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





Standard Magnehelic® Gage MAGNEHELIC

High Accuracy Magnehelic® Gage Note: Shown with optional -SS bezel

HOLES EQUALLY SPACED ON A Ø4-1/8 [104.78] BOLT CIRCLE FOR PANEL MOUNTING IS OVERPRESSURIZED .025 [.64] SPACE CREATED BY 3 SPACER PADS WHEN SURFACE MOUNTED. DO NOT OBSTRUCT. PROVIDES PATH [13.49] 1/8 FFMALE NPT FOR RELIEF OF OVERPRESSURE. HIGH PRESSURE CONNECTION 1/8 FEMALE NPT HIGH PRESSURE 1-1/4 [31.75] CONNECTION [44.45] 1/8 FEMALE Ø4-1/2 [114.3] PRESSURE [12.70] CONNECTION 15/32 [11.91] [120.65] 1/8 FEMALE NPT LOW PRESSURE CONNECTION 1-11/16 [42.86] 7/16 [11.11] [13.49] ø4-3/4 [120.65] PANEL CUTOUT 1/8 FFMALE NPT HIGH PRESSURE 1-1/4 CONNECTION [31.75] 1-3/4 **1** [44.45] ø4-1/2 [120.27] [114.3]

3/16

[4.76]

RUBBER PRESSURE RELIEF PLUG WILL UNSEAT ITSELF WHEN GAGE

Select the SERIES 2000 Magnehelic® Gage 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 noncorrosive gas pressures--either positive, negative (vacuum) or differential. The design resists shock, vibration, over-pressures and is weatherproof to IP67.

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

ACCESSO	RIES
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

ø5-1/2 [139.70]

MOUNTING RING

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.

. 2-17/32

[64.29]

15/32

[11.91]

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.

[12.70]

NPT I OW

PRESSURE

CONNECTION

[17.46]

1/8 FEMALE

[3] 6-32 X 3/16 [4.76] DEEP

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-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

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

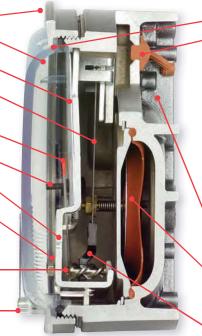
Pointer stops of molded rubber prevent pointer over-travel

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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

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 created by these pads.

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

gages which require an elastomer than sincore 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

exceeding the ratings of any component.

Die cast aluminum case is precision made and iriditedipped 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

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

MODEL CHA	RT									
	Range,		Range,		Range, MM		Range,		Dual Scale Air	Velocity Units
Model		Model	PSI	Model	of Water	Model	kPa		For use with pi	tot tube
2000-00N+••	.05-02	2201	0-1	2000-6MM†••	0-6	2000-0.5KPA	0-0.5			
2000-00+••	025	2202	0-2		0-10	2000-1KPA	0-1			
2000-0†•	050		0-3		0-15	2000-1.5KPA	0-1.5			Range, in w.c./
	0-1.0	2204	0-4	2000-25MM	0-25	2000-2KPA	0-2			Velocity F.P.M.
2002	0-2.0	2205	0-5	2000-30MM	0-30	2000-2.5KPA	0-2.5		2000-00AV+••	
2003	0-3.0	2210*	0-10	2000-50MM	0-50	2000-3KPA	0-3			300-2000
2004	0-4.0	2215*	0-15	2000-80MM	0-80	2000-4KPA	0-4			050/
2005	0-5.0		0-20	2000-100MM	0-100	2000-5KPA	0-5			500-2800
2006	0-6.0		0-30	2000-125MM	0-125	2000-8KPA	0-8			0-1.0/
	0-8.0				0-150	2000-10KPA	0-10			500-4000
	0-10		Range, CM		0-200	2000-15KPA	0-15			0-2.0/
	0-12		of Water		0-250	2000-20KPA	0-20			1000-5600
2015	0-15			2000-300MM	0-300	2000-25KPA	0-25		2005AV	0-5.0/
	0-20		0-15	Zero Center Ra	nges	2000-30KPA	0-30			2000-8800
			0-20	2300-6MM+••	3-0-3	Zava Cantar I	2			0-10/
	0-30		0-25		5-0-5	Zero Center F				2000-12500
	0-40		0-50		10-0-10	2300-1KPA	.5-05			
2050	0-50		0-80			2300-2KPA	1-0-1			
	0-60	2000-100CM		2000-60NPA†••			1.25-0-1.25			
	0-80	2000-150CM			10-60	2300-3KPA	1.5-0-1.5			
		2000-200CM			0-100	Dual Scale Er				
	0-120	2000-250CM			0-100		Range,	Range	,_	
	0-150	2000-300CM			0-123	Model	in w.c.	Pa or k		
	0-160	Zero Center			0.00	2000-00D†••	025	0-62 P		
	0-180		2-0-2		0-500	2000-0D†•	0-0.5	0-125 I		
2250*	0-250		5-0-5		0-750	2001D	0-1.0	0-250 I		
Zero Center	Ranges	2300-30CM	15-0-15		0-1000	2002D	0-2.0	0-500 I		
	0.125-0-0.125			Zero Center Ra		2003D	0-3.0	0-750 I		
2300-001	25-025					2004D	0-4.0	0-1.0 k		
2301	.5-05					2005D	0-5.0	0-1.25		
	1-0-1			2300-60PA†••	30-0-30	2006D	0-6.0	0-1.5 k		
	2-0-2				50-0-50	2008D	0-8.0	0-2.0 k		
	5-0-5				60-0-60	2010D	0-10	0-2.5 k		
	10-0-10			2300-200PA	100-0-100	2015D	0-15	0-3.7 k		
	15-0-15			2300-250PA	125-0-125	2020D	0-20	0-5 kPa		
	10 0-10			2300-300PA	150-0-150	2025D	0-25	0-6.2 k		
					250-0-250	2050D	0-50	0-12.4		
LTI		-f' I I -	- 141		500-0-500	2060D	0-60	0-15 kF		
†These ranges calibrated for vertical scale position • Accuracy ±3% • Accuracy ±4% *MP option standard **HP option standard										

VELOCITY AND VOLUMETRIC FLOW UNITS Scales are available on the Magnehelic® 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 is inches 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.

7,000	511125		
Model	Description		
A-135 A-401 A-310A	Safety relief valve 3-piece magnet kit for mounting Magnehelic® gage directly to magnetic surface Rubber gasket for panel mounting Plastic carry case 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.		



sales@calcert.com



ACCESSORIES

HIGH ACCURACY MAGNEHELIC® DIFFERENTIAL PRESSURE GAGE





Twice as accurate as the standard Magnehelic® gage

Mirrored scale overlay eliminates parallax error

IP67 weatherproof housing

Optional brushed SS bezel



6-Point Calibration **Certificate Included**

OPTIONS - HIGH ACCURACY MAGNEHELIC® GAGE		
To order		
add suffix:	Description	
-HA	High Accuracy Magnehelic® Gage. Accuracy	
	within 1% and weatherproof. Also includes	
	mirrored scale overlay and a six point	
	calibration certificate	
-SS	Corrosion resistant brushed 304 stainless	
	steel bezel	

Accuracy Specifications: See page 20 (Series 2000)

ADDITIONAL GAGE OPTIONS

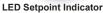






OPTIONS - OTHER OPTIONAL BEZELS			
To order add suffix:	Description		
-CB	Chrome bezel option: A chrome plated aluminum bezel for an		
	aesthetically pleasing finish when mounting on metal surfaces		
	such as control panels.		
-SB	Stainless steel bezel option: 304 stainless steel electro polished		
	Ra 16 finished bezel.		
-SS	Corrosion resistant brushed 304 stainless steel bezel		







Adjustable Signal Flag



Transparent Overlay



Mirrored Scale Overlay



Integrated Mounting Plate

-CB	Chrome bezel option: A chrome plated aluminum bezel for an		
	aesthetically pleasing finish when mounting on metal surfaces		
	such as control panels.		
-SB	Stainless steel bezel option: 304 stainless steel electro polished		
	Ra 16 finished bezel.		
-SS	Corrosion resistant brushed 304 stainless steel bezel		
OPTIONS - LED SETPOINT INDICATOR			
OF HORO - LED OLTH ORTH INDIOATOR			

OPTIONS - LED SETPOINT INDICATOR					
To order add suffix:	Description				
-SP	Bright red LED on right scale shows when setpoint is reached.				
	Field adjustable from gage face, unit operates on 12-24				
	VDC. Setpoint indicator option comes with medium pressure				
	(MP) bezel.				
Note: 4-13/16" hole fo	or flush mounting.				
OPTIONS - ADJUSTA	ABLE SIGNAL FLAG				
To order add suffix:	Description				
-ASF	Integral with plastic gage cover. Available for most models				
	except those with medium or high pressure construction. Can be				
	ordered with gage or separate.				
OPTIONS - TRANSPA	ARENT OVERLAYS				
To order add suffix:	Description				
-G	Green (to highlight and emphasize critical pressures)				
-G -R	Green (to highlight and emphasize critical pressures) Red (to highlight and emphasize critical pressures)				
~	, , , , , , , , , , , , , , , , , , , ,				
-R -Y	Red (to highlight and emphasize critical pressures)				
-R -Y	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY				
-R -Y OPTIONS - MIRRORE	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY				
-R -Y OPTIONS - MIRRORE To order add suffix:	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY Description				
-R -Y OPTIONS - MIRRORE To order add suffix: -M	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY Description A mirrored scale overlay is also available to assist in reducing				
-R -Y OPTIONS - MIRRORE To order add suffix: -M	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY Description A mirrored scale overlay is also available to assist in reducing parallax error. ITED MOUNTING PLATE				
-R -Y OPTIONS - MIRRORE To order add suffix: -M OPTIONS - INTEGRA	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY Description A mirrored scale overlay is also available to assist in reducing parallax error. ITED MOUNTING PLATE				
-R -Y OPTIONS - MIRRORE To order add suffix: -M OPTIONS - INTEGRA To order add suffix:	Red (to highlight and emphasize critical pressures) Yellow (to highlight and emphasize critical pressures) ED SCALE OVERLAY Description A mirrored scale overlay is also available to assist in reducing parallax error. ITED MOUNTING PLATE Description				



OPTIONS - FOR HIGH STATE PRESSURE APPLICATIONS		
To order add suffix: Description		
-HP	High pressure option: for pressures to 80 psig	
-MP Medium pressure option: for pressures to 35 psig		

OPTIONS	
To order add suffix:	Description
-FC	Factory calibration certificate
-LT	Low temperatures to -20°F (-28°C)
-NIST	NIST traceable calibration certificate



MAGNEHELIC® GAGE MOUNTING ACCESSORIES

A-369











A-464















A-371

A-286 A-300 A-368

A single case size is used for most models of Magnehelic® gages. They can be flush or surface mounted with standard hardware supplied. Complete mounting and connection fittings plus instructions are furnished with each instrument. A 4-9/16" hole is required for flush panel mounting.

Flush mounting is easily accomplished with the new A-300 Flush Mounting bracket. This bracket provides a solution to quickly and conveniently flush mount the Magnehelic® gage. The A-300 is ideal for mounting the Magnehelic® gage on control panel doors.

The A-368 is a simple bracket for quickly surface mounting the Magnehelic® gage. After securing the Magnehelic® gage to the A-368 bracket, mount the bracket on any

The A-369 allows the Magnehelic® gage to be easily carried to locations where pressure readings need to be taken. The A-369 can stand on its own or hang on a nail or hook

ACCESSORIES Model Description

A-610	Pipe mounting kit for installing on 1-1/4″ to 2″ horizontal or vertical pipe
A-286	Magnehelic® gage panel mounting flange
A-369	Stand-hang bracket, aluminum, for Magnehelic® gage
A-300	Flush mounting bracket
A-464	Flush mount kit for Magnehelic® gage
A-368	Surface mounting plate, aluminum, for Magnehelic® gage
A-299	Mounting bracket, flush mount for Magnehelic® gage, bracket is then
	surface mounted, steel with gray hammerloid epoxy finish
	A-286 A-369 A-300 A-464 A-368

A-371 Surface mounting bracket, use with medium pressure (-MP) or high

SERIES A-320

INSTRUMENT ENCLOSURE

Protects Various Instruments







A-320-B

pressure (-HP) models only



A-320-A With Gage Installed

A-320-B With Gage Installed

SERIES A-320 Instrument Enclosure protects instruments in all applications. The A-320-A fits standard Magnehelic® size instruments (4-9/16" diameter) and the A-320-B fits standard 3000MR Photohelic® switch/gage size instruments (4-13/16" diameter). Both models include silicone tubing, gage barbs and mounting hardware.

MODEL CHART		
Model	Compatible Instruments	
A-320-A	2000 Magnehelic® Gage, DM-1000 Digital Differential Pressure Gage, DM-2000 Differential Pressure Transmitter	
	DM-2000 Differential Pressure Transmitter	
A-320-B	3000MR Photohelic® Switch/Gage, Series 605 Magnehelic® Differential Pressure Transmitter, DH3 Digihelic® Pressure Controller,	
	Differential Pressure Transmitter, DH3 Digihelic® Pressure Controller,	
	2000 Magnehelic® Gage with medium and high pressure options	

SPECIFICATIONS

Housing: ABS.

Process Connections: Anodized aluminum.

Enclosure Rating: NEMA 1 (IP10). Note: Check instruments rating. Weight: Model A-320-A: 11.29 oz (320 g); A-320-B: 16.23 oz (420 g).

Gage Size Opening: A-320-A: 4-9/16 in (115.89 mm); A-320-B: 4-13/16 in (122.24 mm)