PRESSURE REGULATORS

AIR REGULATORS

Bellofram

Type 10 Precision Air Regulator

TYPE 10 PRECISION AIR REGULATOR

Accuracy and repeatabi ity unmatched by any other self contained regulator in the world.

- Full range accuracy of 0.1 %
- Extremely low sensitivity to changes in supply pressure and flow
- Unique heat-treated stainless steel measuring capsule
- High flow low range and high relief models available

MOTORIZED TYPE 10 REGULATOR

Provides electric control of pneumatic systems Often specified for remote pressure control and ventilation systems.

- Easily integrated into open and closed loop process control systems
- Low power consumption (2 RPM/4 watts, 6 RPM/6 watts)
- Built-in overload slip clutch
- Mounts at any angle

Motorized Type 10 Regulator

Type 40 Adjustable Air Regulator

TYPE 40 ADJUSTABLE AIR REGULATOR

General purpose regulator with adjustable control output, suitable for a wide range of pneumatic systems and equipment.

- Excellent stability and repeatability
- Low droop at high flow
- Rugged, corrosion resistant construction
- Panel or pipe mounted

Type 41 Adjustable High Flow Air Regulator

TYPE 41 ADJUSTABLE HIGH FLOW AIR REGULATOR

Designed to give stable, accurate control in high flow applications.

- Flow capacity up to 25 SCFM
- Available with tapped bonnet vent for installation of plumbing to capture exhaust air

Type 50 Adjustable Air Regulator with Filter and Dripwell

TYPE 50 ADJUSTABLE AIR REGULATOR WITH FILTER AND DRIPWELL

One of the industry's most popular mode s Same features and performance as the Type 40, but includes built-in filter and dripwell.

TYPE 51FR AIR FILTER REGULATOR

A high performance filter dripwell regulator in a compact, low-cost package.

- Integral, 40 micron, selfcleaning nylon mesh filter
- Corrosion-resistant no brass parts
- Low droop high repeatability

Type 51FR Air Filter Regulator

TYPE 51SS STAINLESS STEEL FILTER REGULATOR

Rugged, all 316 stainless regulator that is ideal for regulating sour gas and for corrosive environments.

- Excellent stability and repeatability in harsh conditions
- Tapped vent for capturing exhaust gas
- Integral sintered 316 stainless steel filter

Type 51SS Stainless Steel Filter Regulator

TYPE 60 PRESET FILTER REGULATOR

General purpose regulator with filter dripwell and tamperproof, preset output.

- Super or regulation characteristics
- Three control ranges: 0-20, 20-40 and 40-60 PSIG
- Side, panel or through-body mounting

Type 60 Preset Air Regulator

TYPE 65 PRESET AIR REGULATOR

Pipe-mounted regulator similar to Type 60 except without filter regulator.

TYPE 70 HIGH FLOW REGULATOR

Designed specifically for applications that require substantial flow capacity and accurate pressure control.

- Flow capacity up to 80 SCFM
- Quick response to minute changes in downstream pressure
- Aspirator tube nsures stable output
- Can be disassembled and serviced without removal from air line

Type 70 High Flow Regulator

Type 70BP Back Pressure Regulator

Type 77 Vacuum Regulator

Type 90 Miniature Air Regulator

Type 91 Subminiature Air Regulator

Type 20 Precision Air Relay

Type 72 Positive Bias Booster Relay

Type 73 Positive-Negative Bias Relay

Type 75 Air Relay

AIR REGULATORS

Bellofram

TYPE 70BP BACK PRESSURE REGULATOR
Functions as a high flow, high precision penumatic relief valve with an adjustable setpoint.
- Quick response to changes in upstream pressure
- Flow capacity to 50 SCFM

TYPE 77 VACUUM REGULATOR
Permanent negative bias spring extends control range from 29” Hg vacuum to 150 PSIG pressure.
- Can be installed upstream or downstream of vacuum pump
- Aspirator tube minimizes ouput pressure droop

TYPE 90 MINIATURE AIR REGULATOR
Compact, low cost regulator ideal for limited space applications.
- Only 2-3/4” high, weighs only 3.2 ounces
- Non-rising adjustment knob with lock ring
- Corrosion-resistant – no brass parts

TYPE 91 SUBMINIATURE AIR REGULATOR
Designed for applications with limited space and for low flow or dead end service.
- Smal package: 3.3” high (max), 7/8” diameter. 2.2 ounces
- Corrosion-resistant anodized aluminum exterior

AIR RELAYS

TYPE 20 PRECISION AIR RELAY
Extremely accurate 1:1 relay utilizes a two-stage pilot system which is activated by a highly sensitve pressure measuring capsule.
- Adjusting screw creates positive or negative bias up to 30 PSIG
- Accepts signal pressures from 2 to 120 PSIG
- Compact - only 2-7/8” high

TYPE 72 POSITIVE BIAS BOOSTER RELAY
Generates a stable output pressure which is the sum of an input signal pressure and an adjustable positive bias pressure.
- Exceptionally high flow capacity - up to 50 SCFM
- Four adjustablebias ranges, from 0-10 PSI to2-150ps
- 1:1 signal-to-output ratio standard; 1:2, 1:4 and 1:6 ratios available

TYPE 73 POSITIVE-NEGATIVE BIAS RELAY
Utilizes a fixed negative bias spring and an adjustable positive bias spring to create controlled outputs from 29” Hg vacuum to 150 PSI.
- Flow capacity to 40 SCFM
- Five output ranges, from vacuum to 2 PSI to vacuum to 150 PSI

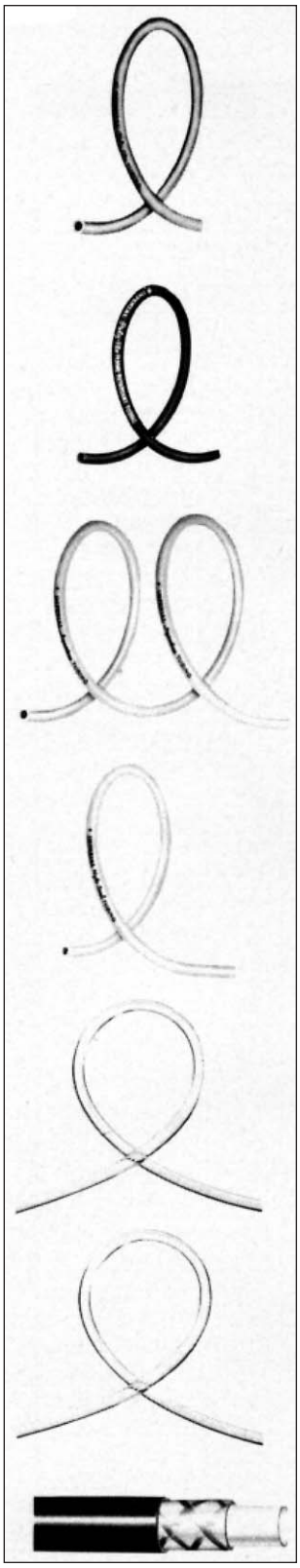
TYPE 75 AIR RELAY
General purpose relay suitable where increased flow capacity, pressure amplification, or remote pressure control is required.
- Choice of 1:1, 1:2, 1:4 or 1:6 signal to-output ratios
- Available with internal 4 PSIG negative bias spring

DIAPHRAGM AIR CYLINDERS

Utilize a durable rolling diaphragm seal to provide virtually friction-free operation.
- Single acting (spring return) and double acting models available
- Extremely sensitive response to small pressure changes
- No lubricat on required

IMPERIAL EASTMAN™

TUBING



POLY-FLO®:
Economical thermoplastic tubing for use where lower pressures and temperatures are involved.
Size Range: 1/8" to 1/2" O.D.
Material: Polyethylene
Maximum Burst Pressure: 600 PSI (room temperature)

ITEM#	DESCRIPTION	ITEM#	DESCRIPTION
FIT22P02	1/8" natural	FIT44P04RED	1/4" red
FIT44P04BLK	1/4" black	FIT66P06BLK	3/8" black
FIT44P04BLU	1/4" blue	FIT66P06NAT	3/8" natural
FIT44P04GRN	1/4" green	FIT660PNAT	3/8" red
FIT44P04NAT	1/4" natural	FITP08BLK	1/2" black
FIT44P04ORG	1/4" orange	FIT88P08NAT	1/2" natural

POLY-FLO® FLAME RETARDANT:
Flame retardant thermoplastic tubing for use where chance of combustion must be minimized.
Size range: 1/4" to 1/2" O.D.
Material: Polyethylene
Maximum burst pressure: 400 PSI

IMPOLENE®:
Tubing ideally suited for use at higher temperatures to 225°F.
Size range: 1/8" to 1/2" O.D.
Material: Polyallomer
Maximum working pressure: 300 PSI

NYLO-SEAL®:
Designed for broad range of installations including food conducting applications.
Size range: 1/8" to 1/2" O.D.
Material: Nylon 11
Maximum working pressure: SN type – 375 PSI; NSR type – 625 PSI; NF type – 250 PSI; F type – 250 PSI; CN type – 200 PSI

FIT44NSR04	1/4" natural	FIT44SN04	1/4" natural
FIT33SN02	1/8" natural	FIT88SN08NAT	1/2" natural

PVC®:
Clear, extremely flexible tubing ideally suited to low pressure applications.
Size range: 1/4" to 1/2" O.D.
Material: Polyvinyl chloride

FIT66PVCCLEAR	3/8" clear	FIT88PVCCLEAR	1/2" clear

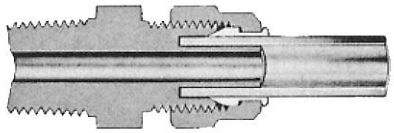
EVA®:
Extra flexible, non-toxic tubing.
Size range: 1/4" to 1/2" O.D.
Material: Ethylene vinyl acetate
Maximum working pressure: 65 PSI

C6 AIR BRAKE TUBING®:
Tough, non-rigid tubing designed for air brake applications. Conforms to SAE J844, Type 3(A&B).
Size range: 1/8" to 3/4" O.D.
Materials: Tube – virgin nylon; Reinforcement – polyester braid; Cover – virgin nylon
Maximum working pressure: 350 PSI
Temperature range: -40°F to 200°F
Features: C6 has high resistance to road salt, gasoline and oil and can take punishing abrasion. Flexibility permits easy routing through frame and around corners. 75% lighter than metal tubing.

COILED (Self Storing) TUBING:
Nylon tan colored tubing in 1/4", 3/8" and 1/2" I.D. sizes. Pressures to 200 PSI. In bulk and in 25 foot assemblies. (Not illustrated)

Refer to pages B9-B11 for fittings.

IMPERIAL EASTMAN™




260-P


260-U


261-P


261-PG


261-U


261-UG


31-PG


60-F


61-F


81-LB


259-P


256-P


262-P


262-PC


262-PH


262-PHS


266-P


268-P


269-P


269LL-P


270-P


271-P


264-P


272-P


277-P


279-P


282-P


282-PC


282-PH


282-PT


282-PHS


296-P


297-P


292-P


293-P

Poly-Flo fittings have a sleeve which snaps into the nut. The complete unit—body, nut and sleeve—is furnished assembled, ready for installation. Just insert tubing and tighten nut—quickly, easily. There is no need to disassemble.

The nut revolves around the sleeve as it is tightened, preventing twisting of the plastic tubing.

Fitting when assembled finger tight on Imperial-Eastman Poly-Flo tubing will hold the burst pressure of the tubing itself.

Poly-Flo fittings are used with plastic or soft metal tubing for pneumatic instrumentation circuits and applications with other gases and liquids.

Stabilized polypropylene sleeves, for use with Poly-Flo or Impolene tubing, are furnished with Poly-Flo Fitting sizes of 1/4“ through 1/2“ O.D. Universal brass sleeves, for use with both plastic and soft metal tubing, are also available for these sizes. Universal brass sleeves are furnished as standard with 1/16” 1/8’’ and 3/16” sizes.

Maximum allowable metal tube wall thickness for use with Poly-Flo Fittings: 1/16”, 1/8”, 3/16” O.D. – no limitation; 1/4” O.D. – 035”; 5/16”, 3/8”, 1/2” O.D. – .049”.

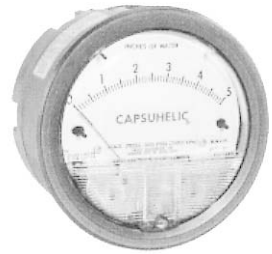
Furnished in split sizes from 1/16’’ O.D. to 1/2” O.D. Tube. Specify O.D. Tube when ordering.

260-P – Polypropylene Sleeve
260-U – Universal Brass Sleeve
261-P – Nut & Sleeve Assembly
261-PG – Nut & Sleeve Assembly; For use with Spring Guard
261-U – Nut Only
261-UG – Nut Only
For use with Spring Guard
31-PG – Spring Guard; For use with 261-PG or 261-UG Nut
60-F – Brass Sleeve; Standard Compression
61-F – Nut; Standard Compression
81-LB – Nut; Hi-Duty
256-P – Reducing Union
259-P – Cap; Plastic
262-P – Union
262-PC – Union; Poly-Flo to Standard Compression
262-PH – Union; Poly-Flo to Hi-Duty
262-PHS – Union; Poly-Flo to Hi-Seal
264-P – Union Tee
266-P – Female Connector
268-P – Male Connector
269-P – Male Elbow
269LL-P – Extra Long Male Elbow
270-P – Female Elbow
271-P – Male Run Tee
272-P – Male Branch Tee
277-P – Female Branch Tee
279-P – Union Reducing Tee
282-P – Bulkhead Union
282-PC – Bulkhead Union; Poly-Flo to Standard Compression
282-PH – Bulkhead Union; Poly-Flo to Hi-Duty
282-PHS – Bulkhead Union; Poly-Flo to Hi-Seal
282-PT – Bulkhead Union; Straight Through
296-P – Union; Poly Flo to Solder
297-P – Tube End Reducer
292-P – Quick Disconnect Fitting
293-P – Quick Disconnect Fitting

Order Tube Fitting by part# and size.

Ei. FIT260P02X02 = 260P fitting 1/8 x 1/8

SERIES 2000 MAGNEHELIC® & SERIES 4000 CAPSUHELIC® DIFFERENTIAL PRESSURE GAUGES



Magnehelic® – More than 70 ranges, from 0-.25" WC to 0-30 PSIG. Zero center from .25-0-.25" WC to 15-0-15" WC. Low (to 15 PSIG), medium (to 35 PSIG), and high total internal pressure styles to 80 PSIG. Accuracy ±2% of full scale.

Capsuhelic® – More than 60 ranges, from 0-.50" WC to 0-300 PSIG. Zero center from 1-0-1" WC to 15-0-15" WC. Sensitive to low differential pressures yet withstands internal pressures to 500 PSIG. Accuracy ±3% of full scale.

Both Magnehelic® and Capsuhelic® gauges have easy-to-read 4" dials that quickly indicate low air or gas pressures – positive, negative or differential. Both include simple, frictionless Magnehelic® magnetic movement. Resistant to shock, vibration and overpressure. No fluid – no evaporation, freezing or toxicity problems. Capsuhelic® gauges handle compatible fluids internally.

Used to measure fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, liquid levels with bubbler systems, pressures in fluid amplifier or fluidic systems; to check gas-air ratio controls, automatic valves, and monitor blood or respiratory pressures in medical equipment.

SERIES 2-5000 MINIHELIC® DIFFERENTIAL PRESSURE GAUGES

14 Ranges – From 0-0.5" WC to 0-30 PSIG. Special ranges and scales available for OEM volume requirements.

Standard Accessories – Steel bracket, screw studs and nuts for panel mounting. Optional surface mounting bracket available.

The Minihelic II® gauge is our smallest, least expensive dial type differntial pressure gauge using the Magnehlic® principle. It features a large easy-to-read circular dial. Design allows panel mounting with hardware included or surface mounting with optional bracket. Choice of barbed connections for tubing to 1/8" NPT male pipe. The mineral and glass filled nylon case withstands rough use and exposure.

The 5% accuracy of the Minihelic® gauge makes it well suited for the use as an air filter gauge or large stationary and portable engines, compressors, ventilators, air handling units and as a monitor on fluidic power supplies. The Minihelic® gauge is also suitable for many of the same applications as the Magnehlic® gauge where the greater accuracy, sensitivity and total pressure capability of the latter are not required.

ITEM#	DESCRIPTION	ITEM#	DESCRIPTION
DWY200000	0-25" WC Magnehelic gauge	DWY2030	0-30" WC Magnehelic gauge
DWY20000	0-.5" WC Magnehelic gauge	DWY2050	0-50" WC Magnehelic gauge
DWY2001	0-1" WC Magnehelic gauge	DWY2100	0-100" WC Magnehelic gauge
DWY2002	0-2" WC Magnehelic gauge	DWY2304	2-0-2" WC Magnehelic gauge
DWY2004	0-4" WC Magnehelic gauge	DWY2310	5-0-5" WC Magnehelic gauge
DWY2005	0-5" WC Magnehelic gauge	DWY25001	0-1.0" WC Minihelic gauge
DWY2010	0-10" WC Magnehelic gauge	DWY7112GC020	0-200, 4 1/2" Face spirahelic gauge
DWY2015	0-15" WC Magnehelic gauge	DWY7112GC060	0-600, 4 1/2" Face spirahelic gauge

Kodon liquid level gauges and accessories can be used in applications from 50 gallon day tanks to 100,000 gallon reservoirs in just about every type of liquid, including acids, oil, water, liquid wastes, molasses, catsup, jet fuel, animal fats, paints and polyester resins.

Four basic “families” of Kodon liquid level gauges provide price and performance alternatives to meet the diverse requirements of the industrial and marine marketplace: Pneumatic, Hydraulic, Mechanical and Electronic.

PNEUMATIC GAUGES (LEVELOMETERS)

Kodon pneumatic gauges represent the least expensive way to achieve reliable, accurate tank gauging in vented tanks.

Pneumatic gauges have been used for many years in tank gauging systems requiring remote (ie. up to 1000 ft) indication with accuracy and stability over wide temperature ranges. These gauges are supplied with custom dials, depending on the application, to indicate proportional (ie: E; 1/4; 1/2; 3/4; F), liters, gallons, feet/inches, percentage of full and dual scale.

Two basic options for Kodon Pneumatic Gauges are available:

Hand-pump operated – used in applications where intermittent operation is acceptable and often used in conjunction with Kodon Model 96961 point level switches and Model 271 alarms for high and low level detection and warning.

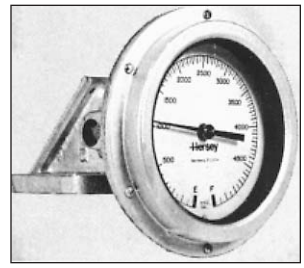
Constant-air operated – used in applications requiring continuous indication and powered by low pressure compressed air. Usually requires Model 16560 pressure regulator/filter and often used in conjunction with Model B622 level switch and Model 271 alarm.

Complete panel-mounted multi-gauge control and alarm systems can also be supplied to minimize on-site installation requirements.

HYDRAULIC GAUGES (LIQUIDOMETERS)

Hydraulic gauges are self-powered, closed systems which many be located up to 250 feet from the tank and also can provide up to four point level switch outputs. Kodon hydraulic gauges are recommended for applications requiring continuous, remote readout, where pneumatic or electrical power is not available at the tank.

MECHANICAL GAUGES



These are simple, reliable, economic gauges which use floats with mechanical linkages to provide continuous readout right at the tank. Our Hersey 6” Direct Readers are built for extreme environmental conditions are are widely used in isolated northern installations. The MDR Models are magnet-operated gauges for small tanks.

ELECTRONIC GAUGES

Kodon’s Hersey electronic gauges, used in conjunction with Hersey VR-2 level sensors, or pressure sensors, represent the current state-of-the art in liquid level indication. Analog and digital options are available and both versions offer built-in point-level switching and warning and 4-20 ma output signal for remote monitoring. The indicators can be located up to 5000 feet from there associated tanks and can be supplied with zener barriers.