

AMERICAN-Standard

*Hydronic Heating Equipment trade price book

HH-1

JULY 5, 1960

*Hydronics . . . the science of heating and cooling with water.

notice:

The Trade Prices
shown herein do not
include freight or cartage.

	PAGE
GENERAL INFORMATION	2-3
Boilers:	
Gas—Packaged Units	4 & 6
Boilers Only	5, 7-14
Oil—Packaged Units	16
Boiler—Burner Units	17-28
Boilers Only	18-28
Stoker Boilers	32-34
Hand fired Boilers	35-37
Radiation:	
Baseboard Panels — Radiantrim	39
— Heatrim	40-41
Convectors — Multifin	42-44
— Arco	45
— Cabinet Extras	46
Radiators — Arco, Sunrad, Peerless	38-39
Remotaire Units	47
Oil Burners and Controls	30-31
Zone Control Sets	31
Gas Conversion Burners	15
Built-In Water Heaters	29
Repair Parts Discounts	2
Sales Offices	48



AMERICAN-Standard

PLUMBING AND HEATING DIVISION

AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

**PLAINTIFF'S
EXHIBIT**

As I. 328

00863

AMERICAN-Standard

HYDRONIC HEATING

TERMS

TRADE PRICE BOOK

Illustrations and descriptions of Plate Numbers listed in this price book will be found in the current American-Standard Heating-Cooling Products Catalog and literature. Items illustrated in product literature and not included in this price book are discontinued. The illustrations in this price book although actual representations of certain products in the line, do not necessarily show sizes and details of all products in the line.

This book contains suggested Trade Prices for certain Hydronic Heating products sold by American Radiator & Standard Sanitary Corporation ("American-Standard") through its Plumbing and Heating Division. (American-Standard acting through that Division is hereinafter referred to as the "Seller"). The Seller assumes no obligation to sell to anyone at any price any of the items listed herein.

All prices herein set forth supersede all prior price lists and are subject to change without notice. The Seller may also, from time to time, discontinue without notice the sale of any of the products listed herein.

INVOICE MINIMUM

An order for items for which invoice prices aggregate less than \$1.00 will be billed at \$1.00.

TERMS AND CONDITIONS APPLYING TO ALL SALES OF GOODS BY AMERICAN-STANDARD THROUGH ITS PLUMBING AND HEATING DIVISION

All sales of goods by American-Standard through its Plumbing and Heating Division are made subject to terms and conditions printed below, in its bulletins and on its acknowledgment of order, invoice and quotation forms. These terms and conditions are as follows:

PRICE

Goods sold by the Seller will be billed to the Buyers according to the prices and terms contained in its current bulletins and price books. In the case of orders for goods for which no price is currently in effect, the price will be determined by the Seller and set forth in the invoice issued after shipment of the goods.

Taxes. Any tax or other Government charge now or hereafter levied upon the production, sale, use or shipment of goods ordered or sold, will be charged to and paid for by the Buyer.

DELIVERY

Transportation Risks. Delivery to the initial carrier shall constitute delivery to the Buyer. The Seller's responsibility ceases upon delivery in good order to such carrier, and all goods are shipped at the Buyer's risk.

The Buyer is urged to examine all deliveries carefully before signing transportation receipts. If goods are visibly damaged, the Buyer should insist that written confirmation of the damage be noted on the freight bill or dray ticket by the agent of the carrier. If damage is discovered after unpacking, the carrier should be notified at once, so that inspection can be made and the claimed damage substantiated by the carrier.

Interference with Delivery. The Seller has no obligation to deliver goods against any order until it has accepted the order by issuance of its acknowledgment of order. In any event, the Seller will not be liable for any delay or failure in the delivery or shipment of goods against an accepted order or for any damages suffered by reason thereof, when such delay or failure is, directly or indirectly, due to accident (in manufacture or otherwise), fire, flood, riot, war, embargo, labor stoppages, inadequate transportation facilities, shortage of material or supplies, delay or default on the part of its vendors, regulation by Government authority, or any like or dissimilar cause or causes beyond its control.

WARRANTY

Except where a different express written warranty has been issued with respect to particular products, no warranty, express or implied, is extended by the Seller to any person or persons other than its distributors and other direct Buyers. To direct Buyers, the Seller warrants only that it will furnish by freight a replacement for, or at its option repair, any product of its manufacture or part or portion thereof, proved to its satisfaction to be defective in material or workmanship under normal use and service within one year after installation. The Seller will not be responsible for any damages whatsoever, or for labor expense, in connection with the replacement of defective products or parts or portions thereof.

This warranty is in lieu of all other warranties, express or implied, and of all other obligations or liabilities, on the part of the Seller. The Seller neither assumes nor authorizes any other person to assume for it any other liabilities in connection with the sale of its products except in the case of express warranties which may be issued by it in writing from time to time with respect to particular products.

Goods of other manufacturers sold by the Seller are not warranted except by express warranties which may be issued in writing from time to time, with respect to particular products or particular sales, but the Seller will endeavor to secure for its direct Buyers the benefits of warranties extended by the manufacturers of such goods sold but not manufactured by the Seller.

CONTRACT WITH BUYER

Acceptance of Orders. Orders will be accepted only by the Seller's usual acknowledgment of order containing terms and conditions applicable thereto. No terms and conditions appearing in a Buyer's order that are at variance with the Seller's terms and conditions shall be binding upon the Seller unless specifically agreed to by it in writing. Unless the Seller specifically so agrees in writing in acknowledging any order, any terms and conditions appearing in a Buyer's order contrary to those stated herein and in such acknowledgment of order are to be deemed waived by the Buyer. Receipt by the Buyer of the acknowledgment of order without prompt objection to the terms and conditions therein and herein set forth, constitutes acceptance by the Buyer of such terms and conditions.

Cancellation of Orders. After the Seller's acknowledgment of order has been issued, an order may be modified or cancelled only upon written agreement by the Seller. Orders for goods other than those of standard manufacture will not be cancelled after a commitment has been made or production scheduled.

Credit for Returned Goods. Merchandise may not be returned for credit unless the Seller has agreed to accept it. Where returns are accepted, a deduction of 10% will be made for rehandling. All transportation costs for returned goods must be paid by the Buyer. In any event, only salable merchandise of standard manufacture may be returned for credit.

Credit Approval. Buyers' orders are accepted subject to credit investigation and approval, and delivery may be withheld or shipment stopped in transit on accepted orders without any liability on the Seller's part, if, in its opinion, the Buyer's ability to pay for the merchandise on these terms and conditions is in doubt.

SHORTAGES OR VARIANCES

No claims for variances from or shortages in orders will be considered unless presented within 90 days after receipt of goods.

PRODUCT AND PACKAGING CHANGES

Factors beyond the control of the Seller and the need for continuing improvement of product require the making of changes from time to time in products and their packaging. The right is reserved to make reasonable changes of any kind without notice and to deliver revised designs or models of goods against any order, unless on the face of the acknowledgment of order this right is specifically waived.

The Seller shall have no responsibility whatever with respect to changes made by the manufacturer in products (or their packaging) sold but not manufactured by the Seller.

SHIPPING WEIGHTS

The shipping weights given herein are approximate, for Buyers' convenience only, and are not guaranteed.

AMERICAN RADIATOR & STANDARD SANITARY CORPORATION PLUMBING AND HEATING DIVISION

REPAIR PARTS—TRADE PRICES

Boilers (all fuels).....	List Price, less 25%
Gas Conversion Burners.....	List Price, less 25%
For List Prices see "American-Standard Radiator Heating Repair Parts Catalog" 1956 Edition.	
Oil Burners.....	List Price, less 25%
For List Prices see "American-Standard Arcoflame Oil Burner Repair Parts Catalog" 1956 Edition.	

AMERICAN-Standard

HYDRONIC HEATING

BOILER RATINGS

BOILER RATINGS

Boiler ratings (net I=B=R ratings of Mbh and sq ft of steam, "net rating sq ft water" and "installed radiation", where shown) represent the maximum net loads that may be connected to the boilers. Steam sq ft ratings are based on 240 Btu per sq ft and water sq ft ratings on 150 Btu (170° water) per sq ft. Allowances have been made in these ratings for normal piping (covered) and pick-up loads and for heating domestic hot water under the following conditions:

It is not necessary to increase the boiler size for domestic hot water supply when not more than two bathrooms are to be served or if the use of domestic hot water does not exceed seventy-five gallons in twenty-four hours.

Sufficient radiation must be installed for the requirements of the building.

In order to select the proper size boiler calculate the heat loss of the building, then divide this figure by 1,000 to get the heat loss expressed in Mbh. Select a steam or water boiler which has a net Mbh rating equal to or greater than this figure using the appropriate steam or water column.

See Ratings, Data and Dimensions book, Form No. 29-2, and current literature for determining the size of radiators and convectors for hot water systems.

For an installation where unusual conditions such as large pipe losses, intermittent heating, unbalanced systems, etc., are encountered, it is suggested to calculate the actual piping loss and estimate the pick-up factor to adjust the load and then select the boiler from the published gross output in Mbh (1,000 Btu per hour).

GAS FIRED BOILERS

The input and output ratings are approved by the American Gas Association.

Ratings shown are for installations at sea level and at elevations up to 2,000 feet. For altitudes above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level.

OIL FIRED BOILERS

The firing rates or I=B=R burner capacity—gallons per hour—are based on the use of oil having 140,000 Btu per gallon heat value, and with 10% CO₂ in the flue gas.

When more than two bathrooms are to be supplied with domestic hot water or when the demand for domestic hot water exceeds seventy-five gallons in twenty-four hours increase the boiler size 120 Btu per hour for each gallon of storage tank capacity.

When Built-in Tankless Heater is used increase the boiler size 12 Mbh for each bathroom in excess of two.

STOKER FIRED BOILERS

The firing rates or I=B=R burner capacity pounds per hour—are based on the use of coal having 13,000 Btu per pound heat value.

When more than two bathrooms are to be supplied with domestic hot water or when the demand for domestic hot water exceeds seventy-five gallons in twenty-four hours increase the boiler size 120 Btu per hour for each gallon of storage tank capacity.

HAND FIRED BOILERS

The ratings (installed radiation sq ft) are based on the use of stove or nut size bituminous coal, anthracite coal or coke with 13,000 Btu per pound heat value. See table below for selecting proper size boiler when using coal with less than 13,000 Btu per pound.

When more than two bathrooms are to be supplied with domestic hot water or when the demand for domestic hot water exceeds seventy-five gallons in twenty-four hours increase the boiler size 120 Btu per hour for each gallon of storage tank capacity.

WHEN PIPING LOSS IS NEGLIGIBLE

The ratings (installed radiation) of steam boilers (all fuels) and coal (hand fired) water boilers may be increased by the percentages shown below when the piping loss of the installation is negligible. The ratings (installed radiation) of automatically fired water boilers may be increased by 12% when the piping loss of the installation is negligible.

ratings installed radiation sq ft		increase ratings by
Steam (all fuels)	Water coal (hand fired)	
up to 250	up to 400	30%
251— 500	401— 800	28%
501—1000	801—1600	24%
1001—1500	1601—2400	21%
1501—2000	2401—3200	18%
2001—3000	3201—4800	15%
3001—4000	4801—6400	13%
over 4000	over 6400	12%

WHERE COAL HAS LESS THAN 13,000 BTU CONTENT

When selecting hand fired boilers for burning coal of lower heating value than 13,000 Btu per pound the following correction factors should be used. Multiply the net load by the proper factor and select the boiler with the corresponding rating (installed radiation sq ft).

heating value of coal	correction factor
13,000	1.00
12,500	1.04
12,000	1.08
11,500	1.13
11,000	1.18
10,500	1.24
10,000	1.30
9,500	1.37
9,000	1.44