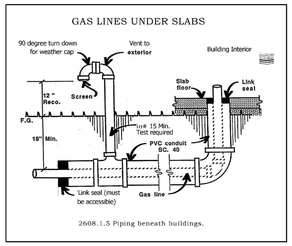
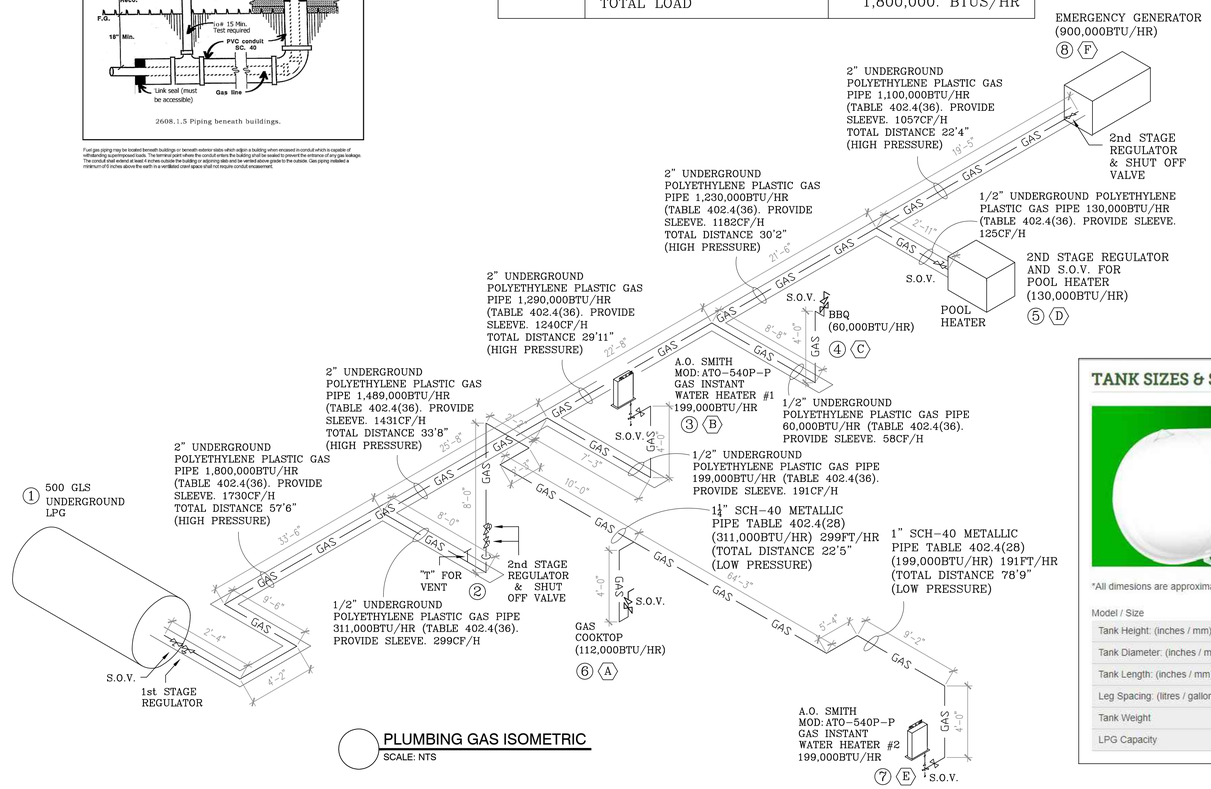
SECTION 2608 GAS PIPING INSTALLATION



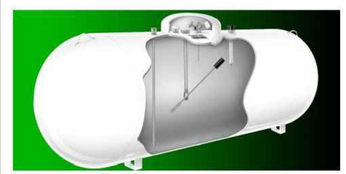
Fuel gas piping may be located beneath buildings or beneath exterior slabs which adjoin a building when encased in conduit which is capable of withstanding superimposed loads. The terminal point where the conduit enters the building shall be sealed to prevent the entrance of any gas leakage. The conduit shall extend at least 4 inches outside the building or adjoining slab and be vented above grade to the outside. Gas piping installed a minimum of 8 inches above the earth in a ventilated crawl space shall not require conduit encasement.

ITEM	DESCRIPTION	LOAD
A	GAS COOKTOP	112,000. BTUS/HR
B	WATER HEATER #1	199,000. BTUS/HR
C	BBQ	60,000. BTUS/HR
D	POOL HEATER	130,000. BTUS/HR
E	WATER HEATER #2	199,000. BTUS/HR
F	EMERGENCY GENERATOR	1,100,000. BTUS/HR
	TOTAL LOAD	1,800,000. BTUS/HR



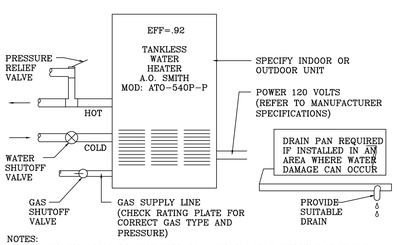
PLUMBING GAS ISOMETRIC
SCALE: NTS

TANK SIZES & SPECIFICATIONS



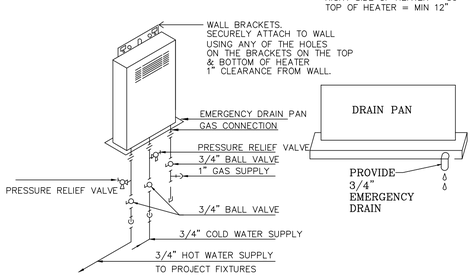
*All dimesions are approximate.

Model / Size	120 Gallon (Vertical)	250 Gallon	500 Gallon	1000 Gallon	2000 Gallon
Tank Height: (inches / mm)	52 (1321)	39 (990)	46 (1168)	50 (1270)	55 (1397)
Tank Diameter: (inches / mm)	30 (762)	30 (762)	37 (940)	41 (1041)	46 (1168)
Tank Length: (inches / mm)	n/a	94 (2388)	120 (3024)	192 (4877)	288 (7315)
Leg Spacing: (litres / gallons)	n/a	60 (1524)	60 (1524)	121 (3073)	192 (4876)
Tank Weight	260 lbs	483 lbs	949 lbs	1760 lbs	3400 lbs
LPG Capacity	380 L	750 L	1500 L	3000 L	6000 L



NOTES:
-WATER HEATER MUST BE INSTALLED TO CONFORM WITH CURRENT NATIONAL ELECTRIC CODE, NATIONAL FUEL GAS CODE, AND ANY APPLICABLE LOCAL PLUMBING, ELECTRICAL, HEATING AND AIR CONDITIONING CODES, AND MANUFACTURER INSTALLATION INSTRUCTIONS
-PROTECT HEATER FROM FREEZING
-SPECIFY NATURAL GAS OR PROPANE

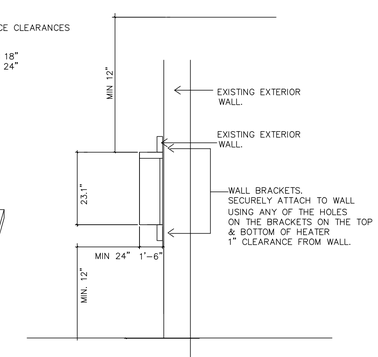
TANKLESS WATER HEATER DIAGRAM
N.T.S.



WATER HEATER SCHEMATC CONNECTION DETAIL
A.O. SMITH MOD: ATO-540P-P SCALE: NTS

OUTDOOR INSTALLATION SERVICE CLEARANCES

DOOR OR WINDOW = 36"
LEFT SIDE OF HEATER = 2"TO 18"
FRONT (MAINTANCE SPACE) = 24"
RIGHT SIDE OF HEATER = 36"
TOP OF HEATER = MIN 12"



OUTDOOR INSTALLATION MOUNTING DETAIL
A.O. SMITH MOD: ATO-540P-P SCALE: NTS

AO Smith

CONDENSING TANKLESS WITH INTEGRATED RECIRCULATION PUMP

COMMERCIAL-GRADE RESIDENTIAL

Ultra-Low NOx gas tankless water heaters with condensing technology featuring an up to 0.95 Uniform Energy Factor (UEF) which lowers operating costs and is environmentally friendly.

OUTDOOR MODELS
ATO-540P

FEATURES:

INTEGRATED RECIRCULATION PUMP

ENERGY STAR® QUALIFIED

AVAILABLE IN NATURAL GAS OR PROPANE (LP)

INDOOR MODEL
- Includes integrated temperature and pump controls with advanced diagnostics that simplify installation and troubleshooting
- Factory-installed power cord

OUTDOOR MODEL
- Includes a wall mount temperature remote controller and advanced diagnostics to simplify troubleshooting

DURABLE HEAT EXCHANGER:
- Primary heat exchanger is constructed of a commercial-grade copper that is more resilient to erosion.
- Secondary heat exchanger is made of type 316L stainless steel to protect against corrosion.

EASY-LINK 540P WITH THREE OTHER 540H TO INCREASE FLOW CAPACITY

COMMON VENT UP TO 8 UNITS

COMPLIES WITH LEAD FREE STANDARDS

SAFETY FEATURES:
- Air-Fuel Ratio (AFR) Sensor
- Exhaust & Water Temperature Safety Control
- Overheat Cut-Off Fuse

INTERNAL FREEZE PROTECTION SYSTEM

POWER DIRECT VENT DESIGN
- Category IV venting can be used
- Exhaust_3" PVC Venting up to 70 Feet or 4" PVC Venting up to 100 Feet
- Provides flexible venting with PVC, CPVC, or ABS Pipe for Intake and Exhaust (solid core only).

ACCESSORIES
- Pipe Cover
- Neutralizer Kit
- Isolation Valve Kits
- Concentric Termination
- Product Preservers® Anti-Scale System

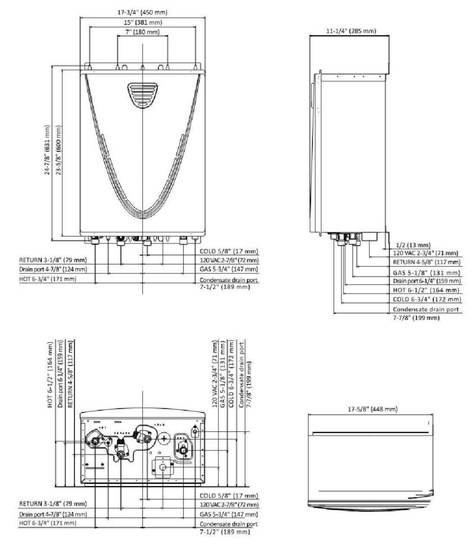
WARRANTY
- 15-year limited warranty on heat exchanger in residential applications
- 5-year limited warranty on heat exchanger in commercial applications
- 5-year warranty on all parts

CONDENSING TANKLESS WITH INTEGRATED RECIRCULATION PUMP

Model Number	Type	Gas Consumption Input		Inlet Gas Pressure		UEF	Maximum GPM*	Hot/Cold Connections	Gas Connection	Dimensions in Inches			Approx Shipping Weight (lbs)
		Minimum BTU/H	Maximum BTU/H	Minimum in. W.C	Maximum in. W.C.					Height	Width	Depth	
Outdoor Models													
ATO-540P-P	Propane	13,000	199,000	8.0	14.0	0.95	10	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	69

15-150 psi Water Pressure. 40 psi or above recommended for maximum flow.
*Current numbers based on factory testing. 0.5 GPM for activation; 0.4 GPM required for continuous fire after initial ignition.
Indoor models are certified from sea level to 10,100 ft. elevations. Outdoor models are certified from sea level to 6,000 ft. elevation.

OUTDOOR MODEL



Daniel F Gutierrez

Digitally signed by Daniel F Gutierrez
DN: CN=Daniel F Gutierrez, email=danny@dfgengineers.com, C=US, O=DG CONSULTING ENGINEERS LLC, OU=Electrical, 1.2.840.113549.1.9.16.1=2.16.840.1.101.3.6.8=3082010a0282010100a0ad0e7f9d0d0e18c2b0129b13b0a0a0a