

# STP-XA4503C turbomolecular pump

The STP-XA4503C magnetic bearing turbomolecular pump series has a wide process window, from high vacuum, to high flow requirements with enhanced throughput for all gases.

This pump is based on a new design, offering features to improve thermal management, which enhances performance on harsh processes, increases the maximum process flow capability and reduces the effects of corrosion and deposition.

It has been designed to handle both light and harsh duty applications, such as etch, implant, lithography and FPD processes.



## Features and benefits

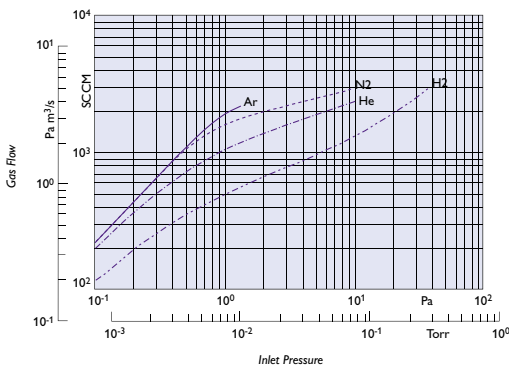
- Advanced rotor design
  - Increased Argon performance
  - Highest pumping speed in its class
  - Wide process window
  - Higher throughput at lower pressure
  - Maintenance free
  - Harsh process compatible
- 5 axis magnetic suspension system
  - Zero contamination
  - Low vibration
  - High reliability
- Optimised temperature distribution
  - Low deposition
  - Built-in cooling mechanism
  - Higher gas throughput
  - Increased operating life
- Certifications
  - Conforms to international safety standards
  - SEMI® compliant, CE marked and UL listed

# Technical data

Specifications				
Inlet flange size	VG300	ISO320F	VG350	
Backing port size	KF40	KF40	KF40	
Pumping speed N <sub>2</sub> /H <sub>2</sub>	3800/2500	4000/2500	4300/2500	litres/second
Compression ratio N <sub>2</sub> /H <sub>2</sub>	>10 <sup>8</sup> /6 x 10 <sup>3</sup>	>10 <sup>8</sup> /6 x 10 <sup>3</sup>	>10 <sup>8</sup> /6 x 10 <sup>3</sup>	
Ultimate pressure	10 <sup>-7</sup> (10 <sup>-9</sup> ) oder	10 <sup>-7</sup> (10 <sup>-9</sup> ) oder	10 <sup>-7</sup> (10 <sup>-9</sup> ) oder	Pa (mbar)
Maximum allowable backing pressure	266 (2.66)	266 (2.66)	266 (2.66)	Pa (mbar)
Maximum allowable gas flow, N <sub>2</sub> *	2800 (4.73)	2800 (4.73)	2800 (4.73)	sccm (Pa m <sup>3</sup> /s)
Maximum allowable gas flow, AR *	2150 (3.63)	2150 (3.63)	2150 (3.63)	sccm (Pa m <sup>3</sup> /s)
Rated speed	24000	24000	24000	rpm
Run-up time to 90% rated speed	12	12	12	minutes
Mounting position	Any orientation			
Water cooling				
Flow	3	3	3	Litres/min
Temperature	5-25 (41-77)	5-25 (41-77)	5-25 (41-77)	°C (°F)
Pressure	3	3	3	Kgf/cm <sup>2</sup>
Recommended purge gas flow N <sub>2</sub>	50 (8.4 x 10 <sup>-2</sup> )	50 (8.4 x 10 <sup>-2</sup> )	50 (8.4 x 10 <sup>-2</sup> )	sccm (Pa m <sup>3</sup> /s)
Input voltage	200-240 +/- 10%	200-240 +/- 10%	200-240 +/- 10%	ac V
Max input power (without TMS)	1.5	1.5	1.5	KVA
Weight, pump/controller	105 (231.48) / 12 (26.46)	105 (231.48) / 12 (26.46)	97 (213.85) / 12 (26.46)	kg (lb)

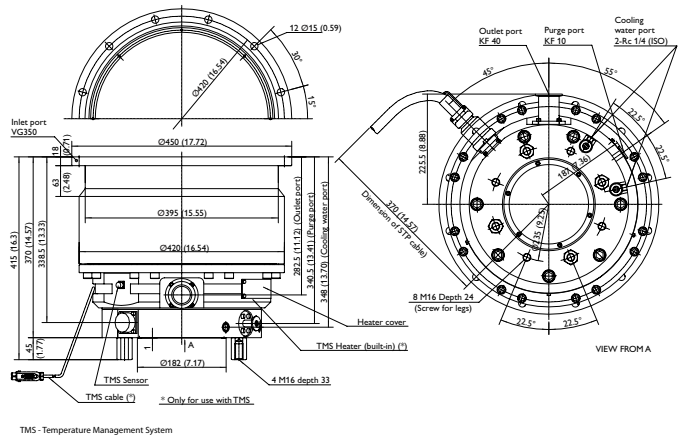
\* water cooled only, 10,000 l/min backing pump

## Performance



P-Q characteristics of STP-4503C series  
Inlet port: VG350 / Backing pump: 17000 l/min / With inlet screen

## Dimensions



TMS - Temperature Management System

## Global contacts

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