Discovery TMA

Site Preparation Guide
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IDEAL PLACEMENT AND BENCH MEASUREMENTS

Select a location with adequate floor space and a rigid laboratory bench that is level and is in a vibration-free environment. For optimal performance, it is recommended that the instrument be placed by itself on a separate marble table.

- **Table width:** 60 cm (24 in)
- **Bench width:** 61–183 cm (24–72 in)
- **Table depth:** 76 cm (30 in)
- **Bench depth:** 76 cm (30 in)
- **Distance from the wall:** 30.5 cm (12 in) min.
System Components

MAIN SYSTEM COMPONENTS

A. Computer (Controller)
B. Instrument
C. Optional Cooling Accessory – MCA 70
Instrument Measurements

MAIN INSTRUMENT

Height Furnace OPEN: 68 cm (27 in)
Height Furnace CLOSED: 63 cm (25 in)
Width: 56 cm (22 in)
Depth: 56 cm (22 in)
Weight: 31.4 kg (69 lbs)
## Utility Requirements

### POWER

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>• 100–240 VAC, 47–63 Hz, 1200 W</td>
</tr>
<tr>
<td></td>
<td>• Safety ground per local regulation</td>
</tr>
<tr>
<td>Power cords provided</td>
<td>• NEMA 5-15 plug</td>
</tr>
<tr>
<td></td>
<td>• Type F plug</td>
</tr>
</tbody>
</table>

Use power cords with plugs appropriate for your circuit.

Supply voltages lower than indicated may result in a degradation of performance.

Ensure that the mains assigned do not also supply power to noise generating equipment nearby, such as motors, welders, transformers, etc.
<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Purge gases          | • Acceptable purge gases: air, nitrogen, argon, and helium  
                       | • Pressure regulator required  
                       | • Conditions:  
                       |   • Must be dry  
                       |   • Must be free from oil, dirt, and water  
                       | If you are using samples that may emit harmful gases, attach a compatible tube to the purge gas exit to transfer the gas to an exhaust or other suitable protective device. |
| Purge gas flow rate  | 100 mL/min (-100°C and above) or 200 mL/min (-150°C and above)            |
# HARDWARE REQUIREMENTS

<table>
<thead>
<tr>
<th>Description</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>• Intel® Core™ i5 8400 or better</td>
</tr>
<tr>
<td></td>
<td>• 2.8 GHz with 9 MB L2 cache</td>
</tr>
<tr>
<td>Memory</td>
<td>≥ 16 GB RAM DDR4 2666 SDRAM</td>
</tr>
<tr>
<td>Hard drive</td>
<td>≥ 80 GB free space</td>
</tr>
<tr>
<td></td>
<td>• 1.5 GB required for Full version of TRIOS</td>
</tr>
<tr>
<td></td>
<td>• 675 MB required for Lite version of TRIOS (without Online help)</td>
</tr>
<tr>
<td>DVD (Optional)</td>
<td>≥ 48x CD-ROM or DVD. Optional for software installation.</td>
</tr>
<tr>
<td>Screen resolution</td>
<td>Required: 1280 x 1024 with 24-bit colors</td>
</tr>
<tr>
<td></td>
<td>Recommended: 1920 x 1080 with 24-bit colors</td>
</tr>
<tr>
<td>Graphic memory</td>
<td>128 MB</td>
</tr>
<tr>
<td>Screen (LCD) size</td>
<td>Required: 19” or greater</td>
</tr>
<tr>
<td></td>
<td>Recommended: 24” wide screen</td>
</tr>
</tbody>
</table>
## SOFTWARE REQUIREMENTS

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Operating System | • Windows 10 Ultimate & Professional  
                   • Home version not supported  
                   • 64-bit version                                                        |
| Internet         | **Internet connection is strongly recommended for ongoing support after installation** |
| Service Pack     | Microsoft Operating System Service Pack                                       |
| Updates          | Windows Operating System and associated Microsoft updates must be up to date |
| Network          | A second network card for corporate network connection is recommended.       |
|                  | *TA Instruments is not responsible for resolving issues associated with connections to your corporate network.* |
| Conflicts        | *TA Instruments is not responsible for resolving hardware/software conflicts created by the addition of third-party hardware or software to the computer.* |
Accessories

**MCA 70 MEASUREMENTS**

- Height: 46 cm (18 in)
- Width: 26 cm (10 in)
- Depth: 51 cm (20 in)
- Weight: 47.7 kg (105 lbs)

**MCA 70 REQUIREMENTS**

**Requirements**

- 120 VAC/12 A/60 Hz
  220 VAC/6 A/50 Hz
- Uses NEMA 5-20P plug

- -70°C to 400°C temperature range with the TMA
- Refrigerants:
  - 1st Stage: R1270 (Propylene), approximately 14 g
  - 2nd Stage: (Blend) R1150 (Ethylene) & R290 (Propane), approximately 22 g
### Discovery TMA

**Enough space for instrument and computer:**
- Bench width: 61–183 cm (24–72 in)
- Bench depth: 76 cm (30 in)
- Marble Table width: 60 cm (24 in)
- Marble table depth: 76 cm (30 in)

**Instrument power is 100–240 VAC, 47–63 Hz, 1200 W**

**Purge gas:**
- Is one of the following: air, nitrogen, argon, or helium
- Is dry and free of oil, dirt, and water

**Computer meets all hardware requirements**

**Computer meets all software requirements**

Customer’s IT personnel has provided Administrative privileges on the controller computer

The Customer’s IT personnel will be on site the day of installation

**Moisture trap for the MCA 70 (200266.001) to prevent moisture buildup**

**The Customer assumes responsibility for any damage that occurs when the instrument is moved by someone other than a trained TA Instruments Service Representative.**

I hereby acknowledge that all utility requirements have been met per the checklist above and that they will be ready at the agreed time of installation.

*If all utility requirements are not met at the agreed time of installation, additional charges may be incurred for a return Service trip.*

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**Customer**

**Company**

**City**

**State**

**Country**

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Please send a signed copy of the completed checklist to your local Service representative.
For information on our latest products, contact information, and more, see our website at: [http://www.tainstruments.com](http://www.tainstruments.com).

To find your local TA Instruments office and contact information, visit [http://www.tainstruments.com/contact/ta-directory/](http://www.tainstruments.com/contact/ta-directory/)

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