

# FVP™

FOUNDATION Fieldbus®  
Positioner / Controller



*Most Effective Technology*

# Masoneilan®

**DRESSER**

Flow Control

## Precise Digital Positioning & Process Control

**D**resser Flow Control, Masoneilan, a leading provider of automated process control solutions, again extends its capabilities with the introduction of the FVP™, the Fieldbus Valve Positioner.

FVP is an intelligent digital valve positioner and PID process controller that communicates using the FOUNDATION Fieldbus protocol. FVP offers advanced control technology for pneumatically actuated valves, providing higher precision, greater flexibility and ease of use previously unattainable in the marketplace.

Masoneilan's ValVue® FF software permits the user to effectively configure, calibrate, tune, view logged data, view diagnostics and perform valve diagnostics.

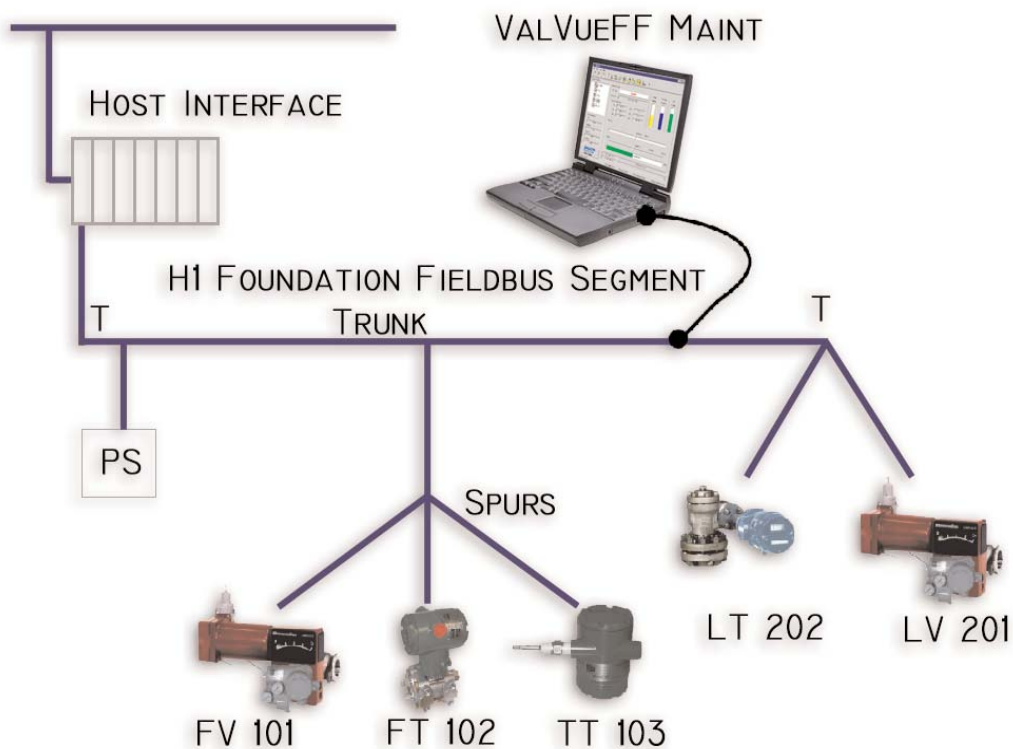


- Plug & Play Compatibility
- Compact Light-weight Housing
- Foundation Fieldbus Certified Device
- Configured from Host ValVue FF System
- Interoperable with Multiple Host Systems
- Mounts on Any Pneumatic Valve or Actuator



## FVP Features

- Precise Accurate Valve Positioning - Responds to 0.05% Step Changes In Both Directions
- Non-Contact Positioner Sensor - Eliminates Wear
- Basic & Advanced Diagnostics - Using Multiple Sensors (Position and Pressure)
- Automated Configuration & Calibration
- Low Life Cycle Costs
  - ▶ Low Power Consumption (16 mA max)
  - ▶ Low Air Consumption
  - ▶ External Manual Bypass Reduces Maintenance Costs
  - ▶ Simple, Fast Mounting
  - ▶ Reduced Wiring / Installation Costs





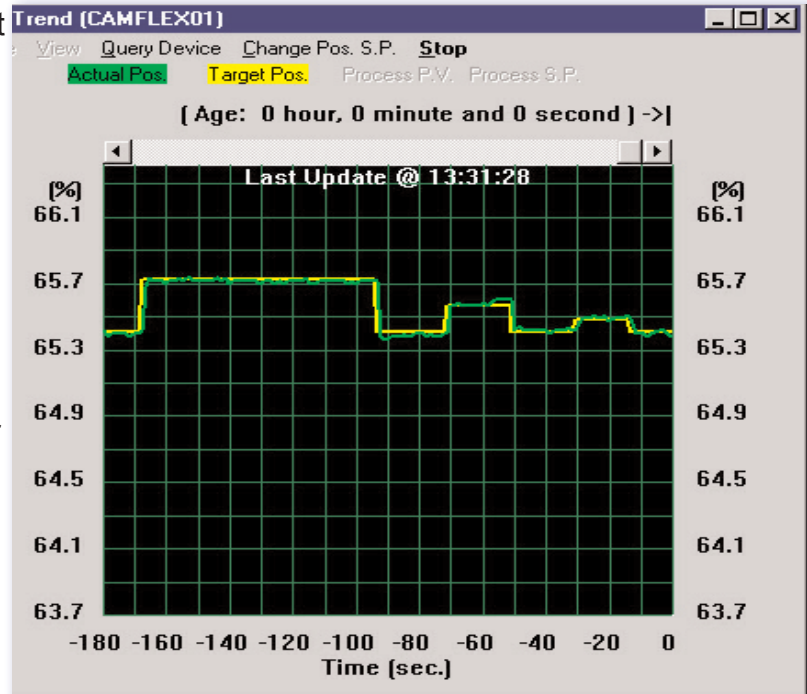
# Customer

## Reduced Process Variability

**T**ighter control to desired set points and fast response due to FOUNDATION Fieldbus's integration of transmitter, PID controller and control valve results in higher throughput, higher yields, improved product quality, and more efficient plant operation.

### Features

- Responds to 0.05% Step Changes
- PID Process Control Included in Positioner
- Accurate & Precise Positioning
- Custom Flow Characterization
- Split Ranging
- Trend Display / Log



## Reduced Installation and Startup Costs

Setup Wizard - Welcome (CV1001)

**Welcome to Setup Wizard for FF based valve positioner !**

This simple setup wizard will walk you through a basic configuration and calibration step by step to get the selected valve positioner up and running quickly. It requires the complete installation of the valve positioner on a control valve with actuator and air supply to complete this setup.

On each setup page, enter proper values for displayed parameters and follow the instruction to go through necessary steps.

Press Back button if you need to go back to previous setup page; press Next button if you are ready to proceed to next setup page when Next button is enabled.

Press Finish button at the last setup page when you need finish this setup.

Press Abort button will abort this setup and restore only the displayed parameters value.

< Back   Next >   Abort   Query Device

**A**utomated configuration, calibration and tuning functions help optimize equipment setup and operation in less time.

Process trend visualization enables the user to minimize adjustment with minimum interaction and do it in less time

### Features

- Automated Configuration
- Automated Calibration
- Automated Tuning
- Process Trend Visualization (Display/Log)
- Plug & Play Installation Capability

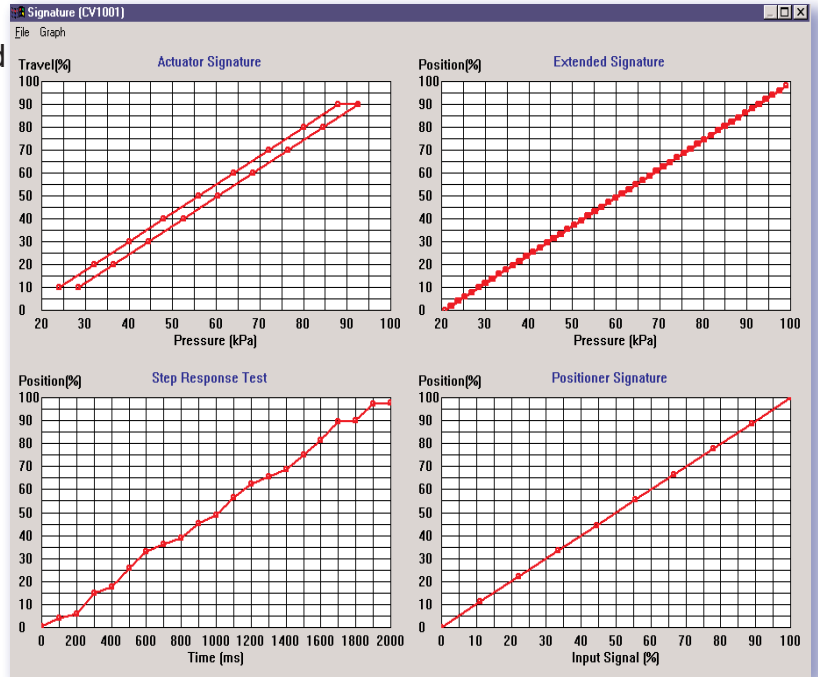
# Benefits

## Reduced Maintenance Costs

Real-time data collection and tracking allows users to accurately monitor and predict equipment performance. Proactive measures can then be implemented to prevent further degradation.

### Features

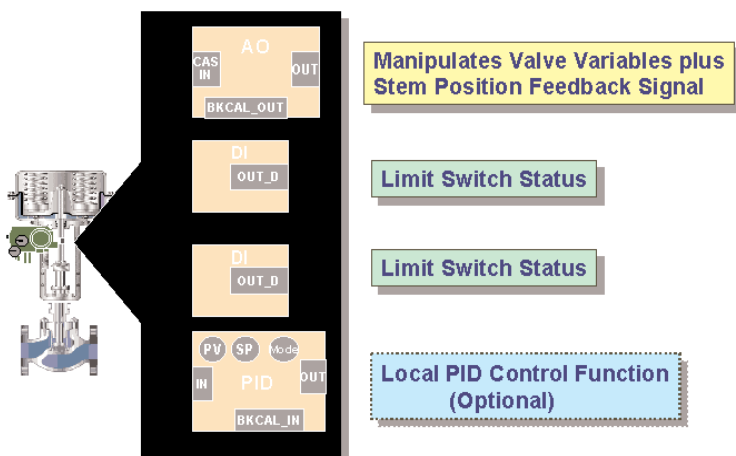
- Non-Contact Inductive Position Sensor & Modular Design Increases the FVP's Maintainability
- Easy Predictive Maintenance
- Basic & Advanced Diagnostics
- Makes Process Diagnostics a Reality
- Diagnostic Capabilities
  - Standard Signature
  - Extended Actuator Signature
  - Positioner Signature
  - Multiple Step Signature



## Reduced Control Loop Complexity

The inclusion of a PID controller, two discrete inputs (for limit switches) and a splitter block in addition to the AO, Resource and Transducer blocks permits easy, tighter control of the process variable.

FVP Function Blocks Provide High Performance and Flexibility

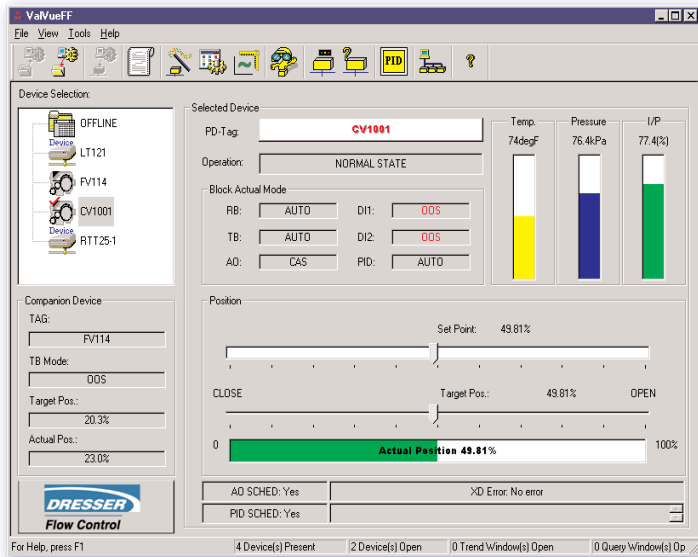


### Features

- Foundation Fieldbus PID Control Block
- Scheduling Through Host System or National Instruments Software
- Softwiring Through Host System or National Instruments Software

# ValVue FF Features

## Powerful, User Friendly FVP Interface



- Configuration
- Calibration
- Monitoring
- Diagnostics

- Set-Up Wizard
- Can Be Run On An Active Segment
- Basic & Advanced Valve Diagnostics

- Process Trend -- Data Display & Storage
- Quick and Easy FVP Configuration & Calibration

MODEL NUMBERING CODE		
NOMENCLATURE		DESCRIPTIONS
FVP110		
Input Signal	-F	FOUNDATION Fieldbus
Applicable Actuator	1	Single Acting Actuator
	2	Double Acting Actuator **
Connections	A	
	3	Electrical Connection: 1/2NPT, Pneumatic Connecion: 1/4NPT
Option Codes	N	
	LC1	PID Function Block
	AP	Build-in Pressure Sensor
Agency Certification	L	Lighting Protection
	FF1	FM Explosion Proof Approval
	FS15	FM Intrinsic Safety Approval
	CF1	CSA Explosionproof Approval
	KS15	CENELEC Intrinsic Safety Approval
	KF1	CENELEC Flameproof Approval

Basic Model: FVP110 - F1A3N / LC1  
 Options: L - Lightning Protection  
 AP - Built-in Pressure Sensor for Advanced Diagnostics  
 Agency Certification

\*\* Pending

# FVP Product Specification

Item	FVP Specification	
Communication Signal	FOUNDATION Fieldbus	
Action	Single acting: Action controlled by FOUNDATION Fieldbus software.	
Connections	Pneumatic	1/4 NPT Female
	Electrical	1/2NPT
External Auto/Manual switch	Included	
Pressure Gauge	Output, Supply	
Position Travel Limits	Rotary travel 10-100 deg.	
	Linear travel 0.4-6 inches (10-152mm)	
Operating Temperature Limits	-40deg F to 185deg F (-40 deg C to 85 deg C)	
Enclosure Rating	IP65, NEMA 4X	
Linearity	+/-0.5%	
Hysteresis	0.3%	
Deadband	0.1%	
Supply Pressure	20-100psi (1.4 - 6.9 bar)	
Air Consumption	0.32 m3/h at 1.4 bar (20 PSI)	
Air Delivery	6.6 m3/h at 1.4 bar (20 PSI)	
Operating Temperature Limits	-40deg F to 185deg F(-40degC to 85degC)	
Temperature Effect	+/-0.04% of F.S./deg C (Typical) +/-0.08% of F.S./deg C	
Lightning Protection	Max current 6000 A (rise 1 $\mu$ sec, fall 40 $\mu$ sec)	
	Repeating current 1000 A (rise 1 $\mu$ sec, fall 40 $\mu$ sec) 100 times	
Dead Band (Bench Test)	0.05%	
Resolution (Bench Test)	0.05%	
Flow Characterization	Linear, Equal percentage (50:1 or 30:1)	
	Quick opening	
	User configuration for 10 segments	
	Tight Shut-off & Full open	
Positioner Auto Tune	FVP performs an automatic determination of the optimal valve position control parameters.	
Function Blocks Included	PID Block: 2 DI Blocks ; AO Block; Transducer Block; Resource Block; Splitter Block**	
Positioner Alarms	Block Alarm, Process Alarm, and Update Event	
	Each Alarm has detail information Block Alarm: Condition of the Function Block, Self Diagnostics, Condition of the Device	
Fail safe action	Internal diagnostics and configurable deviation alarm can set output pressure to zero.	
Diagnostics	Total travel, Total cycle, Time open, Time close, Time near close, Signatures	
Factory Mutual Approvals	Explosion proof	Class I, Division 1, Groups B, C, and D
	Intrinsically Safe	Class I, II, III Division 1, Groups A, B, C, D, E, F, and G
CSA Approvals	Explosion proof	Class I, Division 1, Groups B, C, and D
	Intrinsically Safe**	Class I, II, III Division 1, Groups A, B, C, D, E, F, and G
CENELEC Approvals	Flame proof	EEx d IIB+H2 T5 (ambient temp.not to exceed 80degC) Per EN 50014 and EN 50018
	Intrinsically Safe	EEx ia II C T4 (ambient temperature not to exceed 80degC) Per EN 50014 and EN 50020
JIS Approvals	Explosion proof	Ex ds II C T5
CE Conformity	Yes	

\*\* Pending

# Sales Office Locations

## AUSTRIA

Dresser Valves Europe  
Hans Kudlich-Strasse 35  
A2100 Korneuburg (b. Wien), Austria  
Phone: 43-2262-63689  
Fax: 43-2263-68915

## BELGIUM

Dresser Europe S.p.r.L.  
281-283 Chaussee de Bruxelles  
281-283 Brusselsesteenweg  
1190 Brussels, Belgium  
Phone: 32-2-344-0970  
Fax: 32-2-344-1123

## BRAZIL

Dresser Industria E Comercio Ltda  
Divisao Masoneilan  
Rua Senador Vergueiro, 433  
09521-320 Sao Caetano Do Sul  
Sao Paulo, Brazil  
Phone: 55-11-453-5511  
Fax: 55-11-453-5565

## CANADA

Alberta  
Dresser Flow Control  
DI Canada, Inc.  
Suite 1300, 311-6th Ave., S.W.  
Calgary, Alberta T2P 3H2  
Canada  
Phone: 403-290-0001  
Fax: 403-290-1526

Ontario  
Dresser Flow Control  
DI Canada, Inc.  
5010 North Service Road  
Burlington, Ontario L7L 5R5  
Canada  
Phone: 905-335-3529  
Fax: 905-336-7628

## CHINA

Dresser  
Suite 2403, Capital Mansion  
6 Xinyuannan Road  
Chao Yang district  
Beijing 100040  
Phone: 86-10-6466-1164  
Fax: 86-10-6466-0195

## FRANCE

Dresser Produits Industriels S.A.S.  
Division Masoneilan  
4, place de Saverne  
92400 Courbevoie  
France  
Phone: 33-1-49-04-90-00  
Fax: 33-1-49-04-90-10

## GERMANY

Dresser Valves Europe GmbH  
Klein-Kollenburg-Strasse 78-80  
47877 Willich, Germany  
Mailing Address:  
P.O. Box 1208  
47860 Willich, Germany  
Phone: 49-2156-9189-0  
Fax: 49-2156-41058

## INDIA

Dresser Valve India Pvt. Ltd.  
305/306 "Midas" - Sahar Plaza  
Mathurdas VasANJI Road  
J.B. Nagar - Andheri East  
Mumbai, India 400 059  
Phone: 91-22-835-4790  
Fax: 91-22-835-4791

## ITALY

Dresser Italia S.r.L..  
Masoneilan Operation  
Via Cassano, 77  
80020 Casavatore (Naples), Italy  
Phone: 39-81-7892-111  
Fax: 39-81-7892-208

## JAPAN

Niigata Masoneilan Company, Ltd.  
20th Floor, Marive East Tower  
WBG 2-6 Nakase, Mihama-Ku  
Chiba-shi, Chiba 261-7120, Japan  
Phone: 81-43-297-9222  
Fax: 81-43-299-1115

## KOREA

Dresser Korea, Inc.  
#2107 Kuk Dong Building  
60-1, 3-Ka, Choongmu-ro  
Chung-Ku, Soeul, 100705  
Phone: 82-2-274-0792  
Fax: 82-2-274-0794

## KUWAIT

Dresser  
P.O. Box 242  
Safat 13003, Kuwait  
Courier:  
Flat No. 36, Floor 8  
Gaswa Complex, Mahboula  
Kuwait  
Phone: 965-9061157

## MALAYSIA

Dresser Flow Control - Far East  
Business Suite 19A-9-1  
Level 9, UOA Centre  
No. 19 Jalan Pinang  
50450 Kuala Lumpur, Malaysia  
Phone: 60-3-2163-2322  
Fax: 60-3-2163-6312

## MEXICO

Dresser Valve de Mexico, S.A. de C.V.  
Henry Ford No. 114, Esq. Fulton  
Fraccionamiento Industrial San Nicolas  
54030 Tlalnepantla Estado de Mexico  
Phone: 52-5-310-9863  
Fax: 52-5-310-5584

## THE NETHERLANDS

Dresser Valves Europe  
Steenhouwerstraat 11  
3194 AG Hoogvliet  
The Netherlands  
Mailing Address:  
P.O. Box 640  
NL3190 AN Hoogvliet RT  
The Netherlands  
Phone: 31-10-438-4122  
Fax: 31-10-438-4443

## SINGAPORE

Dresser Singapore, Pte. Ltd.  
16, Tuas Avenue 8  
Singapore 639231  
Phone: 65-861-6100  
Fax: 65-861-7172

## SOUTH AFRICA

Dresser Ltd., South Africa Branch  
P.O. Box 2234, 16 Edendale Road  
Eastleigh, Edenvale 1610  
Republic of South Africa  
Phone: 27-11-452-1550  
Fax: 27-11-452-6542

## SPAIN

Masoneilan S.A.  
C/ Murcia 39 C  
08830 Sant Boi de Llobregat  
Barcelona, Spain  
Phone: 34-93-652-6430  
Fax: 34-93-652-6444

## SWITZERLAND

Dresser Valves Europe SA  
Frauntalweg 76  
CH-8045 Zurich, Switzerland  
Mailing Address:  
P.O. Box 3568  
CH-8021 Zurich, Switzerland  
Phone: 41-1-450 28 91  
Fax: 41-1-450 28 95

## UNITED ARAB EMIRATES

Dresser  
Middle East Operations  
Post Box 61302  
R/A 8, Units JA01/JA02  
Jebel Ali Free Zone  
United Arab Emirates  
Courier:  
Units Nos. JAO1 + JAO2  
Roundabout 8  
Jebel Ali Free Zone  
United Arab Emirates  
Phone: 971-4-8838-752  
Fax: 971-4-8838-038

## UNITED KINGDOM

DI U.K. Limited  
Trevithick Works  
Gillibrands Estate, Skelmersdale  
Lancashire WN8 9TU, England  
United Kingdom  
Phone: 44-1695-52600  
Fax: 44-1695-52662

## DI U.K.

Unit 4, Suite 1.1, Nobel  
House  
Grand Union Office Park  
Packet Boat Lane, Uxbridge  
Middlesex UB8 2GH,  
England  
United Kingdom  
Phone: 44-1895-454900  
Fax: 44-1895-454919

## UNITED STATES

Northern Region  
Dresser Flow Control  
85 Bodwell Street  
Avon, MA 02322-1190  
Phone: 508-586-4600  
Fax: 508-427-8971

Southern Region  
Dresser Flow Control  
11100 West Airport Blvd.  
Stafford, TX 77477-3014  
Phone: 281-568-2211  
Toll Free: 800-847-1099  
Fax: 281-568-1414

