



TORNADO-D20

هات پلنت با همزن مغناطیسی دیجیتال

راهنمای نصب و استفاده دستگاه

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Packing List

No.	Item	Type	QTY
1	Digital magnetic stirrer	TORNADO-D20	1
2	Magnetic bar	Length 2cm 3cm	2
3	Temperature sensor	Pt 1000	1
4	Power cable	5A	1
5	Operations manual		1

Foreword

Thank you for purchasing our Products: AZONAX TORNADO-D20 Magnetic Stirrer, This Manual for users contains function and operation of the Instrument. In order to use the instrument properly, please read this manual carefully before using the Instrument.

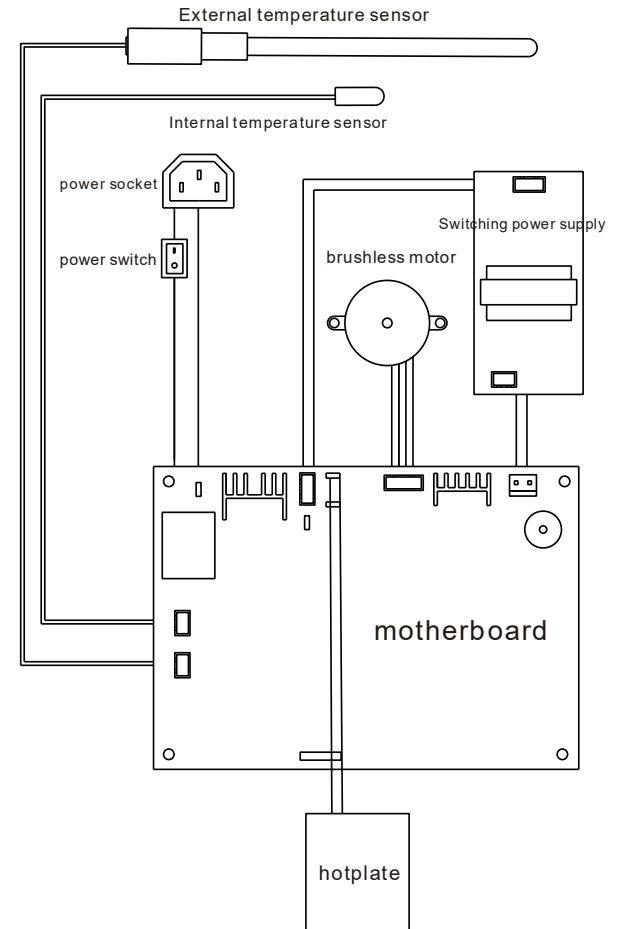
Opening Check

Please check the Instrument and Appendix with the packing list when you first open the instrument packing case. If you find there is something wrong with the Instrument and the Appendix, Please contact the vendor or the producer.

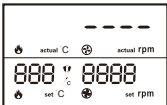
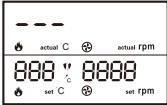
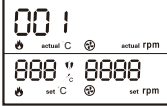
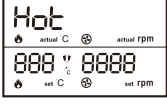
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Annex 1 Wiring Diagram



6 . Troubleshooting

Error	Cause	Solution
No display showing	No main power connection. fuse burn-out	Re-connect the power or contact manufacturer service.
 <p>The display show the ---- on the speed side</p>	The motor damaged or motor connection loose.	Replace the motor , insert and extract connection cable or contact manufacturer service.
 <p>The display show the ----on the TEMP side</p>	Internal temperature sensor damaged or plug loose.	Replace internal temperature sensor insert and extract connection cable or contact manufacturer service.
 <p>Display show 001</p>	The plate damaged or connect plug loose	Replace the plate insert and extract connection cable, or contact manufacturer service.
 <p>Display show HOT</p>	Residual heat alarm ! If the hotplate over 50 °C after turn off the heating ,then show the alarm Prompt.	Normally

1 . Introduction

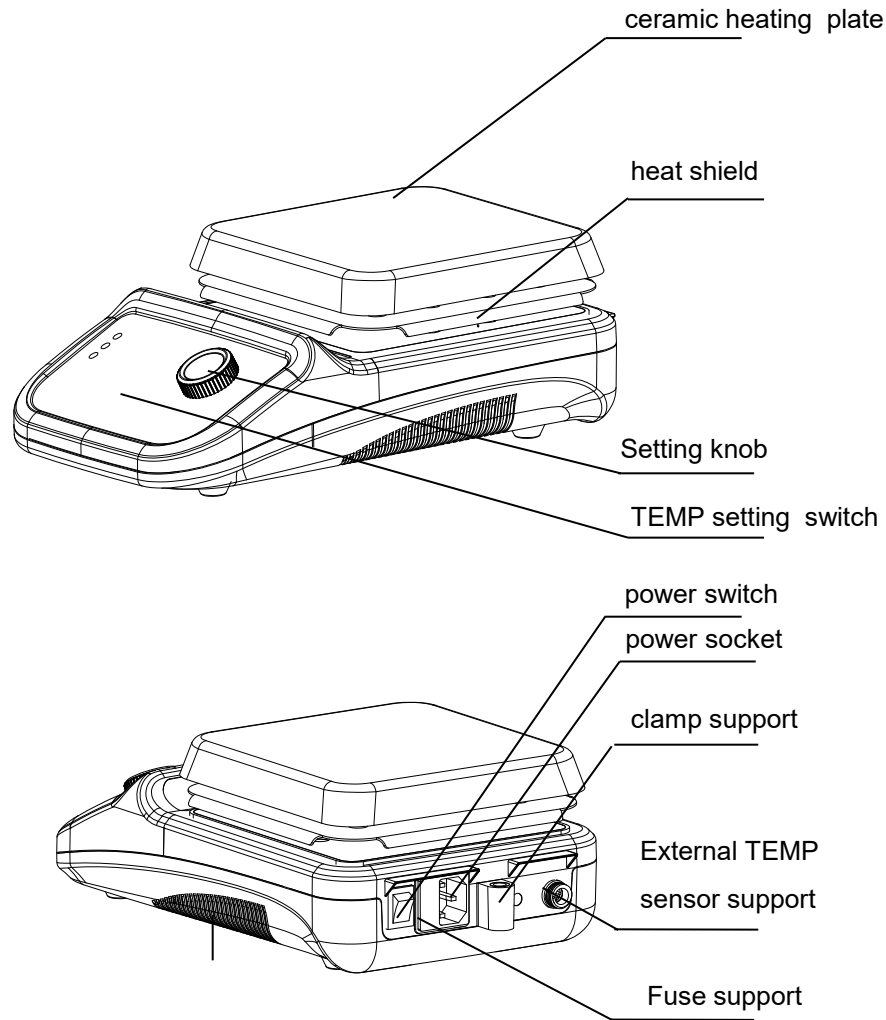
The TORNADO series of the digital magnetic stirrer hot plate series is made of special Ceramic and the special heating technique, the hot plate can reach temperature up to 380° C. Use the large Alnico material which can be provide the powerful magnetic force, it can be prevented the high temperature demagnetization and stir bar decoupling. Humanized design for convenient operation to meet various heating and stirring experimental requirements.

Before starting up this magnetic stirrer for the first time, please read the rest of this operations manual.

1.1 Delivery package

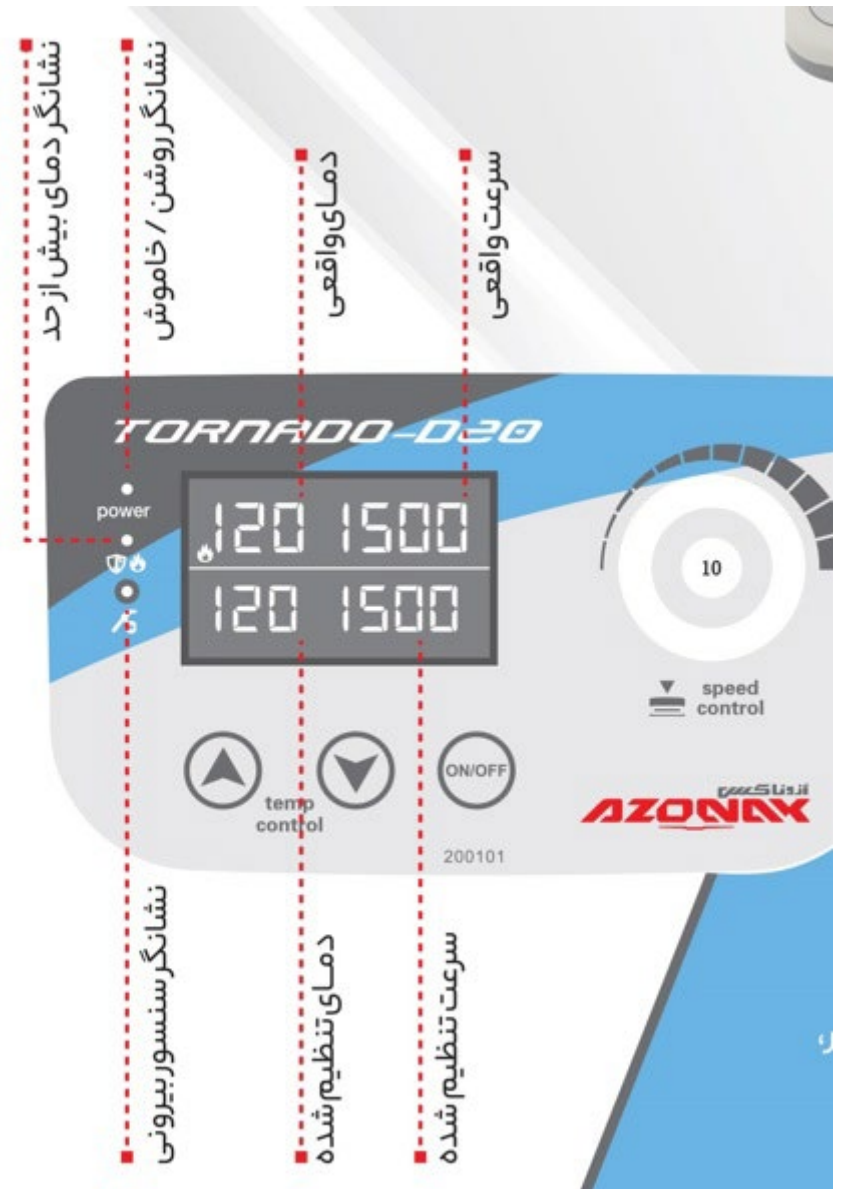
Digital magnetic stirrer	1unit
Magnetic bar	2pcs
Power cable	1unit
Temperature sensor	1unit
Operations manual	1unit

1.2 Structure Description



2

5.3 Operation diagram



5 Operation guide

5.1 Operation buttons

- ▲ ▼ ----- Heating setting button
- ON/OFF----- Heating turn on / turn off button
- SPEED ----- Speed setting knob
(press it speed adjust available)

5.2 Heating temperature setting

press the ▲ ▼ temperature setting button , set the required operation temperature , then press the ON/OFF button start the heating . Press the ON/OFF button again , the machine stop make heating ,If the plate surface more than 50°C then the warning light flashing and the display show the “HOT”



Heating plate with high temperature !

it will be start heating after press the heating button , Please don't touch the hotplate after press the heating button avoid unnecessary physical harm.

5.3 Stir speed setting

Rotate the speed knob according the required speed , press the knob start the stirring , press the knob again then stop the stirring .



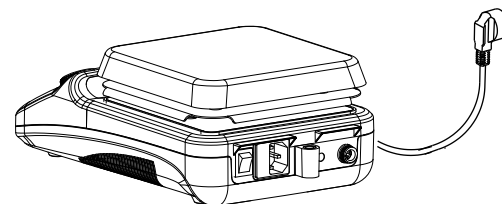
According the different container to set the stirring speed , avoid the liquid sample overflow and unnecessary physical harm .

1.3 Installing the device

1.3.1 Place the onto a level , horizontal surface. Make sure here without the Inflammable 30cm around Magnetic Stirrer .

1.3.2 Insert the power cable to machine power socket and insert another power cable plug to mains power supply. Please make sure that the voltage match up between machine sticker and power supply(100V-130V / 220V-230V)

Ensure voltage is consistent



1.3.3 Make sure here without the Inflammable 30cm around Magnetic Stirrer .

1.3.4 Open the power switch, setting the required TEMP and mix speed

Noted :Please make sure without the Inflammable 30cm around Magnetic Stirrer before start the machine .

2 Technical Data

Technical Data	TORNADO	TORNADO-D20
Max stirrer volume	2L	2L
Speed range	200- 1500rpm	200- 1500rpm
Heating power	1000W	1000W
Max heating temp.	50/380°C	50/380°C
Display	LED	LCD
Integration timer	0-99.99hour	0-99.99hour
Max length for the stirring bar	40mm	40mm
Sensor control accuracy	PT1000	PT1000
The material of surface plate	Ceramic	Ceramic
The dimension of plate	160*160mm	160*160mm
Weight	2.5	2.5

3 Safety instruction



Please don't touch the hotplate after press the heating button (plate surface start the heating), avoid unnecessary physical harm.



Please don't turn off the power and stir switch when the hotplate over 50 °C, avoid unnecessary physical harm and Magnetic block demagnetization.



Do not move the Magnetic Stirrer when the machine working , avoid liquid sample overflow .

4 Maintenance



Keep the machine and plate surface clean ,ensure the machine performance and service life .



Turn off the power till the plate cooling , then use the cleaning cloth with alcohol wipe the plate surface and machine body .Don't put the machine soak in the water or use the unknown solvent cleaning.