

ACE-Digivac Precision Vacuum Gauges/Controller

GENERAL INFORMATION

For 14033 & 14034



14033



14034

INPUT POWER: 120. Volts, 50/60 Hz. (230. Volts available)
Main power switch included (most units)

All pressures (vacuum) are referenced to absolute zero pressure using millimeters (mm) of mercury for scale measurements. 760 mm (Torr) is the sea level barometric pressure nominal standard. Refer to specification table for accuracy tolerance for your particular gauge and reading.

Sensing Head Gauge Tubes should be mounted vertically, pipe thread stems downward, to help keep heavy moisture away from sensing elements. Isolate sensing tube with a valve or stopcock from system in conjunction with approximately two feet of high vacuum hose; especially when system is "wet" or "dirty" during high pressure starts. If turning of the gauge threads when installing is necessary, unplug from patch cord socket as not to twist the lead. TC (thermocouple) type gauges should also have a "cold" trap between stopcock valve and system when trying to pump to low micron readings. Using a trap and stopcock will extend the life and accuracy of any gauge tube.

TC gauges should be left ON and isolated (valve closed) after a typical run unless it is not needed for an extended period of time. It is important to note that any TC gauge tube type vacuum sensor can be ignition source ("Hot Filament") for any volatile vapors. Gases other than nitrogen will affect readings proportional to their thermal conductivity. Strain-transducer type sensors are not affected by different gases since they detect by movement of a surface, not condition of gases. However, strain sensors lose their sensitivity below 1. torr.

Digital communication port RS-232 is available for an additional cost. Gauges are under warranty for one year and sensing heads for 30 days unless found "contaminated" chemically; or if any mechanical damage is shown.

NIST certificates of conformance are available and certification of accuracy are also available for an additional cost.

See DIGIVAC OEM Manual for more detailed information.

For pressure conversions, we suggest you visit this site:
<http://www.onlineconversion.com/pressure.htm>



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ACE-Digivac Precision Vacuum Gauges/Controllers

SPECIFICATION TABLE

Cat No.	Range:	Scale:	±Tolerance
14034-25 Type:TC	1.-1,999. μ	1.-99. μ 100.-999. μ 1,000.-1,999. μ	1. μ 5. μ 50. μ
14034-34 Type:TC	.1-199.9 μ	.1-9.9 μ 10.-99.9 μ 100.-199.9 μ	.5 μ 1. μ 5. μ
14034-36 Type:TC	1. μ to 760 .Torr	1.-9. μ 10.-99. μ 100.-999. μ 1.-9.9 Torr 10.-99. Torr 100.-500. Torr 501.-760. Torr	1. μ 5. μ 10. μ 1. Torr 5. Torr 20. Torr 30. Torr
14034-38 Type:Strain- Transducer	.1-760. Torr	.1-9.9 Torr 10.-99.9 Torr 100.-199.9 Torr 200.-500. Torr 501.-760. Torr	.2 Torr .3 Torr .5 Torr 2. Torr 3. Torr
14033-10 (-23) Type:Strain- Transducer	1.-760. Torr	1.-10. Torr 11.-100. Torr 101.-500. Torr 501.-760. Torr	1. Torr 1. Torr 2. Torr 3. Torr

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14034 Vacuum Gauge

Digital, Non-Mercury

Digital vacuum gauge uses precision current source and solid state electronics for better resolution and accuracy than analog gauges, accuracy: $\pm .25\%$ of Range. Does NOT use mercury. Large, easy-to-read display immune to parallax errors. No moving parts; resistant to dropping and rough handling. Interchangeable tubes; head surfaces are nickel plated steel, ceramic and platinum alloy. **Note:** can withstand up to 30 psig maximum. Supplied with 10' sensor cable with $\frac{1}{8}$ " MNPT connection. Gauge includes gauge tube and AC adapter. Replacement gauge tubes listed. Measures: $2\frac{1}{2}$ " x 5" x 5". Operates at 120VAC, available in 230V.



14034

Use only in
dry system,
i.e., isolate with
cold trap
and stopcock

Type		Type Display	Order Code
TC	Vacuum Gauge, with Tube, Display Range 1. to 1999 micron (1x10 ⁻³)	LCD	14034-25
TC	Vacuum Gauge, with Tube, Display Range .1 to 199.9 micron (1x10 ⁻⁴)	LCD	14034-34
TC	Vacuum Gauge, with Tube, Display Range 1 micron to 760 Torr	LED	14034-36
Transducer	Vacuum Gauge, with Tube, Display Range .1-760mm	LED	14034-38
TC	ID500 Replacement Gauge Tube, only (For -25,-34 &-36)	—	14034-60
Transducer	ID760T Replacement Gauge Tube, only (For -38)	—	14034-62
TC	ID531 Replacement Gauge Tube, only (For 36)	—	14034-64

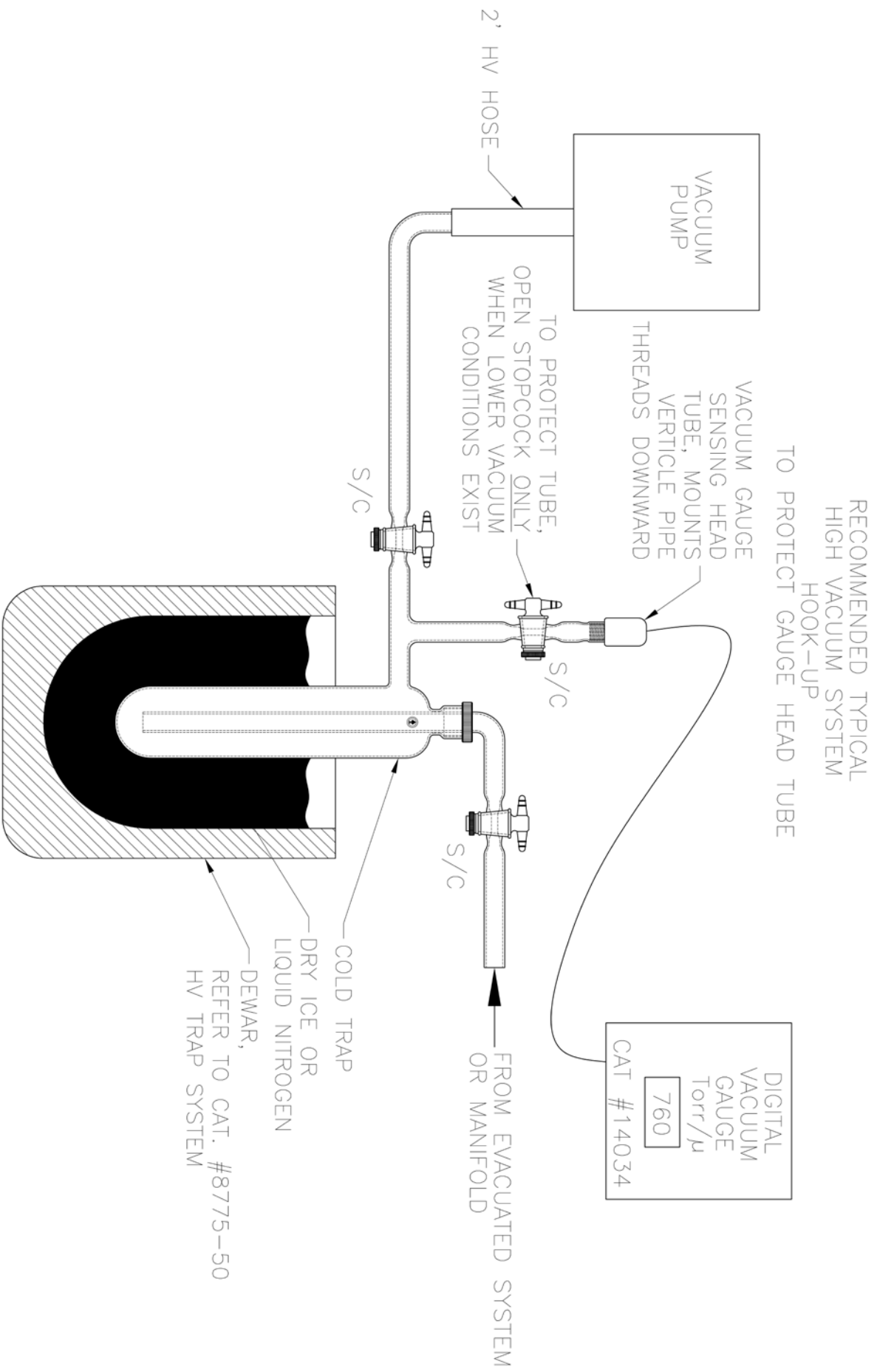
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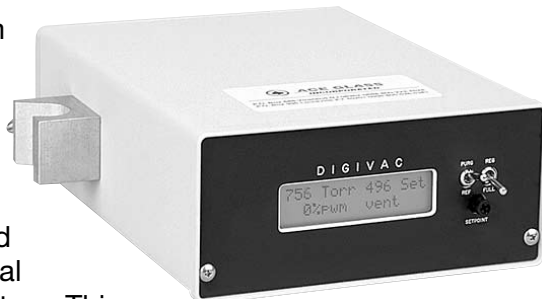
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14033 Vacuum Monitor & Controller

Non-Mercury

Accurate measurement and control of vacuum in one unit. Digital vacuum monitor and control range is 760 TORR (mm Hg) to 1 TORR*. Strain-gauge-type controller is installed in series in vacuum supply line between the vacuum pump and system to be evacuated. Connect pump and system via rear-mounted 3/8" brass hose barbs; other wetted materials are Viton, Stainless Steel and PTFE (optional unit available with S-S hose barbs and valves). A back-lit LCD display shows both measured vacuum and current set point in TORR. Vacuum is controlled by an internal proportioning valve, which can isolate vacuum pump from evacuated system. This proportional valve has a 9/32" I.D. orifice allowing fast flow capacities when needed, and practically eliminates the need for an additional needle valve or stopcock, although it is recommended. Control set point is adjustable by a knob and can control vacuum typically within one TORR over the entire range.



14033

Accuracy: $\pm 0.25\%$ of Range



14033
Rear View

* Sensing head can withstand a 5. lb gauge overpressure limit.

The left switch, in (UP) position, controls a purge valve for purging to atmosphere when needed; (CENTER) position OFF; (DOWN) position, reference not used, also OFF.

The right switch in (UP) position, allows running controlled vacuum; (CENTER) position, OFF, measures vacuum in system; (DOWN) position, full vacuum, no control.

Unit is supplied with RS232 digital comm. port output for attaching to PC serial port. This data link may be monitored using Windows terminal or Hypertem software. (Optional logging software is available which can log at one-minute intervals.) Unit is mountable on vertical bar up to 3/4" diameter. Rear-mounted, quiet-running fan allows internal cooling for stable control and monitoring of vacuum. Supplied with patch cord and power pack in line for standard 120 volt AC operation. Overall measurements: 2 1/2" H x 9" D x 6 1/2" W; weight: 4 lbs.

	Order Code
Vacuum Controller/Monitor (Brass Hose Barbs and Valve)	14033-10
Vacuum Controller/Monitor (S-S Nose Barbs and Valve)	14033-23
Logging Software	14033-65

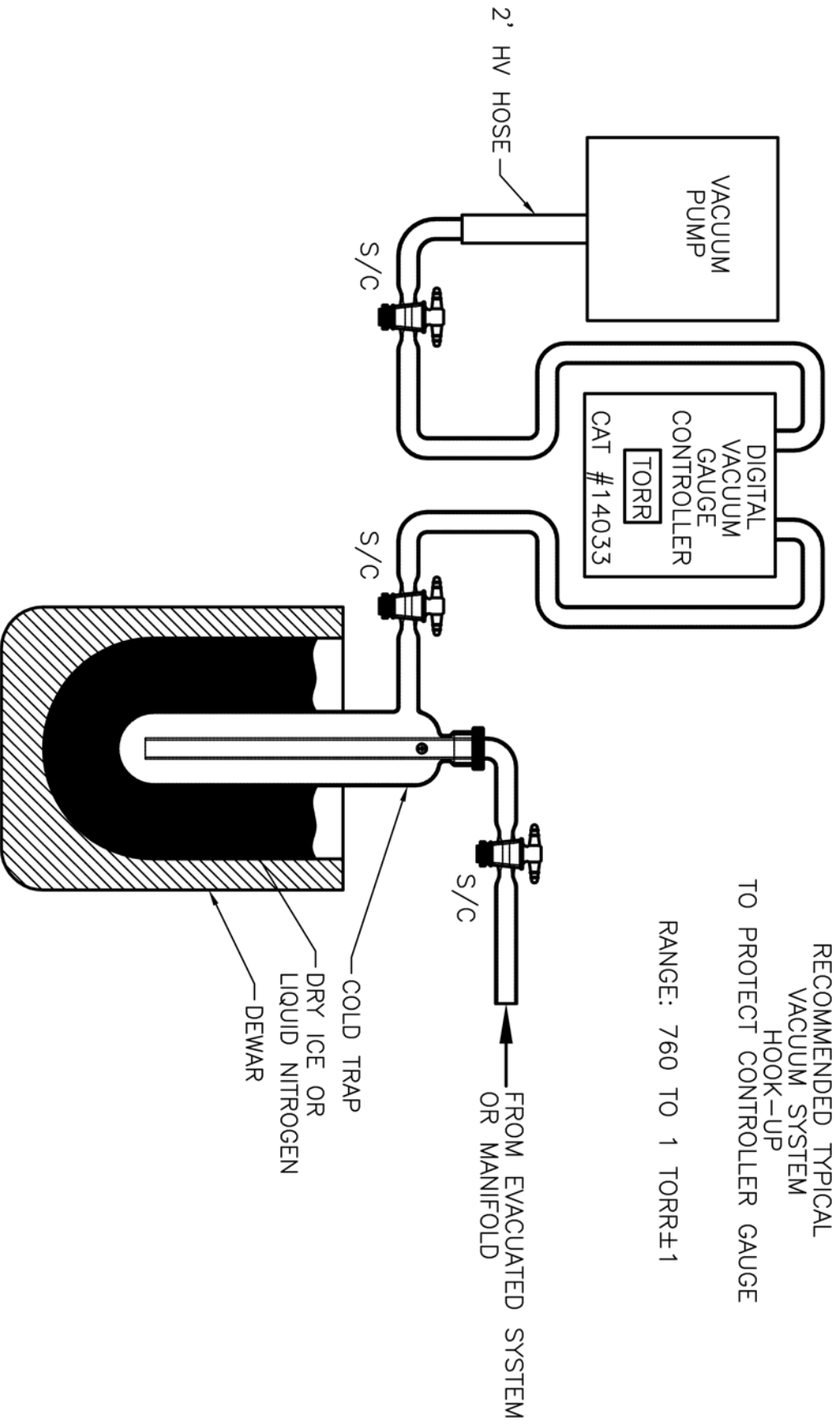
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