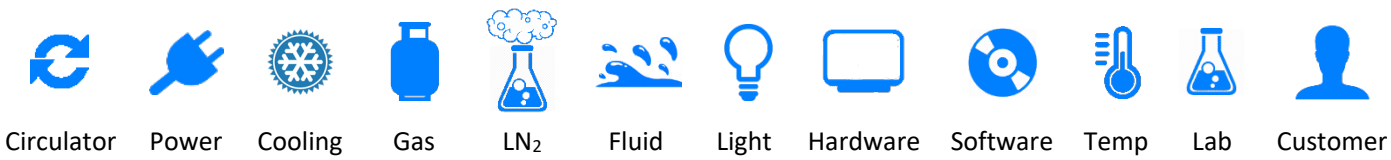
# Discovery SDT 650


## Site Preparation Guide

Revision O  Issued September 2024

# Ideal Setup





# Ideal Setup

## 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.


Bench width: 61–183 cm (24–72 in)

Table width: 76 cm (30 in)

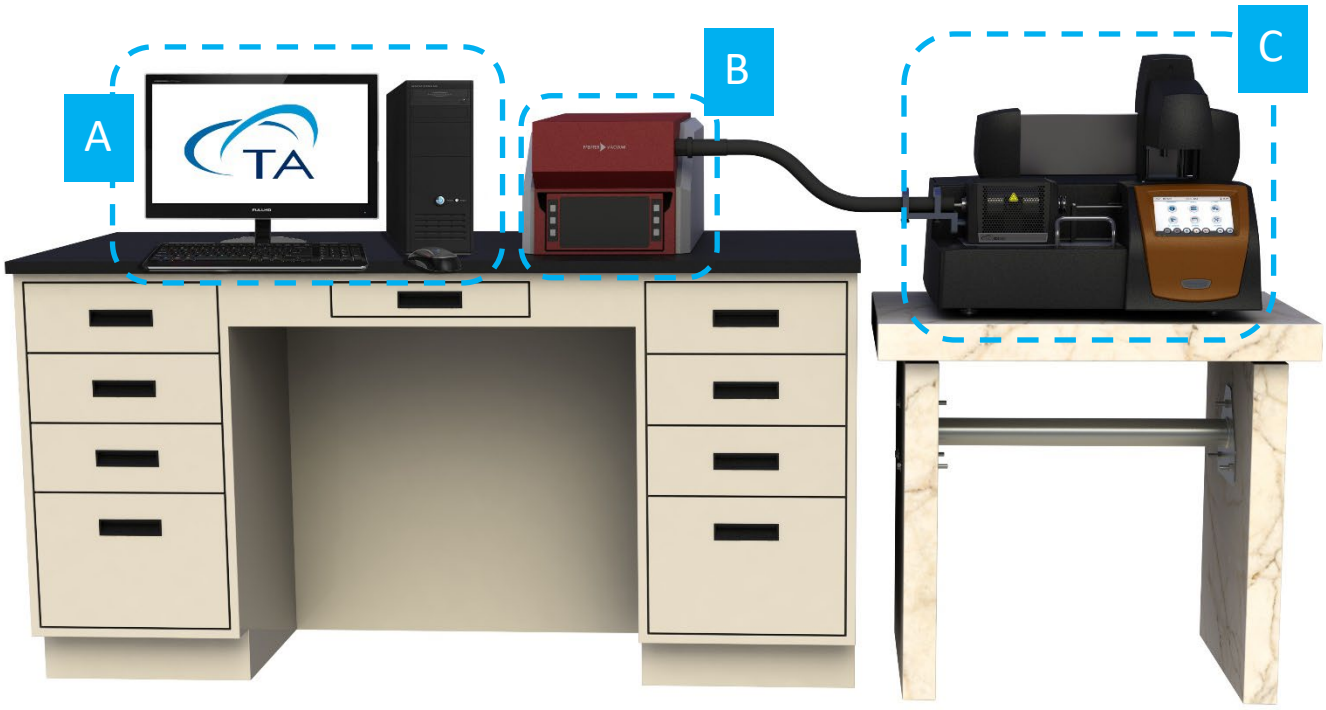
Bench depth: 76 cm (30 in)

Table depth: 76 cm (30 in)

Distance from the wall: 30.5 cm (12 in) min.

# System Components

## MAIN SYSTEM COMPONENTS – WITH MASS SPECTROMETER



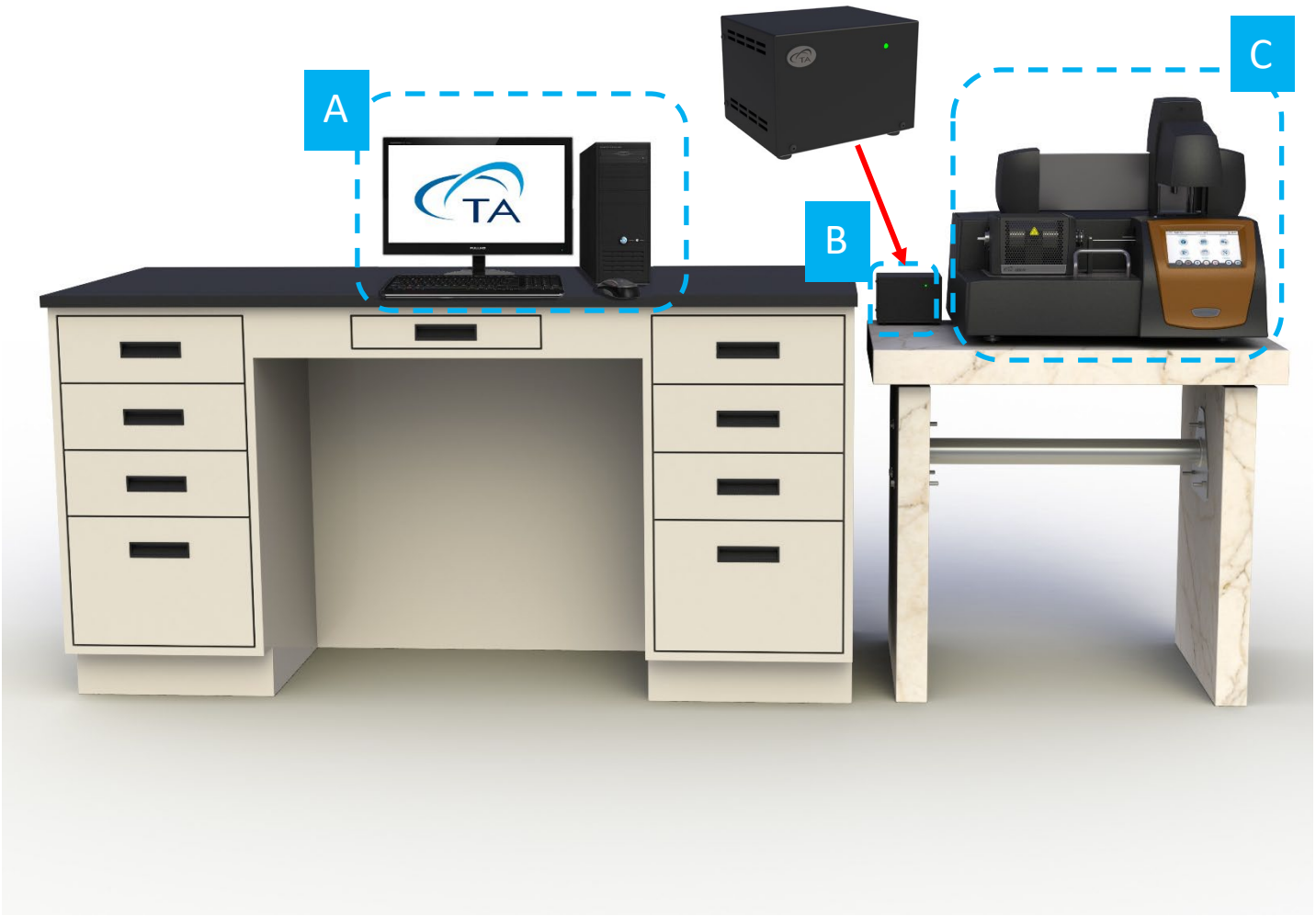

**A. Computer (Controller)**

**B. Mass Spectrometer (Optional)**

**C. Instrument**

# System Components

## MAIN SYSTEM COMPONENTS – WITH BLENDING GDM




**A. Computer (Controller)**

**B. Blending Gas Delivery Module (Optional)**

**C. Instrument**

# Instrument Measurements

## SDT 650 *WITH* AUTOSAMPLER

Height: 53 cm (21 in)

Width: 66 cm (26 in)

Depth: 64 cm (25 in)

Weight: 40 kg (88 lbs)

## SDT 650 *WITHOUT* AUTOSAMPLER

Height: 28 cm (11 in)

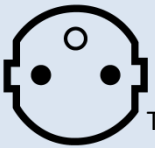
Width: 66 cm (26 in)

Depth: 64 cm (25 in)

Weight: 33 kg (73 lbs)

# Utility Requirements

## POWER

| Item | Requirement |
|---|---|
| Power | • 100–240 VAC, 47–63 Hz, 1200 W<br>• Safety ground per local regulation |
| Power cords provided | • NEMA 5-15 plug<br>• Type F plug  Type F  NEMA 5-15 |

CAUTION **Use power cords with plugs appropriate for your circuit.**

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

CAUTION Ensure that the mains assigned do not also supply power to noise generating equipment nearby, such as motors, welders, transformers, etc.

CAUTION An independent heavy GROUND wire must be provided through the power hookup. Improper grounding may cause severe damage for which the supplier will not accept responsibility. All power strips must be fully grounded and carry the ground through to the sockets into which the computer is plugged.

# Utility Requirements

## GAS

| Item | Requirement |
|---|---|
| Purge gases | • Acceptable purge gases: air, nitrogen, oxygen, argon, and helium<br>• Source gas pressure is a maximum 20 psig for all inlets at the back of the instrument<br>• Pressure regulator required – must be rated for required gases<br>• Conditions:<br>  • Must be dry<br>  • Must be free from oil, dirt, and water<br><br>  <br>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 | Up to 500 mL/min. Recommended flow rate is 100 mL/min. |
| Cooling gas (air) | • Source gas pressure is a maximum 20 psig at the back of the instrument<br>• Pressure regulator required – must be rated for required gas<br>• Conditions:<br>  • Must be dry<br>  • Must be free from oil, dirt, and water |

# Computer Requirements

## HARDWARE REQUIREMENTS

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

# Computer Requirements

## SOFTWARE REQUIREMENTS

| Item | Requirement |
|---|---|
| Operating System | • Windows 10 or 11 Ultimate & Professional<br>• Home version not supported<br>• 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.*<br><br>*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

## PFEIFFER THERMOSTAR MASS SPECTROMETER MEASUREMENTS


Height: 27.4 cm (10.8

Width: 35.8 cm (14.1 in)

Depth: 61.5 cm (24.2 in)

Weight: 23 kg (51 lbs)

## PFEIFFER THERMOSTAR MASS SPECTROMETER REQUIREMENTS

| Requirements | |
|---|---|
| | • Voltage: 100–240 VAC<br>• Amperage: 8.3A to 3.5 A, depending on voltage<br>• Power: 830 W<br>• Fuse type: 2x 10A (slow) |
| | • 10°C–40°C (50°F–104°F)<br>• Max 80% RH at temperatures below 31°C, linearly decreasing to 50% RH at 40°C |
| | • Acceptable purge gases: nitrogen<br>• Must be dry and free of oil, dirt, and water<br>• Purge gas pressure: 7–14 kPa gauge (1–2 psig) |

Circulator Power Cooling Gas $LN_2$ Fluid Light Hardware Software Temp Lab Customer

# Accessories

## DISCOVERY BLENDING GDM MEASUREMENTS

Height: 13 cm (5 in)

Width: 15 cm (6 in)

Depth: 15 cm (6 in)

Weight: 0.5 kg (1 lb)

## DISCOVERY BLENDING GDM REQUIREMENTS

| Requirements | |
|---|---|
| | • Power adapter: 100–240 VAC, 0.5A, 50/60 Hz<br>• Approved for operation on a 20 A branch circuit with protective conductor (ground). DC requirements: 24V, 0.8A. Use only TA Instruments-provided power adaptor. |
| | • Must be dry and free of oil, dirt, and water<br>• Maximum inlet pressure: 140 kPa gauge (20 psig)<br>• Acceptable gases: Nitrogen, argon, helium, air, oxygen, carbon dioxide, forming gas. |

Circulator Power Cooling Gas $LN_2$ Fluid Light Hardware Software Temp Lab Customer

# Site Preparation Checklist

## Discovery SDT 650

| | |
|---|---|
|  | Enough bench space for instrument, computer, and Mass Spectrometer (if needed):<br>☐ Bench width: 61–183 cm (24–72 in)<br>☐ Bench depth: 76 cm (30 in) |
|  | ☐ Instrument power is 100–240 VAC, 47–63 Hz, 1200 W |
|  | Purge gas:<br>☐ Is one of the following: air, nitrogen, oxygen, argon, or helium<br>☐ Is dry and free of oil, dirt, and water<br>☐ Pressure regulator is present and rated for required gases<br>☐ Maximum 20 psig inlet pressure<br>☐ Gas source regulated pressure: up to 500 mL/min<br>Cooling gas (air)<br>☐ Pressure regulator is present and rated for required gas<br>☐ Maximum 20 psig inlet pressure<br>☐ Is dry and free of oil, dirt, and water<br>High Pressure Mass Spectrometer purge gas (if applicable):<br>☐ Is nitrogen or argon<br>☐ Pressure is 7–14 kPa gauge (1–2 psig)<br>☐ Is dry and free of oil, dirt, and water |
|  | ☐ Computer meets all hardware requirements<br>☐ Computer meets all software requirements |
|  | ☐ 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.

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

_____ / ____ / _____

*Customer* *DD* *MM* *YYYY*

_____ _____ _____ _____

*Company* *City* *State* *Country*

Please send a signed copy of the completed checklist to your local Service representative.

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