



Description/Application

Designed specifically for heavy-duty commercial applications. Fully modulating, gas-fired, tankless, on-demand water heater with sealed combustion (optional) and power-vented flue. Can be installed either indoors or outdoors. Supplies hot water to: domestic hot water systems (directly or indirectly using water storage tanks), recirculations systems, hydronic heating systems, radiant floor heating systems, and/or combined domestic & heating applications, etc. Local codes indicate proper compliance. Please check with all local codes prior to installation.

Fuel: NG or LP

Safety Features

- Built in Freeze Protection
- Manual Reset Hi Limit (Set at 194°F)
- Overheat Cut Off Fuse
- Inlet, Outlet & Thermistors for Constant Temperature Monitoring
- Air-Fuel Ratio Rod
- GFI, Fuse & Surge Absorber
- Flame Sensor

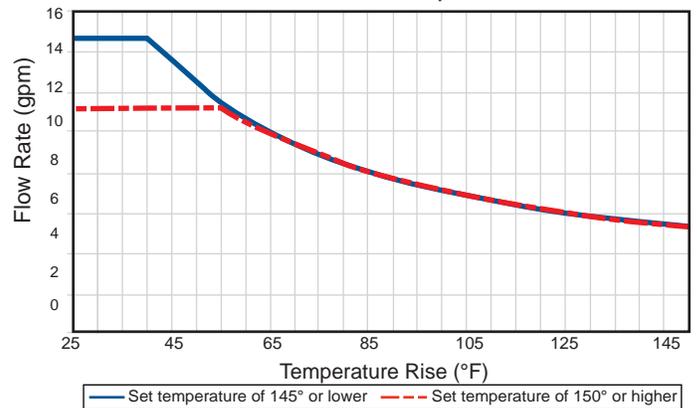
Venting and Combustion

- 5" Category III Stainless Steel
- Vertical or Horizontal Installation
- 50' Max Length, 5 elbows max (90° elbows = 5' equivalent length)
- Power Vent
- Electronic Ignition
- 5" Combustion Air Intake (with optional kit)
- 56 dB Noise Level at Max Output

Accessories

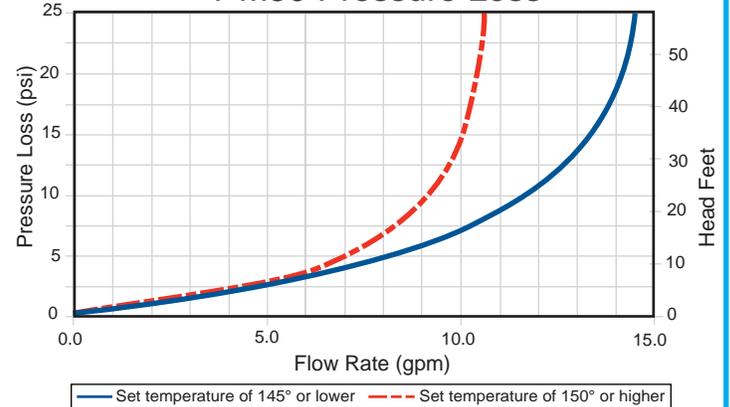
- TM-MC01 Multi-Unit Controller (Multi-Unit System)
- TM-RE30 Temperature Remote Control (optional)
 - 400' Max Distance From Water Heater
 - Non-Polarized 18 Gauge Control Wiring
- TM-DV50 Direct Vent Conversion Kit (optional)
- TM-PC50 Pipe Cover (optional)
- TM-VC50 Vent Cap (optional)
- TM-BF50 Backflow Preventer (optional)

T-M50 Flow Rate Vs. Temperature Rise



Above shown rate is based on single unit only

T-M50 Pressure Loss



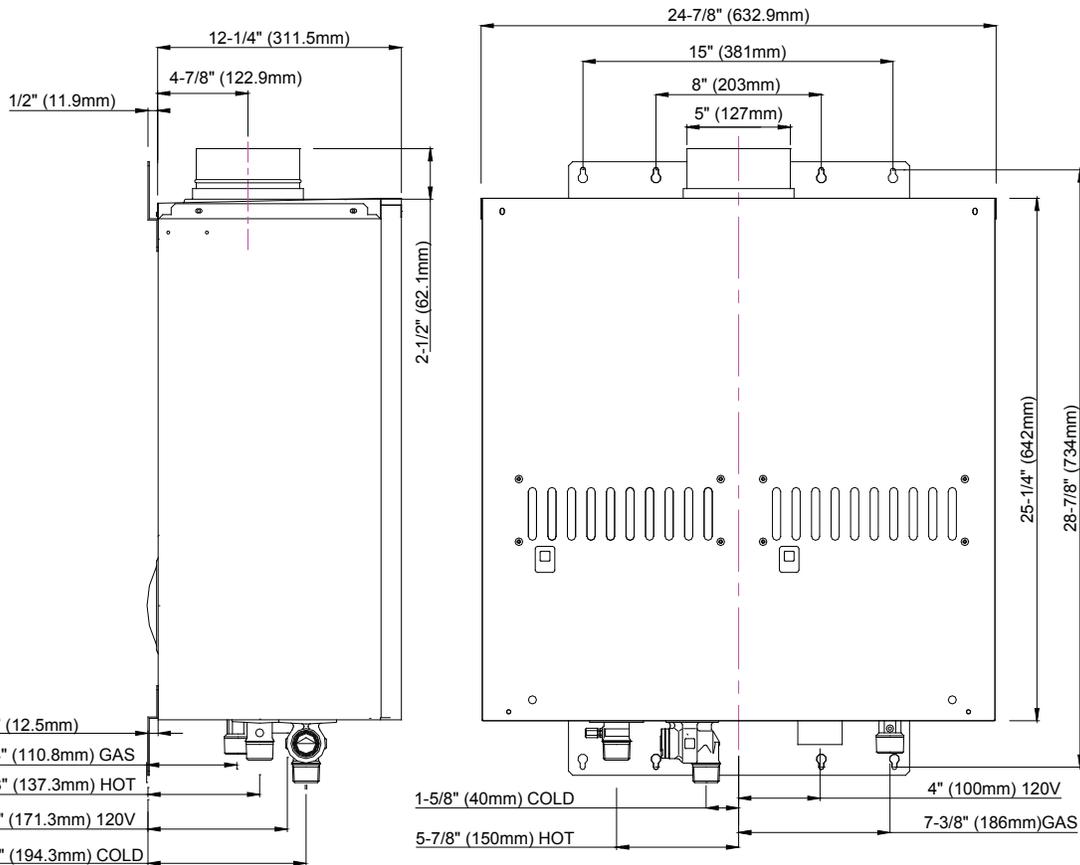
Temperature Settings

Dip Switch: 100°F 115°F 120°F (default) 135°F 145°F 155°F 165°F 185°F

TM-RE30 Remote Controller

Default Mode:	100°F	105°F	110°F	115°F	120°F (default)	125°F	130°	135°F	140°F	145°F	150°F
High Temp Mode:	110°F	115°F	120°F (default)	125°F	130°F	135°F	140°F	145°F	150°F	155°F	160°F
	165°F	170°F	175°F	180°F	185°F						

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T-M50 :	HT	W	D	WT	Volt	Amp	Flue	Intake	(Hot/Cold/Gas) Connections
	25.3"	24.8"	11.8"	112 lbs.	120	1.48	5" O.D.*	5" O.D. (opt.)	1" NPT
	Input		Input						
	Max BTU/h		Min BTU/h		Thermal Eff.		Min Press		Max. Press
NG	380,000		15,000		80.2%		5.0" W.C.		10.5" W.C.
LP	380,000		15,000		82.4%		8.0" W.C.		14.0" W.C.
	GPM		Water PSI		Coil Cap				
	0.5 - 14.5**		15 - 150 PSI***		≈0.32 Gallons				
Clearances		Top	Bottom		Front	Back	Sides		
Indoor		12"	12"		24"	0.5"	2"		
Outdoor		36"	12"		24"	0.5"	2"		

* Category III Required **Current numbers based on factory testing, 0.4 GPM Required for Continuous Fire After initial Ignition.

***Pressure Only Relief Valve Requires (Min. 380,000 BTUs. 150 PSI). Min 40 PSI or above recommended for maximum flow.

Takagi USA reserves the right to change or discontinue the design, drawing and/or specification of its products without notice at anytime.

Specification

Mobius water heater(s) shall be Model T-M50 as manufactured by Takagi Industrial Company, Inc. The Mobius water heater(s) shall be a copper coil integral fin and tube construction with quick release brass or bronze waterways. Heater(s) will be factory assembled and tested.

The heater shall be vented with 5" Stainless steel Category III vent pipe a distance not to exceed 50' (equivalent) feet terminating vertically or horizontally as prescribed. Intake air with optional direct vent kit may be of such material as PVC not to exceed a total of 50' (equivalent).

The heater(s) shall be controlled by onboard solid state printed circuit board monitoring incoming and outgoing temperatures with factory installed thermistors, sensing and controlling flow rate to set point temperature with control both air and gas mixture inputs to maintain thermal combustion efficiency. Unit also consists of ground fault interrupter, inline fusing, spark ignition and sensor system, aluminized stainless steel burners, air-fuel ration rod, Hi limit switch, modulating and proportional gas valves, freeze protection sensor and heating block and overhead cut-off fuses.

The water heater(s) shall be CSA listed, exceeds the energy efficiency requirements of ASHRAE 90. 1b-1992 and listed by SCAQMD rule 11 46.2 Low NOx.