U. S. DEPARTMENT OF COMMERCE
HENRY A, WALLACE, Secretary
NATIONAL BUREAU OF STANDARDS
LYMAN J. BRIGGS, Director

SELF-CONTAINED MECHANICALLY REFRIGERATED DRINKING-WATER COOLERS

COMMERCIAL STANDARD CS127-45

Effective date for new production six months after official announcement of cessation of hostilities

A RECORDED VOLUNTARY STANDARD OF THE TRADE

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1945

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 10 cents

PROMULGATION

of

COMMERCIAL STANDARD CS127–45

for

SELF-CONTAINED MECHANICALLY REFRIGERATED DRINKING-WATER COOLERS

On November 25, 1943, at the instance of the Water Cooler and Drinking Fountain Manufacturers Association, a proposed commercial standard for self-contained mechanically refrigerated drinking-water coolers was circulated to leading user organizations, Government agencies, distributors, and manufacturers for comment. Following numerous adjustments in the light of that comment, the recommended commercial standard was circulated on April 7, 1945, to the entire trade for written acceptance. Those concerned have since accepted and approved the standard as shown herein, for promulgation by the United States Department of Commerce, through the National Bureau of Standards.

The standard is effective for new production six months after official announcement of cessation of hostilities.

Promulgation recommended.

I. J. Fairchild,
Chief, Division of Trade Standards.

Promulgated.

Lyman J. Briggs,
Director, National Bureau of Standards.

Promulgation approved.

Henry A. Wallace,
Secretary of Commerce.

SELF-CONTAINED MECHANICALLY REFRIGERATED DRINKING-WATER COOLERS

COMMERCIAL STANDARD CS127–45

PURPOSE

1. The purposes of this standard are to establish uniform methods of testing, rating, and designating capacity of self-contained mechanically refrigerated drinking-water coolers; to recommend normal standard size designations; to serve as a means for better understanding between manufacturers, distributors, contractors, and users; and to provide a uniform basis for fair competition and for guaranteeing ratings.

SCOPE

2. This standard provides definitions, general requirements, methods of testing, method of rating, standard rating conditions, recommended normal standard sizes and minimum capacities, and uniform guarantees of ratings of self-contained mechanically refrigerated drinking-water coolers of the insulated storage and instantaneous types, air-cooled or water-cooled. All sizes of water coolers are recognized by this standard, but it is recommended that manufacturers and purchasers work toward the types and normal standard sizes listed in table 1.

TABLE 1.—*Recommended normal standard sizes and minimum capacities*

Type of cooler	Recommended normal standard sizes						
	2	3	5	10	15	20	30
	Minimum capacities in gallons per hour [1]						
Bottle	1.5	2.7					
Pressure bubbler with:							
Air-cooled condenser		2.7	4.5	9	13.5	18	
Water-cooled condenser				9	13.5	18	27
Glass-filler (cafeteria) with:							
Air-cooled condenser				9		18	27
Water-cooled condenser				9		18	27

[1] The capacities to be determined under standard rating conditions specified in table 2.

DEFINITIONS

3. *Ambient temperature* is the average temperature of the atmosphere surrounding the drinking-water cooler.

4. *Standard capacity rating, gallons per hour,* of a drinking-water cooler is the number of gallons per hour cooled under the test conditions specified in paragraph 17 and table 2.

5. *Standard peak-draw capacity rating in gallons* is the quantity of cooled drinking water which may be withdrawn when the drinking-water cooler is operated under the specified test conditions, as described in paragraph 24.

6. *Capacity, storage* is the quantity of cooled drinking water in gallons contained in the insulated storage tank of the drinking-water cooler.

7. *A mechanically refrigerated drinking-water cooler* is a device for cooling drinking water by means of mechanical refrigeration.

8. *A self-contained drinking-water cooler* consists essentially of a cooling unit or primary and secondary cooling units (usually provided with a storage tank) for cooling drinking water, a mechanical condensing unit that may be air-cooled or water-cooled or air-and-water-cooled, a device for drawing the cooled water and a drain for the unconsumed water, all enclosed in the same case or container.

9. *Standard performance factor* of a drinking-water cooler is the ratio of its energy input to capacity, expressed in kilowatt hours per gallon of water cooled, when it is operated under the test conditions specified in paragraph 17 and table 2.

10. *Precooling* is the use of waste drain water from pressure-bubbler coolers to precool the water flowing into the cooling unit. A heat exchanger for this purpose is called a precooler.

11. *Standard condenser water consumption rating* of a drinking-water cooler is the total number of gallons of water per hour required for cooling the condensing unit when it is operated under the test conditions specified in paragraph 17 and table 2.

12. *Standard power input rating* of a drinking water cooler is its total power input in watts when it is operated under the test conditions specified in paragraph 17 and table 2.

GENERAL REQUIREMENTS

SAFETY

13. *Safety standards.*—The drinking-water cooler shall meet the safety standards of Underwriters' Laboratories, Inc., Standard for Unit Refrigerating Systems; Standard for Air-Conditioning and Commercial Refrigerating Equipment (both subj. 207), December 1941; Standard for Industrial Control Equipment, July 1938, and subsequent revisions.

13a. Listing by Underwriters' Laboratories, Inc. of the particular make, model, and size of drinking-water cooler, as shown by the markings on the cooler and published by Underwriters' to announce such listing, shall be accepted as evidence of compliance with this safety requirement. This does not preclude as acceptable, tests by other independent laboratories.

RATING

14. *Determination.*—Standard ratings of drinking-water coolers shall be determined by laboratory tests made under the specified test conditions described in the section on Methods of Test.

14a. *Use of precoolers.*—Drinking-water coolers that are equipped with precoolers shall be tested and rated with and without precoolers.

15. *Publication of ratings and data.*

15a. *Standard capacity ratings.*—Standard capacity ratings of drinking-water coolers rated according to the requirements of this standard shall be published to the nearest 0.1 gallon per hour.

15b. *Published standard capacity ratings* shall include the following information and a statement indicating that they are in accordance with this standard:

1. Standard capacity rating with precooler when used.
2. Standard capacity rating without precooler.
3. Standard peak-draw capacity.
4. Standard power input.
5. Standard condenser water consumption (for water-cooled condensers).
6. Appropriate rating conditions as detailed in table 2.

15c. *Published application ratings and data.*—Ratings at conditions other than those specified in this standard shall be considered as application ratings. Published application ratings shall include the following:

1. Capacity, gallons per hour, to the nearest 0.2 gallon per hour.
2. Storage capacity.
3. Ambient temperature.
4. Drinking water temperatures, ingoing and outgoing.
5. Refrigerant used.
6. Electric current used (kind, voltage, frequency, phases).
7. Power input and/or performance factor.
8. Condenser water temperatures, ingoing and outgoing.
9. Condenser water consumption (for water-cooled condensers).

DETAIL REQUIREMENTS

STANDARD EQUIPMENT

16. Drinking-water coolers conforming to this standard shall include, where applicable, the standard equipment shown below, which shall conform to the minimum specifications as outlined therein.

16a. *Cabinet or frame and housing.*—The operating parts shall be adequately supported in a cabinet or frame and housing, finished to resist corrosion. The cabinet or enclosure shall provide easy access for service and maintenance of the operating parts.

16b. *Refrigeration condensing unit* shall comprise the following minimum component parts:

1. Compressor.
2. Motor and drive assembly.
3. Condenser (air-cooled or water-cooled).
4. Water-regulating valve for water-cooled condensers.
5. Liquid receiver tank where used (may be combined with condenser.)

16c. *Evaporator or low side assembly* may be either of instantaneous or storage type; shall be protected against corrosion and damage resulting from freezing when operating at an ambient temperature above 32° F.

16d. *Temperature- or pressure-actuated cycling control* shall be adjustable and capable of maintaining a drinking-water temperature of 50° ±5° F.

16e. *Precooler and/or waste assembly* shall provide a closed drain with no restrictions below that of a ¾-inch outside diameter tube with 0.042-inch wall thickness. It shall be protected inside and outside against corrosion. The waste opening shall be provided with a strainer.[1]

The precooler and waste assembly shall have no internal traps or cross connections between waste-water drains and drinking-water circuits.

16f. *Top or bowl* shall provide a drain basin with a sanitary acid-resisting [2] surface, so designed and proportioned as to be free from corners that would be difficult to clean or that would collect dirt. The bowl should be so proportioned as to prevent unnecessary splashing at a point where the jet falls into the bowl (see footnote 1).

16g. *Bubbler.*—The jet of the fountain shall issue from a nozzle of nonoxidizing, impervious material set at an angle from the vertical such as to prevent the return of water in the jet to the orifice or orifices from which the jet issues. The nozzle and every other opening in the water pipe or conductor leading to the nozzle shall be at least ¾-inch above the overflow level of the bowl, (ASA Standard A40.4–1942, par. 29), so that such nozzle or opening will not be flooded in case a drain from the bowl of the fountain becomes clogged. The inclined jet of water issuing from the nozzle shall not touch the guard and thereby cause spattering (see footnote 1).

16h. *Guard.*—The end of the nozzle shall be protected by nonoxidizing guards to prevent the mouth and nose of persons using the fountain from coming into contact with the nozzle. Guards should be so designed that the possibility of transmission of infection by touching the guards is reduced to a minimum (see footnote 1.)

16i. *Cord and attachment plug.*—A minimum of 6 feet of approved flexible two-wire cord shall extend beyond the cabinet with a suitable two-prong attachment plug of an approved type, for use on current of less than 150 volts to ground in accordance with requirements of the National Board of Fire Underwriters. The cord shall be protected to prevent abrasion at the entrance to the cabinet and shall be provided with adequate strain relief. This shall not apply to Navy, explosion-proof, cafeteria, or other water coolers requiring conduit connection or equipped for direct connection to the electric-supply circuit by means of rigid conduit or other form of metallic raceway.

16j. *Other standard equipment shall include:*

1. Refrigerant as specified in paragraph 18.
2. Refrigerant flow control.
3. Stream-height regulator.
4. Bubbler valve (on and off).
5. Adequate insulation of all cold surfaces not suitably drained (to reduce heat leakage and prevent sweating).
6. Inlet water connection ⅜-inch pipe thread, male or female, for sizes to and including 20 gallons per hour; ½-inch pipe thread, male or female, for sizes 30 and 40 gallons per hour.
7. Waste connection 1¼-inch pipe thread, male or female.

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[1] U. S. Public Health Service Mimeographed Form B–135, Essential Features in the Design of Sanitary Drinking Fountains. Also ASA Spec. Z4.2–1942, Drinking Fountains.

[2] See paragraph 5b of CS77–40.

16k. *Glass-filler type coolers.*—Cafeteria- or glass-filler-type coolers shall be equipped with self-closing glass fillers of a nonoxidizing, impervious material in lieu of bubblers and guards.

16l. *Bottle-type cooler.*—Bottle-type coolers shall be suitable for use with a 5-gallon inverted bottle. (The bottle shall not be furnished.) The water-cooling chamber shall be accessible for cleaning. The following equipment shall be furnished: (1) Bottle bumper, (2) a self-closing faucet, and (3) a waste receptacle, in lieu of equipment specified in paragraphs 16e, 16f, 16g, 16h, 16j (3), 16j (4), and 16k above.

RATING CONDITIONS

17. *Standard capacity-rating conditions.*—Conditions specified for standard ratings of the various types of self-contained mechanically refrigerated drinking-water coolers are enumerated in table 2.

TABLE 2.—*Standard capacity-rating conditions*

[Self-contained mechanically refrigerated drinking-water coolers]

Type (air- or water-cooled)	Bottle	Pressure-bubbler types [1]		Cafeteria or glass-filler types [2]	
	Air	Air	Water	Air	Water
	°F	°F	°F	°F	°F
Ambient temperature	90	90	90	90	90
Drinking-water temperature:					
Ingoing	90	80	80	80	80
Outgoing	50	50	50	50	50
Condensing medium temperature:					
Air-cooled	90	90	----------	90	----------
Water-cooled—					
Ingoing	----------	----------	80	----------	80
Outgoing	----------	----------	100	----------	100
Power supply	115 or 230 volts 60 cycles alternating current				

[1] When rated with precooler, 60 percent of delivered water shall be diverted through precooler.
[2] Cafeteria and glass-filler types are rated without precoolers.

18. *Refrigerant.*—Refrigerants used shall be of group 1 classification according to ASRE Circular No. 15, ASA B9–1939, American Standard Safety Code for Mechanical Refrigeration, list of which is reproduced below, or methyl chloride (CH_3Cl), or sulfur dioxide (SO_2).

Group 1	*Chemical formula*
Carbon dioxide	CO_2
Dichlorodifluoromethane (Freon 12)	CCl_2F_2
Dichloromonofluoromethane (Freon 21)	$CHCl_2F$
Dichlorotetrafluoroethane (Freon 114)	$C_2Cl_2F_4$
Dichloromethane (Carrene No. 1) (methylene chloride)	CH_2Cl_2
Trichloromonofluoromethane (Freon–11) (Carrene No. 2)	CCl_3F

PEAK RATING

19. *Standard peak-draw capacity rating* shall be as determined under test conditions stated in paragraph 24.

MAXIMUM OPERATING TEST

20. *Objective.*—To provide a safety factor above the standard capacity rating conditions, a maximum operating test shall be required. This test shall be made as described in paragraphs 21 and 25.

21. *Maximum operating test conditions.*—Conditions specified for the maximum operating test shall be as given in table 3, with the flow of drinking water adjusted to give continuous operation of the condensing unit.

TABLE 3.—*Maximum operating test conditions*

	Bottle cooler	All other types	
		Air-cooled	Water-cooled
	°F	°F	°F
Ambient temperature	110	110	110
Drinking water temperature:			
Ingoing	110	100	100
Outgoing	50	50	50
Condensing-water temperature:			
Ingoing	----------	----------	100
Outgoing	----------	----------	120

METHODS OF TEST

RATING TESTS

22. *Adjustments.*—The equipment may be adjusted before starting the complete series of prescribed tests. Thereafter no adjustments may be made except of thermostat and the drinking-water flow rate.

23. *Standard capacity rating test.*—The standard capacity rating shall be determined in accordance with the method described in sections 2.10 through 4.21 of ASRE Circular No. 18, Standard Methods of Rating and Testing Self-Contained Mechanically Refrigerated Drinking Water Coolers.

24. *Standard peak-draw capacity test.*—(For pressure-bubbler and cafeteria or glass-filler types).

24a. *Test conditions for standard peak-draw capacity rating.*—The drinking-water cooler shall be operated with the ambient, drinking-water and condensing-water temperatures, and amount of delivered water diverted through precooler, as specified in paragraph 17 and table 2. For determining the standard peak-draw capacity rating, self-contained mechanically refrigerated drinking-water coolers shall be tested in accordance with the *methods* described in ASRE Circular No. 18.

24b. *Test procedure for standard peak-draw capacity rating.*—When the refrigerating unit cuts out on one of its normal cycles, cooled

drinking water shall be withdrawn during a 15-minute period into a suitable container, as follows:

1. At a rate of not less than ½ gallon per minute, per bubbler, or glass filler.
2. In not less than three nor more than six equal intervals, per gallon of standard capacity rating.
3. The temperature of the water withdrawn shall be not less than 45° F, nor exceed 55° F during the 15-minute interval.

All the water drawn during the 15-minute test period shall be collected in a measuring receptacle, and the total flow, including the water diverted through the precooler, shall be measured and reported as "standard peak-draw capacity."

MAXIMUM OPERATING TEST

25. Drinking-water coolers shall be operated continuously for 8 hours under the maximum operating test conditions listed in paragraph 21 and table 3. The maximum operating test shall be conducted in conformance with *methods* of test described in ASRE Circular No. 18. Under these conditions drinking-water coolers shall operate without breakdown, and the motor shall operate in accordance with the specifications of the motor manufacturer and in accordance with the requirements of the Underwriters' Laboratories, Inc.

TEST REPORT

26. The report on the laboratory tests of self-contained mechanically refrigerated drinking-water coolers shall include the data given in table 4, and shall preferably be in a form similar to that shown.

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TABLE 4.—*Laboratory report on tests of self-contained mechanically refrigerated drinking-water coolers*

Identification Data:

1. Manufacturer or distributor _____

2. Model or catalog number _____ 3. Serial number _____

4. Type _____
(Bottle, pressure, or glass filler)

5. Storage- or instantaneous-type evaporator _____

6. Storage capacity, gallons _____ 7. Precooler furnished: Yes ____ No ____

8. Refrigerant name _____ Amount _____

9. Number of bubblers _____ Glass fillers _____ Faucets _____

10. Motor data: Make _____ Type _____ Volts _____ F. L. Amps _____

Kind of current _____ Frequency _____ Phases _____
(ac or dc)

Test Data:

STANDARD CAPACITY-RATING TEST

1. Ambient temperature ____ ° F.

DRINKING WATER—

2. Temperature, ingoing, ____ ° F.

3. Temperature, outgoing, ____ ° F.

4. Total quantity cooled, gal/hr.

5. Quantity through precooler, gal/hr.
(If provided and used.)

COOLING WATER (WATER-COOLED COOLERS)—

6. Temperature, ingoing, ____ ° F.

7. Temperature, outgoing, ____ ° F.

8. Total quantity cooling water, gal/hr.

POWER INPUT—

9. Volts at motor-service connection ____.

10. Watts input to water cooler ____.

STANDARD PEAK-DRAW CAPACITY TEST

11. Ambient temperature ____ ° F.

12. Total quantity withdrawn, gallons (in 15-minute interval).

DRINKING WATER—

13. Temperature, ingoing, ____ ° F.

14. Temperature, outgoing, ____ ° F (min).

15. Temperature, outgoing, ____ ° F (max).

MAXIMUM OPERATING TEST

16. Ambient temperature ____ ° F.

DRINKING WATER—

17. Temperature, ingoing, ____ ° F.

18. Temperature, outgoing, ____ ° F.

COOLING WATER (WATER-COOLED COOLERS)—

19. Temperature, ingoing, ____ ° F.

20. Temperature, outgoing, ____ ° F.

21. Is operation in accord with paragraph 25, this standard?

STANDARD TEST RESULTS FOR PUBLICATION

A. Standard capacity rating with precooler_____ ____ gal/hr.

B. Standard capacity rating without precooler_____ ____ gal/hr.

C. Standard peak-draw capacity_____ ____ gal.

D. Standard power input_____ ____ watts.

E. Standard condenser water consumption (for water-cooled coolers)_____ ____ gal/hr.

All readings for these standard capacity-rating tests shall be taken every 15 minutes; except the outlet drinking-water temperatures during intermittent draws, which shall be taken during each draw and except inlet drinking-water temperatures which, in the case of the bottle water coolers, need to be taken only at the beginning of the test and when a bottle is replaced. The test shall be continued until eight successive readings are within the allowable limits given in ASRE Circular No. 18, paragraph 4.11 through paragraph 4.20.

27. Readings for the maximum operating test shall be taken every hour, and temperatures shall be held to within $\pm 1°$ F of the test conditions specified in paragraph 21 and table 3.

MANUFACTURER'S DATA LABEL AND GUARANTEE

28. In order that purchasers of self-contained mechanically refrigerated drinking-water coolers may be assured that a sample of each type and size has been tested and rated according to the requirements of this standard, a manufacturer's data label identifying the cooler as to type and capacity (manufacturer's model number will suffice), and a statement similar to the following, shall be attached to each drinking-water cooler:

> This drinking-water cooler complies with the requirements of CS127–45, as issued by the National Bureau of Standards, United States Department of Commerce.

EFFECTIVE DATE

29. The standard is effective for new production 6 months after official announcement of cessation of hostilities.

APPENDIX

MANUFACTURER'S RECOMMENDATION FOR INSTALLATION

The manufacturers recommend that every drinking-water cooler, which requires a physical connection to a waste pipe, be connected to the inlet side of a fixture trap of not less than 1¼ in. size (nominal inside diameter), installed outside the cabinet or enclosure.

DRINKING WATER REQUIREMENTS FOR VARIOUS TYPES OF SERVICE

Table 5 is recommended for determining the amount of water required for different classes of service.

TABLE 5.—*Drinking-water requirements*

Type of service	Delivered water temperature	Gallons per hour per person (except as noted)	Waste and consumption per person per hour, ounces (liquid)	Consumption only per person per hour, ounces (liquid)	People served per gallon
Office:	°F				
Cup	45 to 50	0.033	4.2	4.2	30
Bubbler	45 to 50	0.083	10.5	4.2	12
Light manufacturing	45 to 50	0.143	18.3	7.32	7
Heavy manufacturing	50 to 55	0.20	25.6	10.24	5
Hot heavy manufacturing	55 to 60	0.25	32.0	12.8	4
Restaurant [1]	40 to 45	0.1			
Cafeteria [1]	40 to 45	0.083			
Soda fountain	40 to 45	0.5 (gal/hr)/seat.			
Theater:					
Movie	45 to 50	1.0 (gal/hr)/100 seats.			
Legitimate [1]	45 to 50	1.0 (gal/hr)/100 seats continuous capacity. Each fountain shall have storage capacity to provide 5 gallons in 10 minutes.			
Schools	45 to 50	Same as office.			
Hospitals:					
A	45 to 50	0.083 (gal/hr)/bed.			
B	45 to 50	0.083 (gal/hr)/attendant.			
Hotels	45 to 50	0.08 (gal/hr)/room.			
Public fountains, amusement parks, fairs, etc.	45 to 50	20 to 35 (gal/hr)/fountain.			
Department stores, hotel, and office building lobbies.	45 to 50	4 to 5 (gal/hr)/fountain.			

[1] Special consideration should be given to peak-load demands for this application.

STANDING COMMITTEE

30. The following individuals comprise the membership of the standing committee, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Comment concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Division of Trade Standards, National Bureau of Standards, which acts as secretary for the committee.

Manufacturers:

Lee C. Love (chairman), The Ebco Manufacturing Co., 401 W. Town Street, Columbus 8, Ohio.

C. M. Cordley, Cordley & Hayes, 443 Fourth Avenue, New York 16, N. Y.

C. E. Ehrenhardt, Commercial Engineering Division, General Electric Co., 5 Lawrence Street, Bloomfield, N. J.

H. F. Hildreth, Air Conditioning & Commercial Refrigeration Dept., Westinghouse Electric Corporation, 653 Page Boulevard, Springfield, Mass.

A. A. Zollo, Filtrine Manufacturing Co., 53 Lexington Avenue, Brooklyn 5, N. Y.

Distributors:

RICHARD L. HUGHES, Electric Products, Inc., 106 Nelson Avenue, Jersey City 7, N. J.

J. D. PHELAN, Refrigeration Division, Nathan Straus-Duparquet, Inc., 630 Sixth Avenue, New York, N. Y.

WALTER KELLY, Thompson Water Cooler Co., 832 Commonwealth Avenue, Boston 15, Mass.

P. K. CRAWFORD, Alamo Refrigeration Co., 1401 N. Laredo Street, San Antonio 2, Tex.

Users:

Everett W. Jones, The Modern Hospital Publishing Co., 919 N. Michigan Avenue, Chicago 11, Ill. (Representing American Hospital Association.)

National Association of Purchasing Agents, 11 Park Place, New York 7, N. Y. (Invited to name a representative.)

W. J. Madden, Electrical Engineer's Department, The Pennsylvania Railroad, Room 507, 15 No. Thirty-second Street, Philadelphia 4, Pa.

A. R. Horn, Office of Supervising Architect, Federal Works Agency, Public Buildings Administration, Room 5327 Federal Works Agency Building, Washington 25, D. C.

General Interests:

James J. Corey, Refrigeration Development Corporation, 89-35 Queens–Boulevard, Elmhurst, Long Island, N. Y. (Representing American Society of Refrigerating Engineers.)

American Institute of Refrigeration, 433 N. Waller Avenue, Chicago 44, Ill. (Invited to name a representative.)

Glenn Muffly, 132 S. Kensington Place, Springfield, Ohio.

HISTORY OF PROJECT

31. On October 29, 1942, the Water Cooler and Drinking Fountain Manufacturers Association requested the cooperation of the National Bureau of Standards in the establishment of a commercial standard for mechanically refrigerated drinking-water coolers. Following preliminary manufacturers' conferences, February 4, May 14, and November 11, 1943, a draft of the proposed commercial standard was submitted on November 25, 1943, to distributors, users, Government agencies, and others for advance comment.

32. Conferences to adjust the draft on the basis of this comment were held, April 12 and December 14, 1944. The revised draft as thus adjusted was circulated April 7, 1945, to the entire trade for written acceptance, as it appeared that there was substantial approval of the draft, and the situation did not seem to warrant a general conference under wartime emergency conditions.

33. Upon receipt of acceptances in writing from a satisfactory majority of the production volume of the industry, and in the absence of any active, valid opposition, announcement was issued on June 26, 1945, that the standard would become effective for new production six months after official announcement of the cessation of hostilities.

ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this commercial standard.

Date _____

Division of Trade Standards,
National Bureau of Standards,
Washington 25, D. C.

Gentlemen:

We believe that the Commercial Standard CS127–45 constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

Production [1] Distribution [1] Purchase [1] Testing [1]

of self-contained mechanically refrigerated drinking-water coolers.

We reserve the right to depart from it as we deem advisable.

We understand, of course, that only those articles which actually comply with the standard in all respects can be identified or labeled as conforming thereto.

Signature of authorized officer _____
(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer _____

Organization _____
(Fill in exactly as it should be listed)

Street address _____

City, zone, and State _____

[1] Underscore which one. Please see that separate acceptances are filed for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade associations, trade papers, etc., desiring to record their general support, the words "general support" should be added after the signature.

(Cut on this line)

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices and the like.

2. *The acceptor's responsibility.*—The purpose of commercial standards is to establish for specific commodities, nationally recognized grades or consumer criteria and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the commercial standard where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of commercial standards on a Nation-wide basis is fourfold: first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

34. The organizations listed below have individually accepted this standard for use as far as practicable in the production, distribution, testing, or purchase of self-contained mechanically refrigerated drinking water coolers. In accepting the standard they reserved the right to depart therefrom as they individually deem advisable. It is expected that articles which actually comply with the requirements of this standard in all respects will be regularly identified or labeled as conforming thereto, and that purchasers will require such specific evidence of conformity.

ASSOCIATIONS

(General Support)

American Association of Engineers, Chicago, Ill.
National Association of Master Plumbers, New York, N. Y.
Refrigeration Service Engineers Society, Central Connecticut Chapter, Hartford, Conn.
Refrigeration Service Engineers Society, Philadelphia Chapter, Philadelphia, Pa.
Refrigeration Service Engineers Society, Scranton Chapter, Scranton, Pa.
Refrigeration Service Engineers Society, Southern Ohio Chapter, Portsmouth, Ohio.

FIRMS

Aetna Supply Co., New York, N. Y.
Allen Refrigerating Co., Allentown, Pa.
Anchor Billiard & Bowling Co., Inc., Charleston, W. Va.
Arball Refrigeration Supplies, Fresno, Calif.
Atchison, Topeka & Santa Fe Railway, Chicago, Ill.
Automatic Heating & Cooling Supply, Chicago, Ill.
Bader Supply Co., Tulsa, Okla.
Bader's Sales & Service, New Brunswick, N. J.
Baltimore, City of, Bureau of Plans & Surveys, Baltimore, Md.
Berks Engineering Co., Reading, Pa.
Better Living Co., Jackson, Miss.
Binder Co., T. W., Newark, N. J.
Blons & Co., M. J., Chicago, Ill.
Bluefield Supply Co., Bluefield, W. Va.
Boling Co., Cecil, New York, N. Y.
Borden Co., A. E., Boston, Mass.
Borg-Warner Corporation, Norge Division, Detroit, Mich.
Boston Filter Co., Inc., Charlestown, Mass.
Boston & Maine Railroad, Boston, Mass.
Bowers Wholesale Corporation, Norfolk, Va.
Bramhall Deane Co., New York, N. Y.
Brunner Manufacturing Co., Utica, N. Y.
California Consumers Corporation, Los Angeles, Calif.
California Refrigerator Co., San Francisco, Calif.
Capital Electric Co., Topeka, Kans.
Chicago & Eastern Illinois Railroad, Chicago, Ill.
Chicago Faucet Co., The, Chicago, Ill.
Chicago, Milwaukee, St. Paul & Pacific Railroad Co., Chicago, Ill.
Clark's Store Fixtures, Flint, Mich.
Coghlin Electric Co., Worcester, Mass.
Commercial Appliance Co., Greensburg, Pa.
Commercial Refrigeration Co., St. Paul, Minn.
Commercial Refrigeration Sales, Flint, Mich.
Commercial Refrigeration Service Co., Brooklyn, N. Y.
Connecticut Electric Equipment Co., Inc., Meriden, Conn.
Continental Air Lines, Inc., Denver, Colo.
Copeland Refrigeration Corporation, Sidney, Ohio.
Cordley & Hayes, New York, N. Y.
Crescent Electric Supply Co., Sioux City, Iowa.
Crump Co., Inc., B. T., Richmond, Va.
Culver Co., S. K., Chicago, Ill.
Dakota Electric Supply Co., Fargo, N. Dak.
Danforth Co., Pittsburgh, Pa.
Day & Night Manufacturing Co., Monrovia, Calif.
Delta Hardware Co., Escanaba, Mich.
Dennis Refrigeration Supply, Des Moines, Iowa.
Detroit, University of, Detroit, Mich.
Dick & Co., Inc., Henry V., Charlotte, N. C.
Driscoll, Inc., L. W., Charlotte, N. C.
Ebco Manufacturing Co., Columbus, Ohio.
Eklof & Co., Harry S., Baltimore, Md.
El Paso Testing Laboratories, El Paso, Tex.
Elliott-Lewis Electrical Co., Inc., Philadelphia, Pa.
Eoff Electric Co., Salem, Oreg.
Equitable Equipment Co., Inc., New Orleans, La.
Ever-Ready Refrigeration Co., Trenton, N. J.
Famous & Barr Co., St. Louis, Mo.
Filtrine Manufacturing Co., Brooklyn, N. Y.
Fleetwood Distributing Co., Newark, N. J.
Florida, University of, Gainesville, Fla.
Graffin Paper & Scale Co., Graffin Refrigeration Co. Division, Worcester, Mass.
Ganteaume & McMullen, Boston, Mass.
General Electric Co., Schenectady, N. Y.
General Electric Supply Corporation, Dallas, Ft. Worth, Abilene, and El Paso, Tex.
General Electric Supply Corporation, Hartford, Conn.
General Electric Supply Corporation, Louisville, Ky.
General Electric Supply Corporation, Milwaukee, Wis.
General Electric Supply Corporation, New Orleans, La.
General Electric Supply Corporation, Newark, N. J.
General Electric Supply Corporation, Tampa, Fla.
General Refrigeration Service Co., Richmond, Va.
Gennett & Sons, Inc., Richmond, Ind.
Georgia & Florida Railroad, Augusta, Ga.
Georgia School of Technology, Atlanta, Ga.
Giessel Co., Henry, Chicago, Ill.
Hallmark Laboratories, The, Jamestown, N. Y.
Harris & Son, B. F., Grand Rapids, Mich.
Haws Drinking Faucet Co., Berkeley, Calif.
Herrel & Sons, John, Columbus, Ohio.
Hires Co., The Charles E., Philadelphia, Pa.
Hoffman Supply Co., Springfield, Mo.
Holder & Co., Inc., George A., Lynchburg, Va.
Home Electric Co., Tacoma, Wash.
Humphreys Co., H. E., Concord, N. H.
Interstate Electric Co. of Shreveport, Inc., Shreveport, La.
Jarrow Products, Chicago, Ill. (General support.)
Jarvis Engineering Co., South Boston, Mass.
Johnson-Salisbury, Inc., New York, N. Y. (General support.)
Kansas City Southern Railway Co., The, Kansas City, Mo.
Kansas State College, Manhattan, Kans.
Kaufman Store, Inc., The, Richmond, Va.
Kerotest Manufacturing Co., Pittsburgh, Pa.
Keystone Engineering Corporation, Chicago, Ill.
Kiefer Associates, Inc., Carl J., Cincinnati, Ohio.
Kroger Grocery & Baking Co., Cincinnati, Ohio.
Langsenkamp Co., F. H., Indianapolis, Ind.
Lee Co., Emory D., Pensacola, Fla.
Legasse Refrigeration Co., Boston, Mass.
Louisville & Nashville Railroad Co., Louisville, Ky.
Lowry Electric Co., Inc., Williamsport, Pa.
Marquette Equipment Co., Peoria, Ill.
Marsden & Wasserman, Hartford, Conn.

Marson & Associates, Robert C., Portland, Oreg.
Mayson Manufacturing Co., Detroit, Mich. (General support.)
McCall Corporation, New York, N. Y.
Mideke Supply Co., Oklahoma City, Okla.
Midwest Refrigeration & Fixture Co., Wichita, Kans.
Miller & Seddon Co., Inc., Cambridge, Mass.
Mills Industries, Inc., Chicago, Ill.
Montgomery & Crawford, Inc., Spartanburg, S. C.
Mowat Refrigerators, John, San Francisco, Calif.
Muffly, Glenn, Springfield, Ohio. (General support.)
National Airlines, Inc., Jacksonville, Fla.
Neisler Refrigeration Service, R. W., Fort Smith, Ark.
New Mexico College of Agriculture & Mechanic Arts, State College, N. Mex. (General support.)
New Orleans, Inc., Better Business Bureau of, New Orleans, La. (General support.)
Newark College of Engineering, Newark, N. J.
O'Bannon Bros., Little Rock, Ark.
Oklahoma A. & M. College, Civil Engineering Dept. & Civil Engineering Testing Laboratories, Stillwater, Okla.
Ohio State University, Columbus, Ohio.
Oregon State College, Corvallis, Oreg.
Osborn Engineering Co., The, Cleveland, Ohio.
Osmon Refrigeration Co., F. F., Washington, Ind.
Pascal Co., Roy S., Maplewood, N. J.
Pennsylvania Railroad Co., Philadelphia, Pa.
Perfex Corporation, Milwaukee, Wis.
Perrin, Howard R., Klamath Falls, Oreg.
Pine Hill Crystal Spring Water Co., New York, N. Y.
Pittsburgh Case Sales Co., Pittsburgh, Pa.
Puro Filter Corporation of America, New York, N. Y.
Ranco, Inc., Columbus, Ohio
Rawlings-Todd Co., Gastonia, N. C.
Refrigeration Corporation of America, New York, N. Y.
Refrigeration Development Corporation, Elmhurst, N. Y.
Refrigeration Economics Co., Inc., Canton, Ohio.
Refrigeration Engineering & Electric Co., Springfield, Ohio.
Refrigeration Maintenance Corporation, Chicago, Ill.
Refrigeration Maintenance Corporation, Cleveland, Ohio.
Refrigeration Service Co., Denver, Colo.
Refrigeration Supplies, Cleveland, Ohio.
Refrigeration Supplies Distributor, Los Angeles, Calif.
Refrigerative Supply, Seattle, Wash.
Safety Appliance Co., Buffalo, N. Y.
Saint Joseph Light & Power Co., Saint Joseph, Mo.
Saunders, Inc., Kerby, New York, N. Y.
Schuld Refrigeration Service, Cleveland, Ohio.
Servel, Inc., Evansville, Ind.
Simon's Refrigeration Equipment Co., New York, N. Y.
Southern Railway Co., Washington, D. C.
Standard Brass & Manufacturing Co., Houston, Tex.
Stevens Institute of Technology, Hoboken, N. J.
Taylor Co., The Halsey W., Warren, Ohio.
Teague Hardware Co., Montgomery, Ala.
Tecumseh Products Co., Tecumseh, Mich.
Temprite Products Corporation, Detroit, Mich.
Tennessee, University of, Engineering Experiment Station, Knoxville, Tenn.
Thermal Co., Inc., Saint Paul, Minn.
Thompson Water Cooler Co., Boston, Mass.
Torrington Manufacturing Co., The, Torrington, Conn.
Trenton Brass & Machine Co., Trenton, N. J.
Tufts College Engineering School, Medford, Mass.
Twin City Testing & Engineering Laboratory, St. Paul, Minn.
Twining Laboratories, The, Fresno, Calif.
Uniflow Manufacturing Co., Erie, Pa.
Union Supply Co., Pittsburgh, Pa.
United States Testing Co., Inc., Hoboken, N. J. (General support.)
Victor Sales & Supply Co., Philadelphia, Pa.
Virginia Smelting Co., W. Norfolk, Va. (General support.)
WGY Refrigeration Co., Schenectady, N. Y.
Washington, University of, Seattle, Wash.
Weisselberg, A., New York, N. Y.
Westinghouse Electric Corporation, Mansfield, Ohio.
Westland Engineering Supply Co., Chicago, Ill.
Whitney & Co., San Diego, Calif.
Williams & Co., Inc., Pittsburgh, Pa.
Wiliams Oil-O-Matic Heating Corporation, Bloomington, Ill.
Wright Co., Inc., Atlanta, Ga.

U. S. GOVERNMENT

Agriculture, U. S. Department of, Washington D. C.
Federal Public Housing Authority, Washington, D. C.
War Department, Washington, D. C.