

# Equipment

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■ **OVEN** operates at temperatures up to 300°F. Chamber size is 3 by 36 by 48 in. Air is circulated by a 1500 ft<sup>3</sup>/min fan operated by a 1 hp three-phase motor. A 7-day timer and a circular chart recorder are provided. (Pereny Equipment Co., Dept. 412)

■ **COLD-JUNCTION COMPENSATOR** is applicable to thermocouple devices. In use, the measuring thermocouple is connected to the input terminals of the compensator, the measuring device to the output terminals. When a selector switch is set for the type of thermocouple, a temperature-sensitive Wheatstone bridge in the compensator produces the necessary compensating voltage. Compensation accuracy is  $\pm 1^\circ\text{F}$  in ambient levels from 32° to 120°F. The instrument weighs 6 lb and measures  $5\frac{3}{8}$  by 8 by 5 9/16 in. (Technique Associates, Inc., Dept. 405)

■ **ACCELEROMETERS** are capable of continuous operation at temperatures from -100° to +500°F with accuracy  $\pm 5$  percent of reading. Bender-type piezoelectric elements are used with resonant frequencies as high as 30 kcy/sec and sensitivities up to 10 mv/g. Ranges covered are 0.01 to 1000 g and 3 to 10,000 cy/sec. (Gulton Industries Inc., Dept. 391)

■ **DIGITAL BAROMETER** is a null-balancing electromechanical instrument that provides five-place readings of atmospheric pressure. The instrument operates on the weigh-beam principle in which transfer of barometer fluid from one column to another causes an unbalance moment that actuates a servo motor to restore equilibrium. Resolution is 1 in 30,000; repeatability, 0.002 in.-Hg. Outputs other than digital are available. (Dynametrics Corporation, Dept. 400)

■ **PRESSURE TRANSDUCER** uses proving ring principle and a four-arm strain-gage bridge. The transducer will handle most gases and also extremely corrosive liquids. Pressure ranges are 300 to 10,000 lb/in.<sup>2</sup> gage. Linearity is 0.25 percent, hysteresis 0.5 percent. Ambient temperature may be -65° to 250°F. Natural mechanical frequency for the 300 lb/in.<sup>2</sup> range is 2500 cy/sec. (Taber Instrument Corp., Dept. 404)

■ **FLOW-METERING SYSTEMS** provide rate and totalizing indication and introduce pressure drops less than 2.5 lb/in.<sup>2</sup>. Impeller-type transmitters are used to sense flow. The transmitters are available in stainless steel or aluminum alloy with temperature range from less than -350°F to greater than +300°F. Accuracy is  $\pm 1$  percent over the range to 600 gal/min. (Revere Corp. of America, Dept. 407)

■ **VACUUM FURNACE** produces a uniform horizontal hot zone 6 in. in diameter by 12 in. long. Continuous operation to 2200°F is permissible. Vacuum is produced by a 4-in. pumping system with capacity of 720 ft<sup>3</sup>/min<sup>3</sup> at 10<sup>-4</sup> mm-Hg. The four standard loading and cooling arrangements available include provision for a continuous work-exchanger loading and cooling zone. (General Vacuum Corp., Dept. 408)

■ **MERCURY-VAPOR PUMP** is a metal, water-cooled three-stage pump with a speed of 40 liter/sec of air in the 3  $\times$  10<sup>-4</sup> to 2  $\times$  10<sup>-2</sup> mm-Hg range. Ultimate pressure of 10<sup>-8</sup> mm-Hg can be attained with a cold trap at -63°C. Peak speed of 52 liter/sec occurs at 10  $\mu$ -Hg. (Consolidated Electro-dynamics Corp., Dept. 413)

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