

Dwyer Instruments

Precision instruments for measuring, transmitting and controlling pressure, temperature, level and flow





Contents

Magnehelic® Differential Pressure Gages	4
Minihelic® II Differential Pressure Gages	6
Photohelic® Pressure Switch/Gages	7
Slack-Tube® Manometers	8
Flex-Tube® U-Tube Manometers	9
Dual Range Flex-Tube® U-Inclined Manometers	10
Mark II Molded Plastic Manometers	11
Model 478-0 Digital Differential Manometer	12
Series 475 Mk III Handheld Digital Manometer	13
Series 1630 Large Diaphragm Pressure Switches	14
Series 1640 Floating Contact Null Switch for High and Low Actuation	15
Series 1800 Low Differential Pressure Switches for General Industrial Service	17
Series 1900 Compact Low Differential Pressure Switches	18
Minihelic Differential Pressure Indicating Transmitter	19
Flotect® Vane Operated Flow Switch	20
Mark II Molded Plastic Air Velocity Meters	22
Series 471 Digital Thermo-Anemometer	23
Portable Magnehelic® Pressure-Air Velocity Gages	24
Air Velocity Kit	25
Air Meter	26
Smoke Gage Kit	27
Combustion Test Kit	28
Accessories	29
Cross Reference	33

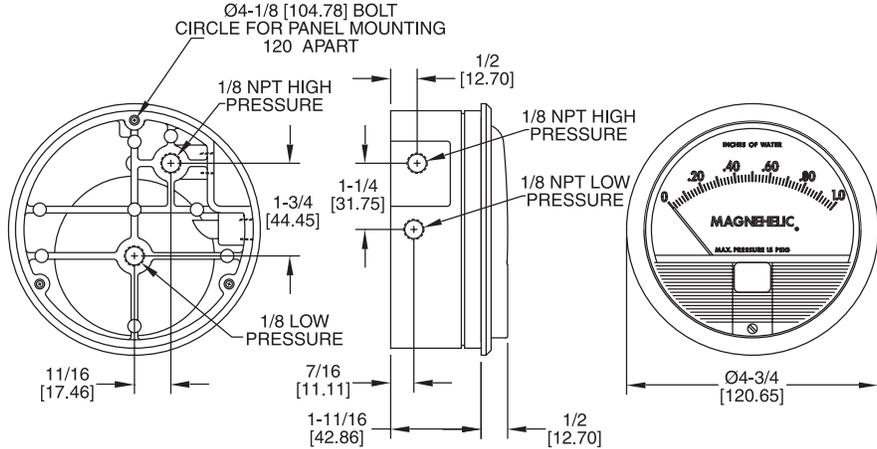
Magnehelic® Differential Pressure Gages

Series 2000



Patent Nos. 4,030,365
5,012,678

Standard Magnehelic® Pressure Gage has a large, easy-to-read 4" dial.



Dimensions, Standard Series 2000 Magnehelic® Pressure Gages. (Slightly different on medium and high pressure models)

Indicate Positive, Negative or Differential, Accurate within 2%

Select the Dwyer Magnehelic® gage for high accuracy — guaranteed within 2% of full scale — and for the wide choice of models available to suit your needs precisely. Using Dwyer's simple, frictionless Magnehelic® movement, it quickly indicates low air or non-corrosive gas pressures — either positive, negative (vacuum) or differential. The design resists shock, vibration and overpressures. No manometer fluid to evaporate, freeze or cause toxic or leveling problems. It's inexpensive, too.

The Magnehelic® is the industry standard to measure fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, liquid levels with bubbler systems and pressures in fluid amplifier or fluidic systems. It also checks gas-air ratio controls and automatic valves, and monitors blood and respiratory pressures in medical care equipment.

Specifications

Service: Air and non-combustible, compatible gases. (Natural Gas option available.)

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% of full scale (±3% on - 0, -100PA, -125PA, 10MM and ±4% on - 00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C).

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

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

Temperature Limits: 20 to 140°F.* (-6.67 to 60°C).

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 adapters and three flush mounting adapters with screws. (Mounting and snap ring retainer substituted for 3 adapters in MP & HP gage accessories.)

*Low temperature models available as special option.

†For applications with high cycle rate within gage total pressure rating, next higher rating is recommended. See medium and high pressure options at lower left.

Magnehelic® Differential Pressure Gages

ServiceFirst Item #	Mfg. #	Range Inches of Water
GAG00987	2000-00†**	0-.25
GAG00888	2000-0†•	0-.50
GAG00139	2001	0-1.0
GAG00874	2002	0-2.0
GAG01004*	2002-LT (low temp)	0-2.0
GAG00896	2003	0-3.0
GAG00897	2004	0-4.0
GAG00928	2005	0-5.0
GAG00993	2006	0-6.0
GAG01039	2008	0-8.0
GAG01040	2010	0-10.0
GAG00988	2015	0-15

†These ranges calibrated for vertical scale position.
 • Accuracy +/-3%. •• Accuracy +/-4%
 *Low temperatures down to -20°F

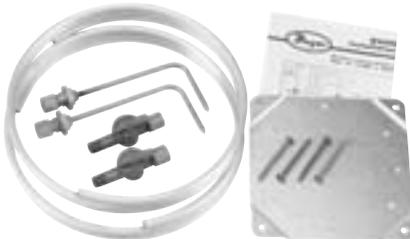
ServiceFirst Item #	Mfg. #	Range Zero Center Inches of Water
GAG01032	2301	.5-0-.5
GAG00999	2302	1-0-1
GAG01000	2304	2-0-2
GAG01001	2310	5-0-5

Dual Scale Air Velocity Units		
ServiceFirst Item #	Mfg. #	Range in W.C. Velocity, F.P.M.
GAG01034	2000-OAV	0-.50/500-2800
GAG01002	2002AV	0-2.0/1000-5600
GAG01036	2010AV	0-10/2000-12.500

ServiceFirst Item #	Mfg. #	Description
HDL00953	A-432	Portable Kit
KIT07478	A-605	Air Filter Kit



HDL00953 (A-432)



KIT07478 (A-605)

Options and Accessories

Portable Units

HDL00953 (A-432) Combine carrying case with any Magnehelic® gage of standard range, except high pressure connection. Includes 9 ft. (2.7 m) of 3/16" I.D. rubber tubing, standhang bracket and terminal tube with holder. Portable Kit.

Air Filter Gage Accessory Package

KIT07478 (A-605) Adapts any standard Magnehelic® for use as an air filter gage. Includes aluminum surface mounting bracket with screws, two 5 ft. (1.5 m) lengths of ¼" aluminum tubing two static pressure tips and two molded plastic vent valves, integral compression fittings on both tips and valves. Air Filter Kit.

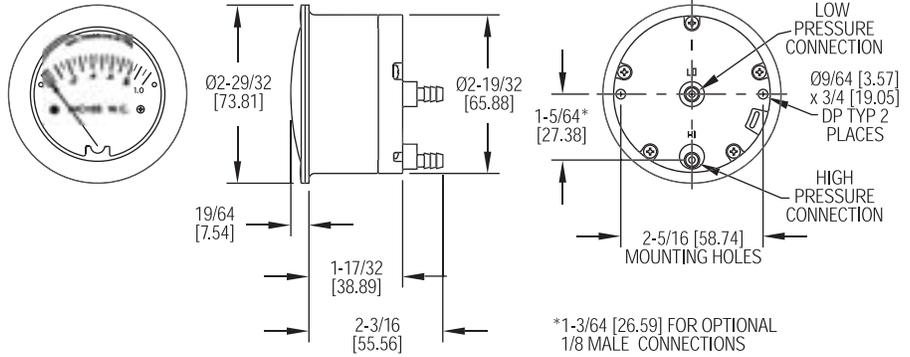
Minihelic® II Differential Pressure Gages

Series 2-5000



Patent No. 4,347,744

The Series 2-5000 Minihelic® II low differential pressure gage provides excellent readability in a compact size.



Dimensions, Series 2-5000 Minihelic® II Gage.

Combining High Accuracy, Compactness, Dependability, and Low Cost

Specifications

Service: Air and compatible gases.

Wetted Materials: Consult factory.

Housing: Glass filled nylon; polycarbonate lens.

Accuracy: ±5% of full scale at 70°F (21.1°C).

Pressure Limits: 30 psig (2.067 bar) continuous to either pressure connection.

Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).

Size: 2-1/16" (52.39 mm) diameter dial face.

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

Process Connections: Barbed, for 3/16" I.D. tubing (standard); 1/8" male NPT (optional).

Weight: 6 oz (170.1g).

Panel Mounting



Mounting hardware is supplied with the Minihelic® II gage for panel mounting through a single hole, 2-5/8" (67 mm) in diameter. Panel thickness up to 1/2" (13 mm) can be accommodated with the hardware supplied. If necessary, surface mounting of the gage can be accomplished by means of two 4-40 screws into the tapped mounting bracket stud holes in the rear of the gage. Surface mounting requires clearance holes in the panel for the two pressure taps.

ServiceFirst Item #	Mfg. #	Range Inches of Water
GAG00996	2-5005	0-5.0

Accessories

KIT09647 (A-434) Portable Kit

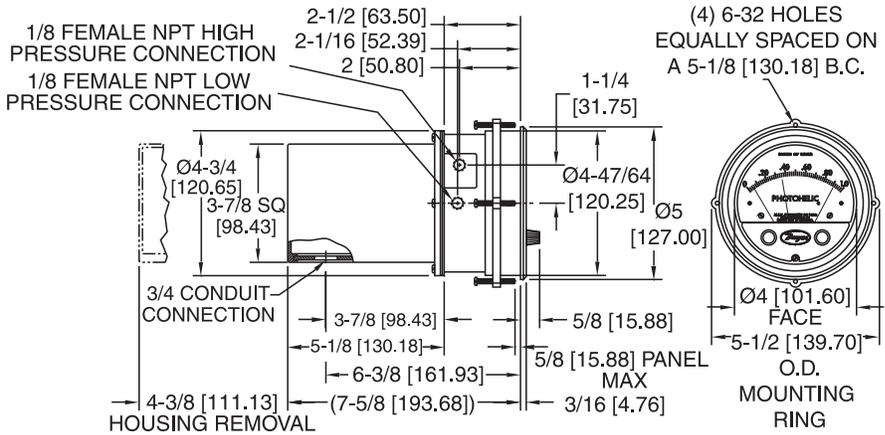
Photohelic® Pressure Switch/Gages

Series A3000



Series A3000 Photohelic® Switch/Gage.

Set points are instantly adjusted with front knobs.



3-in-One Indicating Gage, Lo-Limit and Hi-Limit Control

Photohelic® Switch/Gages function as versatile, highly repeatable pressure switches combined with a precise pressure gage employing the time-proven Magnehelic® design. The Photohelic® measures and controls positive, negative or differential pressures of air and compatible gases. Standard models are rated to 25 psig (1.7 bar) with options to 35 (2.4) or 80 (5.5 bar) psig. Single pressure 36000S models measure to 6000 psig (413 bar) with a 9000 psig (620 bar) rating.

Two phototransistor actuated, DPDT relays are included for low/high limit control. Easy to adjust setpoint indicators are controlled by knobs located on the gage face. Individual setpoint deadband is one pointer width — less than 1% of full scale. Setpoints can be interlocked to provide variable deadband — ideal for control of fans, dampers, etc. Gage reading is continuous and unaffected by switch operation, even during loss of electrical power. Choose from full scale pressure ranges from a low 0-.25" (0-6 mm) w.c. up to 30 psi (21 bar); single positive pressure to 6000 psig (413 bar).

Specifications

Gage Specifications

Service: Air and non-combustible, compatible gases.

Wetted Materials: Consult factory.

Accuracy: ±2% of full scale at 70°F (21.1°C). ±3% on -0 and ±4% on -00 models.

Pressure Limits: -20" Hg. to 25 psig (-0.677 to 1.72 bar). MP option; 35 psig (2.41 bar), HP option; 80 psig (5.52 bar). 36003S – 36010S; 150 psig (10.34 bar). 36020S and higher; 1.2 x full scale pressure.

Temperature Limits: 20 to 120°F. (-6.67 to 48.9°C) Low temperature option available.

Process Connections: 1/8" female NPT.

Size: 4" (101.6 mm) dial face, 5" (127 mm) O.D. x 8-1/4" (209.55 mm).

Weight: 4 lb (1.81 kg).

Switch Specifications

Switch Type: Each setpoint has 2 Form C relays (DPDT).

Repeatability: ±1% of full scale.

Electrical Rating: 10A @ 28 VDC, 10A @ 120, 240 VAC.

Electrical Connections: Screw terminals.

Power Requirements: 120 VAC, 50/60 Hz; 240 VAC & 24 VAC Power optional.

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

Set Point Adjustment: Adjustable knobs on face.

Agency Approvals: UL, CSA, CE.

ServiceFirst Item #	Mfg. #	Range in W.C.
GAG00998	A3000-00	0-25
GAG00994	A3003	0-3.0
GAG00992	A3005	0-5.0



Slack-Tube® Manometers



NO. 1212 Gas Pressure Kit For Servicing Gas Appliances

A handy, complete kit containing a 16" Slack-Tube® Manometer, necessary tubing and connection fittings for checking gas pressures in virtually all gas appliances such as water heaters, furnaces, stoves and dryers. Different range manometers may be specified at corresponding prices. Compared to the cost of purchasing items separately the assembly of component parts into kit form represents substantial savings.

KIT09644 (1212) Gas Pressure Kit

What the kit consists of:

1 – #1211-16 Slack-Tube® Manometer, reads pressure to 16" water.*

1 – Carrying case, plastic, 8 1/2" x 7" x 3 1/8"

1 – 3/4 oz. bottle Fluorescein green color concentrate with wetting agent

2 – 1/8" pipe thread rubber tubing adapters

1 – 1/8" to 1/4" pipe thread bushing

1 – 3 ft. length 3/16" rubber tubing

1 – Rubber tubing adapter to fit standard 7/16" dia. spud.

*Other ranges available.

Flex-Tube® U-Tube Manometers



These inexpensive manometers measure positive, negative and differential pressures. Dwyer Flex-Tube® U-Tube Manometers combine the inherent accuracy of the simple “U” Tube with the durability of tough, long-lasting plastic construction. Columns are of .375" O.D. flexible and shatter proof clear butyrate tubing. They are easily accessible for cleaning. Indicating tube is backed by white scale channel to provide maximum color contrast. Scales are extruded high impact polystyrene plastic, formed to hold columns in perfect alignment. Stark white scales have graduations and numbers silkscreen-printed in black for maximum legibility.

You can choose from numerous models and features including overpressure safety traps, in full scale ranges from 8" to 36" of water or mercury. All are suitable for total pressures to 100 psi — for determining velocity and static pressures, leakage, fan and blower efficiency, filter resistance, and gas pressures. Ideal wherever a portable, direct reading manometer is needed.

Standard Accessories

Series 1222 — 2 magnetic mounting clips; tube clamp; 2 plastic carrying plugs and 2 flexible plastic tubing connectors for attachment of 3/16" rubber or plastic tubing without kinking. 3/4 ounce bottle .826 sp. gr. red gage oil furnished for “D” style manometers. Fluorescein green dye concentrate furnished with “W/M” style manometers. Mercury is available at extra cost.

ServiceFirst Item #	Mfg. #
GAG00989	1222-12-W/M
GAG00990	1222-12-D
GAG01031	1223-8-D
GAG01033	1223-12-Db*

Ranges and Dimensions

Model or Range		Hg Required To Fill		Length “A”		O.A. Length “B”	
Inches H ₂ O	Millimeters H ₂ O	Grams	Ounces	W/M	D	W/M	D
8 (4-0-4)	M200 (100-0-100)	178.5	6.3	12 1/4	14	15 1/4	17
12 (6-0-6)	M300 (150-0-150)	225.5	7.9	16 1/4	18 7/8	19 1/4	21 3/4

Not recommended for vacuum service above 5 in. Hg (68 in. w.c.)

*Type “b” connections

Dual Range Flex-Tube® U-Inclined Manometers



Standard accessories

Two plastic carrying plugs with retainers for use when manometer is not in service. Two magnetic clips to hold instrument to metal surface. Flexible red vinyl plastic tubing connectors. Brass terminal tube 1/4" diameter x 8" long. One terminal tube holder. Brass adapter, 1/8" pipe thread to plastic tubing. One 4 1/2-foot length of Tygon plastic tubing. One 3/4 ounce bottle .826 sp. gr. red gage fluid. Vinyl carrying case.



Above — Use Series 1227 as a regular U-tube manometer to read high-range pressure on the right leg, or as an inclined manometer (shown here) to read low-range pressure on the bottom leg. Simply incline manometer until fluid levels read zero. No spirit level required. Magnetic clips hold the gage in position on a steel duct surface.

Series 1227 Manometer — Most versatile and useful low cost manometer we know of. Designed for installation and servicemen. A sturdy, clear plastic manometer, it offers single, direct readings in two ranges: As a U-tube, it reads from 0 to 16" of water; as an inclined gage, it reads from -.20 to 0 to 2.6" of water. "How-to-use" instructions are printed directly on the scale.

Indicating Tubing — Clear .400" O.D., tough, shatterproof butyrate. Pressure connection end is bent to provide over pressure protection when used as an inclined gage. One 4 1/2' x 3/8" Tygon tube included for pressure source connection.

Scale — Stark white high-impact styrene, 21" long. Adjustable for precise zeroing.

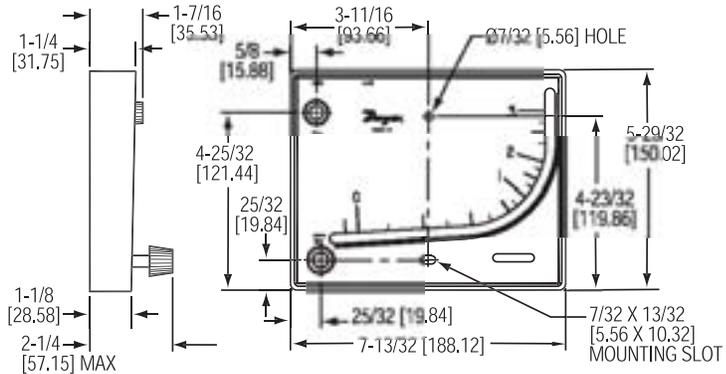
Markings — 1" major, .2" minor graduations on high range; .02" graduations on low range. Silkscreened in black on stark white for positive definition. Acrylic-coated for permanence.

ServiceFirst Item #	Mfg. #
GAG00995	Series 1227

As Vertical U-Tube Manometer 0-16" water with 1" major divisions, .2" minor divisions
As Inclined Manometer Scale is 17" long, reading .20-0-2.6" water with .02" minor divisions

Mark II Molded Plastic Manometers

3% Accuracy For Stationary And Portable Applications At Minimum Cost



ServiceFirst Item #	Mfg. #	Range	Fluid Used
GAG00991	Mark II 25	0-3 in w.c.	Red oil, .826 s.g.
GAG00997	Mark II 27*	0-7000 fpm	Red oil, .826 s.g.

*Require pitot tube at additional cost.

Dwyer Mark II series molded manometers are of the inclined and inclined-vertical types. The curved inclined-vertical tube of the Model 25 gage provides higher ranges with more easily read increments at low readings. The Model 25 is excellent for general purpose work.

Installation — Mark II manometers can be mounted on any vertical surface with the two mounting screws provided. A built-in spirit level simplifies leveling before mounting screws are tightened. Simply fill the reservoir, adjust fluid level to zero, connect the tubing, and the gage is ready for operation.

Digital Differential Manometer

Model 478-0



Selectable Engineering Units, Min/Max, Backlight, $\pm 1.5\%$ Accuracy

- Economically Priced.
- Multi-Functioning: Positive, Negative, or Differential Measurement.
- Display Readings in Inches w.c. or mbar.
- Min/Max, Hold and Zero Functions.
- Backlit Display.
- Extruded Aluminum Case.

Quickly verify filter condition, monitor cleanrooms, troubleshoot HVAC systems, or perform field calibrations with the Model 478-0 Digital Differential Manometer. The Model 478-0 is an indispensable tool for the HVAC technician, plant engineer, or industrial hygienist. The electronics are housed in a rugged extruded aluminum case to provide long life and exceptional durability.

The manometer can be used to measure positive, negative, or differential pressures from -60 to 60" w.c. (-150 to 150 mbar). The unit features selectable units in inches w.c. or mbar and a Min/Max function. Press the Hold key to freeze the current pressure measurement on the display. The 478-0 manometer includes a zeroing button to null out any minor pressure differences. To view the display clearly in poorly lighted areas, use the backlight key.

The Model 478-0 Digital Differential Manometer includes a quick start reference guide and a 9V battery.

Specifications

Service: Air and compatible gases.

Wetted Materials: Consult factory.

Accuracy: $\pm 1.5\%$ F.S. from 32 to 104°F (0 to 40°C).

Pressure Hysteresis: $\pm 0.1\%$ of full scale.

Pressure Limits: -60 to 60" w.c. (-150 to 150 mbar).

Temperature Limits: 32 to 104°F (0 to 40°C).

Storage Temperature Limits: -4 to 176°F (-20 to 80°C).

Display: 0.42" (10.6 mm) 4-1/2 digit liquid crystal.

Resolution: 0.01" from -9.99" w.c. to 9.99" w.c.; 0.1" <-10" w.c., >10" w.c.

Power Requirements: 9V alkaline battery, (up to 40 hours of operation). Battery included but not connected.

Weight: 10.8 oz (306 g).

Connections: Two barbed connections for use with 1/8" (3.18 mm) or 3/16" (4.76 mm) I.D. tubing.

Agency Approvals: CE.

Dimensions: 6-9/16" H x 2-13/16" W x 29/32" D.

TOL02234 (Model 478-0) Digital Differential Manometer



HOL00954 (A-402A) CARRYING CASE — Tough gray nylon pouch protects any Series 478-0 Manometer. Double zippered for quick and easy access. With belt loop that snaps closed.

7 1/2"H x 3"W x 2 1/4"D
(191 x 76 x 57 mm)

Mk III Handheld Digital Manometer

Series 475



Ranges from 1 in. w.c. to 150 psid, ±0.5% Accuracy

- Measures Positive, Negative and Differential Pressures
- Rugged, Extruded Aluminum Case
- Lightweight, Fast and Easy to Use
- Dual Calibration with English and Metric Units
- FM Approved



HDL00954 (A-402A)



KIT09645 (475-AV)

Specifications

Service: Air and compatible gases.

Wetted Materials: Consult factory.

Accuracy: ±0.5% F.S., 60 to 78°F (15.6 to 25.6°C); ±1.5% F.S. from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C).

Pressure Hysteresis: ±0.1% of full scale.

Pressure Limits: See chart.

Temperature Limits: 0 to 140°F (-17.8 to 60°C).

Compensated Temperature Limits: 32 to 104°F (-0 to 40°C).

Storage Temperature Limits: -4 to 176°F (-20 to 80°C).

Display: 0.5" liquid crystal. 3-1/2 digits.

Resolution: See chart.

Power Requirements: 9 volt alkaline battery. Battery not connected.

Weight: 10.8 oz (306 g).

Connections: Two barbed connections for use with 1/8" (3.18 mm) or 3/16" (4.76 mm) I.D. tubing. Two compression fittings for use with 1/8" (3.18 mm) I.D. x 3/16" (4.76 mm) O.D. tubing for 475-7-FM & 475-8-FM only.

Agency Approvals: FM, CE.

ServiceFirst Item #	Mfg. #	English Range	Metric Range	Maximum Pressure
TOL02233	475-1-FM	0-19.99 in. w.c.	0-4.97 kPa	10 psig/68.9 kPa

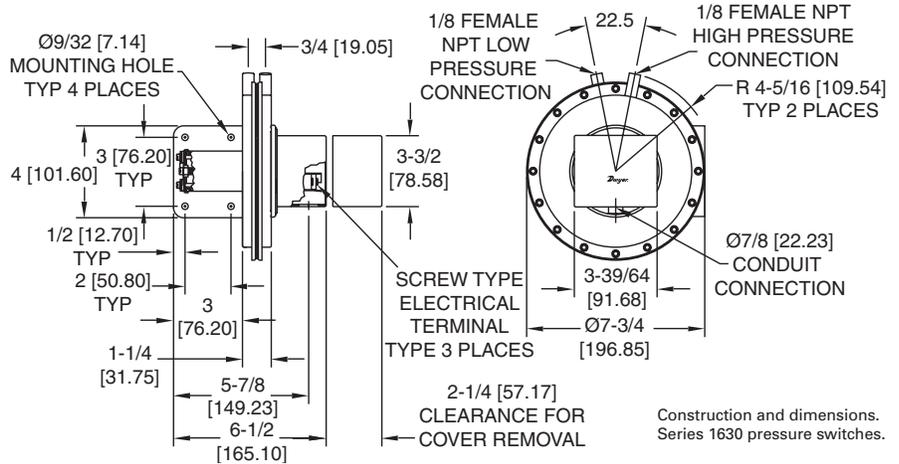
HDL00954 (A-402A) CARRYING CASE — Tough gray nylon pouch protects any Series 475 Manometer. Double zippered for quick and easy access. With belt loop that snaps closed. 7 1/2"H x 3"W x 2 1/4"D (191 x 76 x 57 mm)

KIT09645 (475-1-FM-AV) AIR VELOCITY KIT — Includes the Series 475-FM Manometer, two A-303 static pressure tips two 9 ft. lengths 3/16" I.D. rubber tubing, no. 166-6-CF Pitot tube, A-397 step drill, A-532 air velocity slide chart and instruction bulletin H-11, all packed in a tough, molded plastic carrying case with die cut foam liner.



Large Diaphragm Pressure Switches

Series 1630



Visual Set Point Adjustment in 5 Standard Ranges, 0.05" to 12" w.c. Repetitive Accuracy within $\pm 1\%$

Our highest precision conventional large diaphragm pressure switch provides maximum dependability. In addition, it incorporates a visible set point indicator for maximum convenience. UL and CSA listed, FM approved for general service, these switches are suitable for most applications in air conditioning and industrial service. Electrical capability of 15 amps handles most small electrical loads.

Specifications

Service: Air and non-combustible, compatible gases.

Wetted Materials: Consult factory.

Temperature Limits: -30 to 110°F (-34.4 to 43.3°C).

Pressure Limits: 10 psig (68.95 kPa) continuous, 25 (172.4 kPa) psig surge.

Switch Type: Single-pole double-throw (SPDT).

Repeatability: $\pm 1\%$.

Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz.

Electrical Connections: 3 screw type, common, normally open and normally closed.

Process Connections: 1/8" female NPT.

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

Set Point Adjustment: Screw type with enclosed scale.

Weight: 4 lb, 14 oz (2.21 kg).

Agency Approvals: UL, CSA, FM.

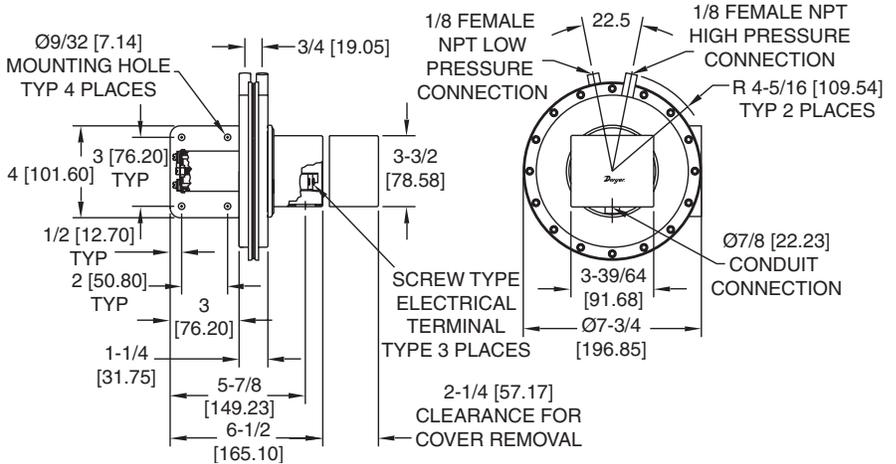
CAUTION: FOR USE ONLY WITH AIR OR COMPATIBLE GASES.

ServiceFirst Item #	Mfg. #	Operating Range, Inches, W.C.	Approximate Dead Band	
			At Min. Set Point	At Max. Set Point
SWT02823	1638-0	0.05 to 0.25	0.04	0.05



Floating Contact Null Switch for High and Low Actuation

Series 1640



Visual Set Point Adjustment... Adjustable Null Zone

The unique electric switch design in the 1640 is another Dwyer innovation. The Dwyer Model 1640 Differential Pressure Switch resembles the Series 1630 switches. The Model 1640, however, is equipped with a single pole, double throw floating contact switch (not snap acting) so it functions as a null switch.

Drawing shows the switching action schematically. As the diaphragm moves in response to pressure changes, it moves the floating contact to cause switching action at two preset points with no switching action between these points. The "high" circuit will be closed when rising pressure differential reaches the preset level. The "low" circuit will be closed when falling pressure differential reaches the preset level.

A typical example of usage is to position motorized dampers when static pressure in a duct system reaches a desired maximum and reposition the dampers when the static pressure falls to a pre-established minimum. By using a pitot tube sensing element the Model 1640 switch can serve in the same way to control air velocity and maintain a constant volume of air in a supply duct.

Temperature Limits: -30 to 110°F (-34.4 to 43.3°C).

Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.

Switch Type: Single-pole double-throw (SPDT) floating contact (not snap action).

Electrical Rating: Non-inductive — 2.5 A @ 110 VAC; 1.5 A @ 220 VAC; 1 A @ 24 VDC; 0.5 A @ 110 VAC; Inductive — 1 A @ 110 VAC; 0.5 A @ 220 VAC; 0.5 A @ 24 VDC (De-rate 70-80% for very slow pressure changes).

Electrical Connections: 3 screw type, common, normally open and normally closed.

Process Connections: 1/8" female NPT.

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

Set Point Adjustment: Screw type.

Weight: 4 lb, 13 oz (2.18 kg).

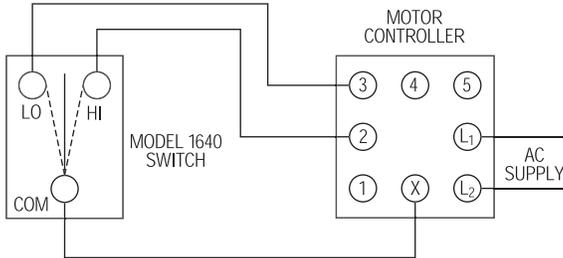
Agency Approvals: CE.

CAUTION: FOR USE ONLY WITH AIR OR COMPATIBLE GASES.

See page 16 for additional information.



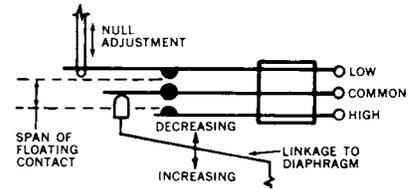
Floating Contact Null Switch for High and Low Actuation



Typical Wiring Hook-Up

Rising pressure closes the “high” contact which causes the motor to rotate in a counterclockwise direction. Decreasing pressure closes the “low” contact and causes the motor to rotate in a clockwise direction. When the floating contact is in the null zone there is no switching action and motor is at rest.

CAUTION: Because of the very low electrical rating, the 1640 switch is almost always used with a relay which has suitable current carrying capability.



Adjustment of the Switch

The “high” actuation point of the Model 1640 switch is indicated on a calibrated scale secured to the transparent range screw enclosure. Resetting is accomplished simply by turning the adjustment screw with a screwdriver to the desired setting on the scale.

The “low” actuation point is set by adjusting the span of the null by turning the Span Adjusting Screw on top of the switch element inside conduit enclosure (See photo).

Specifications

Service: Air and non-combustible, compatible gases.

Wetted Materials: Consult factory.

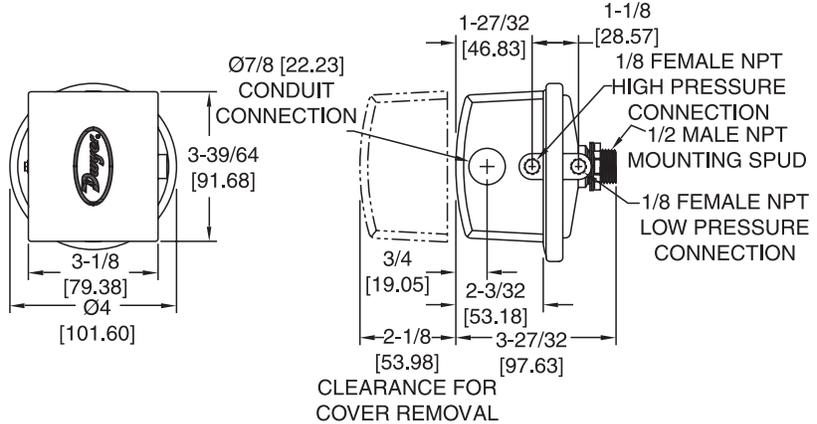
ServiceFirst Item #	Mfg. #	Ranges Inches, w.c.	Adjustable Null Span	
			Min. Set	Max. Set
SWT01879	1640-0	.01 to 0.2	0.01	0.03
SWT01880	1640-1	0.2 to 1.0	0.02	0.06
SWT02824	1640-2	1.0 to 4.0	0.03	0.12

Low Differential Pressure Switches for General Industrial Service

Series 1800



Model 1823 pressure switch.
UL and CSA listed, FM approved.



Construction and dimensions. Series 1823 pressure switches.



Series 1823 pressure switch.
Conduit enclosure removed to show electric switch.

Set Points from 0.07" to 85" w.c. Repetitive Accuracy within 2%

Essential for industrial environments, the Series 1800 combines small size and low price with 2% repeatability for enough accuracy for all but the most demanding applications. Set point adjustment inside the mounting stud permits mounting switch on one side of a wall or panel with adjustment easily accessible on the opposite side. UL and CSA listed, FM approved.

CAUTION: FOR USE ONLY WITH AIR OR COMPATIBLE GASES.

Specifications

Service: Air and non-combustible, compatible gases.

Wetted Materials: Consult Factory.

Temperature Limits: -30 to 180°F (-34 to 82.2°C). 1823-00, -20 to 180°F (-28.9 to 82.2°C).

Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.

Switch Type: Single-pole double-throw (SPDT).

Repeatability: ±2%.

Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz. De-rate to 10 A for operation at high cycle rates.

Electrical Connections: 3 screw type, common, normally open and normally closed.

Process Connections: 1/8" female NPT.

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

Set Point Adjustment: Screw type inside mounting stud.

Weight: 1 lb, 5 oz (595 g).

Agency Approvals: CE, UL, CSA, FM.

ServiceFirst Item #	Mfg. #	Operating Range, Inches W.C.	Approximate Dead Band	
			At Min. Set Point	At Max. Set Point
SWT02826	1823-00	0.07 to 0.22	0.05	0.05
SWT02825	1823-0	0.15 to 0.5	0.06	0.06
SWT02827	1823-1	0.3 to 1.0	0.08	0.08
SWT02828	1823-2	0.5 to 2.0	0.1	0.12
SWT02829	1823-5	1.5 to 5.0	0.14	0.28

BRK03439 (A-389) Mounting Bracket is 16 ga. steel, zinc plated and dichromate dipped for corrosion resistance. Provides rugged, permanent mounting and speeds installation.



Compact Low Differential Pressure Switches

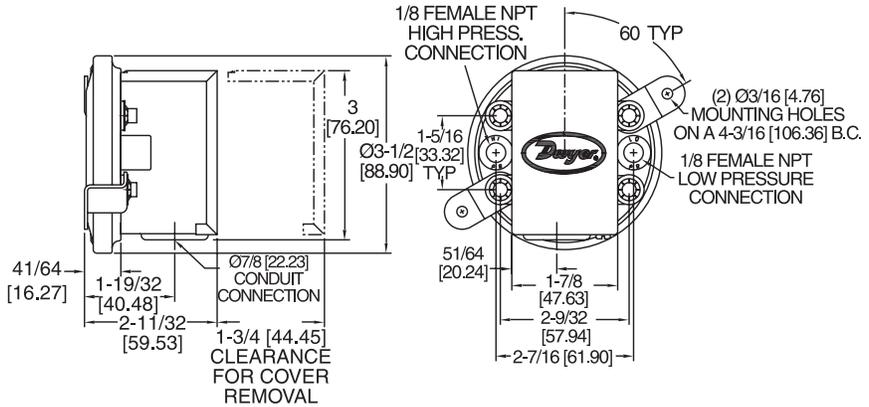
Series 1900



Series 1910 pressure switch. All pressure and electrical connections and set point adjustments are on one side for easy installation.



Series 1910 switch with conduit enclosure off. Shows electric switch and set point adjustment screw.



The Dwyer-engineered force-motion amplifier increases the leverage of diaphragm movement and results in a switch with excellent sensitivity and repeatability.

Specifications

Service: Air and non-combustible, compatible gases.

Wetted Materials: Consult Factory.

Temperature Limits: -30 to 180°F (-34 to 82.2°C).

Pressure Limits: 45" w.c. (11.2 kPa) continuous, 10 psig (68.95 kPa) surge.

Switch Type: Single-pole double-throw (SPDT).

Repeatability: ±3%.

Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz. Derate to 10 A for operation at high cycle rates.

Electrical Connections: 3 screw type, common, normally open and normally closed.

Process Connections: 1/8" female NPT.

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

Set Point Adjustment: Screw type inside conduit enclosure.

Weight: 1lb, 4.5 oz (581 g).

Agency Approvals: CE, UL, CSA, FM.

CAUTION: FOR USE ONLY WITH AIR OR COMPATIBLE GASES.

Set Points from 0.07" to 20" W.C. Repetitive Accuracy within 3%

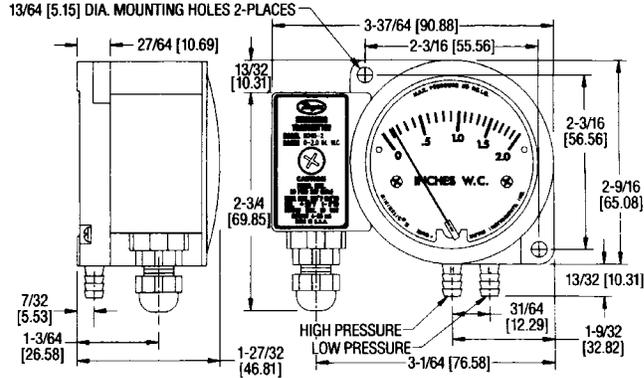
Our most popular series combines advanced design and precision construction to make these switches able to perform many of the tasks of larger, costlier units. Designed for air conditioning service, they also serve many fluidics, refrigeration, oven and dryer applications. For air and non combustible compatible gases, Series 1900 switches have set points from 0.07 to 20" (1.8 to 508 mm) w.c. Set point adjustment is easy with range screw located inside conduit enclosure. Internal location helps prevent tampering. UL, CE, CSA listed, and FM approved.

ServiceFirst Item #	Mfg. #	Operating Range, Inches W.C.	Approximate Dead Band	
			At Min. Set Point	At Max. Set Point
SWT01159	1910-00	0.07 to 0.15	0.04	0.04
SWT00606	1910-0	0.15 to 0.55	0.10	0.10
SWT02830	1910-1	0.40 to 1.6	0.15	0.16
SWT02354	1910-5	1.40 to 5.5	0.30	0.30
SWT01371	1910-10	3.0 to 11.75	0.40	0.40



Minihelic® Differential Pressure Indicating Transmitter

Series 604D



The Dwyer Series 604D Minihelic® Indicating Transmitter combines visual monitoring with electronic control of low differential air or compatible gas pressures. This versatile device is ideal for building HVAC systems where local indication is needed during maintenance checks or when troubleshooting the system. The transmitter design employs the latest strain gage technology and operates in 2-wire control loop circuits. Separate Zero and Span controls plus a 4-screw terminal strip are protected in a gasketed side enclosure. Cable gland fits .10 - .25" round cable. A 10-35 VDC power supply is required.

Specifications

Gage Specifications

Service: Air and non-combustible, compatible gases.

Wetted Materials: Consult factory.

Accuracy: ±5% F.S.O.

Stability: +1% F.S./yr.

Pressure Limits: 30 psig (206.8 kPa) continuous; 50 psig (344.7 kPa) surge.

Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).

Process Connections: Barbed, for 3/16" (4.76 mm) I.D. tubing.

Size: 2-1/16" (52.39 mm) diameter dial face.

Weight: 5.6 oz (159 g).

Agency Approvals: CE.

Transmitter Specifications

Accuracy: ±2% of full span output (includes linearity, hysteresis and repeatability).

Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).

Compensated Temperature Range: 32 to 120°F (0 to 48.9°C).

Thermal Effect: ±0.025% F.S./°F (0.045% F.S./°C).

Power Requirements: 10-35 VDC (2 wire*).

Output Signal: 4 to 20 mA.

Zero and Span Adjustments: Internally accessible potentiometers.

Loop Resistance: DC; 0-1250 ohms maximum.

Current Consumption: DC; 38 mA maximum.

Electrical Connections: Terminal block.

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

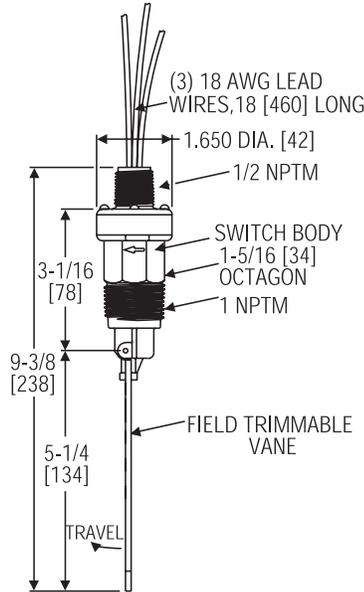
ServiceFirst Item #	Mfg. #	Range Inches w.c.
TRM00042	604D-1	0-1.0



FLOTECT®

Vane Operated Flow Switch

Series V8



Field Adjustable – 1 to 6 Inch Pipe, Leak Proof Body

V8 Flotect® Flow Switch Protects Equipment: Operation is simple and dependable. In most applications, the switch is normally off while there is sufficient flow of liquid or air. When flow stops, the vane spring moves the vane, actuating a single pole double throw switch rated 5A @ 120/250 VAC to start or stop motor, pump, engine, etc. Operate a damper or valve; shut down a burner or actuate an alarm or signal, protecting unattended equipment from damage or loss of production.

The V8 Flotect® Flow Switch has a leak proof body and vane constructed of tough durable polyphenylene sulfide (equivalent to RYTON®) which has excellent chemical resistance. The full size trimmable vane is provided with molded-in graduations allowing for installation in a 1 inch through 6 inch pipe. Operating pressures are up to 150

psig (10 bar) and temperatures to 212°F (100°C). The V8 flow switch can be used in various chemical processes, industrial systems and similar applications where process conditions are compatible with polyphenylene sulfide, ceramic 8 and 316SS. The V8 Flotect® flow switch is UL recognized as an industrial motor controller per UL standard 508, suitable for mounting in a protected environment.

Applications

Applications are chemical processing, air conditioning, refrigeration, heating systems, cooling lines, machinery, liquid transfer systems, water treatment, food processing, and machine tools. Also, other applications compatible with the materials of construction.

Specifications

Service: Compatible gases or liquids.

Wetted Materials:

Vane and Body: Polyphenylene Sulfide (PPS).
Pin and Spring: 316 SS or Inconel.
Magnet: Ceramic 8.

Temperature Limit: 212°F (100°C).

Pressure Limit: 150 psig (10.34 bar).

Enclosure Rating: General purpose, WP option is weatherproof.

Switch Type: SPDT snap switch, MV option: SPDT gold contact snap switch.

Electrical Rating: 5A @ 125/250 VAC, 5A resistive, 3A inductive @ 30 VDC. MV option: 1A @ 125 VAC, 1A resistive, 0.5A inductive @ 30 VDC.

Electrical Connections: 18 AWG, 18" (460 mm) long.

Conduit Connection: 1/2" male NPT.

Process Connection: 1" male NPT.

Mounting Orientation: Switch can be installed in any position but the actuation/deactuation flow rates are based on horizontal pipe runs and are nominal values.

Set Point Adjustment: Vane is trimmable.

Weight: 4.5 oz (0.13 kg).

Agency Approvals: CE, UL 508 for US and Canada.



FLOTECT®

Vane Operated Flow Switch

Series V8

Cold Water Flow Rates Approximate actuation/deactuation GPM upper, LPM lower		Air Flow Rates Approximate actuation/deactuation SCFM upper, LPM lower	
Pipe Size		Pipe Size	
1"	10.8/9.1 40.9/34.6	1"	39/32.6 1105/923
11D4"	9.8/8.3 37.2/31.4	11D4"	37.5/32.2 1062/912
11D2"	8.6/6.8 32.4/25.7	11D2"	33.4/26.7 945/757
2"	10.9/8.8 41.2/33.4	2"	43/36.8 1218/1042
3"	12.9/8.9 48.8/33.5	3"	52.7/38.9 1493/1100
4"	21.1/13.8 79.7/52.2	4"	87.6/63.6 2482/1802
6"	45/33 170.2/124.7	6"	168.6/137.4 4775/3890

Suggested Specifications:

Automatic Polyphenylene Sulfide plastic flow switch shall be vane operated to actuate a single pole, double throw snap switch. Motion of the vane shall actuate switch by action of a magnet which controls the switch inside the one piece leak proof switch body. Control shall be suitable for pressure up to 150 psig (10 bar) and temperature to 212°F (100°C). Switch shall be W.E. Anderson Model No. V8.

SWT02822 (V8) Flow Switch

Molded Plastic Air Velocity Meters

Mark II



Low in Cost – Direct Reading Scales Offer 3% Accuracy – For Portable or Stationary Applications

Construction and installation features:

Construction is simple with virtually indestructible molded white styrene-acrylonitrile housing, indicating tube and fluid wells, molded ABS knobs and zero adjust plunger, shock mounted glass level vial and leak proof “O” ring seals. Scales are lithograph printed on aluminum and epoxy coated.

For stationary applications, the Mark II air velocity meters can be easily mounted on any vertical surface with the two screws provided. A built in spirit level simplifies leveling.

Just fill the reservoir, adjust fluid level to zero, connect the pitot tube, and it is ready for operation.

ServiceFirst Item #	Mfg. #	Range
GAG00997	Mark II 27	0-7,000 fpm

Pitot tube not included

Digital Thermo-Anemometer

Series 471 Four Field Selectable Ranges from 500 to 15,000 FPM



The Series 471 Digital Thermo Anemometers are versatile dual function instruments that quickly and easily measure air velocity in four field selectable ranges, in either feet per minute or meters per second, plus air temperature in °F or °C. High contrast LCD display shows both range selected and present velocity. Convenient backlight provides perfect visibility in low light conditions. Light automatically shuts off after 2-1/2 minutes to prolong battery life. Low battery warning is included.

Stainless steel probe with comfortable hand grip is etched with insertion depth marks from 0-8 inches and 0-20 cm on the Model 471-1. When fully extended, the probe length on models 471-2 and 471-3 reach 33 inches (83 cm). Model 471-3 features a telescoping bendable probe for easy access in hard-to-reach locations.

Extruded aluminum housing fully protects electronics, yet is lightweight and comfortable to hold even when taking multiple readings as part of duct traverses. An integral sliding cover protects sensors when not in use. Standard accessories are 9 volt alkaline battery, wrist strap, custom fitted carrying case and step drill for making duct holes from 3/16" to 1/2".

Specifications

Air Velocity Specifications:

Service: Air.

Range: Field Selectable 0-500, 0-1500, 0-5000, 0-15000 FPM (see chart for Metric Conversions).

Accuracy: Depending on range (See chart) @ 59 to 86°F (15 to 30°C). Outside this range add 0.11% per °F (0.2% per °C).

Temperature Limits: Probe: 0 to 200°F (-18 to 100°C).

Ambient: 32 to 104°F (0 to 40°C).

Display: 4-1/2 Digit 0.4" High.

Resolution: 1 FPM / 0.1 MPS.

Response Time: 15 Seconds.

Power Requirements: 9 volt alkaline battery, included.

Probe: 5/16" (8.13 mm) diameter probe with integral hand grip and 6 ft. (15.2 cm) coiled cord. Length of probe: Model 471-1=10" (25.4 cm); Models 471-2 and 471-3= 33" (83 cm) extended.

Weight: 12 oz (340 g).

Temperature Specifications:

Range: 0 to 200°F (-18 to 100°C).

Accuracy: ±2°F (1°C).

Temperature Limits: Probe: 0 to 200°F (-18 to 100°C).

Ambient: 32 to 104°F (0 to 40°C).

Display: 4-1/2 Digit 0.4" high.

Resolution: 0.1°.

Response Time: 30 Seconds.

MTR00947 (Model 471-2) Digital Thermo Anemometer with telescoping probe includes battery, wrist strap, 6-step drill, carrying case and instructions.

Range Number	Velocity, FPM	Velocity, MPS	Accuracy
1	0-500	0-3.0	±3% F.S.
2	0-1500	0-7.0	±3% F.S.
3	0-5000	0-30	±4% F.S.
4	0-15000	0-75	±5% F.S.

Portable Magnehelic® Pressure-Air Velocity Gages



Use with Pitot tube for air velocity measurement or without for pressure measurement. Easy and quick to use, Portable Magnehelic® Gages with dual scale are less sensitive to level than liquid gages, yet offer accuracy to $\pm 2\%$ over the full scale. Air Velocity Scale provides direct reading for standard air without conversions. They are handy to use on a ladder or in confined locations encountered in field testing. Dwyer magnetic linkage provides exceptionally responsive, consistently accurate indication of air velocity, positive, negative or differential pressures in air and non-corrosive gases. Pointer movement is inertia-free and drift-free. Highly resistant to shock and vibration.

Portable Magnehelic Unit includes:

Maximum total pressure rating 15 psig. Ambient temperature range 30 to 140°F. Aluminum stand iridite-dipped; gage has baked gray hammerloid finish. Furnished in gray plastic carrying case. Connections include 1/8" NPT high and low pressure taps, duplicated-one pair side and one pair back. Two 1/8" NPT plugs included. Rubber Tubing and Adapters — One 9 ft. length of 3/16" I.D. tubing, terminal tube and two pipe thread to tubing adapters.

ServiceFirst Item #	Mfg. #	Pressure, Inches w.c.	Velocity, FPM
GAG01035	2001AV-Port	0-1.0	500-4000
GAG01003	2002AV-Port	0-2.0	1000-5600

Air Velocity Kit

Model KIT09645 (475-1-FM-AV)



Includes Digital Manometer, Pitot Tube, Accessories

Convenient all-in-one kit is small, light and easy to use. No set-up or leveling needed. Digital manometer reads from 0-19.99 in. w.c. with $\pm 0.5\%$ F.S. accuracy and minor divisions to 0.01. Large 1/2" LCD readout is easy to see in poorly lighted areas and has "low battery" warning. Included is a 6" stainless steel Pitot tube with integral compression fitting to hold it securely when taking readings. Also, two static pressure tips with magnetic mounting measure pressure drop across filters, condenser coils, etc. Kit comes complete with rubber tubing, 9V battery, step drill, AV calculator slide rule, and custom fitted carrying case. An indispensable test kit for the plant engineer, industrial hygienist and HVAC technician.

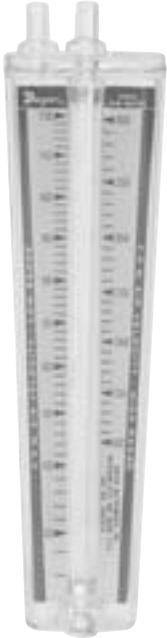
KIT09645 (475-1-FM-AV) Air Velocity Kit

Complete Kit Includes:

- Model 475-1 Digital Manometer, range 0-19.99 in. w.c.
- Model 166-6-CF, 6" Pitot Tube with Compression Fitting
- Two No. A-303 Static Pressure Tips with Magnetic Mounting
- Two 9 Ft. Lengths 3/16" I.D. Rubber Tubing
- No. A-397 Step Drill for 3/16"-1/2" Holes in 1/16" Increments
- No. A-532 AV Slide Chart
- 9 Volt Battery
- Fitted Polyethylene Case

Air Meter

No. 460



A Low-Cost, Direct Reading Instrument Used for Both Air Velocity & Static Pressure Tests

Simple and quick, the No. 460 Air Meter is popular for servicing air conditioning, heating and ventilating equipment. Direct reading velocity and static pressure scales — both low and high ranges — show supply and return grille velocities, furnace draft, pressure drop across filters, etc. The 460 gives consistent, accurate results with no tedious calibration. Rugged plastic for rough daily use. Dual velocity ranges read 260-1200 and 1000-4000 fpm; pressure ranges from .005-.09 and .05 - 1.0 inches w.c.

KIT09648 (460) Air Meter, complete kit

Smoke Gage Kit

No. 920 Complete Kit, Includes 10 Components



Easy-to-Use Smoke Gage Kit enables you to quickly balance maximum CO₂ with minimum smoke for clean, efficient combustion. Simply take an actual sample of the smoke being tested and compare it to the standards on the Smoke Chart included. Just 10 full strokes of the pump produces an accurate test sample. Complete testing instructions are included.

Popular with professional heating engineers, the No. 920 Smoke Gage Kit includes these quality components:

1. Dwyer Smoke Gage Pump — Fast working; the first known unit to conform with ASTM D-2156-XX standards for testing smoke density in flue gases from burning distillate fuels. Filter paper clamps instantly into pump inlet.
2. Hole Plugs — Packet of 20 to fill awl holes.
3. Smoke Chart — For easy comparison with samples taken. Laminated plastic, wipes clean.
4. Awl — Pierces smoke pipe for thermometer and sampling tubes. Large, comfortable plastic handle.

KIT12065 (No. 920) Smoke Gage Kit

5. Smoke Gage Filter Paper — An exclusive, time-saving Dwyer development. Roll of filter paper is contained in dispenser box, kept clean and convenient.
6. Metal Terminal Tube — 8-1/2" long, heavy gauge brass.
7. How-to-Use Instructions — Simple with step-by-step illustrations.
8. Rubber Tubing — Flexible, long-lived.
9. Spring Holders — A superior design for holding thermometer and sampling tubes.
10. Kit Case — Tough, durable, one piece high density polyethylene with living hinge and clasp. Foam liner protects contents.

Combustion Test Kit

No. 1200-B A Complete Kit – With Extra Supplies to Save You Time and Money



Photo shows both Inclined Draft Gage and Magnehelic®; only one is included as standard equipment.

Quick and Easy-to-Use Dwyer Combustion Test Kit.

Measure all four factors that govern overall efficiency: CO₂ content, draft, stack temperature and smoke. Accuracy to $\pm 1/2\%$ CO₂ fully meets the requirements of the professional Heating Engineer. Yet an apprentice can follow the simple, illustrated step-by-step instructions. Add a small pitot tube, which will fit into the kit case, for air velocity measurements.

1. New easy-to-carry, impact resistant polyethylene. Carrying Case with handle.
2. No. 1101 CO₂ Indicator — Clear acrylic plastic, virtually unbreakable.
3. Aspirator Bulb, Filter and Tubing Assembly.
4. Filter Wool — Extra supply in bag for about 1000 tests.
5. No. 171 Draft Gage — Continuously indicating, permanently accurate. 0 to .25" W.C. range in .01 divisions.
6. Dwyer Smoke Gage Pump — Fast-working, the first known unit to conform with ASTM D-2156-XX standards for testing smoke density in flue gases.
7. Smoke Filter Paper — An exclusive Dwyer development.
8. Magnehelic® Gage — 0-.25" W.C. and 300 to 2000 FPM. Included in Model 1200-B kit below.
9. Awl — Pierces smoke pipe for thermometer and sampling tubes.
10. CO₂ Absorbent Solution — Extra supply for many tests.
11. No. A-503 Stack Thermometer — Dial type, stainless steel 200 to 1000°F.
12. Gage Oil — Long-lasting extra supply.
13. Spring Holders — For thermometer and terminal tubes.
14. Hole Plugs — Packet to fill awl holes.
15. Smoke Chart — Laminated plastic, for comparison with samples taken.
16. Dwyer Combustion Efficiency Slide Rule Computer — Simple to operate.
17. Operating Instructions — Simple, illustrated. Show step by-step use.
18. Combustion Data Cards and Parts List — Plastic, weighs only 6 lb 8 oz.

KIT12066 (No. 1200-B) Combustion Test Kit

Includes portable Dwyer Magnehelic® Draft Gage with large 4" dial instead of No. 171 Inclined Draft Gage, 0 to .25" W.C. range in .01" divisions. Also has air velocity scale with 300 to 2000 F.P.M. range. No leveling necessary; no gage oil required. Kit is otherwise identical to No. 1200-A and weighs only 7 lb 5 oz.

Accessories

Gage Fluids



OIL00156
A-101



OIL00157
A-102

Gage fluids in the 3/4 ounce size are furnished in unbreakable plastic dispenser type bottles. Larger sizes are supplied in plastic bottles with screw caps. CAUTION: Use only Dwyer fluids in Dwyer gages.

Red Gage Oil, .826 sp. gr. The standard fluid for use in inclined manometers, "D" type vertical manometers and all Dwyer gages using red oil.

OIL00156 (A-101), 3/4 oz. dispenser bottle
OIL00157 (A-102), 4 oz. bottle

Gage Tubing



TUB11284
A-201

Clear plastic tubing is easily inspected and is therefore best for test applications where a possibility of fluid entering the tubing exists. Rubber tubing has less tendency to kink in storage and occupies less space, thus is best for portable work. Metal Tubing is recommended for permanent installations. Double column tubing is used with Mark II manometers and the Wind Speed Indicator.

TUB11284 (A-201), Rubber Tubing, 3/16" I.D., 9 ft length

TUB11345 (A-221-100), Flexible Vinyl Tubing, Clear 1/8" I.D. x 3/16" O.D. 100 ft. lengths, 40 psi maximum pressure @ 165°F

Accessories

Static Pressure Sensors



These sensors are for use with manometers, Magnehelic® gages, pressure switches and other controllers to pick up or sense static pressure drop across air filters and cooling coils, blower input and discharge pressures, etc. The angled tips shown have 4" insertion depth. Each has four radially drilled .040" sensing holes. All except Model A-303 mount in 3/8" hole in duct. For portable use, a magnet holds No. A-303 in place. No. A-305 is used where a very low actuation or sensing point is required on a pressure switch or gage or where response time is critical. No. A-307 and A-308 are suitable for use in low velocity systems or where the need for accuracy is less critical.

SEN01275 (A-301), Static Pressure Tip, for 1/4" metal tubing connection

SEN01276 (A-302), Static Pressure Tip, for 3/16" and 1/8" I.D. plastic or rubber tubing

SEN01277 (A-303), Portable Static Pressure Tip, for 3/16" I.D. rubber or plastic tubing with 4" insertion

SEN01278 (A-305), Static Pressure Tip, low resistance application, furnished with two (2) hex jam nuts and two (2) mounting washers for duct mounting and with 1/8" NPT pipe thread for pressure connection

SEN01279 (A-306), Outdoor static pressure sensor. Provides average outdoor pressure signal for reference in building pressurization applications. Includes sensor, 50 ft. vinyl tubing, mounting bracket and hardware

FTG01022 (A-307), Static Pressure Fitting, for 1/4" metal tubing connection

FTG01023 (A-308), Static Pressure Fitting, for 3/16" and 1/8" I.D. plastic or rubber tubing

FLG01114 (A-345), Flange for mounting A-301, A-302, A-307, A-308 or 1/8" dia. Pitot Tubes with compression fitting when interior of duct is not accessible. Aluminum, with gasket and sheet metal screws

Valves - Connectors



Instrument valves for permanent installation. They mount in part A-316, A-317, type C manometer connections or Magnehelic® gage and connect to metal tubing or 1/8" pipe.

VAL08310 (A-310A), 3-Way Vent Valve, plastic, 1/8" NPT to 1/4" metal tubing. Positions are: (1) Line: Gage connected to pressure source. (2) Off: Both gage and connection to pressure source closed. (3) Vent: Gage vented to atmosphere and connection to pressure source closed. 80 PSI rating. Replaces former model A310 (brass)

CON01272 (A-315) Gage connector, shut-off type, for 3/16" rubber tubing

Accessories

Fittings - Filters



PLG00033 (A-331)



ADP01103 (A-339)



TEE00957 (A-342)



FLG01114 (A-345)

PLG00033 (A-331), 1/8" NPT Filter Vent Plug, nylon and sintered metal

ADP01103 (A-339), Adapter, brass, 1/8" NPT to 3/16" rubber and 1/8" I.D. plastic tubing

TEE00957 (A-342), "T" Assembly, plastic, for 3/16" I.D. rubber or 1/4" plastic tubing

FLG01114 (A-345), Flange, aluminum with gasket and sheet metal screws, 1/8" NPT

Miscellaneous



PLT03904 (A-368)

PLT03904 (A-368), Surface mounting plate, aluminum, for Magnehelic® gage

Accessories

Carrying Cases



HDL00954 (A-402A)



HDL00953 (A-432)

Steel cases are substantially constructed and finished in gray hammerloid. Molded plastic cases are gray, high density polyethylene.

HDL00954 (A-402A), Nylon Carrying Pouch for Series 475, 477 490 Digital Manometers and Series 450 CO Monitor — 7-1/2" x 3" x 2-1/4"

HDL00953 (A-432), Plastic Carrying Case for Magnehelic® Gage includes mounting stand, rubber tube, etc.

Optional Accessory Kits for Air Filter Switches



KIT09668 (A-602)



KIT09646 (A-604)

KIT09668 (A-602), Air Filter Kit. Accessory package for using switch without a gage includes two pressure tips with integral compression fittings, two 5 ft. lengths of 1/4" aluminum tubing and two 1/8" NPT to 1/4" tubing compression fittings.

KIT09646 (A-604), "T" Kit. Accessory package for using pressure switch in conjunction with Mark II gages includes two plastic tubing connector tees and two plastic tubing to 1/8" NPT adapters.

Slide Chart



TOL02245 (A-532), Air Velocity Calculator Slide Chart

Cross Reference

Cross Reference — ServiceFirst Item No. to Manufacturer No.

ServiceFirst Item #	Mfg. #	Page No.	ServiceFirst Item #	Mfg. #	Page No.
ADP01103	A-339	31	KIT07478	A-605	5
BRK03439	A-389	17	KIT09644	1212	8
CON01272	A-315	30	KIT09645	475-1-FM-AV	13, 25
FLG01114	A-345	30, 31	KIT09646	A-604	32
FTG01022	A-307	30	KIT09647	A-434	6
FTG01023	A-308	30	KIT09648	460	26
GAG00139	2001	5	KIT09668	A-602	32
GAG00874	2002	5	KIT12065	920	27
GAG00888	2000-0	5	KIT12066	1200-B	28
GAG00896	2003	5	MTR00947	471-2	23
GAG00897	2004	5	OIL00156	A-101	29
GAG00928	2005	5	OIL00157	A-102	29
GAG00987	2000-00	5	PLG00033	A-331	31
GAG00988	2015	5	PLT03904	A-368	31
GAG00989	1222-12-W/M	9	SEN01275	A-301	30
GAG00990	1222-12-D	9	SEN01276	A-302	30
GAG00991	MARK II 25	11	SEN01277	A-303	30
GAG00992	A3005	7	SEN01278	A-305	30
GAG00993	2006	5	SEN01279	A-306	30
GAG00994	A3003	7	SWT00606	1910-0	18
GAG00995	1227	10	SWT01159	1910-00	18
GAG00996	2-5005	6	SWT01371	1910-10	18
GAG00997	MARK II 27	11	SWT01879	1640-0	16
GAG00998	A3000-00	7	SWT01880	1640-1	16
GAG00999	2302	5	SWT02354	1910-5	18
GAG01000	2304	5	SWT02822	V8	20, 21
GAG01001	2310	5	SWT02823	1638-0	14
GAG01002	2002AV	5	SWT02824	1640-2	16
GAG01003	2002AV-Port	24	SWT02825	1823-0	17
GAG01004	2002-LT	5	SWT02826	1823-00	17
GAG01031	1223-8-D	9	SWT02827	1823-1	17
GAG01032	2301	5	SWT02828	1823-2	17
GAG01033	1223-12-Db	9	SWT02829	1823-5	17
GAG01034	2000-OAV	5	SWT02830	1910-1	18
GAG01035	2001AV-Port	24	TEE00957	A-342	31
GAG01036	2010AV	5	TOL02233	475-1-FM	13
GAG01039	2008	5	TOL02234	478-0	12
GAG01040	2010	5	TOL02245	A-532	32
HDL00953	A-432	5, 32	TRM00042	604D-1	19
HDL00954	A-402A	12, 13, 32	TUB11284	A-201	29
			TUB11345	A-221-100	29
			VAL08310	A-310A	30

Cross Reference

Cross Reference — Manufacturer No. to ServiceFirst Item No.

Mfg #	ServiceFirst Item #	Page No.	Mfg #	ServiceFirst Item #	Page No.
920-B	KIT12065	27	2304	GAG01000	5
1200-B	KIT12066	28	2310	GAG01001	5
1212	KIT09644	8	2-5005	GAG00996	6
1222-12-D	GAG00990	9	460	KIT09648	26
1222-12-W/M	GAG00989	9	471-2	MTR00947	23
1223-12-Db	GAG01033	9	475-1-FM	TOL02233	13
1223-8-D	GAG01031	9	475-1-FM-AV	KIT09645	13, 25
1227	GAG00995	10	478-0	TOL02234	12
1638-0	SWT02823	14	604D-1	TRM00042	19
1640-0	SWT01879	16	A-101	OIL00156	29
1640-1	SWT01880	16	A-102	OIL00157	29
1640-2	SWT02824	16	A-201	TUB11284	29
1823-0	SWT02825	17	A-221-100	TUB11345	29
1823-00	SWT02826	17	A3000-00	GAG00998	7
1823-1	SWT02827	17	A3003	GAG00994	7
1823-2	SWT02828	17	A3005	GAG00992	7
1823-5	SWT02829	17	A-301	SEN01275	30
1910-0	SWT00606	18	A-302	SEN01276	30
1910-00	SWT01159	18	A-303	SEN01277	30
1910-1	SWT02830	18	A-305	SEN01278	30
1910-10	SWT01371	18	A-306	SEN01279	30
1910-5	SWT02354	18	A-307	FTG01022	30
2000-0	GAG00888	5	A-308	FTG01023	30
2000-00	GAG00987	5	A-310A	VAL08310	30
2000-OAV	GAG01034	5	A-315	CON01272	30
2001	GAG00139	5	A-331	PLG00033	29
2001AV-Port	GAG01035	24	A-339	ADP01103	29
2002	GAG00874	5	A-342	TEE00957	29
2002AV	GAG01002	5	A-345	FLG01114	30, 31
2002AV-Port	GAG01003	24	A-368	PLT03904	29
2002-LT	GAG01004	5	A-389	BRK03439	17
2003	GAG00896	5	A-402A	HDL00954	13, 30
2004	GAG00897	5	A-432	HDL00953	5, 30
2005	GAG00928	5	A-434	KIT09647	6
2006	GAG00993	5	A-532	TOL02245	30
2008	GAG01039	5	A-602	KIT09668	30
2010	GAG01040	5	A-604	KIT09646	30
2010AV	GAG01036	5	A-605	KIT07478	5
2015	GAG00988	5	MARK II 25	GAG00991	11
2301	GAG01032	5	MARK II 27	GAG00997	11
2302	GAG00999	5	V8	SWT02822	20, 21



Literature Order Number	RSP-PRC030-EN
Filing Hierarchy	Service Products/Controls
Date	December 2004
Supersedes	New
Stocking Location	Inland

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