101 Park Ave. **McDERMOTT WATER HEATERS, INC.** New York City

**SOLD BY JOBBERS AND BOILER MANUFACTURERS**

McDERMOTT WATER HEATERS, INC., installed the first submerged water heater in New York City. Today McDermott Heaters are installed in buildings supplying hot water to over 48,000 apartments in the New York metropolitan area.

These heaters may be used as oil preheaters and converters for any usual adaptation.

We manufacture water heaters exclusively. We believe we can show them to be superior in quality and performance. We are prepared to meet price competition anywhere.

Complete information on request.

**Table 2—McDermott In-Boiler Heaters**
(Used with Storage Tanks)

| Cat. Size No. | Lgth., Ft. | Cap. Gals.* | Tank Con., In. | Boiler Opening, In. | List Price |
|---|---|---|---|---|---|
| V4103 | 3 | 150 | 1¼ | 1¼x4¾ | $30.00 |
| V4106 | 6 | 245 | 1¼ | 1¼x4¾ | 50.00 |
| V4108 | 8 | 350 | 1¼ | 1¼x4¾ | 66.67 |
| M4210 | 10 | 550 | 2 | 3⅛x3½ | 100.00 |
| M4212 | 12 | 800 | 2 | 3⅛x3½ | 116.67 |

*Ratings based on 100° temperature rise in three hours, 180° F. boiler water in summer with supply at 75° F., and 212° F. boiler water in winter with supply at 45° F.

*Special lengths take price of next larger size.*

*This McDermott Heater was manufactured by us for the U. S. Government*

**Table 1—McDermott Exterior Heaters and McDermott In-Tank Heaters**

| Cat. size No. | Capacity, Gals. *With steam at 1-lb. pressure | ‖Using water from steam heating boiler as the heating medium | †Using 180° F. water as the heating medium | Pipe Connections, In. Coil Steam | Coil Water | Shell Steam | Shell Water | Dimensions in Inches L Over-all length | D Over-all Diameter | Square feet of copper | Weight with shell (crated), lbs. | ‡List Price Complete with shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | 180 | 110 | 77 | 2 | 2 | 1 | 2 | 30 | 8 | 3.14 | 78 | $24.00 |
| 53 | 280 | 165 | 116 | 2 | 2 | 1 | 2 | 42 | 8 | 4.71 | 98 | 40.00 |
| 54 | 370 | 220 | 154 | 2 | 2 | 1½ | 2 | 54 | 8 | 6.28 | 117 | 50.00 |
| 55 | 465 | 275 | 193 | 2 | 2 | 1½ | 2½ | 66 | 8 | 7.85 | 136 | 60.00 |
| 56 | 560 | 330 | 231 | 2 | 2 | 1½ | 2½ | 78 | 8 | 9.42 | 155 | 65.00 |
| 57 | 650 | 385 | 270 | 2 | 2 | 1½ | 2½ | 90 | 8 | 10.99 | 174 | 72.00 |
| 58 | 740 | 440 | 308 | 2 | 2 | 2 | 3 | 102 | 8 | 12.56 | 193 | 80.00 |
| 59 | 840 | 495 | 347 | 2 | 2 | 2 | 3 | 114 | 8 | 14.13 | 212 | 90.00 |
| 510 | 920 | 550 | 385 | 2 | 2 | 2 | 3 | 126 | 8 | 15.70 | 230 | 100.00 |
| 103 | 1100 | 660 | 462 | 2 | 4 | 2 | 4 | 56 | 16 | 18.84 | 405 | 105.00 |
| 104 | 1480 | 880 | 616 | 2 | 4 | 2 | 4 | 68 | 16 | 25.12 | 459 | 135.00 |
| 105 | 1840 | 1100 | 770 | 2 | 4 | 2 | 4 | 80 | 16 | 31.40 | 513 | 216.00 |
| 106 | 2220 | 1320 | 925 | 2½ | 5 | 2½ | 5 | 92 | 16 | 37.68 | 567 | 258.00 |
| 107 | 2580 | 1540 | 1078 | 2½ | 5 | 2½ | 5 | 104 | 16 | 43.96 | 621 | 300.00 |
| 108 | 2950 | 1760 | 1232 | 2½ | 5 | 2½ | 5 | 116 | 16 | 50.24 | 675 | 350.00 |
| 109 | 3320 | 1980 | 1386 | 3 | 6 | 3 | 6 | 128 | 16 | 56.52 | 729 | 400.00 |
| 1010 | 3690 | 2200 | 1540 | 4 | 6 | 4 | 6 | 140 | 16 | 68.80 | 783 | 450.00 |
| 125 | 2775 | 1650 | 1155 | 2½ | 5 | 2½ | 5 | 84 | 19 | 47.10 | 628 | 415.00 |
| 126 | 3330 | 1980 | 1386 | 3 | 5 | 3 | 5 | 96 | 19 | 56.52 | 697 | 460.00 |
| 127 | 3885 | 2310 | 1617 | 4 | 6 | 4 | 6 | 108 | 19 | 65.94 | 766 | 505.00 |
| 128 | 4440 | 2640 | 1848 | 4 | 6 | 4 | 6 | 120 | 19 | 75.36 | 835 | 550.00 |
| 129 | 4995 | 2970 | 2079 | 5 | 8 | 5 | 8 | 132 | 19 | 84.78 | 904 | 595.00 |
| 1210 | 5550 | 3300 | 2310 | 5 | 8 | 5 | 8 | 144 | 19 | 94.20 | 973 | 640.00 |
| 83 | 1330 | 792 | 555 | 2 | 4 | 2 | 4 | 54 | 13½ | 18.90 | 303 | 88.00 |
| 84 | 1774 | 1056 | 740 | 2 | 4 | 2 | 4 | 66 | 13½ | 25.2 | 357 | 188.00 |
| 85 | 2220 | §1320 | §925 | 2½ | 5 | 2½ | 5 | 78 | 15½ | 31.5 | 411 | 238.00 |
| 86 | 2662 | §1584 | §1110 | 2½ | 5 | 2½ | 5 | 90 | 13½ | 37.8 | 465 | 288.00 |
| 87 | 3106 | §1848 | §1295 | 3 | 6 | 3 | 6 | 102 | 13½ | 44.1 | 519 | 338.00 |
| 88 | 3550 | §1480 | §1480 | 4 | 6 | 4 | 6 | 114 | 13½ | 50.4 | 573 | 386.00 |

*Gallons raised 130° F. in 3 hrs. ‖Gallons raised 100° F. in 3 hrs. Based upon 180° F. boiler water in summer with supply at 75° F. and 212° F. boiler water in winter with supply at 45° F. †Gallons raised 100° F. in 3 hrs. Based on supply at 45° F. §Use with circulating pump if heating medium is water. ‡Write for discounts.

**Table 3—McDermott Tankless-Instantaneous Water Heaters Using Water or Steam as the Heating Medium**—Installed in Boilers or in Self-contained Shells

| Size No. | V3 | V4 | V5 | V6 | V7 | V8 | M10 | M12 |
|---|---|---|---|---|---|---|---|---|
| In Steam Boiler Gals. raised 130° F. hourly velocity pressure* | 650 | 800 | 1000 | 3500 | 5500 | 7300 | 14000 | 17000 |
| In Water Boiler Gals. raised 100° F. hourly velocity pressure* | 455 | 560 | 700 | 2450 | 3850 | 5110 | 9800 | 11900 |
| Square feet of surface | 10.5 | 13.65 | 16.80 | 19.95 | 23.1 | 26.25 | 50.24 | 54.95 |
| Boiler opening, in. | 1¼x15.5 | 1¼x15.5 | 1¼x15.5 | 1¼x15.5 | 1¼x15.5 | 1¼x15.5 | 3.75x12 | 3.75x12 |
| Shell dimensions, in. | 10x | 10x | 10x | 10x | 10x | 10x | 14x | 14x |
| If self-contained, ft. | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 |
| L—length, ft. | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 |
| W—width, in. | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 11.5 | 11.5 |
| Weight with shell, crated | 198 | 248 | 298 | 348 | 398 | 448 | 810 | 880 |
| Weight without shell, crated | 45 | 52 | 59 | 66 | 73 | 80 | 170 | 180 |
| No. of units in Table 2 of equal capacity§ | 3V4103 | 3V4104 | 3V4105 | 3V4106 | 3V4107 | 3V4108 | 3M4210 | 3M4212 |
| List price with shell | $120.00 | $150.00 | $165.00 | $190.00 | $215.00 | $240.00 | $370.00 | $410.00 |
| List price without shell | $90.00 | $110.00 | $125.00 | $150.00 | $175.00 | $200.00 | $300.00 | $350.00 |

*Maximum discharge temperature 30° F. less than boiler water temperature. §Smaller boiler openings and greater efficiency in maintaining primary heat on transfer surface result from *non-grouped coils.* They are connected in series by piping contractors.





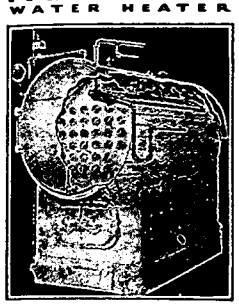
# Parkinson Heater Corporation

**Parkinson Tankless Submerged Water Heaters, Tempering Valves, etc.**

11 West 42nd St., **New York City** 4105 N. Damen Ave., **Chicago, Ill.**

**Local Distributors in Principal Cities. Consult phone book or write**

PARKINSON (TANKLESS SUBMERGED) WATER HEATER



*One of the typical installations Parkinson in a fire tube boiler*

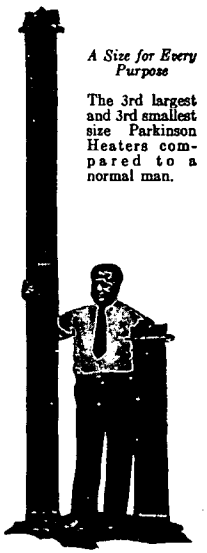
Officially approved by the Investigatin Committee of Architects and Engineers.

**PRODUCTS—Parkinson Tankless Submerged Water Heaters for domestic water supply, designed to eliminate storage tanks, insulation, separate heater, extra flue, fittings, piping and hook up at a very definite savings in fuel costs. Holby Tempering Valves (write for details) for use with water heaters to increase gallon capacity and assure uniform temperature within 5 degrees and permit continuous circulation.**

**Free Service**—Without obligation, our Engineering Department will submit recommendations, layouts, or advice on domestic hot water and piping requirements.

Send for list of users, actual case studies and circulars.

**Guarantee**—Parkinson Heaters are guaranteed to produce under normal conditions a saving of from 30% to 70% of fuel costs. All parts tested under 250 lbs. pressure.



*A Size for Every Purpose*

The 3rd largest and 3rd smallest size Parkinson Heaters compared to a normal man.

## How to Figure Heater Required

Tankless water heating cannot be figured by the customary method as used for tanks. Therefore the following method using the "Demand Unit" is used. This unit has been developed from the result of thousands of installations over six years.

| Calculation of Demand Units | Units | Demand Units | Comparative Capacity Standard Estimated Tank Size, Gals. | Installation No. Water Pressure Up to 40 Lbs. | 40 to 80 Lbs. | 80 to 120 Lbs. |
|---|---|---|---|---|---|---|
| Kitchen and bathroom, normal | 10 | | | | | |
| Extra apartment bath, private | 3 | | | | | |
| Extra apartment bath, maid | 4 | | | | | |
| Kitchen | 5 | | | | | |
| Cupboard kitchen | 2 | | | | | |
| Bathtubs, normal | 5 | 10 | 50 | 1 | 1 | 3 |
| Separate shower | 5 | 20 | 90 | 3 | 3 | 3 |
| Shower in tub | 1 | 30 | 120 | 3 | 3 | 6 |
| Lavatories | 2 | 60 | 240 | 6 | 6 | 12 |
| Club or institution showers | 25 | 120 | 480 | 12 | 12 | 12 |
| Sinks (slop) | 3 | 160 | 600 | 12 | 18 | 20 |
| Restaurant (hand washing) | 1 | 220 | 840 | 18 | 18 | 20 |
| | per seat | 280 | 1080 | 20 | 30 | 30 |
| Wash tubs, apt. laundry | 5 | 360 | 1400 | 30 | 30 | 50 |
| All other loads: the detail of equipment should be furnished. | | 420 | 1680 | 30 | 50 | 50 |
| | | 480 | 1900 | 50 | 50 | 70 |
| | | 540 | 2150 | 50 | 50 | 70 |
| | | 600 | 2400 | 50 | 70 | 70 |
| | | 660 | 2700 | 50 | 70 | 224 |
| | | 720 | 2900 | 70 | 224 | 224 |
| | | 840 | 3100 | 70 | 224 | 224 |
| | | 1000 | 5400 | 250 | 250 | 270 |
| | | 1500 | 6400 | 270 | 270 | 270 |
| | | 2000 | 7000 | 270 | 290 | 290 |
| | | 2500 | 9000 | 290 | 290 | 290 |

*Load on Boiler*

*Steel flue type boiler*—Due to increased efficiencies set up in the boiler it is safe to install PARKINSONS in boilers without additional radiation provided the boiler is ample for the heating load. For new boilers a factor of safety of 2 sq. ft. per demand unit may be figured.

*Cast-iron boilers* require 4 sq. ft. radiation for each demand unit.

*Water Temperature*

Line temperatures range from 135° to 165°, but may be controlled within 15°. For hotter water special heater is required. *Holby Tempering* Regulators are supplied for more uniform requirements built special for Parkinson Heater.

NOTE—*Put the letter C after installation number if it is a cast-iron boiler.*

Piping details furnished per request. To estimate the cost of piping same as hooking to tank.

**Construction**—The Parkinson is protected by Pat. No. 1,834,070 and operates on an exclusive principle not to be confused with other heating coils. Supply tube and return tubes are sized to produce a rapid and constant flow of hot water. Heater is constructed of virtually pure copper, consisting of heavy wall tubes and cast headers, brazed together with copper flux at high temperature.

**Installation**—Heating unit is submerged in boiler water just below water line of practically any low pressure boiler. Simple to install. Does not multilate the boiler as only one incision is required. Unit takes up no usable space in cellar. Operates on any fuel, automatic or hand fired.