# INSTALLATION MANUAL FOR

# Gov-Board™


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Governale™

| | |
|---|---|
| Heating Contractor | Installation Date |
| Address | Phone Number |


**Brooklyn, New York  Phone 718-272-2300  Fax 718-272-3776**



104837-02 - 9/14

**For Ratings at the following temperatures, multiply the 150° rating by the multiplier of the desired temperature.**

**Temperature — Multiplier**

| | | |
|---|---|---|
| 150° - 1.0 | 120° - .54 | 100° - .32 |
| 140° - .82 | 110° - .42 | 90° - .22 |
| 130° - .68 | | |

## Gov-Board Ratings – Steam and Hot Water (500 LBS/HR Flow Rate **)

| Length in Lineal Feet* | Steam Rating Square Feet | Steam Ratings BTU Per Hr. At 215°F | HOT WATER RATINGS IN BTU PER HOUR AT 500 LBS./HR. (ONE GPM) FLOW RATE** AT AVERAGE WATER TEMPERATURE OF | | | | | | | | Pressure Drop in Inches of Water*** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 230°F | 220°F | 210°F | 200°F | 190°F | 180°F | 170°F | 150°F | |
| **Per Lin. Ft.** | **3.40** | **820** | **890** | **830** | **770** | **710** | **650** | **590** | **520** | **390** | |
| 1.5 | 5.1 | 1,230 | 1,340 | 1,250 | 1,160 | 1,070 | 980 | 890 | 780 | 585 | .10 |
| 2.0 | 6.8 | 1,640 | 1,780 | 1,660 | 1,540 | 1,420 | 1,300 | 1,180 | 1,040 | 780 | .10 |
| 2.5 | 8.5 | 2,050 | 2,230 | 2,080 | 1,930 | 1,780 | 1,630 | 1,480 | 1,300 | 975 | .11 |
| 3.0 | 10.2 | 2,460 | 2,670 | 2,490 | 2,310 | 2,130 | 1,950 | 1,770 | 1,560 | 1,170 | .12 |
| 3.5 | 11.9 | 2,870 | 3,120 | 2,910 | 2,700 | 2,490 | 2,280 | 2,070 | 1,820 | 1,365 | .13 |
| 4.0 | 13.6 | 3,280 | 3,560 | 3,320 | 3,080 | 2,840 | 2,600 | 2,360 | 2,080 | 1,560 | .14 |
| 4.5 | 15.3 | 3,690 | 4,010 | 3,740 | 3,470 | 3,200 | 2,930 | 2,660 | 2,340 | 1,755 | .14 |
| 5.0 | 17.0 | 4,100 | 4,450 | 4,150 | 3,850 | 3,550 | 3,250 | 2,950 | 2,600 | 1,950 | .15 |
| 5.5 | 18.7 | 4,510 | 4,900 | 4,570 | 4,240 | 3,910 | 3,580 | 3,250 | 2,860 | 2,145 | .16 |
| 6.0 | 20.4 | 4,920 | 5,340 | 4,980 | 4,620 | 4,260 | 3,900 | 3,540 | 3,120 | 2,340 | .17 |
| 6.5 | 22.1 | 5,330 | 5,790 | 5,400 | 5,010 | 4,620 | 4,230 | 3,840 | 3,380 | 2,535 | .18 |
| 7.0 | 23.8 | 5,740 | 6,230 | 5,810 | 5,390 | 4,970 | 4,550 | 4,130 | 3,640 | 2,730 | .18 |
| 7.5 | 25.5 | 6,150 | 6,680 | 6,230 | 5,780 | 5,330 | 4,880 | 4,430 | 3,900 | 2,925 | .19 |
| 8.0 | 27.2 | 6,560 | 7,120 | 6,640 | 6,160 | 5,680 | 5,200 | 4,720 | 4,160 | 3,120 | .20 |
| 8.5 | 28.9 | 6,970 | 7,570 | 7,060 | 6,550 | 6,040 | 5,530 | 5,020 | 4,420 | 3,315 | .21 |
| 9.0 | 30.6 | 7,380 | 8,010 | 7,470 | 6,930 | 6,390 | 5,850 | 5,310 | 4,680 | 3,510 | .22 |
| 9.5 | 32.3 | 7,790 | 8,460 | 7,890 | 7,320 | 6,750 | 6,180 | 5,610 | 4,940 | 3,705 | .22 |
| 10.0 | 34.0 | 8,200 | 8,900 | 8,300 | 7,700 | 7,100 | 6,500 | 5,900 | 5,200 | 3,900 | .23 |
| 10.5 | 35.7 | 8,610 | 9,350 | 8,715 | 8,090 | 7,460 | 6,830 | 6,200 | 5,460 | 4,095 | .24 |
| 11.0 | 37.4 | 9,020 | 9,790 | 9,130 | 8,470 | 7,810 | 7,150 | 6,490 | 5,720 | 4,290 | .25 |
| 11.5 | 39.1 | 9,430 | 10,240 | 9,550 | 8,860 | 8,170 | 7,480 | 6,790 | 5,980 | 4,485 | .26 |
| 12.0 | 40.8 | 9,840 | 10,680 | 9,960 | 9,240 | 8,520 | 7,800 | 7,080 | 6,240 | 4,680 | .26 |
| 12.5 | 42.5 | 10,250 | 11,130 | 10,380 | 9,630 | 8,880 | 8,130 | 7,380 | 6,500 | 4,785 | .27 |
| 13.0 | 44.2 | 10,660 | 11,570 | 10,790 | 10,010 | 9,230 | 8,450 | 7,670 | 6,760 | 5,070 | .28 |
| 13.5 | 45.9 | 11,070 | 12,020 | 11,210 | 10,400 | 9,590 | 8,780 | 7,970 | 7,020 | 5,265 | .29 |
| 14.0 | 47.6 | 11,480 | 12,460 | 11,620 | 10,780 | 9,940 | 9,100 | 8,260 | 7,280 | 5,460 | .30 |
| 14.5 | 49.3 | 11,890 | 12,910 | 12,040 | 11,170 | 10,300 | 9,430 | 8,550 | 7,540 | 5,655 | .30 |
| 15.0 | 51.0 | 12,300 | 13,350 | 12,450 | 11,550 | 10,650 | 9,750 | 8,850 | 7,800 | 5,850 | .31 |
| 15.5 | 52.7 | 12,710 | 13,800 | 12,870 | 11,940 | 11,010 | 10,080 | 9,150 | 8,060 | 6,045 | .32 |
| 16.0 | 54.4 | 13,120 | 14,240 | 13,280 | 12,320 | 11,360 | 10,400 | 9,440 | 8,320 | 6,240 | .33 |
| 16.5 | 56.1 | 13,530 | 14,690 | 13,700 | 12,710 | 11,720 | 10,730 | 9,470 | 8,580 | 6,435 | .34 |
| 17.0 | 57.8 | 13,940 | 15,130 | 14,110 | 13,090 | 12,070 | 11,050 | 10,030 | 8,840 | 6,630 | .34 |
| 17.5 | 59.5 | 14,350 | 15,580 | 14,530 | 13,480 | 12,430 | 11,380 | 10,330 | 9,100 | 6,825 | .35 |
| 18.0 | 61.2 | 14,760 | 16,020 | 14,940 | 13,860 | 12,780 | 11,700 | 10,620 | 9,360 | 7,020 | .36 |
| 18.5 | 62.9 | 15,170 | 16,470 | 15,360 | 14,250 | 13,140 | 12,030 | 10,920 | 9,620 | 7,215 | .37 |
| 19.0 | 64.6 | 15,580 | 16,910 | 15,770 | 14,630 | 13,490 | 12,350 | 11,210 | 9,880 | 7,410 | .38 |
| 19.5 | 66.3 | 15,990 | 17,360 | 16,190 | 15,020 | 13,850 | 12,680 | 11,510 | 10,140 | 7,605 | .38 |
| 20.0 | 68.0 | 16,400 | 17,800 | 16,600 | 15,400 | 14,200 | 13,000 | 11,800 | 10,400 | 7,800 | .39 |
| 20.5 | 69.7 | 16,810 | 18,250 | 17,020 | 15,790 | 14,560 | 13,330 | 12,100 | 10,660 | 7,995 | .40 |
| 21.0 | 71.4 | 17,220 | 18,690 | 17,430 | 16,170 | 14,910 | 13,650 | 12,390 | 10,920 | 8,190 | .41 |
| 21.5 | 73.1 | 17,630 | 19,140 | 17,850 | 16,560 | 15,270 | 13,980 | 12,690 | 11,180 | 8,385 | .42 |
| 22.0 | 74.8 | 18,040 | 19,580 | 18,260 | 16,940 | 15,620 | 14,300 | 12,980 | 11,440 | 8,580 | .42 |

**Ratings based on active length. Active length same as total length.**

****The Hot Water Ratings at 500 lb. Flow Rate are based on a standard water flow rate of 500 lbs. per hour (one gallon per minute) through the Gov-Board. These ratings should be used for all installations except as noted under 2000 Lb. Flow Rate.**

***Add ½" to length for each bushing. Add 5" to length for each valve enclosure.**

*****Based on ¾" pipe connections.**

**For Ratings at the following temperatures, multiply the 150° rating by the multiplier of the desired temperature.**

**Temperature — Multiplier**

| | | |
|---|---|---|
| 150° - 1.0 | 120° - .54 | 100° - .32 |
| 140° - .82 | 110° - .42 | 90° - .22 |
| 130° - .68 | | |

## Gov-Board Ratings – Steam and Hot Water (2,000 LBS/HR Flow Rate **)

| Length in Lineal Feet* | Steam Rating Square Feet | Steam Ratings BTU Per Hr. At 215°F | HOT WATER RATINGS IN BTU PER HOUR AT 500 LBS./HR. (ONE GPM) FLOW RATE** AT AVERAGE WATER TEMPERATURE OF | | | | | | | | Pressure Drop in Inches of Water*** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 230°F | 220°F | 210°F | 200°F | 190°F | 180°F | 170°F | 150°F | |
| **Per Lin. Ft.** | **3.40** | **820** | **940** | **880** | **810** | **750** | **690** | **620** | **550** | **410** | |
| 1.5 | 5.1 | 1,230 | 1,410 | 1,320 | 1,220 | 1,130 | 1,040 | 930 | 830 | 615 | 1.29 |
| 2.0 | 6.8 | 1,640 | 1,880 | 1,760 | 1,620 | 1,500 | 1,380 | 1,240 | 1,100 | 820 | 1.39 |
| 2.5 | 8.5 | 2,050 | 2,350 | 2,200 | 2,030 | 1,880 | 1,730 | 1,550 | 1,380 | 1,025 | 1.50 |
| 3.0 | 10.2 | 2,460 | 2,820 | 2,640 | 2,430 | 2,250 | 2,070 | 1,860 | 1,650 | 1,230 | 1.61 |
| 3.5 | 11.9 | 2,870 | 3,290 | 3,080 | 2,840 | 2,630 | 2,420 | 2,170 | 1,930 | 1,435 | 1.71 |
| 4.0 | 13.6 | 3,280 | 3,760 | 3,520 | 3,240 | 3,000 | 2,760 | 2,480 | 2,200 | 1,640 | 1.82 |
| 4.5 | 15.3 | 3,690 | 4,230 | 3,960 | 3,650 | 3,380 | 3,110 | 2,790 | 2,480 | 1,845 | 1.93 |
| 5.0 | 17.0 | 4,100 | 4,700 | 4,400 | 4,050 | 3,750 | 3,450 | 3,100 | 2,750 | 2,050 | 2.03 |
| 5.5 | 18.7 | 4,510 | 5,170 | 4,840 | 4,460 | 4,130 | 3,800 | 3,410 | 3,030 | 2,255 | 2.14 |
| 6.0 | 20.4 | 4,920 | 5,640 | 5,280 | 4,860 | 4,500 | 4,140 | 3,720 | 3,300 | 2,460 | 2.25 |
| 6.5 | 22.1 | 5,330 | 6,110 | 5,720 | 5,270 | 4,880 | 4,490 | 4,030 | 3,580 | 2,665 | 2.35 |
| 7.0 | 23.8 | 5,740 | 6,580 | 6,160 | 5,670 | 5,250 | 4,830 | 4,340 | 3,850 | 2,870 | 2.46 |
| 7.5 | 25.5 | 6,150 | 7,050 | 6,600 | 6,080 | 5,630 | 5,180 | 4,650 | 4,130 | 3,075 | 2.57 |
| 8.0 | 27.2 | 6,560 | 7,520 | 7,040 | 6,480 | 6,000 | 5,520 | 4,960 | 4,400 | 3,280 | 2.68 |
| 8.5 | 28.9 | 6,970 | 7,990 | 7,480 | 6,890 | 6,380 | 5,870 | 5,270 | 4,680 | 3,485 | 2.78 |
| 9.0 | 30.6 | 7,380 | 8,460 | 7,920 | 7,290 | 6,750 | 6,210 | 5,580 | 4,950 | 3,690 | 2.89 |
| 9.5 | 32.3 | 7,790 | 8,930 | 8,360 | 7,700 | 7,130 | 6,560 | 5,890 | 5,230 | 3,895 | 3.00 |
| 10.0 | 34.0 | 8,200 | 9,400 | 8,800 | 8,100 | 7,500 | 6,900 | 6,200 | 5,500 | 4,100 | 3.10 |
| 10.5 | 35.7 | 8,610 | 9,870 | 9,240 | 8,510 | 7,880 | 7,250 | 6,510 | 5,780 | 4,305 | 3.21 |
| 11.0 | 37.4 | 9,020 | 10,340 | 9,680 | 8,910 | 8,250 | 7,590 | 6,820 | 6,050 | 4,510 | 3.32 |
| 11.5 | 39.1 | 9,430 | 10,810 | 10,120 | 9,320 | 8,630 | 7,940 | 7,130 | 6,330 | 4,715 | 3.42 |
| 12.0 | 40.8 | 9,840 | 11,280 | 10,560 | 9,720 | 9,000 | 8,280 | 7,440 | 6,600 | 4,920 | 3.53 |
| 12.5 | 42.5 | 10,250 | 11,750 | 11,000 | 10,130 | 9,380 | 8,630 | 7,750 | 6,880 | 5,125 | 3.64 |
| 13.0 | 44.2 | 10,660 | 12,220 | 11,440 | 15,030 | 9,750 | 8,970 | 8,060 | 7,150 | 5,330 | 3.74 |
| 13.5 | 45.9 | 11,070 | 12,690 | 11,880 | 10,940 | 10,130 | 9,320 | 8,370 | 7,430 | 5,535 | 3.85 |
| 14.0 | 47.6 | 11,480 | 13,160 | 12,320 | 11,340 | 10,500 | 9,660 | 8,680 | 7,700 | 5,740 | 3.96 |
| 14.5 | 49.3 | 11,890 | 13,630 | 12,760 | 11,750 | 10,880 | 10,010 | 8,990 | 7,960 | 5,945 | 4.06 |
| 15.0 | 51.0 | 12,300 | 14,100 | 13,200 | 12,150 | 11,250 | 10,350 | 9,300 | 8,250 | 6,150 | 4.17 |
| 15.5 | 52.7 | 12,710 | 14,570 | 13,640 | 12,560 | 11,630 | 10,700 | 9,610 | 8,530 | 6,355 | 4.28 |
| 16.0 | 54.4 | 13,120 | 15,040 | 14,080 | 12,960 | 12,000 | 11,040 | 9,920 | 8,800 | 6,560 | 4.38 |
| 16.5 | 56.1 | 13,530 | 15,510 | 14,520 | 13,370 | 12,380 | 11,390 | 10,230 | 9,080 | 6,765 | 4.49 |
| 17.0 | 57.8 | 13,940 | 15,980 | 14,960 | 13,770 | 12,750 | 11,730 | 10,540 | 9,350 | 6,970 | 4.60 |
| 17.5 | 59.5 | 14,350 | 16,450 | 15,400 | 14,180 | 13,130 | 12,080 | 10,850 | 9,630 | 7,175 | 4.70 |
| 18.0 | 61.2 | 14,760 | 16,920 | 15,840 | 14,580 | 13,500 | 12,420 | 11,160 | 9,900 | 7,380 | 4.81 |
| 18.5 | 62.9 | 15,170 | 17,390 | 16,280 | 14,990 | 13,880 | 12,770 | 11,470 | 10,180 | 7,585 | 4.92 |
| 19.0 | 64.6 | 15,580 | 17,860 | 16,720 | 15,390 | 14,250 | 13,110 | 11,780 | 10,450 | 7,790 | 5.03 |
| 19.5 | 66.3 | 15,990 | 18,330 | 17,160 | 15,800 | 14,630 | 13,460 | 12,090 | 10,730 | 7,995 | 5.13 |
| 20.0 | 68.0 | 16,400 | 18,800 | 17,600 | 16,200 | 15,000 | 13,800 | 12,400 | 11,000 | 8,200 | 5.24 |
| 20.5 | 69.7 | 16,810 | 19,270 | 18,040 | 16,610 | 15,380 | 14,150 | 12,710 | 11,280 | 8,405 | 5.35 |
| 21.0 | 71.4 | 17,220 | 19,740 | 18,480 | 17,010 | 15,750 | 14,490 | 13,020 | 11,550 | 8,610 | 5.45 |
| 21.5 | 73.1 | 17,630 | 20,210 | 18,920 | 17,420 | 16,130 | 14,840 | 13,330 | 11,830 | 8,815 | 5.56 |
| 22.0 | 74.8 | 18,040 | 20,680 | 19,360 | 17,820 | 16,500 | 15,180 | 13,640 | 12,100 | 9,020 | 5.67 |

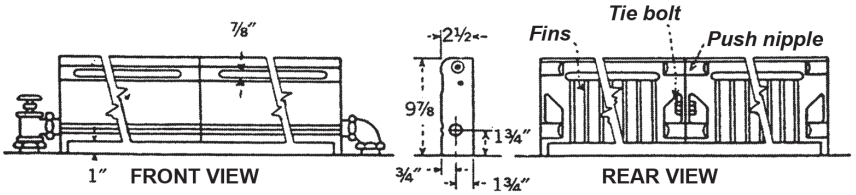
**Ratings based on active length. Active length same as total length. Gov-Board Water Content - 2.5 lbs. or .3 gal. per linear ft.**

****The Hot Water Ratings at 2000 lb. Flow Rate are limited to installations where the water flow rate through the Gov-Board is greater than 2000 lbs. per hour (four gallons per minute). Where the water flow rate through the Gov-Board is not know, the rating at the standard flow rate of 500 lbs. per hour must be used.**

***Add ½" to length for each bushing. Add 5" to length for each valve enclosure.**

*****Based on ¾" pipe connections.**

## Dimensions and Specifications




Gov-Board TAPPINGS - Tapped 3/4" top and bottom of end sections. A 3/4" x 1/8" vent bushing is furnished with each Gov-Board Assembly. Only one air vent location need be used.

Use of PTFE (Teflon®) tape or paste containing PTFE is not recommended as overtightening is possible, causing cracking of the Gov-Board tappings.

Copper tubing is not recommended for steam applications due to high heat loss through the tubing and thermal expansion noise.

Maximum recommended length for steam applications is 10 lineal feet.

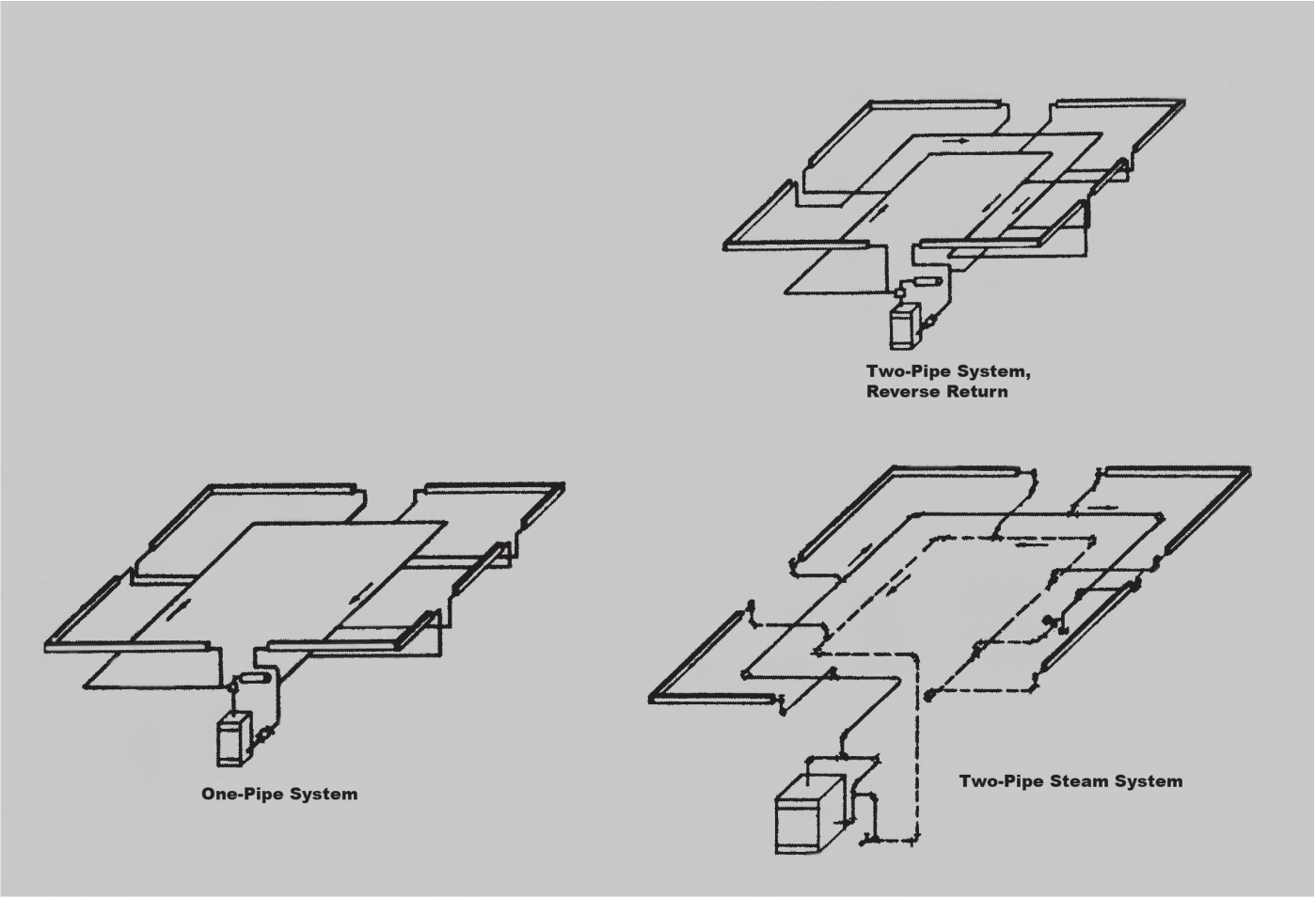
# Gov-Board Assembly Chart

Gov-Board Assemblies up to and including 6 lineal ft. are shipped in one piece.

Longer Assemblies are shipped in two or more pieces or sub-assemblies, none of which exceeds 6 lineal ft.

| ASSEMBLIES AND SUB-ASSEMBLIES ARE MADE UP OF FOLLOWING SECTIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ASSEMBLIES** | **18" Left End** | **24" Left End** | **24" Int.** | **24" Right End** | **12" Right End** | **18" Panel** | **24" Panel** |
| 1-1/2 Ft. Assembly | — | — | — | — | — | 1 | — |
| 2 Ft. Assembly | — | — | — | — | — | — | 1 |
| 2-1/2 Ft. Assembly | 1 | — | — | — | 1 | — | — |
| 3 Ft. Assembly | — | 1 | — | — | 1 | — | — |
| 3-1/2 Ft. Assembly | 1 | — | — | 1 | — | — | — |
| 4 Ft. Assembly | — | 1 | — | 1 | — | — | — |
| 4-1/2 Ft. Assembly | 1 | — | 1 | — | 1 | — | — |
| 5 Ft. Assembly | — | 1 | 1 | — | 1 | — | — |
| 5-1/2 Ft. Assembly | 1 | — | 1 | 1 | — | — | — |
| 6 Ft. Assembly | — | 1 | 1 | 1 | — | — | — |
| SUB-ASSEMBLIES | | | | | | | |
| 5-1/2 Ft. L.H. Sub-Assembly | 1 | — | 2 | — | — | — | — |
| 6 Ft. L.H. Sub-Assembly | — | 1 | 2 | — | — | — | — |
| 6 Ft. Center Sub-Assembly | — | — | 3 | — | — | — | — |
| All R.H. Sub-Assembly | — | — | Required Number | 1 or 1 | | — | — |

| Sub-Assembly Chart | | | |
|---|---|---|---|
| **ASSEMBLY LENGTH** | **L.H.** | **CENTER** | **R.H.** |
| 6-1/2 Ft. | 5-1/2 Ft. | — | 1 Ft. |
| 7 Ft. | 6 Ft. | — | 1 Ft. |
| 7-1/2 Ft. | 5-1/2 Ft. | — | 2 Ft. |
| 8 Ft. | 6 Ft. | — | 2 Ft. |
| 8-1/2 Ft. | 5-1/2 Ft. | — | 3 Ft. |
| 9 Ft. | 6 Ft. | — | 3 Ft. |
| 9-1/2 Ft. | 5-1/2 Ft. | — | 4 Ft. |
| 10 Ft. | 6 Ft. | — | 4 Ft. |
| 10-1/2 Ft. | 5-1/2 Ft. | — | 5 Ft. |
| 11 Ft. | 6 Ft. | — | 5 Ft. |
| 11-1/2 Ft. | 5-1/2 Ft. | — | 6 Ft. |
| 12 Ft. | 6 Ft. | — | 6 Ft. |
| 12-1/2 Ft. | 5-1/2 Ft. | 6 Ft. | 1 Ft. |
| 13 Ft. | 6 Ft. | 6 Ft. | 1 Ft. |
| 13-1/2 Ft. | 5-1/2 Ft. | 6 Ft. | 2 Ft. |
| 14 Ft. | 6 Ft. | 6 Ft. | 2 Ft. |
| 14-1/2 Ft. | 5-1/2 Ft. | 6 Ft. | 3 Ft. |
| 15 Ft. | 6 Ft. | 6 Ft. | 3 Ft. |
| 15-1/2 Ft. | 5-1/2 Ft. | 6 Ft. | 4 Ft. |
| 16 Ft. | 6 Ft. | 6 Ft. | 4 Ft. |
| 16-1/2 Ft. | 5-1/2 Ft. | 6 Ft. | 5 Ft. |
| 17 Ft. | 6 Ft. | 6 Ft. | 5 Ft. |
| 17-1/2 Ft. | 5-1/2 Ft. | 6 Ft. | 6 Ft. |
| 18 Ft. | 6 Ft. | 6 Ft. | 6 Ft. |
| 18-1/2 Ft. | 5-1/2 Ft. | 2-6 Ft. | 1 Ft. |
| 19 Ft. | 6 Ft. | 2-6 Ft. | 1 Ft. |
| 19-1/2 Ft. | 5-1/2 Ft. | 2-6 Ft. | 2 Ft. |
| 20 Ft. | 6 Ft. | 2-6 Ft. | 2 Ft. |
| 20-1/2 Ft. | 5-1/2 Ft. | 2-6 Ft. | 3 Ft. |
| 21 Ft. | 6 Ft. | 2-6 Ft. | 3 Ft. |
| 21-1/2 Ft. | 5-1/2 Ft. | 2-6 Ft. | 4 Ft. |
| 22 Ft. | 6 Ft. | 2-6 Ft. | 4 Ft. |
| 22-1/2 Ft. | 5-1/2 Ft. | 2-6 Ft. | 5 Ft. |
| 23 Ft. | 6 Ft. | 2-6 Ft. | 5 Ft. |
| 23-1/2 Ft. | 5-1/2 Ft. | 2-6 Ft. | 6 Ft. |
| 24 Ft. | 6 Ft. | 2-6 Ft. | 6 Ft. |




**Gov-Board**

### Types of Systems

Hydronic Heating Systems are classified according to the piping arrangement and heating medium employed. Gov-Board is very versatile in that it may be used in almost all types of systems as noted below:

1. Series Loop Forced Circulation Hot Water
2. One-Pipe Forced Circulation Hot Water
3. Two-Pipe Reverse Return Gravity or Forced Circulation Hot Water
4. Two-Pipe Steam or Vapor.

It is not recommended that Gov-Board be used in a One-Pipe Steam System.

### System Description

1. **Series Loop** is a forced circulation hot water heating system with the Gov-Board Assemblies connected so that all the water flowing through a circuit passes through each series-connected Assembly in the circuit. Thus, the Assemblies serve as portions of the main.

2. **One-Pipe** is a forced circulation hot water heating system utilizing one continuous main from boiler supply to boiler return. Gov-Board Assemblies are connected to this pipe or main by two smaller pipes known as branches. When connecting these branches to the main, one of the standard tees is replaced by a special tee frequently called a one-pipe fitting. These one-pipe fittings cause a portion of the water flowing through the main to pass through the Gov-Board Assemblies and back to the main again.

3. **Two-Pipe Reverse Return** is a gravity or forced circulation hot water heating system utilizing one main to carry heated water from the boiler to the Gov-Board Assemblies and a second main to carry the cooled water from the Assemblies back to the boiler. The Assemblies are connected to the return main in the reverse order from that in which they are connected to the supply main. Very few designers use this type of system for residential applications, since there is no difference between the heating qualities of this system and the other two hot water systems.

4. **Two-Pipe Steam or Vapor Systems** are steam systems in which each Gov-Board Assembly is provided with two piping connections, and where steam and condensate flow in separate mains and branches. The Vapor system differs from the low pressure system only in the type of air valve used.

## SERIES LOOP SYSTEMS

### Installation Data

This type of installation, in which the Gov-Board Assemblies serve as part of the main, is the most economical way Gov-Board can be installed. Substantial savings in labor and material are realized in that one-pipe fittings, shut-off valves, balancing cocks and additional piping are eliminated. Quality is not sacrificed as tests have proven the ability of a Series Loop System to produce comfort conditions equal to those produced by other hydronic heating systems. Series Loop Systems are ideal for homes without basements, especially those built on concrete slabs, as it eliminates the necessity for running the mains in the attic or in the concrete slab. With proper design, the Series Loop System can be used to advantage in apartment construction.

As indicated in the adjacent piping diagrams, the supply runs from the boiler to the first Gov-Board Assembly in the circuit and then from Assembly to Assembly, dropping below the floor only when necessary to avoid obstructions such as doors, fireplaces, etc. Gov-Board Baseboard Extensions are used to conceal the piping run above the floor.

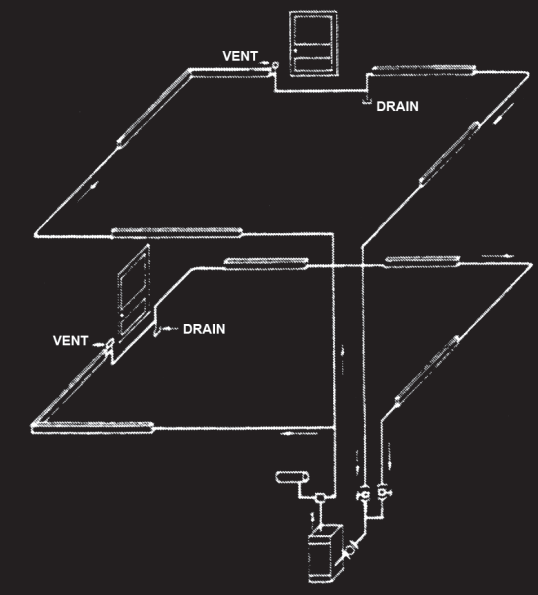
It is sound practice to run a loop around an ordinary 5 or 6 room house. In the case of very small two-story homes, the loop may take in both first floor and second floor rooms. Larger ranch style, two-story and split level homes may use two separate loops running from the same supply line and coming back into the common return line. An example of this is shown (lower right) where the rooms on each floor are on a separate loop. In some two-story homes it might be desirable to put part of each floor on one loop and the other portions of each floor on a second loop. Do not include three stories on one loop. In multiple loop systems, a valve should be placed at the return end of each loop for balancing.

**Expansion–** Gov-Board Assemblies and connecting piping will vary in length with water temperature changes in the system. To prevent distortion or noise as this expansion takes place, adequate measures must be provided in the system design and by the installer. Proper location of breaks in a run when the piping must drop through the floor to clear obstructions such as doors and fireplaces, expansion fittings, use of flexible tubing at the end of a run, offsetting the vertical risers in adequate size holes (1¼" holes for ¾" copper tubing, 1¼" x 1½" elongated holes for ¾" steel pipe) – all provide for expansion and make for a quality installation. In systems where high boiler water temperature must be maintained for domestic hot water, length of Gov-Board Assemblies between two inside adjacent corners (when Gov-Board is on three walls) should not exceed 25-feet, unless there is an expansion break between or swing joint provided at end. See SPECIAL APPLICATIONS, page 14. It is also desirable on these types of systems to provide a by-pass and mixing valve between boiler supply and return so that in mild weather, temperature changes in the system will be gradual instead of rapid.

**Balancing System –** System should be balanced on days when average winter temperatures prevail outdoors.




Series Loop System,
Single Circuit




Series Loop System,
Two Floors with Loop
for each Floor

**To Design Series-Loop Gov-Board Installation –**

1. Calculate the Heat Loss of each room using the procedure outlined in the I=B=R Heat Loss Calculation Guide No. H-21 or the ASHRAE Guide.
2. Using 210°F as design water temperature and 500 lbs/hr. as flow rate, select length of Gov-Board Assembly for each room to produce desired output. (Design water temperature other than 210°F may be used but should not exceed 230°F.) If system designed on 20°F drop, this 210°F average water temperature means roughly, that under maximum load conditions, the water leaves the boiler at 220°F and returns at 200°F and returns at 200°F. Since maximum load conditions occur only at rare intervals, the system usually operates at considerably lower water temperatures.
3. Locate Gov-Board Assemblies on Floor Plan drawn to scale.
4. Layout Piping on Floor Plan as illustrated. Since the temperature of the water decreases progressively from the first Heating Unit to the Last Heating Unit on a circuit, the system should be laid out, if possible, so that the Heating Units with the hotter water are in areas such as the living room, bath and dining room. Heating Units in bedrooms, kitchen and similar areas should be located on the end of the loop.
5. Measure length of Circuit (horizontal and vertical) from boiler supply to boiler return (include Gov-Board lengths). In Series Loop Systems, on rare instances a Gov-Board Assembly, Radiant Radiator or Slenderized Radiator is connected to the main with branches. Since a one-pipe fitting is used, add 12 additional feet to the measured length to obtain total length of Circuit.
6. Knowing the load-length of the loop from Steps 2 and 5 above, Table A will indicate whether or not a standard ¾" or 1" circulator is adequate.

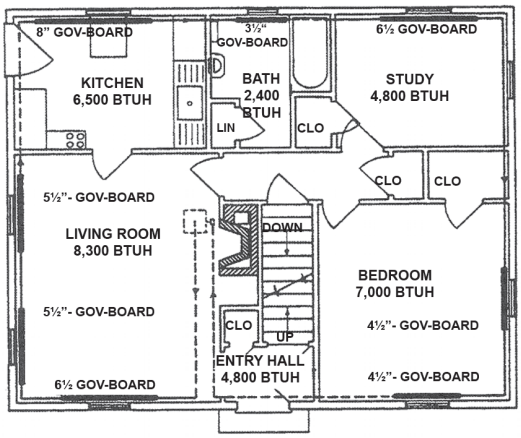
| TABLE A | | TABLE B | |
|---|---|---|---|
| **Btu/Hr. Output of Gov-Board Assemblies Each Loop** | **Total Length of Loop Ft.** | **Btu/Hr. Output of Gov-Board Assemblies All Loops** | **Length of Longest Loop - Ft.** |
| 40,000 | 100 | 50,000 | 240 |
| 35,000 | 135 | 55,000 | 210 |
| 30,000 | 175 | 60,000 | 165 |
| 25,000 | 260 | 65,000 | 140 |
| | | 70,000 | 120 |

NOTE: Table based on 20°F Drop through Circuit - 3/4" piping.

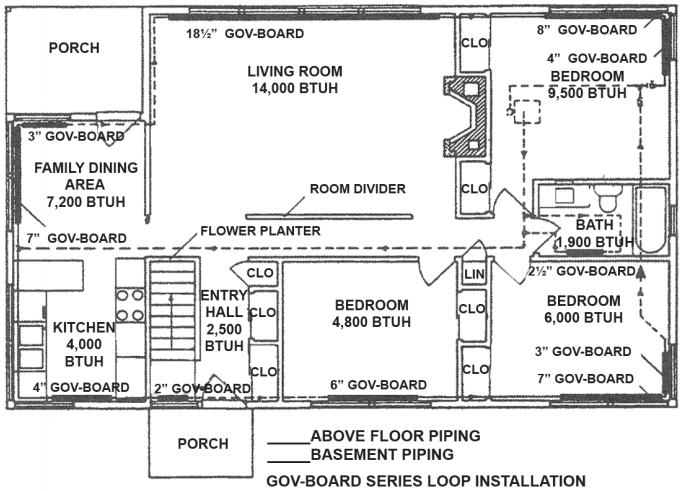
NOTE: Table based on head developed by Standard 3/4" or 1" circulator - 20°F Drop through system.

If, for a given output, the total length of the loop exceeds the values shown in Table A, the loop may be split into two circuits – see Illustration. Check load-length of each circuit.

Determine from Table B if 1" trunk is adequate.




GOV-BOARD SERIES LOOP INSTALLATION
SINGLE CIRCUITS




GOV-BOARD SERIES LOOP INSTALLATION
TWO CIRCUITS

### Installation Details

A Gov-Board heating system is extremely easy to install – no other heating system requires less labor. The same installation practices that are used in an ordinary radiator system are followed. Use conventional methods in selecting boiler and pipe sizes, including mains, risers and branches. Supply and return connections to Gov-Board are made in the same way as with conventional radiators.

### Location of Gov-Board

Gov-Board should be placed along exposed walls in place of the regular wood baseboard. If the outside walls do not provide sufficient space, place additional assemblies on inside wall.

### Recessed

Gov-Board may be recessed the depth of the lath and plaster, and will extend into the room approximately one and a quarter inches.

### Expansion

Gov-Board will expand about 1/8" in 10 lineal feet with a temperature rise of 180°F. To provide for this, holes cut through the floors should be larger than the pipe, and swing connections should be located in branches between the Main and Risers.

### Venting

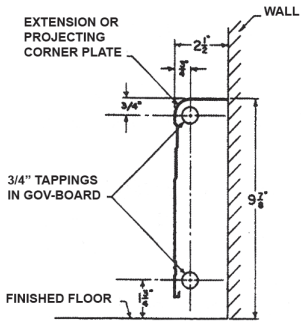
When two or more Gov-Board assemblies are connected in series on a hot water job it is necessary to vent each assembly, unless the assemblies are connected at the top tapping. When connected in series on a two-pipe steam job, the assemblies should be connected at the bottom, and only one steam air vent need be used.

### Maximum Dimensions of Fittings

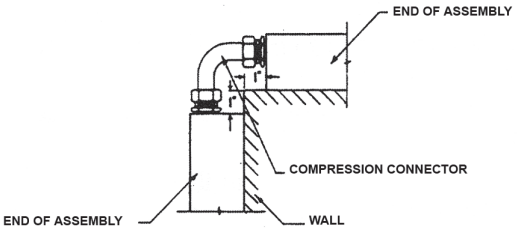
In as much as the BASEBOARD EXTENSION PANELS and PROJECTING CORNER PLATES are installed flush with the face of Gov-Board, there are a few types of fittings that cannot be used in back of these parts because of the space limitations. As shown in the adjacent diagram, the diameter of the fittings cannot exceed 1½" – radiator union elbows and regular pipe unions usually measure more, ¾" copper sweat or screw fittings usually measure less. When iron pipe and fittings are used, straight connections may be made with ¾" right and left coupling and corner connections with ¾" street elbow. Because of these space limitations, Governale has available a Compression Connector for use with the Projecting Corner Plate (see illustration).

Because of the radius on the face of INVERTED CORNER PLATE, fittings having a diameter greater than 1½" may be used (see illustration). For easy and quick connections at inside corners, however, we recommend the Governale Compression Connector for use with the 4-5/8" Inverted Corner Plate. Both are illustrated.

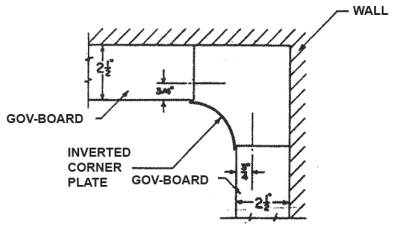
VALVE ENCLOSURES have been designed to accommodate almost all makes of shut-off valves and steam traps. See Illustration for Enclosure dimensions.



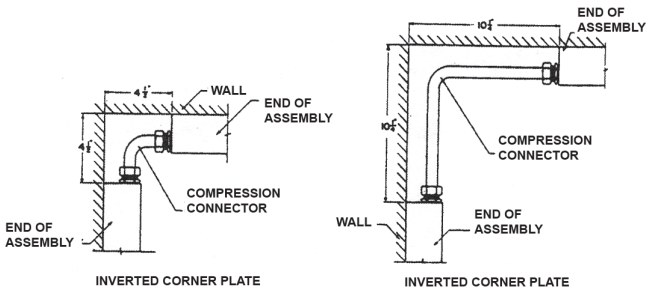

PROJECTING CORNER PLATES OR
GOV-BOARD EXTENSION



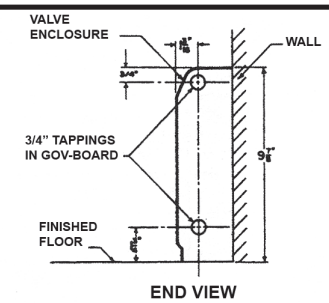

PROJECTING CORNER CONNECTION



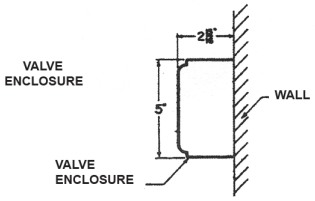

INVERTED CORNER PLATE




PLAN VIEW OF INSIDE CORNER CONNECTIONS




END VIEW




TOP VIEW

## INSTALLATION INSTRUCTIONS

### 1. Wall Preparation:

To prevent excessive heat loss through the walls in back of Gov-Board, it is recommended that the stud space behind the Assemblies be insulated to a height of at least 12" above the floor with 4" mineral wool batts (blanket or loose insulation may also be used) or other approved insulating materials. This is particularly essential if the Gov-Board is recessed. Mark Stud locations.

### 2. Allowance for Finished Flooring to Wall-to-Wall Carpeting:

If Gov-Board is to be installed prior to the finished floor, a wooden strip 2½" in width and equal in height to the finished floor should be installed along the base of all walls where baseboard assemblies and trim are to be placed.

If allowance is not made for wall-to-wall carpeting, or for carpeting that is to be laid with edges flush to the room side surface of Gov-Board, the air inlet of the Gov-Board will be restricted, resulting in a reduction in output. To compensate for the wall-to-wall carpeting, baseboard assemblies and trim should be raised by laying under them a strip of wood 2½" wide and the same thickness as the carpet and pad.

### 3. Recessing of Gov-Board Assemblies and Trim.

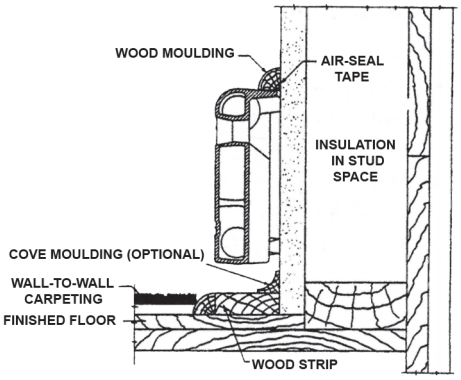
(If Gov-Board to be installed free-standing, proceed to Step 4.)

Gov-Board and Trim may be partially recessed or installed free standing against the finished wall surface. Although procedure for preparing recess may vary slightly with type of finished wall, in general, steps outlined below for lath and plaster construction may be followed:

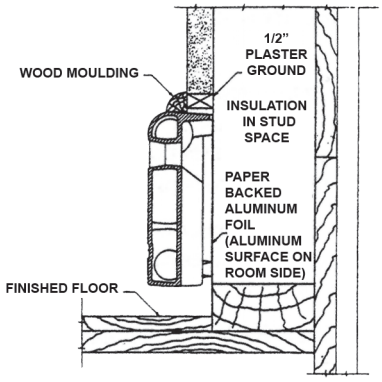
a. Nail ½" plaster ground to studs with the bottom of the plaster ground located 10" above finished floor.

* Additional height must be allowed if recess prepared before finished floor is laid or if wall-to-wall carpeting is to be installed – see Step 2 of Installation Instructions.

b. Line back of recess with paper-backed aluminum foil. This can be accomplished quickly and neatly by stapling foil to studs with staple gun. Foil surface should be on room side.

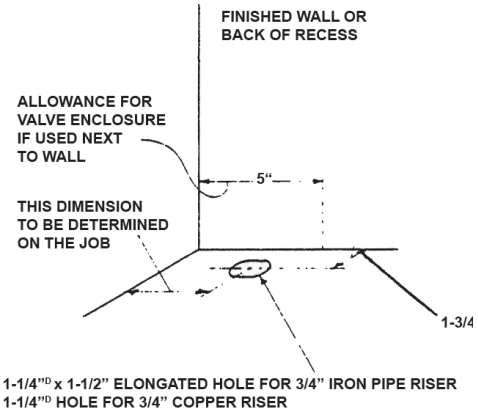



GOV-BOARD INSTALLATION
WALL-TO-WALL CARPETING

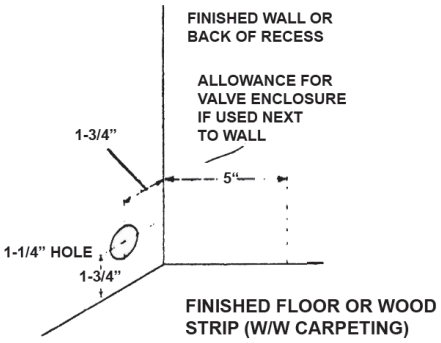



RECESSED GOV-BOARD INSTALLATION

### 4. Locate Holes for Piping (see illustrations):




PIPING THRU FLOOR




PIPING THRU WALL

## 5. Assembling Gov-Board

Gov-Board is shipped assembled in lengths up to 6 lineal feet– longer assemblies are shipped in two or more sub-assemblies for assembly on the job (see Gov-Board Assembly chart, page 4). One man can join tow sub-assemblies together in a matter of minutes providing he has a Gov-Board Assembly Clamp (available at a nominal charge) and follows the recommended procedure.

In assembling Gov-Board sub-assemblies on the job, the sections should be lined up, face down, on the floor or other flat surface near the wall on which they are to be installed. Ends of section, nipple ports and nipples should be thoroughly cleaned with kerosene or gasoline and wiped dry with a clean cloth.

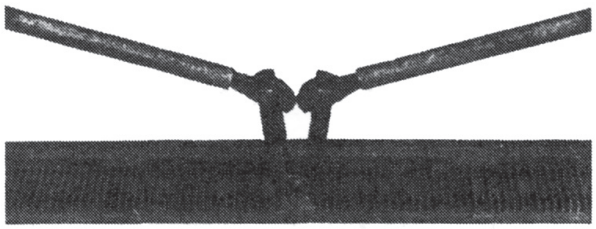
Place a thin coating of nipple lubricant on nipples and insert into the nipple ports of one assembly without cocking. Engage nipples in nipple ports of second assembly and push sections together by hand as far as possible keeping ends of sections parallel.

In order to secure necessary leverage with Gov-Board Clamp, cut two pieces of 1¼" steel pipe 15" long and place them on the two cam handles.

Insert Gov-Board Clamp nose in the recesses in the Gov-Board castings, **being certain that the nose of the clamp is resting on the bottom of the recess –** THIS IS IMPORTANT. If the clamp nose will not reach the bottom of the recess, exert light pressure downward on the cam handles until the two castings are PARTIALLY drawn together. Release the pressure on the handles and the clamp nose will then drop to the bottom of the recess.

Press down on both cam handles simultaneously until castings are drawn together. **Be sure clamp is not tilted, since this may break casting.** If nipples do not draw up evenly during final tightening, strike end of assembly with wood block and hammer or mallet to bring the sections back in line. Do not strike Gov-Board sections with a metal hammer.

Remove the clamp, place the tie bolts in the bolt slots and tighten securely.



**Sections being drawn together - ready for tie-bolt**

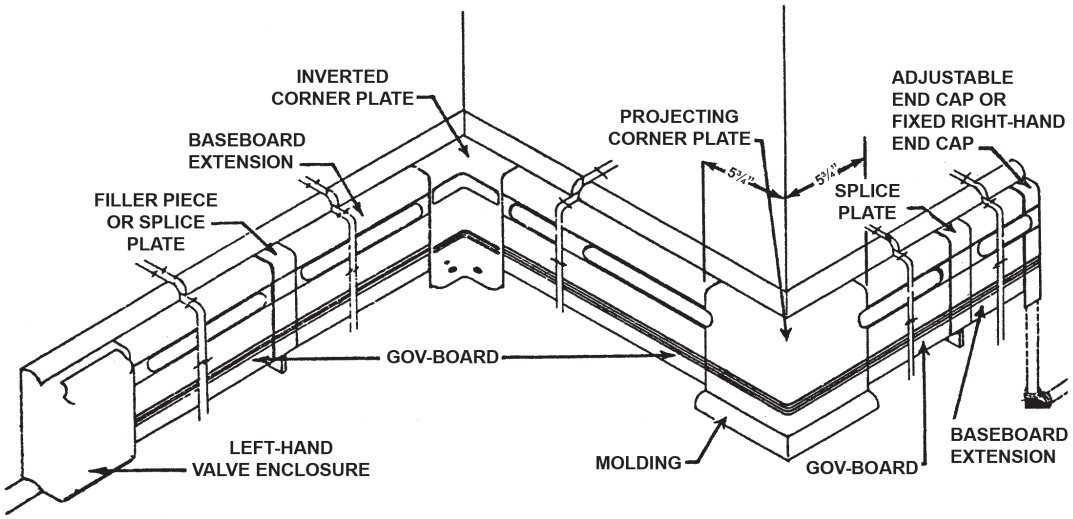
## 6. Installation of Gov-Board Assemblies

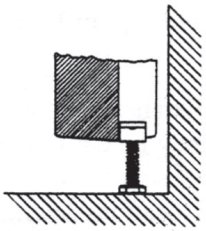
Install all fittings in end of sections and all necessary vents while assemblies are still laying flat on floor.

Install bottom center supports prior to raising assemblies to upright position. Refer to table for number of supports required They should be spaced evenly.

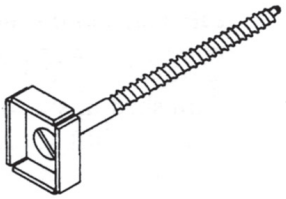
| Length Assembly | Number of Top and Bottom Center Supports Required |
|---|---|
| 1½ to 14½ Lineal Feet | 1 |
| 15 to 21½ Lineal Feet | 2 |
| 22 to 28½ Lineal Feet | 3 |

Install the spring clip Bottom Center support by pushing it all the way up against the bottom of two fins and next to the waterway of the section as illustrated below. Run the ¼" cap screw into the clip until head is not more than ¾" from the clip.





Spring Clip Bottom Center Support



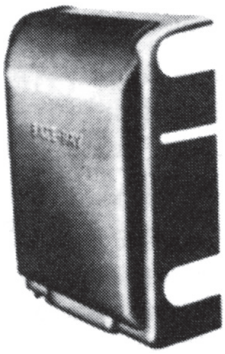
Top Center Support

Stand Assemblies upright, place in position and fasten to the walls with Top Center Supports using the number shown in the table above. Insert Top Center Supports in Air Outlet opening of Sections opposite studs (stud locations determined in step 1). Use wood screw furnished with Top Center Support and screw into stud until tight, the longer dimension of the top center support is in a vertical position when installed. Back off fraction of a turn to permit movement caused by expansion and contractions of sections. Adjust Bottom Center Supports by turning Cap Screws down until they begin to contact floor. Do not extend the Cap Screws any further.

Connect assemblies to piping. Complete remainder of piping to boiler, fill system with water and check for leaks.

CARE MUST BE EXERCISED TO SEE THAT 30 PSI GAUGE PRESSURE IS NOT EXCEEDED.

DO NOT PRESSURE TEST WITH AIR.



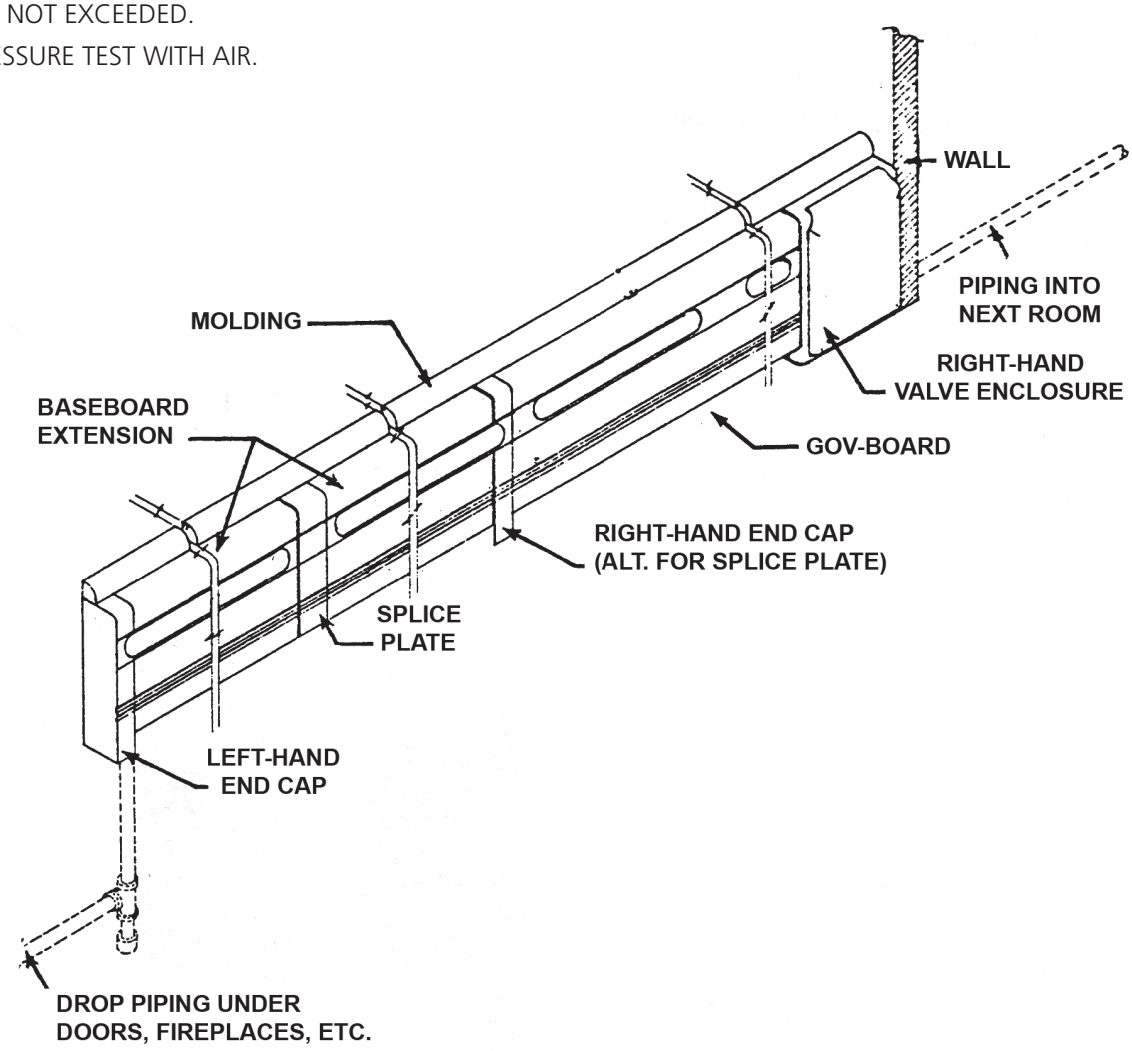
7. **Installation of Valve enclosures** (furnished in right-hand and left-hand patterns).

   Remove knockout in end of Valve Enclosure if piping to run through Valve Enclosure.

   Bend tab on Valve Enclosure so that hole is on inside of Valve Enclosure facing wall.

   Place Valve Enclosure next to Gov-Board and fasten to Gov-Board with ¼" thumb screw furnished.

   Insert screw furnished through tab on Valve Enclosure and fasten to wall. Set Valve Enclosure Cover in place.



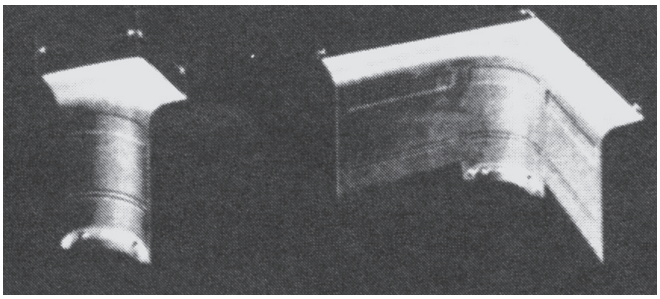
**8. Installation of Corner Plates**

**Inverted Corner Plates –** for inside corners – furnished in two types, 4-5/8" standard plate is used when Assemblies on adjoining walls extend to within 4-3/8" of the corner. If this distance is greater than 4-3/8" but less than 10-3/8", the 10-5/8" plate is used. Extended Plate may be cut to desired length with hacksaw.

Set Inverted Corner Plate in place overlapping the end of the adjoining Gov-Board Assemblies. Secure to floor with wood screws furnished.

If installation is on tile with wood sub-flooring, drill 1/2" holes in tile in line with holes in Corner Plate. Holes should not penetrate sub-flooring. Substitute screws of same size as furnished but longer and secure Corner Plate to sub-flooring.

If installation is on masonry floor, drill 1/2" holes approximately 1" deep in floor in line with holes in Corner Plate. Drive slightly oversized wood plugs into holes and secure Corner Plate to plugs with wood screws furnished.



**Projecting Corner Plate –** for concealing pipe and fittings at outside corners. See section on MAXIMUM DIMENSION OF FITTINGS, page 8. Assemblies on adjoining walls must extend to within 3" of corner.

Set Projecting Corner Plate in place overlapping the ends of the adjoining Gov-Board Assemblies. Secure with moulding (not furnished) at top and bottom.

**9. Installation of Baseboard Extension, Splice Plates, End Caps and Filler Pieces.**

**Baseboard Extension –** Extension panels are furnished in six foot lengths but may be cut to desired lengths with hacksaw. Extensions are supported by hangers which are attached to studs (stud locations determined in Step 1) with two No. 10 x 1-1/2" wood screws.

Screw hangers to studs so that there is a hanger located at the extreme ends of the Baseboard Extension and at two foot intervals along its length. If construction members are not suitably located, use Moly Screw anchors to secure Hangers to wall. Bottom of Hangers should rest on finished floor unless Gov-Board has been raised for wall-to-wall carpeting (see page 9). If such is the case, Hangers must be raised an equal amount.

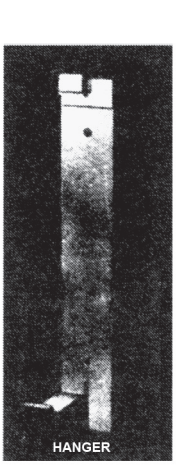
Install END CAPS on Extension (see succeeding paragraph), insert lip on top rear of Extension into slot at top of Hangers and snap channel on bottom of Extension under spacer arm on lower part of Hanger.

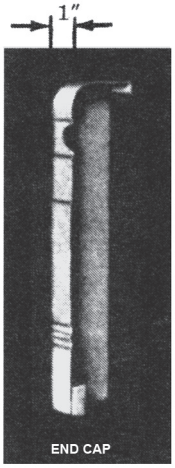
**Splice Plates –** used to make neat covering for joint where two Extension Panels butt together or where Extension Panel terminates at Gov-Board.

Plate hooks on bottom of Splice Plate over lip on bottom of Extension Panel and push top of Splice Plate toward wall until hooks on top of the Splice Plate snap into position behind the Extension or the Gov-Board. When the Splice Plate is used to join an Extension Panel to Gov-Board, bottom hook which overlaps Gov-Board must be cut off.

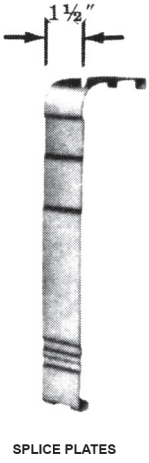
**End Caps –** available in both left-hand and right-hand patterns for finishing off ends of Baseboard Extensions that terminate at doorways or at Valve Enclosures. They can be used where Extensions butt against Gov-Board in preference to Splice Plate.

Remove Knockout in end of End Cap if piping is to run in this direction. Slide over end of Extension Panel.


HANGER



END CAP



SPLICE PLATES

**Adjustable End Caps & Filler Pieces –**

**Adjustable End Caps** are available in both left-hand and right-hand patterns and are used in the same locations as the standard end caps except the 9" length of the adjustable end caps makes it possible to fill in spaces of up to 7-1/2". A knockout is also available in the ends for piping.

Filler pieces are used where a 9" space or less exists between two sections of baseboard or between a section of baseboard and baseboard extension.

To install adjustable end cap or filler piece accessory, insert bolt thru hole in accessory and engage toggle as shown in Figure 1 & 3 below. Place accessory against Gov-Board at same time pushing toggle thru air outlet of Gov-Board. With accessory in final location, tighten bolt until accessory is secure. Use finger to keep toggle in vertical position, as shown in Figure 2 below.

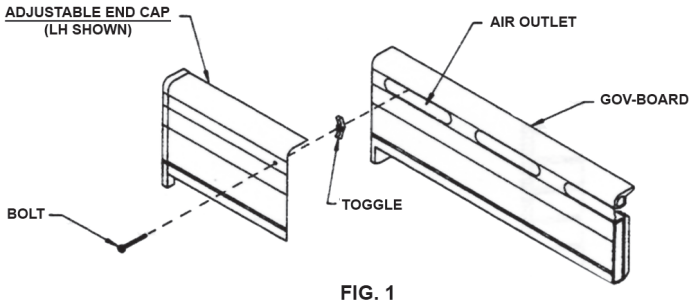



**FIG. 1**
**INSTALLATION OF ADJUSTABLE END CAP**

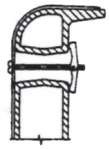


**FIG. 2**
**PROPER LOCATION OF TOGGLE**
**WHEN SECURING ACCESSORY TO GOV-BOARD**

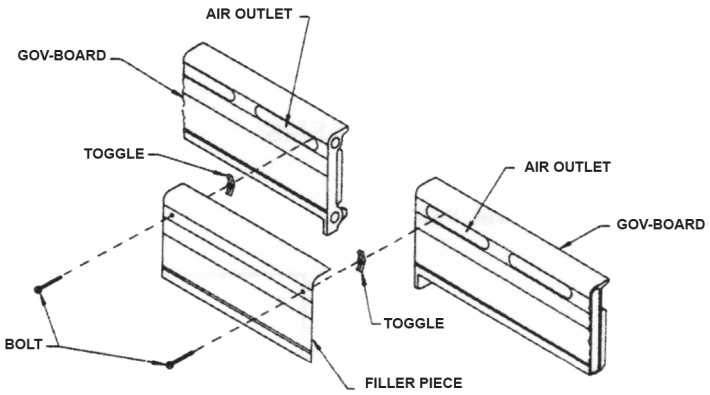



**FIG. 3**
**INSTALLATION OF GOV-BOARD**
**ADJUSTABLE END CAP & FILLER PEICE**

**10. Completing Installation – Important**

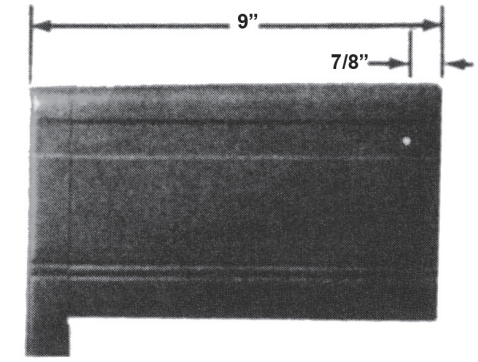
**Air-Seal –** It is necessary to prevent leakage of air between the walls and Gov-Board, since this will cause dirt streaks on the wall above the heating unit. This can be avoided by installing an "Air-Seal".

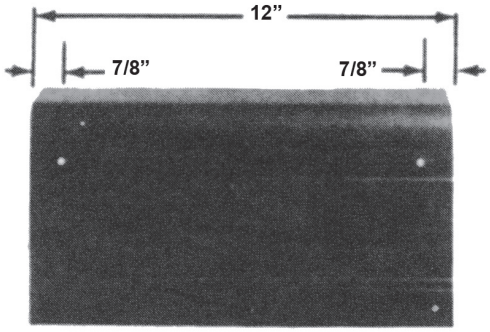
We recommended using 1" wide tape for this purpose, preferably with a thermal setting adhesive, available from Governale at nominal charge.

With the adhesive side down, press one-half of tape against the top of Gov-Board and the other half against the wall as illustrated on page 9.

**Wood Moulding –** For finished installation, 3/4" quarter round or other wood moulding should be nailed to wall on top of Gov-Board (over "Air-Seal") and Trim and down side of Valve Enclosures. When Projecting Corner Plates are used, install wood moulding at base of Corner Plate to hold in place. An illustration showing the application of the moulding can be found on page 9.

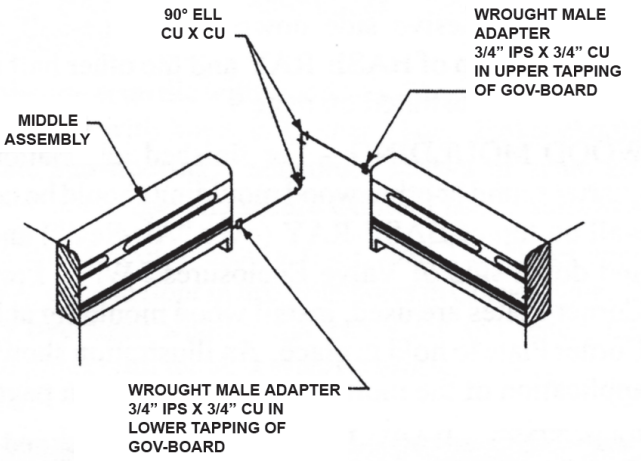
**Painting –** Gov-Board and Trim are primed with a latex (water based) paint and must be top coated with a high grade oil or solvent based enamel to prevent rusting of the metals immediately after installation. Primer coated products should not be allowed to sweat as a result of high room humidity or cold water in system. The use of flat wall paint is not recommended since it may chip or crack when applied to surfaces that are heated. Consult reputable paint dealer.



## Special Applications

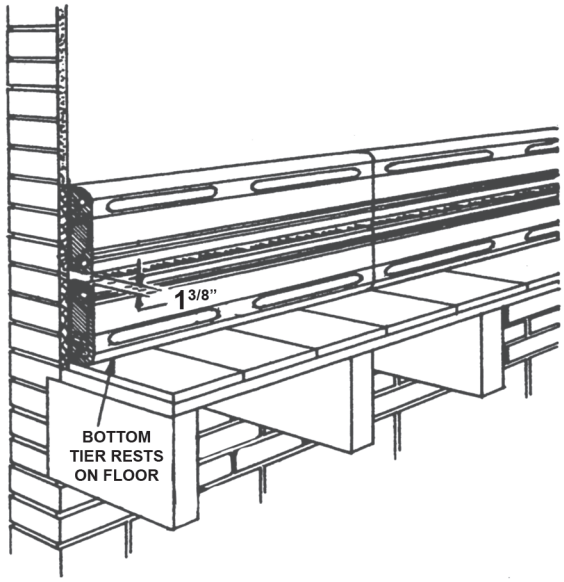
**Gov-Board Installed on Three Walls of Room –** When Gov-Board is installed on three walls, expansion noises are sometimes created by the middle assembly when rigid piping is used to connect all three assemblies together. Flexibility can be gained by connecting two of the adjoining assemblies with a flexible connector or swing joint such as illustrated.



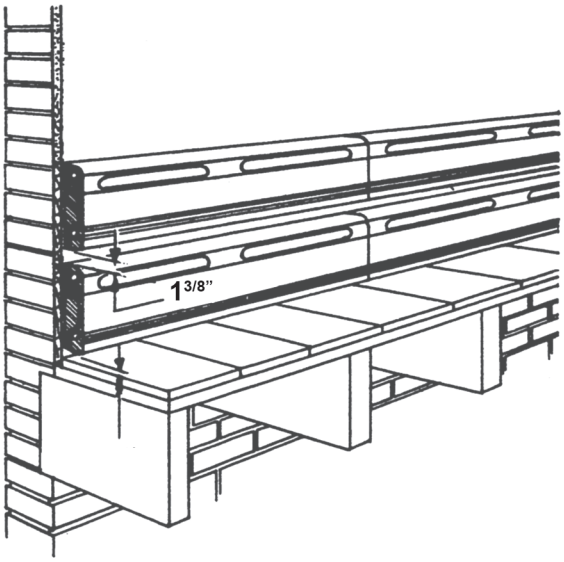

**Installation with Governale Radiant or Slenderized Radiators –** Since a Gov-Board installation is made in much the same manner as any other radiator system, Governale RADIANT OR SLENDERIZED RADIATORS may be used in a Gov-Board Radiant Baseboard System.

**Two-Tier Installation –** Where wall space is limited, Gov-Board may be installed in tiers. Both sections may be upright or lower section inverted as illustrated. Legs on end sections are cut off to enhance appearance.

**Rating Correction Factor –** If Gov-Board is installed in tiers in accordance with the illustrations, each tier will have a rating of .91 times the rating shown in the Tables on pages 2 and 3.

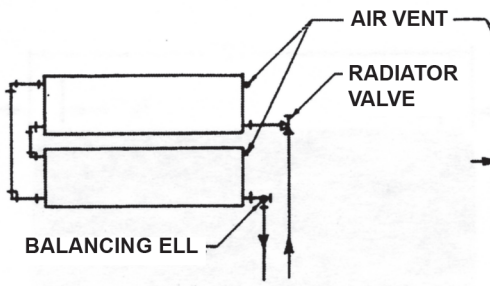



**Top Sections Upright, Bottom Sections Inverted.**

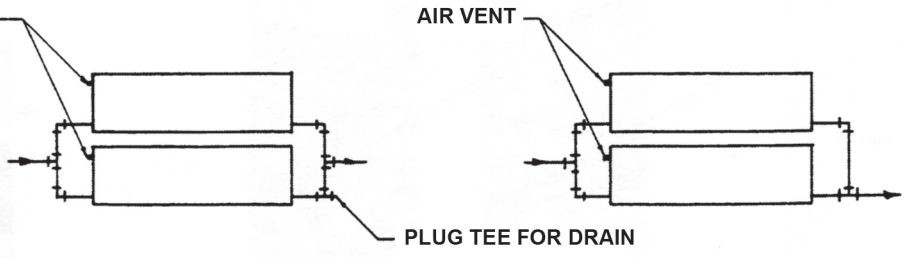



**Both Sections Upright**

## POSSIBLE PIPING ARRANGEMENTS
## TWO--TIER GOV-BOARD FORCED CIRCULATION HOT WATER SYSTEMS




**SUPPLY & RETURN AT SAME END OF ASSEMBLY**




**SUPPLY & RETURN AT OPPOSITE ENDS OF ASSEMBLY**

## Notes

# Limited Warranty

## GOV-RAY™, GOV-FREE™, Gov-Board, CAST IRON ELEMENTS, STEEL ELEMENTS, COPPER ELEMENTS, CONVECTOR CABINETS

**LIMITED WARRANTY - Except as provided below with respect to products or parts not manufactured by GOVERNALE CO. INC., GOVERNALE CO. warrants to the original owner at the original installation site that products manufactured by the GOVERNALE CO. comply, at the time of manufacture, with recognized hydronics Industry regulatory agency standards and requirements then in effect and will be free from defects in materials and workmanship for a period of one year after the date of installation.**

**The remedy for breach of this warranty is expressly limited to the repair or replacement of any part found to be defective under conditions of normal use and does not extend to liability for incidental, special or consequential damages or losses such as loss of the use of the products, inconvenience, loss of time or labor, expense to remove alleged defective product. GOVERNALE CO. shall have no responsibility for the performance of any product sold by it under conditions varying materially from those under which such product is usually tested under existing Industry standards, nor for any damage to the product from abrasion, erosion, corrosion, deterioration or the like due to abnormal temperatures or the influence of foreign matter or energy, nor for the design or operation of any system of which any such product may be made a part or for the suitability of any such product for any particular application.**

**For products or parts not manufactured by GOVERNALE Co., the warranty obligations at GOVERNALE CO. shall, in all respects, conform and be limited to the warranty actually extended to GOVERNALE CO. by its vendors.**

**Warranty service can be obtained by contacting the original installer of the product and providing him with a detailed description of any apparent defect. If this procedure fails to result in satisfactory warranty service, the owner should notify GOVERNALE CO., 788 WILLIAMS AVENUE, BROOKLYN, NY 11207. Transportation to a factory or other designated facility for repairs of any products of any items alleged defective shall, in all events, be the responsibility and at the cost of the owner.**

**Not with standing any of the above provisions, (1) failures resulting from misuse, Improper installation or lack of maintenance are not covered by this warranty, and (2) GOVERNALE CO.'s liability under this warranty shall not exceed the selling price of the product found to be defective.**

**Equipment furnished by the Buyer, either mounted or unmounted, and when contracted for by the Buyer to be installed or handled is not covered by this warranty. GOVERNALE CO. does not assume any responsibility in connection with such equipment, operation, warranty, performance, or any other liability connected thereof.**

**The foregoing provision of this WARRANTY shall be effective to the maximum extent permitted by applicable law, and, to the extent that any such provision would otherwise have an unconscionable result or would otherwise be inconsistent with applicable law, such provision shall be limited in effect to the minimum extent necessary to avoid such unconscionable result or inconsistency with applicable law.**

**Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose shall, to the extent permitted by applicable law, be limited in duration to a period of one year after the date of installation. To the extent permitted by applicable law, the remedies for breach of any such implied warranty shall be limited to the remedies set forth above with respect to a breach of express limited warranty provided. With respect to the limitations on implied warranties set forth above, GOVERNALE CO. hereby notifies each person to whom such warranty is made as follows: Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.**

**Governale Company Inc.**
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