מדינת ישראל

משרד השיכון

9518-52

סמל: העיר העתיקה

הנושא: סניטציה

נפתח ב 1/6/67

נסגר ב ....

2 בדצמבר 1968

מס'ם/18796/1384

לכבוד
מהנדס ד. גור,
רח' נורדאו 15,
רמת - גן.

א.נ.,

הנדון: מתקן ומערכת גז לחימום מים -
בית מחסה - הרבע חיחודי בעיר העתיקה.

בהמשך לשיחתנו וביקורנו המשותף במקום ביום 1 לח.ז., להלן הצעתנו בנדון:

1. דוד אגירה לחימום מים דגם GL 37-150.

תפוקת המים - תפוקה שוטפת: בהעלאת טמפרטורה של 33 כ - 800 ליטר מים חמים לשעה.
תפוקת חד פעמית: כ - 150 ליטר מים חמים בטמפרטורת של 82 כל 25 דקות.

קיבול - 150 ליטר.
תצרכת הגז - 3 ק"ג גז לשעה.
בידוד - מושלם ע"י שכבה בעבי של 5 ס"מ צמר זכוכית.
לחץ - לחץ עבודה מקסימלי - 10 אטמוספרות (אין לחץ מינימלי).
ארובה - בקטר "6.
אביזרים - 1. טרמוסטט עצמאי (אינו צורך חשמל לצרך חפלה).
2. שסתום בטחון.
חיבורי המים - בקטר "1½.

מחיר הדוד.....1,225.- ל"י
מס קנית.....378.- ל"י
סה"כ.....1,603.-..... ל"י

2. דוד אגירה לחימום מים דגם GL 85-240.

תפוקת המים - תפוקה שוטפת: בהעלאת טמפרטורה של 33 כ - 1350 ליטר מים חמים לשעה.
תפוקה חד פעמית: כ - 240 ליטר מים חמים בטמפרטורת של 82 כל 35 דקות.

קיבול - 320 ליטר.
תצרכת הגז - 5 ק"ג גז לשעה.

../2.

ב י ד ו ד - מושלם ע"י שכבה בעבי של 5 ס"מ צמר זכוכית.

ל ו ח - לוח עבודה מקסימלי - 10 אטמוספרות (אין לוח מינימלי).

א ר ו ב ה - בקטר "7.

א ב ז ר י ם - 1. טרמוסטט עצמאי (אינו צורך חשמל לצרך הפעלה).
2. שסתום בטחון.

חיבורי המים - בקטר "1½.

מחיר הדוד.....2,025.- ל"י
מס קנית.....630.- ל"י

סה"כ.....2,655.- ל"י

3. מתקן הגז

א. לדוד GL 37-150

מתקן גז של 6 מיכלים א' (קיבול 48 ק"ג גז)
כולל : טעמת 343 עם 2 ברזי סגירת,
ברז בטחון ראשי,
1 נקודת גז עם ברז בטחון,
1 טכסה מגן לרסת הלחץ,
1 רסת לחץ,
וכל יתר האבזרים הדרושים
להפעלת תקינה.....280.- ל"י
מס קנית קצוב.....27.- ל"י
תצגרת לפי תעריפי החברה.

ב. לדוד GL 85-240

מתקן גז של 10 מיכלים א' (קיבול 48 ק"ג גז)
כולל : מעמת 545 עם 2 ברזי סגירת
וכו' - לפי הטפרט בנ"ל.....360.- ל"י
מס קנית קצוב.....27.- ל"י
תצגרת לפי תעריפי החברה.

ארובת חיבורי המים והמתקנת מרכך מים (שאנו ממליצים על הרכבתו, לשם מניעת משקעי אבנית בדפנות תצגרת) - יבוצעו ע"י המזמין.

4. שטח איוורון

א. שטח איוורון למתקן המיכלים 343 - 0.60 x 3.50 מטר.

ב. שטח איוורון למתקן המיכלים 545 - 1.10 x 3.50 מטר.

אזור האיוורון יהיה סגור ומוגן ע"י חטר בלתי דליק, עם אפשרות פתיחה לצרך החלפת מיכלים (שער).
יש להכין פתח איוורור בתחתית הקרקע לכל ארך השטח בגבה של 20 ס"מ.

.../3.

5. <u>חדר הדוד</u>

החדר יהיה סגור עם דלת מחמר בלתי דליק.

אידרור במפלס הקרקע לכל ארך הפתח ובגבה של 20 ס"מ.
אידרור עליון מעל לגבה של 2 מטר בפתח הכניסה.

בעקרון בעד המיכלים (-.100 ל"י למיכל) - נסכים לקבל ערבות עצמית של משרד השכון או עירית ירושלים.

הואיל ונמסר לנו כי ביצוע העבודה דנן הינו דחוף, נבקשכם לאשר הצעתנו בהקדם.

לשרות בכ' בכל עת, הננו חותמים,

בכבוד רב,
החברה האמריקאית-ישראלית לגז בע"מ

י. תמיר.

העתק : מר וייד, משרד השכון.
מהנדס שוריזן.
סניף ירושלים.

לוט : פרוספקטים.

ית/מז

102RG-25 JUNE '65S (SUPERSEDES 102RG-25 FEB. '64K)

FLOATER V GLASSLINED COMMERCIAL GAS WATER HEATERS

RUUD

STANDARD EQUIPMENT

1. *Glass lined tank (double coat)*
2. *120° to 180° thermostat*
3. *Diaphragm gas valve*
4. *Gas Pressure Regulator*
5. *100% safety shutoff on all gases*
6. *Swing around draft diverter**
7. *Hand-hole cleanout*
8. *1½" water connections*
9. *Oversize drain valve*
10. *Circulating loop connection*
11. *ASME rated T & P relief valve*
12. *Cast iron burners*
13. *2" Fiberglas insulation*
14. *Magnesium anode rod*

*Except Model GL37-200-1.

ENGINEERING INFORMATION

1. STORAGE TANK The tank of this water heater is lined with a double coating of high temperature glass formula. It is built for long life under any water conditions. A magnesium anode rod is installed at the factory.

2. EXTERNAL FLUE DESIGN External flue (full-floating) design utilizes entire outside surface of tank as a heat exchange area, giving lower BTU heat transfer per square inch. Absence of internal flues removes critical stress areas normally found in commercial water heaters, and leaves the bottom head completely accessible for easy cleaning.

3. SPECIAL STEEL FLUE LINER The flue liner in Floater V glass lined water heaters is made of special temperature and corrosion resistant steels. Will not warp or distort even under the most severe operating conditions.

4. FIBERGLAS INSULATION A 2" blanket of Fiberglas insulation completely surrounds the flue liner. The effectiveness of Fiberglas in preventing heat loss is well known, and its use assures high operating efficiency.

5. HAND-HOLE CLEANOUT A large hand-hole cleanout is standard equipment. The hand-hole opening is used for the removal of scale (lime), silt, sand, and other foreign materials which might accumulate. Opening is equipped with a glass coated cover plate and is sealed with a replaceable neoprene gasket.

6. DRAFT DIVERTER "Swing around" diverter* allows connection to the outside flue from any direction. Saves time and installation expense, and allows the water heater(s) to be placed at any convenient angle.

7. TEMPERATURE CONTROL Designed to shut off all gas if pilot light goes out. Thermo-magnetic automatic pilot—no moving parts to wear out. Accurate temperature control.

8. CAST IRON BURNER Raised, drilled port, cast iron burner is designed for unusually high primary air injection. The resultant low flame mantle allows for the best use of the combustion chamber space, as well as minimizing any possibility of sooting.

9. OVERSIZE DRAIN VALVE Has far bigger internal openings to allow rapid draining of the tank for periodic inspection. A ¾" I.P.S. side opening is used for connecting the return line of building circulating loops.

10. RELIEF VALVE An ASME rated temperature and pressure relief valve is available with each unit. The valve is set for 150 psi pressure and 210°F. temperature.

11. FACTORY ASSEMBLY Every model is completely assembled, and performance tested at the factory.

APPROVALS AND RATINGS

1. These Ruud Floater V water heaters are fully approved by the American Gas Association Laboratories: *a) As automatic instantaneous water heaters, b) As automatic circulating tank water heaters, c) For operation at 180°, d) For operation on combustible floors.*

2. Rudd Floater V water heaters are hydrostatically pressure tested and rated for 150 psi working pressure.

3. Ruud Floater V water heaters are constructed in accordance with Standards No. 5 of the National Sanitation Foundation, and are Approved-Listed for use with all types of dishwashing machines when installed with special leg extensions.

5 YEAR WARRANTY

Five-year warranty. In the first two years a defective tank will be replaced with a new water heater and in the next three years at 60%, 75% and 90% of the current retail price of the replacement. Defective parts will be replaced in first year. Cost of local delivery, labor and materials are not covered.

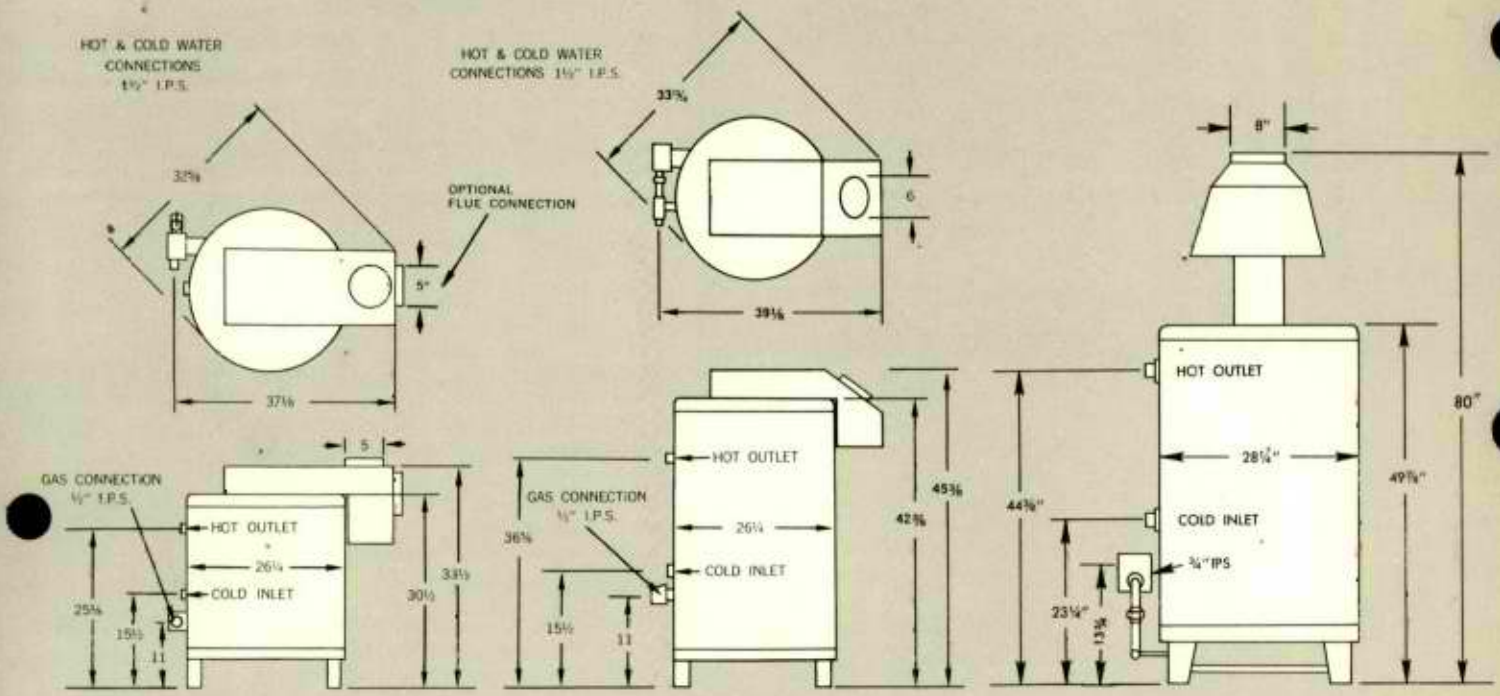
GL18-65-1 & GL18-100-1

GL37-150-1 (Swing Around Diverter)

GL37-200-1 (Upright Diverter)

RUUD

ENGINEERING DETAILS



MODELS GL18-65-1 & GL18-100-1 | **MODEL GL37-150-1** | **MODEL GL37-200-1**

Increase height dimensions 4½" if leg extensions are used for N.S.F. Approval. Model GL37-200-1 only 2".

Heater Model	Input BTU/hr.	Tank Gallons	Recovery in Gals./hr. at Various Temperature Rises 40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°	Shipping Weight
GL18-65-1	72,000	18	151	121	101	86	76	67	61	55	50	47	43	285#
GL18-100-1	100,000	18	210	168	140	120	105	93	84	76	70	65	60	290#
GL37-150-1	150,000	37	315	252	210	180	158	140	126	115	105	97	90	362#
GL37-200-1	199,900	37	420	336	280	240	210	187	168	153	140	129	120	389#

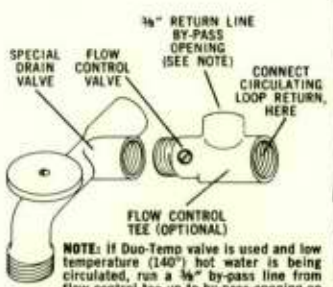
Available for All Gases—Except L.P. Air Gases.

SAMPLE SPECIFICATIONS

Water heater(s) shall be Ruud Floater V Model_____ having gas input of_____BTU/hr. and a recovery rate of_____GPH at a 100° temperature rise. Water heater(s) shall have the A.G.A. seal of approval. Water heater(s) shall be furnished with a tank lined with a double coating of high temperature glass and furnished with a magnesium anode rod rigidly supported. Tanks shall have a working pressure rating of 150 psi, and shall be equipped with a boiler-type hand-hole cleanout. Water heater(s) shall be of external flue design, and completely factory assembled, including a pressure regulator properly adjusted for operation on_____gas; cast iron, raised drilled port burners; and a factory supplied ASME rated, temperature and pressure relief valve. Controls will be arranged for 100% safety shutoff in event of pilot failure. Complete unit shall be insulated with a 2" blanket of Fiberglas. Water heater(s) shall be covered by a five year warranty from the manufacturer.

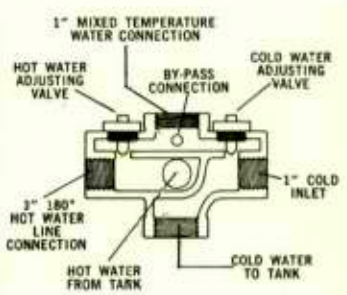
(Add for two temperature systems)

Ruud Duo-Temp valve kit shall be installed on water heater(s): 180° water line shall be connected to Duo-Temp valve opening marked "hot"; building general purpose hot water line shall be connected to opening marked "mixed"; cold water supply shall be connected to opening marked "cold."



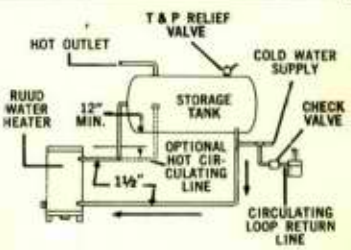
NOTE: If Duo-Temp valve is used and low temperature (140°) hot water is being circulated, run a ⅛" by-pass line from flow control tee up to by-pass opening on Duo-Temp valve. If 180° water is being circulated, install pipe plug in by-pass opening.

DETAIL-CIRCULATING LOOP RETURN CONNECTION



RUUD DUO-TEMP MIXING VALVE (OPTIONAL)

NOTE: Above models are approved for gravity circulation to a separate tank. However, Duo-Temp valve kit should not be used when heater is so installed.



CONNECTIONS TO HORIZONTAL STORAGE TANK

PRINTED IN U.S.A. 102RG-25 JUNE '65S

Ruud Manufacturing Company • Chicago, Illinois
Division of Rheem Manufacturing Company

FLOATER V GLASSLINED COMMERCIAL GAS WATER HEATERS

RUUD

TANDARD EQUIPMENT

1. *Glass lined tank (double coat)*
2. *120° to 180° thermostat*
3. *High-limit control*
4. *Diaphragm gas valve*
5. *Gas Pressure Regulator*
6. *100% safety shutoff on all gases*
7. *Swing around draft diverter*
8. *Hand-hole cleanout*
9. *1½" water connections*
10. *Oversize drain valve*
11. *Circulating loop connection*
12. *ASME rated T & P relief valve*
13. *Cast iron burners*
14. *2" Fiberglas insulation*
15. *Magnesium anode rod**

ENGINEERING INFORMATION

1. STORAGE TANK The tank of this water heater is lined with a double coating of high temperature glass formula. It is built for long life under any water conditions. A magnesium anode rod is installed at the factory*.

2. EXTERNAL FLUE DESIGN** External flue (full-floating) design utilizes entire outside surface of tank as a heat exchange area, giving lower BTU heat transfer per square inch. Absence of internal flues removes critical stress areas normally found in commercial water heaters, and leaves the bottom head completely accessible for easy cleaning.

3. SPECIAL STEEL FLUE LINER The flue liner in Floater V glass lined water heaters is made of special temperature and corrosion resistant steels. Will not warp or distort even under the most severe operating condition.

4. FIBERGLAS INSULATION A 2" blanket of Fiberglas insulation completely surrounds tank liner. The effectiveness of Fiberglas in preventing heat loss is well known, and its use assures high operating efficiency.

5. HAND-HOLE CLEANOUT A large hand-hole cleanout is standard equipment. The hand-hole opening is used for the removal of scale (lime), silt, sand, and other foreign materials which might accumulate. Opening is equipped with a glass coated cover plate and is sealed with a replaceable neoprene gasket.

6. DRAFT DIVERTER "Swing around" diverter allows connection to the outside flue from any direction. Saves time and installation expense, and allows the water heater(s) to be placed at any convenient angle. 45° vent connection allows either horizontal or vertical venting.

7. TEMPERATURE CONTROL Designed to shut off all gas if pilot light goes out. Thermo-magnetic automatic pilot—no moving parts to wear out. Accurate temperature control.

8. CAST IRON BURNERS Raised, drilled port, cast iron burners are designed for unusually high primary air injection. The resultant low flame mantle allows for the best use of the combustion chamber space, as well as minimizing any possibility of sooting.

9. OVERSIZE DRAIN VALVE Has far bigger internal openings to allow rapid draining of the tank for periodic inspection. A ¾" I.P.S. side opening is used for connecting the return line of building circulating loops.

10. RELIEF VALVE An ASME rated temperature and pressure relief valve is available with each unit. The valve is set for 150 psi pressure and 210° F. temperature.

11. FACTORY ASSEMBLY Every model is completely assembled, and performance tested at the factory.

APPROVALS AND RATINGS

1. These Ruud Floater V water heaters are fully approved by the American Gas Association Laboratories: *a) As an automatic storage water heater (Model GL75-360-1 only as instantaneous water heater), b) As an automatic circulating tank water heater, c) For operation at 180°, d) For operation on combustible floors.*

2. Ruud Floater V water heaters are hydrostatically pressure tested and rated for 150 psi working pressure.

3. Ruud Floater V Models GL85-240-1 and GL75-360-1 are available with construction in accordance with the requirements of the ASME Boiler and Pressure Vessel Code.

4. Ruud Floater V water heaters are constructed in accordance with Standards No. 5 of the National Sanitation Foundation, and are Approved-Listed for use with all types of dish-washing machines when installed with special leg extensions.

*3 rods on Model GL75-360-1.
**Plus 3 flues on Model GL75-360-1.

5 YEAR WARRANTY

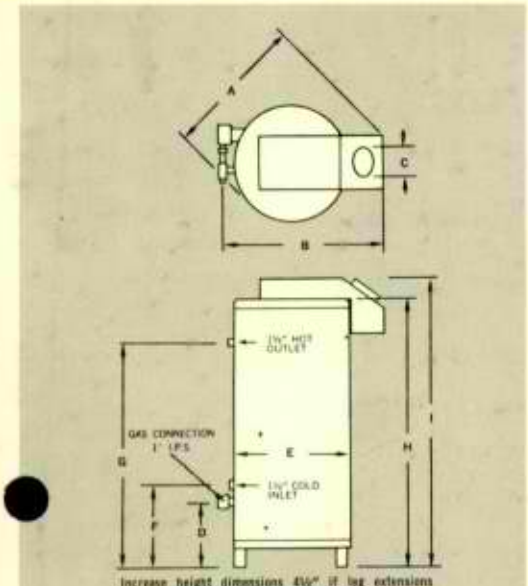
Five-year warranty. In the first two years a defective tank will be replaced with a new water heater and in the next three years at 60%, 75% and 90% of the current retail price of the replacement. Defective parts will be replaced in first year. Cost of local delivery, labor and materials are not covered.

MODELS
GL85-150-1
GL85-200-1
GL85-240-1

MODEL
GL75-360-1

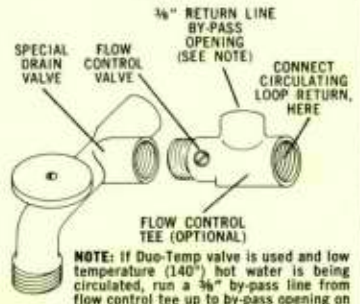
RUUD

ENGINEERING DETAILS



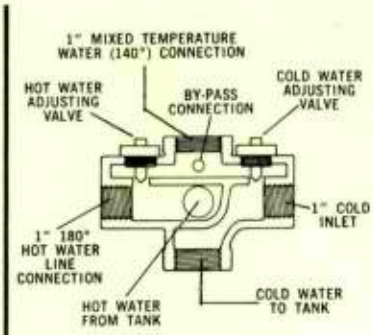
Increase height dimensions 4½" if leg extensions are used for N.S.F. Approval. Model GL75-360-1 only 2".

Model	A	B	C	D	E	F	G	H	I
GL75-360-1	36¾	45⅜	8	16¼	28¼	26¼	71¾	77	83½
GL85-240-1 GL85-200-1 (L.P.)	36¾	39⅞	7	14½	28¼	23¾	69¼	74¾	81¼
GL85-200-1	35¾	38⅞	7	11	26¼	21¾	67¼	73	79½
GL85-150-1	33¹⁵⁄₁₆	36⅛	7	11	26¼	21¾	67¼	73	76

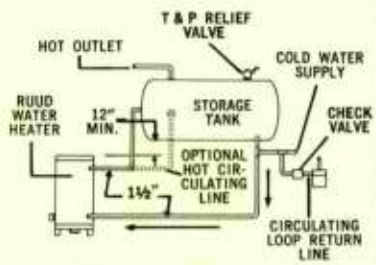


NOTE: If Duo-Temp valve is used and low temperature (140°) hot water is being circulated, run a ⅜" by-pass line from flow control tee up to by-pass opening on Duo-Temp valve. If 180° water is being circulated, install pipe plug in by-pass opening.

DETAIL-CIRCULATING LOOP RETURN CONNECTION

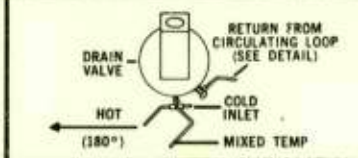


RUUD DUO-TEMP MIXING VALVE (OPTIONAL)

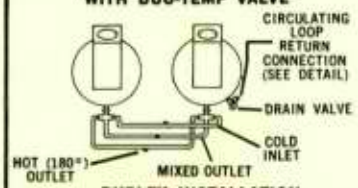


NOTE: Above models are approved for gravity circulation to a separate tank. However, Duo-Temp valve kit should not be used when heater is so installed.

CONNECTIONS TO HORIZONTAL STORAGE TANK



SINGLE WATER HEATER INSTALLATION WITH DUO-TEMP VALVE



DUPLEX INSTALLATION WITH DUO-TEMP VALVE

RECOVERY CAPACITIES

Model	Type of Gas	Input BTU/hr.	Tank Gallons	Recovery in Gal./hr. at Various Temperature Rises											Standard Weight	ASME Weight
				40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°		
GL75-360-1	CITY GASES	360,000	75	756	605	504	432	378	336	302	275	252	233	216	680 lbs.	830 lbs.
GL75-340-1	PROPANE	340,000	75	714	564	476	408	357	317	285	260	238	220	204	680 lbs.	830 lbs.
GL75-300-1	BUTANE	300,000	75	630	498	420	360	315	280	252	229	210	194	180	680 lbs.	830 lbs.
GL85-240-1	NATURAL MIXED, MFD., PROPANE*	240,000	85	504	403	336	288	252	224	202	183	168	155	144	600 lbs.	735 lbs.
GL85-200-1	ALL**	199,900	85	420	336	280	240	210	187	168	153	140	129	120	545 lbs.	—
GL85-150-1	ALL**	150,000	85	315	252	210	180	158	140	126	115	105	97	90	543 lbs.	—

* Not available for butane gas, or L.P.-air gas. * * Not available for L.P.-air gas.

SAMPLE SPECIFICATIONS

Water heater(s) shall be Ruud Floater V Model_____ having gas input of_____BTU/hr. and a recovery rate of_____GPH at a 100° temperature rise. Water heater(s) shall have the A.G.A. seal of approval. Water heater(s) shall be furnished with a tank lined with a double coating of high temperature glass and furnished with a magnesium anode rod* rigidly supported. Tanks shall have a working pressure rating of 150 psi, and shall be equipped with a boiler-type hand-hole cleanout. Water heater(s) shall be of external flue design**, and completely factory assembled, including a pressure regulator properly adjusted for operation on_____ gas; cast iron, raised drilled port burners; and a factory supplied ASME rated, temperature and pressure relief valve. Controls will be arranged for 100% safety shutoff in event of pilot failure. Complete unit shall be insulated with a 2" blanket of Fiberglas. Water heater(s) shall be covered by a five year warranty from the manufacturer.

(add for ASME construction)
Water heater(s) shall be constructed in accordance with the requirements of the ASME Boiler and Pressure Vessel Code.

(Add this paragraph when 2, 3, or 4 water heaters are manifolded together)
Ruud pre-fabricated manifolds shall be used to interconnect the water heaters. Manifolds shall be installed so that water flow through water heaters is exactly equal.

(Add for two temperature systems)
Ruud Duo-Temp valve kit shall be installed on water heater(s): 180° water line shall be connected to Duo-Temp valve opening marked "hot"; building general purpose hot water line shall be connected to opening marked "mixed"; cold water supply shall be connected to opening marked "cold."

(Add if a hot water circulating loop is to be used)
The return line from either a mixed or 180° circulating loop shall be connected to the side opening of the water heater drain valve. A check valve shall be installed in return line.

*3 rods on Model GL75-360-1.
**Plus 3 flues on Model GL75-360-1.

PRINTED IN U.S.A. 102RG-13 JUNE '65S

Ruud Manufacturing Company • Chicago, Illinois
Division of Rheem Manufacturing Company