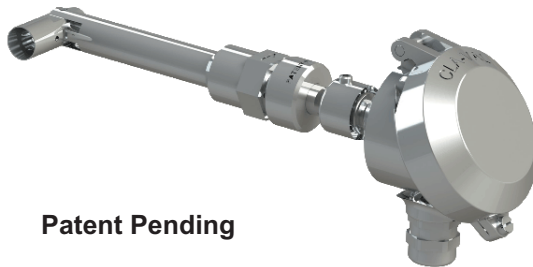




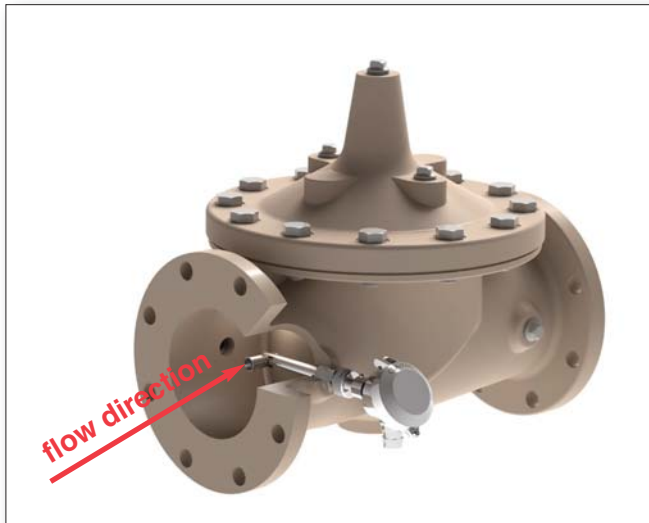
— MODEL — **X144AF**

e-FlowMeter™ for Ground Fueling



Patent Pending

- Can be retrofitted to an existing Cla-Val Automatic Control Valve or factory assembled on a new valve
- Alleviates the need for an inline meter and the associated installation costs
- IP 68 Submersible
- Class 1, Division 2
- Intrinsically safe
- Provides flow data with accuracy +/- 2% of Full Scale
- Mounts on either inlet body tapping of the Cla-Val Control Valve in tappings as small as 1/2-inch
- Incorporates electronics suitable for use with fuels
- For flow measurement applications only - not for fueling installation “transfer of custody” tracking
- Independent laboratory tested:
 - Utah State University,
 - Imperial College - London



Installation view of the X144AF e-FlowMeter™

Note: Consult Factory for Angle Pattern Applications

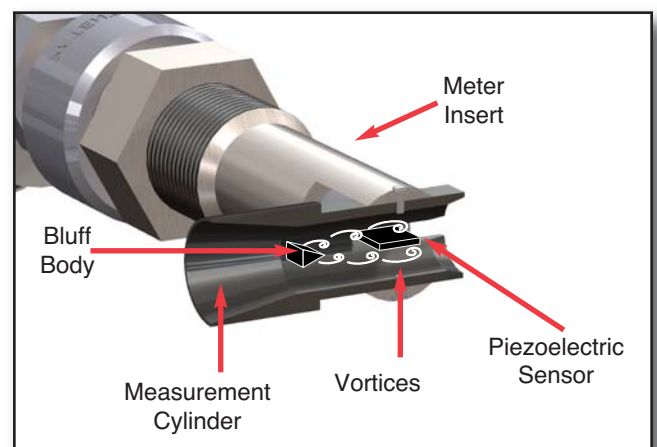
The Cla-Val Model X144AF e-FlowMeter™ is a vortex shedding insertion flow meter designed to be installed in the inlet tapping of a Cla-Val Automatic Control Valve to provide accurate flow measurement data without the need to install an inline meter.

The X144AF e-FlowMeter™ can be retrofitted to an existing Cla-Val Automatic Control Valve in a matter of minutes to quickly add flow measurement capability to a valve that is already performing another primary function in your fueling system. It is ideal for fuel-water separators and other installations where flow data is desired. For applications involving installation in close proximity to pump discharge, please consult factory with details.

Frequency Measurement

The X144AF e-FlowMeter™ uses the vortex shedding method to measure flow. The meter is inserted into the inlet tapping of the valve and the measurement cylinder is oriented parallel to the direction of flow. The flow enters the measurement cylinder where it encounters the bluff body, generating vortices, which in turn, deflects off the piezoelectric sensor.

The sensor counts the vortices and communicates the data to the meter’s integral circuit board. The flow data signal is converted to 4-20mA, pulse or digital pulse, depending on the desired application.

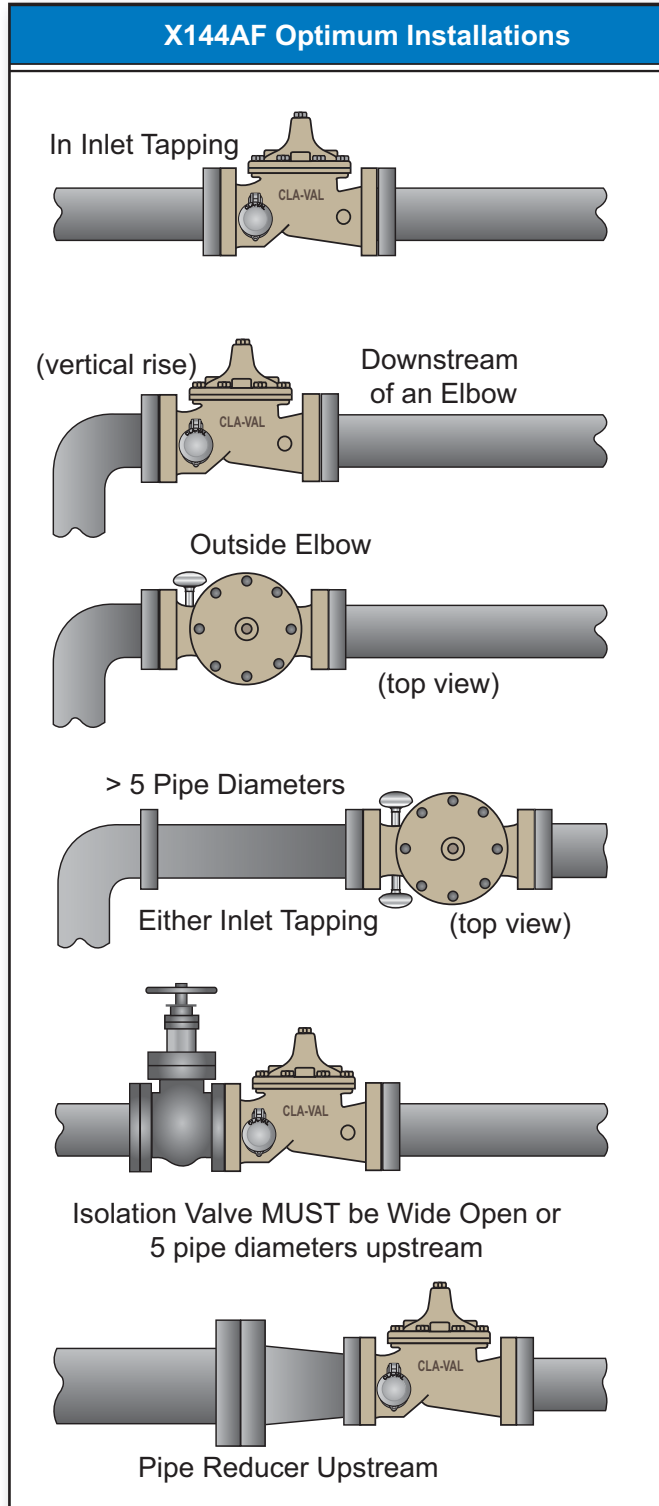


visit www.cla-val.com for more information
or call 800.942.6326

Installation Guidelines and Typical Applications

Installation Locations

For optimum performance, it is recommended that the valve in which the X144 e-FlowMeter™ is installed be located as shown below.



Note: Consult factory for other installation configurations

Information Transmission

The X144 e-FlowMeter™ measures flow of fuel and transmits information via a 4-20mA signal to desired location or device such as an external display at an installation site, such as those shown below.

Fuel-Water Separator Applications

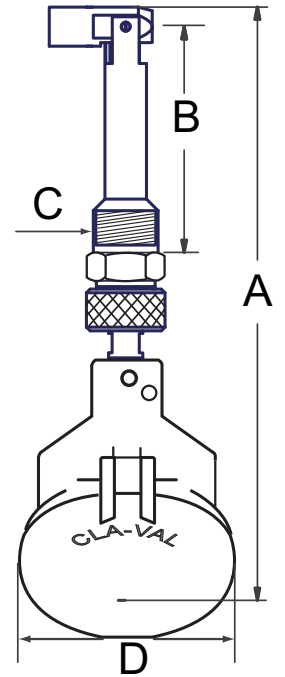


Storage Tank Fill Applications



X144AF Dimensions

X144 Sizes		1	2	3	4
Full Port Valve Sizes		2, 2-1/2, 3	4, 6	8, 10	12, 14, 16*
Reduced Port Valve Sizes		4	6, 8	10, 12	14, 16, 18, 20, 24*
Overall Length (in inches)	A	8.85	9.45	13.18	17.91
Insertion Length (in inches)	B	2.3	2.8	6.8	17.6
Pipe Thread (NPT)	C	1/2"	3/4"	1"	1"
Overall Width (in inches)	D	3.25	3.25	3.25	3.25



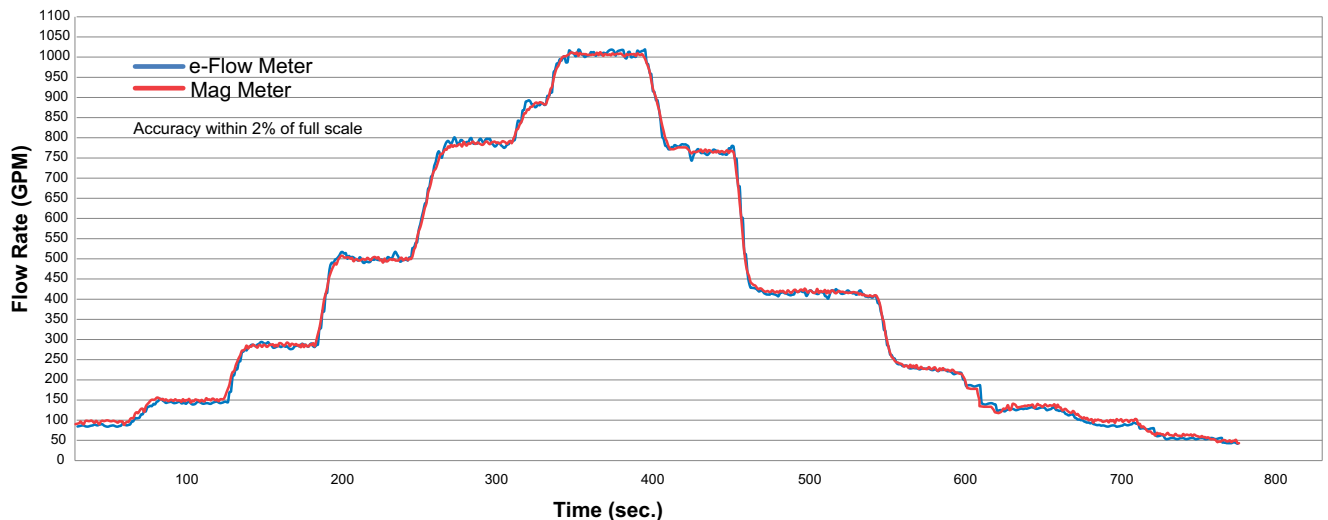
* For larger applications, please consult factory

X144AF e-FlowMeter™ Operational Flow Range

Line Size inches (mm)	2" (50mm) (100-49 Body)	2-1/2" (65mm)	3" (80mm)	4" (100mm)	6" (150mm)	8" (200mm)	10" (250mm)	12" (300mm)	16" (400mm)
Minimum Flow (GPM)	10	10	15	25	60	100	160	230	360
Maximum Flow (GPM)	210	300	460	800	1800	3150	4950	7000	11000
Minimum Flow (l/S)	0.65	0.65	1.0	1.5	3.8	6.3	10.0	15	23
Maximum Flow (l/S)	13.3	18.9	29	50	110	200	310	440	700

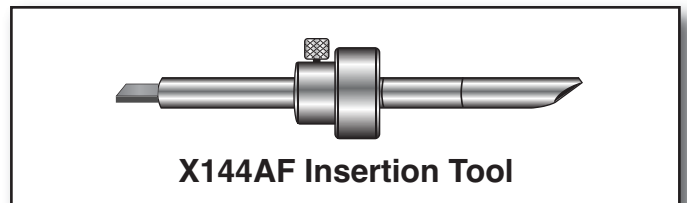
Typical Performance

X144 e-FlowMeter vs. Mag Meter



Options

- Remote Mounted Display
- Field Calibration (Custom Curve) *
- Pulsed output proportional to flow rate for low power consumption *
- * Using e-FlowMeter™ Customer Software (see below)



Insertion Tool and Locking Ring

- Required for installation
- Tool allows the proper installation and alignment of the bluff body to be parallel to upstream flow.

Power Requirement

- 12/24 VDC, 0.7 Watts minimum.

X144AF e-Flow Meter™ Sizing

- The X144 threads directly into the inlet tapping of a Cla-Val Control Valve. The size of the e-FlowMeter is dependent on the specific valve size for which it has been calibrated - no additional fittings are required. **See dimension chart on previous page.**

Cabling

- The unit is supplied with 30 feet of cable.

X144AF e-FlowMeter™ Analog Range (4-20mA Scaling): Factory Settings

If required, the factory settings of the e-FlowMeter™ can be adjusted. A Cla-Val USB Adapter Cable is required and can be ordered by contacting the factory at 800.942.6326.

Go to www.cla-val.com/controls-software.cfm for software/instructions.

Port Style	Line Size inches (mm)	2" (50) (100-49 Body)	2-1/2" (65)	3" (80)	4" (100)	6" (150)	8" (200)	10" (250)	12" (300)	14" (350)	16" (400)	18" (450)	20" (500)	24" (600)																
Full Port Valves 4mA = 0 (GPM - l/s)	20mA Range (GPM)	260	375	575	1000	2250	3900	6000	8750	10500	14000	Consult factory																		
	20mA Range (l/s)	16.4	23.7	36.3	63.1	140	245	380	550	660	880																			
Full Port Pulse Weight = 250ms	Gal/Pulse	10	12.5	20	35	75	130	200	300	350	475					Consult factory														
	l/Pulse	38	48	75	130	280	500	750	1140	1320	1800																			
Reduced Port Valves 4mA = 0 (GPM- l/s)	20mA Range (GPM)	not available			675	1600	2900	4500	5650	7750	9350									Consult factory										
	20mA Range (l/s)				42.5	100	180	285	355	490	590																			
Reduced Port Valves Pulse Weight = 250ms	Gal/Pulse				not available			22.5	53	95	150													190	310	310	Consult factory			
	l/Pulse							85	200	365	565													710	1200	1200				



CLA-VAL

PO Box 1325 Newport Beach CA 92659-0325
Phone: 949-722-4800 • Fax: 949-548-5441

CLA-VAL CANADA

4687 Christie Drive
Beamsville, Ontario
Canada L0R 1B4
Phone: 905-563-4963
Fax: 905-563-4040

CLA-VAL EUROPE

Chemin des Mesanges 1
CH-1032 Romanel/
Lausanne, Switzerland
Phone: 41-21-643-15-55
Fax: 41-21-643-15-50

©COPYRIGHT CLA-VAL 2011 Printed in USA
Specifications subject to change without notice.

www.cla-val.com

Represented By: