

Green Control - Valve Model UC Ratings ASME 150-2500

Application

Green Control Valve Model UC is a specially designed cage guided Control Valve intended to handle variety of Process applications from medium to high pressure drops and wide range of temperatures. Heavy cage guiding and selection of hardened trim materials will eliminate vibration, erosion and dynamic instability associated with high pressure drop applications. A wide range of materials, offers a choice to suit the individual application. The smooth body flow path reduces turbulences, minimizing the effects of erosion and noise

Design Features

- Compact, cage guided valve with stream lined globe type body with high flow capacity and low pressure recovery.
- screwed in or quick change seat trims
- Trim Type : Cage
- Inherently characterized trims available in Linear, Equal percentage or quick opening
- Balanced Trim

Benefits

- Top-entry design with immediate access to plug and seat
- Reduced inspection and maintenance cost
- Compact and easy to install trims
- Excellent flow capacity and control rangeability
- Low actuating force required with balanced trim style
- Reduces potential erosion and noise problems



ENGINEERING DATA - Control Valve Model UC

General

The Model UC range of valves has been developed to provide a cost effective, reliable and easily maintained control valve capable of working in rigorous environments.

Quick-change trim provides for easily accessible seat and trim components to minimize fitting and parts replacement times. Cage guided trim, in balanced configuration, gives excellent rigidity and resistance to vibrations.

End Connection Sizes/Types:

2 in (50mm) - 24 in (600 mm).

Integral Flanges, Butt Weld ends. For other options, contact the factory.

Design Standard:

ASME B 16.34.

Valve Body Ratings:

ASME 150 - ASME 2500.

Body Configurations:

Globe

Bonnet Styles:

Bolted as standard.

For other options, contact the factory

Standard Bonnet Packing:

Teflon/Chevrons.

Trim type:

Cage.

Inherent Trim Characteristics:

Linear, Equal percentage or quick opening.

Plug Options:

Balanced.

Plug/Seat Leakage Class:

- Class IV ANSI/FCI 70.2 as standard options:
- Class V
- Class VI with soft seat insert

Materials:

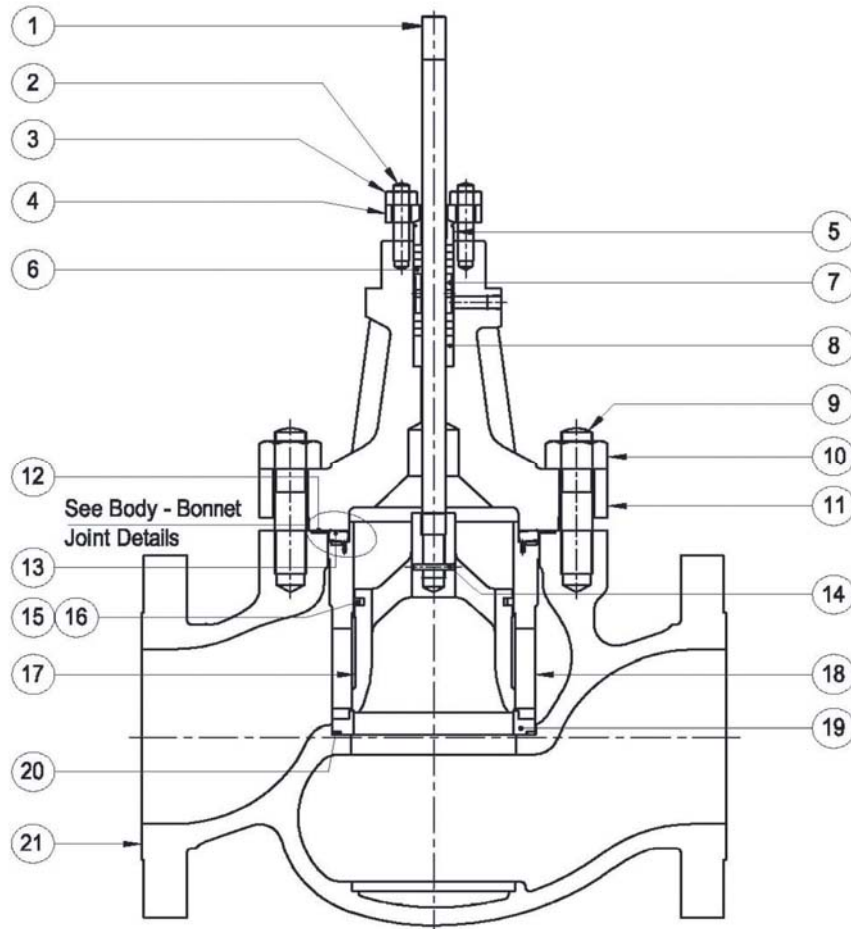
The main materials used are:

- Body: - ASTM A216 WCB/WCC / ASTM A105
- ASTM A351CF8M / ASTM A351CF3M
- ASTM A995 4A / 5A / 6A
- Bonnet: - ASTM A216 WCB/WCC / ASTM A105
- ASTM A351CF8M / ASTM A351CF3M
- ASTM A182 F316
- ASTM A995 4A / 5A / 6A
- Trim: - 17-4 PH
- SS 316
- SS 316 + Stellite
- SS 410
- SS 410 + Stellite
- SS 410
- Duplex / Super Duplex SS

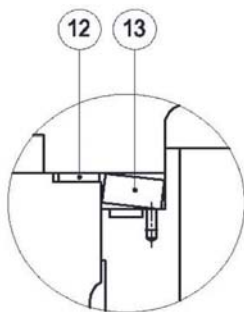
For other options, contact the factory

Paint:

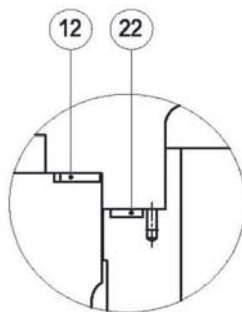
A wide range of paint finishes are available.



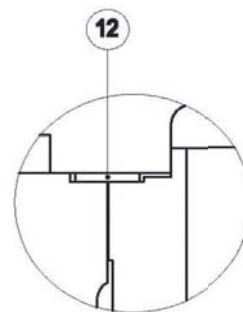
BODY - BONNET JOINT DETAILS



Valve Size 6" to 16"
With Conical Spring
For Temp. $\geq 450^{\circ}\text{F}$



Valve Size 6" to 16"
Without Conical Spring
For Temp. $< 450^{\circ}\text{F}$



Valve Size 2" to 4"
For all Temperatures

MATERIAL COMBINATION:

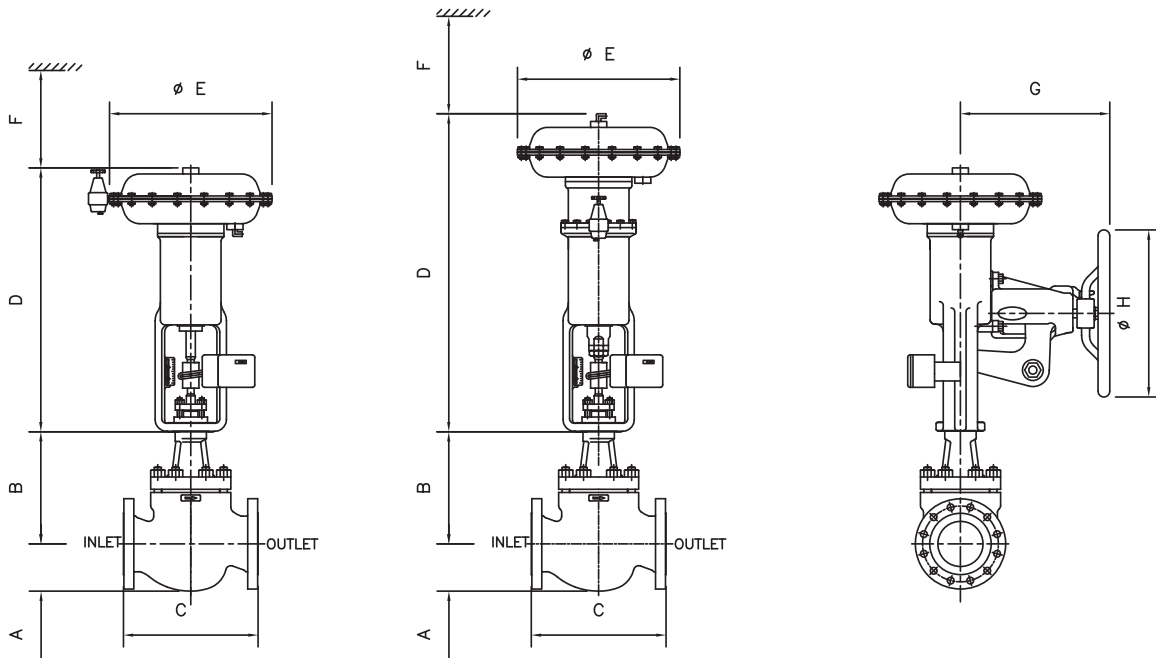
#	DESCRIPTION	CARBON STEEL VALVE	STAINLESS STEEL VALVE
1	Plug Stem	ASTM A 564 Gr. 630	ASTM A 564 Gr. 630
2	Packing Stud	ASTM A 193 Gr. B8	ASTM A 193 Gr. B8
3	Packing Nut	ASTM A 194 Gr. 8	ASTM A 194 Gr. 8
4	Packing Flange	ASTM A 668 Cl. B	ASTM A 668 Cl. B
5	Packing Follower	ASTM A 479 Ty 304	ASTM A 479 Ty 316
6	Packing	PTFE	PTFE
7	Spacer / Lantern Ring	ASTM A 479 Ty 304	ASTM A 479 Ty 304
8	Guide Bush	ASTM A 276 Ty 440 C	ASTM A 479 Ty 316 + Stellite 6
9	Body Stud	ASTM A 193 Gr. B7	ASTM A 193 Gr. B7
10	Body Stud Nut	ASTM A 194 Gr. 2H	ASTM A 194 Gr. 2H
11	Bonnet	ASTM A 216 Gr. WCC	ASTM A 351 Gr. CF8M
12	Body Gasket	AISI 316L + Graphite	AISI 316L + Graphite
13	Conical Spring, For Temp 233 °C-344 °C	ASTM A 564 Gr. 630 H 1075	ASTM A 564 Gr. 630 H 1075
	Conical Spring, For Temp 344 °C-427 °C	Inconel X-750	Inconel X-750
14	Plug Pin	ASTM A 582 Ty 303	ASTM A 582 Ty 303
15	External Seal Ring	Temp -196 °C to +566 °C Leakage Class II Ni Resist ASTM A 439 Ty D3	Ni Resist ASTM A 439 Ty D3
16	Internal Seal Ring		Ni Resist ASTM A 439 Ty D3
15	External Seal Ring	Temp -29 °C to +150 °C Leakage Class IV Std PTFE	PTFE
16	Internal Seal Ring		Nordel
15	External Seal Ring	Temp -196 °C to +454 °C Leakage Class IV Std. Graphite	Graphite
16	Internal Seal Ring		Ni Resist ASTM A 439 Ty D3
17	Plug	A 747 Gr. CB7 CU1 H1075	A 479 TY 316 + Hardfaced Seat
18	Cage, For Temp 233 °C-344 °C	A 487 Gr. CA6NM Hard Cr. Pltd	A 479 Ty 316 Hard Cr. Plated
	Cage, For Temp 344 °C-427 °C	A 487 Gr. CA6NM Nitrided	A 487 Gr. CA6NM Nitrided
19	Seat Ring	A 479 Ty 316 + Stellite 6	A 479 TY 316 with Hard Faced Seat.
20	Seat Ring Gasket	AISI 316L + Graphite	AISI 316L + Graphite
21	Valve Body	ASTM A 216 Gr. WCC	ASTM A 351 Gr. CF8M
22	Cage Gasket	AISI 316L + Graphite	AISI 316L + Graphite

*For Valves 6" to 12" without conical spring

Note: Other material combinations are available as necessitated by process requirements.

CV DATA		FLOW CHARACTERISTICS					
		LINEAR		EQ% [150# - 600#]		LOW NOISE / ANTI-CAVITATION	
Size	Stroke	Min	Max	Min	Max	Min	Max
2"	1 ½"	35	76	24	60	25	60
3"	2"	60	150	60	140	50	120
4"	2"	100	245	90	220	80	200
6"	2"	160	400	150	365	120	300
8"	2 ½"	260	650	225	580	150	500
10"	3"	400	1000	360	900	270	680
12"	4"	600	1350	560	1280	300	725

INSTALLATION DIMENSIONS UC SERIES



Air to Close (Model:UA11)

Air to Open (Model:UA12)

Side Mounted Hand wheel

DIMENSIONAL DETAILS OF UC SERIES VALVE BODY S/A						
SIZE		A	B	End to End – C		
Inches	mm			ANSI-150	ANSI-300	ANSI-600
2"	50	CF	CF	CF	CF	CF
3"	80	85	325	298 ±1.5	318 ±1.5	337 ±1.5
4"	100	135	325	352 ±1.5	368 ±1.5	394 ±1.5
6"	150	170	400	451 ±1.5	473 ±1.5	508 ±1.5
8"	200	210	485	543 ±1.5	568 ±1.5	610 ±1.5
10"	250	255	575	673 ±1.5	708 ±1.5	753 ±1.5
12"	300	280	632	737 ±3.0	775 ±3.0	819 ±3.0

DIMENSIONAL DETAILS OF ACTUATOR SUB ASSEMBLY						
ACTUATOR				Actuator Removal Clearance	Side Mounted Hand wheel	
SIZE	D (UA 11)	D (UA 12)	ø E	F	G	ø H
30	460	530	332	112	230	229
35	570	660	383	112	290	300
40	725	850	447	142	408	457
45	770	885	530	142	408	457
50	CF	1020	530	142	408	457
55	945	1260	530	142	CF	CF

For the dimension of other size and rating, please contact Green Control

