### Discovery Hybrid Rheometer



### Site Preparation Guide for HR 10/20/30 Series

Revision F Issued August 2024



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# **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. A marble table is recommended.



Bench width: 127 cm (50 in)

Marble table width: 60 cm (24 in)

Bench depth: 76 cm (30 in)

Marble table depth: 76 cm (30 in)

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

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### System Components



#### MAIN SYSTEM COMPONENTS



- A. Instrument
- **B.** Computer
- C. Electronics Control Module



### Instrument Measurements



#### MAIN INSTRUMENT



Height: 91 cm (35.8 in)

Width: 34 cm (13.4 in)

Depth: 48 cm (18.5 in)

Weight: 42.4 kg (93.5 lbs)



**ELECTRONICS CONTROL MODULE** 

Height: 36 cm (14.2 in)

Width: 23 cm (9 in)

Depth: 40 cm (15.7 in)

Weight: 10.7 kg (23.6 lbs)



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# **Utility Requirements**



#### POWER

Item	Requirement
Power	<ul> <li>110–240 VAC, 47–63 Hz, 1.4 kW</li> <li>Neutral to Ground (NG) voltage max 0.5 volt</li> <li>Safety ground per local regulation</li> </ul>
Power cords provided	<ul> <li>NEMA 5-15 plug</li> <li>Type F plug</li> <li>Type F NEMA 5-15</li> </ul>



#### Use power cords with plugs appropriate for your circuit.

CAUTION

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.



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

	Air Bearing (Air or Nitrogen):
Gas Pressure	Compressed at 345–1034 kPa gauge (50–150 psig)
Flow Rate	Air flow volume capacity requirements are specific to the Temp Control Options purchased with the DHR instrument. Refer to the DHR Accessories Site Prep Guide for additional information.
Dew point	-20°C or better
Conditions	<ul> <li>Must be dry</li> <li>Must be free from oil and dirt<sup>1</sup></li> </ul>
Other	• ¼ NPT female connection required for DHR main air supply (not provided)

<sup>1</sup> Compressed Air Quality Requirements		
Dew point	ldeal: -40°C Minimum: -20°C	
Dirt particle	5μm	
Oil including vapor	0.01 mg/m <sup>3</sup>	



Item	Requirement
Circulating Fluid	See the HR/DHR Accessories Requirements for specific fluid requirements.



### **Computer Requirements**

#### HARDWARE REQUIREMENTS

Description	Requirement
Processor	<ul> <li>Intel<sup>®</sup> Core<sup>™</sup> i5 8400 or better</li> <li>2.8 GHz with 9 MB L2 cache</li> </ul>
Memory	$\geq$ 16 GB RAM DDR4 2666 SDRAM
Hard drive	<ul> <li>≥ 80 GB free space</li> <li>1.5 GB required for Full version of TRIOS</li> <li>675 MB required for Lite version of TRIOS (without Online help)</li> </ul>
DVD (optional)	$\geq$ 48x CD-ROM or DVD (optional for installing TRIOS)
Screen resolution	Required: 1280 x 1024 with 24-bit colors Recommended: 1920 x 1080 with 24-bit colors
Graphic memory	128 MB
Screen (LCD) size	Required: 19" or greater Recommended: 24" wide screen
USB II port	Required with ETC and Peltier Camera Viewer options, SALS accessory, and Automatic Asphalt calibration kit
Network card	Ethernet 10Base T/100 Base TX
Additional Ethernet card(s)	Necessary if connecting the instrument directly and access is needed to the Corporate LAN. Also required for Modular Microscope Accessory.
Ethernet Cabling	10/100BaseTX Ethernet hub/switch. Must be EIA-568B Category 5+ UTP
Client-Server Protocol	DHCP
Image Capture (Camera Option)	DirectX 9.0 or higher
Second Monitor	Recommended for SALS Accessory image viewing and Modular Microscope Accessory
TCP/IP ports used	<ul> <li>TCP: 20010, 20011</li> <li>UDP: 5050, 5056</li> </ul>



### **Computer Requirements**



### SOFTWARE REQUIREMENTS

Item	TRIOS
Operating System	<ul> <li>Windows 10 or 11 Ultimate &amp; Professional</li> <li>Home version not supported</li> <li>≥ 64-bit version</li> </ul>
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 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.



### Site Preparation Checklist

$\checkmark$	Discovery Hybrid Rheometer – HR 10/20/30 Series
	<ul> <li>Enough bench space for instrument, computer, and Electronics Control Box</li> <li>Bench length: 127 cm (50 in)</li> <li>Bench depth: 76 cm (30 in)</li> </ul>
۴	Instrument power is 110–230 VAC, 47–63 Hz, 1.4 kW
	<ul> <li>Computer meets all hardware requirements</li> <li>I have two network cards installed on the computer to be able to connect to both the corporate LAN and the instrument.</li> <li>Computer meets all software requirements</li> <li>Customer's IT personnel has provided Administrative privileges on the controller computer</li> <li>The Customer's IT personnel will be on site the day of installation</li> </ul>
ē	<ul> <li>Air Bearing Gas Pressure (air or nitrogen)</li> <li>□ Pressure is 345–1034 kPa (50–150 psig)</li> <li>□ Dew point is -20°C or better</li> <li>□ Particle content is &lt; 5µm and oil and vapor is &lt; 0.01 mg/m<sup>3</sup>*</li> <li>□ ¼ NPT female connection to the main compressed air source</li> <li>*TA filter/regulator assembly (P/N 250000.001) meets these requirements.</li> </ul>
1	The Customer assumes responsibility for any damage that occurs when the instrument is moved by someone other than a trained TA Instruments Service Representative.
l hereby ready at	acknowledge that all utility requirements have been met per the checklist above and that they will be the agreed time of installation.
<u>lf all util</u> <u>a return</u>	ity requirements are not met at the agreed time of installation, additional charges may be incurred for Service trip.
Custome	or DD MM YYYY
Compan	y City State Country
Please se	end a signed copy of the completed checklist to your local Service representative.



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To find your local TA Instruments office and contact information, visit <a href="http://www.tainstruments.com/contact/ta-directory/">http://www.tainstruments.com/contact/ta-directory/</a>

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