

# STP-XA2703C/3203C turbomolecular pump

The STP-XA2703C and STP-XA3203C turbo pumps offer high performance in the process range of high vacuum to 2300 sccm process flow with enhanced throughput for all gases.

These pumps are based on a new platform 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. The outstanding performance is suited to both light and harsh applications, such as semiconductor etch, implant, lithography and LCD processes.



## Features and benefits

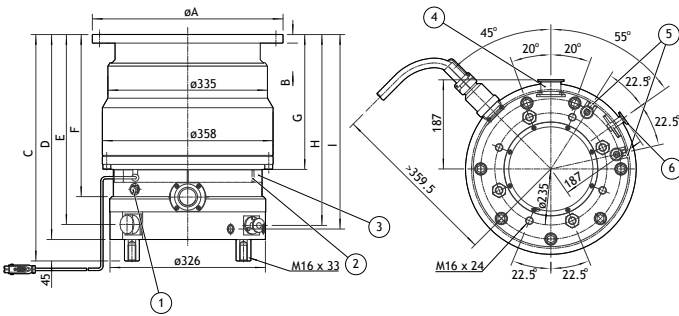
- Advanced rotor design
  - Increased H<sub>2</sub>, N<sub>2</sub> and Ar performance
  - Improved performance in the process pressure range of high vacuum to 2300 sccm
  - Maintenance free
- 5 axis magnetic suspension system
  - Zero contamination
  - Low vibration
- Innovative torque management
  - Patented torque reduction mechanism
- Optimised temperature management
  - High temperature TMS capability
  - Low deposition
  - Built-in cooling mechanism
  - Higher gas throughput heated and unheated
  - Optimised life
  - Harsh process compatible
- Certifications
  - SEMI® compliant, CE marked and UL listed

# Technical data

Specifications	STP-XA2703C	STP-XA3203C	
Inlet flange size	ISO250F/VG250	ISO320F/VG300	
Pumping speed N <sub>2</sub> /H <sub>2</sub>	2650/2050	3200/2300	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>	
Ultimate pressure	10 <sup>-7</sup> oder	10 <sup>-7</sup> oder	Pa
Maximum allowable backing pressure	266	266	Pa
Maximum allowable gas flow, N <sub>2</sub> *	3000 (5.0)	3000 (5.0)	sccm (Pa m <sup>3</sup> /s)
Maximum allowable gas flow, AR *	2000 (3.4)	2000 (3.4)	sccm (Pa m <sup>3</sup> /s)
Rated speed	27500	27500	rpm
Starting time	8	8	minutes
Mounting position	Any orientation		
Water cooling			
Flow	3	3	Litres/min
Temperature	5-25 (41-77)	5-25 (41-77)	°C (°F)
Pressure	0.3	0.3	MPa
Recommended purge gas flow	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%	AC V
Typical power consumption	1.5	1.5	KVA
Weight, pump/controller	75/12 (165/26.4)	80/12 (176/26.4)	kg (lb)

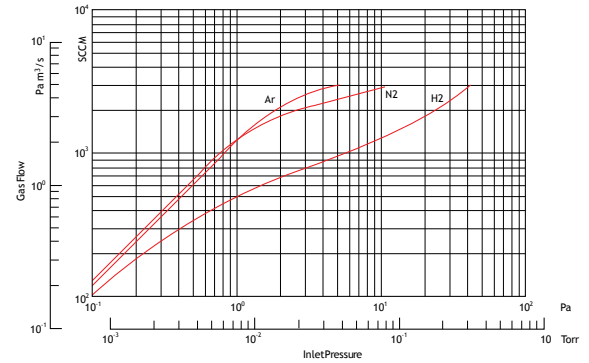
\* water cooled only, 10,000 l/min backing pump

## Dimensions

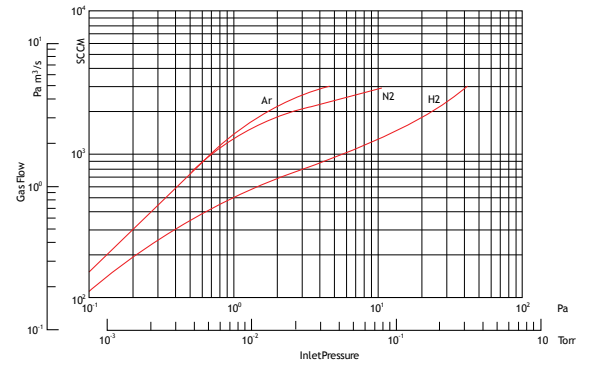


- 1 Temperature Management System (TMS) Sensor
  - 2 TMS heater\*
  - 3 TMS heater cover\*
  - 4 Outlet port KF40
  - 5 Cooling water port Rc 1/4 (ISO)
  - 6 Purge port KF10
- \* TMS spec only

## Performance curves



P-Q characteristics of STP-XA2703 series  
Backing pump: 17000 l/min / with Inlet Screen



P-Q characteristics of STP-XA3203 series  
Backing pump: 17000 l/min / with Inlet Screen

Inlet flange port	STP-XA2703			STP-XA3203		
	VG250	ISO250F	ICF305 (DN250 CF)	VG300	ISO320F	ICF356 (DN320 CF)
ØA	350 (13.8)	335 (13.2)	305 (12.0)	400 (15.8)	425 (16.7)	356 (14.0)
B	15 (0.6)	15 (0.6)	28 (1.1)	18 (0.7)	20 (0.8)	28.5 (1.1)
C	454 (17.9)	454 (17.9)	459 (18.1)	415.5 (16.4)	415.5 (16.4)	454.5 (17.9)
D	409 (16.1)	409 (16.1)	414 (16.3)	370.5 (14.6)	370.5 (14.6)	409.5 (16.1)
E	377.5 (14.9)	377.5 (14.9)	383 (15.1)	339 (13.3)	339 (13.3)	378.5 (14.9)
F	319 (12.6)	319 (12.6)	325 (12.8)	280.5 (11.0)	280.5 (11.0)	320.5 (12.6)
G	262 (10.3)	262 (10.3)	267 (10.5)	223.5 (8.8)	223.5 (8.8)	262.5 (10.3)
H	379.5 (14.9)	379.5 (14.9)	385 (15.2)	341 (13.4)	341 (13.4)	380.5 (15.0)
I	387 (15.2)	387 (15.2)	393 (15.5)	348.5 (13.7)	348.5 (13.7)	388 (15.3)

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