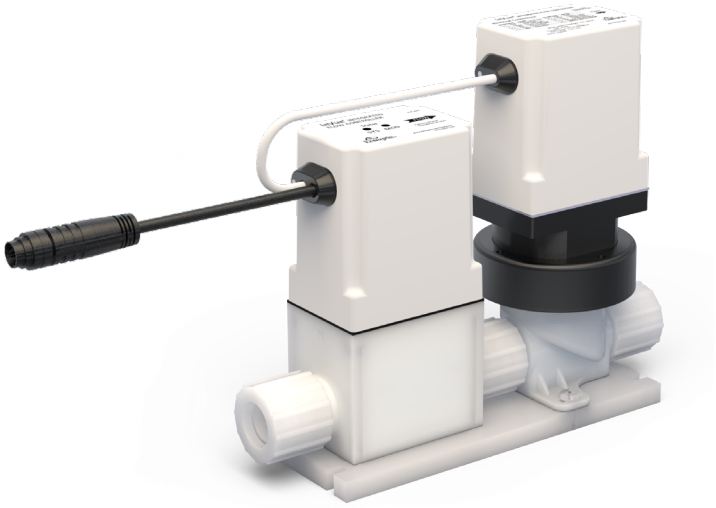
InVue® Integrated Flow Controller Model 6550

High flow, bulk chemical flow control



Entegris is solving today's flow control challenges using innovative flow control technology. The InVue® Integrated Flow Controller (IFC), Model 6550 is designed for bulk chemical flow control. Engineered with 60, 90, or 120 L/min flow rates, the IFC Model 6550 is ideal in sub-fab bulk chemical delivery applications, and in liquid fluid handling systems requiring high flow volumes.

The integrated flow controller uses proven and reliable differential pressure flow measurement technology and advanced closed-loop process control. Visual indicators provide diagnostics for preventive maintenance, troubleshooting, and alarm conditions, enabling users to integrate more process functionality.

- Integral pressure transducer for additional process information
- Proven superior measurement and control with bubble producing media
- Robust design for stability and long-term reliability
- High accuracy for critical dispense applications
- Fast response for accurate dispense rates
- LED status and discrete alarm output for visual and electronic diagnostics
- Can be installed in any orientation

Constructed for Compatibility

The InVue Integrated Flow Controller, Model 6550 is designed for use in ultrapure liquid chemical, DI water, and CMP slurry applications. It is also designed for effective control of bubble producing media.

The valve seat and diaphragm are designed to minimize dead volume and fluid shear, reducing the possibility of process contamination. Featuring fluorinated materials for wetted parts, the IFC Model 6550 is ideal for protecting chemical integrity. In addition, the chemical resistant nonwetted parts perform well in harsh chemical environments.

Advanced Technology

The InVue Integrated Flow Controller, Model 6550 utilizes a unique PTFE valve diaphragm allowing for high volume fluid flow control. Leveraging the latest motorized valve and flow-meter technology, encapsulated internal electronics control all aspects of the flow controller. The product is activated by a setpoint signal (for example, 4 – 20 mA, 0 – 10 VDC) to maintain fluid flow at the desired setpoint.

APPLICATIONS

The InVue IFC Model 6550 combines Entegris' differential pressure based flowmeter and leading-edge control valve technology to create a closed-loop flow controller ideal for:

- High flow applications such as bulk delivery or tool liquid dispense
- Critical dispense applications
- Chemical spiking and blending
- On-demand chemical mixing

SPECIFICATIONS

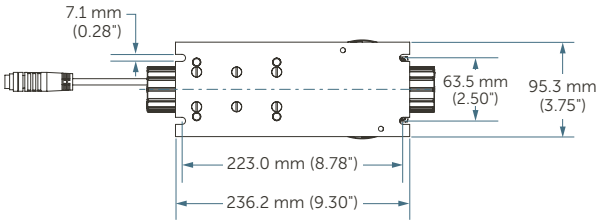
Materials of construction	Wetted parts	Body: PTFE , PFA
		Diaphragm: PTFE
		Sensor interface: CTFE or PFA
		Primary O-ring: Perfrez® PXC Ultra
	Nonwetted parts	Polypropylene, PVDF, Viton®, polyurethane, and PVC (in addition to materials listed above)
Operating range		10 – 100% of full scale flow
Flow control accuracy		±1% of full scale (calibrated using DI water @ 23°C [73°])
Repeatability		±0.5% of full scale
Pressure measurement output		0 – 689 kPa (0-100 psig)
Pressure accuracy		±1% of full scale
Operating pressure		103 – 552 kPa (15 – 80 psig) (60 L/min, 90 L/min) 172 – 552 kPa (25 – 80 psig) (120 L/min)
Minimum required differential pressure*		≥15 psi, differential (60 L/min, 90 L/min) ≥25 psi, differential (120 L/min)
Output signals		Two 4 – 20 mA electrically isolated outputs, one for flow and one for pressure
Response time		<3 seconds at ≥15 psid (60 L/min, 90 L/min) <3 seconds at ≥25 psid (120 L/min)
Non-operating over-pressure limit		827 kPa (120 psig)
Process temperature		10 – 65°C (50 – 149°F)
Electrical input		24 VDC (±10%) @ 1.2 amps
Setpoint input signal		4 – 20 mA, 0 – 10 VDC
Enclosure		IP54
Weight		3.2 kg (7 lbs)
Approvals		CE

**Minimum required differential pressure is the minimum inlet to outlet fitting differential pressure required to reach full scale flow and response time specifications.*

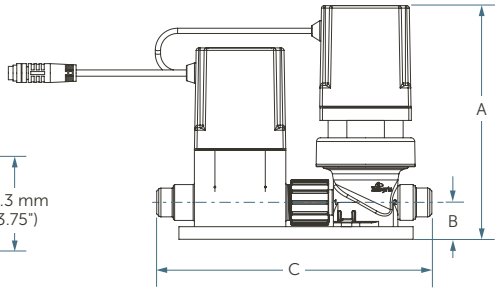
Note: Specifications are subject to change without notice. Please consult Entegris for the most current information.

DIMENSIONS

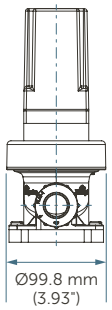
Top View



Side View



End View



	DIMENSIONS		
Inlet/Outlet port connection	**A**	**B**	**C**
1" Flaretek tube fitting	235.6 mm (9.28")	37.1 mm (1.46")	277.5 mm (10.93")
1" PrimeLock tube fitting	239.7 mm (9.44")	41.1 mm (1.62")	282.2 mm (11.11")

ORDERING INFORMATION

InVue Integrated Flow Controller NT6550: part number

6550- ___ - ____ - ____ - __ - ___ - ___

Primary/secondary seal
U3 = Perfrez PXC Ultra/Viton

Sensor interface
P9 = 100 psig sensor (product rated to 80 psig) with CTFE (for acids, bases and oxidants, typically)
P10 = 100 psig sensor (product rated to 80 psig) with PFA (for solvents and temperatures >40°C, typically)
Note: Selection is dependent on application and chemical media. Please contact Entegris for best selection.

Setpoint input signal, controller type
A = 4–20 mA, continuous
B = 0–10 VDC, continuous
K = 4–20 mA, batch
L = 0–10 VDC, batch
M = 0–5 VDC, batch

Electrical connector type
B12 = FEP-jacketed 12' (366 cm) pigtail electrical cable
G01 = PVC-jacketed 1' (30 cm) electrical cable terminated with 14-pin Turck connector***

Inlet/outlet port connection**
F08 = 1" Flaretek tube fitting
K08 = 1" PrimeLock tube fitting
Note: Contact Entegris regarding Super 300 Type Pillar® tube fittings

Flow range*
T10 = 0–60 L/min
T11 = 0–90 L/min
T12 = 0–120 L/min

**Flow ranges are scaled to zero flow, measurement is from 10–100% of full scale flow range.*
***For options not shown here, please contact Entegris.*
****For electrical connector type G01, a 14-pin mating cable is required for installation. See "Electrical Mating Cables for InVue Flow Controller, Model 6550 – Accessory" chart below for ordering information.*

Maximum operating pressure for Model 6550 is 552 kPa (80 psig).
Product specified with a flared tube connection is packaged with two PVDF nuts.
For custom configurations and specifications, please contact Entegris.

Electrical Mating Cables for InVue Flow Controller, Model 6550 – Accessory

Part number	Description	Quantity
14G02	14-pin mating Turck connector with 2-meter (6.5') PVC-jacketed cable	1
14G05	14-pin mating Turck connector with 5-meter (16.4') PVC-jacketed cable	1
14G10	14-pin mating Turck connector with 10-meter (32.8') PVC-jacketed cable	1

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the Contact Us link to find the customer service center nearest you.

TERMS AND CONDITIONS OF SALE

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