



Matrix M100V High Efficiency Integrated Mechanical System (IMS)

Submittal Sheet

Section 1 - Specifications
Section 2 - Dimensions
Section 3 - Electrical

Project Name: _____ Date: _____
 Location: _____
 Engineer: _____
 Contractor: _____ Rep: _____

1 SPECIFICATIONS

General Specifications

- ▶ Product Features
 - Certified to ANSI Z21.13 / CSA 4.9 Gas-fired Boiler Standard
 - Performance rated to CSA P.10 – Premium rating
 - Modulating burner, 6:1 turndown
 - Space heating via Forced-air and/or Hydronics
 - Instantaneous Hot Water Heater
 - Heat Recovery Ventilator (HRV)
- ▶ Factory Supplied Items
 - Outdoor temperature sensor
 - Plenum temperature sensor
 - 30PSI ASME Relief Valve
 - Pressure Regulating Valve (PRV)
 - 30PSI Pressure Gauge
 - Natural Gas to LP conversion kit
 - Vent termination bird screens
 - 500ml bottle of Fernox F1 Inhibitor
- ▶ Control Features
 - Automatic multistage Force-air heating (14-105MBH output)
 - Hydronic heating with integrated primary-loop plumbing and Outdoor Reset control
 - Output sharing logic for combined Force-air and Hydronic space heating loads
 - DHW priority with auto-adjusting boiler temperature setting
 - Two stage cooling ready, each stage adjustable from 400-1600 CFM (AC components not included)
 - Adjustable Circulation fan rate (400-1600 CFM)
 - Heat Recovery Ventilation (HRV) with two fully adjustable rates
 - Dehumidification/Override Ventilation (Winter only)
 - Ventilation balancing with electronic control of inlet and outlet fans
 - Input for optional DHW storage tank recirculation
- ▶ Optional sidewall vent kit (NTI part # 82666)

Supply Plenum, in.	22.5 x 18.5
Return Plenum, in.	18 x 18
DHW Connections NPT, in.	3/4
Hydronic Connections NPT, in.	3/4

Gas Connection NPT, in.	1/2
Vent/Air-intake Pipe Diameter, in.	3 or 4
Vent/Air-intake Pipe Length, ft.	105 ¹
Approximate Weight, lb	300

¹ – Maximum vent/air-intake length for LP when using 3” piping is 50’.

Performance Specifications

Boiler (ANSI/ASHRAE 103)	
Input (Min), BTU/hr	25,000
Input (Max), BTU/hr	150,000
DOE Heating Capacity, BTU/hr	136,000
AFUE, %	95.1
Net 1=B=R Rating, BTU/hr	118,000

IMS (CSA P.10)	
Annual Electrical Consumption, kWh/y	1826
Overall Thermal Performance Factor	0.91
Performance Level	Premium

HVAC Specifications

Air Flow Heating, CFM	Air Flow Cooling, CFM	Air Flow Continuous, CFM	HRV Ventilation, CFM
400 - 1200	400 - 1600	400 - 1600	70 - 150



NY Thermal Inc.

65 Drury Cove Road Saint John, NB E2H 2Z8 Canada

Technical Service: 1-800-688-2575 Fax: 1-506-432-1135 Web: [http:// www.nythermal.com](http://www.nythermal.com)

NY Thermal Inc. reserves the right to change these specifications without notice.

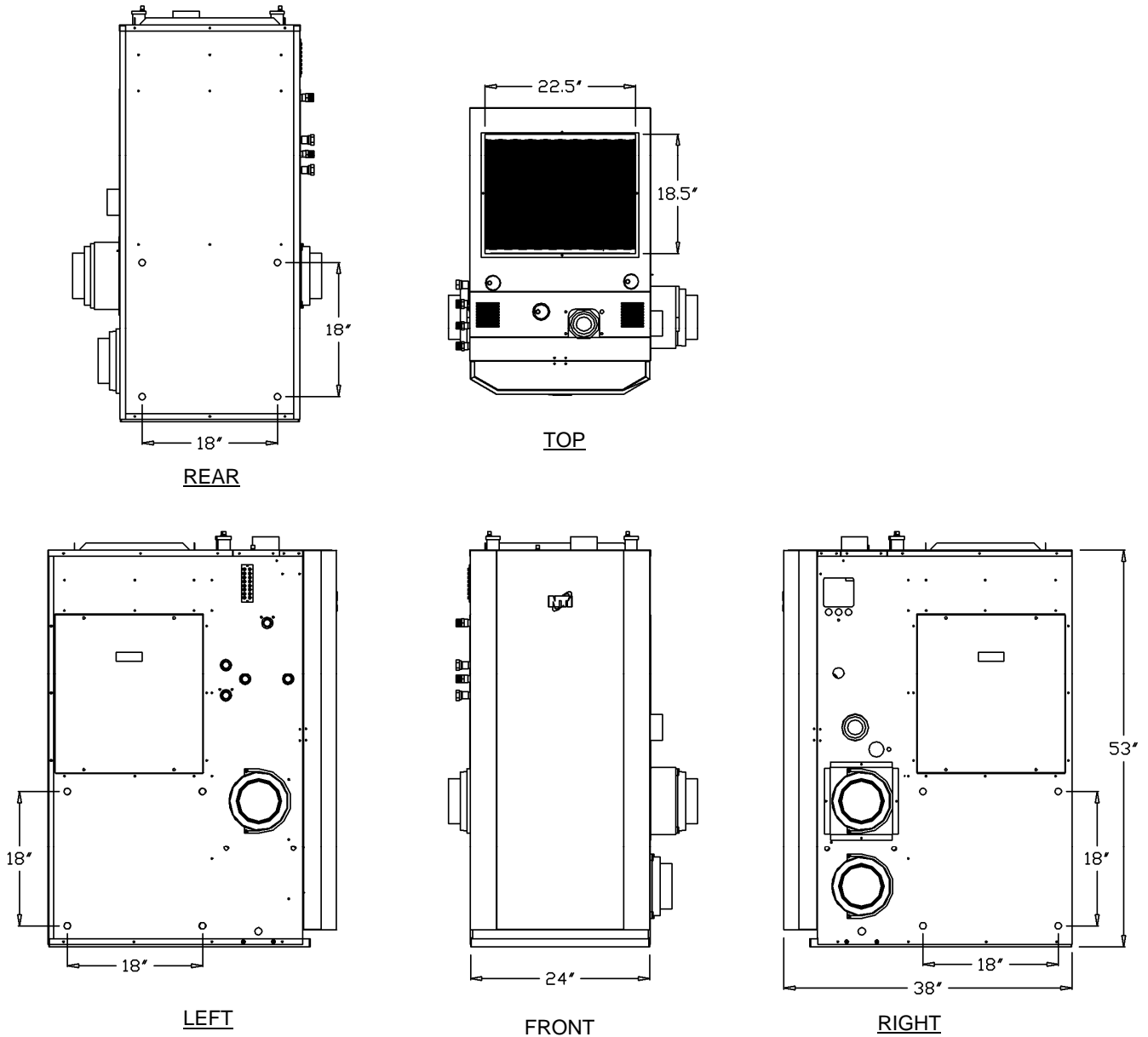


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² DIMENSIONS

Product Dimensions – in. [mm]



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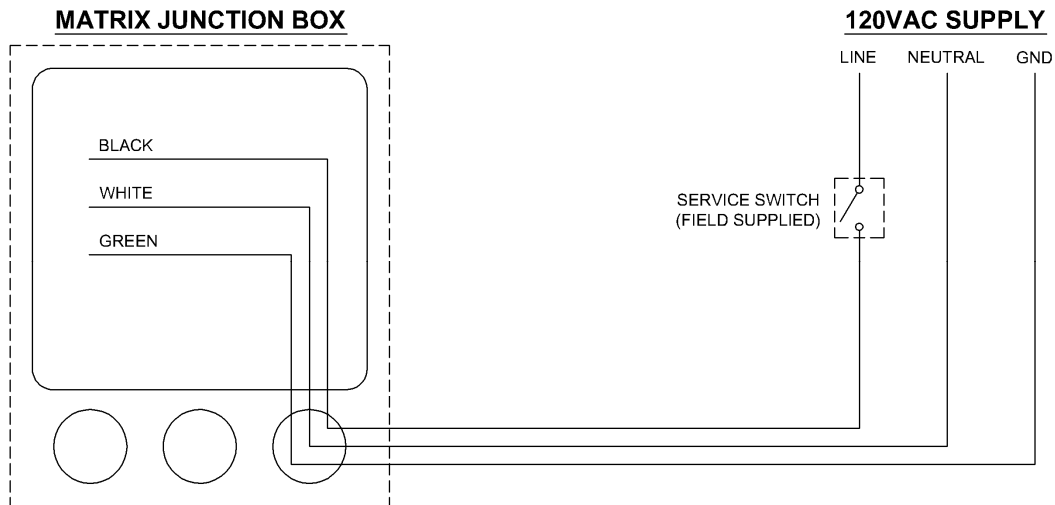
Recommended Clearances – in. [mm]

Top	Front	Left	Right	Back	Bottom
24 [610]	24 [610]	24 [610]	24 [610]	6 [152]	0

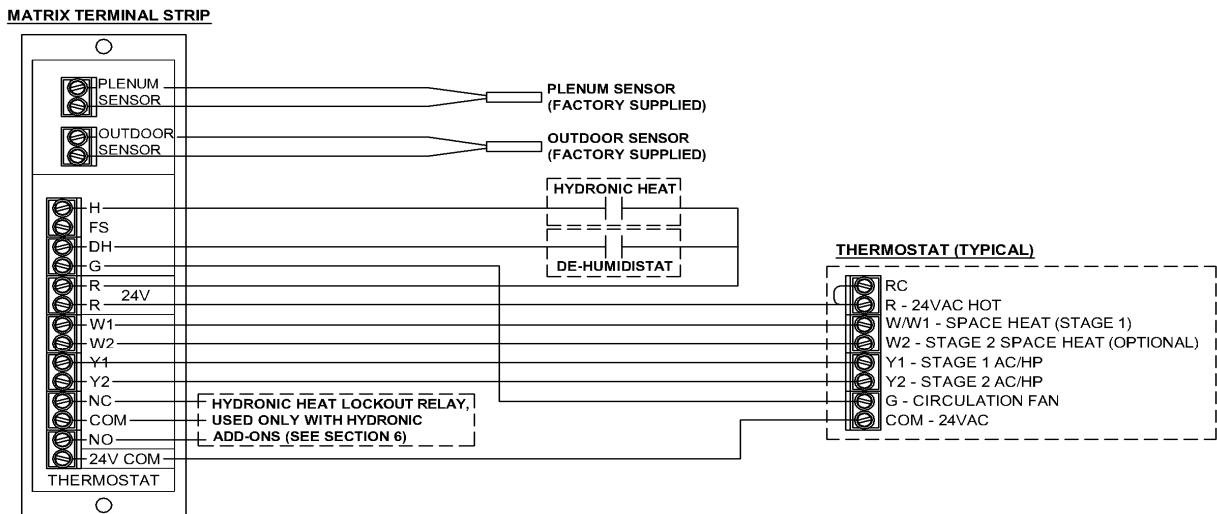
3 ELECTRICAL

Simplified Wiring Diagrams

Line Voltage Field Wiring



Low Voltage Field Wiring



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