

# Residential/Commercial Gas Tankless Water Heaters



Fully modulating, gas fired, tankless water heater specifically designed for residential and commercial applications. Supplies hot water to domestic hot water systems (directly or indirectly) which can be used with storage tanks, recirculation systems, hydronic heating systems, radiant floor heating systems, and/or combined domestic & heating applications.

## FEATURES

**CONTINUOUS MAXIMUM FLOW RATES UP TO 10.0 GPM**

**ENERGY STAR® QUALIFIED**

**AVAILABLE IN NATURAL GAS OR PROPANE (LP)**

**OUTDOOR MODELS INCLUDE REMOTE CONTROL AS A STANDARD FEATURE**

**INDOOR MODELS INCLUDE BOTH A REMOTE CONTROL AND POWER CORD AS STANDARD FEATURES**

**LOW NO<sub>x</sub> EMISSIONS**

**COMPLIES WITH LEAD FREE STANDARDS**

**HEAT EXCHANGER (T-D2 MODELS) IS CONSTRUCTED OF COMMERCIAL-GRADE HRS35 COPPER**

### SAFETY FEATURES:

- Built in Freeze Protection
- Manual Reset Hi-Limit
- Overheat Cutoff Fuse
- Inlet and Outlet Thermistors for Constant Temperature Monitoring
- Flame Sensor

### EASY-LINK UP TO 4 UNITS (T-D2 MODELS):

- With no additional parts or accessories needed

### VENTING AND COMBUSTION

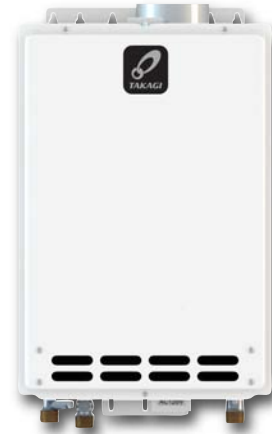
- 4" Category III Vent
- Vertical or Horizontal Installation
- 50' Max Length, 5 Elbows max (90° elbows = 5' equivalent length)
- Power Vent
- Electronic Ignition - No Pilot Light
- 3" Combustion Air Intake (with optional kit)

### OPTIONAL ACCESSORIES

- Complete Line of Category III Venting
- Recess Box (outdoor)
- Pipe Cover
- Direct Vent Conversion Kit (indoor)
- Isolation Valve Kits
- Backflow Preventor
- Concentric Termination Kits

### WARRANTY

- 15-year limited warranty on heat exchanger in residential applications
- 10-year limited warranty on heat exchanger in commercial applications
- 5-year limited warranty on all parts



**INDOOR MODELS**  
T-KJr2-IN, T-K4-IN, T-D2-IN



**OUTDOOR MODELS**  
T-KJr2-OS, T-K4-OS, T-D2-OS



T-D2 Models



ANSI Z21.10.3  
CSA 4.3

# Residential/Commercial Gas Tankless Water Heaters



MODEL NUMBER	FUEL TYPE	GAS CONSUMPTION INPUT		ENERGY FACTOR (EF)	INLET GAS PRESSURE			DIMENSIONS IN INCHES			VOLT	AMP	FLUE*	INTAKE (OPTIONAL)	HOT/COLD GAS CONN.	APPROX. SHIPPING WEIGHT (LBS)
		MIN. BTU/H	MAX. BTU/H		MIN. in W.C.	MAX. in W.C.	MAX GPM**	HEIGHT	WIDTH	DEPTH						
T-KJr2-IN-NG	Natural	19,500	140,000	0.82	5.0	10.5	6.6	20 1/4	13 3/4	7 3/4	120	0.61	4" O.D.	3" O.D.	3/4" NPT	38
T-KJr2-IN-LP	Propane	19,500	140,000	0.82	8.0	14.0	6.6	20 1/4	13 3/4	7 3/4	120	0.61	4" O.D.	3" O.D.	3/4" NPT	38
T-KJr2-OS-NG	Natural	19,500	140,000	0.82	5.0	10.5	6.6	20 1/4	13 3/4	7 3/4	120	0.61	N/A	N/A	3/4" NPT	38
T-KJr2-OS-LP	Propane	19,500	140,000	0.82	8.0	14.0	6.6	20 1/4	13 3/4	7 3/4	120	0.61	N/A	N/A	3/4" NPT	38
T-K4-IN-NG	Natural	11,000	190,000	0.82	5.0	10.5	8.0	20 1/4	13 3/4	9 1/2	120	0.73	4" O.D.	3" O.D.	3/4" NPT	43
T-K4-IN-LP	Propane	11,000	190,000	0.82	8.0	14.0	8.0	20 1/4	13 3/4	9 1/2	120	0.73	4" O.D.	3" O.D.	3/4" NPT	43
T-K4-OS-NG	Natural	11,000	190,000	0.82	5.0	10.5	8.0	20 1/4	13 3/4	9 1/2	120	0.73	N/A	N/A	3/4" NPT	43
T-K4-OS-LP	Propane	11,000	190,000	0.82	8.0	14.0	8.0	20 1/4	13 3/4	9 1/2	120	0.73	N/A	N/A	3/4" NPT	43
T-D2-IN-NG	Natural	11,000	199,000	0.82	5.0	10.5	10.0	20 1/4	13 3/4	9 1/2	120	0.75	4" O.D.	3" O.D.	3/4" NPT	45
T-D2-IN-LP	Propane	11,000	199,000	0.82	8.0	14.0	10.0	20 1/4	13 3/4	9 1/2	120	0.75	4" O.D.	3" O.D.	3/4" NPT	45
T-D2-OS-NG	Natural	11,000	199,000	0.82	5.0	10.5	10.0	20 1/4	13 3/4	9 1/2	120	0.75	N/A	N/A	3/4" NPT	45
T-D2-OS-LP	Propane	11,000	199,000	0.82	8.0	14.0	10.0	20 1/4	13 3/4	9 1/2	120	0.75	N/A	N/A	3/4" NPT	45

All dimension in inches.

15-150 psi water pressure. 40 psi or above recommended for maximum flow.

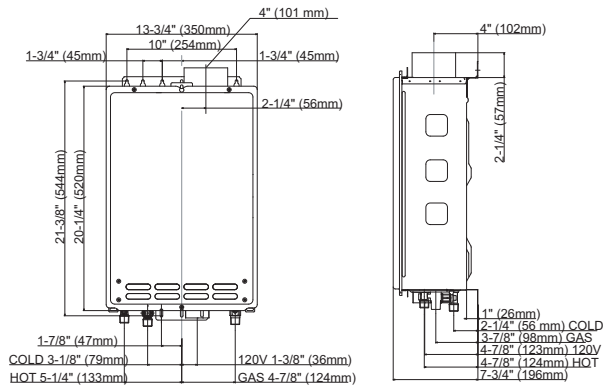
\*Category III Required

\*\*Current numbers based on factory testing, 0.5 GPM required for activation, 0.4 GPM required for continuous fire after initial ignition.

Pressure only relief valve required (Min. 200,000 BTUs. 150 PSI). Min 40 PSI or above recommended for maximum flow.

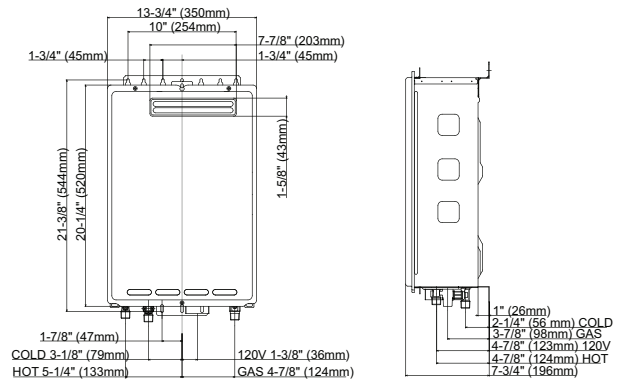
## T-KJr2 INDOOR DIMENSIONS

**CLEARANCES:** Top 12", Bottom 12", Front 24", Back 1", Sides 2"



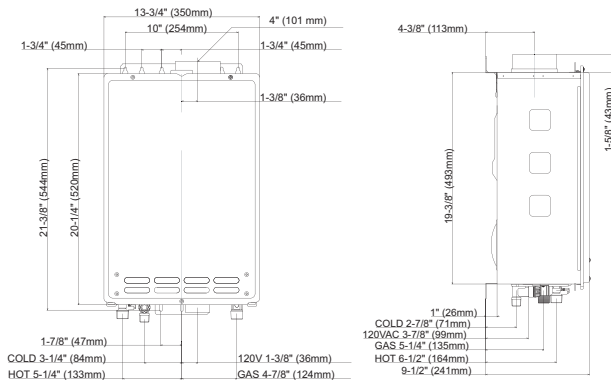
## T-KJr2 OUTDOOR DIMENSIONS

**CLEARANCES:** Top 36", Bottom 12", Front 24", Back 1", Sides 2"



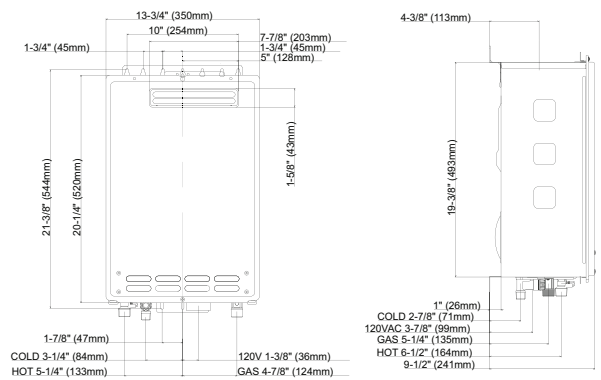
## T-K4 and T-D2 INDOOR DIMENSIONS

**CLEARANCES:** Top 12", Bottom 12", Front 24", Back 1", Sides 2"



## T-K4 and T-D2 OUTDOOR DIMENSIONS

**CLEARANCES:** Top 36", Bottom 12", Front 24", Back 1", Sides 2"

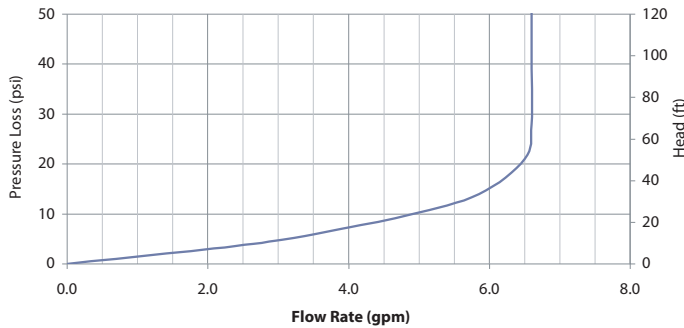


# Residential/Commercial Gas Tankless Water Heaters

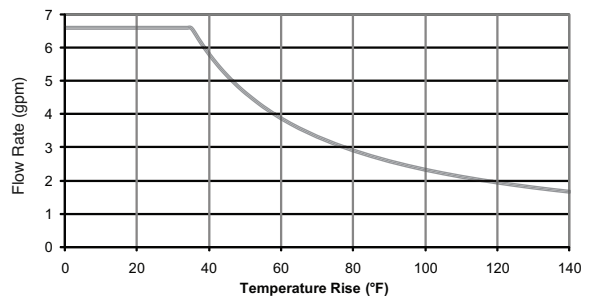


## T-KJr2 models

Indoor/Outdoor Pressure Loss

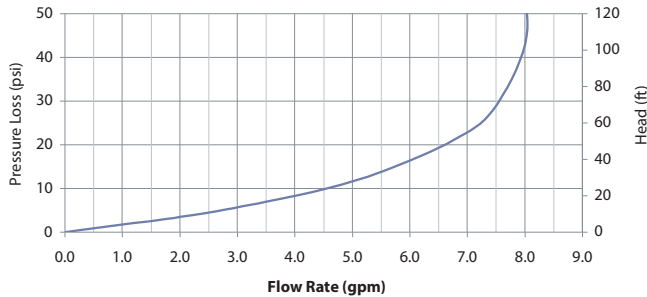


Comparison of Flow Rate vs. Temperature Rise

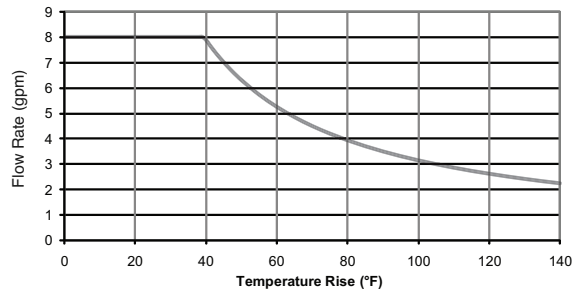


## T-K4 models

Indoor/Outdoor Pressure Loss

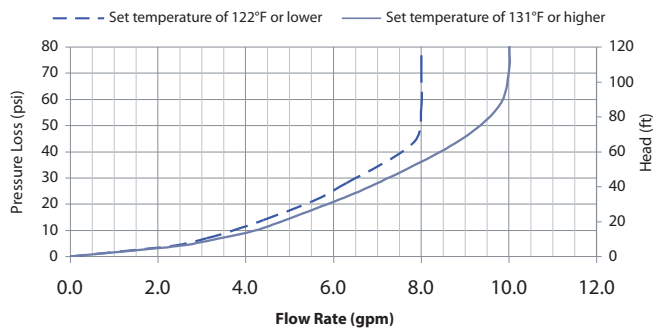


Comparison of Flow Rate vs. Temperature Rise

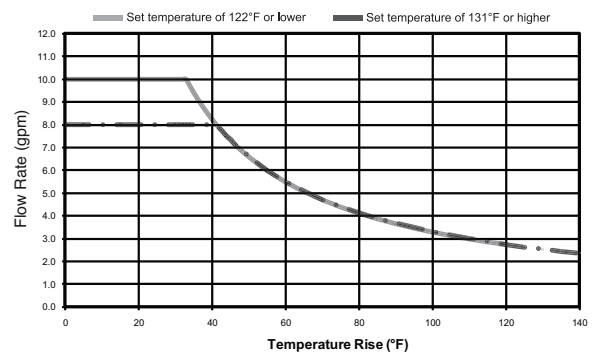


## T-D2 models

Indoor/Outdoor Pressure Loss



Comparison of Flow Rate vs. Temperature Rise



# **Residential/Commercial Gas Tankless Water Heaters**



## **Specification for the T-D2**

The fully modulating, on-demand, gas fired tankless water heater(s) shall be Takagi Tankless Water Heater model T-D2-IN or T-D2-OS, having a maximum input rating of 199,000 Btu/h and available in NG or LP. The heater shall have ¾ in. male NPT water and gas connections. The inlet gas supply pressures shall be 5.0 in. WC (min.) up to 10.5 in. WC (max) for NG and 8.0 in. WC (min.) up to 14 in. WC (max.) for LP. The heater(s) shall be supplied with a temperature remote, TM-RE30/9007603005, that can be installed up to 400 ft. from the heater using 18 gauge (minimum) control wire. The temperature remote shall provide diagnostic information, fault history, and heater set temperature. The heater(s) shall operate using 120 V / 60 Hz power source. The indoor heater(s) will incorporate a factory installed power cord.

The indoor heater(s) shall be vented with 4" diameter Category III vent pipe with a length not to exceed 50 ft. (equivalent), terminating horizontally or vertically. The indoor heater(s) can be direct vented with optional direct vent conversion kit, TK-TV10/9007667005, using 3" diameter pipe. The intake pipe may use material such as PVC, ABS, aluminum, or Category III pipe and cannot exceed 50 ft. (equivalent) length. The outdoor heater(s) shall be constructed with an integral exhaust vent on the front of the heater.

The water heater(s) shall use an HRS35 copper, fin tube heat exchanger with quick release brass or bronze waterways. The heater(s) shall be controlled by an onboard solid-state printed circuit board which uses the following factory installed components: thermistors to monitor water temperature; a flow sensor to measure flow rate; a flame sensor to monitor combustion; an Air-Fuel Ratio Rod to measure and adjust air input in order to maintain optimal combustion efficiency. The heater also consists of inline fusing and surge absorbers for electrical surge protection, an electronic spark igniter, aluminized stainless steel burners, a hi-limit temperature switch, modulating gas valve, dual freeze protection that will automatically fire the heater and use heating blocks to protect the heat exchanger, and an overheat cutoff fuse.

The heater(s) can manifold to Easy-Link up to 4 heaters to provide additional capacity. The Easy-Link controls shall be built onto the onboard solid-state printed circuit board and does not require external controls. The linking control wire shall be supplied with the heater. The Easy-Link control shall modulate the system for the most efficient performance. The Easy-Link control shall rotate the priority heater every 12 hours of operation time or 100 starts for balanced duty/cycle operation.

The heater(s) shall be CSA approved for sale in the United States and Canada, ENERGY STAR® qualified with a minimum energy factor of 0.82, meets the energy efficiency requirements of the U. S. Department of Energy and ASHRAE 90.1-2007, complies with Low NOx emissions of 40 ng/J or 55 ppm, and shall be certified to NSF 5 Standards.