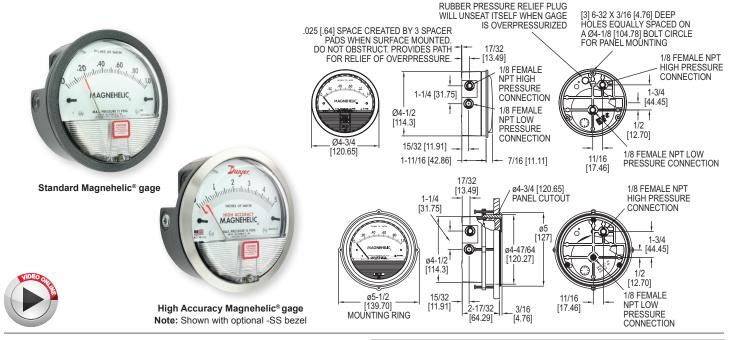


# MAGNEHELIC® DIFFERENTIAL PRESSURE GAGES Indicate Positive, Negative or Differential, Accurate within 1%





Select the Series 2000 Magnehelic® Differential Pressure Gages for a versatile low differential pressure gage with a wide choice of 81 models and 27 options to choose from. Using Dwyer's simple, frictionless Magnehelic® gage movement, it quickly indicates air or non-corrosive gas pressures--either positive, negative (vacuum) or differential. The design resists shock, vibration, over-pressures and is weatherproof

Select the -HA High Accuracy Magnehelic® gage option for an accuracy within 1% of full-scale. Also included with the -HA option at no extra cost are a mirrored scale overlay and a 6 point calibration certificate.

### **FEATURES/BENEFITS**

- · Easy to read gage through undistorted plastic face permits viewing from far away
- · Patented design provides quick response to pressure changes means no delay in assessing critical situations
- Durable and rugged housing and high-quality components combine to provide longservice life and minimized down-time
- · High accuracy option is twice as accurate as the standard Magnehelic® gage

#### **APPLICATIONS**

- · Filter monitoring
- · Air velocity with Dwyer pitot tube
- Blower vacuum monitoring
- · Fan pressure indication
- · Duct. room or building pressures
- · Clean room positive pressure indication

ACCESSORIES					
Model	Description				
A-432	Portable kit; combine carrying case with any Magnehelic® gage of				
	standard range, except high pressure connection. Includes 9 ft (2.7				
	m) of 3/16" ID rubber tubing, standhang bracket and terminal tube				
	with holder				
A-605	Air filter gage accessory kit; adapts any standard Magnehelic® gage				
	for use as an air filter gage. Includes aluminum surface mounting				
	bracket with screws, two 5 ft (1.5 m) lengths of 1/4" aluminum tubing,				
	two static pressure tips and two molded plastic vent valves, integral				
	compression fittings on both tips and valves				
A-605B	Air filter gage accessory kit; air filter kit with two plastic open/close				
	valves, two 4" steel static tips, plastic tubing and mounting flange				
A-605C	Air filter gage accessory kit; air filter kit with two plastic open/close				
	valves, two plastic static tips, plastic tubing and mounting flange				

#### **SPECIFICATIONS**

Service: Air and non-combustible, compatible gases (natural gas option available). Note: May be used with hydrogen. Order a Buna-N diaphragm. Pressures must be less than 35 psi

Wetted Materials: Consult factory.

Housing: Die cast aluminum case and bezel, with acrylic cover. Exterior finish is coated gray to withstand 168 hour salt spray corrosion test.

Accuracy: ±2% (-HA model ±1) of FS (±3% (-HA ±1.5%) on -0, -100PA, -125PA, -10MM and ±4% (-HA ±2%) on -00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C)

Pressure Limits: -20 in Hg to 15 psig (-0.677 to 1.034 bar); MP option: 35 psig (2.41 bar); HP option: 80 psig (5.52 bar).

Enclosure Rating: IP67.

Overpressure: Relief plug opens at approximately 25 psig (1.72 bar), standard gages only.

Temperature Limits: 20 to 140°F\* (-6.67 to 60°C). -20°F (-28°C) with low temperature option.

Size: 4" (101.6 mm) diameter dial face.

Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.

Process Connections: 1/8" female NPT duplicate high and low pressure taps - one pair side and one pair back

Weight: 1 lb 2 oz (510 g), MP & HP 2 lb 2 oz (963 g).

Standard Accessories: Two 1/8" NPT plugs for duplicate pressure taps, two 1/8" pipe thread to rubber tubing adapter, and three flush mounting adapters with screws. (Mounting and snap ring retainer substituted for three adapters in MP & HP gage accessories.)

Agency Approvals: Meets the technical requirements of EU Directive 2011/65/EU (RoHS II). Note: -SP models not RoHS approved.

Note: For applications with high cycle rate within gage total pressure rating, next higher rating is recommended. See Medium and High pressure options

\*Low temperature models available as special options





A-432

A-605

Over Protection Note: See page 21 (Series 2000)



## MAGNEHELIC® DIFFERENTIAL PRESSURE GAGES Indicate Positive, Negative or Differential, Accurate within 1%



Bezel provides flange for flush mounting in panel.

Clear plastic face is highly resistant to breakage. Provides undistorted viewing of pointer and scale.

Precision litho-printed scale is accurate and easy to read.

Calibrated range spring is flat spring steel. Small amplitude of motion assures consistency and long life. It reacts to pressure on diaphragm. Live length adjustable for calibration.

Red tipped pointer of heat treated aluminum tubing is easy to see. It is rigidly mounted on the helix shaft.

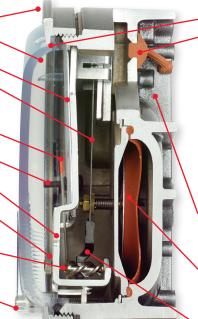
Pointer stops of molded rubber prevent pointer over-travel without damage

"Wishbone" assembly provides mounting for helix, helix bearings and pointer shaft.

Jeweled bearings are shock-resistant mounted; provide virtually friction-free motion for helix. Motion damped with high viscosity silicone fluid.

**Helix** is precision made from an alloy of high magnetic permeability. Mounted in jeweled bearings, it turns freely, following the magnetic field to move the pointer across the

Zero adjustment screw is conveniently located in the plastic cover, and is accessible without removing cover. O-ring seal provides pressure tightness.



O-ring seal for cover assures pressure integrity of case.

#### OVERPRESSURE PROTECTION

Blowout plug is comprised of a rubber plug on the rear which functions as a relief valve by unseating and venting the gage interior when over pressure reaches approximately 25 psig (1.7 bar). To provide a free path for pressure relief, there are four spacer pads which maintain 0.023" clearance when gage is surface mounted. Do not obstruct the gap

The blowout plug is not used on models above 180" of water pressure, medium or high pressure models, or on gages which require an elastomer other than silicone for the diaphragm.

The blowout plug should not be used as a system overpressure control. High supply pressures may still cause the gage to fail due to over pressurization, resulting in property damage or serious injury. Good engineering practices should be utilized to prevent your system from presenting the retirement from the retirement from

exceeding the ratings of any component. Die cast aluminum case is precision made and iridite-

dipped to withstand 168 hour salt spray corrosion test. Exterior finished in baked dark gray hammerloid. One case size is used for all standard pressure options, and for both surface and flush mounting.

Silicone rubber diaphragm with integrally molded O-ring is supported by front and rear plates. It is locked and sealed in position with a sealing plate and retaining ring. Diaphragm motion is restricted to prevent damage due to overpressures.

Samarium Cobalt magnet mounted at one end of range spring rotates helix without mechanical linkages.

MODEL CHART										
	Range,		Range,		Range, MM		Range,		Dual Scale Air	Velocity Units
Model		Model	PSI	Model	of Water	Model	kPa		For use with pi	
	.05-02		0-1	2000-6MM†••		2000-0.5KPA				
	025			2000-10MM+•			0-1			
	050		0-3	2000-15MM			0-1.5			Range, in w.c./
	0-1.0		0-4	2000-25MM			0-2			Velocity F.P.M.
	0-2.0			2000-30MM		2000-2.5KPA				025/
	0-3.0		0-10	2000-50MM			0-3			300-2000
	0-4.0		0-15	2000-80MM			0-4			050/
	0-5.0		0-20	2000-100MM			0-5			500-2800
	0-6.0		0-30	2000-100MM			0-8			0-1.0/
	0-8.0			2000-120MM			0-10			500-4000
	0-10		Range, CM	2000-100MM			0-15			0-2.0/
	0-10	Model	of Water	2000-250MM			0-10			1000-5600
	0-12 0-15	mouel	o. water	2000-230MM			0-25			
	0-13	2000-15CM	0-15	Zero Center Ra			0-30			0-5.0/ 2000-8800
	0-25		0-20		2.0.2					0-10/
	0-30		0-25	2300-6MM†••	F 0 F	Zero Center F				2000-12500
	0-40		0-50	2300-10MM†•	5-0-5	2300-1KPA	.5-05			2000-12500
	0-40		0-80	2300-20MM†•		2300-2KPA	1-0-1			
	0-60	2000-100CM		Model		2300-2.5KPA				
	0-80	2000-150CM		2000-60NPA†••		2300-3KPA	1.5-0-1.5			
	0-100	2000-200CM		2000-30PA†••	0-30	Dual Scale Er	nalish/Metri	c Mode	ls	
	0-100	2000-250CM		2000-60PA†••	JO-6U		Range,	Range		
	0-120	2000-300CM		2000-100PA†•	0-100		in w.c.	Pa or k		
		Zero Center		2000-125PA†•	JU-125	2000-00D+••	025	0-62 Pa		
	0-100		2-0-2	2000-250PA	0-250		0-0.5	0-125 F		
	0-100		5-0-2  5-0-5	2000-300PA	0-300		0-1.0	0-250 F		
2230			15-0-5 15-0-15	2000-500PA	0-500		0-2.0	0-500 F		
		2300-30CIVI	110-0-10	2000-750PA	JU-75U	2002D	0-3.0	0-300 F		
Zero Center				2000-1000PA	10-1000		0-4.0	0-1.0 k		
	0.125-0-0.125			Zero Center Ra	nges		0-5.0	0-1.25		
2300-0†•	.25-025			Model		2006D	0-6.0	0-1.5 k		
2301	.5-05			2300-60PA+••			0-8.0	0-2.0 k		
	1-0-1			2300-100PA+•			0-10	0-2.5 k		
	2-0-2			2300-120PA		2015D	0-15	0-2.3 k		
	5-0-5			2300-200PA			0-20	0-5.7 kPa		
	10-0-10			2300-250PA			0-25	0-6.2 k		
2330	15-0-15			2300-300PA		2050D	0-50	0-0.2 K		
				2300-500PA			0-60	0-12.4 0-15 kF		
				2300-1000PA	500-0-500	20000	0-00	0-13 KF	a	
†These range	†These ranges calibrated for vertical scale position • Accuracy ±3% •• Accuracy ±4% *MP option standard **HP option standard									

**ACCESSORIES** 

Model Description

**VELOCITY AND VOLUMETRIC FLOW UNITS** Scales are available on the Magnehelice gage that read in velocity units (FPM, m/s) or volumetric flow units (SCFM, m³/s, m³/h). Stocked velocity units with dual range scales

in inches w.c. and feet per minute are shown above. For other ranges contact the factory. When ordering volumetric flow scales please specify the maximum flow rate and its corresponding pressure.

Example: 0.5 in w.c. = 16,000 CFM.

A-321	Safety relief valve
A-448	3-piece magnet kit for mounting Magnehelic® gage directly to magnetic surface
A-135	Rubber gasket for panel mounting
	Plastic carry case
A-310A	3-way vent valves. In applications where pressure is continuous and the Magnehelic® gage
	is connected by metal or plastic tubing which cannot be easily removed, we suggest using
	Dwyer A-310A vent valves to connect gage. Pressure can then be removed to check or
	re-zero the gage

