General Design Features

- Fully automated chemical injection metering package combining measurement, actuation and control using an integrated Positive Displacement Flow Meter (PDFM), Electric Actuator, and Chemical Injection Metering Valve (CIMV).
- Chemical Injection Metering Valve (CIMV) incorporates SkoFlo's field proven pressure independent design.
  - ✓ Tested in the harshest environments for over 30 years
  - ✓ 20,000 valves in service
- Positive Displacement Flow Meter (PDFM) developed by SkoFlo and deployed in subsea CIMVs since 2011 offers "true volumetric" flow measurement resulting in reliable and accurate flow measurement to 0.6 gallons per day.
- *Smaller footprint* architecture provides several important benefits:
  - ✓ Reduced cost
  - ✓ Reduced weight
  - ✓ Easily reconfigurable
- Minimal intervention, easy to install and maintain
- Reduces Platform Maintenance by eliminating system leak points from typical tubing and fittings
- High turndown ratio
- ATEX, IECEx, ETL Certified
- Optional downstream pressure sensor available for improved performance, diagnostics, and cost savings
- Highly accurate flow measurement of ±0.5% of reading.
- Continuous Setpoint Regulation (CSR) – SF3 automatically adjusts set point if needed to maintain consistent and accurate chemical injection in the event of extreme temperature variations.
- Autonomous Flow Measurement (AFM) – SF3 can be programmed to take periodic flow readings as needed.
- Zero Flow Shutdown (ZFS) – If flow stops the valve will be shutdown to prevent excess pumping of fluids when the pumps come back on.

SkoFlo Benefits

- 30-year experience, industry expert and solution provider
- Pressure Independent Valve Technology (PIVT)
- Significant chemical **OPEX** cost savings

Unmatched flow delivery, accuracy, proven reliability

Flow Characteristics

Flow Range	0.2 to 200 GPD (0.03 to 31.5 LPH)	0.6 to 700 GPD (0.09 to 110 LPH)	50 to 1800 GPD (8 to 284 LPH)
Measurement Accuracy	±0.5% of reading		

Design Ratings

Design Standards	IEC 60079-0, IEC 60079-1, UL1203, IEC 60529, UL61010-1	
Design Life	25 years	
Working Pressure Rating	5,000 or 10,000 psig (345 or 690 barg)	
Proof Test Pressure	7,500 or 15,000 psig (517 or 1034 barg)	
Operating Temperature Rating*	-20° to 59°C (0° to 138°F)	
Storage Temperature Rating	-20° to 65°C (0° to 150°F)	
Debris tolerance	SAE AS4059 Class 12B-F	
Weight	70lbs (32kgs)	
Process Connections	Hydraulic	¼" NPT (5ksi); ⅜" AE MP (10ksi)
	Electrical	½" NPT or M20 x 1.5
Ingress Protection	IP66 (NEMA 4x)	

Materials

Chemically Wetted Material	NACE MR0175
Metallic Material Certification	EN 10204 Type 3.1 Certification
Non-metallic Seals	FFKM, FKM and EPDM Seals offered (NORSOK M-710). For special seals, contact factory.

Electricals

Electrical Connector	Terminal Block
Voltage Supply (2 options)	120 – 240 / 50 – 60Hz; 24 V DC ±4 V
Analog Inputs	4-20mA (Set flow rate and Minimum flow rate), 24 VDC
Power Consumption Max	Expected Wattage – 80W

Software

Protocol	Modbus RTU, HART v7.1 For additional communication protocols, contact factory.
Baud rate	1200 – 57600
Communication Interface	TIA-485(-A)/EIA-485/RS-485

Hazardous Location Ratings

ATEX and IECEx	CE 2575 Ex II 2G Ex db IIB T6 Gb
NEC/CEC	Class 1, Division 1, Group C

*Consult SkoFlo for higher temperature rating