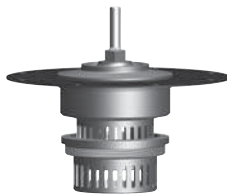




Specify • Retrofit • Optimize

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# Enjoy the many benefits of using valves and accessories produced by the world's leading manufacturer of automatic control valves.



Since 1936, Cla-Val has been a leading manufacturer of automatic control valves, serving waterworks, industrial, fire protection, aviation fueling and marine customers throughout the world. Our commitment to excellence and continuous improvement shows in each valve we produce and in the many new products we introduce to the marketplace each year.

Cla-Val is a global company with headquarters and a twenty-acre manufacturing/foundry complex in Costa Mesa, California, in addition to production facilities in Canada, Switzerland, France and the United Kingdom.

Cla-Val's long history of manufacturing and industry excellence also enables us to provide the industry's most comprehensive program of hands-on, personalized technical/product training at our in-house training facilities in the US, Canada, Switzerland, the UK and France.

Cla-Val Automatic Control Valves are renowned for their quality and superior performance. The company is also known for consistently excellent customer service as well as innovation, specifically related to products that help to conserve water and energy.



# Specify • Optimize • Retrofit

## *There are so many ways to get more from Cla-Val Automatic Control Valves...*

For new valves, it's best to include add-on features like those listed below during the specification process. Next best is to add supplemental features at the time of order placement. For existing, installed valves, it's never too late to retrofit or upgrade them to include new features and functions.

When you are facing an operational challenge, please consider the many accessories that can be included on your basic valves to enhance performance and get more from your investment in Cla-Val products.

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- X105L Limit Switch Assembly
- X117D and E Position Transmitters

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- CPC Electronic Position Control
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**For factory and regional sales contact information, please see back cover**

**Log-on to [www.cla-val.com](http://www.cla-val.com) to learn more about Cla-Val's extensive product offering.  
Call the factory at 800.942.6326 to contact a technical advisor.**

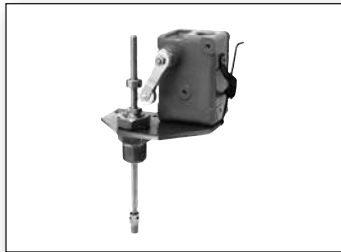
# Electronic Accessories and Enhancements

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## 133 Metering Kit

- When the metering kit is added to a Cla-Val Automatic Control Valve, no external meter is required
- Allows valve to control and measure flow simultaneously
- Does not affect other valve functions such as pressure reducing, rate-of-flow control, or pressure relief
- Can be added to new valves or retrofitted to an existing, installed valve without removal of the valve from the pipeline
- Completely self-contained, requiring 12 to 24 VDC
- Takes up less space than a typical meter



## X105L Limit Switch Assembly

- UL Listed switches available
- Actuated by the opening or closing of the valve on which it is mounted
- Weather-sealed and explosion proof
- Easy to adjust and can be field retrofitted to most Cla-Val control valves
- Ideal for many applications including process control, pump control, and motor starting or stopping



## X117D Valve Position Transmitter

- Accurately monitors and transmits valve position
- Use with the 131VC Series Electronic Valve Controller
- 4-20 mA output signal
- Easily interfaced with SCADA
- Environmentally sealed to IP-68
- Can be field retrofitted without removal of the valve from the pipeline



## X117E Contact-Free Valve Position Transmitter

- Accurately monitors and transmits valve position
- Contact free configuration assures longer service life
- No o-rings to replace, less maintenance
- 4-20 mA output signal
- Easily interfaced with SCADA
- Environmentally sealed to IP-68
- Can be field retrofitted without removal of the valve from the pipeline

# Functional Enhancements

## “B” Feature: CK2 Isolation Valve

- Allows operator to manually override the automatic functions of the valve
- Enables operator to easily perform field testing of the main valve without removing the valve from the pipeline
- Provides a means to isolate individual sections of the pilot system
- Field retrofitable



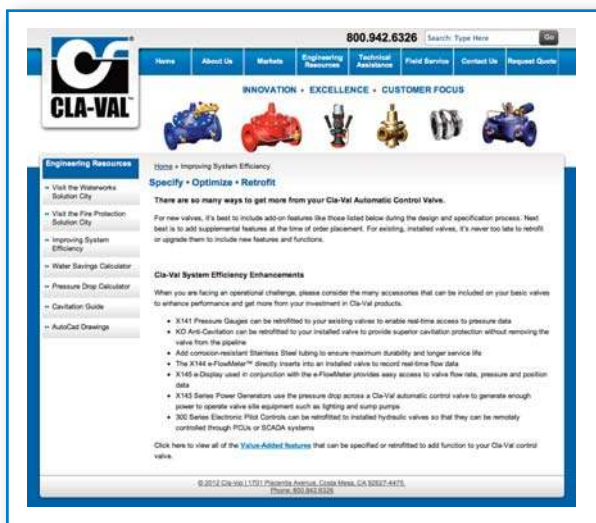
## “D” Feature: Check Valve with Isolation Valve

- Provides return flow protection in systems where there is a potential for the outlet pressure to be greater than the inlet pressure
- Enables an automatic control valve to also act as a check valve without disrupting primary function
- Retrofittable without removal of the valve from the pipeline
- Eliminates the need for a separate check valve in the system in the area adjacent to the control valve



## “S” Feature: CV Speed Control

- Controls valve opening and closing speed
- Adjustable restriction device that acts as a needle valve when flow is in the direction of the stem
- When flow is in the reverse direction, the port opens fully to allow unrestricted flow
- Corrosion resistant, requires no lubrication
- Automatic operation in any position
- Simple to adjust and maintain



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# Service Life Enhancements

## Optional Stainless Steel Tubing & Fittings

- Specify Stainless Steel trim to ensure maximum durability and the following benefits:
  - Corrosion resistance
  - Fire and heat resistance
  - Inherently longer service life than other materials
  - Impact resistance
  - Strength-to-Weight advantage
  - Hygienic
  - Aesthetically pleasing for visible installations



## Optional Epoxy Coating

- NSF and AWWA approved for potable water applications
- Provides long term corrosion protection
- Fusion bonded coating adheres more permanently to the valves
- Affords greater protection against gouging, rough handling, wear and abrasion
- Resistant to cathodic disbondment
- More aesthetically pleasing than other coatings



## Optional Dura-Kleen™ Stem

- Ideal for harsh water applications, especially those prone to calcium build-up
- Patented fluted surface of the Stainless Steel Dura-Kleen™ stem channels away deposits from the stem
- Frictionless operation
- Excellent preventative measure against stem issues arising in continuous service



## Optional Delrin® Sleeve Stem

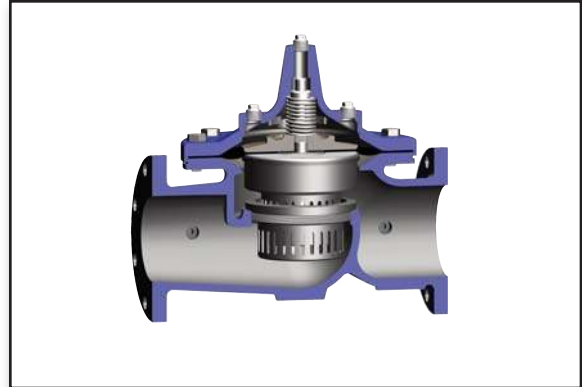
- Ideal for harsh water applications with low differentials
- Chemically resistant with very low water adsorption
- Resistant to build-up
- Provides maximum durability because of the high stiffness and excellent dimensional stability of the Delrin® sleeve
- Frictionless operation



# System Safeguards/Enhancements

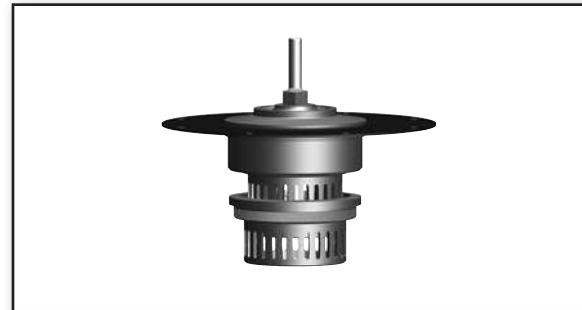
## Optional KO Anti-Cavitation Trim for New 100-01 Hytrol Valves

- Install in any Cla-Val Automatic Control valve for virtually cavitation free operation
- Ideal for applications with high pressure differentials or discharging to atmosphere
- Standard 316 Stainless Steel disc guide and seat
- Reduces noise and vibration
- Drip-tight, positive sealing
- Available in sizes from 1½" - 36"



## KO Anti-Cavitation Trim Field Conversion Kit for Existing, Installed 100-01 Hytrol Valves

- Retrofit an existing, installed Cla-Val Automatic Control Valve with the KO Anti-Cavitation Conversion Kit to make it cavitation proof
- Experience all the benefits of new KO Anti-Cavitation Valve when the conversion kit is added to your valve without removing from the pipeline



## Hydraulic Back-Up for Electronic Valves

- 131 Series and 133 Series Electronic Control Valves can be equipped with a hydraulic pilot control that will enable the valve to operate in the event of power loss
- Can be field retrofitted without removing the valve from the pipeline



## X140-1 316 Stainless Steel Locking Security Cap

- Stainless Steel cap encapsulates the pilot control's adjustment screw to prevent unauthorized access
- Available in three sizes
- Can be field retrofitted to an existing, installed pilot system



## X43H H-Style Strainer

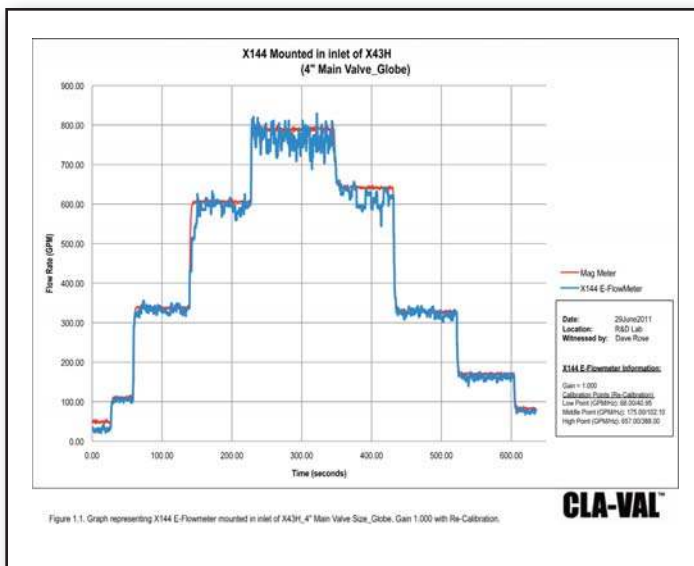
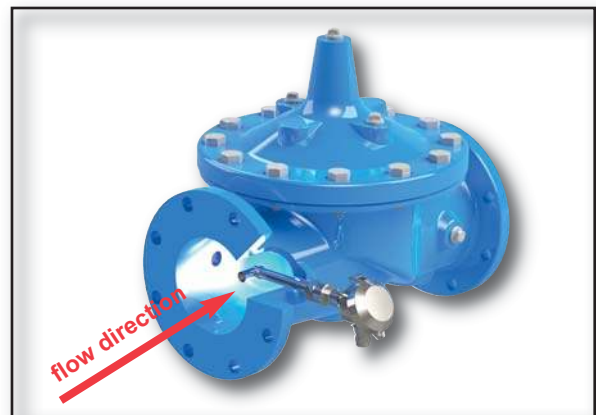
- Provides an effective means of removing unwanted solid particles in pipeline flow
- Prevents fouling and debris build-up in Cla-Val Automatic Control Valves
- Standard 316 Stainless Steel strainer mesh
- Standard Ductile Iron, Fusion Bonded, Epoxy Coated body for maximum durability
- Easy maintenance enabled by compact H-Style design
- Takes up less space than other pipeline strainers



# Information Gathering

## “M” Feature: X144 e-FlowMeter for New or Existing Valves

- Alleviates the need for an in-line meter and the associated installation costs
- IP 68 Submersible
- Provides flow data with accuracy +/- 2% of Full Scale
- Mounts on either inlet body tapping of the Cla-Val Control Valve
- Stainless Steel Construction
- 4-20mA Loop Powered
- Plug-and-Play Metering
- No Moving Parts
- Independent laboratory tested:
  - Utah State University,
  - Imperial College - London



**Laboratory Tested  
Field Proven**

## X145 e-Display for New or Existing Valves

- Ideal companion to the X144 e-FlowMeter
- Displays: Flow Rate, Total, Pressure, Position and mA
- Displays rate up to five digits and totals up to eight digits
- IP-67 Submersible
- SCADA compatible
- Customizable units
- Backlight optional
- Integral wall-mount hardware included





## **“P” Feature: X141 Gauges**

- Stainless Steel construction
- Available in 2½" - 4" sizes
- Provides easy access to pressure data
- Enables user to perform diagnostic performance testing of valve
- Gauge is equipped with an isolation valve for easy installation and change-out
- Can be easily field retrofitted to any Cla-Val Automatic Control Valve



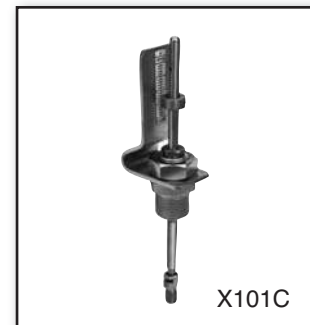
## **“V” Feature: X101 Valve Position Indicator**

- Provides quick and easy access to valve position information
- Equipped with a vent valve to exhaust any air that is trapped in the valve cover
- Leak-proof and frictionless operation
- Protected indicator rod encased in Pyrex tube
- Stainless Steel available



## **X101C Valve Position Indicator - FM Approved**

- Displays easy-to-read indication of valve position
- Frictionless, leak proof operation
- Included on FM Approved valve in 3", 4", 6" and 8" sizes
- Easy to retrofit to an existing, installed Cla-Val Automatic Control Valve



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Cla-Val Salesman nearest you.**

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# Power Generation

## Retrofittable X143 Series Power Generators

- Uses the hydraulic energy of the system to generate power
- Retrofits to an existing Cla-Val Control Valve
- Can be specified on a new valve
- Ideal for isolated locations and confined spaces
- Produces power to operate onsite equipment such as: Electronic Control Valves, Communications Equipment and Data Loggers

## X143HP Hydro Power Generator

- Uses the hydraulic energy of the system to generate power
- Retrofits to an existing Cla-Val Control Valve
- Can be specified on a new valve
- Ideal for isolated locations and confined spaces
- Generates up to 250 watts of power to operate onsite equipment, including:
  - Electronic Control Valves
  - Communications Equipment
  - Data loggers that capture and store information
  - Vault equipment: sump pumps, lighting, and heat tape



X143IP generates up to 14 watts of power



X143MP generates up to 0.7 watts of power

## get off the grid with Cla-Val Power Generators!

X143HP generates up to 250 watts of power



# Electronic Control

## 33 Series Electronic Controls

- Simplified Remote Valve Set-Point Control
- Isolated Input, 12-24VDC Input Power
- Reverse Polarity Protection
- IP-68 Submersible
- Pressure reducing, Pressure Sustaining and Rate of Flow configurations Available



CRD-33



CRL-33



CDHS-33

## CPC Position Control

- Precise Valve Position Control
- Completely Self-contained
- High Energy Efficiency with Low Operation Friction
- Direct Control of Valve Opening and Closing
- Combines with Pressure, Flow or Level Control
- Ideal for SCADA Control

## CTC Timer Control

- Precise valve on-off control up to 4 times daily
- Completely self-contained time-controlled operation
- High energy efficiency, 2- year battery life
- Retains stored data even after battery is depleted
- IP-68 submersible



CPC



CTC

## Typical Value Added Installations





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