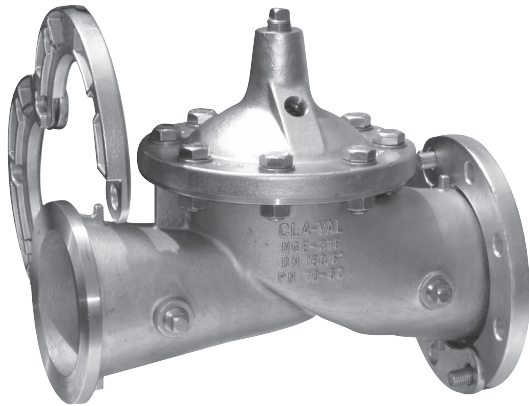




— MODEL — **100-44**  
(Reduced Internal Port)

# 316SS Hytrol Valve



- All 316 Stainless Steel
- Reduced Cavitation Design
- Drip-Tight, Positive Sealing Action
- Service Without Removal From Line
- Every Valve Factory Tested
- Three-Year Warranty

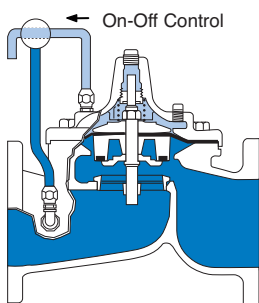
The Cla-Val Model 100-44 Hytrol 316SS Valve is a reduced port hydraulically operated, diaphragm actuated, globe pattern valve with all 316 Stainless Steel metal parts. Specially designed 316 Stainless Steel removable slip-on flanges provide 150 or 300 ANSI class flange connections that meet ANSI and ISO standards. This valve is ideal for control valve applications where fluid compatibility is often a problem. The standard Electropolish finish on the 316 Stainless Steel parts offers extreme corrosion resistance to many industrial fluids such as seawater, high alkyl or high acid concentrations or other aggressive or corrosive fluids.

**Note:**

KO anti-cavitation trim is available for valves in sizes 100 mm and larger only.

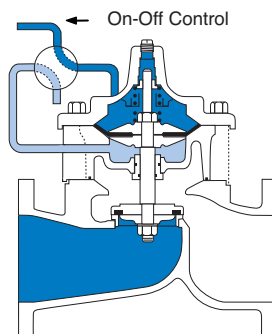
The Model 100-44 Hytrol consists of these major components: body, flanges, diaphragm assembly and cover. The diaphragm assembly is the only moving part and is guided top and bottom by a precision-machined stem. A non-wicking diaphragm of nylon fabric reinforced, synthetic rubber creates the control chamber for the valve. A resilient, synthetic rubber disc forms a drip-tight seal, with the renewable seat, when pressure is applied to the control chamber. The rugged simplicity of design and packless construction assures a long life of dependable, trouble-free operation. Smooth flow passages and fully guided diaphragm assembly assure optimum control, when used in piping systems requiring remote control, pressure regulation, solenoid operation, rate of flow control or check valve operation.

## Principle of Operation



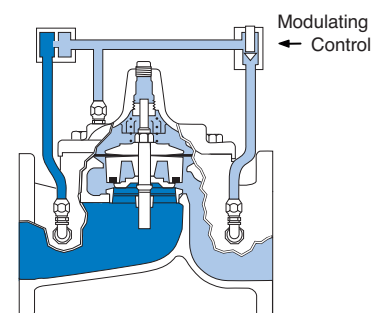
### Full Open Operation

When pressure in the cover chamber is relieved to a zone of lower pressure, the line pressure at the valve inlet opens the valve, allowing full flow.



### Tight Closing Operation

When pressure from the valve inlet is applied to the cover chamber, the valve closes drip-tight.



### Modulating Action

The valve holds any intermediate position when operating pressure is equal above and below the diaphragm. Using a Cla-Val "Modulating" Control will allow the valve to automatically compensate for line pressure changes.

# 100-44 Main Valve Specifications

## Sizes

Globe (millimeters):  
50, 65, 80, 100, 150, 200, 250  
and 300 mm

## End Detail

Slip-on Two Piece Flange  
Dimensions Per ANSI B16.5

## Pressure Rating

ANSI Class 150:  
Maximum 285 psi  
ANSI Class 300:  
Maximum 400 psi

Higher Pressure Available  
Please Contact Factory

## Operating Temperature

Fluids Compatible with Valve  
Materials  
-40° to 82° C -40° to 180° F)

## Materials

Body, Cover, Trim,  
Diaphragm Assembly,  
Flanges, and Fasteners  
316 Series  
Stainless Steel  
Electropolished

### Disc:

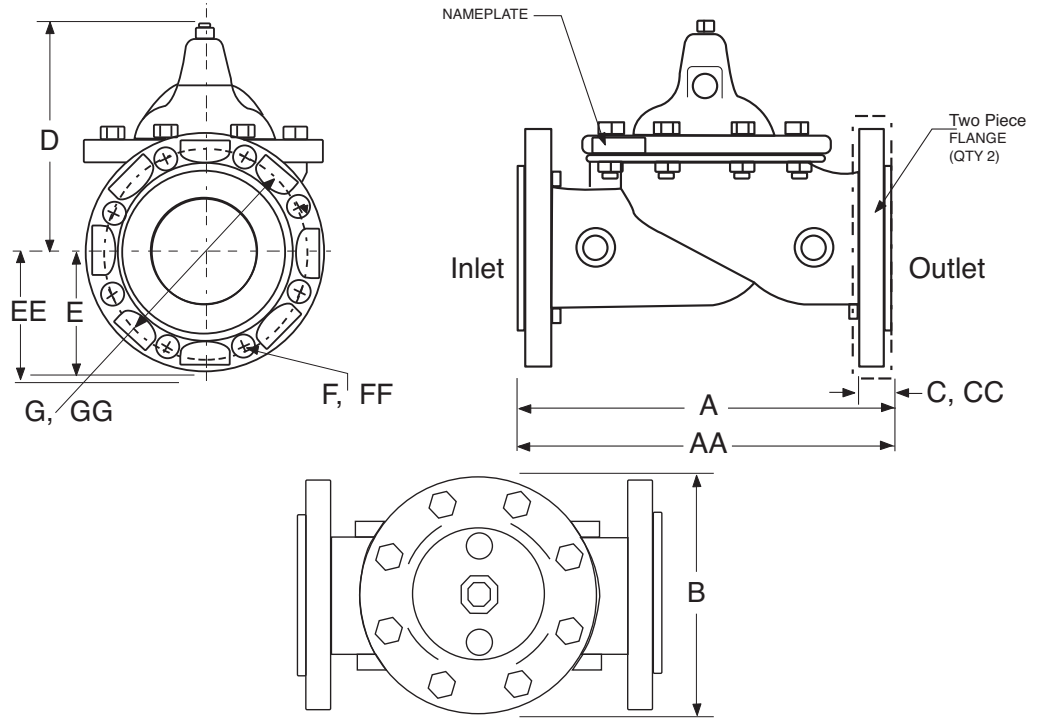
Buna-N® Rubber\*

### Diaphragm:

Nylon Fabric Reinforced  
Synthetic Buna-N® Rubber\*

\*Contact Factory for Other  
Disc or Diaphragm Materials

**Note:** 100-44 valve uses the same  
internal parts as the basic Cla-Val  
standard main reduced internal  
port 100-20 Hytrol.



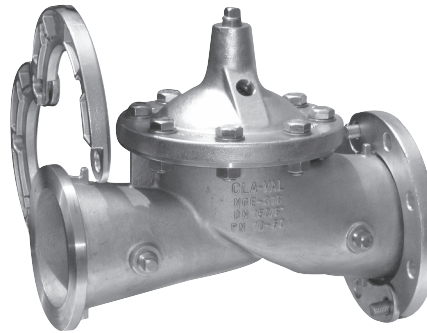
## 100-44 Main Valve Dimensions (mm)

Valve Size (mm)	50	65	80	100	150	200	250	300
A 150 ANSI	230	290	310	350	480	600	730	850
AA 300 ANSI	230	290	310	350	480	600	730	850
B	145	205	170	235	295	400	510	600
C	23	23	24	24	26	29	29	32
CC 300 ANSI	24	24	25	25	58	29	37	38
D	165	202	208	257	338	416	486	532
E	78	90	95	115	143	173	202	243
EE 300 ANSI	83	95	105	127	160	190	223	260
F	18	18	18	18	23	22	26	26
FF 300 ANSI	18	19	22	22	22	26	30	34
G	121	140	152	191	241	299	362	432
GG 300 ANSI	127	149	168	200	270	330	387	450
Flange Bolts (150 Class)	102	102	102	203	203	203	305	305
Flange Bolts (300 Class)	203	203	203	203	305	305	406	406
Approx. Wt. (Kgs.)	11	18	18	34	73	132	190	330

## Reduced Port Functional Data

Size (Inches)	Cv (gpm)*	Cv (l/s)**
50	38	9
65	50	12
80	67	16
100	138	33
150	242	58
200	555	133
250	923	222
300	1492	359

\*Cv = gpm flow at 1 psi drop  
\*\*Cv = l/s flow at 1 bar drop



### When Ordering Please Specify:

1. Catalog No. 100-44
2. Valve Size
3. Fluid Being Handled
4. Fluid Temperature
5. Inlet Pressure Range
6. Outlet Pressure Range
7. Maximum and Minimum Differential Pressure
8. Flow Rate Range



E-100-44 Metric (R-02/2019)

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