm	5.0mm	2.5mm	5.0mm
Flow	I/h	30-200	65-370	100-575	220-1,330
	I/s	0.008-	0.018-	0.028-	0.061-
	gpm	0.056	0.103	0.160	0.369
		0.13-0.88	0.29-1.63	0.44-2.53	0.97-5.85

### Flow graph for Venturi Metering Station

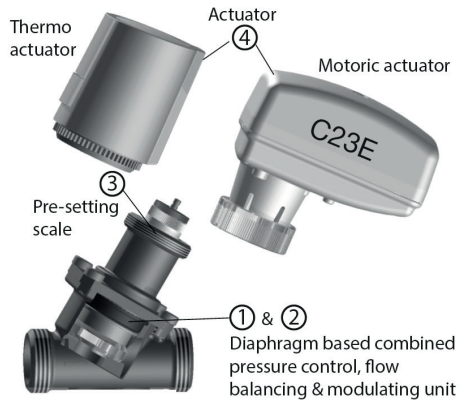
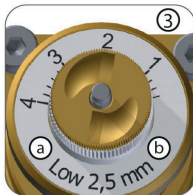


# EasyLink PICV

## H Block complete with PICV



1. Differential pressure control
2. Modulating control component
3. Presetting scale (not accessible when the actuator is mounted)
  - a. Flow range: Low-High
  - b. Stroke: 2.5 - 5.0
4. Actuator



## Operating Pressure

The EasyLink PICV (DN15) can operate to a maximum differential pressure of 800kPa (8 bar).

## Close Off Pressure

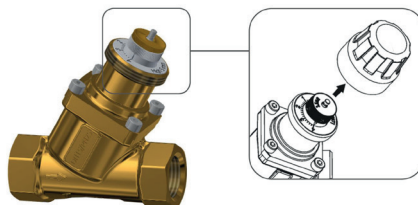
The EasyLink is capable of closing against the following differential pressures to EN 1349 Class IV:

DN15: 600kPa (6 Bar) - based on 100N actuator force

DN15: 800kPa (8 Bar) - based on 160N actuator force

## Isolation

When fitted with the isolation cap (DN15) the EasyLink is capable of isolation to a maximum of 10 bar.



# EasyLink PICV/S H Block complete with PICV and Strainer

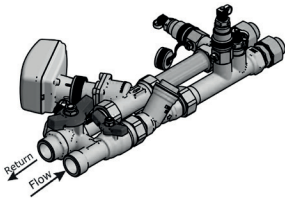


## Features

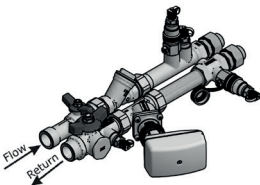
- Fitted with PICV and Strainer (mesh filter - hole size: 0.5mm)
- For direct mounting to terminal units in heating and cooling applications at 40mm centres
- Integral Venturi metering station for accurate flow verification. Kv-signal values: 0.198-0.598-1.394-2.361
- Material DZR Brass CW602N
- Integrated union joints for easy valve alignment
- Tee handle isolation valves for flow, return and bypass
- Drains on the flow and return
- PT plugs across the PICV to measure DP
- PT plug on the flow side for measuring the DP across the terminal unit
- Left and right hand versions available
- Thermic actuators available on request

## Technical data

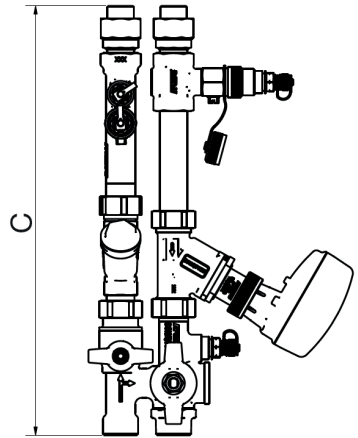
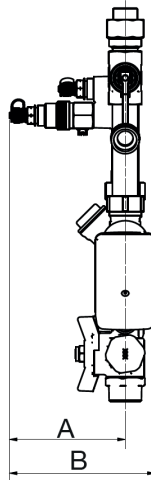
Max pressure: 20 Bar  
 Differential pressure: 800 kPa (8 Bar)  
 Working temp: 0°C to +120°C



Right hand version



Left hand version



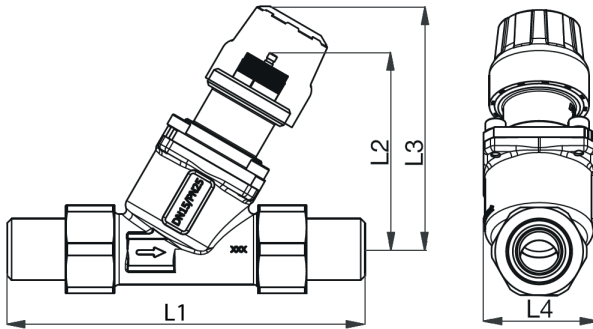
DN	DN15
A	95
B	120
C	325

Part Name	Material
Body	DZR Brass CW602N
O-Rings	EPDM

KV values (*Accuracy KV signal: +/- 5%)	
KV signal*	KV max
0.198	0.262
0.598	0.723
1.394	2.309
2.361	4.399

# EasyLink PICV/S

## H Block complete with PICV and Strainer



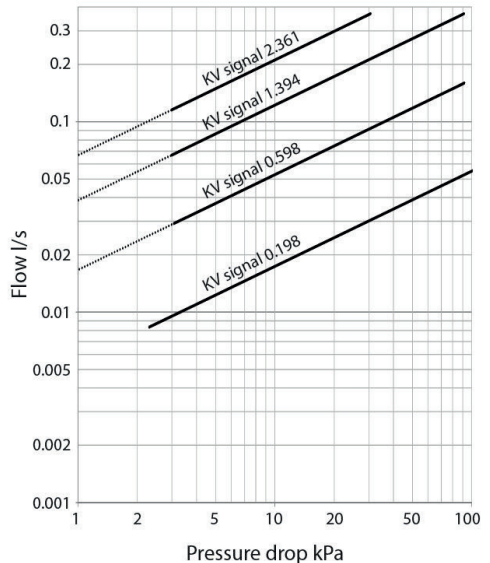
DN	DN15
Thread	G 3/4"
L1	122
L2	68
L3	83
L4	38
Kgs (Basic)	0.38
Kgs (P/T)	0.47

Part Name	Material
Body	DZR Brass CW602N
O-Rings	EPDM
Spring	Stainless Steel
DP Controller	PPS 40% glass
Diaphragm	HNBR

### PICV's Available

Stroke	mm	DN15 LOW		DN15 HIGH	
		2.5mm	5.0mm	2.5mm	5.0mm
Flow	I/h	30-200	65-370	100-575	220-1,330
	I/s	0.008-0.056	0.018-0.103	0.028-0.160	0.061-0.369
	gpm	0.13-0.88	0.29-1.63	0.44-2.53	0.97-5.85

### Flow graph for Venturi Metering Station

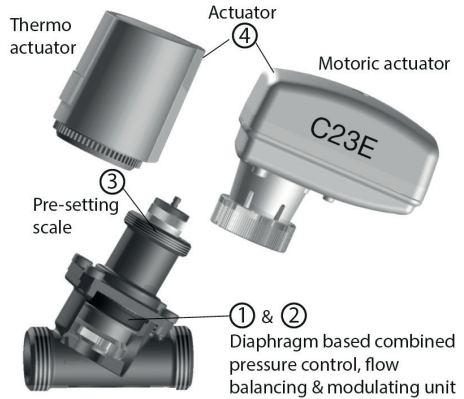




# EasyLink PICV/S H Block complete with PICV and Strainer



1. Differential pressure control
2. Modulating control component
3. Presetting scale (not accessible when the actuator is mounted)
  - a. Flow range: Low-High
  - b. Stroke: 2.5 - 5.0
4. Actuator



## Operating Pressure

The EasyLink PICV (DN15) can operate to a maximum differential pressure of 800kPa (8 bar).

## Close Off Pressure

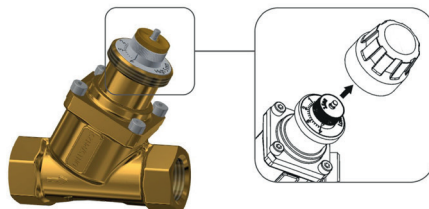
The EasyLink is capable of closing against the following differential pressures to EN 1349 Class IV:

DN15: 600kPa (6 Bar) - based on 100N actuator force

DN15: 800kPa (8 Bar) - based on 160N actuator force

## Isolation

When fitted with the isolation cap (DN15) the EasyLink is capable of isolation to a maximum of 10 bar.



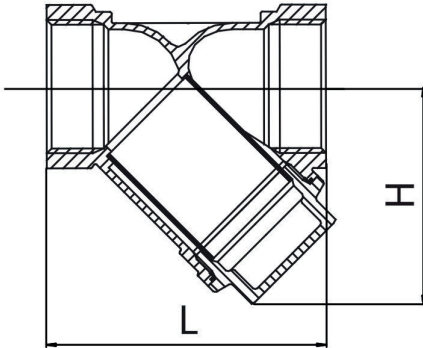
# EasyLink PICV/S

## H Block complete with PICV and Strainer



### Features

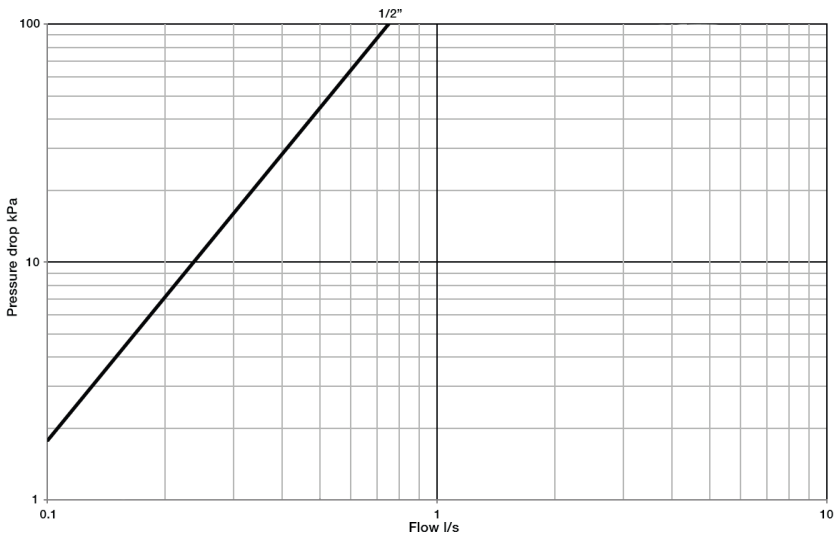
- Excellent corrosion resistance - DZR Body and Stainless Steel Filter.
- Filter Mesh (32, hole size 0.5mm) ensures high filtering performance.
- The filter can be easily replaced without removing the body of the strainer from the H Block arrangement.



DN	DN15
L	56
H	41
Kv	2.7
Kgs	0.158

Part Name	Material
Body	DZR Brass CW602N
Filter Mesh	Stainless Steel

### Differential Pressure (kPa)



# EasyLink80 PICV/S

## H Block complete with PICV and Strainer



### Features

- Fitted with PICV and Strainer (mesh filter - hole size: 0.5mm)
- For heating and cooling applications at 80mm centres
- Material DZR Brass CW602N
- Integrated union joints for easy valve alignment
- Tee handle isolation valves for flow, return and bypass
- Drains on the return
- PT plugs across the PICV to measure DP
- PT plug on the flow side for measuring the DP across the terminal unit
- Left and right hand versions available
- Thermic actuators available on request
- Optional Integral Venturi metering station for accurate flow verification. Kv-signal values: 0.263 - 9.72

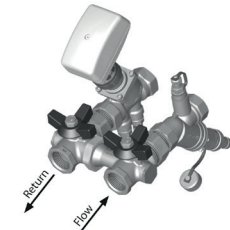
### Technical data

Max pressure: 25 Bar

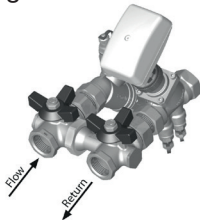
Maximum Differential pressure: 800kPa (8 Bar)

Working temp: 0°C to +120°C

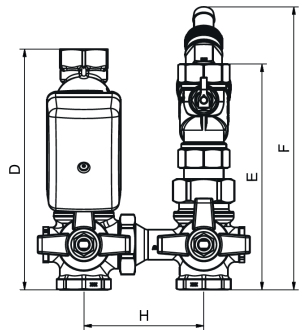
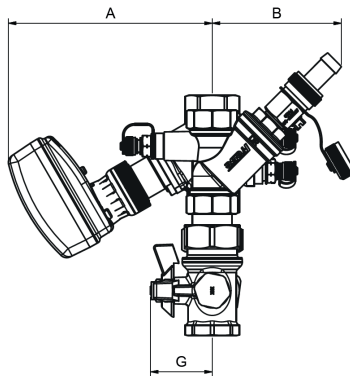
Material: DZR Brass (CW602N) unless otherwise stated



Right hand version



Left hand version



DN	DN15	DN20	DN25	DN25L
A	117	117	120	135
B	74	86	92	92
D*	155/175	160/180	164/184	181/201
E	136	150	165	165
F	176	188	204	204
G*	41/88	41/88	41/88	41/88
H	80	80	80	80

\*) Std Handle / Ext Handle

Part Name	Material
Body	DZR Brass CW602N
O-Rings	EPDM

# EasyLink80 PICV/S

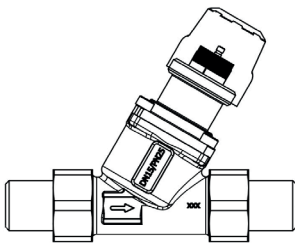
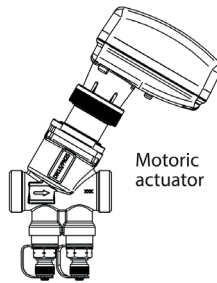
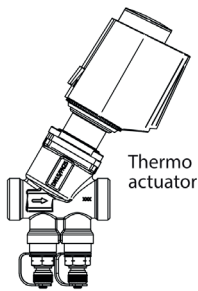
## H Block complete with PICV and Strainer



DN	KV values (*Accuracy KV signal: +/- 5%)		Flow Range (l/s)
	KV signal*	KV max	
DN15XUL	0.263	0.25	0.0075-0.023**
DN15UL	0.55	0.61	0.017-0.045**
DN15L	1.15	1.23	0.031-0.074**
DN15	2.80	3.63	0.062-0.148**
DN20	5.33	7.56	0.138-0.325**
DN25	9.72	13.61	0.258-0.603**

\*\*\*) Tolerance of nominal Kvs:±3% (test according to BS7350)

The flow ranges are a recommendation only. The measurement of higher flows is allowed, but the pressure loss on the selected metering station must be considered to avoid the excessive resistance.



Needles for DP measurement: Max diameter, Ø3.2mm  
Length 25-40mm  
Thread: ISO 228/1

**When used at temperatures below 0°C, a stem heater must be used to prevent ice on the spindle.**

Part Name	Material
Body	DZR Brass CW602N
O-Rings	EPDM
Spring	Stainless Steel
DP Controller	PPS 40% glass
Diaphragm	HNBR

# EasyLink80 PICV/S

## H Block complete with PICV and Strainer

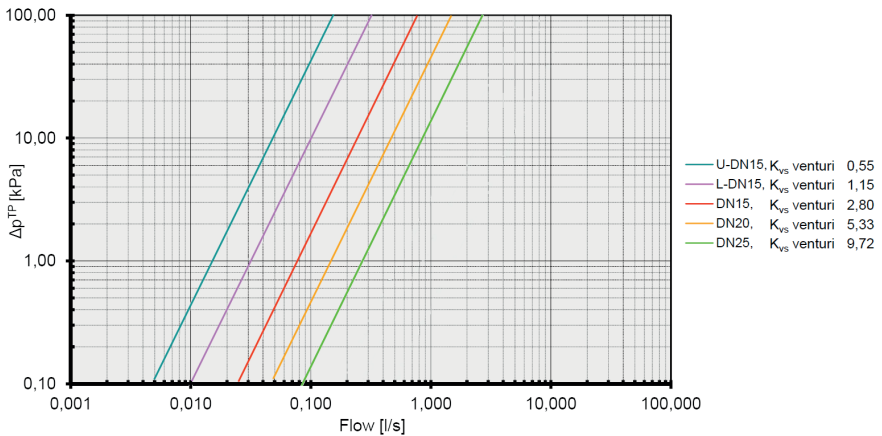


### PICV's Available - Flow Data

Type	DN10-DN15		DN15-DN20		DN20	DN25	DN25
	Low		High		High	Low	High
Stroke mm	2.5	5.0	2.5	5.0	5.5	5.5	5.5
I/h	30-200	65-370	100-575	220-1,330	300-1,800	280-1,800	600-3,609
Flow I/s	0.008-0.056	0.018-0.103	0.028-0.160	0.061-0.369	0.083-0.500	0.078-0.500	0.167-1.003*
gpm	0.13-0.88	0.29-1.63	0.44-2.53	0.97-5.85	1.32-7.93	1.23-7.93	2.64-15.89

\*Flows above 0.603 will generate a signal higher than 5kPa.

### Flow graph for Venturi Metering Station



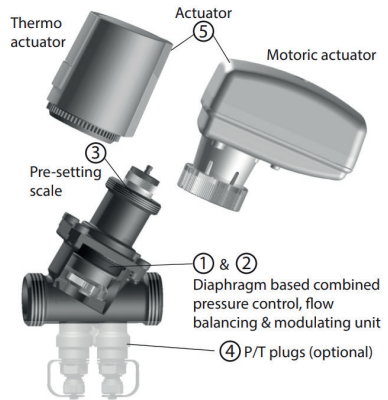
$$Q = \frac{K_{vs}^{venturi} \cdot \sqrt{\Delta p^{TP}}}{36}$$

Formula linking flow Q (in l/s) and  $\Delta p$  measured at test points (in kPa).

# EasyLink80 PICV/S H Block complete with PICV and Strainer



1. Differential pressure control
2. Modulating control component
3. Presetting scale (not accessible when the actuator is mounted)
  - a. Flow range: Low-High
  - b. Stroke: 2.5 - 5.0 - 5.5mm
4. Actuator
5. P/T Plugs



## Operating Pressure

The EasyLink80 PICV can operate to a maximum differential pressure of 800kPa (8 bar).

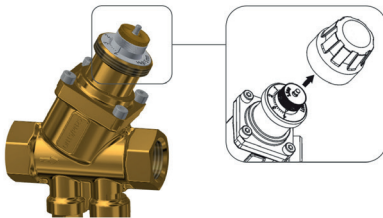
## Close Off Pressure

The EasyLink is capable of closing against the following differential pressures to EN 1349 Class IV:

- DN10 to DN25: 600kPa (6 Bar) - based on 100N actuator force
- DN10 to DN25: 800kPa (8 Bar) - based on 160N actuator force
- DN25L to DN32: 800kPa (8 Bar) - based on 100N actuator force

## Isolation

When fitted with the isolation cap the EasyLink is capable of isolation to 10 bar.



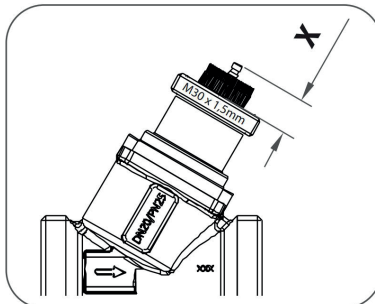
## Actuator Requirements: DN10-DN32

Dimension 'X' in closed position:

- 2.5mm stroke = 11.4mm
- 5.0mm stroke = 9.3mm
- 5.5mm stroke = 8.8mm

Actuator minimum force: 100N

Actuator connection: M30 x 1.5mm



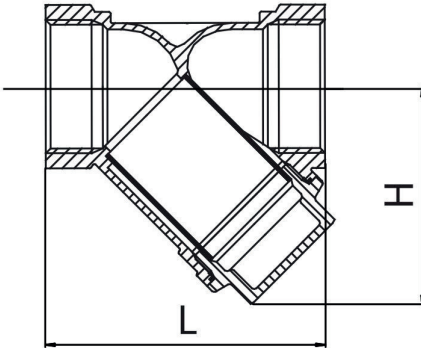
# EasyLink80 PICV/S

## H Block complete with PICV and Strainer



### Features

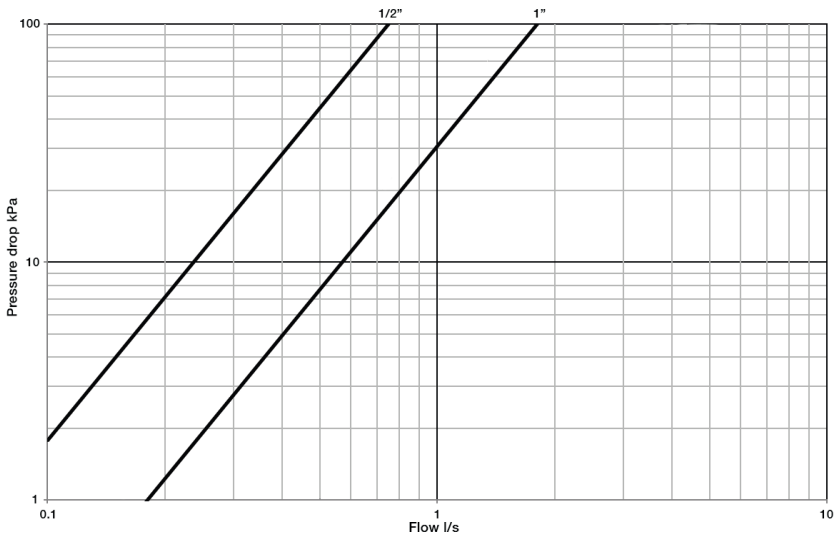
- Excellent corrosion resistance - DZR Body and Stainless Steel Filter.
- Filter Mesh (32, hole size 0.5mm) ensures high filtering performance.
- The filter can be easily replaced without removing the body of the strainer from the H Block arrangement.



DN	DN25
L	82
H	62
Kv	6.5
Kgs	0.44

Part Name	Material
Body	DZR Brass CW602N
Filter Mesh	Stainless Steel

### Differential Pressure (kPa)



# EasyLink80 FODRV

## H Block complete with FODRV



### Features

- Fitted with FODRV
- For heating and cooling applications at 80mm centres
- Material DZR Brass CW602N
- Integrated union joints for easy valve alignment
- Tee handle isolation valves for flow, return and bypass
- Drains on the return
- Built in PT ports for flow measurement
- PT plug on the flow side for measuring the DP across the terminal unit
- Kv value printed clearly on the handwheel for identification during commissioning
- Double regulating feature enables the valve opening to be set at the desired set point using a 3mm allen key

### Technical data

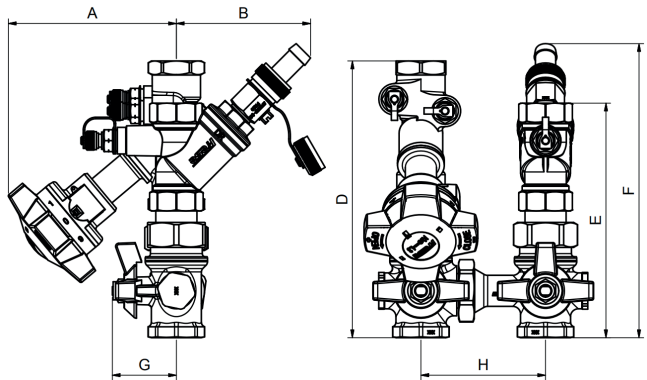
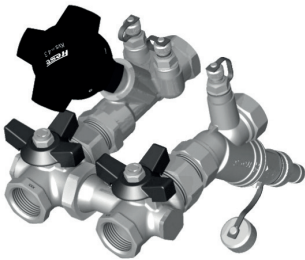
Max pressure: 25 Bar

Maximum Differential pressure: 800kPa (8 Bar)

Working temp: 0°C to +120°C

Material: DZR Brass (CW602N) unless otherwise stated

Filter/Strainer Mesh: Stainless Steel. 32 (0.5mm)



DN	DN15	DN20	DN25
A	112	108	125
B	74	86	92
D	167	177	183
E	136	150	165
F	176	188	204
G*		41*	
H	80/130/170		

\*Only Std. Handle possible

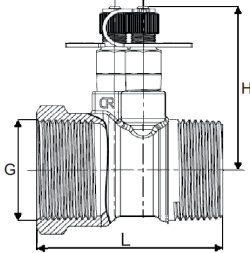


# EasyLink80 FODRV

## H Block complete with FODRV



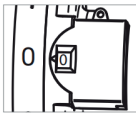
### Metering Station



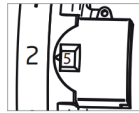
	DN	DN15	DN20	DN25
L (mm)	60	62	68	
H (mm)	57	60	64	
G	1/2"	3/4"	1"	

### Setting the valve

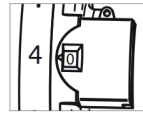
Valve closed



Valve set at 2.5



Valve fully open



### Verification of the flow

In general, the flow rate in a system can be verified in two ways:

1. Direct flow rate verification in a circuit
2. Measurement of the differential pressure across the balancing valve or metering station.

#### 1. Direct flow rate verification

For example, this can be carried out by ultrasonic equipment. On the basis of the measured velocity of the flow and the pipe dimension, the software will compute the flow rate. The use of ultrasonic verification requires free access to the pipes as the sensors are fitted directly to the pipe.

#### 2. Measurement of the differential pressure

In the case of balancing valves, such as the Albion FODRV, the differential pressure across the balancing valve or metering station is measured to verify the flow.

Use the flow graph on page 3 to determine the flow or use the data tables on page 4 to determine the Kv of the valve at the specific pre-setting. The formula below can be used to determine the flow from the measured  $\Delta P$ .

The following applies to all flow control valves:

$$Q = K_v \cdot \sqrt{\Delta p}$$

Q = Flow (m<sup>3</sup>/h)

Kv = Orifice area

$\Delta p$  = Differential pressure (Bar)

The Albion FODRV verifies the flow by measuring the differential pressure across the fixed orifice plate. The flow can be calculated using the formula above.

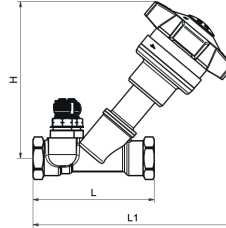
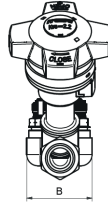
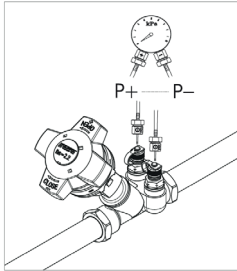
#### Flow calculation with other units

$Q = K_v \cdot 100 \cdot \sqrt{\Delta p}$	Q = l/h $\Delta p = \text{kPa}$
$Q = \frac{K_v}{36} \cdot \sqrt{\Delta p}$	Q = l/s $\Delta p = \text{kPa}$

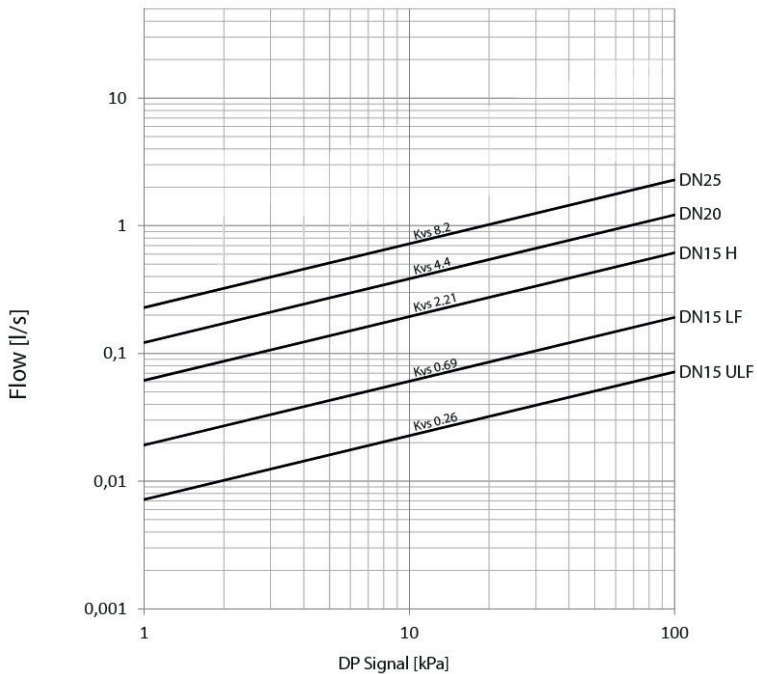
# EasyLink80 FODRV H Block complete with FODRV



Measurement of the differential pressure across the fixed orifice of the valve



DN	DN15 ULF	DN15 LF	DN15	DN20	DN25
L	87	87	87	96	100
L1	143	143	143	142	153
H	112	112	112	108	125
B	47	47	47	53	57
Kvs					
(For flow verification)	0.26	0.69	2.21	4.4	8.2
Kv (Total valve)	0.26	0.69	1.99	3.17	5.21
Kg	0.49	0.49	0.49	0.58	0.84



# EasyLink80 FODRV

## H Block complete with FODRV



Pre-set	DN15 ULF	DN15 LF	DN15	DN20	DN25
	Kv	Kv	Kv	Kv	Kv
0	0	0	0	0	0
0.1	0.03	0.08	0.07	0.04	0.24
0.2	0.06	0.16	0.15	0.08	0.48
0.3	0.09	0.23	0.22	0.12	0.72
0.4	0.12	0.31	0.30	0.16	0.96
0.5	0.15	0.39	0.37	0.20	1.20
0.6	0.15	0.43	0.45	0.28	1.38
0.7	0.16	0.46	0.53	0.36	1.56
0.8	0.17	0.50	0.60	0.43	1.73
0.9	0.17	0.53	0.68	0.51	1.91
1.0	0.18	0.57	0.75	0.59	2.09
1.1	0.18	0.58	0.81	0.66	2.21
1.2	0.19	0.60	0.87	0.74	2.32
1.3	0.19	0.61	0.93	0.82	2.44
1.4	0.20	0.62	0.99	0.89	2.56
1.5	0.20	0.63	1.04	0.97	2.67
1.6	0.21	0.64	1.07	1.03	2.75
1.7	0.21	0.64	1.10	1.08	2.82
1.8	0.21	0.65	1.13	1.14	2.90
1.9	0.22	0.65	1.16	1.19	2.98
2.0	0.22	0.66	1.19	1.25	3.05
2.1	0.22	0.66	1.23	1.30	3.18
2.2	0.23	0.67	1.28	1.36	3.31
2.3	0.23	0.67	1.32	1.42	3.45
2.4	0.23	0.67	1.37	1.48	3.58
2.5	0.24	0.68	1.41	1.54	3.71
2.6	0.24	0.68	1.47	1.65	3.84
2.7	0.24	0.68	1.53	1.76	3.98
2.8	0.24	0.68	1.60	1.87	4.11
2.9	0.25	0.68	1.66	1.97	4.25
3.0	0.25	0.69	1.72	2.08	4.38
3.1	0.25	0.69	1.76	2.21	4.49
3.2	0.25	0.69	1.80	2.34	4.61
3.3	0.25	0.69	1.84	2.46	4.72
3.4	0.25	0.69	1.88	2.59	4.83
3.5	0.25	0.69	1.92	2.72	4.94
3.6	0.26	0.69	1.94	2.81	5.00
3.7	0.26	0.69	1.95	2.90	5.05
3.8	0.26	0.69	1.96	2.99	5.10
3.9	0.26	0.69	1.97	3.08	5.16
4.0	0.26	0.69	1.99	3.17	5.21

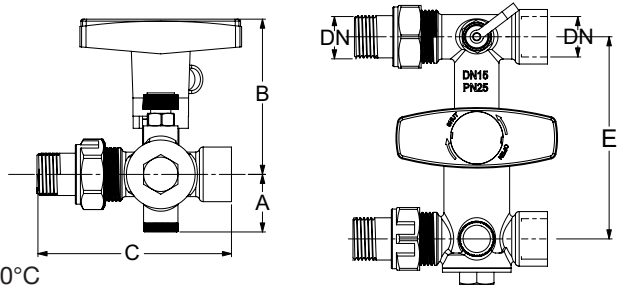
# Monolink

## H Block Screwed



### Features

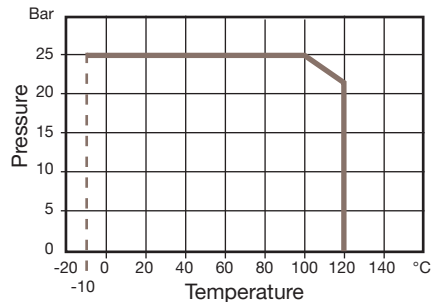
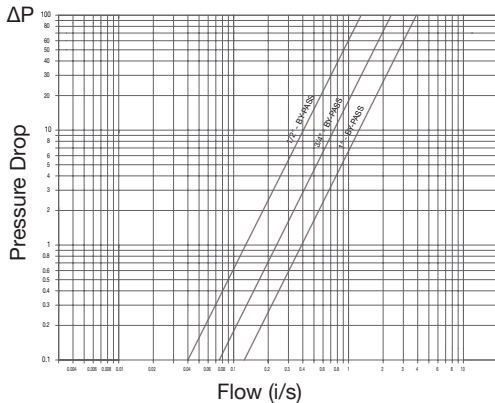
- Screwed BSP F X Union Male
- Body DZR Brass EN12165 - CW602N-M
- Tested to EN12266-1:2012
- Complete with test point and air vent
- 5 year guarantee



### Technical data

Max pressure: 25 Bar  
Working temp: -10°C to +120°C

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"
Ø	15	20	25	32	46
A	29	33	35	37.5	37.5
B	77	81	85	85	85
C	96	119	143	157	165
E	100	100	150	175	175
Kgs	0.79	1.17	1.58	2.86	3.50



V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# Monolink 25

## H Block complete with ART 25

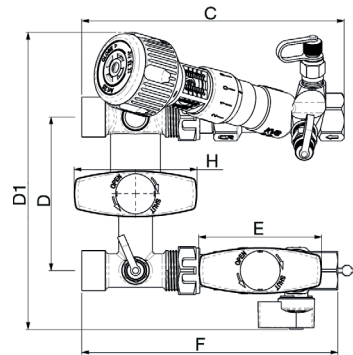
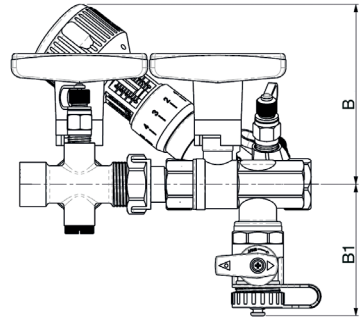


### Features

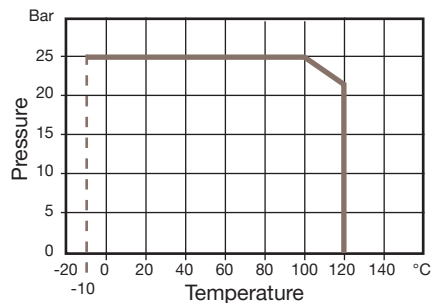
- BSP Connections
- Material DZR Brass EN12165 - CW602N-M
- Tested in accordance with EN 12266-1:2012
- 5 year guarantee

### Technical data

Max pressure: 25 Bar  
Working temp: -10°C to +120°C



DN	1/2"	3/4"	1"
Ø	15	20	25
B	106	122	132
B1	77	81	91
C	171	202	241
D	100	100	150
D1	193	201	253
E	80	80	80
F	167	197	243
H	80	80	80



### Part Name

ART 25	FODRV
ART 731	H Block
ART 630	Ball valve, strainer and drain cock

# Monolink 20C

## H Block complete with ART 20C PICV

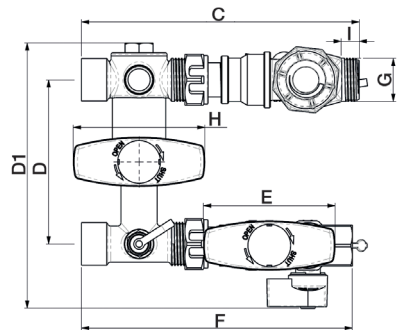
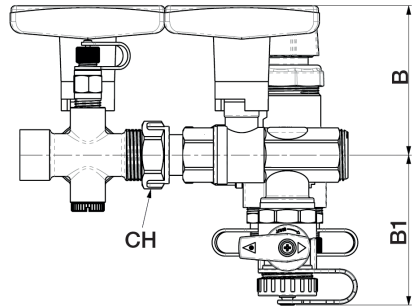


### Features

- Available in BSP
- Material DZR Brass EN12165 - CW602N-M
- Tested in accordance with EN 12266-1:2012
- Flow modulation along whole control actuator stroke (ART C21V, C22V, C23E)
- 5 year guarantee

### Technical data

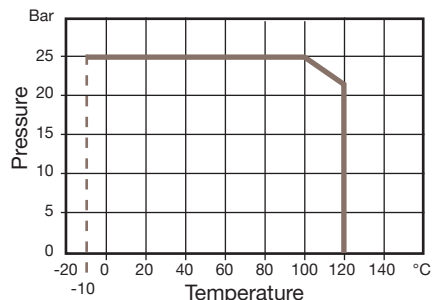
Max pressure: 25 Bar  
Working temp: -10°C to +120°C



Monolink Size	1/2"	1/2"	3/4"	1"
PICV Size (20C)	DN10	DN15	DN20	DN25
External Thread (G)	1/2"	3/4"	1"	1 1/4"
B	77	77	84	84
B1	77	77	81	93
CH				
C	163	169	218	257
D	100	100	100	150
D1	162	162	164	216
E	80	80	80	80
F	165	165	197	240
H	80	80	80	80
I	8.5	11	12	13

### Part Name

ART 20C	PICV
ART 731	H Block
ART 630	Ball valve, strainer and drain cock
ART C21V/C22V/C23E	Control Actuator



V1. Dimensions in mm

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# Monolink 20

## H Block complete with ART 20 PICV

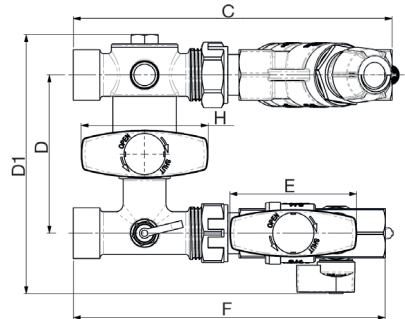
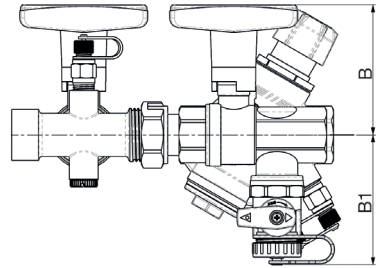


### Features

- Available in BSP
- Material DZR Brass EN12165 - CW602N-M
- Tested in accordance with EN 12266-1:2012
- Flow modulation along whole control actuator stroke (ART C21V, C22V, C23E)
- 5 year guarantee

### Technical data

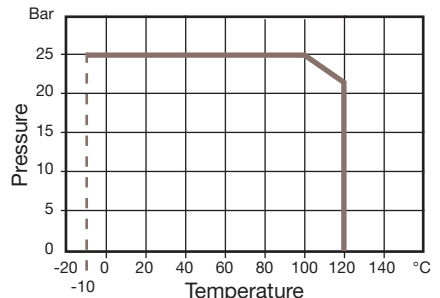
Max pressure: 25 Bar  
Working temp: -10°C to +120°C



Monolink Size	1/2"	3/4"	1"	1 1/4"	1 1/2"
PICV Size (20)	DN15	DN20	DN25	DN32	DN40
B	79	81	85	95	119
B1	79	81	91	120	129
C	189	201	231	270	294
D	100	100	150	175	175
D1	161	164	216	242	249
E	80	80	80	95	110
F	167	197	240	357	388
H	80	80	80	80	80

### Part Name

ART 20	PICV
ART 731	H Block
ART 630	Ball valve, strainer and drain cock
ART C21V/C22V/C23E	Control Actuator



V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# Monolink 22

## H Block complete with ART 22

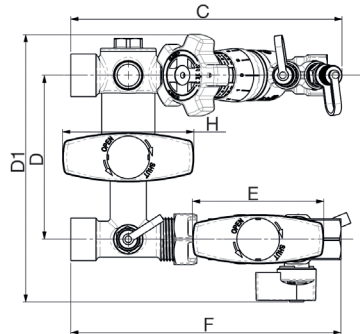
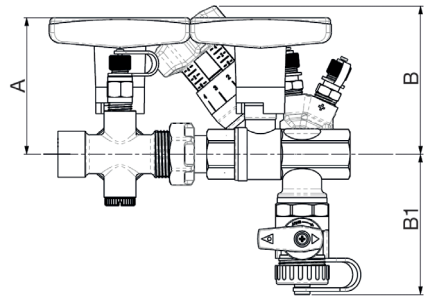


### Features

- Available in BSP
- Material DZR Brass EN12165 - CW602N-M
- Tested in accordance with EN 12266-1:2012
- 5 year guarantee

### Technical data

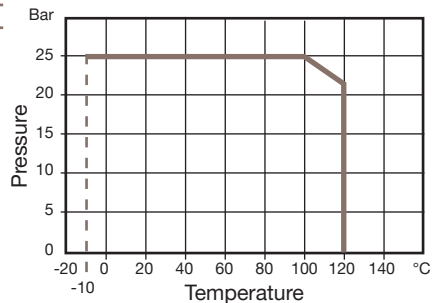
Max pressure: 25 Bar  
 Working temp: -10°C to +120°C



Monolink Size	1/2"	1/2"	1/2"	3/4"	1"
Valve Size	DN15 L	DN15 ML	DN15	DN20	DN25
A	77	77	77	81	85
B	83	83	83	82	84
B1	79	79	79	83	93
C	165	165	165	197	229
D	100	100	100	100	150
D1	163	163	163	164	217
E	80	80	80	80	80
F	165	165	165	199	240
H	80	80	80	80	80

### Part Name

ART 22	FODRV
ART 731	H Block
ART 630	Ball valve, strainer and drain cock





# Monolink 23/27

## H Block complete with ART 23/27

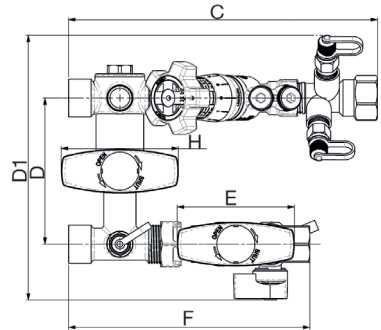
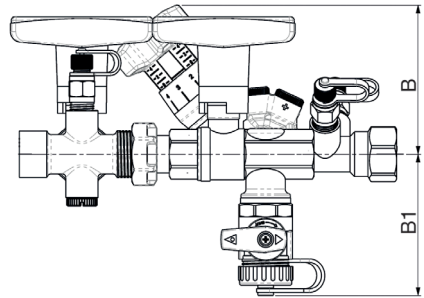


### Features

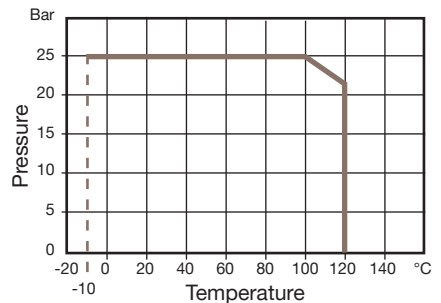
- Available in BSP
- Material DZR Brass EN12165 - CW602N-M
- Tested in accordance with EN 12266-1:2012
- 5 year guarantee

### Technical data

Max pressure: 25 Bar  
 Working temp: -10°C to +120°C



Monolink Size	1/2"	1/2"
DN	DN15 UUL	DN15 UL
B	83	83
B1	79	79
C	211	211
D	100	100
D1	181	181
E	80	80
F	165	165
H	80	80



Part Name	
ART 23	DRV
ART 27	Orifice Plate
ART 731	H Block
ART 630	Ball valve, strainer and drain cock

V1. Dimensions in mm

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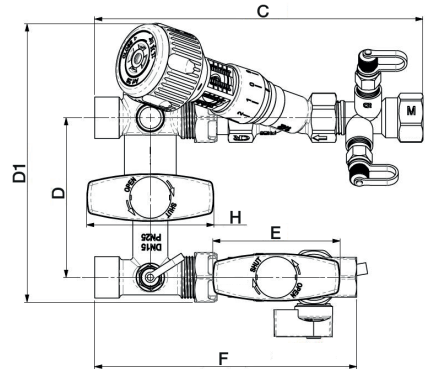
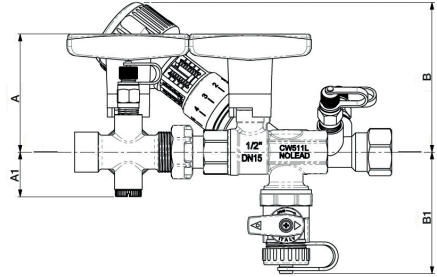
# Monolink 26/27

## H Block complete with ART 26/27



### Features

- Available in BSP Parallel
- Material DZR Brass EN12165 - CW602N-M
- Tested in accordance with EN 12266-1:2012
- 5 year guarantee



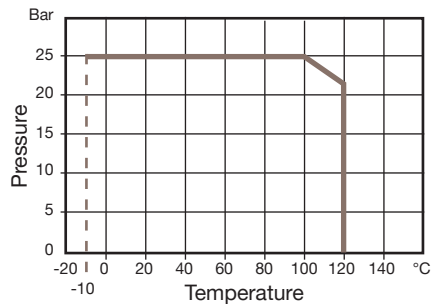
### Technical data

Max pressure: 25 Bar  
Working temp: -10°C to +120°C

Monolink Size	1/2"	1/2"	1/2"	1/2"
DN	DN15M	DN15L	DN15UL	DN15UUL
A	76.8	76.8	76.8	76.8
A1	29	29	29	29
B	97.4	97.4	97.4	97.4
B1	79	79	79	79
C	206.4	206.4	206.4	206.4
D	100	100	100	100
D1	174.3	174.3	174.3	174.3
E	80	80	80	80
F	164.7	164.7	164.7	164.7
H	80	80	80	80

### Part Name

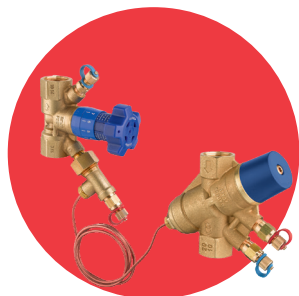
ART 731	H Block
ART 630	Ball valve, strainer and drain cock
ART 26	Balancing valve
ART 27	Orifice Plate



V1. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 24 & 28DP PN16 DPCV & Partner Valve



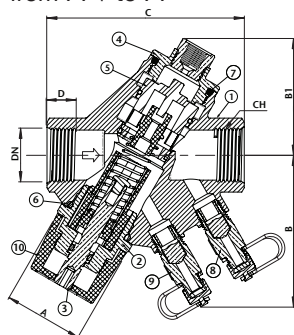
## Features

- BSP Parallel (ART 24 ISO 228/1), (ART 28DP ISO 7/1)
- Impulse tube connection point for ART 24 DPCV
- Supplied as shown with fitting and measuring nipples
- Handwheel shut-off function and clear 360° reading
- Allen key locking mechanism enabling valve to be closed and re-opened to its exact pre-set position
- Conforms to BS 7350 / BS 5154
- System  $\Delta P$  is measured from PF- to P+  
System flow may be adjusted on ART 28DP whilst measuring  $\Delta P$  from PF+ to PF-



## Technical data

Max pressure: 16 Bar  
Working temp: -10°C to +120°C  
Max Differential Pressure: 400kPa

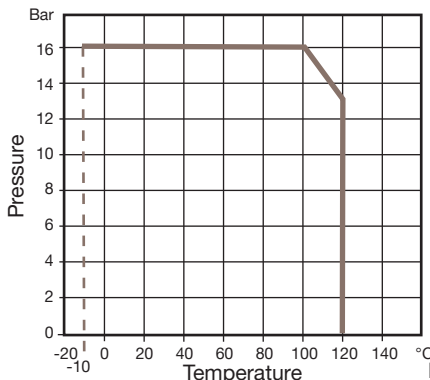


DN	15 Low $\Delta P$	15 High $\Delta P$	20 Low $\Delta P$	20 High $\Delta P$	25 Low $\Delta P$	25 High $\Delta P$	32 High $\Delta P$	40 High $\Delta P$	50 High $\Delta P$
A	40		40	40	50	50	50	65	65
B	70		72	72	91	91	91	98	105
B1	57		57	57	74	74	74	85	90
C	95.5	See ART	96.5	96.5	132	132	132	144.5	155
D	11.5		12.5	12.5	14.5	14.5	16.5	16.5	20
CH	27	24C	32	32	39	39	47	54	68
Flow (l/s)	0.014- 0.167	data- sheet	0.028- 0.278	0.042- 0.556	0.167- 0.694	0.194- 1.167	0.278- 1.389	0.833- 2.222	1.389- 4.167
$\Delta P$ vers (kPa)	5-30		5-30	20-60	5-30	20-60	20-80	20-80	20-80
Kvs	3.6		4	4	9.5	9.5	11.4	16.4	17.9
Kgs	0.83		0.88	0.88	1.54	1.54	1.63	2.48	2.97

## N. Part Name

## Materials

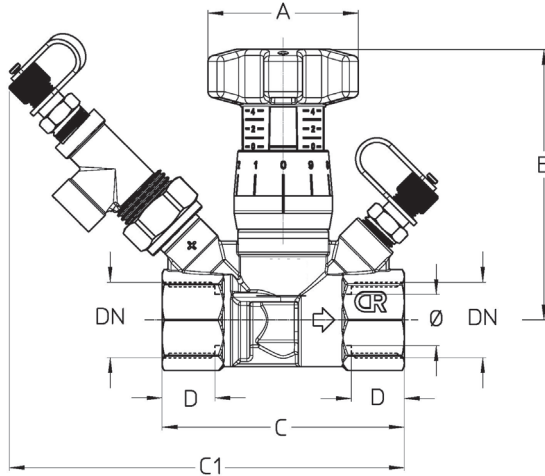
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem	DZR Brass CW602N-M
4	Screwed End	DZR Brass CW602N-M
5	Differential Pressure Cartridge	DZR Brass CW602N-M
6	O-Ring	EPDM
7	O-Ring	EPDM
8	Blue Binder Point	DZR Brass CW602N-M
9	Red Binder Point	DZR Brass CW602N-M
10	Cap	Plastic



V1. Dimensions in mm

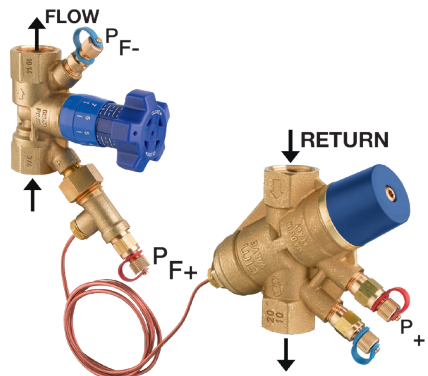
This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 24 & 28DP PN16 DPCV & Partner Valve

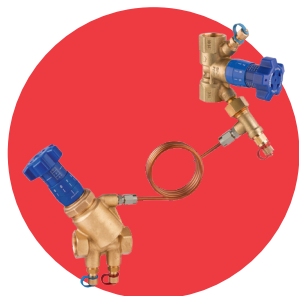


DN	15	20	25	32	40	50
A	50	50	50	50	50	50
B	87.5	89.5	91.5	99.0	99.0	100.0
C	77	80	87	108	115	124
C1	139	140	142	157	163	166
D	17.0	18.5	21.0	22.5	23.0	26.5
CH	25	31	38	48	55	66
Thread	½" Rp	¾" Rp	1" Rp	1¼" Rp	1½" Rp	2" Rp
Kv	1.75	2.87	4.08	6.71	10.40	15.06
Kgs	0.50	0.56	0.63	1.05	1.24	1.47

Part Name	Materials
Body	DZR Brass CW602N-M
Bonnet	DZR Brass CW602N-M
Stem	DZR Brass CW602N-M
Gasket	EPDM
Shutter	DZR Brass CW602N-M
Handwheel	Nylon 6
Screw	DZR Brass CW602N-M
O-Ring	EPDM
Binder Point	DZR Brass CW602N-M



# ART 24C & 28DP PN16 DPCV & Partner Valve



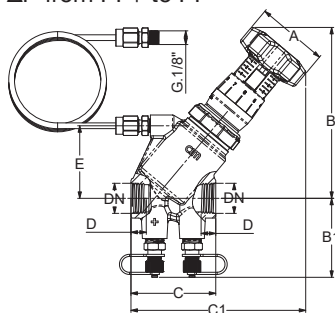
## Features

- BSP Parallel (ART 24C ISO 228/1), (ART 28DP ISO 7/1)
- Impulse tube connection point for ART 24C DPCV
- Supplied as shown with fitting and measuring nipples
- Handwheel shut-off function and clear 360° reading
- Allen key locking mechanism enabling valve to be closed and re-opened to its exact pre-set position
- Conforms to BS 7350 / BS 5154
- System  $\Delta P$  is measured from PF- to P+  
System flow may be adjusted on ART 28DP whilst measuring  $\Delta P$  from PF+ to PF-



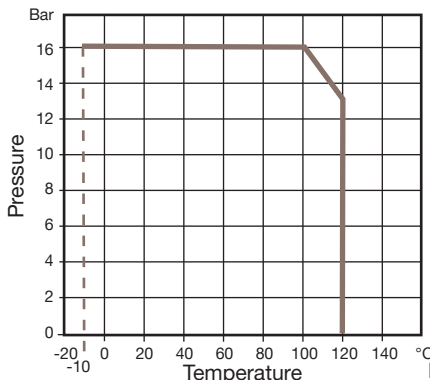
## Technical data

Max pressure: 16 Bar  
Working temp: -10°C to +120°C  
Max Differential Pressure: 400kPa



DN	15 Low $\Delta P$	20 Low $\Delta P$	25 Low $\Delta P$	15 High $\Delta P$	20 High $\Delta P$	25 High $\Delta P$
A	50	50	50	50	50	50
B	119	119	119	119	119	119
B1	55	55	55	55	55	55
C	59	66	72	59	66	72
C1	122	124	131	122	124	131
D	12	13	13.5	12	13	13.5
E	50	50	50	50	50	50
CH	25	31	41	25	31	41
Flow (l/s)	0.021-0.167	0.028-0.347	0.139-0.694	0.042-0.306	0.042-0.556	0.194-0.694
$\Delta P$ vers (kPa)	5-30	5-30	5-30	20-60	20-60	20-60
Kv	4.1	4.9	5.0	4.1	4.9	5.0
Kgs	0.87	0.90	1.03	0.87	0.90	1.03

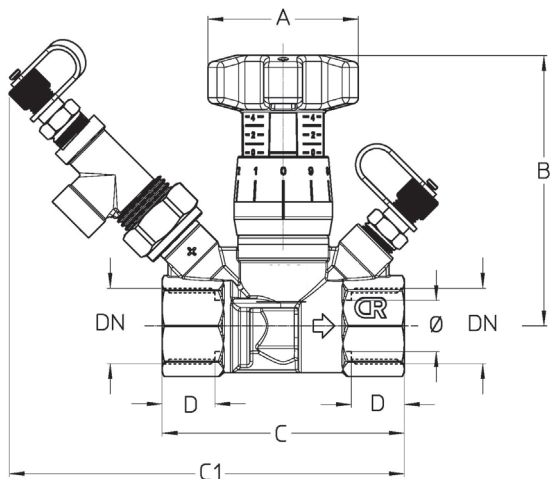
Part Name	Materials
Body	DZR Brass CW602N-M
Bonnet	DZR Brass CW602N-M
Stem	DZR Brass CW602N-M
Screwed End	DZR Brass CW602N-M
Differential Pressure Cartridge	DZR Brass CW602N-M
O-Ring	EPDM
O-Ring	EPDM
Blue Binder Point	DZR Brass CW602N-M
Red Binder Point	DZR Brass CW602N-M
Cap	Plastic



V1. Dimensions in mm

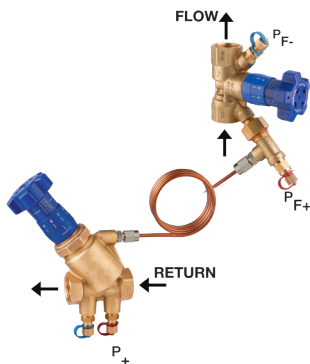
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# ART 24C & 28DP PN16 DPCV & Partner Valve



DN	15	20	25	32	40	50
A	50	50	50	50	50	50
B	87.5	89.5	91.5	99.0	99.0	100.0
C	77	80	87	108	115	124
C1	139	140	142	157	163	166
D	17.0	18.5	21.0	22.5	23.0	26.5
CH	25	31	38	48	55	66
Thread	½" Rp	¾" Rp	1" Rp	1¼" Rp	1½" Rp	2" Rp
Kv	1.75	2.87	4.08	6.71	10.40	15.06
Kgs	0.50	0.56	0.63	1.05	1.24	1.47

Part Name	Materials
Body	DZR Brass CW602N-M
Bonnet	DZR Brass CW602N-M
Stem	DZR Brass CW602N-M
Gasket	EPDM
Shutter	DZR Brass CW602N-M
Handwheel	Nylon 6
Screw	DZR Brass CW602N-M
O-Ring	EPDM
Binder Point	DZR Brass CW602N-M



# ART 241

## PN16 Differential Pressure Control Valve (DPCV)

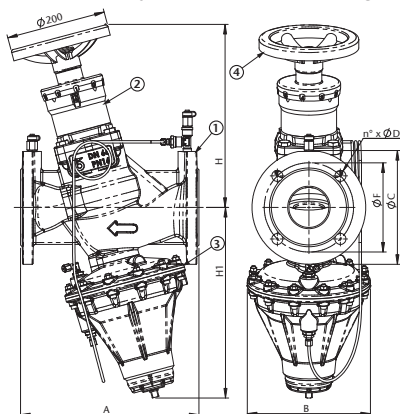


### Features

- Cast Iron EN GJL 250, Flanged EN 1092-1, F-F EN 558-1
- Flow measurement function. No need for separate commissioning station partner valve
- Isolation valve function
- Differential pressure can be set and adjusted in situ
- Reduction of commissioning, improved energy saving
- Phased installation and system future-proofing

### Technical data

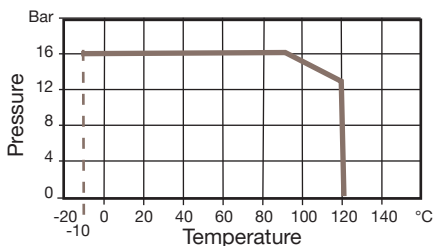
Max pressure: 16 Bar  
 Working temp: -10°C to +120°C  
 Differential pressure range: 16 Bar (1600 kPa)



DN	65 Low ΔP	65 High ΔP	80 Low ΔP	80 High ΔP	100 Low ΔP	100 High ΔP	125 Low ΔP	150 Low ΔP
H1	310	310	400	400	414	414	436	460
H	305	305	316	316	326	326	367	381
A	290	290	310	310	350	350	400	480
B	200	242	242	242	242	242	242	242
F	145	145	160	160	180	180	210	240
n x D	4x18	4x18	8x18	8x18	8x18	8x18	8x18	8x22
C	185	185	200	200	220	220	250	285
Kgs	24.2	24.2	30.6	30.6	36.1	36.1	51	80
Flow (l/s)	0.278 - 20.833	0.556 - 20.833	0.334 - 23.611	0.834 - 27.777	0.471 - 33.333	0.834 - 41.667	0.834 - 47.222	1.111 - 63.889
ΔP vers (kPa)	20-80	80-160	20-80	80-160	20-80	80-160	20-80	20-80
Kvs	47.6	47.6	70.0	70.0	105.5	105.5	139	191

### N. Part Name Materials

1	Body	EN GJL250
2	Regulator	CW617N
3	Diaphragm	EPDM
4	Handwheel	Carbon Steel, Epoxy Coated



V1. Dimensions in mm

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# ART 34NPT

## Thermostatic Mixing Valve (TMV)



### Features

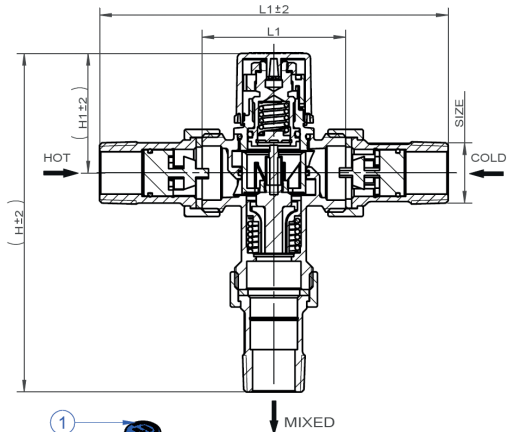
- Cold water supply temperature 4.4°C - 26.6°C
- Hot water supply temperature 48.8°C - 82.2°C
- Temperature adjustment range 30°C - 49°C
- Working temperature range 38°C - 44°C
- Factory temperature setting 41°C ±2°C
- Mix temperature stability 1.7°C
- Max supply pressure 125psi
- Temperature differential 11°C
- Maximum temperature 90°C
- Flow rate minimum 4 litres/min (1gpm)
- ASSE 1017 Approved



### Technical data

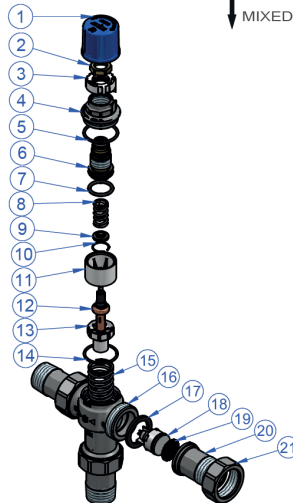
Max supply pressure 125psi  
Temp adjustment range 30°C to 49°C

DN	1/2"	3/4"
H	136.2	143.7
H1	50.1	50.7
L	135	146
L1	59	61
Kgs	0.56	0.76



### N. Part Name Materials

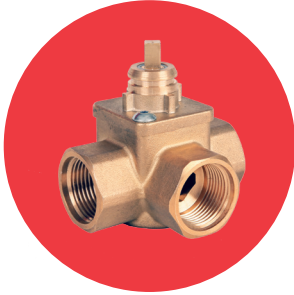
1	Cap	ABS
2	Locking Cap	Brass CW617N
3	Locating Ring	POM+25%GF
4	Bonnet	Brass C46500
5	O-Ring	EPDM WRAS approved
6	Stem	Brass C46500
7	O-Ring	EPDM WRAS approved
8	Spring	Stainless Steel 304
9	Block	Brass C46500
10	Circlip	Stainless Steel 304
11	Piston	PSU
12	Thermostat Assembly	
13	Water Flow Directors	PSU
14	O-Ring	EPDM WRAS approved
15	Spring	Stainless Steel 304
16	Valve Body	Brass C46500
17	Gasket	EPDM WRAS approved
18	Check Valve	Acetal
19	Strainer	Stainless Steel 304
20	Connect Pipe	Brass C46500
21	Union Nut	Brass CW617N





# CRM

## 3 Port Rotary Control Brass Valve

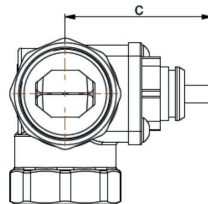
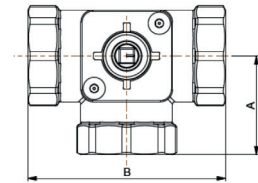


### Features

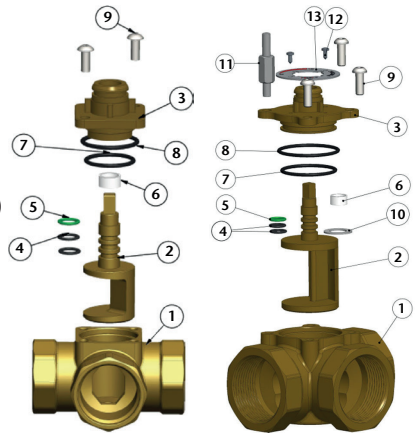
- BSP Parallel (ISO 7/1)
- 3-way valve suitable for mixing or diverting
- Designed to suit CLIP system actuators CRV(E)
- Max working pressure 10 bar
- Suitable for heating or cooling applications
- Spindle groove identifies rotor position
- Max spindle operating torque <2Nm

### Technical data

Max pressure: 10 Bar  
 Working temp: -10°C to +110°C  
 Differential pressure range: Mixing 100kPa (1 Bar)  
 Diverting 200kPa (2 Bar)



### DN15-DN25      DN32-DN50



DN	15	20	25	32	40	50
Type	1/2" CRM15 FFF	3/4" CRM15 FFF	1" CRM15 FFF	1 1/4" CRM32 FFF	1 1/2" CRM40 FFF	2" CRM50 FFF
A	36	36	41	47	53	60
B	72	72	82	94	106	120
C	45	45	45	48	65	66
Connection	Rp 1/2"	Rp 3/4"	Rp 1"	Rp 1 1/4"	Rp 1 1/2"	Rp 2"
Kvs	3	7	11	15	25	40
Kgs	0.49	0.55	0.59	0.92	1.62	2.20

N.	Part Name	Qty	Materials	N.	Part Name	Qty	Materials
1	Body	1	Brass CW617N	8	O-Ring 27x2.5	1	EPDM
2	Rotor	1	Brass CW617N	9 (DN15-25)	Screw M5X10	2	Steel / Zinc plated
3	Cover	1	Brass CW617N	9 (DN32-50)	Screw M6x16	3	Steel / Zinc plated
4	O-Ring 8.73x1.78	2	EPDM	10	Washer	1	PTFE
5	O-Ring 8.73x1.78	1	FKM	11	Spacer	1	Steel / Zinc plated
6	Washer	1	PTFE	12	Screw 2.9x6.5	2	DIN7981 A2k
7	O-Ring 23.3x2.4	1	EPDM	13	Index Plate	1	Al

V1. Dimensions in mm

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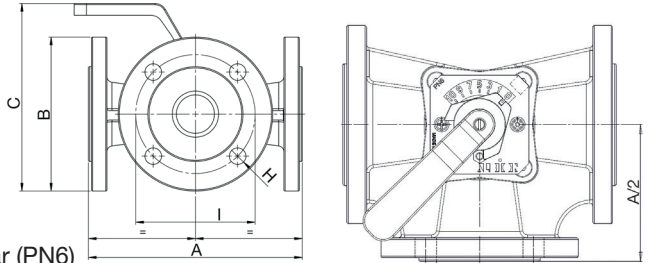
# CLRM

## 3 Port Flanged Rotary Mixing Valve



### Features

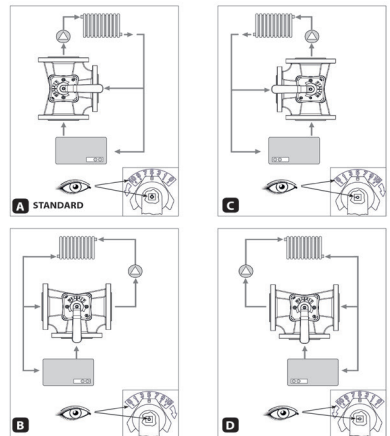
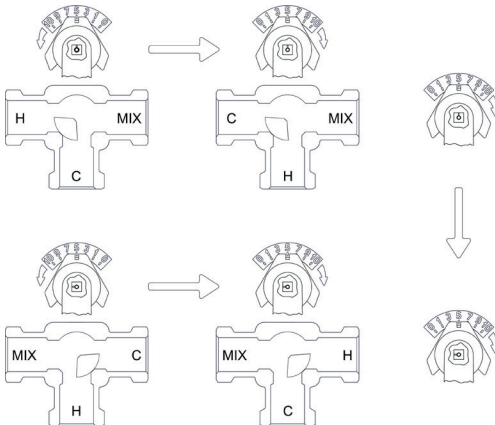
- Cast Iron body and plug (EN-GJL-250). Handle: ABS
- Hydraulic tightness: EPDM
- Manual or actuated operation
- Suitable fluids: Water, glycol water (max 30%)
- Connections: Flanged connections ISO 7005



### Technical data

Max Pressure: 6 Bar (PN6)  
 Working Temperature: -10°C to +110°C  
 Rotor's Rotation Angle: 90°  
 Leakage: DN40 - DN100 0.1% del Kvs  
 DN125 - DN150 0.5% del Kvs

DN	40	50	65	80	100	125	150
Kv	41	65	100	185	310	510	820
A	180	200	200	234	260	296	350
A/2	90	100	100	117	130	148	175
B	130	140	160	190	210	240	265
C	160	170	190	210	240	270	300
H	14	14	14	18	18	18	18
I	100	110	130	150	170	200	225
Hole N°	4	4	4	4	4	8	8
Kgs	7	9	11	15	22	34	50



V1. Dimensions in mm

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# CRV / CRE

## Actuator to fit Rotary CRM & CLRM Valves

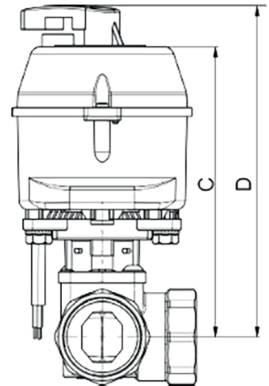
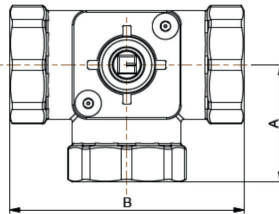


### Features

- Quick connection / release CLIP system utilised
- Synchronous motor with defined rotation direction
- CRV24 (24VAC) & CRV230 (230VAC) offers 3pt control
- CRE (24VAC) offers 0-10V, 4-20mA modulating control
- Auto / Man button with handle for manual operation
- Auxillary switches as standard on CRV
- 0-10VDC feedback signal as standard on CRE

### Technical data

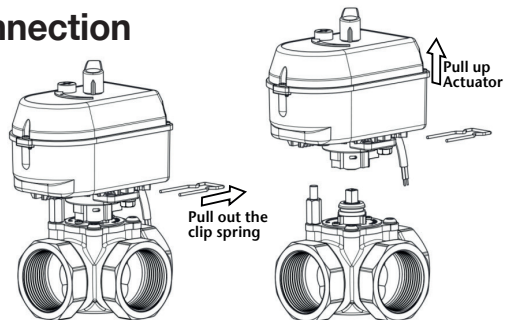
Max Torque: 15 Nm  
 Ingress Protection: IP44  
 Running Time: 73 sec / 90°



DN	15	20	25	32	40	50
Type	CRM15/3.0	CRM20/7.0	CRM25/11	CRM32/15	CRM40/25	CRM50/40
A	36	36	41	47	53	60
B	72	72	82	94	106	120
C	126	126	126	132	139	140
D	144	144	144	149	156	158
Connection	Rp 1/2"	Rp 3/4"	Rp 1"	Rp 1 1/4"	Rp 1 1/2"	Rp 2"
Kvs	3	7	11	15	25	40
Kgs	1.22	1.28	1.32	1.65	2.35	2.93

## Disconnection / Reconnection

For reconnection, insert clip spring into clip adapter on actuator and push actuator onto valve to hear 'click'.



V1. Dimensions in mm

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# ART 2115GB

## Fixed Orifice Regulating Wafer Butterfly Valve

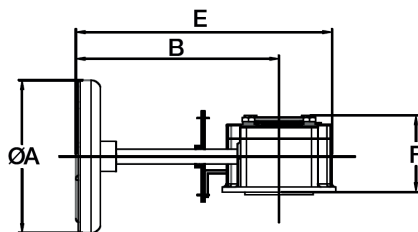
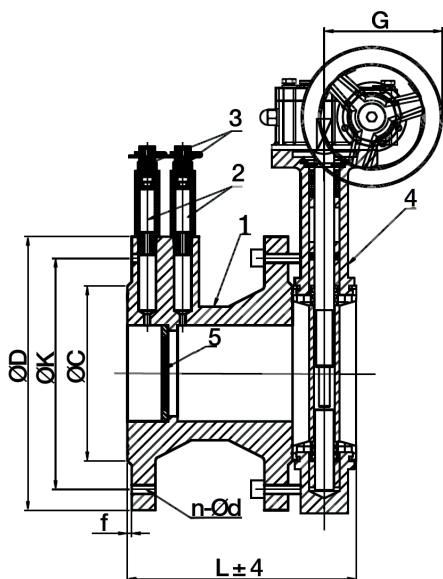


### Features

- Flange Mounting PN16 Only
- Position Indicator
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Supplied with 2 extended test points
- Gearbox has multiple lockable positions
- The ART 2115GB consists of an ART 115 Butterfly Valve coupled to a Fixed Orifice Flanged Metering Station to form a fixed orifice commissioning set with regulation and isolation capabilities
- Supplied fully assembled

### Technical data

Max Pressure: 16 Bar  
Working Temperature:  $-10^{\circ}\text{C}$  to  $+110^{\circ}\text{C}$



DN	50	65	80	100	125	150	200	250	300
ØD	165	185	200	220	250	285	340	405	460
ØK	125	145	160	180	210	240	295	355	410
ØC	99	118	132	156	184	211	266	319	370
f	3	3	3	3	3	3	3	3	4
Ød	19	19	19	19	19	23	23	28	28
n	4	4	8	8	8	8	12	12	12
L	150	156	176	165	195	202	238	275	295
ØA	122	122	122	122	122	122	200	200	200
B	161	161	161	161	161	161	194	194	194
E	210	210	210	210	210	210	260	260	260
F	61	61	61	61	61	61	72	72	72
G	104	104	104	104	104	104	158	158	158
Kv	60	112	175	314	461	662	1161	1705	2647
Kvs	47.5	88.5	125	228	328.8	477.5	826	1218	1794
Kgs	11.8	13.4	16.8	18.8	25.0	31.0	49.2	72.0	94.0

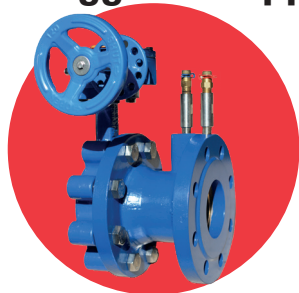
N.	Part Name	Materials
1	Metering Station	Cast Iron GG25
2	Extension	Stainless Steel 304
3	Test Point	Brass
4	Butterfly Valve	Ductile Iron GGG40
5	Fixed Orifice	Brass

V1. Dimensions in mm

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# ART 2135GB

## Fixed Orifice Regulating Lugged & Tapped Butterfly Valve

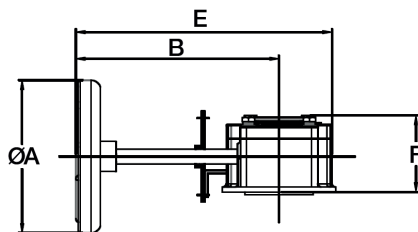
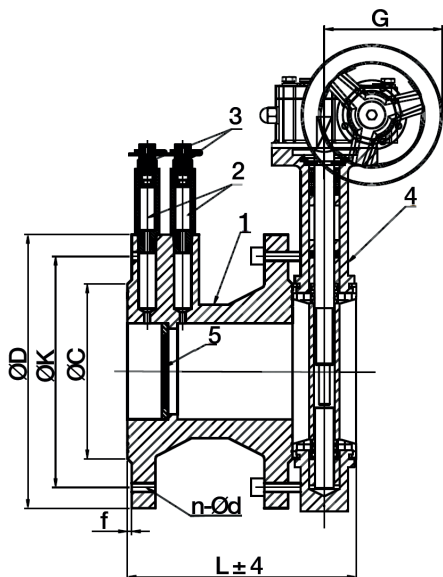


### Features

- Flange Mounting PN16 Only
- Position Indicator
- Fixed orifice with  $\pm 5\%$  flow measurement accuracy
- Supplied with 2 extended test points
- Gearbox has multiple lockable positions
- The ART 2135GB consists of an ART 135 Butterfly Valve coupled to a Fixed Orifice Flanged Metering Station to form a fixed orifice commissioning set with regulation and isolation capabilities
- Supplied fully assembled

### Technical data

Max Pressure: 16 Bar  
Working Temperature:  $-10^{\circ}\text{C}$  to  $+110^{\circ}\text{C}$



N.	Part Name	Materials
1	Metering Station	Cast Iron GG25
2	Extension	Stainless Steel 304
3	Test Point	Brass
4	Butterfly Valve	Ductile Iron GGG40
5	Fixed Orifice	Brass

DN	50	65	80	100	125	150	200	250	300
ØD	165	185	200	220	250	285	340	405	460
ØK	125	145	160	180	210	240	295	355	410
ØC	99	118	132	156	184	211	266	319	370
f	3	3	3	3	3	3	3	3	4
Ød	19	19	19	19	19	23	23	28	28
n	4	4	8	8	8	8	12	12	12
L	150	156	176	165	195	202	238	275	295
ØA	122	122	122	122	122	122	200	200	200
B	161	161	161	161	161	161	194	194	194
E	210	210	210	210	210	210	260	260	260
F	61	61	61	61	61	61	72	72	72
G	104	104	104	104	104	104	158	158	158
Kv	60	112	175	314	461	662	1161	1705	2647
Kvs	47.5	88.5	125	228	328.8	477.5	826	1218	1794
Kgs	12.6	14.3	18.7	21.0	27.7	34.2	53.1	77.4	97.7

V1. Dimensions in mm

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# ART 195 PN16

## PN16 Cast Iron Suction Diffuser

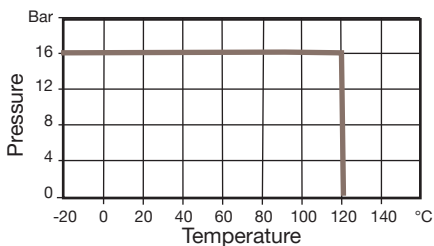


### Features

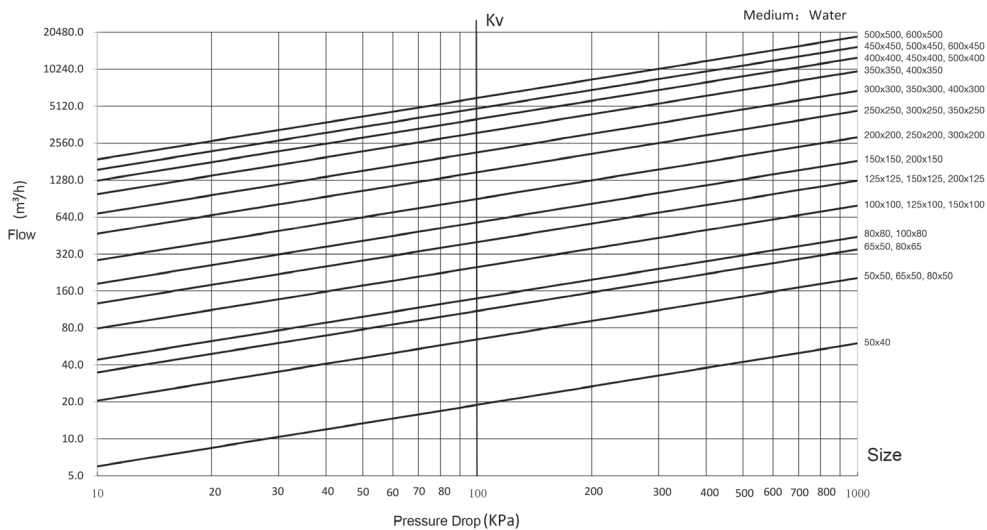
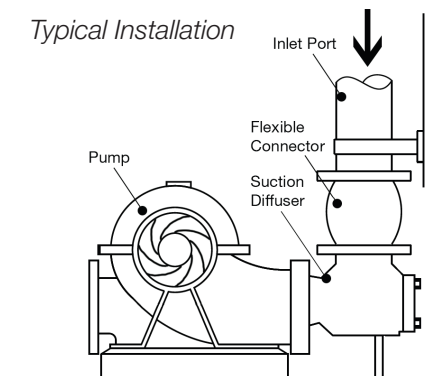
- Designed for suction side of pump installations
- Prevents debris and foreign materials entering the pump
- Low pressure drop
- Available with reduced and equal inlet / outlets
- Flange conforms to BS EN1092 PN16
- Available Flanged PN25

### Technical data

Max Pressure: 16 Bar  
 Working Temperature: -20°C to +120°C



### Typical Installation



V1. Dimensions in mm

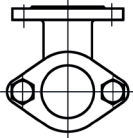
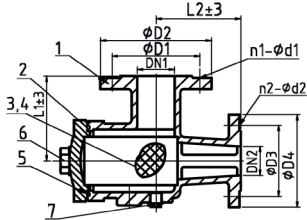
This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

# ART 195 PN16

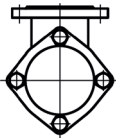
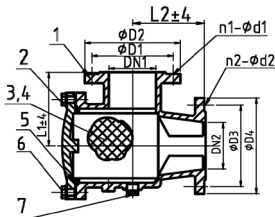
## PN16 Cast Iron Suction Diffuser



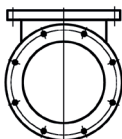
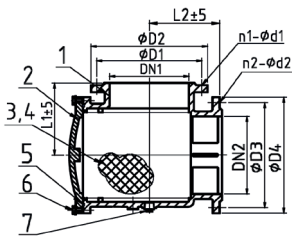
DN50 x DN40 - DN100 x DN100



DN125 x DN100, DN125 x DN125,  
DN150 x DN100 & DN200 x DN125



DN150 x DN125, DN150 x DN150 &  
DN200 x DN150+



DN1xDN2	ØD1	ØD2	N1-ØD1	ØD3	ØD4	N2-ØD2	L1	L2	Kgs
50x40	125	165	4-19	110	150	4-19	114.4	114.4	12
50x50	125	165	4-19	125	165	4-19	114.4	114.4	14.5
65x50	145	185	4-19	125	165	4-19	126.5	126.5	18
65x65	145	185	4-19	145	185	4-19	126.5	126.5	20
80x50	160	200	8-19	125	165	4-19	139.7	114	17
80x65	160	200	8-19	145	185	4-19	140.1	140.1	25
80x80	160	200	8-19	160	200	8-19	140.1	140.1	26
100x80	180	220	8-19	160	200	8-19	165	165	36
100x100	180	220	8-19	180	220	8-19	165	165	40
125x100	210	250	8-19	180	220	8-19	191.5	191.5	51
125x125	210	250	8-19	210	250	8-19	191.5	191.5	53
150x100	240	285	8-23	180	220	8-19	203	165	58
150x125	240	285	8-23	210	250	8-19	203	203	65
150x150	240	285	8-23	240	285	8-23	203	203	68
200x125	295	340	12-23	210	250	8-19	192	229	60
200x150	295	340	12-23	240	285	8-23	228.6	203	88
200x200	295	340	12-23	295	340	12-23	229	229	120
250x200	355	405	12-28	299.5	340	12-23	279.4	229	130
250x250	355	405	12-28	355	405	12-28	279	279	145
300x200	410	460	12-28	295	340	12-23	280	280	175
300x250	410	460	12-28	355	405	12-28	304.8	279	220
300x300	410	460	12-28	410	460	12-28	304.8	304.8	250
350x250	470	520	16-28	355	405	12-28	318	328	270
350x300	470	520	16-28	410	460	12-28	318	328	280
350x350	470	520	16-28	470	520	16-28	318	328	292
400x300	525	580	16-31	410	460	12-28	334	364	315
400x350	525	580	16-31	470	520	16-28	334	364	335
400x400	525	580	16-31	525	580	16-31	334	364	360
450x350	585	640	20-31	470	520	16-28	370	389	375
450x400	585	640	20-31	525	580	16-31	370	389	397
450x450	585	640	20-31	585	640	20-31	370	389	410
500x400	650	715	20-34	525	580	16-31	406	428	497
500x450	650	715	20-34	585	640	20-31	406	428	512
500x500	650	715	20-34	650	715	20-34	406	428	530
600x450	770	840	20-37	585	640	20-31	470	480	745
600x500	770	840	20-37	650	715	20-34	470	480	760
600x600	770	840	20-37	770	840	20-37	470	480	775

N.	Part Name	Materials
1	Body	Cast Iron
2	Cover	Cast Iron
3	Screen	Stainless Steel 304
4	Woven Mesh	Stainless Steel 304
5	O-Ring	EDPM
6	Bolt	Carbon Steel
7	Plug	Carbon Steel

# ART 195 ANSI

## ANSI 125 Cast Iron Suction Diffuser

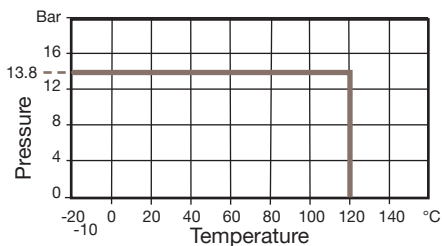


### Features

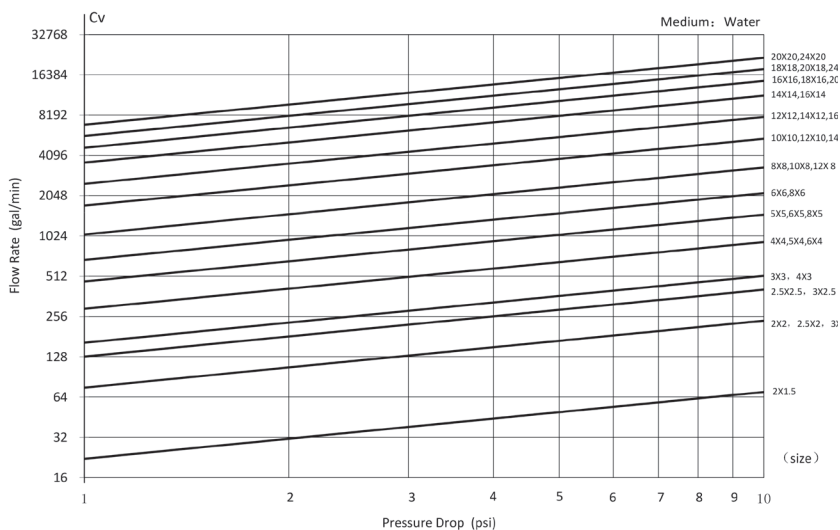
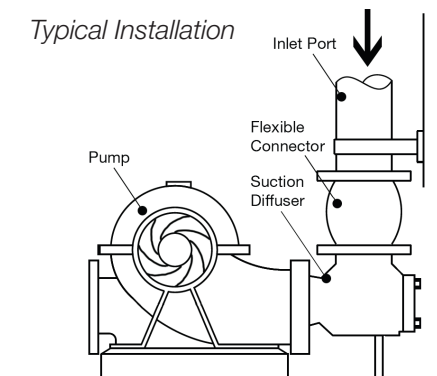
- Designed for suction side of pump installations
- Prevents debris and foreign materials entering the pump
- Low pressure drop
- Available with reduced and equal inlet / outlets
- Flanged ANSI 125 (B16.1)

### Technical data

Max Pressure: 13.8 Bar  
 Working Temperature: -20°C to +120°C



### Typical Installation



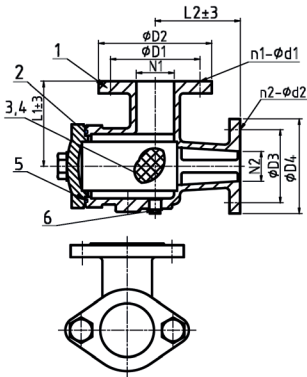


# ART 195 ANSI

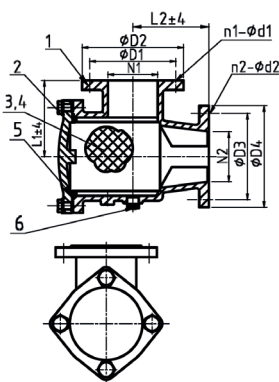
## ANSI 125 Cast Iron

### Suction Diffuser

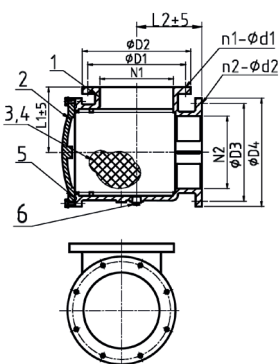
2" x 1.5" - 4" x 4"



5" x 4", 5" x 5", 6" x 4" & 8" x 5"



6" x 5", 6" x 6" & 8" x 6"+



DN1xDN2	ØD1	ØD2	N1-ØD1	ØD3	ØD4	N2-ØD2	L1	L2	Kgs
2x1.5	120.5	152	4-19	98	127	4-16	114.4	114.4	12
2x2	120.5	152	4-19	120.5	152	4-19	114.4	114.4	14.5
2.5x2	140	178	4-19	120.5	152	4-19	126.5	126.5	18
2.5x2.5	140	178	4-19	140	178	4-19	126.5	126.5	20
3x2	152.5	191	4-19	120.5	152	4-19	139.7	114	17
3x2.5	152.5	191	4-19	140	178	4-19	140.1	140.1	25
3x3	152.5	191	4-19	152.5	191	4-19	140.1	140.1	26
4x3	190.5	229	8-19	152.5	191	4-19	165	165	36
4x4	190.5	229	8-19	190.5	229	8-19	165	165	40
5x4	216	254	8-22	191	229	8-19	191.5	191.5	51
5x5	216	254	8-22	216	254	8-22	191.5	191.5	53
6x4	241.5	279	8-22	190.5	229	8-19	203	165	58
6x5	241.5	279	8-22	216	254	8-22	203	203	65
6x6	241.5	279	8-22	241.5	279	8-22	203	203	68
8x5	298.5	343	8-22	216	254	8-22	192	229	60
8x6	298.5	343	8-22	241.5	279	8-22	228.6	203	88
8x8	298.5	343	8-22	298.5	343	8-22	229	229	120
10x8	362	406	12-25.4	298.5	343	8-22	279.4	229	130
10x10	362	406	12-25.4	362	406	12-25.4	279	279	145
12x8	432	483	12-25.4	298.5	343	8-22	280	280	175
12x10	432	483	12-25.4	362	406	12-25.4	304.8	279	220
12x12	432	483	12-25.4	432	483	12-25.4	304.8	304.8	250
14x10	476	533	12-29	362	406	12-25.4	318	328	270
14x12	476	533	12-29	432	483	12-25.4	318	328	280
14x14	476	533	12-29	476	533	12-29	318	328	292
16x12	539.5	597	16-29	432	483	12-25.4	334	364	315
16x14	539.5	597	16-29	476	533	12-29	334	364	335
16x16	539.5	597	16-29	539.5	597	16-29	334	364	360
18x14	578	635	16-32	476	533	12-29		389	375
18x16	578	635	16-32	539.5	597	16-29	370	389	397
18x18	578	635	16-32	578	635	16-32	370	389	410
20x16	635	699	20-32	539.5	597	16-29	406	428	497
20x18	635	699	20-32	578	635	16-32	406	428	512
20x20	635	699	20-32	635	699	20-32	406	428	530
24x18	749	813	20-35	578	635	16-32	470	480	745
24x20	749	813	20-35	635	699	20-32	470	480	760
24x24	749	813	20-35	749	813	20-35	470	480	775

N.	Part Name	Materials
1	Body	Cast Iron
2	Cover	Cast Iron
3	Screen	Stainless Steel 304
4	Woven Mesh	Stainless Steel 304
5	O-Ring	EDPM
6	Plug	Carbon Steel

# ART 197 PN16

## PN16 Cast Iron Triple Duty Valve



### Features

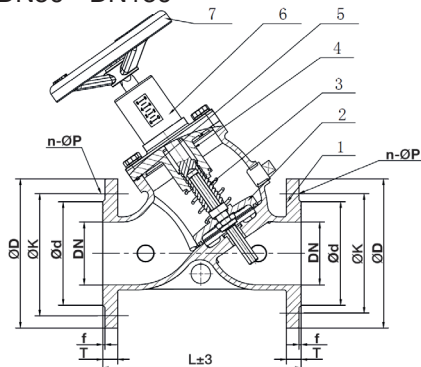
- Combines three functions in one valve
- Isolation, flow regulation and a spring check valve
- Position Indicator
- Designed for discharge side of pump installations
- Flange conforms to BS EN1092 PN16
- Available Flanged PN25

### Technical data

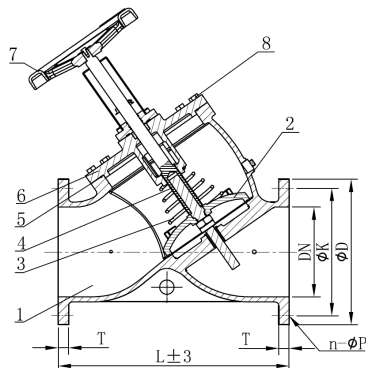
Max Pressure: 16 Bar  
 Working Temperature: -20°C to +120°C

	L	ØD	ØK	Ød	T	N-ØP	Kgs
2"	213	165	125	99	20	4-19	12
2½"	250	185	145	118	20	4-19	16
3"	254	200	160	132	22	8-19	19
4"	368	220	180	156	24	8-19	40
5"	407	250	210	184	26	8-19	46
6"	457	285	240	211	26	8-23	70
8"	546	340	295	266	30	12-23	120
10"	648	405	355	319	32	12-28	240
12"	762	460	410	370	32	12-28	350

### DN50 - DN150



### DN200 - DN300

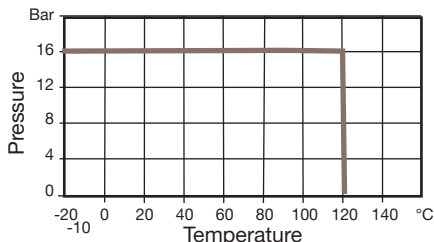


### DN50 - DN150

N.	Part Name	Materials
1	Body	Cast Iron
2	Disc	Ductile Iron + EPDM
3	Shaft	Stainless Steel 410
4	Cover	Cast Iron
5	Sealing Ring	EPDM
6	Calibration Device	Plastic ABS
7	Handwheel	Carbon Steel

### DN200 - DN300

N.	Part Name	Materials
1	Body	Cast Iron
2	Disc	Ductile Iron + EPDM
3	Spring	Stainless Steel 304
4	Shaft	Stainless Steel 410
5	O-Ring	EPDM
6	Cover	Cast Iron
7	Handwheel	Carbon Steel
8	Bolt	Carbon Steel



V1. Dimensions in mm

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# ART 197 ANSI

## ANSI 125 Cast Iron

### Triple Duty Valve



#### Features

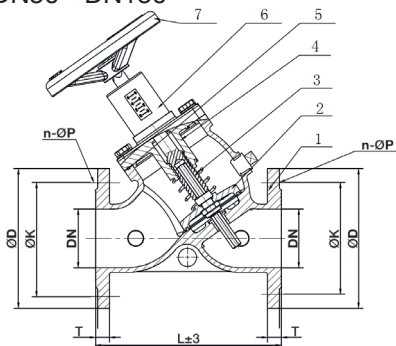
- Combines three functions in one valve
- Isolation, flow regulation and a spring check valve
- Position Indicator
- Designed for discharge side of pump installations
- Flanged ANSI 125 (B16.1)

#### Technical data

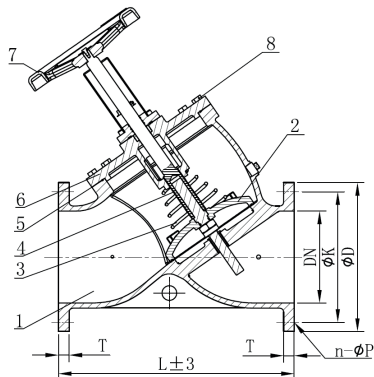
Max Pressure: 13.8 Bar  
 Working Temperature: -20°C to +120°C

	L	ØD	ØK	T	N-ØP	Kgs
2"	213	152.4	120.7	15.8	4-19	12
2½"	250	177.8	139.7	17.5	4-19	16
3"	254	190.5	152.4	19.1	4-19	19
4"	368	228.6	190.5	23.9	8-19	40
5"	407	254	215.9	23.9	8-22.4	46
6"	457	279.4	241.3	25.4	8-22.4	70
8"	546	342.9	298.5	28.5	8-22.4	120
10"	648	406.4	362	30.2	12-25.4	240
12"	762	482.6	431.8	31.8	12-25.4	350

#### DN50 - DN150



#### DN200 - DN300

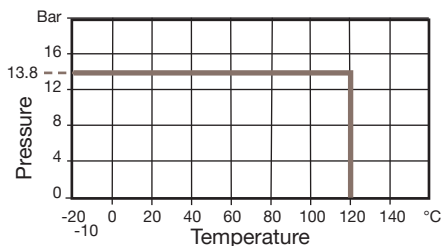


#### DN50 - DN150

N.	Part Name	Materials
1	Body	Cast Iron
2	Disc	Ductile Iron + EPDM
3	Shaft	Stainless Steel 410
4	Cover	Cast Iron
5	Sealing Ring	EPDM
6	Calibration Device	Plastic ABS
7	Handwheel	Carbon Steel

#### DN200 - DN300

N.	Part Name	Materials
1	Body	Cast Iron
2	Disc	Ductile Iron + EPDM
3	Spring	Stainless Steel 304
4	Shaft	Stainless Steel 410
5	O-Ring	EPDM
6	Cover	Cast Iron
7	Handwheel	Carbon Steel
8	Bolt	Carbon Steel



V1. Dimensions in mm

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# ART 24

## PN16 Differential Pressure Control Valve (DPCV)



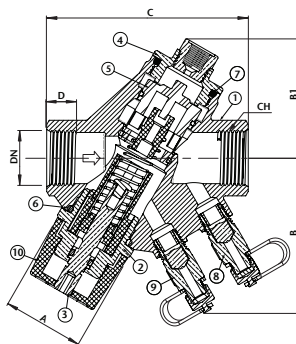
### Features

- BSP Parallel (ISO 228/1)
- Differential pressure can be set and adjusted in situ
- Tamper proof pre-setting device
- Removable differential pressure cartridge allows forward flushing as well as back flushing
- Reduction of commissioning, improved energy saving
- Phased installation and system future proofing



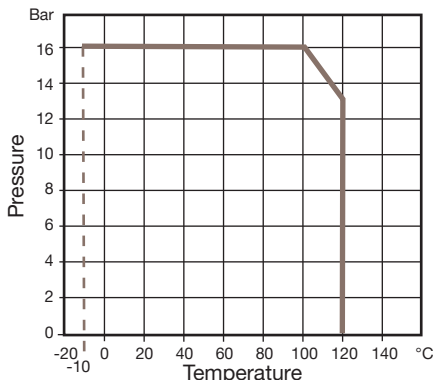
### Technical data

Max pressure: 16 Bar  
 Working temp: -10°C to +120°C  
 Max Differential Pressure: 400kPa



DN	15 Low ΔP	15 High ΔP	20 Low ΔP	20 High ΔP	25 Low ΔP	25 High ΔP	32 High ΔP	40 High ΔP	50 High ΔP
A	40		40	40	50	50	50	65	65
B	70		72	72	91	91	91	98	105
B1	57	See ART	57	57	74	74	74	85	90
C	95.5		96.5	96.5	132	132	132	144.5	155
D	11.5		12.5	12.5	14.5	14.5	16.5	16.5	20
CH	27	24C	32	32	39	39	47	54	68
Flow (l/s)	0.014- 0.167	data- sheet	0.028- 0.278	0.042- 0.556	0.167- 0.694	0.194- 1.167	0.278- 1.389	0.833- 2.222	1.389- 4.167
ΔP vers (kPa)	5-30		5-30	20-60	5-30	20-60	20-80	20-80	20-80
Kvs	3.6		4	4	9.5	9.5	11.4	16.4	17.9
Kgs	0.83		0.88	0.88	1.54	1.54	1.63	2.48	2.97

N.	Part Name	Materials
1	Body	DZR Brass CW602N-M
2	Bonnet	DZR Brass CW602N-M
3	Stem	DZR Brass CW602N-M
4	Screwed End	DZR Brass CW602N-M
5	Differential Pressure Cartridge	DZR Brass CW602N-M
6	O-Ring	EPDM
7	O-Ring	EPDM
8	Blue Binder Point	DZR Brass CW602N-M
9	Red Binder Point	DZR Brass CW602N-M
10	Cap	Plastic



V1. Dimensions in mm

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# ART 28DP

## PN25 - DPCV Partner Valve



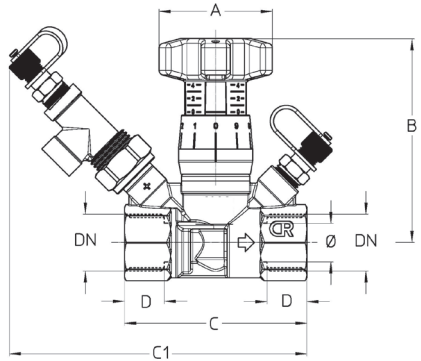
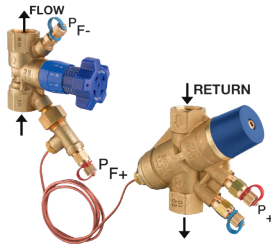
### Features

- BSP Parallel (ISO 7/1)
- Variable orifice double regulating valve
- Impulse tube connection point for ART 24 DPCV
- Supplied as shown with fitting and measuring nipples
- Handwheel shut-off function and clear 360° reading
- Allen key locking mechanism enabling valve to be closed and re-opened to its exact pre-set position
- Conforms to BS 7350 / BS 5154
- System  $\Delta P$  is measured from PF- to P+  
System flow may be adjusted on ART 28DP whilst measuring  $\Delta P$  from PF+ to PF-



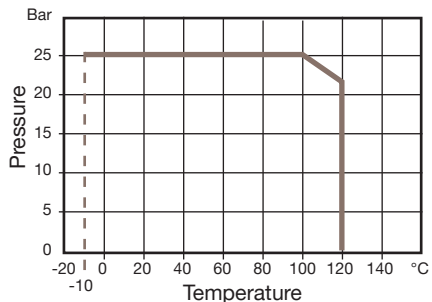
### Technical data

Max pressure: 25 Bar  
Working temp: -10°C to +120°C



DN	15	20	25	32	40	50
A	50	50	50	50	50	50
B	87.5	89.5	91.5	99.0	99.0	100.0
C	77	80	87	108	115	124
C1	139	140	142	157	163	166
D	17.0	18.5	21.0	22.5	23.0	26.5
CH	25	31	38	48	55	66
Thread	½" Rp	¾" Rp	1" Rp	1¼" Rp	1½" Rp	2" Rp
Kv	1.75	2.87	4.08	6.71	10.40	15.06
Kgs	0.50	0.56	0.63	1.05	1.24	1.47

Part Name	Materials
Body	DZR Brass CW602N-M
Bonnet	DZR Brass CW602N-M
Stem	DZR Brass CW602N-M
Gasket	EPDM
Shutter	DZR Brass CW602N-M
Handwheel	Nylon 6
Screw	DZR Brass CW602N-M
O-Ring	EPDM
Binder Point	DZR Brass CW602N-M
O-Ring	EPDM

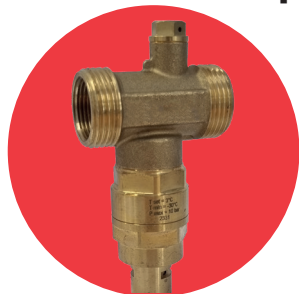


V1. Dimensions in mm

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# ART 1710

## Anti-Freeze Valve for Heat Pumps



### Features

- BSP Parallel (ISO 228/1) or NPT (ANSI B.1.20.1)
- Designed to discharge when the system water temp goes to  $<3^{\circ}\text{C}$  preventing ice forming
- Discharge ends when the system water temperature increases to  $>4^{\circ}\text{C}$
- Accuracy  $\pm 1^{\circ}\text{C}$
- Reduces potential breakdown costs to the system

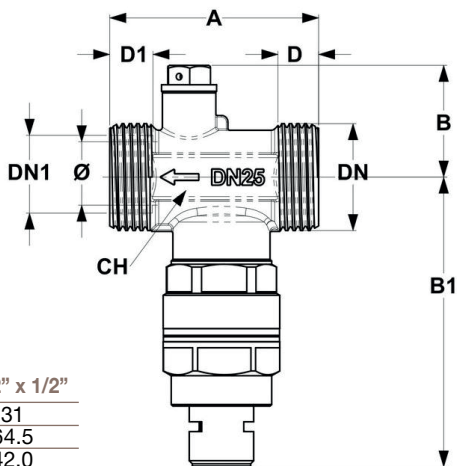
### Technical data

Max pressure: 10 Bar

Working temp:  $0^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$

Fluid temp (opening):  $3^{\circ}\text{C}$

Fluid temp (closing):  $4^{\circ}\text{C}$



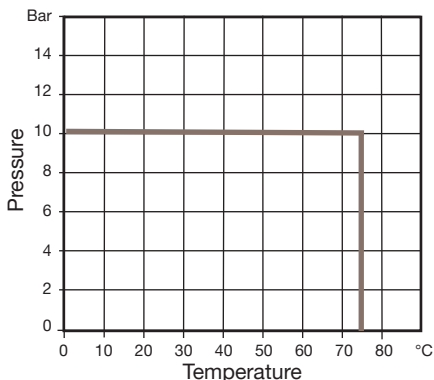
DN x DN1	1" x 3/4"	1.1/4" x 1"	1.1/2" x 1/2"
Ømm	16	23	31
A	64.5	64.5	64.5
B	34.5	38.0	42.0
B1	92.0	95.5	99.5
D	13	13	13
D1	12.0	12.5	12.5
CH	30	36	44
Kgs	0.48	0.52	0.53

DN x DN1	1" x 3/4"	1.1/4" x 1"	1.1/2" x 1/2"
Ømm	16	23	31
KV	9	23	47
Q3	0.3	0.3	0.3
Q0.5	3	3	3

KV - Flow in  $\text{m}^3/\text{h}$  at pressure loss of 1 bar.

Q3 - Exhaust flow rate in l/h at  $3^{\circ}\text{C}$  with pressure of 3 bar.

Q0.5 - Exhaust flow rate in l/h at  $0.5^{\circ}\text{C}$  with pressure of 3 bar.



### Part Name

### Materials

Body	Brass CW617N-DW
O Rings	EPDM

V1. Dimensions in mm

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