

# QUANTUM 12

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## Appendix to Manual

SERIAL NUMBER:

PATENTS: U.S. 6544583B2, U.S. 6479094, U.S. 6433319, U.S. 6580061B2,  
U.S. 6663914; ADDITIONAL PATENTS PENDING

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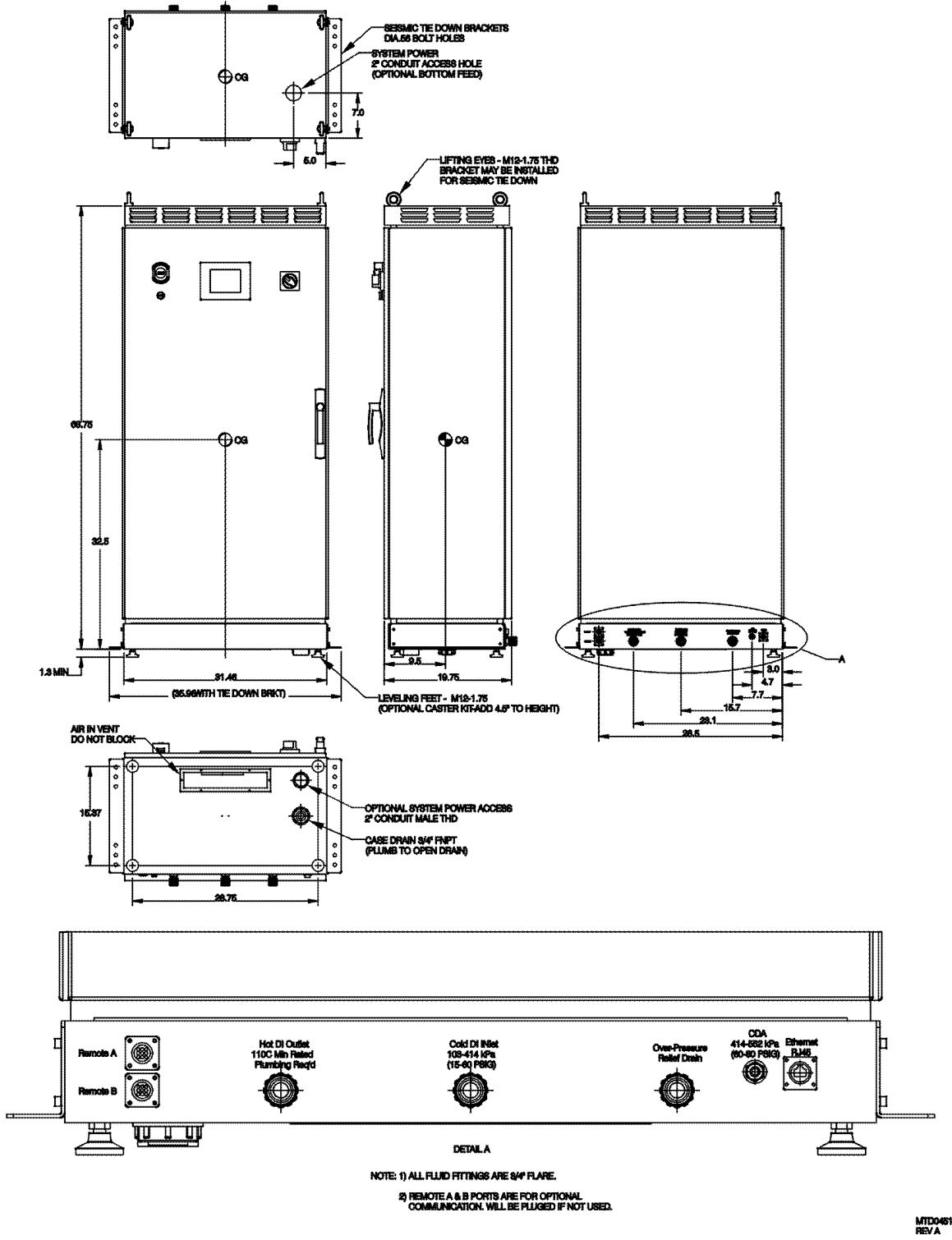
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# 1 APPENDIX: QUANTUM 12

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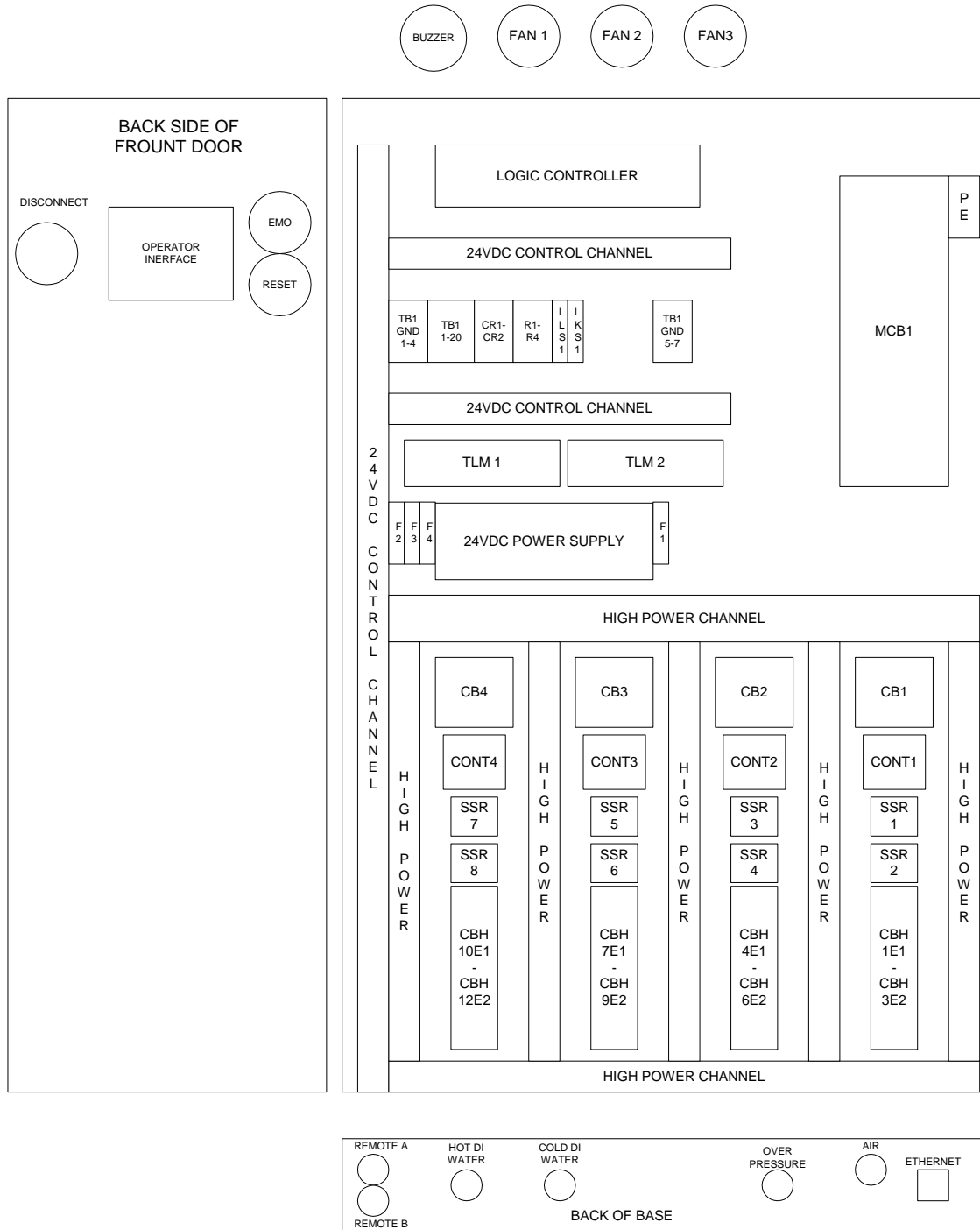
## 1.1 UTILITY REQUIREMENTS

<b>Remote Signals:</b>	Standard Ethernet, RJ-45 Connector See schematic for wiring options.
<b>Cold DI Inlet:</b>	3/4" Flare PFA Tube 103-414 kPa (15-60 psig)
<b>Hot DI Outlet:</b>	3/4" Flare PFA Tube Discharge line must be restricted to create adequate backpressure >103 kPa (15 psig). A flow restriction may be required at the point of use to limit discharge rate.
<b>Overpressure Relief Drain:</b>	3/4" Flare PFA Tube 3/4" flare tube or equivalent <20m (60 ft.) length to open drain
<b>CDA or N2:</b>	1/4" Tube – Pressure source for diaphragm valve on DI Water Inlet 414-552 kPa (60-80 psig)
<b>Cabinet Drain:</b>	Open to drain (do not tie to overpressure line)
<b>System Weight:</b>	Dry Kg. (lbs): 209 Kg (460 lbs.)
<b>Min. Dimensions:</b>	178cm x 81cm x 51cm (70"H x 32"W x 20"D)



**Figure 1-1: Facility Installation Layout**

**NOTE:** Accessibility to open or remove the front and back panels is required for maintenance of the heater.



MTD0466

Figure 1-2: Electrical Component Layout

## 1.2 SYSTEM REQUIREMENTS

### 144kW 480VAC Standard Configuration

**Model Number:** QTM144V480A00  
**Heating Module:** QA1V480P12  
**Typical Resistance:** Consult factory  
**System Power:** 480 volts, 3 phase, 50/60 Hz, 180 Amp Full Load  
225 Amp over-current protection provided at machine hook-up terminals  
Machine Interrupting Rating 35kA

### 120kW 480VAC Standard Configuration

**Model Number:** QTM120V480A00  
**Heating Module:** QA1V480P10  
**Typical Resistance:** Consult factory  
**System Power:** 480 volts, 3 phase, 50/60 Hz, 150 Amp Full Load  
200 Amp over-current protection provided at machine hook-up terminals  
Machine Interrupting Rating 35kA

### 120kW 415VAC Standard Configuration

**Model Number:** QTM120V415A00  
**Heating Module:** QA1V415P10  
**Typical Resistance:** Consult factory  
**System Power:** 415 volts, 3 phase, 50/60 Hz, 185 Amp Full Load  
225 Amp over-current protection provided at machine hook-up terminals  
Machine Interrupting Rating 35kA

### 120kW 380VAC Standard Configuration

**Model Number:** QTM120V380A00  
**Heating Module:** QA1V380P10  
**Typical Resistance:** Consult factory  
**System Power:** 380 volts, 3 phase, 50/60 Hz, 185 Amp Full Load  
225 Amp over-current protection provided at machine hook-up terminals  
Machine Interrupting Rating 35kA

### 1.3 SPARE PARTS

The most common replacement parts are listed below. For items not listed please contact Trebor.

PART NO.	DESCRIPTION	RECOMMENDED SPARE QTY.
98003412	Fuse, 3 Amp, CCMR	3
98003413	Fuse, 5 Amp, CCMR	1
98003546	SSR,90A,4-32VDC IN,48-660V OUT,IDEC	4
AE112	Gasket, SSR, Thermobond	4
Heating Module	See System Requirements for part number.	1
AF174	Over-pressure Burst Fitting	1

Please specify system Model Number and Serial Number when ordering spare parts. Consult factory for other parts not shown above.

### 1.4 WIRING SCHEMATIC

See system label for schematic number(s). See attached fold out sheets.