ITT Conoflow
Process Control Solutions

ITT

ENGINEERED FOR LIFE

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About ITT Conoflow

Under the ITT Conoflow brand, ITT is a market-leading manufacturer of Instruments and Controls for the various segments of the industrial market place. ITT has been designing pneumatic and electronic products since the early 1950's and has continued to focus on providing durable, long-lasting and reliable products.

The instrument products contained in this brochure are sold through a network of highly capable distributors. They can assist you with all of your application specifications and product support requirements.

ITT is dedicated to producing the highest quality products for your most common and most severe industrial applications. At ITT, We Solve It!

ITT Conoflow designs and manufactures a variety of products for the industrial marketplace. Our extensive product portfolio includes low pressure regulators, such as, filter regulators, filters, manual loading regulators, service regulators and specialty regulators consisting of differential, ratio/booster and back pressure regulators.

High pressure regulators are offered in single-stage and dual-stage diaphragm style, piston regulators for high outlet applications and tied diaphragm styles for various clean industries. I/P-E/P Transducers along with positioners, actuators, fail safe systems and snap acting relays are also offered.

Common Applications

- Filtration to Instruments
- Calibration Systems
- Environmental Detection Systems
- Vacuum Regulation
- Fire Suppresion Systems
- NACE Required Environments
- Medical Applications
- Liquid Level Measurement
- Valve Actuation and Positioning
- Tank Pressure Control
- Controlled Environment Gas Delivery
- Oil and Gas Applications

ISO9001-2008 CERTIFIED

Filter Regulators and Filters

Airpak®, Filter Regulators

ITT Conoflow's GFH and FR Series Airpak®, Filter-Regulators are used to provide clean, accurate air to instruments, valves, positioners, transducers and other pneumatic control devices. These units provide high flow capability, durable materials of construction and bubble tight shut-off.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
FR95	Aluminum	250 psig	0-25, 0-60, 0-125	25 scfm	1/4" NPT
GFH45	Brass	300 psig		20 scfm	1/4" NPT

Airpak® Filter Elments: 10 micron, 35 micron, 40 micron

Filters

Conoflow's GFX Series Filters are used to provide clean air to instruments and other pneumatic devices. The 35 micron filter removes foreign particles from the air allowing intermediate and final control devices to operate at peak efficiency.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure	Flow Capacity	Ports
GFX02/04	Brass, Aluminum	300 psig	No Regluation	75 scfm	1/4" NPT

GFX Filter Element: 10 micron, 40 micron

Low Pressure Regulators

Manual Loading Regulators

The Conoflow GH10 Manual Loading Regulators are precision units designed for use in laboratory environments, remote loading of pneumatic devices, speed changers and other general purpose applications.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
GH10	Brass, Aluminum Stainless Steel	200/300 psig	0-3, 0-5 0-15, 0-25 0-35, 0-50 0-125	10 scfm	1/4" NPT

Multiple Diaphragm and Nozzle Seat Options Available, Consult Conoflow Catalog Data

Service Regulators

Conoflow's Service (GH20 Series) Regulators are rugged units with flow capacities and performance characteristics which allow the units to operate in both instrument and industrial applications The GH40 Series Regulators are for applications where positive shut-off and minimum air consumption are required.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
GH20/GH40	Brass, Aluminum Stainless Steel	200/300 psig	0-25, 0-65 0-125	20 scfm	1/4" NPT

Multiple Diaphragm Options Available, Consult Conoflow Catalog Data

Pressure Reducing Regulators

Conoflow's GH25 Pressure Reducing Regulator is used for both air and liquid pressure reduction.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
GH25	Aluminum	250 psig	0-30, 0-65 0-125	45 scfm 5 gpm	3/8" NPT

Speciality Regulators

Differential Regulators

Conoflow's Fixed Differential Pressure Regulators are used to maintain a constant pressure differential across a variable or fixed orifice, providing a constant flow rate regardless of variations in upstream or downstream pressure. Various forms of differential regulators are offered.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
GH21XT	Brass, S.S.	200 psig	3 psig - Fixed	2.5 scfm	1/4" NPT
GH41XT	Brass, S.S.	200 psig	3 psig - Fixed	2.5 scfm	1/4" NPT
GH21AT/41AT	Brass, S.S.	300 psig	0-5, 15, 25, 35, 50, 125	10 scfm	1/4" NPT

Multiple Diaphragm and Nozzle Seat Options Available, Consult Conoflow Catalog Data

Vacuum Regulators

ITT Conoflow's Vacuum Regulators are designed to accurately regulate the sub-atmospheric pressure of a vessel being evacuated. These units are especially suited for laboratory work and test stands for simulation of high altitude conditions.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure	Flow Capacity	Ports
GH20VT/40VT	Brass, S.S.	Vacuum	0-15 Hg	1.5 scfm	1/4" NPT and 1/8" Sensing
GH28VT	Aluminum	Vacuum	0-30 Hg	1.5 scfm	1/4" NPT and No Sensing

Multiple Diaphragm Options Available, Consult Conoflow Catalog Data

Ratio Booster - Relays

The Conoflow GH22 Series Relay is used to boost, amplify or reduce the pneumatic signal of a controller or similar instrument in a predetermined ratio (1:1, 1:2, 1:3, 2:1, 3:1). Using an independent supply pressure for greater flow volume (16 scfm), the unit relays an instrument signal to a final control element such as a valve actuator. Consult Conoflow Catalog data for specifications and range options.

Back Pressure Regulators

The Conoflow Series GH30 Back Pressure Regulator is used to maintain a constant upstream pressure of gas, vapor or liquid. Designed for accurate regulation under low flow conditions, these units are widely used for protection of analysis instrumentation or as a relief valve in supply pressure lines to control devices.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
GH30	Brass, S.S.	150 psig	0-3, 0-5, 0-15, 0-25, 0-35, 0-50,0-125	2-30 scfm	1/4" NPT

Multiple Diaphragm Options Available, Consult Conoflow Catalog Data

High Pressure Regulators

Piston Style HP300 Series Regulators

The Conoflow HP300 High Pressure Regulator is designed to accurately control supply pressures up to 10,000 PSIG (69 MPa). This piston sensing, self-relieving regulator allows pressure setting reduction in a closed system by relieving downstream pressure through the regulator. Typical applications include pressurizing tanks and calibration systems

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP300	Brass, S.S. NACE	6,000 10,000	8-500, 9-800, 10-1500 15-2500, 25-4000, 30-6000	Cv=0.14	1/4" NPT

CGA Cylinder Construction Accessories Available: Consult Catalog Data

High Pressure Regulators Cont'd

Piston Style HP400 Series Regulators

Conoflow's HP400 is an economical piston-sensing, self-contained pressure reducing regulator capable of handling high inlet and outlet pressures.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP400	Brass	3,500/6,000 psig	20-2500	Cv=0.06	1/4" NPT

CGA Cylinder Construction Accessories Available: Consult Catalog Data

Diaphragm Style HP500 Series Regulators

The HP500 Regulator is a self-contained, diaphragm sensing high purity regulator for high pressure gas and light liquid applications.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP500	Brass, S.S. NACE	5,000/6,000 psig	4-25, 4-50, 5-100, 6-250, 10-500	Cv=0.16	1/4" NPT

Multiple Diaphragm Options Available, Consult Conoflow Catalog Data

Diaphragm Style HP600 Series Regulators

Conoflow's HP600 is a tied diaphragm design regulator that features a mechanical link between the diaphragm and main valve to prevent pressure "creep".

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP600	316 S.S., NACE	3,000/5,000 psig	2-25, 3-50, 3-100, 4-150	Cv=0.15	1/4" NPT

High Purity Internal Conenction Optioons Available, Consult Conoflow Catalog Data

Diaphragm Style HP610 Series Regulators

The HP610 is a high purity, high flow, self-contained, spring-loaded, pressure reducing regulator. This unit is designed for use in applications requiring high flow rates and the ability to relieve outlet media pressure.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP610	316 S.S., NACE	250 psig	0-50	Cv=0.95	1/4" NPT

Non-Relieving Diaphragm Option Available, Consult Conoflow Catalog Data

Diaphragm Style HP635 Series Regulators

The HP635 is a high purity, high flow, self-contained, spring-loaded, pressure reducing regulator. This unit is designed for use in applications requiring high flow rates and the ability to relieve outlet media pressure.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP635	316 S.S., NACE	250 psig	0-50	Cv=0.95	1/4" NPT

Non-Relieving Diaphragm Option Available, Consult Conoflow Catalog Data

Diaphragm Style HP700 Series Regulators

Conoflow's HP700 Series Regulator is a two-stage, high purity unit designed to provide constant outlet pressure regardless of inlet pressure fluctuations.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure (psig)	Flow Capacity	Ports
HP700 HP710	Brass, 316 S.S., NACE	3,500/6,000 psig	4-25, 4-50, 5-100, 5-150, 6-250	Cv=0.14	1/4" NPT

The Diaphragm and CGA Connection Accessories Available, Consult Conoflow Catalog Data

I/P-E/P Transducers

GT210 I/P-E/P Transducers

Conoflow's Miniature Electro-Pneumatic Transducers accept a variety of electrical input signals by jumper switch and convert them to proportional pneumatic output signals.

Model	Input Signal	Outlet Pressure (psig)	Flow Capacity	Linearity
GT210/410/610	4-20: 0-5 mA AC 10-50: 1-9 VDC	3-15, 3-27, 6-30	12 scfm	±0.5% of span

150 psig Supply Pressure, Factory Mutual Intrinisically Safe Mode Offered, Consult Conoflow Catalog Data

GT_8 Series I/P Transducers

Conoflow's Electro-Pneumatic Transducers incoporate low impedance circuitry and accept a variety of electrical input signals and convert them to proportional output signals.

Model	Input Signal	Outlet Pressure (psig)	Flow Capacity	Linearity
GT_8	4-20: 0-5 mA AC 10-50: 1-9 VDC	3-15, 3-27, 6-30	12 scfm	±1% of span

Explosion Proof Model Available (Factory Mutual), Consult Conoflow Catalog Data

Positioners

GC31-GC34 Commandaire Positioners

Conoflow's Commandaire® Positioner is a top mounted, integral positioner used with piston or spring and diaphragm actuators. Utilizing a force balance principle this unit provides proportional positioning of an actuator with stroke lengths up to 10".

Model	Supply Pressure	Stroke Lengths	Actions on Instrument Signal	Flow Capacity	Linearity
GC31/GC34	100 psig	1/4" to 10"	Extend or Retract	5 scfm	<1% of span

Fast Open/Closed Feature Available, Consult Conoflow Catalog Data

GH232T Reversing Relay

The purpose of the GH232T is to reduce the cushion load to the actuator in proportion to the positioner output pressure. This effectively provides the advantage for a full reversal positioner by providing full differential pressure across the actuator piston if necessary. (Converts GC3 Series Positioners to Full Reversal mode of operation.)

Actuators

GB5 Series Pneumatic Piston Actuators

Conoflow's Pneumatic Piston Actuators are designed to operate and position valves, variable speed drives and other pneumatically controlled devices. Combine with Conoflow GC3 Top Mount Positioners for fully proportional unit.

Model	Bore Size	Effective Areas	Stroke Lengths	Lever Thrust
GB5	3-8"	7, 12, 28.5, 50	1/4" - 10"	Up to 12,000 lbs

Fail Safe and Lock in Last Position Options Available, Consult Conoflow Catalog Data

GB52SC / GB53SC Series Lever Actuators

Conoflow's GB5_SC Pneumatic Lever Actuators, are rugged and powerful units used to automatically position dampers, louvers, variable pitch fans and to make various mechanical adjustments to process machinery. Low profile (only 18" high) requires less headroom. A sturdy ductile iron yoke with large mounting base provides rigid mounting. The steel lever arm has eight take-off positions for stroke flexibility. Combine with Conoflow GC3_ Top Mount Positioners for fully proportional unit.

Model	Bore Size	Effective Areas	Stroke Lengths	Lever Thrust
GB5	6-8"	28.5, 50	5-12" Lever Travel	Up to 100 lbs

Fail Safe and Lock in Last Position Options Available, Consult Conoflow Catalog Data

Val-U-Act Actuators

ITT Val-U-Act ball valve actuators are double acting pneumatic rotary operators with one moving part to ensure millions of maintenace free cycles. Multiple sizes and torque outputs to operte most two-way and diverter type ball valves up to 3" orifice.

Working Pressure Medium	Bore Size	Construction Materials	Output Shaft Diameters	Rod Materials	Rotational Range	Ports
Pneumatic	1-1/4"	Anodized Aluminum	3/8"	Stainless Steel	90°	1/8" NPT
Pneumatic	2-1/2"		3/4"			1/4" NPT

Manual Override, Spring-Return, Adjustable Stroke and Limit Switch Options Available Consult Factory

GVB Series Snap Acting Relay

Conoflow Series GVB Snap-Acting Relays change ports to a secondary air source when the main supply pressure fails below a predetermined set point. In the event of supply or pilot pressure failure, the positive action relay will automatically:

- Switch from main to auxiliary supply pressure
- Lock an actuator in its last position
- Extend or retract an actuator stem
- Divert flow or pressure from one device to another

The Series GVB Snap-Acting Relays have an integral pilot which makes them compact, lightweight, and easily piped and mounted.

Model	Body Material	Max. Inlet Pressure	Outlet Pressure	Flow Capacity
GVB11/12	316 S.S.	150 psig	25-85 psig	Cv = 0.38

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