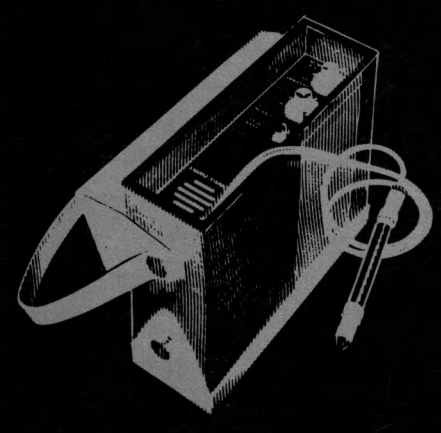
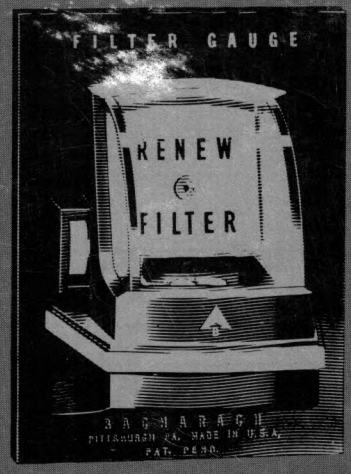


BACHARACH INSTRUMENTS



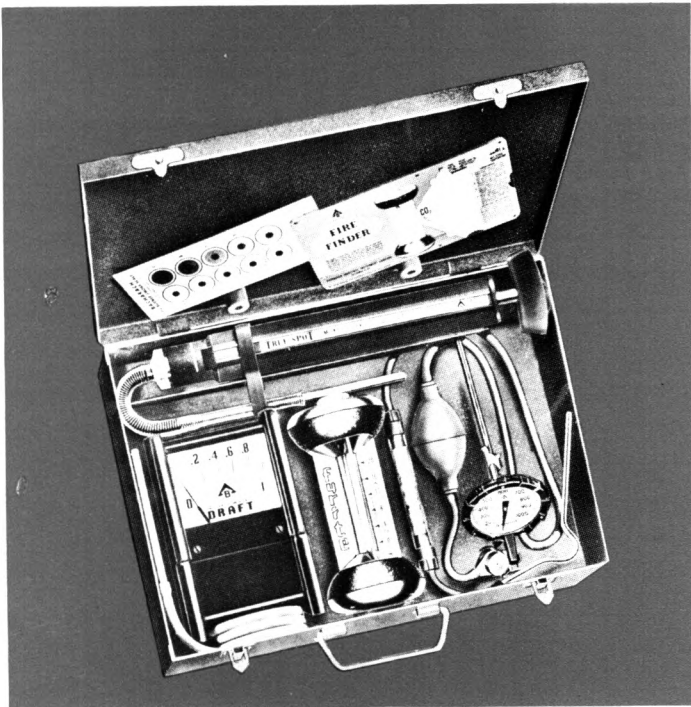
Products Distributed by

Contents

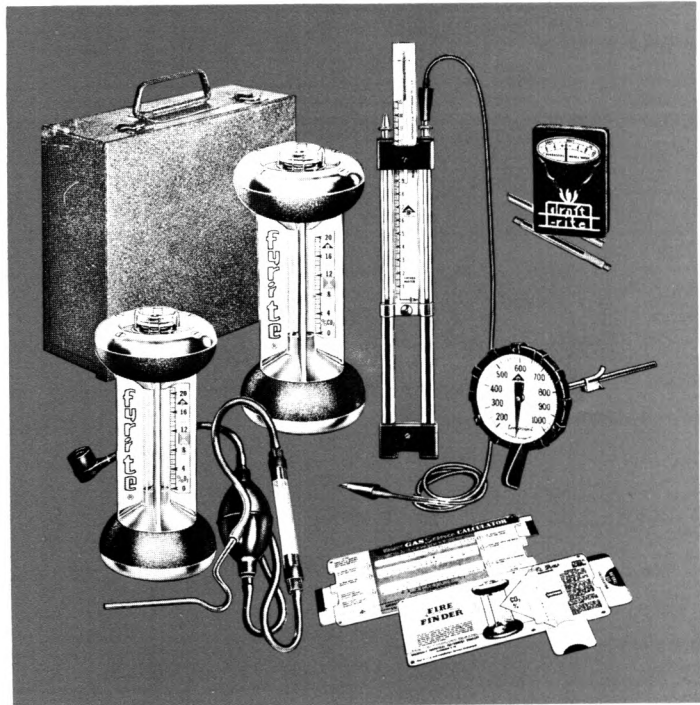
BACHARACH INSTRUMENT COMPANY has created and produced this catalog with our customers in mind. It is a concise and compact presentation of the instruments we manufacture for industry. We have made every attempt to make this catalog easy to understand so that your ordering will be as simple and time-saving as possible. We sincerely hope you will find its use both informative and concurrent. However, if there is something you don't see, or cannot find, please do not hesitate to contact us. We are in business to serve you.

	Page
Combustion Kits	Flap
Fyrite	1
Gas Hazard Indicator	2
High Range CO Tester	2
Monoxor Indicator	3
Monoxor Detector	3
True Spot	4
Portable Manometer	4
MZF Draft Gauge	5
Drafrite	5
Florite	6
Floret	6
Air Filter Indicator	7
Tempoint Dial Thermometers	8
Ti-Test	8

	Page
Gold Ribbon Thermometers	8
Servitemp	9
Sling Psychrometer	9
Tempscribes	10
Tempscribe Recorders	11
Serdex Humidity Indicator	12
Serdex Humidity Recorder	12
Serdex Telemeter	13
Serdex Hygrothermograph	13
Humidigard	14
ServiVac	14
Leakator	15
Gas Leak Detector	15
ServiVar	16
Model K	16



Oil Combustion-Testing Kit (10-5022) Kit Shown



Gas Combustion-Testing Kit

Combustion Test Kits

Combustion Test Kits for gas/oil testing. Packaged in a complete kit for use by gas/oil servicemen.

Features

- Helps reduce air pollution.
- Helps set up peak efficiency of heating equipment.
- Helps eliminate fuel waste.
- Promotes maximum economy.
- Testing, proper adjustments make for less maintenance.
- Helps heating equipment give safe, dependable performance.

Values obtained from the readings of the instruments in these kits result from determination of temperature and CO₂ content of flue gas, overfire draft, flue draft and smoke density. Gas kits include a Manometer to

check gas manifold input pressure; and a Monoxor CO Indicator to make certain that products of combustion do not contain dangerous concentrations of carbon monoxide; also included is a slide rule that gives the percent combustion efficiency and percent stack loss, eliminating the need for additional calculations.

Bacharach Combustion Test Kits are separately available for either gas or oil burning installations. Each kit contains a set of specially designed instruments packaged in a sturdy storage case.

Bacharach also produces a special Vaporizing Burner Adjusting Kit. It contains all the necessary instruments for the installation and adjustment of oil-burning space heaters, water heaters, cooking ranges, and warm air furnaces with vaporizing burners.

Air Pollution

In addition to providing a basic tool for an effective maintenance program and the upgrading of faulty installations, Bacharach Combustion Test Kits are indispensable to meet the requirements of the newly introduced air pollution control ordinances.

In fact, a special air contamination test kit is produced by Bacharach. It's designed for quick and accurate checking of atmospheric concentrations of O₂, CO₂ and CO.

PLEASE NOTE: See fold-out of this page to check your application and instrument requirements and Bacharach Code No. ordering information.

Contamination Kit

10-5220

(11-7039)

(10-7005)

KIT COMPONENTS			Kits for Oil Burner Service									
			Vaporizing Burner Kit	Service "5002" Kit		Master Kit			Utility Kit			Bachara
Item	Specifications	Codes	20-7006	10-5002	10-5010	10-5014	10-5018	10-5019	10-5022	10-5037	10-5023	10-5050
Fyrite—CO ₂	0-7.6%	11-7042										
	0-20%	11-7032		○	○	○	○	○	○	○	○	○
	0-20% Unfilled	11-7031										
	0-60%	11-7034										
Fyrite O ₂	0-7.6%	11-7044										
	0-21%	11-7036										
	0-21% Unfilled	11-7035										
Refill Fyrite Fluid	CO ₂ —0-20% or 0-60%	11-0057										
	O ₂ —0-21% or 0-60%	11-0169										
Aspirator Sampling Assembly				○ (11-7029)	○ (11-7029)	○ (11-7029)	○ (11-7029)	○ (11-7029)	○ (11-7029)	○ (11-7029)	○ (11-7029)	○ (11-7029)
Filtering Material	10 per envelope	11-0121		○	○	○	○	○	○	○	○	○
CO Monoxor Indicator	0-0.2%	19-0242										
	0-0.5%	19-0243										
CO Monoxor Detector		19-7019										
		19-7020										
CO Indicator Tubes	0.2%—Carton of 12	19-5010										
	0.5%—Carton of 12	19-5015										
CO Detector Tubes	Carton of 12	19-5002										
Sampling Tube Attachment Monoxor		19-0003										
Tube Caps	6 per package	19-0001										
Drafrite	+0.1 to 0 to -0.14" W	13-3000	○	○								
	+2.5 to 0 to -3.5 mm W	13-3002			○							
MZP Draft Gauge	+0.05 to 0 to -0.25" W	13-7019				○			○			
	+0.05 to 0 to -1.0" W	13-7021										○
	+1.0 to 0 to - 5.0 mm W	13-7018					○			○		
	+1.0 to 0 to -25.0 mm W	13-7020						○			○	
	+1.0 to 0 to -15.0 mm W	13-7022										
Manometer	15" W and 8.5 oz./sq. in.	17-7002										
	15" W and 35 cm W	17-7000										
Gold Ribbon Thermometer	Mercury Filled, 0—220° F	12-0117	○									
Tempoint Thermometer	200—1000° F. 6" Stem	12-7014		○		○			○			
	200—1000° F. 12" Stem	12-7018										○
	100—540° C. 6" Stem	12-7015			○		○	○		○	○	
	100—540° C. 12" Stem	12-7017										
True-Spot		21-7006						○	○	○	○	
Oil Flow Graduate		20-5002	○									
Cross Level		20-5003	○									
Oil Collecting Beaker		20-5004	○									
Gas Service Calculator		10-0070										
Fire Efficiency Finder	Oil Scale	11-0071		○		○			○			○
	Gas Scale	11-0072		○		○			○			○
	Coal Scale	11-0073										○
Stackloss Calculator		10-5175			○		○		○	○		
Carrying Case			○ (10-7007)	○ (10-7000)	○ (10-7000)	○ (10-7001)	○ (10-7001)	○ (10-7001)	○ (10-7003)	○ (10-7003)	○ (10-7003)	○ (10-7003)

U. S. Postal Regulations prevent mailing Fyrite Fluid, either in the instrument, kit, or as a refill, by Air or Surface Parcel Post.

Fyrite Gas Analyzer

An uncomplicated, easy-to-use instrument for measuring and analyzing carbon dioxide and oxygen gases.

Features

- Accurate readings within 1/2 of 1% CO₂ or O₂.
- Takes less than a minute per test.
- No special training necessary.
- Sturdy construction.
- Readings unaffected by most foreign gases.

Fyrite Gas Analyzers are accurate, fast and simple instruments to use. They are available in two models. One model measures carbon dioxide and the other model measures oxygen. And both models have three standard ranges to meet the exacting needs of almost all possible applications. These instruments are also solidly built for use in the field or laboratory. Since all component parts are replaceable and readily available from stock Fyrites are easy to maintain. See chart below for test ranges.

Gases up to 1000° F may be tested with the standard aspirator sampling assembly.

Included with each Fyrite CO₂ Indicator is a time-saving fire efficiency finder. This handy slide rule calculator is used for flue gas

measurement of CO₂ and temperature to show at a glance the percentage of combustion efficiency and stack loss when burning oil, gas, LP-gas, anthracite and bituminous coal.

Typical Applications

CO₂ tests of controlled atmospheres in food and meat storage rooms.

Flue gas combustion tests.

CO₂ tests of heat treating atmospheres.

Checking CO₂ in inert gas blankets in tankers and barges carrying gasoline and other combustibles.

CO₂ tests on lime kilns.

Controlled atmosphere greenhouses.

Oxygen determination in flammable gas mixtures.

Oxygen tests to check inertness of atmosphere in silos, fuel tanks.

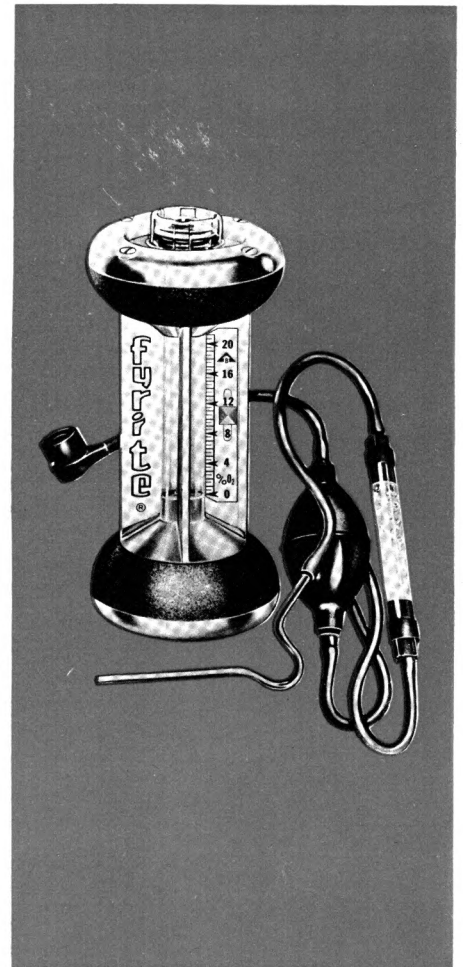
Oxygen deficiency tests in confined spaces.

Oxygen concentrations in hydrogen-cooled generators and oil-sealed inert gas transformers.

Testing sewerage plant digester gas.

Tests in connection with oxygen and gas anesthesiology.

Routine laboratory testing.



Fyrite Indicator Kits

Gas Types	Range	Kit Components					Bacharach Code Nos. Complete Kit
		Fyrite Indicator with Fluid	Aspirator Sampling Assembly	Filter Mat'l. (One Envelope)	Fire Efficiency Finder	Carrying Case	
Carbon Dioxide CO ₂	0-7.6%	11-7042	11-7039	11-0121	Not included	10-7000	10-5053
	0-20%	11-7032	11-7029		*		10-5000
	0-60%	11-7034	11-7029		Not included		10-5032
Oxygen O ₂	0-7.6%	11-7044	11-7039		Not included		10-5054
	0-21%	11-7036	11-7029		Not included		10-5011
	0-60%	11-7038	11-7029		Not included		10-5046

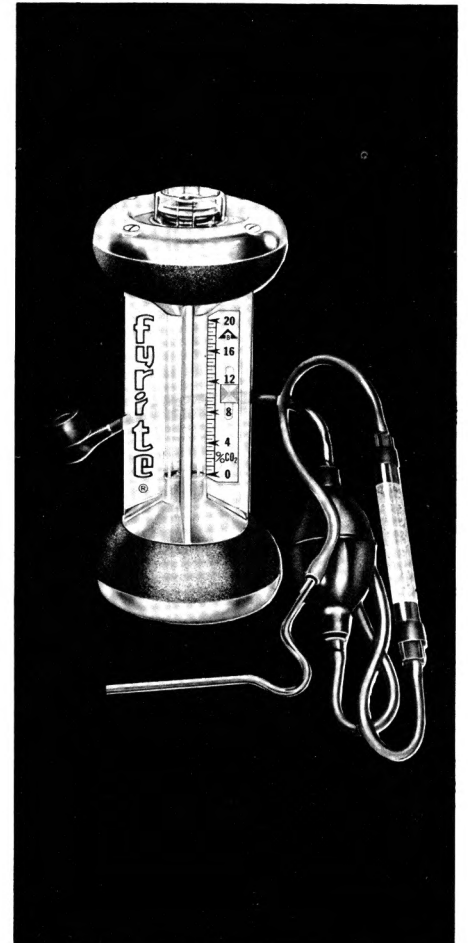
*With 3 scales—oil, gas, coal.

Ceramic sampling tube for gas analysis at temperatures over 1400°F—18" long. Bacharach code number for this tube is 11-164. For combined Fyrite O₂, CO₂ and Monoxor CO tests on combustion products order sampling assembly CGE 19-5016.

Repair and Refill Packages

Gas Types	Range	Repair Packages		Refill Packages		Bacharach Code Nos. Fyrite Fluid Only (3 bottles)
		Bach. Code	Contents	Bach. Code	Contents	
Carbon Dioxide CO ₂	0-7.6%	11-7053	One bottle of Fyrite fluid, valve plunger gasket, top gasket, diaphragm and envelope of filtering material.	11-7048	Two bottles of Fyrite fluid, valve plunger and envelope of filtering material.	10-5100
	0-20%	11-7052		11-7047		10-5057
	0-60%	11-7052		11-7047		10-5057
Oxygen O ₂	0-7.6%	11-7055		11-7051		10-5103
	0-21%	11-7054		11-7050		10-5060
	0-60%	11-7054		11-7050		10-5060

Note: U. S. Postal Regulations prohibit mailing of Fyrite fluid either in the instrument, kit, or a refill, by Air or Surface Parcel Post.



Gas Hazard Indicator

Today's best portable instrument that quickly and accurately measures concentrations of carbon dioxide, hydrogen sulfide, sulfur dioxide, nitrogen dioxide, chlorine gas or carbon monoxide.

Features

- Gives fast on the spot readings.
- Simplifies detection of toxic gas concentrations at threshold limit values.
- Hand operated—portable.
- Scales and tubes can be ordered for specific needs.
- Easy to read.

Measuring is accomplished by use of a hand-held sampling pump. This pump has interchangeable scales and calibrated tubes. Measurements are read directly from the length of stain. And no color comparison charts or calibration curves are required. The Gas Hazard Indicator may be safely used in the presence of flammable gases. It is a valuable aid to safety engineers and industrial hygienists everywhere. For example, in such industries as refineries, process industries, mines, tunnels, sewers, natural gas fields and confined spaces. See chart below for ranges.

Gas Hazard Indicator

Gas Type	Range	Kit Components					Bacharach Code Nos. Complete Kit	
		Test Pump Only—Less Scale and Orifice	Orifice	Scale	Indicator Tubes Carton of 12	Tube Caps Package of 6		Carrying Case with Space for One Carton of Tubes
H ₂ S	0-650 ppm	19-7016	19-0176	19-0088	19-5030	19-0001	19-0311	19-0247
SO ₂	0-2700 ppm			19-0092	19-5071			19-0248
CO ₂	0-4%			19-0090	19-5068			19-0249
NO ₂	0-50 ppm			19-0157	19-0156			19-0250
Cl ₂	0-20 ppm			19-0163	19-0162			19-0251
CO	0-0.2%		*	19-0014	19-5010			*
	0-0.5%		19-0015	19-5015				

Optional Accessory: Aspirator Sampling Assembly (Bacharach Code No. 11-7045). Used for remote testing; or for sampling CO in LP-Gas or LNG engine exhaust emissions.

*To convert one of the above kits to a CO Monoxor Indicator, order Orifice "A" (Bach. Code No. 19-0193) and the corresponding scale and indicator tubes. For more information see Monoxor section on next page.



High Range CO Tester

An easy-to-use instrument designed for use in checking CO percentages in the field of technical gas analysis.

Features

- Easy to operate.
- Dual range.
- Unaffected by presence of smoke, fumes and most other gases.
- Testing is fast and simple.
- Mechanically operated—requires no electrical circuitry.

The Bacharach High Range CO Tester is an accurate, easy-to-use instrument. The CO percentage, indicated by length of stain in indicator tube, is measured on instrument's built-in scale.

Model CME Sampler is mechanically operated; it requires no electrical circuit; and

can be used in the presence of flammable gases. Its reading indications are not affected by smoke, fumes and other gases, such as oxides of nitrogen, sulphur dioxide, carbon dioxide, methane, etc. The indicator tubes are effective in ambient temperatures from -70° F. to + 125° F.

See chart on page three for ordering specifications.

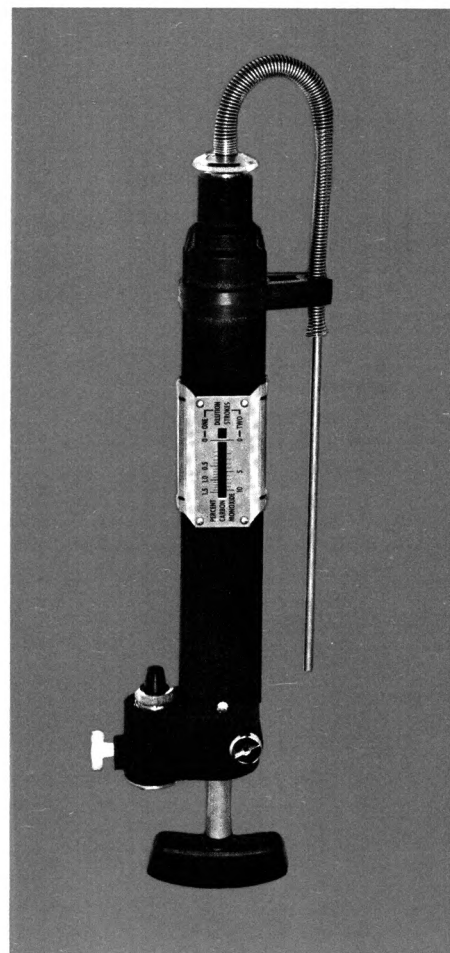
Applications

Inert gas generators.

Controlled atmosphere in reheating and annealed furnaces.

Reducing atmospheres in kilns used for producing cement and other ceramic products. Motor vehicle exhausts.

Combustion tests, detection of explosive gases.



Monoxor[®] Indicator

An inexpensive, yet dependable instrument designed for use in the measurement of carbon monoxide.

This quick, easy-to-use instrument measures the atmosphere you're testing by simply drawing an air sample through a chemical reagent in a glass indicator tube. The presence of carbon monoxide is indicated by a stain appearing in the indicator tube. The length of the stain is measured against a built-in scale to determine the CO percentage or parts per million (ppm).

The Monoxor Indicator is supplied in a small metal carrying case. It contains a double-sided scale; 12 Monoxor Indicator Tubes; and six rubber tube caps. An orifice is available to convert CO tester for H₂S, SO₂, CO₂, NO₂ and Cl₂. Calibration curves or color comparison charts are not required.

Monoxor[®] Carbon Monoxide Detector

Instantly shows the presence of carbon monoxide due to improper venting, insufficient combustion air supply, defective pilots, regulators, valves, controls or leakage in gas lines.

The Monoxor Detector provides an inexpensive and dependable means of showing if carbon monoxide is present in dangerous quantities. Fast and simple to use, an air sample is drawn through a detector tube containing an indicating gel. If a stain forms after one pump stroke, the CO concentration is 300 ppm, or higher. A stain after two pump strokes shows a CO concentration of 100 to 300 ppm. If no stain appears after two pump strokes this indicates the CO is less than 100 ppm.

Monoxor CO Detector tubes are very inexpensive to use. If the gel is only partially stained, the tube may be reversed and used for a second test. The pen shaped pump is provided with a clip for carrying in the pocket.

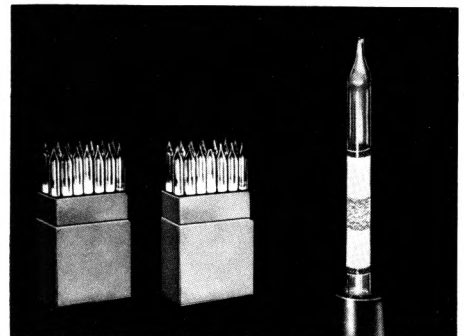
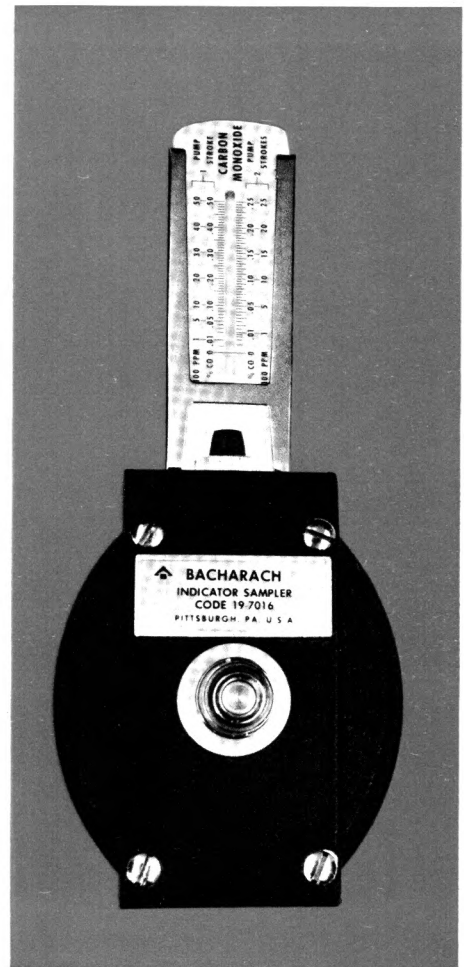
Applications (Indicator and Detector Monoxors:)

Air Hygiene and industrial safety investigations.

Flue gas measurement.

Installation or servicing of gas-fired heating equipment and appliances.

For checking CO conditions in: chemical processing, mining, manufacturing of ammonia gas, cooking, manufactured gas production, blast and open hearth furnace operations, petroleum refining, forging, casting, acetylene welding, smelting, ceramic and brick manufacturing.



Monoxor Indicators and Detectors for the measurement of Carbon Monoxide-CO

Items	Range	Kit Components							Bacharach Code Nos. Complete Kit
		Sample Pump Including Scale and Orifice "A"	Orifice "A" *	Scale	Indicator Tubes Carton of 12	Tube Caps Package of 6	Carrying Case	Sampling Assembly	
Monoxor Indicators	0-0.2%	19-0242	19-0175	19-0014	19-5010	19-0001	19-0311		19-0240
	0-0.5%	19-0243	19-0175	19-0015	19-5015		19-0311		19-0241
High Range CO Tester	Dual Range 0-1.5% 0-10%	19-5001			19-5010 (2-incl.)		19-0009		19-5026
Monoxor Indicator Flue Gas Test Set	0-0.2%	19-0242	19-0175	19-0014	19-5010		19-0311	11-7045	19-0245
	0-0.5%	19-0243	19-0175	19-0015	19-5015		19-0311	11-7045	19-0244
Monoxor Detector	Concentrations As Low As 50 ppm Can Be Estimated	19-7019 (Pump Only) Does not include scale or Orifice "A"							19-7021
Monoxor Detector Flue Gas Test Set					19-5002 (2-incl.)	19-0002	11-7056	19-5005	

*To convert the CO Monoxor to a Gas Hazard Indicator, order Orifice "B" (Bach. Code No. 19-0194) and the corresponding scale and indicator tubes. See Gas Hazard Indicator Information on previous page.

True-Spot[®] Smoke Tester

Determines efficient combustion and is internationally recognized as the standard method for evaluating smoke density in the flue gases from distillate fuels.

- Used in conjunction, by the Underwriters' Laboratories, for approval testing of oil burning appliances.
- Specified by the installation standards of the National Oil Fuel Institute.
- Assigned ASTM D2156-65.

Tests are simple and fast, involving less than a minute. Reproducibility is within 1/2 of a smoke spot number on the special Oil Burner Smoke Scale. The importance of the True-Spot Smoke Tester is quickly recognized in savings on fuel bills and expensive service calls. True-Spot comes complete with sampling pump, scale and supply of filter paper for 500 tests.

Features

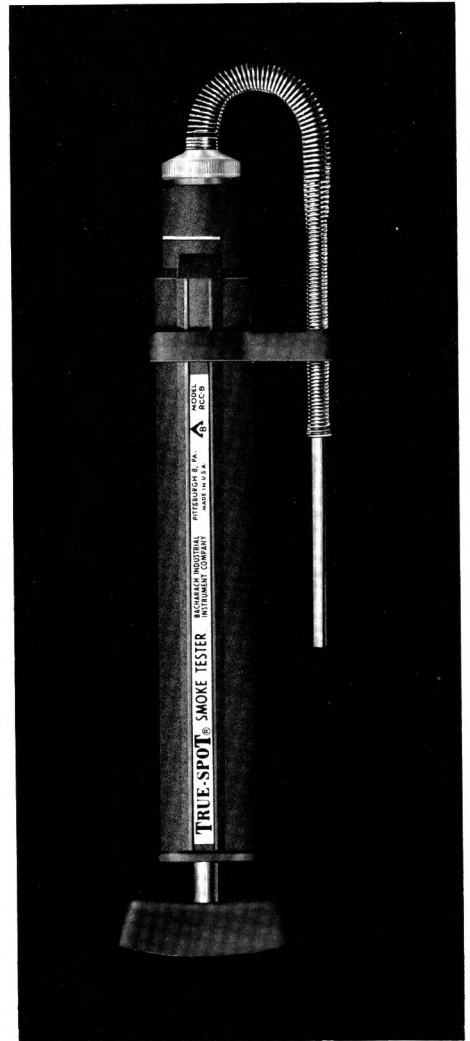
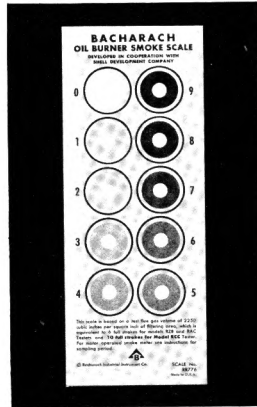
- Specified for air pollution control legislation.
- Meets all Governmental and Industrial requirements for good oil burner operation.
- Accurate readings in less than a minute.
- Simple 3-step test procedure.
- Meets U. S. Commercial Standards CS75-67 in every respect.

True Spot

Item	Kit Components			Bacharach Code No. for Complete Kit*
	Test Pump	Smoke Scale	Filter Paper Sheets (40 strips)**	
True-Spot	21-7005	21-0018	21-0019	21-7006

* Optional Accessories: One bottle of True-Spot Lubricant (Bacharach Code 21-0040)

** Box of 100 filter discs (Used with obsolete True-Spot RAC—Bacharach Code 21-1002)



Portable Manometer

A valuable and easy-to-use instrument for measuring and adjusting the pressure in gas lines.

Features

- Designed for portability.
- Exceptional legibility.
- Use with Bacharach special fluid, mercury or water.
- Check valves prevent pressure surge spillage.
- Positive shut-off valves prevent fluid loss.
- Rugged, dependable and durable.

The Bacharach U-Tube Manometer is designed primarily for accuracy, readability and portability. The special non-freezing fluid is tinted blue for legibility. The fluid has a

1.9 specific gravity which permits a 0-15" scale on a 11" instrument. Readings on the scales are marked in large bold numerals with clearly lined graduations. Metric equivalents in CMS are marked on the reverse side of inch scale. Columns are constructed from a special highly transparent, shatter-proof plastic. Head piece has positive seal shut-off valves to facilitate transportation without fluid leakage.

Applications

To measure pressure in gas lines and to adjust pressure for all types of gas burning appliances.

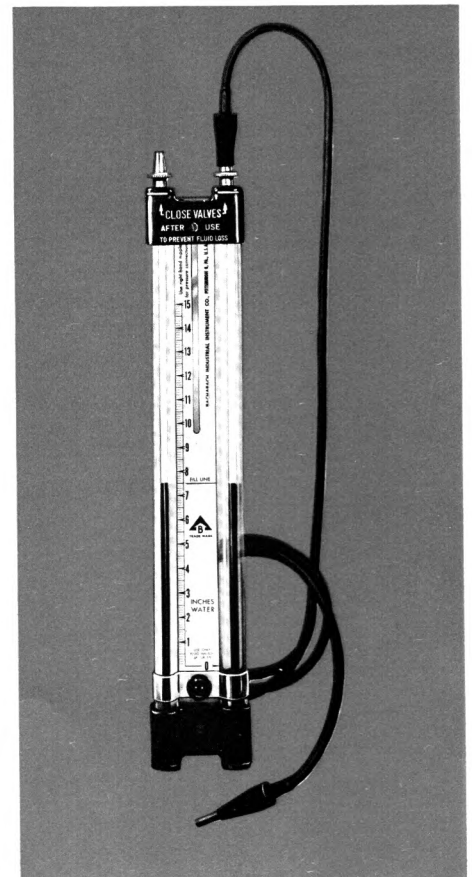
Determination of filter resistance, fan efficiency, air velocity and static pressures.

Portable Manometer

Item	Scale Range	Fluid		Bacharach Code Nos.
		Filled	Unfilled	
Portable Manometer	0-7" W (0.1" / div.)	<input type="checkbox"/>		17-7013
	0-18 cm W (0.2 cm / div.)		<input type="checkbox"/>	17-7016
	0-15" W (0.1" / div.)	<input type="checkbox"/>		17-7002
	0-8.5 oz./sq. in. (0.1 oz./sq. in. div.)		<input type="checkbox"/>	17-7011
	0-15" W (0.1" / div.)	<input type="checkbox"/>		17-7000
	0-38 cm W (0.2 cm / div.)		<input type="checkbox"/>	17-7008
Bacharach Blue Manometer Fluid, extra bottle.				17-0025
15" Manometer Case				17-0026
7" Manometer Case				17-0031

All manometers furnished with shut-off valves, 4 ft. rubber hose and connecting plugs.

NOTE: Bacharach fluid gravity is 1.9 and WILL NOT mix with gauge oil or water.



MZF Draft Gauge

A dependable, service-free draft gauge for reading draft remotely from test point.

Features

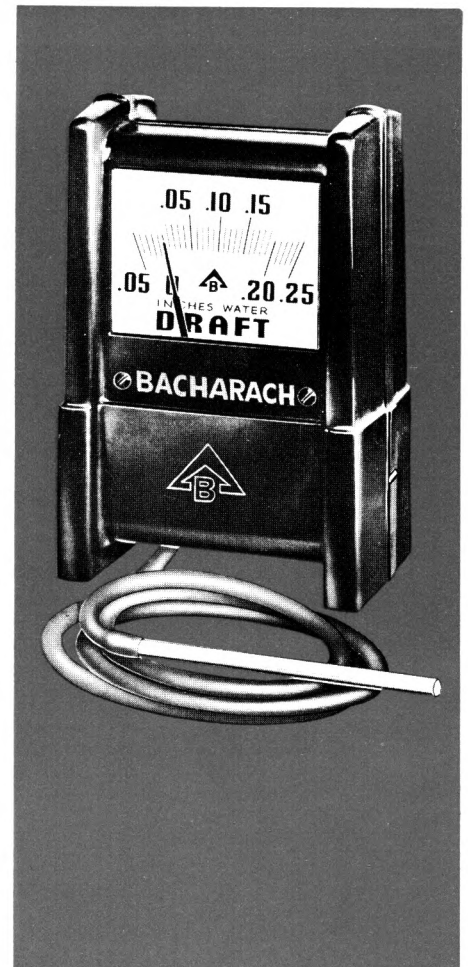
- Large, easy-to-read meter.
- High visibility scale.
- Lightweight, yet rugged.
- No liquid or leveling required.
- Remote reading.
- Simple to use.
- Requires no maintenance.

No liquid or tedious leveling is necessary for the highly-sensitive MZF Draft Gauge.

This dry-type instrument is always ready for immediate use. The pointer's movement over scale is in direct proportion to the magnitude of the draft at the test point. Also excellent for commercial and industrial applications. Scales available for inches or millimeters water gauge and millibars/Newtons p. sq. mtrs.

Applications

Residential, Commercial and Industrial Heating Plants. (To measure furnace draft and pressure drop across air filters.)



Drafrite[®] Pocket Draft Gauge

A small, inexpensive and easy-to-use draft gauge.

Features

- Pin points draft trouble.
- Helps balance fire box, smoke hood, and smoke pipe draft.
- Helps set draft regulator.
- Locates chimney defects.

Instantly indicates the draft over fire, smoke outlet, flue pipe, or in chimney. This pocket size instrument is conveniently held in one hand while using. Ideal for heating dealers

and service men. The free-floating pointer indicates sudden changes from draft to pressure, caused by "puff-backs". Model with range regularly furnished is 0.14" up-draft to 0.10" down-draft. A 0.25" up-draft to 0.05" down-draft model is also available. Simple to use, the Drafrite requires no special training. This is one of the most versatile instruments available.

Applications

Flue pipe, chimney, fire box, smoke hood, smoke pipe draft, draft regulator, oil burning firing rate, basement ventilation.



Draft Gauges

Item	Range	Components	Bacharach Code Nos.
MZF Draft Gauge	+0.05 to 0 to -0.25"W	5" Draft tube 9' of rubber tubing	13-7019
	+0.05 to 0 to -1.0"W		13-7021
	+1.0 to 0 to -5mmW		13-7018
	+1.0 to 0 to -15mmW		13-7022
	+1.0 to 0 to -25mmW		13-7020
Drafrite Draft Gauge	+.10 to -.60 millibars	2 sections of draft tube Leatherette Case 13-0003	13-7029
	+ 10 to - 60 Newton/sq. mtr		13-3000
	+0.10 to 0 to -0.14"W		13-3001
	+0.05 to 0 to -0.25"W		13-3002
	+2.5 to 0 to -3.5mmW		13-3003
	+1.5 to 0 to -6.5mmW		

Florite[®] Air Velocity Meter

Models MRF and MLD

The Florite Air Velocity Meter can be used to obtain accurate air velocity readings almost anywhere.

Features

- Instantaneous, direct readings of air velocity without timing or calculations.
- Scale lock holds reading until lock is released.
- Magnetic damping levels out insignificant variations in air velocity.
- The longest scale of any mechanical velocity meter.
- Chart converts air velocity readings to cubic feet per minute without calculations.

This instrument is simply held in the air stream, either in an open area or against the face of a flat-surfaced register, so that the air current is flowing directly into the face of the instrument. No stop watch, curves or calculations of any kind are necessary.

Model MRF features the longest scale (8") available on any mechanical air velocity meter. For added accuracy and recheck, a built-in scale lock retains readings when necessary. Florite automatically averages air velocity over an area of 3" in diameter or square.

Model MLD is identical to Model MRF except for its scale range and "air scoop" inlet designed for measuring air flow from round or square ceiling diffusers having discharge openings of at least 1/4 x 3 inches.

Applications

Measurement of grill velocities on heating and cooling installations to balance air distribution.

Measure air flow in experiments and lab work.

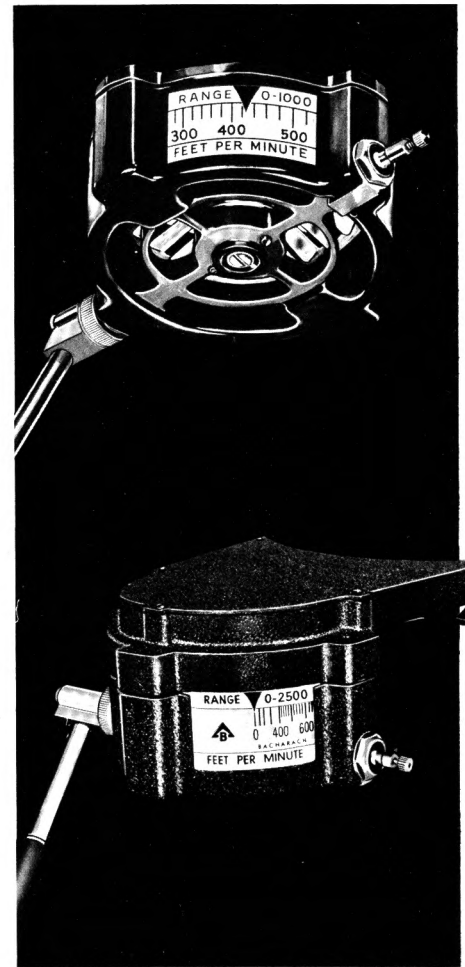
Measure air flow in connection with ceramics, textile and other manufacturing processes.

Measurement of surface wind velocities.

Measurement of velocity of cooling air through generators, motors, and electronic machinery.

Measurement of air velocities in testing ventilating systems in schools, hospitals, mines and factories.

Checking flow conditions of exhaust hoods and other fume removal equipment.



Floret[®] Air Velocity Indicator

Features

- Can be used on floor and baseboard registers and diffusers, side wall registers or any other air discharge opening.
- Instant readings from any held position.
- Entirely self-contained . . . needs no hose, probe or other auxiliary parts for measuring air velocity.
- Readings are in feet per minute or meters per second.

The Floret is the ideal pocket size air flow indicator for applications where readability to 50 ft./min. is adequate. It has many specific uses including checking air flow in clean rooms, fume hoods, refrigeration units, or any other air discharge opening. Can be used for checking air flow through

openings as small as 1/4" diameter.

The Floret can be held in any position while making a test. It gives direct readings instantly; no leveling or "zero balancing" required. Scale range: 0-1000 ft./min. Instrument size: 4 1/2" high x 2 1/2" wide x 1" deep. Supplied in pocket case.

Applications

Reach-in refrigerators, display cases, walk-in coolers, other types refrigeration units, spotting objectionable air movements in rooms, detecting leaks around doors and windows, checking air flow at registers, grills, diffusers and convectors, checking air flow over and through electronic equipment.



Air Velocity Meters

Air Velocity Meter	Range	Kit Includes		Bacharach Code Complete Kits
		Grille Velocity Finder	Leatherette Case	
Florite MRF	0-1000 fpm	16-0107	16-0005	16-7001
	Dual Scale 0-3000 fpm 0-35 mph			16-7002
	Dual Scale 0-300 meters per min. 0-5 meters per sec.	16-7003		
	Dual Scale 0-1000 meters per min. 0-16 meters per sec.	16-7004		
Florite with Air Inlet Scoop MLD	0-2500 fpm	16-0006	16-0008	16-7005
	0-750 meters per min.			16-7006
Floret	0-1000 fpm	16-0008	16-0008	16-7009
	0-300 meters per min.			16-7010

Air Filter Service Indicators

Bacharach Air Filter Indicators monitor the performance of air filters to assure clean air and trouble-free operation of air conditioning equipment.

Features

- Maintains high air filtering efficiency.
- Reduces inspection and service costs.
- Dependable, trouble-free operation.
- Easy to install.
- Assures top performance of air conditioning systems.
- Field adjustable.
- Used in ships, aircraft and railroad cars.

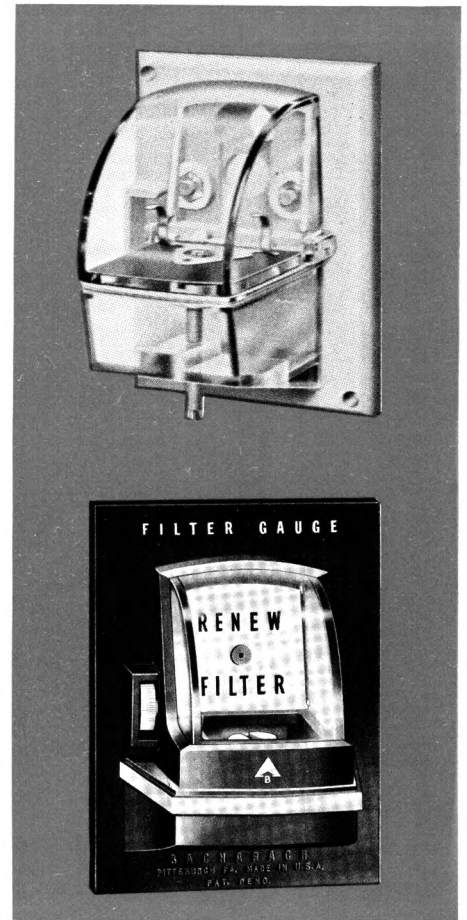
Bacharach Air Filter Indicators are easy to install. They are particularly suitable for central heating and cooling systems, packaged air conditioners in stores and office buildings, room conditioners, unit ventilators and similar cooling and ventilating appliances.

A variety of models are available. Some with a visual mechanical signal and others with both mechanical signal and electrical contacts for connection to remove circuits.

Applications

Use of these indicators guards the operating efficiency of an installation. They accurately sense and automatically signal when it is time to change the air filter. Filter replacement costs are minimized—washing of permanent-type filters is done only when necessary; replacement-type filters are never discarded too soon.

Bacharach Air Filter Indicators are also used to assure minimum air velocity to comply with state codes applicable to the removal of vapors from paint spray booths.



Air Filter Service Indicators

Model	Visual Mechanical	Signal Reset		Type of Mounting		Electrical Switch Contact Ratings			Applications	Bacharach Code Nos.
		Manual	Auto-matic	Unit Source	Cast Alum. Housing	Contact Ratings of Mechanical Switches—Normally Open	Contact Ratings of Models with Magnetic Mercury Bulb Switches			
							Normally Open	Normally Closed		
MDF	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		No Contacts			Domestic heating and air conditioning applications. May be single connected or differentially connected across filter. See tabulation for self resetting features and remote signal capability. Range of adjustment: 0.10" to 1.0" W.	18-7017
MEF	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		26 V. A.C. or D.C. Single Pole 0.25 amps				18-7016
MBF	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>						
MED	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		No Contacts			Domestic heating and air conditioning applications. Single connection downstream of filters only.	18-7004
MND	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	No Contacts			General applications. Adjustable for suction pressure differentials between 0.06 and 3.5" W.	18-7006
MXE	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	115 volts 1.0 amp A.C. or D.C. Single Pole			Industrial and commercial applications. Adjustable over suction differential pressure range of .06 to 3.5" W.	18-7005
MFD	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		115 V. A.C. 0.30 amps 115 V. D.C. 0.15 amps 230 V. A.C. 0.15 amps 230 V. D.C. 0.07 amps		Industrial and commercial applications requiring remote signal. Adjustable over suction differential pressure range of .12" to 3.5" W.	18-7009
MRD	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>			115 V. A.C. 1.0 amps 115 V. D.C. 0.5 amps 230 V. A.C. 0.5 amps 230 V. D.C. 0.07 amps	Normally closed signal feature used in conjunction with paint spray booth applications where air to spray gun is cut off when booth filters fail to meet minimum air passage required.	18-7013

Tempoint® Dial Thermometers

Bi-Metal Dial Thermometers for fast accurate temperature readings from -40° to +1000° F.

Features

- Stainless steel 3/16" OD stem.
- Recalibration possible—zero adjust.
- High impact, heat resistant bezel.
- Sealed for dust and moisture protection.
- Single helical bi-metal coil.
- Scaled for easy readability.

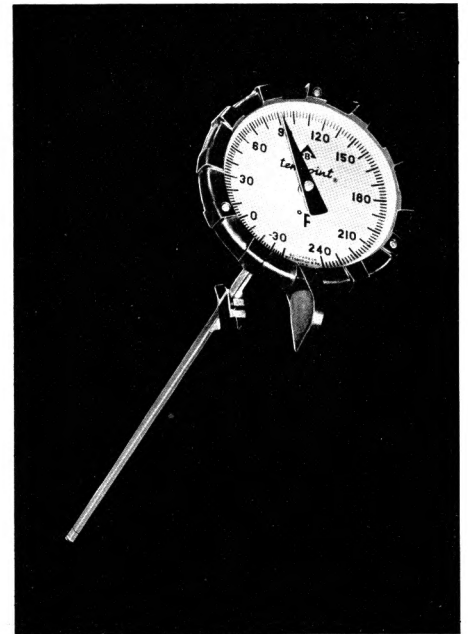
Models are available for measuring ranges from -40° to 1000° F or 100° to 500° C. Fast response of the bi-metal element assures accurate reading of temperature excursions. The 2 1/2" non-glare dial gives maximum readability, even in hard to see

and dimly lit locations. Rugged and inexpensive, the accuracy is within 1% over the entire scale. A stem mounting sleeve supports the thermometer firmly in sheet metal pipes or ducts and permits adjustment insertion distance.

- * Also available is a Tempoint Air Circulation Kit consisting of two thermometers packed in a sturdy wood box. Used for checking temperatures simultaneously.

Applications

Furnace Stack Temperature Measuring—air temperature in furnace ducts or at outlet grilles. Output temperatures of window and automotive air conditioners.



Gold Ribbon Thermometer

The most practical pocket type thermometer available.

Features

- Accurate.
- Shock resistant.
- Functionally styled.
- Easy-to-read.
- Choice of 3 models—covering ranges from -40° to +220° F.

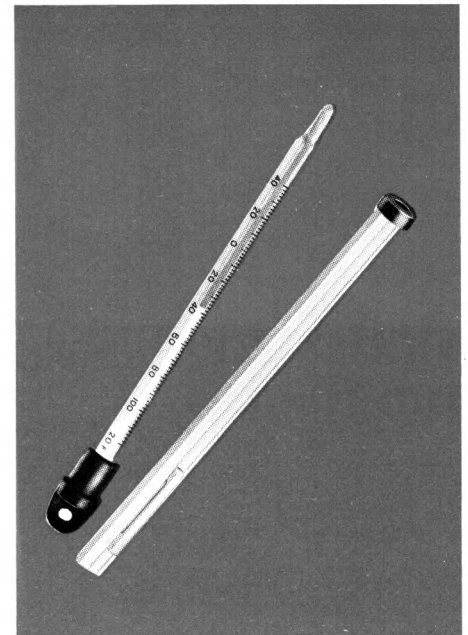
A versatile and widely used measuring device, this pocket thermometer is unique for its effective protection against breakage and fluid separation. A sleeve of shock absorb-

ing material in the aluminum case and a rubber top cap, cushions the glass tube and eliminates all metal-to-glass contact.

The glass thermometer tube has etched black-filled numerals and graduations magnified against a yellow background on a flat reading surface.

Applications

Refrigerators, freezers, cold storage cabinets, water chillers, performance testing of temperature difference across coils, other refrigeration and air conditioning applications.



Ti-Test Pocket Dial Thermometer

Handy, easy-to-use for service tests on air conditioning and refrigeration equipment.

Features

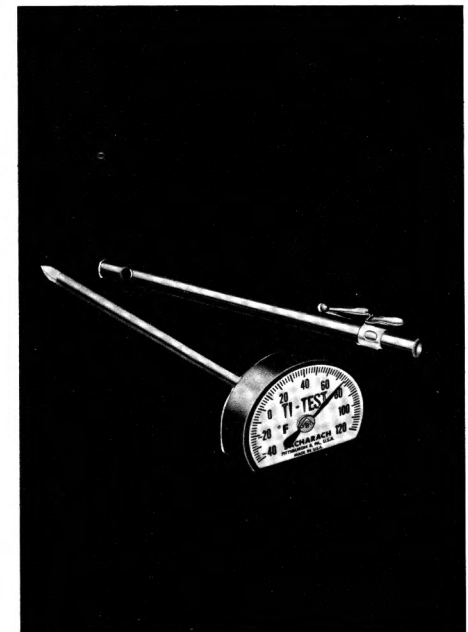
- Truncated head is flat-sided to nest in pocket.
- Magnifying crystal for ease of reading.
- High impact strength plastic head.
- Exceptional heat and shock resistance.
- Stainless steel stem.
- Calibration adjustment.

The Ti-Test is specifically designed for service tests on refrigeration and air conditioning equipment, and for spot checking temperatures of meat, food, etc. It is the only pocket thermometer with a "truncated" head which nests snugly in pocket

and prevents thermometer from rolling when placed on flat surface. Has super-sensitive bi-metallic helix; and a 1° F. accuracy over full range, 100% over-range protection. Crystal dial lens is of superior optical clarity and magnifies dial for ease of reading. Because of the Ti-Test's extreme ruggedness (no glass parts or liquids), it is rapidly becoming the most popular pocket thermometer for servicemen. Supplied with protective pocket case equipped with spring clip.

Applications

Refrigeration and air conditioning, Multi-plate freezers. Checking rise or drop in temperature.



Tempoint, Ti-Test, Gold Ribbon Thermometers

Item	Range	Stem Length	Bacharach Code Thermometer Complete	Bacharach Code Thermometer Tube Only
Tempoint Dial Thermometer	+200 to +1000° F	6"	12-7014	
		12"	12-7018	
	+100 to +500° C	6"	12-7015	
		12"	12-7017	
	-40 to +240° F	9"	12-7016	
Ti-Test Pocket Dial Thermometer	-40 to +120° F	4 1/2"	12-5014	
	+60 to +220° F	4 1/2"	12-5016	
Gold Ribbon Thermometer	-40 to +120° F Mercury	5 1/2"	12-5011	12-0015
	-50 to +120° F Red Spirit		12-5013	12-0016
	0 to +220° F Mercury		12-5012	12-0017

* Tempoint Air Circulation Kit, Bach. Code 12-5010.

* Tempoint Air Circulation Kit—contains 2-12-7016 Thermometers and One Box (12-0013).

Servitemp®

A 3-Lead Thermistor Thermometer.

Features

- Taut band meter movement.
- High impact polycarbonate case.
- Fast response.
- Compact and portable
- Low current drain, gives up to 350 hours continuous operation.

Servitemp testers are battery operated thermometers designed to read accurate temperatures ranging from -50° to 150° F (-45° to 65° C), or $+30^{\circ}$ to 250° F (0 to 120° C), at three remote locations, by the turn of a selector switch. Surface, air or liquid temperatures may be measured with very fast response.

Initially developed to check refrigerators and freezers, the Servitemp is now used for an extensive range of industrial applications. Two types of measuring probes are available: The Kwik Probe is used for surface, air and water temperature measurements. The Universal Probe is recommended for general purpose immersion measurements in halo-

genated hydrocarbons, solvents and liquids that will not attack gold or polypropylene plastic. Probes are stored in a compartment behind the meter. The standard probe length is 15 feet. Probe extensions permit measuring over distances of up to 100 feet, without loss of accuracy.

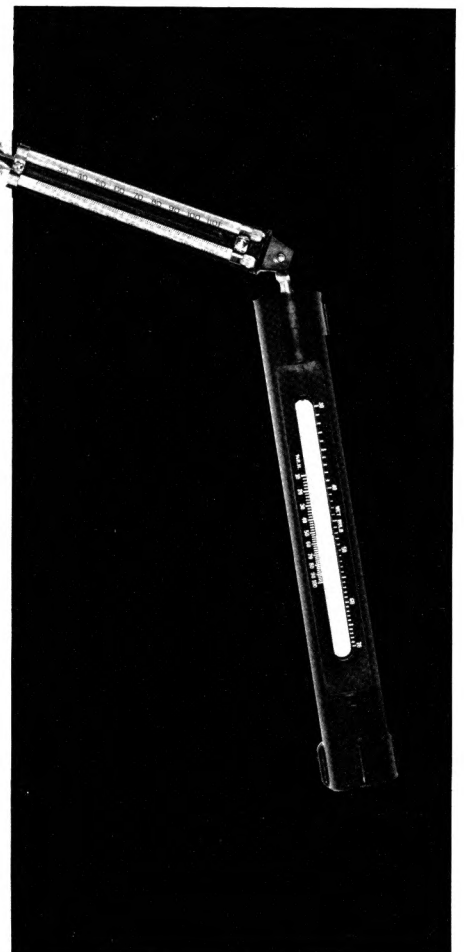
Applications

Testing refrigerators, freezers, frozen food and dairy cases, refrigeration coils, evaporators, condensers, cold plates, control bulb locations, superheat, thermal cut-out locations on hermetic units, ambient air and other phases of refrigeration and air conditioning systems.

Automotive radiators, voltage regulators, engine blocks, crank cases, transmission and automatic chokes. Electronic uses include heat sinks, transistor, SCR and diode cases, transformers, coils, thermal electric devices, resistors, encapsulated assemblies, etc.

Servitemp

Item	Specifications	Bacharach Code Nos.
Servitemp (includes one Kwikprobe)	Dual range: -50 to $+150^{\circ}$ F $+50$ to $+150^{\circ}$ F	12-7019
	Dual range: -45 to $+10^{\circ}$ C $+10$ to $+65^{\circ}$ C	12-7020
Servitemp II (includes one Kwikprobe)	Dual range: $+30$ to $+250^{\circ}$ F 0 to $+120^{\circ}$ C	12-0262
Kwikprobe	Sensor with 15 ft. cord and plug	12-0258
Universal Probe	Sensor with 15 ft. cord and plug	12-0090
Carrying Case	Vinyl	12-0096
Probe Clip	For $\frac{1}{4}$ " to 1" Dia. Tubing	12-0105
Probe Extension	15 ft. (max. 6 per probe)	12-0125



Sling Psychrometer Model SAC

An accurate and easy-to-use psychrometer that indicates percent relative humidity without reference to charts.

Features

- Slide rule construction provides quickly converts temperature to R. H.
- Built-in water reservoir holds sufficient water for several hours testing.
- Thin-bulb design gives fast thermal response.
- Thermometers are made of shock-resistant glass; stems have deep-etched numerals and 1° scale divisions for easy reading.
- Designed for portability.

This unique Sling Psychrometer accurately determines percent relative humidity with-

out necessity of consulting complex tables. A water reservoir eliminates the need to wet the wick each time a reading is taken. It can be whirled freely. A built-in slide rule calculator correlates wet and dry bulb thermometer indications for direct reading of R.H. measurement. Thermometer case telescopes into handle for protection when not in use.

Applications

Measurement of comfort conditions in air conditioned environments, hospital operating rooms, etc.

Tests in industrial atmospheres where high or low humidity may be critical in manufacturing processes.

Sling Psychrometer

Item	Temperature Range	Bacharach Code	Replacement Parts	
			Thermometer	Wick (4 wicks, 10" long)
Sling Psychrometer	$+20$ to $+120^{\circ}$ F Mercury	12-7011	12-0177	12-0011
	-5 to $+50^{\circ}$ C Mercury	12-7013	12-0020	
	$+20$ to $+120^{\circ}$ F Red Spirit	12-7012	12-0052	

Tempscribe Recorders

Provides chart records of temperature and electrical operations.

They are ideal for use in service of air conditioning and refrigeration equipment, experimental rooms, controlled environments and quality control applications. The temperature record shows the highest and lowest temperature, duration of any temperature extreme, and the frequency and spread of temperature fluctuations. Tempscribe with bulb-type element is available for recording remote temperatures.

Extremely versatile, the Tempscribe can be used in as many as 32 standard combinations to make recordings over various temperature ranges and time spans. Sensing element and recording pen are contained in interchangeable front doors. This unique design allows easy changeover from temperature recording to operation recording, or from one temperature range to another. The chart drive, contained in the back case, is a precision-built, spring-driven clock with ample surplus power. Instrument size: 5½" x 4½" x 7½" high.

(A) Interchangeable Bi-Metal Doors

Record "on-location" temperature.

A bi-metallic coil directly exposed to surrounding air, permits 7-day temperature-time record. Record shows highest and lowest temperature, duration of extremes, frequency and spread of fluctuations. Thermal response is fast and dependable.

Popular Ranges

Temperature Time Range	Complete Recorder Bach. Code
-30 to +120° F., 24 hour chart	14-1011
-30 to +120° F., 7 day chart	14-1010
-20 to +40° F., 24 hour chart	14-1111
-10 to +50° F., 24 hour chart	14-1211
+40 to +100° F., 24 hour chart	14-1511

Temperature Time Range	Complete Recorder Bach. Code
-30 to +50° C., 7 day chart . . .	14-1910
-25 to +10° C., 24 hour chart	14-2011
+5 to +40° C., 24 hour chart	14-2111

(B) Interchangeable Bulb-Capillary Doors

Record, remote temperature.

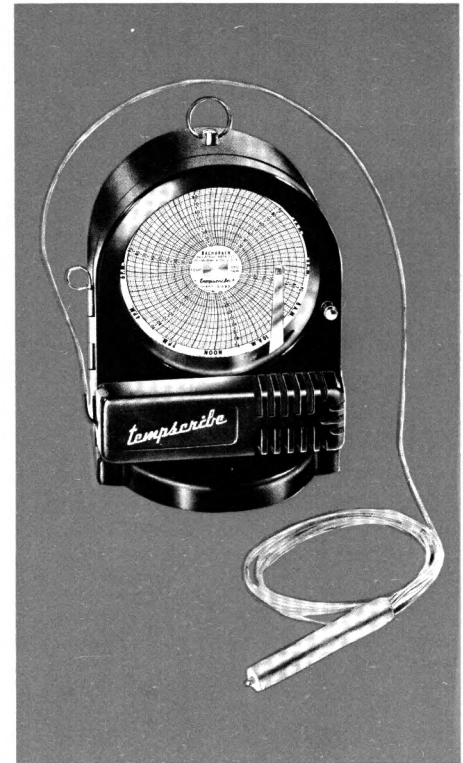
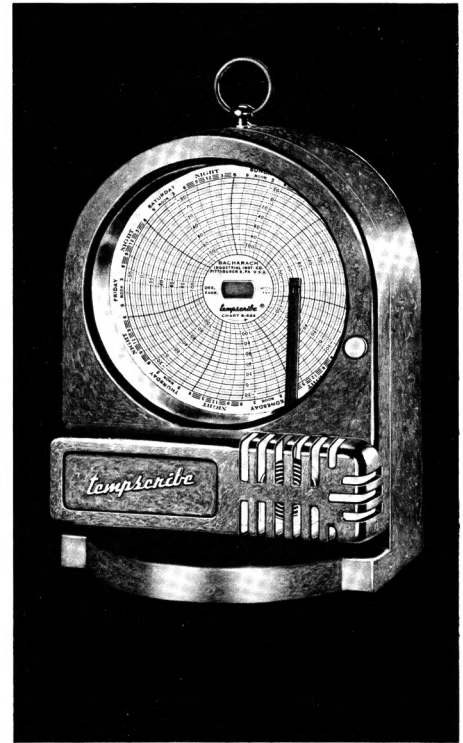
Element comprises temperature-sensitive bulb and 6 ft. capillary tubing which transmits temperature impulse from bulb to recorder. Place recorder at any convenient viewing point. Makes 7-day temperature-time record showing occurrence and duration of temperature fluctuations -30° to +130° F.

Popular Ranges

Temperature Time Range	Complete Recorder Bach. Code
-30 to +50° F., 24 hour chart	14-2311
-30 to +120° F., 7 day chart . .	14-2210
+50 to +130° F., 24 hour chart	14-2511
-35 to +10° C., 7 day chart . . .	14-2610
+5 to +50° C., 7 day chart . . .	14-2710
+5 to +50° C., 24 hour chart	14-2711

Applications

An exact knowledge of temperature is demanded by most modern industrial processes. Many thousands of Bacharach Tempscribe recording thermometers have been supplied in recent years for schools, hotels, hospitals, apartment and office buildings, printing, textile, tobacco, ice, dairy, food, chemical plants, breweries, greenhouses, mushroom cellars, refrigerating rooms, cold storage warehouses, photographic studios, freight terminals, industrial and educational laboratories.



Operation Recorder with Electro-Magnet Element

Electrical Connection	Chart Rotation	Case With Spring Chart Drive	Chart		Bacharach Code Door With Electro-Magnet Element	Bacharach Code Complete Recorder Including Case, Door 100 Charts Bottle of Ink
			Time Divisions	Bacharach Code Box of 100 Charts		
Parallel	24 Hours	14-7031	15 Min.	14-0062	14-7033	14-3611
Series	24 Hours	14-7031	15 Min.	14-0062	14-7032	14-3511

Temperature-Operational Recorder with Bulb-Type and Electro-Magnet Element

Electrical Connection	Chart Rotation	Case With Spring Chart Drive	Chart			Range	Bacharach Code Door With Bulb Type and Electro-Magnet Element and 6' Capillary Tubing and Mounting Reel	Bacharach Code Complete Recorder Including Case, Door Mounting Reel 100 Charts Bottle of Ink
			Time Division	Temp. Division	Bacharach Code Box of 100 Charts			
Parallel	24 Hours	14-7031	15 Minutes	2° F	14-0082	-30 to +50° F	14-7038	14-3311
					14-0083	-30 to +120° F	14-7039	14-3211
Series	24 Hours	14-7031	15 Minutes	2° F	14-0082	-30 to +50° F	14-7040	14-3011
					14-0083	-30 to +120° F	14-7041	14-2911

Tempscribe Temperature Recorders

Components and Charts

Temperature Recorder with Bi-Metal Element

Chart Rotation	Case With Spring Chart Drive	Chart			Range	Bacharach Code Door With Bi-Metal Element	Bacharach Code Nos. for Complete Recorder Kit Including Case, Door, 100 Charts, Bottle of Ink
		Time Division	Temp. Division	Bacharach Code Box of 100 Charts			
24 Hours	14-7031	15 Minutes	5° F	14-0045	-30 to +120° F	14-7015	14-1011
			2° F	14-0046	-20 to + 40° F	14-7005	14-1111
			2° F	14-0048	-10 to + 50° F	14-7006	14-1211
			2° F	14-0067	+24 to + 88° F	14-7007	14-1311
			2° F	14-0051	+40 to +100° F	14-7008	14-1511
			2° F	14-0052	+60 to + 90° F	14-7004	14-1611
			2° F	14-0054	+70 to +130° F	14-7010	14-1711
			1° C	14-0057	-25 to + 10° C	14-7012	14-2011
			1° C	14-0058	+ 5 to + 40° C	14-7013	14-2111
7 Days	14-7030	3 Hours	5° F	14-0044	-30 to +120° F	14-7015	14-1010
			2° F	14-0047	-10 to + 50° F	14-7006	14-1210
			2° F	14-0050	+40 to +100° F	14-7008	14-1510
			2° F	14-0095	+60 to + 90° F	14-7004	14-1610
			2° F	14-0079	+70 to +160° F	14-7014	14-1810
			2° C	14-0066	-30 to + 50° C	14-7016	14-1910

Temperature Recorder with Bulb-Type Element

Chart Rotation	Case With Spring Chart Drive Including Bottle of Ink	Chart			Range	Bacharach Code Door With Bulb-Type Element, 6' Capillary Tubing and Mounting Reel	Bacharach Code Nos. for Complete Kit Including Case, Door, Mounting Reel, 100 Charts, Bottle of Ink
		Time Division	Temp. Division	Bacharach Code Box of 100 Charts			
24 Hours	14-7031	15 Minutes	5° F	14-0075	-30 to +120° F	14-7025	14-2211
			2° F	14-0070	-30 to + 50° F	14-7019	14-2311
			2° F	14-0069	+10 to + 90° F	14-7020	14-2411
			2° F	14-0071	+50 to +130° F	14-7021	14-2511
			1° C	14-0091	-35 to + 10° C	14-7022	14-2611
			1° C	14-0090	+ 5 to + 50° C	14-7023	14-2711
7 Days	14-7030	3 Hours	5° F	14-0068	-30 to +120° F	14-7025	14-2210
			2° F	14-0080	+10 to + 90° F	14-7020	14-2410
			1° C	14-0101	-35 to + 10° C	14-7022	14-2610
			1° C	14-0207	+ 5 to + 50° C	14-7023	14-2710

Biological Refrigerator with Bulb-Type Element

Chart Rotation	Case With Spring Chart Drive Including Bottle of Ink	Chart			Range	Bacharach Code Door with Bulb-Type Element, 10' Capillary Tubing and Mounting Reel	Bacharach Code Nos. for Complete Kit Including Case, Door, Mounting Reel, 100 Charts, Bottle of Ink
		Time Division	Temp. Division	Bacharach Code Box of 100 Charts			
7 Days	14-7030	3 Hours	1° F	14-0076	-5 to +15° C	14-7024	14-4005

Optional Accessories: One bottle red ink—Bach. Code 14-0009
Tempscribe steel carrying case—Bach. Code 14-4065

Serdex® Humidity/ Temperature Indicators

This two-pointer instrument provides accurate indication of relative humidity and temperature simultaneously.

Features

- Completely self-contained, no piping or external power source is required.
- Rapid response to humidity changes.
- Wide temperature tolerances from -35° to $+130^{\circ}$ F (-37.5° C to $+54.5^{\circ}$ C).
- Easy to read scale.

The Serdex Indicator is furnished as a portable instrument, or with a flanged case for surface mounting. Completely self-contained, no piping or external power source

is required. The sensing element is a highly-sensitive, conically-shaped membrane diaphragm. It gives almost instant response to humidity changes. Its reliable operating characteristics are retained in ambient temperatures from -35° to $+130^{\circ}$ F (-37.5° C to $+54.5^{\circ}$ C). Lag constant is less than 4 sec. for 63% of indicated range covered in an air stream velocity of 800 ft./min. (approx. 260 mt./min.) A single pointer Serdex is available for measuring 15 to 95% R. H.

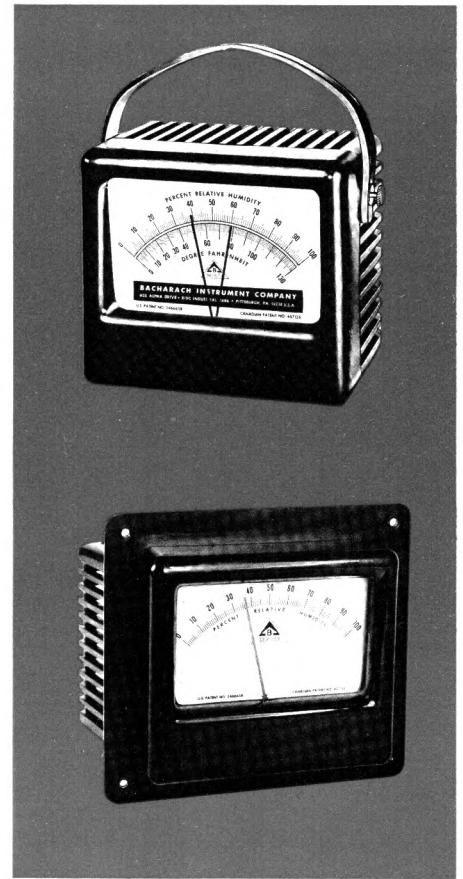
Applications

Checking and adjusting ventilating, refrigeration, humidification, dehumidification systems.

Serdex Indicators

Serdex Indicator Type	Specifications			Bacharach Code Portable Indicator With Leather Strap Handle	Bacharach Code Complete Indicator With Flange Adapter Set Bacharach Code 22-0237 For Panel Mounting*
	Scale Width (Inches)	Relative Humidity Range	Temperature Range		
Relative Humidity and Temperature Precision Model	3½	0-100%	0 to $+130^{\circ}$ F	22-7056	22-7057
			-5 to $+55^{\circ}$ C	22-7076	22-7077
Relative Humidity Only Precision Model				22-7059	22-7060
Relative Humidity Only Utility Model	2½			22-7006	

* Fits into 5½" x 4¾" Hole Opening.



Serdex® Humidity/ Temperature Recorder

The circular chart recorder is ideal for providing a permanent record of humidity and temperatures.

Features

- Rapid response to humidity changes.
- Wide temperature tolerances from -35° to $+130^{\circ}$ F (-37.5° C to $+54.5^{\circ}$ C).
- Completely self-contained.

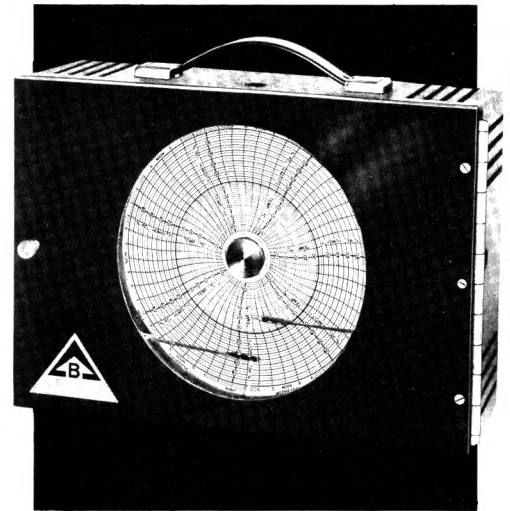
The recorder incorporates the patented Serdex conically-shaped membrane diaphragm humidity element. The temperature sensing element is a precision bi-metal coil.

The Serdex recorder is self-contained and equipped with a spring-wound chart drive. The 6" diameter chart has 2% R.H. and 2° F. divisions and is available for 24-hour or 7-day rotation.

A circular chart recorder is available for only recording relative humidity.

Applications

Monitors, by recording humidity where it is important to preserve materials, prevent deterioration and monitor general environments.



Serdex Recorders—Spring Chart Drive

Serdex Recorder Type	Specifications			Chart				Bacharach Code Ink Bottle One Bottle		Bacharach Code Complete Recorder Includes One Box of Charts and One or Two Bottles of Ink	
	Relative Humidity Range	Temp. Range	Rotation	Divisions			Bacharach Code Box of 100		Red		Purple
				Time	Temp.	R/H	Circular Chart	Strip Chart			
Relative Humidity and Temperature	0-100%	0 to $+100^{\circ}$ F	24 Hr.	15 Min.	2° F	2%	22-0082	22-0077	22-0079	22-7042	
		0 to $+100^{\circ}$ F	7 Day	3 Hr.	5° F	5%	22-0419			22-7078	
		-10 to $+90^{\circ}$ F	7 Day	3 Hr.	5° F	5%	22-0063			22-7018	
		-16 to $+40^{\circ}$ C	7 Day	3 Hr.	2° C	5%	22-0285			22-7052	
Relative Humidity Only	0-100%		24 Hr.	15 Min.		2%	22-0083	22-0077	22-0079	22-7015	
			7 Day	3 Hr.		2%	22-0081			22-7017	
Hygrothermograph	0-100%	0 to $+100^{\circ}$ F	24 Hr.	30 Min.	2° F	2%		22-0085	22-0079	22-7008	
		0 to $+100^{\circ}$ F	7 Day	2 Hr.	5° F	5%		22-0086		22-7009	
		-10 to $+50^{\circ}$ C	7 Day	2 Hr.	2° C	2%		22-0088		22-7010	
Hydrograph			24 Hr.	15 Min.		2%		22-0084		22-7007	

Serdex® Hygrothermograph/ Hygrograph

This unique instrument is specifically designed for scientific, industrial and commercial applications where high accuracy and complete dependability are essential.

Features

- Entirely self-contained . . . no piping or wiring needed.
- Accuracy of the humidity section is within $\pm 3\%$ R.H. in the range of 15% to 95% R.H. at temperatures from $+32^\circ$ to $+130^\circ$ F (-36° C to $+54.5^\circ$ C).
- High sensitivity to variations in humidity is assured by the patented SERDEX Membrane Diaphragm Humidity Sensing System.

The Serdex Hygrothermograph makes concurrent, continuous records of atmospheric humidity and temperature on a 7" x 14" (7.8 cm) x 35.4 cm) strip chart, for either 24-hour or 7-day periods. The most minute fluctuations in relative humidity are clearly visible. The SERDEX chart is evenly divided, providing a full 3-inch (7.6 cm) chart sec-

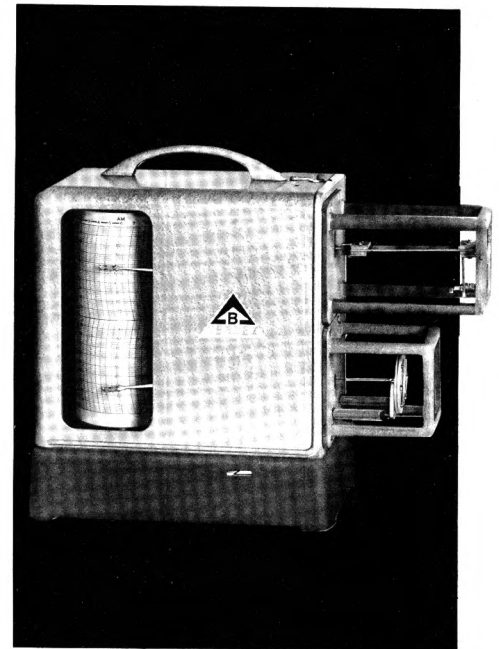
tion for humidity and temperature records. Thus, variations in relative humidity and temperature are recorded on the same scale, which greatly aids in correlating the two records. Lag constant is less than 50 seconds for 63.21% of the indicated range when the range covered is $90\% \pm 5\%$ to $50\% \pm 5\%$ in an air stream velocity of 800 ft./min. (approx. 260 mt./min.).

The Hygrograph Model records relative humidity only. It produces a highly magnified graph, for a 24-hour period on a 6" chart (15 cm).

Applications

Records humidity-temperature for scientific, industrial and commercial applications, conservation and meteorological agencies, research centers, government departments, colleges, institutions, industrial labs.

Please Note: See chart on opposite page for specifications and Bacharach code numbers.



Serdex® Humidity Telemetry System

The Serdex Telemeter is a remote reading electronically operated, humidity indicating system.

Features

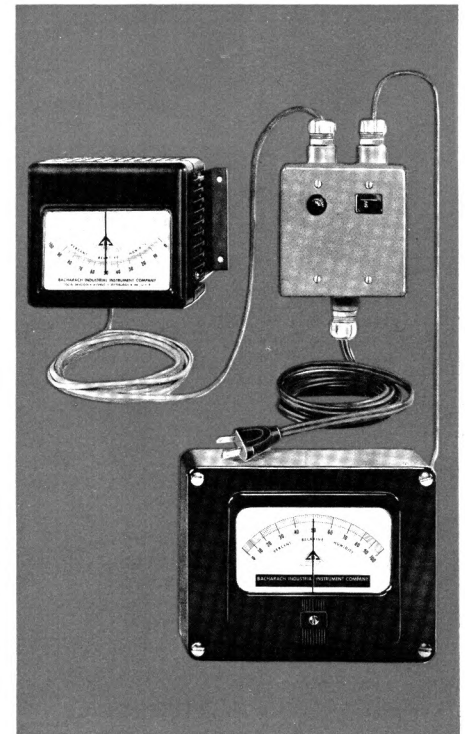
- Accuracy unaffected by long exposure to high RH.
- Fast response.
- Easy to install and maintain.
- Dependable and highly constant.

The readout meter may be located up to 9000 ft. 3000 mts. from the sensing unit, which may be placed indoors, outdoors, or in any type of environmental controlled chamber. The system consists of three major assemblies: The Sensing Unit which connects to a power unit which may be up to 100 ft. away. The Power Unit is comprised of a transformer, switch and fuse assembly, housed in a UL-approved enclosure. It con-

nects to a 115 V. 60 Hz (220 V. 50/60 Hz) power source. The remote Readout meter connects to the power unit and may be up to 9000 ft. (3000 mts.) away. A flush mounting or a flange mounting readout meter housing is available. The Sensing Unit, includes the sensing diaphragm, temperature stabilized transistorized oscillator — demodulator printed circuit and indicating meter. Sensing units are furnished with an indoor housing, or with a weatherproof housing for location outdoors. The exclusive Serdex humidity sensing system has been time-proven by more than 20 years' use in all types of applications.

Applications

For remote indication of relative humidity in: Air pollution monitoring stations, meteorological stations, commercial, industrial and laboratory environments.



Serdex Humidity Telemetry Systems

Serdex Humidity Telemetry System	System Components					Bacharach Code*** Complete System Includes 6 Foot Power Cord, Four 100 Foot Conductor Cables and Two 10 Foot Conductor Cables
	Power Pack***	Sensor Pack		Read-Out Meter		
		Outdoor Housing	Indoor Housing	Flush Mounted*	Surface Mounted**	
With Readout Meter	22-7046 (Specify 115 V. 60 Hz. 220 V. 50 Hz.)	22-7065		22-0291		22-5001
		22-7065			22-0293	22-5002
			22-7063	22-0291		22-5003
			22-7063		22-0293	22-5004
Without Readout Meter		22-7065				22-7054
			22-7063			22-7053

* Flush Mounted Housing Dimensions $4\frac{1}{4}$ " High x $4\frac{3}{8}$ " Wide x $1\frac{3}{4}$ " Deep.

** Surface Mounted Housing Dimensions $5\frac{1}{4}$ " High x $6\frac{3}{4}$ " Wide x $2\frac{1}{8}$ " Deep.

*** When ordering a Power Pack or complete recorder, specify either 115V 60 Hz or 220V 50 Hz.

Humidigard Humidity Control System

The Bacharach-Serdex Humidigard System is an electronic humidity controller, designed for applications where economy, ease of installation, reliability and fast responses are critical requirements.

Features

- Accurate to 3% relative humidity from 15% to 90%.
- As little as 5% span between high and low set point.
- Adjustable dual (high and low) set points.
- 10 amp non-inductive 115 V. 60 Hz "contact rating" (220 V. 50/60 Hz).
- Continuous operation.
- Lightweight—can be moved and "wired in" wherever needed.

The Humidigard Humidity Control System consists of two major assemblies, the RH Indicator and a controller for connection to a 115 V. 60 Hz (220 V. 50 Hz) power source. There is a choice of three models to meet special needs.

Model 500—is a two point controller with pilot light. This module can control two functions; activating a dryer for example when the high R.H. limit is exceeded; and activating a humidifier when the lower preset level is exceeded. The control relays are self-resetting.

Model 510—is also a two point controller. It controls a single piece of equipment. A dryer for example, would be activated at a high preset level and shut off when a lower R. H. limit is attained. The operation can also be reversed.

Model 520 (Alarm System) is a two point alarm system with manual reset. It controls either a high or low humidity alarm or both. It can be fitted as required to any bell, light or combination alarm solenoid system.

Applications

Industrial, processing, medical, chemical, laboratory and commercial applications where critical humidity levels must be maintained.



Humidigard Humidity Control Systems

Model	Control Span	System Components				Complete System Bacharach Code Nos.	
		Bacharach Code Nos. for Sensor Pack	Control Module		115 Volt 60 Hz.	240 Volt 50/60 Hz.	
			115 Volt 60 Hz.	240 Volt 50/60 Hz.			
Model 500 Controller	10%	22-7089	22-7085	22-7102	22-0538	22-0566	
	5%	22-7098			22-0548	22-0569	
Model 510 Controller	10%	22-7089	22-7090	22-7103	22-0539	22-0567	
	5%	22-7088			22-0549	22-0570	
Model 520 Alarm System	10%	22-7089	22-7092	22-7104	22-0540	22-0568	
	5%	22-7098			22-0550	22-0571	

ServiVac[®] Vacuum Gauge

A completely portable, lightweight, precision instrument designed for field service work.

Features

- Lightweight—portable.
- Compact—fits snugly in hand.
- Ruggedized taut band meter movement for rough treatment.
- Battery powered—takes standard 9-volt transistor radio type battery.
- Continuous readings from atmosphere to 10 microns.

The ServiVac Vacuum Gauge is small, compact and rugged. The thermistor vacuum sensor is operated in a self-heating mode; and

its resistance changes as the system is evacuated through heat dissipation.

The range of the instrument is from atmosphere to 10 microns. ServiVac is battery powered. It uses a standard 9-volt transistor radio battery. The power selector switch is a spring return type which eliminates the possibility of inadvertently leaving the instrument turned "on".

Six feet of power cord is included with the instrument.

Applications

Testing and evacuation of refrigerant systems, checking vacuum lines in laboratories, servicing of automotive air conditioners.



ServiVac Vacuum Gauge

Item	Range	Kit Components				Bacharach Code Nos. Complete Kit
		Gauge Only	Sensor	Connector Cable 6 ft. in length	Vinyl Carrying Case	
ServiVac	atmosphere to 10 Microns	20-7003	20-0024	20-0047	12-0096	20-7005
		20-7003			Not included	20-0051

Leakator® Halogen Leak Detector

The LEAKATOR is a rugged, portable, battery operated, electronic instrument, used to pin-point leakage of halogen gas from refrigeration and air conditioning systems.

Features

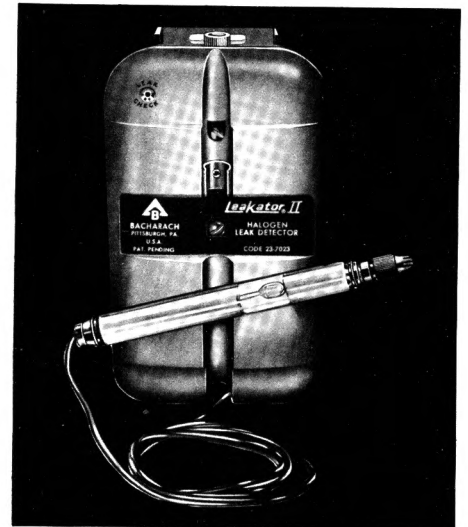
- Fast response.
- Adjustable sensitivity.
- Compact and portable.
- Continuous duty cycle.
- Versatile.
- Easy-to-use.
- Reliable.

The LEAKATOR detector responds to R11, R12, R22, R114, R500, and other halogenated hydrocarbons.

LEAKATOR® II indicates the presence of halogen gas by means of a neon glow lamp in the sensing probe. It is recommended for service and maintenance work in noisy locations and where the refrigeration system is readily accessible.

Applications

Inspection and maintenance of commercial, industrial and residential refrigeration and air conditioning systems; Air conditioning systems installed in automobiles, buses, trains, trucks, ships and aircraft. Also a pressure vessel leak detector when refrigerant gas is used as tracer gas.



Halogen Leak Detectors

Model	Bacharach Code Complete Unit*	Optional Accessories					
		Carrying Case	Maintenance Kit				
			Complete Maintenance Kit	Probe Tips (Set of Two)	Filter Guards (Set of Five)	Leak Check Ampule	Signal Lamp
Leakator II	23-7023	24-0063	23-0332	23-0329	23-0328	23-0335	23-0330

* Without Batteries (2 D-Cells Required. Eveready 1150 or E95 recommended).

Electronic Multi-Gas Leak Detectors

Locates almost any gas or vapor leak.

Bacharach multi-gas leak detectors incorporate a sensitive thermal conductivity cell and bridge circuit. They are designed to respond to the thermal circuit conductivity of a gas sample. The bridge is normally balanced in air so that leaks in positive pressure gas piping or vessels may be detected and pinpointed.

Two Models are available:

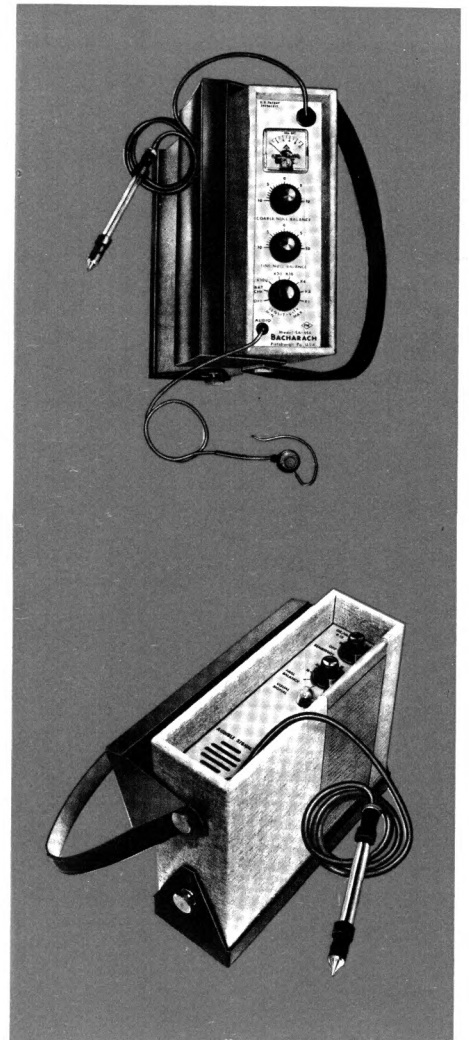
Model SA63 is a general purpose instrument powered by replaceable alkaline dry-cell flashlight batteries. Leakage is indicated by a signal light and an audible signal.

Model SA65A is powered by a rechargeable

lead/gel electrolyte battery that gives 12 hours continuous operation.

This instrument has a built-in battery charger. The SA65 gives fast response; and the solid-state circuitry is intrinsically safe which permits its use in hazardous locations. FM approved for Class 1, Div. 1, Groups A, B, C and D. Accepted by U. S. Coast Guard. Miscellaneous Electrical Equipment List (CG-293) based on Paragraph of Reference (b) and 46 CFR 111.65-3 (d) and 111.65-4 (e) for Class I, Groups A, B, C, and D hazardous atmospheres.

Helium leaks of the magnitude of 0.076 standard cubic feet per year (6.8×10^{-5} cc/sec. can be detected as a full scale meter deflection.



Gas Leak Detectors

Model	Recharging Voltage	Power Pack		Bacharach Code Nos. Complete Unit Includes Power Pack and Shoulder Strap
		Rechargeable Battery and Charger	D-Cell Batteries	
SA65A	110 V. 60 Hz.	23-7019	—	23-7027*
	220 V. 50/60 Hz.	23-7035	—	23-7036*
SA63	—	—	6 included†	23-7001

* Includes built-in battery charger.
† Eveready E95 recommended.

ServiVar® Electrical Test Meter

For fast, simple measurements of VOLTS, AMPS and OHMS.

Features

- Taut-band meter movement and hi-impact polycarbonate case.
- Eight color coded "one-in-sight" scales that can be thumb dialed to select the required measuring range.
- "Self-protecting" solid state circuits to eliminate the need for fuses and still protect the instrument from gross overloads.
- Optional line splitter accessory facilitates current and voltage measurements at outlet boxes, by splitting a double conductor line cord under actual load conditions.

The ServiVar—Volts, amps, resistance meter is a special test instrument to meet the needs

of the field serviceman. It's a rugged, light-weight, portable instrument that is easy to use.

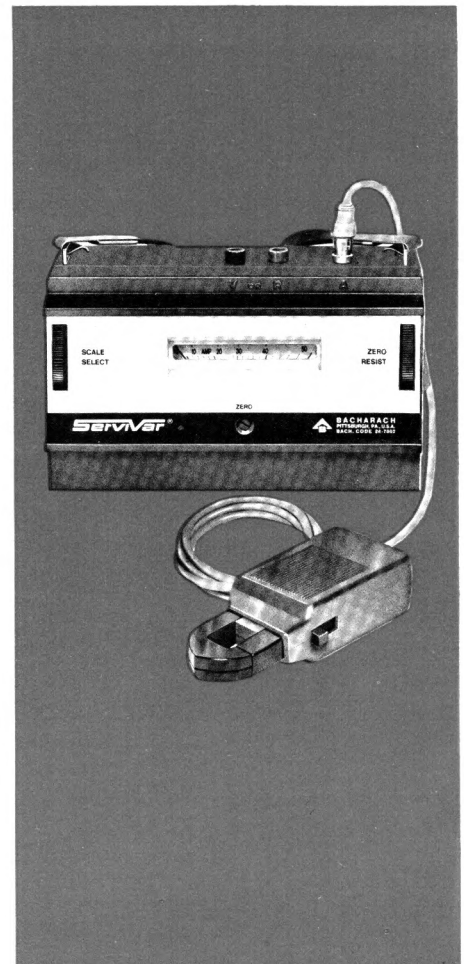
Applications

ServiVar applications include testing for continuity, grounds, open circuit and shorts in all types of electrical appliances and equipment. Measurement of start and running currents of all A. C. motors from large 75 to 100 amp 3 phase types down to fractional horsepower sizes. The line splitter measures currents as low as 0.1 amp. Heater loads can be quickly measured and calculated. Motor windings, squirrel cage rotors, slip ring motors and centrifugal switches in split phase motors can be tested. Capacitors can be checked for opens and grounds and the capacitance values can be calculated.

ServiVar

Item	Kit Components				Bacharach Code Complete Kit
	Meter With Two Lead Wires*	Snap-Around Probe		Carrying Case	
		60 Cycles A.C.	50 Cycles A.C.		
ServiVar	24-0075 24-0075	24-7001 —	— 24-7006	24-0063 24-0063	24-0074 24-7007

Optional Accessories: *Lead Wires Only, Bacharach Code 24-0051/15 Foot Probe Extension, Bacharach Code 12-0125/Line Splitter, Bacharach Code 24-7003



Model K Oxygen Indicators

A fast responding instrument for measuring in the low, medium and high oxygen percentage ranges.

Features

- Ready for instant use, no warm-up period.
- Instantaneous response.
- Long life detection cell may be reactivated as needed.
- Rugged and portable.
- Models K25 and K2500 FM approved intrinsically safe for use in Class 1, Division 1, hazardous areas, as specified by the National Electrical Code.
- Accuracy:
 - 0 - 5% range \pm 1/10% Oxygen
 - 0 - 25% range \pm 1/4% Oxygen
 - 0 - 100% range \pm 3% Oxygen

An alternative to the Orsat apparatus, the Model K is a portable oxygen indicator with a direct-reading meter. The indicator uses a self-generating, temperature compensated, membrane type electrolytic cell. A sample of the atmosphere to be tested is drawn into the instrument by means of an aspirator bulb.

Three models are available:

Model K25 is a single-range model graduated 0-25% Oxygen. It is widely used to measure the oxygen content of confined spaces and assure safe entry conditions.

Model K2500 is a dual-range model graduated 0-25% and 0-100% Oxygen. Oxygen content of gas mixtures in any combination up to 100% can be determined.

Model K525 is provided with a solid-state amplifier to give full-scale deflections over the ranges 0-5% and 0-25% Oxygen. The amplifier is powered by two 9-Volt transistor mercuric oxide batteries.

Applications

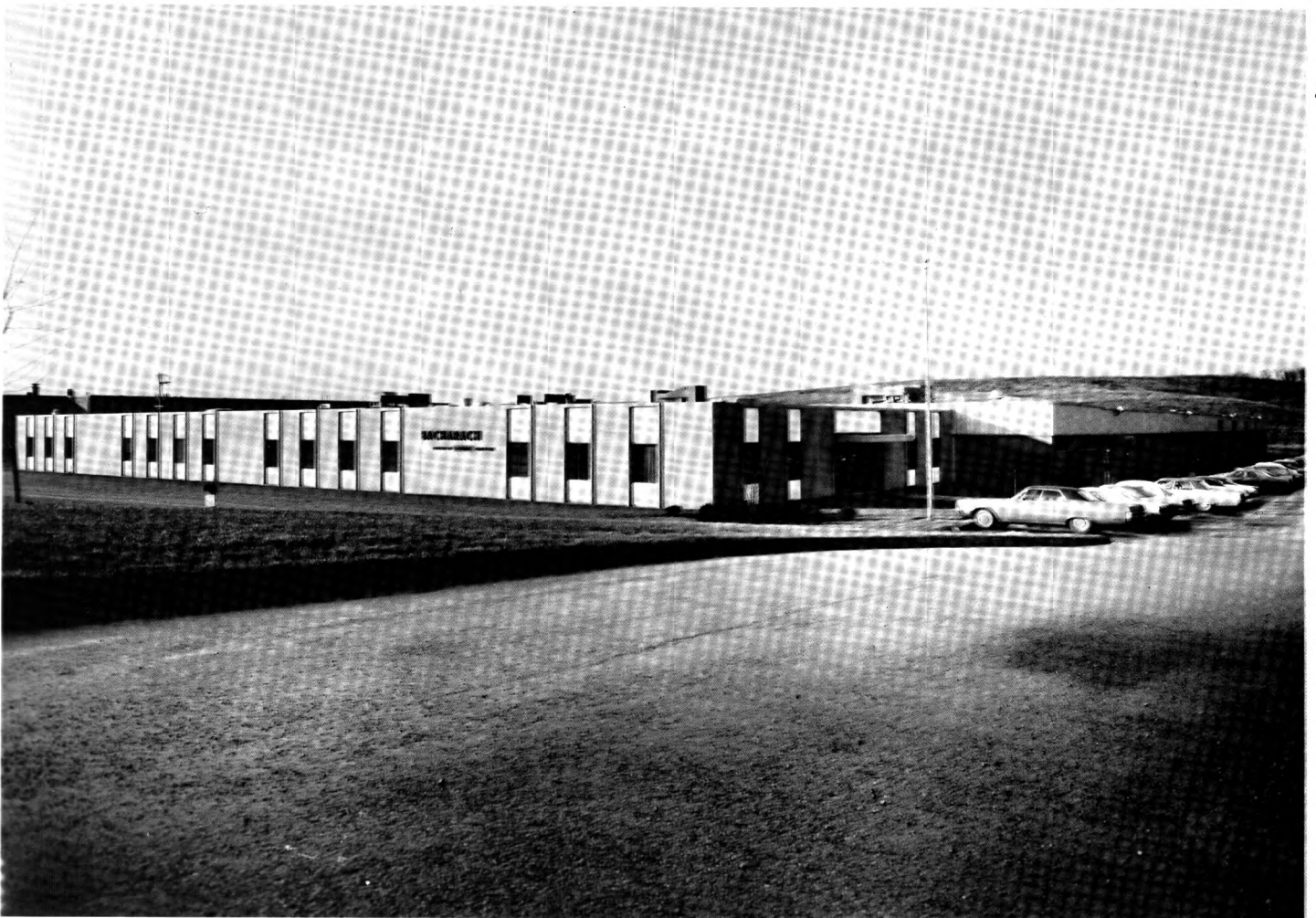
Testing confined spaces for safe breathing conditions. Testing for air leakage into normally oxygen-free systems. Supervising natural gas pipeline purging operations. End point determination or tail gas monitoring in oxidation reactions. Adjusting air / fuel ratios. Checking pure oxygen streams and, in hospitals, the atmosphere in oxygen tents and incubators.



Model K Oxygen Indicators

BACH. CODE NOS.	DESCRIPTION
514-001	Model K with shoulder strap, 0-25%
514-002	Model K with shoulder strap, Dual Range: 0-25; 0-100%
514-003	Model K with shoulder strap, Dual Range: 0-5: 0-25%
340-104	Leather Storage Case
340-911	Shoulder Strap
REPLACEMENT PARTS	
514-010	Replacement Oxygen Cell - Dry Charged
514-010.5	Replacement Oxygen Cell - Wet Charged
514-011	Oxygen Cell Reactivation Kit
550-013	Fiberglass Probe, 30" Long, Filter, 42" Rubber Hose
550-014	Alum. Probe 30" Long, Filter, 42" Rubber Hose
550-015	Alum. Probe 10" Long, Filter, 30" Rubber Hose

Principal Administration and Manufacturing Facilities of Bacharach Instrument Company



IF YOU ARE INTERESTED IN			REFER TO	ON PAGE
AIR	Velocity	Measuring	Florite Floret	6
	Filtering	Indicating	Filter Service Indicators	7
GAS	Multi-Gas	Leak Detection	SA65	15
	Refrigerant	Leak Detection	Leakator II SA63	15 15
	Toxic Detection of	CO SO ₂ CO ₂ NO ₂ H ₂ S Cl ₂	Monoxor Gas Hazard Indicator	2
HEATING	Combustion Efficiency Testing	Complete Kits	For Gas For Oil	Flap
		Individual Instruments	Fyrite CO, O ₂ , CO ₂ Indicators CO Monoxor Detector and Indicator Draft Gauge Pocket Draft Gauge Smoke Tester Stack Thermometer Manometer Air Velocity Meter Air Velocity Indicator Air Filter Indicator	1 3 5 5 4 4 4 6 6 7
REFRIGERATION AIR CONDITIONING	Vacuum	Measuring	ServiVac	14
	Leakage	Detecting	SA63 Leakator	15 15
	Balancing	Air Velocity Measuring	Floret Florite	6 6
	Recording	Temperature and/or Humidity	Serdex Tempscribe	12-13 10-11
	Temperature	Thermometers	Thermistor Dial Mercury	9 8 8
HUMIDITY	Measuring	Humidity Only	Sling Psychrometer Serdex	9 12-13
	Indicating	Humidity and Temperature	Serdex	12-13
		Remote—Humidity Only	Telemetering	13
	Recording	Humidity Only Strip Chart	Serdex Hygrothermograph	12-13 12-13
Control	System	Humidigard	14	
TEMPERATURE	Indicating Thermometers	Dial	Ti-Test	8
		Dial	Tempoint	8
		Mercury—Spirit	Gold Ribbon	8
		Thermistor Indicating Recording	Servitemp Tempscribe	9 10-11
	Recorders	Remote Temperature Circular Chart Temperature and Humidity	Tempscribe Serdex	10-11 12-13
OXYGEN	Analysis	Chemical Absorption Type	Fyrite	1
	Indicating	Direct Reading Type	Model K	16
VACUUM	Indicating	Thermistor Sensor	ServiVac	14
OPERATION	Recording of Electrical	Events	Tempscribe	10-11
	Electrical Testing	Ohms, Volts, Amps	ServiVar	16

Bacharach Instrument Company

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