

P-K MACH'n'Roll®

Models MnR-300, MnR-399, MnR-500, MnR-750 & MnR-1050
Natural Gas, Liquid Propane, or Dual Fuel with NURO® Control



PATTERSON-KELLEY

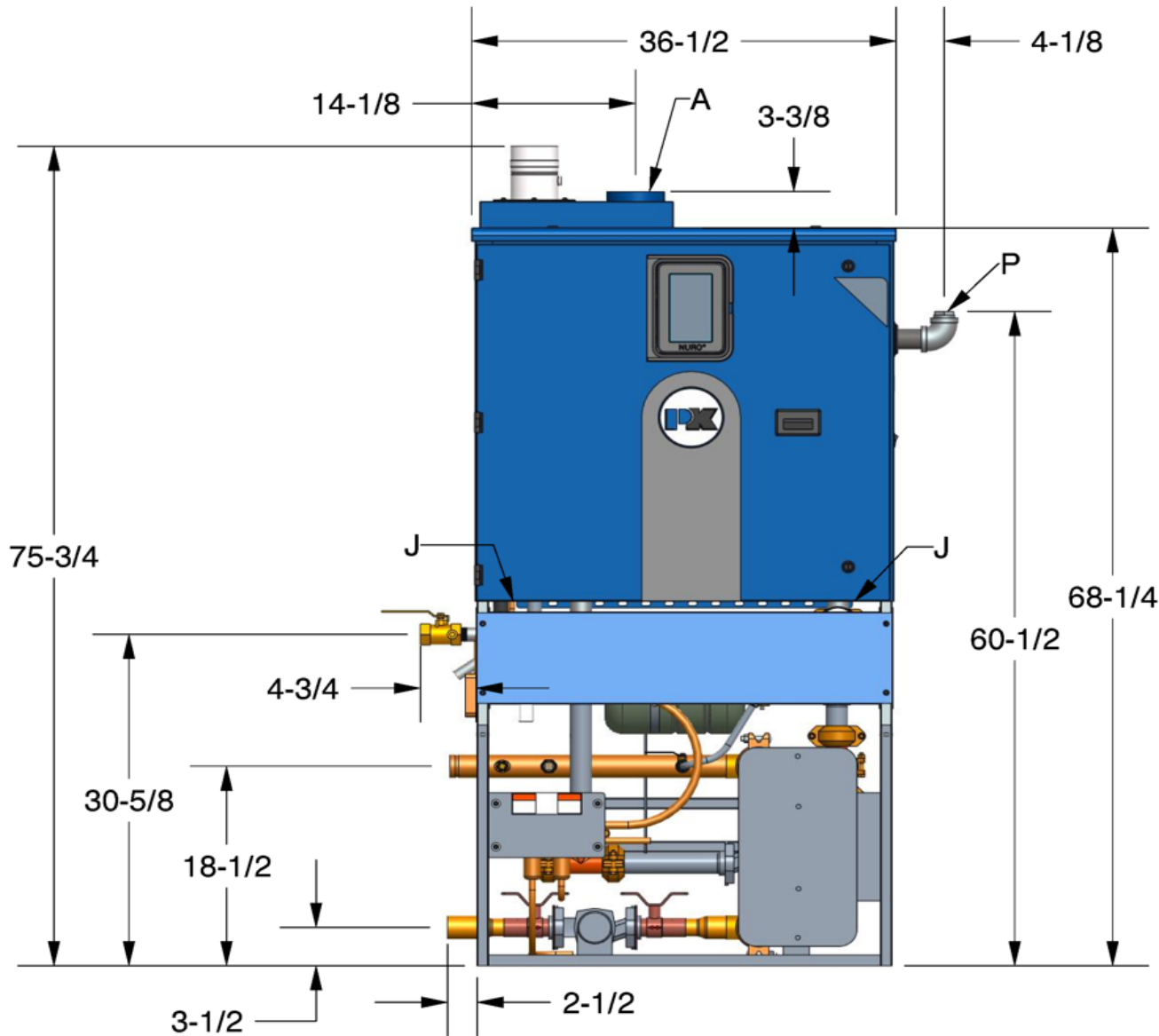
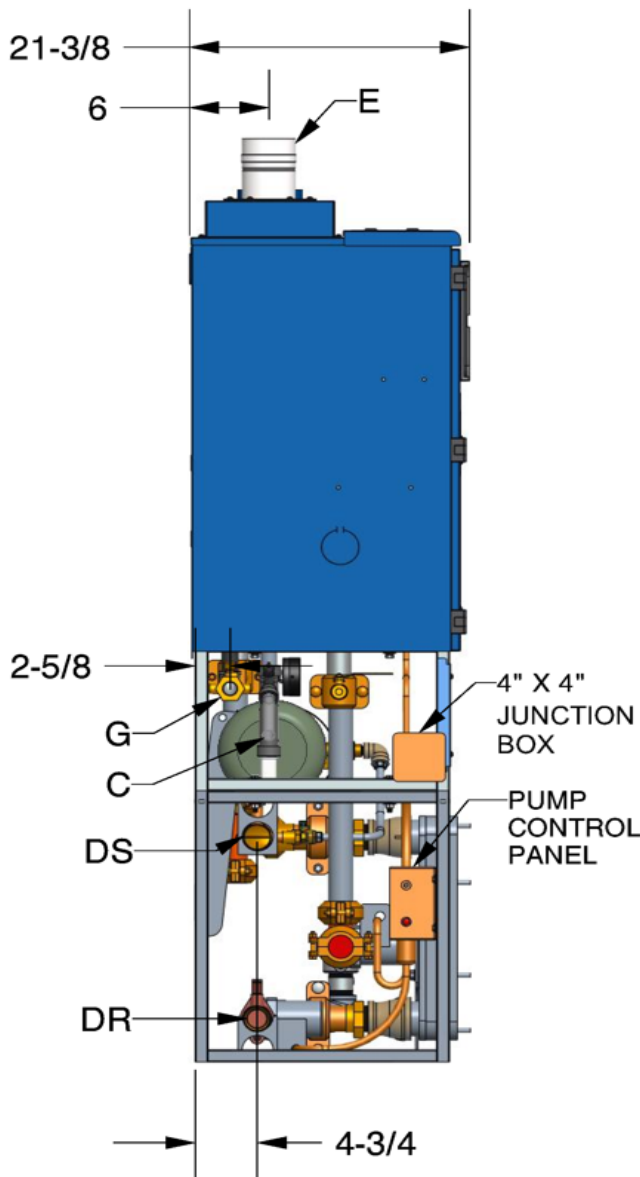


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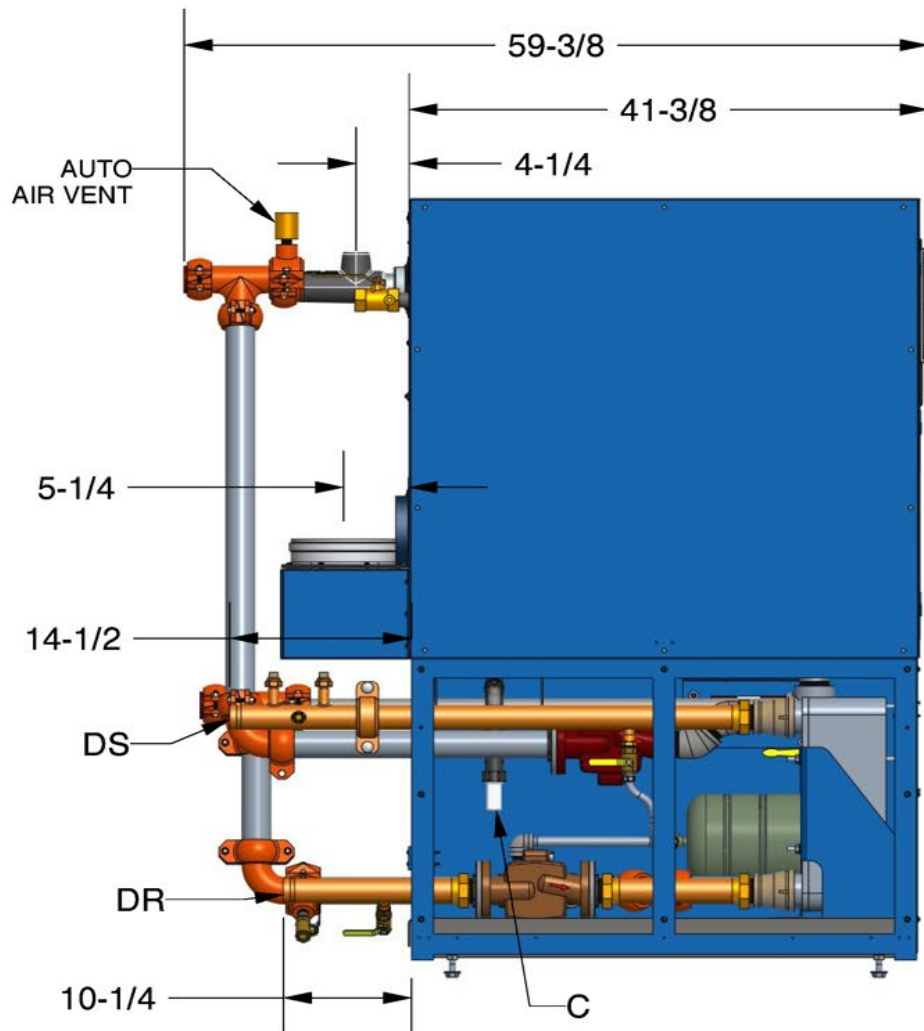
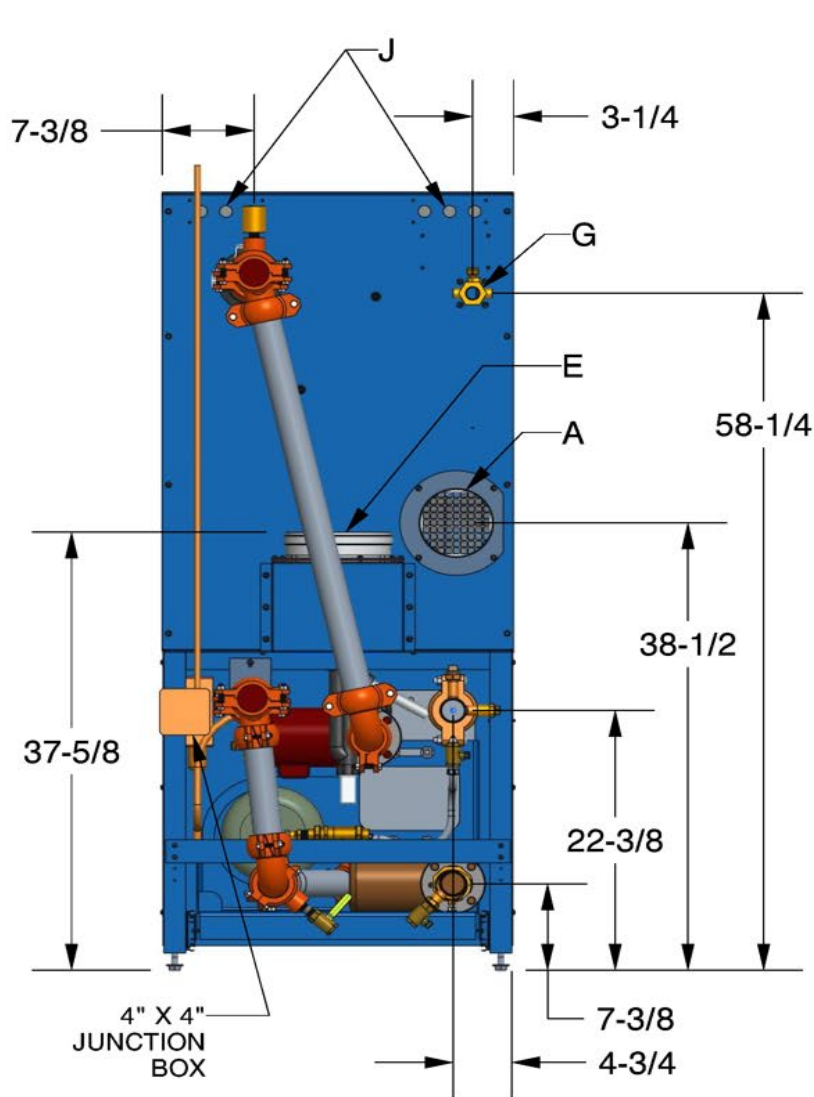
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MnR300 - MnR500



MnR750 - MnR1050



PROUDLY
DESIGNED & ASSEMBLED
IN THE U.S.A.

Components		
☐ Boiler Components		
A	Combustion Air Inlet [MnR300-500]	5" dia. stub
	Combustion Air Inlet [MnR750&1050]	6" dia. Stub
C	Condensate Drain	3/4" hose
E	Exhaust Vent [MnR300-500]	4"
	Exhaust Vent [MnR750]	6"
	Exhaust Vent [MnR1050]	8"
J	Wiring Junction Boxes	inside cabinet
P	Pressure Relief Valve	see list for options
R*	Boiler Return, Victaulic® clamp [MnR300-500]	1-1/2" pipe, grooved
	Boiler Return, Victaulic clamp [MnR750&1050]	2" pipe, grooved
S*	Boiler Supply, Victaulic clamp [MnR300-500]	1-1/2" pipe, grooved
	Boiler Supply, Victaulic clamp [MnR750&1050]	2" pipe, grooved
BP	Boiler Water Flow Device	3 speed circulation pump
☐ Domestic Hot Water Components		
DR	Domestic Hot Water Return, Victaulic® clamp	2" copper pipe, grooved
DS	Domestic Hot Water Supply, Victaulic® clamp	2" copper pipe, grooved
DP	Domestic Hot Water Flow Device	3 speed circulation pump
☐ Single Fuel Boiler (NG or LP)		
G	Gas Connection	1" NPT-F

Victaulic is a registered trademark of Victaulic Company, Easton, PA, USA

*Only available with Comfort Heat Kit

Boiler Controls		
ASME CSD-1 is standard		
Complies with: GE GAP (IRI) guidelines GAP.4.1.0 and GAP.4.1.3 FM Global 6-4 Section 1.0		
Components:		
Main Gas Train with Dual Shut-off		
Integrated Boiler Control, NURO™ Series		
Operating Thermostat, 70°-195°F (21°-91°C)		
High Limit Thermostat, Manual Reset, 100°-197°F (38°-93°C)		
High Exhaust Back Pressure Switch		
LWCO, Probe Type, Manual Reset		
Combustion Air Proving Switch, Differential Pressure Type		
Combustion Blower, Variable Speed, 300 Watt		

Electrical Requirements		
Power Supply		120V, 1ph, 60Hz
MnR 300-500	Boiler Operating Current	Less than 5 Amps
	DHW Electrical Requirements	4.6 Amps
	Recommended Min Circuit Capacity	15 Amps
MnR 750-1050	Boiler Operating Current	Less than 6 Amps
	DHW Electrical Requirements	9.6 Amps
	Recommended Min Circuit Capacity	20 Amps

Pressure Relief Valve/Press-Temp Gauge					
☐ 30 PSIG 3/4" x 1"	MnR300-500			0-100psi/30-240°F	
☐ 30 PSIG 1" x 1"	MnR750&1050			0-100psi/30-240°F	
Shipped Loose for Field Installation					
Ratings and Capacities					
Fuel Selection	☐ Natural Gas (NG)				
	☐ Propane Gas (LP)				
Model Selection	☐ MnR300	☐ MnR399	☐ MnR500	☐ MnR750	☐ MnR1050
Max Inlet Gas Pressure	14" w.c.	14" w.c.	14" w.c.	14" w.c.	14" w.c.
Min Inlet Gas Pressure	NG: 3.5" w.c.	NG: 3.5" w.c.	NG: 6" w.c.	NG: 3.5" w.c.	NG: 3.5" w.c.
	LP: 7.0 " w.c.	LP: 7.0 " w.c.	LP: 7.0 " w.c.	LP: 7.0 " w.c.	LP: 7.0 " w.c.
Input, BTU/hr	300,000	399,000	500,000	750,000	1,050,000 (NG) 1,000,000 (LP)
Output, BTU/hr	280,500	371,070	460,000	712,500	987,000 (NG) 940,000 (LP)
Boiler HP	8.3	11.0	13.7	21.3	29.5
Operating Weight	450 lbs.	453 lbs.	453 lbs.	1125 lbs.	1225 lbs.
Boiler Water Content	3.22 gallons	3.59 gallons	3.59 gallons	10.63 gallons	12.03 gallons
Shipping Dimensions	53"x29"x83"	53"x29"x84"	53"x29"x84"	36"x84"x74"	36"x84"x72"
Shipping Weight	579 lbs.	582 lbs.	582 lbs.	1225 lbs.	1266 lbs.

A.S.M.E. Section IV Design Data					
Maximum Pressure	80 psig				
Maximum Temperature	250°F				
Maximum Operating Temperature	194°F				
	MnR300	MnR399	MnR500	MnR750	MnR1050
Heated Wet Surface Area	12.29 sq. ft.	15.72 sq. ft.	15.72 sq. ft.	18.35 sq. ft.	25.69 sq. ft.
Flow Rate @ 20°F	28 GPM	37 GPM	46 GPM	72 GPM	100 GPM
Flow Rate @ 40°F	14 GPM	18 GPM	23 GPM	36 GPM	50 GPM
DHW Heat Exchanger					
Double Wall Brazed Plate - ASME Section VIII - Div 1.					
316 Stainless Steel Plates w/ Copper Brazing					
	MnR300 - MnR500		MnR750 & MnR1050		
DHW Heat Transfer Surface Area	34.8 sq ft.		92.8 sq ft.		
Maximum Pressure	150 psig		150 psig		

Recovery Performance Data [‡]					
	☐ MnR300	☐ MnR399	☐ MnR500	☐ MnR750	☐ MnR1050
40°F to 140°F	320 GPH	425 GPH	533 GPH	820 GPH	1148 GPH
60°F to 120°F	542 GPH	721 GPH	903 GPH	1405 GPH	1967 GPH

[‡] Refer to Installation and Owner's Manual for additional recovery performance data

Recommended Clearance for Service Access [‡]	
MnR300 - MnR500	Front - 30" Rear - 0" Top - 24" Right Side - 24" Left Side - 24"
MnR750 & MnR1050	Front - 30" Rear - 24" Top - 24" Right Side - 24" Left Side - 24"

[‡] Refer to Installation and Owner's Manual for complete clearance dimension details

