Instrumentation and Process Control Solutions for the Oil & Gas Industry

ControlAir's Precision Pressure Regulators, Filter Regulators, Volume Boosters, Air Relays and I/P Transducers help ensure precise pressure adjustment for instrumentation and process control in the oil and gas markets. These demanding applications require accurate and repeatable pressure regulation, sometimes under extreme conditions. ControlAir's family of Stainless Steel and NACE units provide longer life in offshore and other harsh environments.

Pneumatic and Electro-Pneumatic Regulators are used in the following applications

Process Control Valves
Control of valves with Filter Regulators, I/P Pressure Transducers and Volume Boosters

Separator Skids
Water and oil separators

Rotational Speed Controls on Compressors and Turbines
I/P Transducers are used to control throttle speed

Emergency Shutdown System Controls
Filter Regulators and SIL 3 compliant Volume Boosters for quick and reliable valve actuation

Flare and Burner Systems
High Flow Regulators used for gas vent control

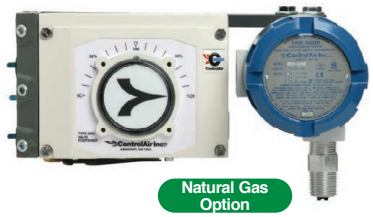
Wellhead Instrumentation and Analysis
Precision Regulators and low bleed I/P Transducers for sensitive instrument control

Tank Blanketing Precision Regulators for controling tank pressures

Natural Gas Compressors
Regulators for fuel systems on compressor skids

ControlAir

	TYPE 310/330/335 Filter Regulators	TYPE 350/360/370 Filter Regulator/Regulator/Filter	TYPE 380/390SS Filter Regulator / Regulator	TYPE 3500/3600 High Pressure Regulators	TYPE 1227/1230 Gas Pressure Regulators	TYPE 6100/6200 Volume Boosters	TYPE 6500/6600 Large Flow Volume Booster
Features	• Corrosion Resistant Construction • NACE MR0175 Compliant • Depth Filter • Two Outlet Connections • Stable Output and Repeatability • Low Droop At High Flow Levels • Tight Shutoff • Low Air Consumption • Tapped Exhaust • Stainless Steel Trim option	• 316 Stainless Steel (T350/360/370) • NACE MR0175 Compliant • Autodrain Option (T350 & 370) • 1/4" & 1/2" NPT Ports • Low Temp Option • High Flow Capacity • Tapped Exhaust Port • Minimal Air Consumption	• 316L Stainless Steel Construction • High Flow Capacity • 3/4" or 1" NPT Porting • (2) Gauge Ports • Automatic Drain Option • Soft Seat Self Relieving Design	• 316 Stainless Steel (T3600) • NACE MR0175 Compliant (T3600) • Choice of Three Output Pressures • Choice of Three Output Ports • Socket Head or Tee Handle • Replacement Valve Seat • Non-Relieving Design (T3600) • High Maximum Inlet Pressure	• 1" or 2" body size • Wide range of orifice sizes for different flow capacities • Trim can be replaced without disconnecting regulator from the system • Can be re-arranged into multiple orientations for diffcult installations with limited maneuverability • Tamper-proof cap • Monitoring option (M) provides downstream feedback control line	• 1/4", 1/2" or 3/4" NPT Porting • Aluminum or 316 Stainless Steel Construction • Integral Adjustable Bypass Valve • High Flow Capacity • Soft Valve Seat Design • High Temperature Operation • High Output Ehaust • (2) 1/4" NPT Gauge Ports • Balanced Supply Valve • Optional Negative Bias	• 3/4" or 1" NPT Porting • Integral Adjustable Bypass Valve • High Flow Capacity • Soft Valve Seat • High Temp. Operation • Tapped High Output Exhaust Port • (2) Gauge Ports-Optional • Low Temp. Option • IEC 65108 SIL 3 Compliant
NACE Compliant	**T310 & T335**	**T350, T360 & T370**		**T3600**	**T1227N & T1230N**		
Material (Body)	Diecast Aluminum with Baked Epoxy Finish	316L Stainless Steel	316L Stainless Steel	**T3500:** Brass **T3600:** 316 Stainless Steel	LCC Steel	**T6100:** Aluminum **T6200:** 316 Stainless Steel	**T6500:** Aluminum **T6600:** 316 Stainless Steel
Output Ranges	0-30 psig (0-2.1 bar) 0-60 psig (0-4.1 bar) 0-100 psig (0-6.9 bar) **T330:** 0-120 psig (0-8 bar)	**T350 & T360:** 0-30 psig (0-2.1 bar) 0-60 psig (0-4.1 bar) 0-100 psig (0-6.9 bar) 0-150 psig (0-10.3 bar) **T370:** N/A	0-30 psig (0-2.1 bar) 0-60 psig (0-4.1 bar) 0-100 psig (0-6.9 bar) 0-150 psig (0-10.3 bar) 0-200 psig (0-13.8 bar)	0-125 psig (0-8.6 bar) 0-150 psig (0-10.3 bar) 0-225 psig (0-15.5 bar)	**T1227:** 5-20 psig (0.4-1.4 bar) 15-40 psig (1.0-2.8 bar) 10-95 psig (0.7-6.4 bar) 35-80 psig (2.4-5.5 bar) 70-150 psig (4.8-10.3 bar) **T1230:** 27-50 psig (1.9-3.5 bar) 46-95 psig (32.-6.6 bar) 90-150 psig (6.2-10.3 bar) 150-200 psig (10.3-13.8 bar) 200-275 psig (13.8-19 bar) 275-500 psig (19-34.5 bar)	0-150 psig (0-10.3 bar)	0-150 psig (0-15 bar)
Maximum Supply Pressure	**T310 & T335:** 250 psig (17.2 bar) **T330 Autodrain:** 150 psig (10 bar)	**T350:** 290 psig (20.0 bar) **Autodrain:** 150 psig (10.34 bar) **T360:** 290 psig (20.0 bar) **T370:** 150 psig (10.34 bar) **Autodrain:** 150 psig (10.34 bar)	290 psig (20.0 bar) **Autodrain:** 150 psig (10.0 bar)	6000 psig (413 bar)	**T1227:** 2,000 psig (138 bar) **T1230:** 1,500 psig (103 bar)	250 psig (17.0 bar)	250 psig (17.0 bar)
Maximum Flow Coefficients (Cv)	**T330 & T335-1/4":** 0.5 at 150 psig supply and 80 psig setpoint **T330-1/2":** 2.5 at 150 psig supply and 80 psig setpoint	1/4" = 1.2 1/2" = 3.3	**T380:** 3/4": 9.0; 1": 10.0 **T390:** 3/4": 11.0; 1": 11.0	0.13	**T1227:** See Table 2 in Sales Sheet **T1230:** See Table 2 in Sales Sheet	Port / Forward / T6100 Exhaust / T6200 Exhaust 3/4" 5.0 3.5 4.0 1/2" 4.5 3.5 4.0 1/4" 2.0 2.5 3.0	3/4" Forward: 8.0 Exhaust: 8.0 1" Forward: 9.0 Exhaust: 8.0
Air Consumption	Less than 5 scfh (2.5 Nl/min)	4 scfh (2 Nl/min) maximum	4 scfh (2 Nl/min) maximum				
Flow Capacity	**T310:** 20 scfm at 100 psig with 20 psig output **T330-1/4":** 30 scfm at 150 psi with 20 psig output **T330-1/2":** 180 scfm at 150 psig with 20 psig output		**T380:** 3/4" &1": 425 scfm (12,027 Nl/min) **T390:** 3/4": 450 scfm (12,735 Nl/min); 1": 500 scfm (14,150 Nl/min)		**T1227:** See Table 3 in Sales Sheet **T1230:** See Table 4 in Sales Sheet	250 scfm (7,075 Nl/min)	3/4": 375 scfm (10,613 Nl/min) 1": 425 scfm (12,028 Nl/min)
Operating Temperatures	**T310 & T335:** -20° to 180°F (-29° to 82°C) **T330 Manual drain:** 0° to 160°F (-18° to 71°C) **T330 Autodrain:** 32° to 160°F (0° to 71°C) **T330 Low temp option:** -62° to 194°F (-52° to 90°C)	-20° to 185°F (-29° to 85°C) **Autodrain option (T350 & T370 only):** 32° to 185°F (0° to 85°C) **Low temp option:** -61° to 194°F (-52° to 90°C)	-40° to 200°F (-40° to 93°C) **Autodrain:** 32° to 200° (0° to 93°C)	**T3500:** -70° to 225°F (-57° to 107°C) **T3600:** -40° to 225°F (-40° to 107°C)	**T1227:** Nitrile & Nylon -40° to 180°F (-40° to 82°C); Fluorocarbon 0° to 180°F (-18°C to 82°C) **T1230:** Neoprene, Nitrile & Nylon -40° to 180°F (-40° to 82°C); Fluorocarbon and CTFE 0° to 180°F (-18° to 82°C)	-40˚ to 200˚F (-40˚ to 93˚C) **Low temperature option:** -62˚ to 194°F (-52˚ to 90°C)	-40˚ to 200˚F (-40˚ to 93˚C) **Low temperature option:** -62˚ to 194˚F (-52˚ to 90˚C)
Filter	40 micron (5 micron option)	**T350/360:** 25 micron; optional 5 micron; **T370:** N/A	**T380:** 40 micron (5 micron option) **T390:** N/A				
Porting Inlet/Outlet: Gauge(s): Exhaust: Body:	**T310 & T335** / **T330** 1/4" NPT / 1/4" NPT or 1/2" NPT 1/4" NPT / 1/4" NPT 1/4" NPT / 1/4" NPT	**T350/360** / **T370** 1/4" NPT or 1/2" NPT / 1/4" NPT or 1/2" NPT 1/4" NPT / 1/4" NPT 1/8" NPT / —	3/4" NPT or 1" NPT (2) 1/4" NPT 1/8" NPT	1/4" NPT	1" Body, 2" Body	1/4" NPT, 1/2" NPT or 3/4" NPT 1/4" NPT ø7/16" or 1/4" NPT option	3/4" or 1" NPT (2) 1/4" NPT 3/4" NPT **Signal port:** 1/4" NPT **Feedback port option:** 1/4" NPT
Weight	**T310:** 1.6 lb. (0.72 kg) **T335:** 1.2 lb. (0.54 kg)	**T350:** 1/4" NPT: 2.2 lbs. (1.0 kg) 1/2" NPT: 2.8 lbs. (1.3 kg) **T360:** 1/4" NPT: 2.0 lbs. (0.9 kg) 1/2" NPT: 2.6 lbs. (1.2 kg) **T370:** 1/4" NPT: 2.1 lbs. (0.95 kg) 1/2" NPT: 2.5 lbs. (1.14 kg)	**T380:** 16.6 lbs (7.5 kg) **T390:** 14.5 lbs (6.6 kg)	3.25 lbs (1.5 kg)	**T1227:** 1" Body 6.5 lbs. (3 kg); 2" Body 10 lbs. (4.5 kg) **T1230:** 1" Body 25 lbs. (11.3 kg); 2" Body 30 lbs. (13.6 kg)	**T6500:** 2.5 lbs (1.13 kg) **T6600:** 5.7 lbs (2.60 kg	**T6500:** 6.5 lbs. (2.95 kg) **T6600:** 15 lbs. (6.80 kg)
Operating Media	Air, inert gas, sweet (natural) and sour gases	Air, inert gas, sweet (natural) and sour gases	Air, inert gas, sweet (natural) gas	**T3500:** Air, inert gas, noncorrosive gases **T3600:** Air, inert gas, sweet (natural) and sour gases	Air, inert gas, sweet (natural) gas	Air, inert gas, sweet (natural) gas	Air, inert gas, sweet (natural) gas



	TYPE 595 I/P Transducer	TYPE 900 I/P Transducer	TYPE 950 I/P Transducer	TYPE 2000 Valve Positioner Pneumatic/Electro-Pneumatic
Features	• Explosion-proof • Compact Size • Vibration & Position Insensitive • Low temperature Option • Worldwide Agency Approvals	• Electronic Closed-loop Feedback • Compact Size • Easy Wiring • Input/Output Ports on Front and Back • Intrinsic Safety Approvals • Field selectable outputs (optional) • Field reversable, RFI/EMI protection • Zero-based ranges available	• Explosion-proof • Optional Field-Selectable Outputs • Approved for Natural Gas • RFI/EMI Protected • Compact Size • Low Air / Gas Consumption	- Explosion-proof Natural Gas option • Modular Construction • Rotary & Linear, Single & Double Acting • Optional 4-20 mA Feedback on Mechanical Switches • External Zero Adjustment • Compact Design and Low Weight • Vibration/Position/Shock Insensitive • Stainless Steel Spool Valve
Approvals	FM, CSA, ATEX, EAC	FM, CSA, ATEX, EAC	FM, CSA, ATEX, EAC	FM, CSA, ATEX
Material (Body)	Chromate-treated aluminum w/epoxy paint NEMA 4X (IP65)	Chromate-treated aluminum w/epoxy paint NEMA 4X (IP65)	Chromate-treated aluminum w/epoxy paint NEMA 4X (IP66)	NEMA 4X (IP66) aluminum w/polyester epoxy finish
Inputs	4-20 mA	**Standard Range** 4-20 mA, 0-5 Vdc 0-10 Vdc, 1-5 Vdc 1-9 Vdc **High Output Range** 4-20 mA, 0-5 Vdc 0-10 Vdc, 1-5 Vdc 1-9 Vdc	4-20 mA	**Pneumatic** 3-15 psi (0.2-1.0 bar) **Electro-Pneumatic** 4-20 mA (Ri<250 ohms)
Output Ranges psig (bar)	3-15 (0.2-1.0) 3-27 (0.2-1.9) 6-30 (0.4-2.1)	1-17 (0.1-1.2) 3-15 (0.2-1.0) 3-27 (0.2-1.9) 6-30 (0.4-2.1) 0-15 (0-1) 0-30 (0-2.1) 2-60 (0.14-4.1) 2-100 (0.14-6.9) 0-60 (0-4.1) 0-100 (0-6.9)	3-15 (0.2-1.0) 3-27 (0.2-1.9) 6-30 (0.4-2.1)	
Maximum Supply Pressure Note: Supply pressure must be a minimum of 5 psig (0.3 bar) above maximum output	3-15: 22 psig (1.5 bar) max 3-27, 6-30: 42 psig (2.8 bar) max	22-60 (1.5-4.1) 20-100 (1.4-6.9) 32-100 (2.2-6.9) 35-100 (2.4-6.9) 25-65 (1.7-4.5) 40-70 (2.8-4.8) 65-130 (4.5-9.0) 105-130 (7.2-9.0) 70-80 (4.8-5.5)	100 psig (6.9 bar)	<145 psi (<10 bar) 21.8-145 psi (1.50-10 bar)
Air Consumption Coefficients (Cv)	0.1 scfm (2.82 Nl/min)	1.5 scfh (0.75 Nl/min) at mid range typical 4.5 scfh (2.25 Nl/min) at mid range typical	3.0 scfh (1.5 Nl/min) at mid range	**Pneumatic scfm (Nl/min)** / **Electro-Pneumatic scfm (Nl/min)** @29 psig (2.0 bar): 0.18 (5.09) / 0.2 (5.7) @87 psig (6.0 bar): 0.53 (424.5) / 0.6 (17.0) @145 psig (10 bar): 0.88 (707.5) / 1.0 (28.3)
Operating Temperatures	-40°F to 158°F (-40°C to 70°C) Low temperature (L) option: -67ºF to 158ºF (-55ºC to 70ºC)	-40° to 158°F (-40° to 70°C)	-40° to +158°F (-40° to +70°C)	-40˚ to 185˚F (-40˚ to 85˚C)
Porting	**Pneumatic:** 1/4" NPT (P & N versions); 1/16" manifold mount (M version) 1/8" NPT Gauge Port (P version) Electric: 1/2" NPT or M20-1.5	**Pneumatic:** 1/4" NPT/BSP **Electric:** 1/2" NPT/BSP	**Pneumatic:** 1/4" NPT **Electric:** 1/2" NPT M20 x 1.5 (ATEX)	1/4" NPT; Gauge Ports 1/8" NPT 1/2" NPT; M20-1.5 (ATEX)
Flow Capacity	2.4 scfm (67.92 Nl/min) max	4.5 scfm (127.35 Nl/min) at 25 psig (1.7 bar) supply (3-15, 3-27, 6-30 psig) 20.0 scfm (566 Nl/min) at 150 psig (10.0 bar) supply (0-120 psig) 12.0 scfm (340 Nl/min) at 100 psig (6.9 bar) supply (3-15, 3-27, 6-30, 2-60 psig)	4.5 scfm (127 Nl/min) at 25 psig (1.7 bar) supply 12.0 scfm (340 Nl/min) at 100 psig (6.9 bar) supply	**scfm** / **Nl/min** @29 psig (2.0 bar) 9.5 / 268.9 @87 psig (6.0 bar) 28.3 / 800.1 @145 psig (10 bar) 47.1 / 1333
Operating Media	Clean, dry, oil-free, instrument air, filtered to 40 micron	Clean, dry, oil-free, instrument air, filtered to 40 micron	Clean, dry, oil-free, instrument air, filtered to 40 micron. Sweet natural gas or methane when purchased with (E) option.	Clean, dry, oil-free instrument air, filtered to 40 micron

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