Technical Overview

Agilent
Trusted Answers

TwisTorr 305-IC Turbo Pumps with Power Supply and Interface Cable

This technical overview provides insights into the optimal use and seamless connection of the Agilent 24V DC power supply for use with TwisTorr 305-IC, 305-ICQ, and 305-IC SF turbomolecular pumps.

The addition of a 24V DC power supply provides a stable, clean power source for the TwisTorr-IC models and ensures consistent performance and zeroed risks of voltage fluctuations or power supply-related issues.

This technical overview covers essential topics, including the installation process and recommended power supply specifications. Furthermore, it addresses potential challenges and offers troubleshooting tips to guarantee a smooth and successful integration.

By following the guidelines outlined in this document, users can optimize the performance of their Agilent TwisTorr 305-IC turbomolecular pumps, harness the advantages of a reliable 24V DC power supply, and achieve efficient and uninterrupted vacuum system operation.

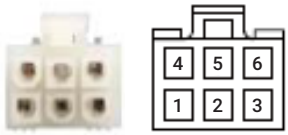
For detailed instructions and technical specifications related to the TwisTorr 305-IC turbo pumps, please refer to the pump user manual.

Power supply 24V for TwisTorr 305-IC, TwisTorr 305-ICQ, TwisTorr 305-IC SF turbo pumps

TwisTorr 305-IC pumps with integrated controller need 24V input voltage: Agilent offers a power supply 24V, with part number **X3514-81005**. The power supply is equipped with 3 power cables for EU / US / China (cable power supply length is 1 m).

X3514-81005
power supply

Pump side connector pinout	
PIN NO.	VOLTAGE OUTPUT
1, 2, 3	+
4, 5, 6	-



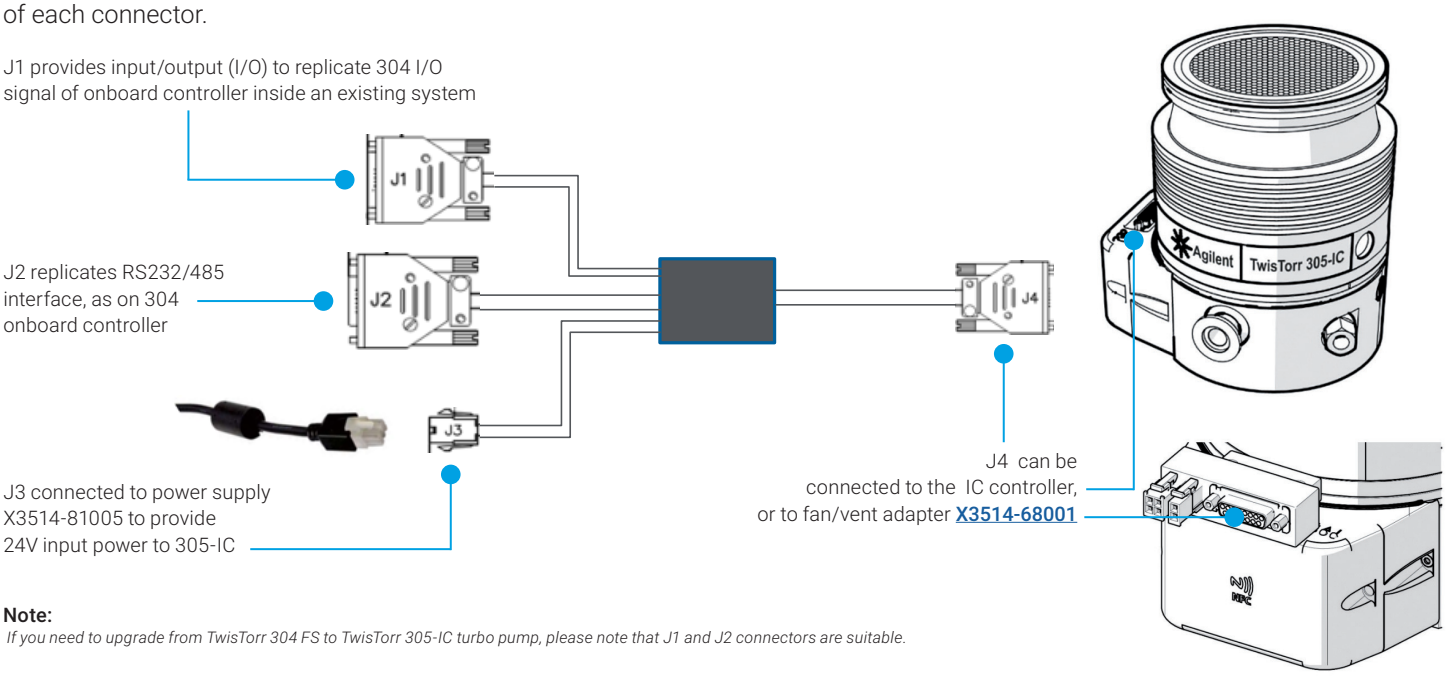
Technical Specifications

Input voltage:	24 Vdc
Max input power:	200 W
Pump stand-by average power:	10 W - 15 W
Pump max operation power:	150 W with water or air cooling

Connection guideline

How to connect power supply X3514-81005 to TwisTorr 305-IC turbo pump. Cable X3514-81003 is required

Connection guideline with schematics and connectors pinouts to ensure proper connection between electrical components. The schematics provide a visual representation of the circuitry, while the pinouts indicate the correct position and function of each connector.



Note:
If you need to upgrade from TwisTorr 304 FS to TwisTorr 305-IC turbo pump, please note that J1 and J2 connectors are suitable.

Frequently Asked Questions

Q: How do I ensure compatibility between the power supply and my Agilent turbomolecular pump?

A: To ensure compatibility, refer to the specifications and guidelines reported in this document. Match the voltage and current requirements of the pump with those provided by the power supply. If in doubt, please consult the Agilent experts.

Q: What aspects should I consider when choosing a power supply for my TwisTorr 305-IC?

A: Choosing a reliable and high-quality power supply is crucial. Agilent PN X3514-81005 provides an approved solution. As an alternative, look for power supplies from reputable manufacturers that offer stable output voltage, low electrical noise, and protection features like overvoltage/undervoltage protection.

Q: How can I prevent electrical interference when connecting a power supply to my turbomolecular pump?

A: To minimize electrical interference use shielding and grounding techniques. Ensure proper grounding of the pump and power supply, use shielded cables, and consider implementing filters or ferrite cores to suppress electromagnetic or radio frequency interference.

Q: What wiring and connection considerations should I keep in mind when connecting the power supply to my turbomolecular pump?

A: Follow the Agilent's guidelines for connection provided in this document. Use the appropriate wire types, ensure proper insulation, and employ secure connections. Additionally, adhere to proper grounding techniques to ensure electrical safety and system integrity.

www.agilent.com/en/product/vacuum-technologies

DE43737782

Published in Italy, July 17, 2023
5994-6546EN

Agilent
Trusted Answers