



## Universal™ is a family of commercial gas water heaters that are designed to fit into tight retrofit applications

### Features & Benefits

The tighter the commercial retrofit, the more you will appreciate how the Universal's compact size and multiple water connections simplify installations. Choose from 80% thermal efficiency models that range from 98,000-399,900 BTU/h and have maximum temperature setting of 180 degrees Fahrenheit.

### Space Saver Design

The short heights and narrow jacket diameters, plus the top, front and rear water inlets/outlets offer the ultimate in installation flexibility.

### System Sentinel™ LED Diagnostic System

Our exclusive diagnostic system, with glowing LED lights, verifies system operation sequence by sequence.



### Patented Technology

Universal's proprietary steel formulation, patented multi-flue design, combined with two coats of porcelain enamel, results in a superior heat exchanger design.

### Stainless Steel Burners

Precision burners, raised port design, are formed from high chromium stainless steel. Each burner assembly slides out like a drawer for quick inspection and maintenance.

### Low Profile Automatic Flue Damper

Low profile damper minimizes overall product height. Heavy duty vent hood supports are designed to withstand the rigors of installation.

### Full-port, Full-flow Drain Valve

Factory installed brass drain valve allows for faster draining and servicing.

### Direct Spark-to-Pilot Ignition System

Energy saving ignition that ignites pilot only when there is a call for heat.

### Altitude Certifications

Up to 5,000 feet for natural gas and 2,000 feet for LP; with high altitude certification kit, up to 8,000 feet.

### Patented Anode Rods

Anode design utilizes multiple magnesium rods to ensure corrosion resistance for a long tank life.

### Warranty

3-Year limited tank warranty  
See Commercial Warranty Certificate for complete information.

**Efficiency** | All models tested according to ANSI test procedures, and meet or exceed the thermal efficiency and standby loss requirements of ASHRAE standard (EPact). Also exceeds energy efficiency codes of all states including California Energy Commission (CEC).

**Safety and Construction** | Design certified by CSA: For operation at 180 degrees; meets all safety and construction requirement of ANSI Z21.10.3; as an automatic storage or instantaneous water heater; as an automatic circulating tank water heater; and for operation on combustible floors and in alcove installations. **Certified for 150 PSI maximum working pressure (160 PSI for ASME models).**

**Optional Construction** | ASME construction is available on designated models. UL Sanitation (NSF5) compliant models are available when equipped with optional seal kit (Part No. AM35450).



**Ruud Universal**  
35 to 100-Gallon Capacities  
98,000-399,900 BTU/h  
Natural and LP Gas  
Top-Front-Rear Inlet/Outlet  
Water Connections



(On Selected Models)

(With Optional Kit)

*Continued on page 5*

<b>RECOVERY CAPACITIES</b> (Recovery in U.S. Gallons/Hr. (GPH) and Liters/Hr. (LPH) at various temperature rises)															
MODEL NUMBER	INPUT (BTU/H) NAT. & LP	ASME CERTIFIED		UNITS	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F
		THERMAL EFF.	STANDBY LOSS (BTU/H)		(22°C)	(28°C)	(33°C)	(39°C)	(45°C)	(50°C)	(56°C)	(61°C)	(67°C)	(75°C)	(78°C)
G75-125	125,000	80%	1108.8	GPH	303	242	202	173	152	135	121	110	101	93	87
				LPH	1147	918	765	655	574	510	459	417	382	353	328
G82-156	156,000	80%	1190.0	GPH	378	303	252	216	189	168	151	138	126	116	108
				LPH	1432	1145	954	818	716	636	573	521	477	440	409
G76-180	180,000	80%	1183.9	GPH	436	349	291	249	218	194	175	159	145	134	125
				LPH	1652	1321	1101	944	826	734	661	601	551	508	472
G37-200*	199,900	80%	900.0	GPH	485	388	323	277	242	215	194	176	162	149	138
				LPH	1834	1468	1223	1048	917	815	734	667	611	564	524
G76-200-1	199,900	80%	1208.8	GPH	485	388	323	277	242	215	194	176	162	149	138
				LPH	1834	1468	1223	1048	917	815	734	667	611	564	524
G91-200	199,900	80%	1299.0	GPH	485	388	323	277	242	215	194	176	162	149	138
				LPH	1834	1468	1223	1048	917	815	734	667	611	564	524
G100-200(A)	199,900	80%	1349.8	GPH	485	388	323	277	242	215	194	176	162	149	138
				LPH	1834	1468	1223	1048	917	815	734	667	611	564	524
G72-250(A)	250,000	80%	1245.8	GPH	606	485	404	346	303	269	242	220	202	186	173
				LPH	2294	1835	1529	1311	1147	1020	918	834	765	706	655
G100-250(A)	250,000	80%	1412.5	GPH	606	485	404	346	303	269	242	220	202	186	173
				LPH	2294	1835	1529	1311	1147	1020	918	834	765	706	655
G100-270(A)	270,000	80%	1437.5	GPH	655	524	436	374	327	291	262	238	218	201	187
				LPH	2478	1982	1652	1416	1239	1101	991	901	826	762	708
G72-300(A)	300,000	80%	1308.0	GPH	727	582	485	416	364	323	291	264	242	224	208
				LPH	2753	2202	1835	1573	1376	1224	1101	1001	918	847	787
G100-310(A)	310,000	80%	1487.5	GPH	752	601	501	429	376	334	301	273	251	231	215
				LPH	2845	2276	1896	1626	1422	1264	1138	1034	948	875	813
G65-400(A)	399,900	80%	1386.0	GPH	969	776	646	554	485	431	388	353	323	298	277
				LPH	3670	2936	2446	2097	1835	1631	1468	1334	1223	1129	1048
G85-400(A)	399,900	80%	1514.0	GPH	969	776	646	554	485	431	388	353	323	298	277
				LPH	3670	2936	2446	2097	1835	1631	1468	1334	1223	1129	1048
G100-400(A)	399,900	80%	1599.0	GPH	969	776	646	554	485	431	388	353	323	298	277
				LPH	3670	2936	2446	2097	1835	1631	1468	1334	1223	1129	1048

\*Automatic circulating tank water heater  
 Recovery ratings are based on thermal efficiencies obtained in a CSA certified laboratory.  
 (A) indicates available ASME model.

<b>MAXIMUM DELIVERY</b> In U.S. Gallons and Liters. (Includes useable storage and recovery for indicated times.)															
MODEL NUMBER	TANK CAPACITY		INPUT BTU/H NAT. & L.P.	TEMP. RISE	UNITS	5	10	15	20	30	45	60	120	180	Min. to Rec. Contents
	GALLONS	LITERS				Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	
G75-125	75	284	125,000	100°F	GAL.	63	73	83	93	113	143	174	295	416	37
				56°C	LTR.	237	275	313	352	428	543	658	1116	1575	
G82-156	82	310	156,000	100°F	GAL.	70	83	95	108	133	171	209	360	511	33
				56°C	LTR.	265	313	360	408	504	647	790	1363	1935	
G76-180	76	288	180,000	100°F	GAL.	68	82	97	111	140	184	228	402	577	26
				56°C	LTR.	256	311	367	422	532	697	862	1523	2183	
G37-200*	35	132	199,900	100°F	GAL.	41	56	72	88	119	167	214	403	562	11
				56°C	LTR.	155	212	273	333	451	633	811	1527	2130	
G76-200-1	76	288	199,900	100°F	GAL.	69	86	102	118	150	199	247	441	635	24
				56°C	LTR.	263	324	385	446	568	752	935	1669	2403	
G91-200	91	344	199,900	100°F	GAL.	80	96	112	128	161	209	258	451	645	28
				56°C	LTR.	302	363	425	486	608	791	975	1709	2442	
G100-200(A)	100	379	199,900	100°F	GAL.	86	102	118	135	167	215	264	458	652	31
				56°C	LTR.	326	387	448	510	632	815	999	1732	2466	
G72-250(A)	72	273	250,000	100°F	GAL.	71	91	111	131	172	232	293	535	778	18
				56°C	LTR.	267	344	420	497	650	879	1108	2026	2944	
G100-250(A)	100	379	250,000	100°F	GAL.	90	110	131	151	191	252	312	555	797	25
				56°C	LTR.	341	418	494	571	724	953	1183	2100	3018	
G100-270(A)	100	379	270,000	100°F	GAL.	92	114	135	157	201	266	332	594	855	23
				56°C	LTR.	348	430	513	595	761	1008	1256	2247	3238	
G72-300(A)	72	273	300,000	100°F	GAL.	75	99	123	147	196	269	341	632	923	15
				56°C	LTR.	283	374	466	558	741	1017	1292	2393	3494	
G100-310(A)	100	379	310,000	100°F	GAL.	95	120	145	170	220	295	371	671	972	20
				56°C	LTR.	360	455	549	644	834	1118	1403	2541	3679	
G65-400(A)	65	246	399,900	100°F	GAL.	78	110	142	175	239	336	433	821	1209	10
				56°C	LTR.	295	417	539	662	906	1273	1640	3108	4576	
G85-400(A)	85	322	399,900	100°F	GAL.	92	124	156	189	253	350	447	835	1223	13
				56°C	LTR.	348	470	592	715	959	1326	1693	3161	4629	
G100-400(A)	100	379	399,900	100°F	GAL.	102	135	167	199	264	361	458	846	1233	15
				56°C	LTR.	387	510	632	754	999	1366	1733	3201	4669	

\*Automatic circulating tank water heater

**DIMENSIONAL INFORMATION** All Dimensions Shown in English and Metric.

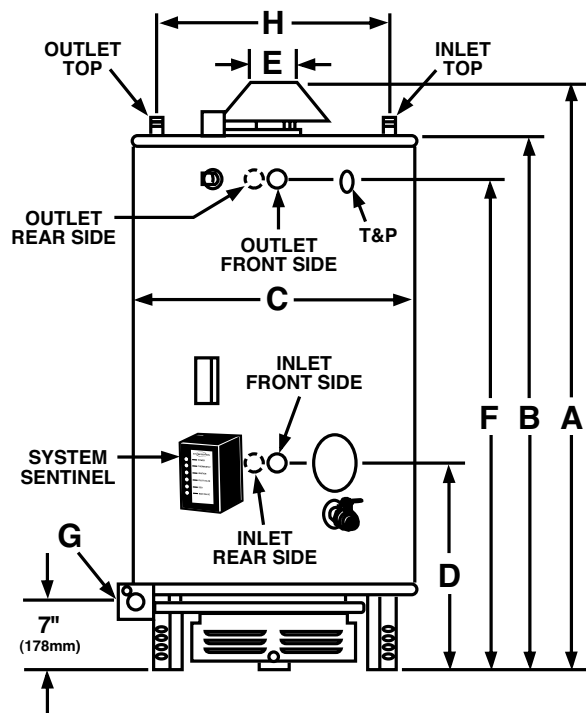
MODEL NUMBER	UNITS	A	B	C	D	E	F	G	H	WATER CONNECTIONS			APPROXIMATE SHIPPING WEIGHT	
										TOP IN/OUT	FRONT SIDE	REAR SIDE	STD.	ASME
G75-125	inches	65-1/2	61	26-1/4	25	5	56	3/4	20	1-1/2	1-1/2	1-1/2	480 lbs.	N/A
	mm	1664	1549	667	635	127	1422	19	508	38	38	38	217 kgs.	N/A
G82-156	inches	68-13/16	64	26-1/4	25	6	58-5/8	3/4	20	1-1/2	1-1/2	1-1/2	490 lbs.	N/A
	mm	1748	1626	667	635	152	1489	19	508	38	38	38	222 kgs.	N/A
G76-180	inches	68-13/16	64	26-1/4	25	6	58-5/8	3/4	20	1-1/2	1-1/2	1-1/2	540 lbs.	N/A
	mm	1748	1626	667	635	152	1489	19	508	38	38	38	245 kgs.	N/A
G37-200*	inches	49-1/4	43-3/8	26-1/4	25	6	37-5/8	3/4	20	1-1/2	1-1/2	1-1/2	405 lbs.	N/A
	mm	1251	1102	667	635	152	956	19	508	38	38	38	184 kgs.	N/A
G76-200-1	inches	68-13/16	64	26-1/4	25	6	58-5/8	3/4	20	1-1/2	1-1/2	1-1/2	540 lbs.	N/A
	mm	1748	1626	667	635	152	1489	19	508	38	38	38	245 kgs.	N/A
G91-200	inches	76-5/16	71-13/16	26-1/4	30-5/8	6	66-3/8	3/4	20	1-1/2	1-1/2	1-1/2	600 lbs.	N/A
	mm	1938	1824	667	778	152	1686	19	508	38	38	38	272 kgs.	N/A
G100-200(A)	inches	73-1/16	66-1/8	30-1/4	23-1/4	6	57-1/2	3/4	23	1-1/2	2	2	780 lbs.	835 lbs.
	mm	1856	1680	768	591	152	1460	19	584	38	51	51	353 kgs.	378 kgs.
G72-250(A)	inches	71-1/16	64-1/2	26-1/4	25	6	58-5/8	3/4	20	1-1/2	1-1/2	1-1/2	590 lbs.	630 lbs.
	mm	1805	1638	667	635	152	1489	19	508	38	38	38	267 kgs.	285 kgs.
G100-250(A)	inches	73-1/4	66-1/8	30-1/4	23-1/4	8	57-1/2	3/4	23	1-1/2	2	2	795 lbs.	835 lbs.
	mm	1861	1680	768	591	203	1460	19	584	38	51	51	360 kgs.	378 kgs.
G100-270(A)	inches	73-7/8	66-1/8	30-1/4	23-1/4	8	57-1/2	3/4	23	1-1/2	2	2	805 lbs.	845 lbs.
	mm	1876	1680	768	591	203	1460	19	584	38	51	51	365 kgs.	383 kgs.
G72-300(A)	inches	71	64-1/8	26-1/4	25	8	58-5/8	3/4	20	1-1/2	1-1/2	1-1/2	590 lbs.	630 lbs.
	mm	1803	1629	667	635	203	1489	19	508	38	38	38	267 kgs.	285 kgs.
G100-310(A)	inches	75	68-1/2	30-1/4	32-1/4	7	61-3/4	3/4	23	1-1/2	2	2	770 lbs.	810 lbs.
	mm	1905	1740	768	819	178	1568	19	584	38	51	51	349 kgs.	367 kgs.
G65-400(A)	inches	70-11/16	64-1/2	26-1/4	25	8	58-5/8	3/4	N/A	N/A	1-1/2	1-1/2	640 lbs.	680 lbs.
	mm	1795	1638	667	635	203	1489	19	N/A	N/A	38	38	290 kgs.	308 kgs.
G85-400(A)	inches	78-13/16	72-5/16	26-1/4	30-5/8	10	66-3/8	3/4	20	1-1/2	1-1/2	1-1/2	640 lbs.	680 lbs.
	mm	2002	1837	667	778	254	1686	19	508	38	38	38	290 kgs.	308 kgs.
G100-400(A)	inches	76	68-1/2	30-1/4	32-1/4	8	61-3/4	1**	23	1-1/2	2	2	770 lbs.	810 lbs.
	mm	1930	1740	768	819	203	1568	25**	584	38	51	51	349 kgs.	367 kgs.

\*Automatic circulating tank water heater

\*\*3/4" (19mm) for L.P. Models. Increase Height 3-5/8" (92mm) for NSF Models.

All Models Require a 120V Power Source/0.3 amps.

(A) Suffix Indicates ASME Tank Construction Available.





### CSA/ASME Rated T&P Valve

Factory installed relief valve

### Insulation

Sag and moisture proof fiberglass insulation surrounds the storage tank and heavy mineral wool insulation surrounds the combustion chamber.

### Hand-hole Cleanout

For easy removal of lime/sediment deposits.

### Manual Reset High Limit

ASME models are factory equipped with manual reset high limit to meet the code requirements in many states.

### Gas Control System

Thermostat adjusts from 100 to 180 degrees Fahrenheit, 24 volt combination gas valve includes main gas pressure regulation, on-off manual valve, 120/24 volt transformer and high limit temperature cut-out.

### Recommended Specifications (for trade reference only)

Water heater(s) shall be Universal model \_\_\_\_\_, manufactured by Ruud, having gas input of \_\_\_\_\_ BTU/h and a recovery rate of \_\_\_\_\_ GPH at a 100°F temperature rise when tested and certified at \_\_\_\_\_ thermal efficiency. Water heater(s) shall have a storage capacity of \_\_\_\_\_ gallons. Water heater(s) shall have the CSA seal of certification and supplied with a factory installed CSA/ASME rated temperature and pressure relief valve. Tank(s) shall be furnished with a tube bundle having a double coating of high temperature porcelain enamel and furnished with magnesium anode rods rigidly supported. Water heater(s) shall meet or exceed the thermal efficiency and standby loss requirements of ASHRAE. Tanks shall have a working pressure rating of 150 psi, and shall be completely factory assembled, including a pressure regulator properly adjusted for operation on \_\_\_\_\_ gas with stainless steel burners. Controls will be arranged for safety shutoff in event of pilot failure. Water heater(s) with inputs less than 360,000 BTU/h shall have top, front and rear side inlet/outlet water connections. Water heater(s) shall be covered by a three year limited warranty against tank leaks.

### When ordering ASME construction, place (A) after the model number (for trade reference only)

Water heater(s) shall be constructed in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section IV Part HLW.

### CLEARANCES TO COMBUSTIBLES

MODEL NUMBER	UNITS	SIDE	REAR	TOP
G75-125	inches	2	2	12
	mm	51	51	305
G82-156	inches	2	2	12
	mm	51	51	305
G76-180	inches	2	2	12
	mm	51	51	305
G37-200	inches	2	2	12
	mm	51	51	305
G76-200-1	inches	2	2	12
	mm	51	51	305
G91-200	inches	2	2	12
	mm	51	51	305
G100-200(A)	inches	2	4	12
	mm	51	102	305
G72-250(A)	inches	6	6	12
	mm	152	152	305
G100-250(A)	inches	2	4	12
	mm	51	102	305
G100-270(A)	inches	2	4	12
	mm	51	102	305
G72-300(A)	inches	6	6	12
	mm	152	152	305
G100-310(A)	inches	6	6	12
	mm	152	152	305
G65-400(A)	inches	6	6	12
	mm	152	152	305
G85-400(A)	inches	6	6	12
	mm	152	152	305
G100-400(A)	inches	6	6	12
	mm	152	152	305

Allow a minimum of 18" (457mm) front clearance for servicing.

*In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.*