

NT™ Proportional Control Valves, Model 6300, Cv up to 2.8

Linear, reliable proportional control in CMP slurry applications



NT Proportional Control Valve, Model 6300

The NT™ Proportional Control Valve, Model 6300 is developed for use in ultra high-purity applications. Compatible with highly corrosive processes and designed for use in CMP slurry applications, this valve is an ideal choice to solve today's flow control needs. Featuring PFA and PTFE for wetted parts and inert materials for nonwetted parts, the valve is resistant to harsh chemical environments and external spray-downs. With the latest motor driver technology, the internal electronics control all aspects of the valve's stepper motor. The valve is actuated using Entegris' advanced algorithm design to maintain the desired setpoint.

APPLICATIONS

The NT Proportional Control Valve Model 6300 (flow factor C_v , 0.16, 0.68, 1.0 and 2.80) is solving today's flow control challenges by providing a high-purity, linear control valves that can be used on any analog control loop and is ideal for:

- Control for critical dispense, chemical spiking and blending
- Closed-loop control of any separate analog sensor for temperature, pressure, flow, conductivity, etc.

FEATURES & BENEFITS

PTFE wetted surfaces	Broad chemical compatibility for high-purity applications
Nonmetallic external components	Corrosion resistance extends product lifetime
Double diaphragm construction	Prevents chemical exposure to motor and electronics Protects process from contamination
Optimized seat and diaphragm design	Minimize dead volume and fluid shear for reliable control from fully closed to fully open
Compact footprint	Easy installation where space is limited
Advanced motor driver technology	Provides smooth, precise linear control

SPECIFICATIONS

Materials of construction	Wetted parts	Body, PFA
		Diaphragm, PTFE
	Nonwetted parts	Polypropylene, Viton®, PVDF
Response time	<2 seconds from 5 to 95% full scale	
Pressure range*	-100 kPa to 414 kPa (-14.5 psig to 60 psig)	
Over pressure limit	689.5 kPa (100 psig)	
Process temperature**	10° to 65°C (50° to 149°F)	
Electrical input	24 VDC \pm 10%, regulated	
Setpoint input signal	4–20 mA, 0–10 VDC, 0–5 VDC; separate homing line also included	
Enclosure	NEMA 5/IP54	
Connection type***	Flaretek tube fitting	
Approvals	CE	

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

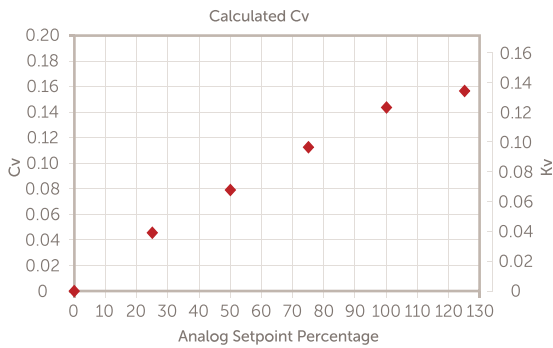
* Please consult the factory for pressure ranges from 414 kPa to 552 kPa (60 psig to 80 psig).

** Please consult the factory for temperatures from 65° to 80°C (149° to 176°F).

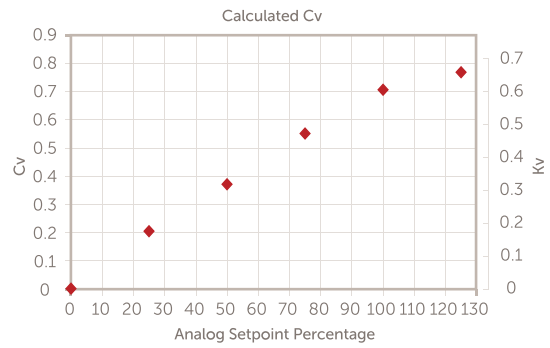
*** For PrimeLock® connections and other options not listed, please contact Entegris.

PERFORMANCE DATA

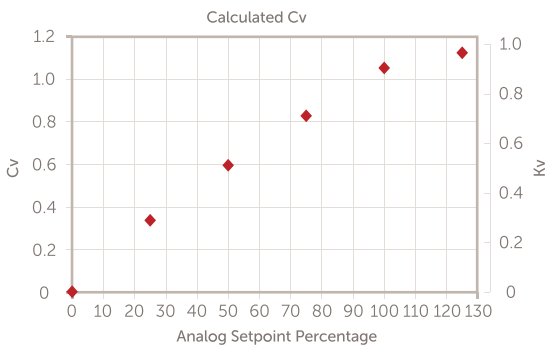
CV1 F02 (1/4"): Max Cv = 0.16



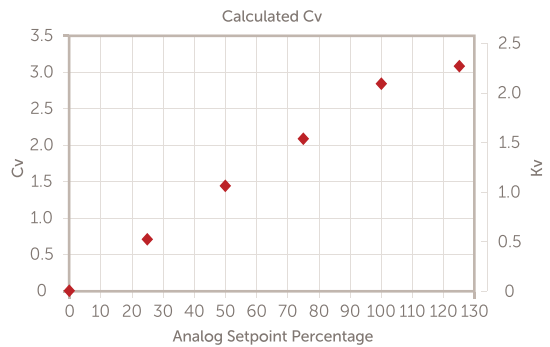
CV2 F03 (3/8"): Max Cv = 0.68



CV3 F04 (1/2"): Max Cv = 1.0

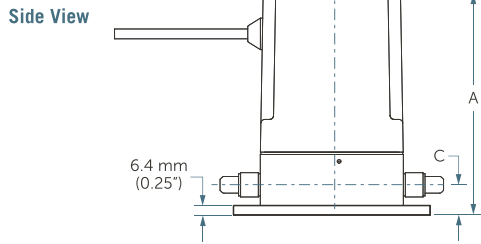


CV4 F06 (3/4"): Max Cv = 2.8



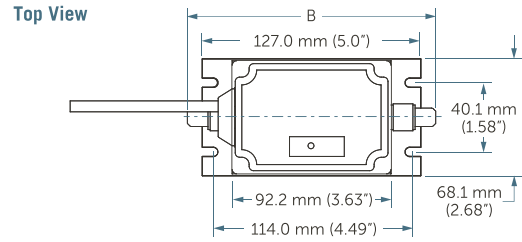
DIMENSIONS

CV1 – CV4 Ranges
(Flaretek® Inlet /Outlet Type)



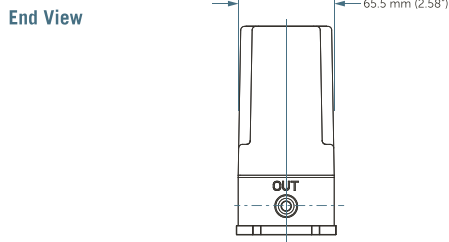
Inlet/Outlet Port Connection 1–4 C _v Ranges	Dimensions A	C
1/4" Flaretek®	142.2 mm (5.60")	19.6 mm (0.77")
3/8" Flaretek	142.2 mm (5.60")	19.6 mm (0.77")
1/2" Flaretek	144.5 mm (5.69")	21.6 mm (0.85")
3/4" Flaretek	153.7 mm (6.05")	27.2 mm (1.07")

CV1 – CV4 Ranges
(Flaretek® Inlet /Outlet Type)



Inlet/Outlet Port Connection 1–4 C _v Ranges	Dimension B
1/4" Flaretek®	144.0 mm (5.67")
3/8" Flaretek	144.0 mm (5.67")
1/2" Flaretek	150.1 mm (5.91")
3/4" Flaretek	153.7 mm (6.05")

CV1 – CV4 Ranges
(Flaretek® Inlet /Outlet Type)



ORDERING INFORMATION

PART NUMBER	CV	INLET/OUTLET PORT CONNECTION	ELECTRICAL CONNECTOR TYPE	SETPOINT INPUT SIGNAL, CONTROLLER TYPE
6300CV2F3B12K	0.68	3/8" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	4-20 mA
6300CV2F3B12L	0.68	3/8" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	0-10 VDC
6300CV2F3B12M	0.68	3/8" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	0-5 VDC
6300CV2F3G1K	0.68	3/8" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	4-20 mA

ORDERING INFORMATION

PART NUMBER	CV	INLET/OUTLET PORT CONNECTION	ELECTRICAL CONNECTOR TYPE	SETPOINT INPUT SIGNAL, CONTROLLER TYPE
6300CV2F3G1L	0.68	3/8" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	0-10 VDC
6300CV2F3G1M	0.68	3/8" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	0-5 VDC
6300CV3F4B12K	1.0	1/2" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	4-20 mA
6300CV3F4B12L	1.0	1/2" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	0-10 VDC
6300CV3F4B12M	1.0	1/2" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	0-5 VDC
6300CV3F4G1K	1.0	1/2" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	4-20 mA
6300CV3F4G1L	1.0	1/2" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	0-10 VDC
6300CV3F4G1M	1.0	1/2" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	0-5 VDC
6300CV4F6B12K	2.80	3/4" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	4-20 mA
6300CV4F6B12L	2.80	3/4" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	0-10 VDC
6300CV4F6B12M	2.80	3/4" Flaretek® tube fitting	FEP-jacketed 12' (366 cm) pigtail electrical cable	0-5 VDC

ORDERING INFORMATION

PART NUMBER	CV	INLET/OUTLET PORT CONNECTION	ELECTRICAL CONNECTOR TYPE	SETPOINT INPUT SIGNAL, CONTROLLER TYPE
6300CV4F6G1K	2.80	3/4" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	4-20 mA
6300CV4F6G1L	2.80	3/4" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	0-10 VDC
6300CV4F6G1M	2.80	3/4" Flaretek® tube fitting	PVC-jacketed 1' (30 cm) electrical cable terminated with 14 pin Turck connector (mating cable sold separately)	0-5 VDC

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.

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Corporate Headquarters
129 Concord
Billerica, MA 01821
USA

Customer Service
Tel +1 952 556 4181
Fax +1 952 556 8022
Toll Free 800 394 4083

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