

USE

- zone heating / cooling systems
- HVAC
- systems using alternative energy
- household automation systems in general

PRINCIPALI CARATTERISTICHE

- fast push connection with the actuator
- equal-percentage characteristic curve with adjustment disk
- different selectable Kvs values
- sealing closure
- 2-way and 3-way from 1/2" to 2"



SINTESI REGULATING ball valves



REGULATING DISC

VERSIONS



DN	Ø	Connections	PN	Kv _s [m³/h]	Code
15	1/2"	Rp 1/2"	16	0,25	SC2ARKVA
15	1/2"	Rp 1/2"	16	0,4	SC2ARKVB
15	1/2"	Rp 1/2"	16	0,63	SC2ARKVC
15	1/2"	Rp 1/2"	16	1,0	SC2ARKVD
15	1/2"	Rp 1/2"	16	1,6	SC2ARKVE
15	1/2"	Rp 1/2"	16	2,5	SC2ARKVF
15	1/2"	Rp 1/2"	16	4,0	SC2ARKVG
15	1/2"	Rp 1/2"	16	6,3	SC2ARKVH
20	3/4"	Rp 3/4"	16	4,0	SC2BRKVG
20	3/4"	Rp 3/4"	16	6,3	SC2BRKVH
20	3/4"	Rp 3/4"	16	8,6	SC2BRKVI
20	3/4"	Rp 3/4"	16	10	SC2BRKVJ
25	1"	Rp 1"	16	6,3	SC2CRKVH
25	1"	Rp 1"	16	10	SC2CRKVJ
25	1"	Rp 1"	16	16	SC2CRKVK
32	1 1/4"	Rp 1 1/4"	16	10	SC2DRKVJ
32	1 1/4"	Rp 1 1/4"	16	16	SC2DRKVK
32	1 1/4"	Rp 1 1/4"	16	25	SC2DRKVL
40	1 1/2"	Rp 1 1/2"	16	16	SC2ERKVK
40	1 1/2"	Rp 1 1/2"	16	25 *	SC2ERKVL
50	2"	Rp 2"	16	25	SC2FRKVL
50	2"	Rp 2"	16	40 *	SC2FRKVM

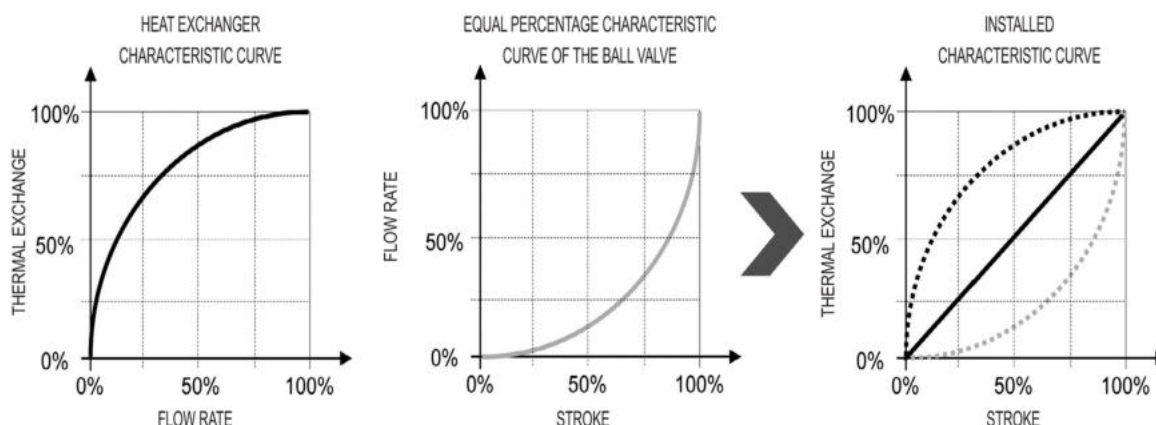
DN	Ø	Connections	PN	Kv _s A-AB [m³/h]	Kv _s B-AB [m³/h]	Code
15	1/2"	Rp 1/2"	16	0,25	0,175	SC3ARKVA
15	1/2"	Rp 1/2"	16	0,4	0,28	SC3ARKVB
15	1/2"	Rp 1/2"	16	0,63	0,44	SC3ARKVC
15	1/2"	Rp 1/2"	16	1,0	0,7	SC3ARKVD
15	1/2"	Rp 1/2"	16	1,6	1,1	SC3ARKVE
15	1/2"	Rp 1/2"	16	2,5	1,75	SC3ARKVF
15	1/2"	Rp 1/2"	16	4,0	2,8	SC3ARKVG
15	1/2"	Rp 1/2"	16	6,3	4,4	SC3ARKVH
20	3/4"	Rp 3/4"	16	4,0	2,8	SC3BRKVG
20	3/4"	Rp 3/4"	16	6,3	4,4	SC3BRKVH
20	3/4"	Rp 3/4"	16	10	5	SC3BRKVJ
25	1"	Rp 1"	16	6,3	4,4	SC3CRKVH
25	1"	Rp 1"	16	10	7	SC3CRKVJ
25	1"	Rp 1"	16	16	8	SC3CRKVK
32	1 1/4"	Rp 1 1/4"	16	10	7	SC3DRKVJ
32	1 1/4"	Rp 1 1/4"	16	16	11,2	SC3DRKVK
32	1 1/4"	Rp 1 1/4"	16	25	12,5	SC3DRKVL
40	1 1/2"	Rp 1 1/2"	16	16	11,2	SC3ERKVK
40	1 1/2"	Rp 1 1/2"	16	25 *	12,5 *	SC3ERKVL
50	2"	Rp 2"	16	25	17,5	SC3FRKVL
50	2"	Rp 2"	16	40 *	20 *	SC3FRKVM

* Kvs value without disc

TECHNICAL FEATURES	
Fluid type	Water (max 30% glycol)
Fluid temperature	+5°C ... +100°C
Nominal pressure	16 bar
Δp max	3.4 bar
Characteristic curve	Equal-percentage
Operating angle	90°
Leakage class EN60534-4	In line port Class IV (<0,01% Kvs) Angle port Class I (<1% Kvs)

DESCRIPTION

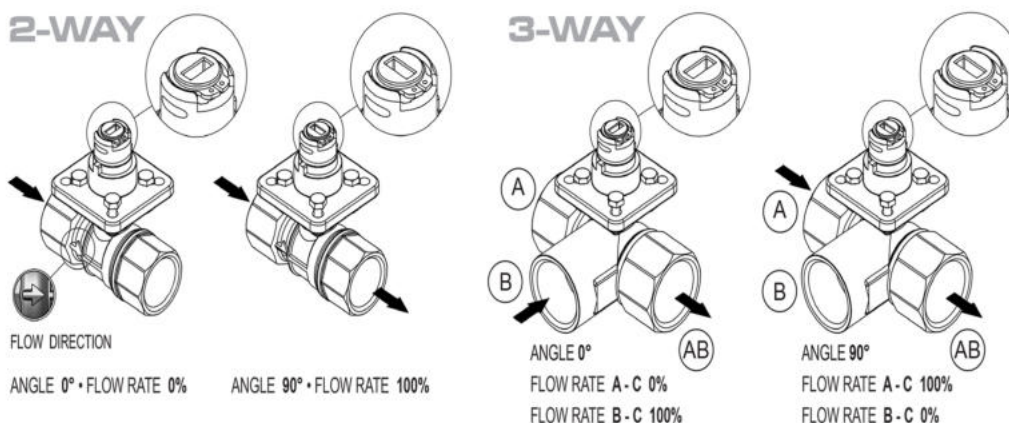
The 2-way and 3-way regulator ball valves combined with the 3-point actuators or proportional actuators of **SINTESI** series provide a motorized ball valve with equal-percentage regulating curve. In general, the heat exchange is described with a typically non-linear relationship between flow and exchanged heat. The use of the regulating ball valves with equal-percentage characteristic, thanks to special adjustment discs, allows the compensation of any non-linearity, obtaining a characteristic curve installed as shown below. It is easy to understand how the regulation, on a system with constant gain, is positively affected in terms of stability.



Note that the presence of the adjustment disc reduces the flow coefficient to values which are similar to those of traditional regulating valves. With the adjustment disc, the **SINTESI** valve becomes a regulating valve, adding several advantages:

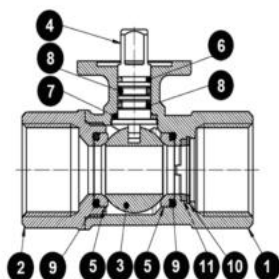
- Great stability of the control ring
- Flow coefficient similar to that of traditional regulating valves
- Equal-percentage standardized feature
- Fewer operations of the actuator

FLOW DIRECTION



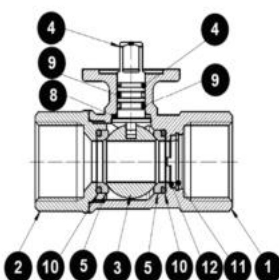
CAUTION: regulating valves should always be fitted according to the flow direction. An arrow moulded on the ball valve indicates the flow direction.

MATERIALS USED



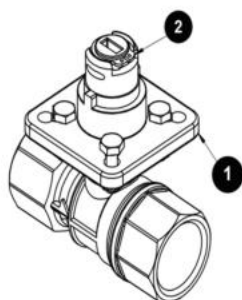
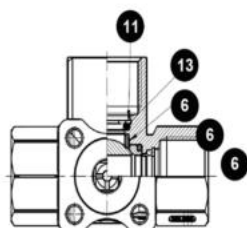
MATERIAL USED IN THE 2-WAY BALL VALVE

1	BODY	BRASS CW 617N - UNI EN 12420
2	COUPLING	BRASS CW 617N - UNI EN 12420
3	BALL	BRASS CW 617N - UNI EN 12168 / CHROMED NICKEL
4	ROD	BRASS CW 614N - UNI EN 12164 / NICKEL PLATING
5	SEALS BALL	PTFE 15% GRAPHITE FILLED
6	SEALS ANTI-FRICTION	P.T.F.E.
7	SEALS ANTI-FRICTION	PTFE 15% GRAPHITE FILLED
8	O-RING	EPDM
9	O-RING	EPDM
10	STOP RING	AISI 420
11	MODULATOR	PPA (AMODEL 1145 HS)



MATERIAL USED IN THE 3-WAY BALL VALVE

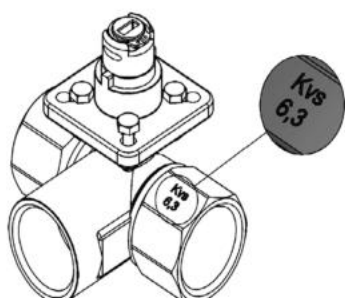
1	BODY	BRASS CW 617N - UNI EN 12420
2	COUPLING	BRASS CW 617N - UNI EN 12420
3	BALL	BRASS CW 617N - UNI EN 12168 / CHROMED NICKEL
4	ROD	BRASS CW 614N - UNI EN 12164 / NICKEL PLATING
5	SEALS BALL	PTFE 15% GRAPHITE FILLED
6	SEALS BALL	P.T.F.E.
7	SEALS ANTI-FRICTION	P.T.F.E.
8	SEALS ANTI-FRICTION	PTFE 15% GRAPHITE FILLED
9	O-RING	EPDM
10	O-RING	EPDM
11	STOP RING	AISI 420
12	MODULATOR	PPA (AMODEL 1145 HS)
13	MODULATOR	PA 6.6



MATERIALS USED FOR THE ISO 5211 ADAPTER

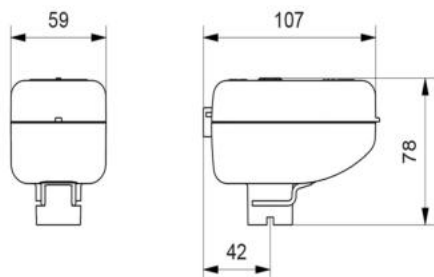
1	BODY	POLYARYLAMIDE
2	SEEGER	AISI 420

KVS VALUE MARKING



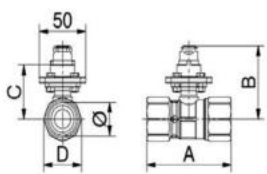
OVERALL SIZE

ACTUATOR

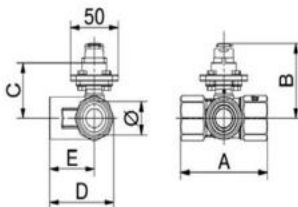


FUNCTION	SINTESI	PROPORTIONAL SINTESI SMART	MODBUS SINTESI SMART
3-point modulating control	✓		
Proportional modulating control		✓	
Remote control			✓

BALL VALVE

MODEL	DN	Ø	A	B	C	D
2-way 	15	1/2"	71	65	48	33
	20	3/4"	77	65	48	34
	25	1"	91	67	50	41
	32	1 1/4"	104	78	60	52
	40	1 1/2"	105	78	60	58
	50	2"	127	82	65	72

C: to be taken into account when coupling the actuator to the ball valve

MODEL	DN	Ø	A	B	C	D	E
3-way 	15	1/2"	71	65	48	55	38
	20	3/4"	77	65	48	57	40
	25	1"	91	67	50	67	47
	32	1 1/4"	104	78	60	80	55
	40	1 1/2"	105	78	60	84	55
	50	2"	127	82	65	101	65

C: to be taken into account when coupling the actuator to the ball valve

EXAMPLE OF SPECIFICATIONS

SINTESI REGULATING BRASS BALL VALVE • CW617N UNI EN 12420, PTFE seals, EPDM O-rings, PN16, ΔP max 3,4 bar. Adjustment disc with equal-percentage characteristic curve. Leakage Class IV-<0,01% Kv in line port (EN60534-4). Female thread EN 10226-1. Operating temperatures +5°C...+100°C. Fluid type: water with glycol max. 30%. Connection to the actuator with Sintesi fast push connection. Version: 2-way DN25 - Rp 1" - Kvs 6,3

Brand: **COMPARATO**

Code: **SC2CRKVH**