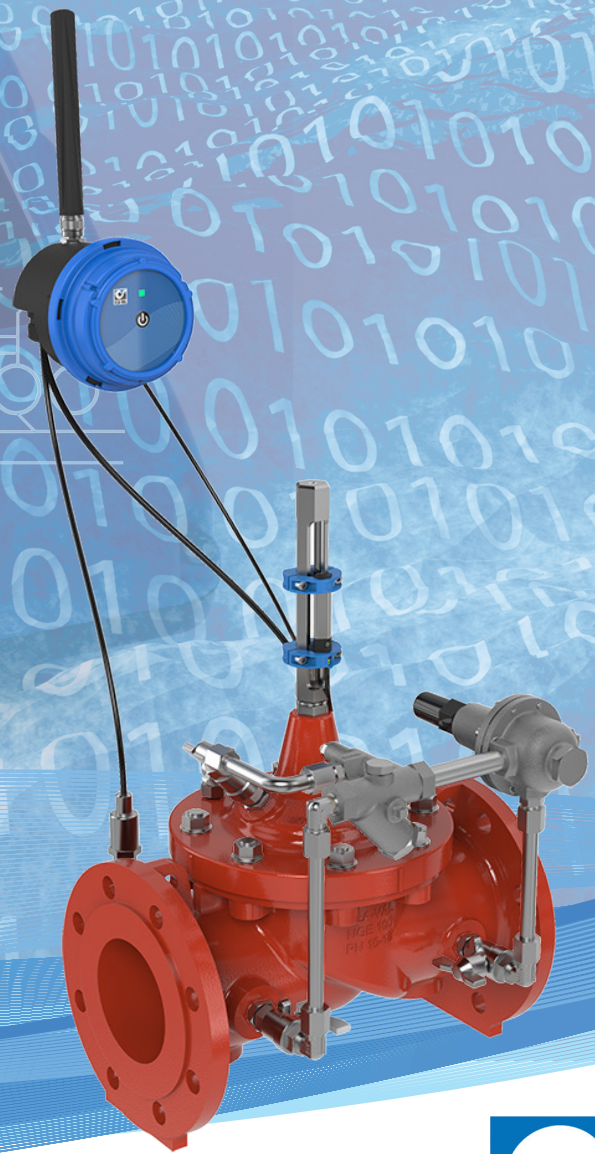
Cla-Val ValveFlow™

Flow Calculation Algorithm

- Flow information without the need of a flowmeter
- Inlet pressure, outlet pressure, valve position ➡ ***ValveFlow™***
- Easy to retrofit on existing CLA-VAL valves
- Can be used for flow information and/or flow control applications
- Embedded in **CLA-VAL D22**, **D35**, **CV-Log-35** and **X35**



Leading the Innovation

CLA-VAL Europe
AUTOMATIC CONTROL VALVES

CLA-VAL™

CLA-VAL VALVEFLOW™

Flow Calculation Algorithm

DESCRIPTION

CLA-VAL *ValveFlow*™ is a metering and data acquisition package comprising **CLA-VAL smart device** (logger or controller), **CLA-VAL e-Lift-35** valve position sensor, and two pressure transmitter sensors.

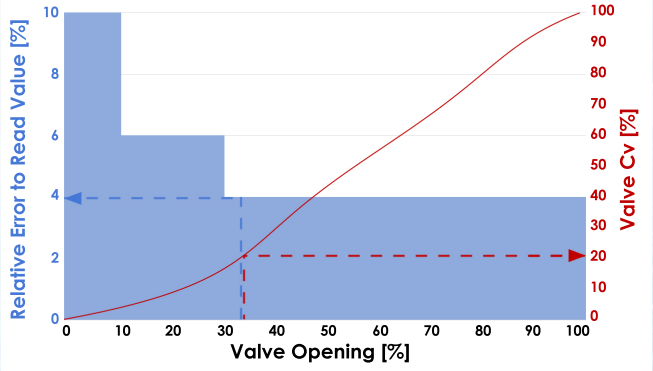
CLA-VAL *ValveFlow*™ computes the flow through a CLA-VAL control valve, based on the inlet and outlet pressures and its position.
The very precise proprietary algorithm embedded in the smart device allows calculating the flowrate, for flow information or flow control applications, without the need of a flowmeter.

Using only three basic sensors, four hydraulic datasets are made available: inlet pressure, outlet pressure, valve position and flowrate.

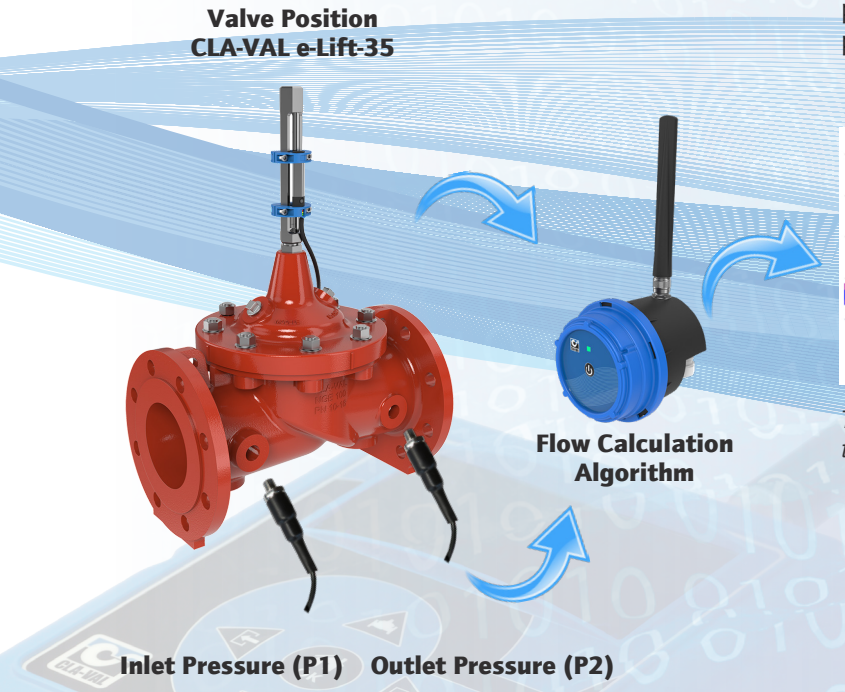
***ValveFlow*™** package is available for any CLA-VAL control valve of sizes NGE 80 mm, NGE 100 mm, and NGE 150 mm*.

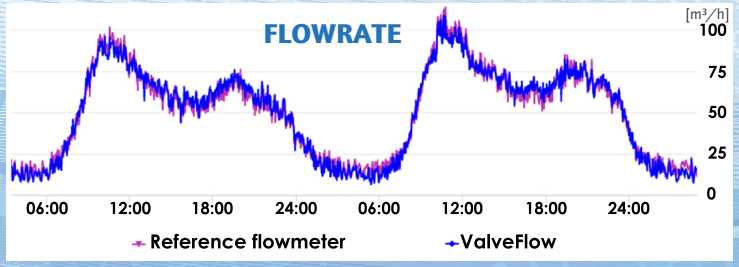
PRECISION

***ValveFlow*™** will automatically compute the flow going through a CLA-VAL valve with an average precision of 4% relative to the read value**, providing flow information at locations where no flowmeter is available, or allowing a higher level of diagnostic by tracking the flow from a reference flowmeter and the ***ValveFlow*™** information.



The precision is defined by the average difference between the calculated flowrate for a give valve opening position, and a calibrated reference flowmeter. A minimum differential pressure of 0.5 bar across the valve is necessary to ensure proper performance of the flow calculation algorithm.





*Typical example of the **ValveFlow**™ algorithm performance compared to a reference flowmeter*

** Contact CLA-VAL for other sizes*
*** Depending on valve size and opening position*

VALVEFLOW COMPATIBLE SMART DEVICES

	D22	D35 / MD35	CV-Log-35	X35
Power Supply	External 12-24 VDC	Battery or External 6-24 VDC	Battery or External 6-24 VDC	External 6-24 VDC
Pressure Sensors	4-20 mA, 0-16 bar, IP68	Ratiometric, 0-16 bar, IP68	Ratiometric, 0-16 bar, IP68	4-20 mA, 0-16 bar, IP68
Position Sensor	**CLA-VAL e-Lift-35***			
Inputs	4x Analog (4-20 mA) 6x Digital (Dry Contact)	4x Analog (Ratiometric / 0-5V / 0-10V) 2x Digital (Dry Contact or Pulse)	4x Analog (Ratiometric / 0-5V / 0-10V) 2x Digital (Dry Contact or Pulse)	4x Analog (4-20 mA) 2x Digital (Dry Contact or Pulse)
Outputs	4x Analog (4-20 mA) 2x Solenoid (24 VDC) 2x Relay	2x Latching Solenoid (6VDC) 1x Digital (Dry Contact or Pulse)	No	4x Analog (4-20 mA) 1x Digital (Dry Contact or Pulse)
Regulation	PID, Control Curve	PID, Control Curve	No	No
Data Communication	4G (LTE-M, NB-IoT) 2G (GPRS)	4G (LTE-M, NB-IoT) 2G (GPRS)	4G (LTE-M, NB-IoT) 2G (GPRS)	No
Display	Yes – 4.3" Color Display 272x480	PC, Tablet or Smartphone through Wifi	PC, Tablet or Smartphone through Wifi	Yes – OLED Monochrome

** See CLA-VAL e-Lift-35 specific documentation for more information*

SWITZERLAND
Europe, Middle East & Africa
Chemin des Mésanges 1
CH-1032 Romanel-sur-Lausanne
✆ + 41 21 643 15 55

UAE - DUBAI
Office 2004 , JBC5 - Cluster W - JLT
P.O. Box 336812 Dubaï, UAE
✆ +971 4 5667665

USA
Global Headquarters
1701 Placentia Avenue, Costa Mesa
CA 92627-4475
✆ + 949 722 4800

UNITED KINGDOM
Dainton House, Goods Station Road
CGB - Tunbridge Wells
Kent TN1 2 DH England
✆ + 44 1892 514 400

FRANCE
ZAC du Champ du Périer
1, Porte du Grand Lyon
FR - 01700 Neyron
✆ + 33 4 72 25 92 93

CANADA
4687 Christie Drive
Beamsville, Ontario
Canada L0R 1B4
✆ + 905 563-4963

NEW ZEALAND
45 Kennaway Road
1Woolston, Christchurch, 8023
✆ + 64 396 44860

MEXICO
Tubrivalco, S.A. de C.V.
Circunvalacion Jorge Alvarez
del Castillo No 1206-3
Col. Chapultepec Country
CP 44620 - Guadalajara, Jalisco
✆ + (33) 11309329

WATERWORKS

From the reservoir to the customer tap, the CLA-VAL Company has developed more than 3,500 Automatic Control Valve models.

Accurately controlling pressure, tank level and flows within water networks is the result of more than 80 years of unparalleled expertise.

CLA-VAL

WWW.CLA-VAL-EUROPE.COM