## STPH301C Turbomolecular Vacuum Pump



Edwards high performance STPH301C turbomolecular pump has been designed for use in the harshest of semiconductor applications. The pumps field proven reliability and class-leading performance give maximum process flexibility. The STPH301C has been approved for use by major equipment manufacturers in the semiconductor and magnetic media industries.

#### Features & Benefits

- Advanced rotor technology
- Higher gas throughput
- Maximized process flexibility
- Oil free
- Low vibration

#### Dimensions

# 

M8 x 20

Outlet port

Cooling water in

Cooling water out

Purge port

## Applications

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                            | ISO100K                                     |
|---|---|
| Outlet port                             | KF40  |
| Purge port                              | KF10  |
| Water cooling fitting                   | PT1/4                                       |
| Pumping Speed                           |   |
| N <sub>2</sub>                          | 300 ls <sup>-1</sup>                        |
| H <sub>2</sub>                          | 200 ls <sup>-1</sup>                        |
| Compression ratio                       |   |
| N <sub>2</sub>                          | >10 <sup>8</sup>                            |
| H <sub>2</sub>                          | 10 <sup>3</sup>                             |
| Ultimate pressure with bake out heating | 10 <sup>-7</sup> Pa (10 <sup>-9</sup> Torr) |
| Max continuous outlet pressure          | 660 Pa (5 Torr)                             |
| Max Nitrogen throughput                 | 2500 sccm                                   |
| Rated speed                             | 48000 rpm                                   |
| Starting time                           | 4 min                                       |
| Max inlet flange temperature            | 120 °C                                      |
| Input voltage                           | 100 to 120 (± 10) V a.c. or                 |
|   | 200 to 240 (± 10) V a.c.                    |
| Power consumption                       | 0.6 kVA                                     |
| Pump weight                             | 15 kg                                       |
| Controller weight                       | 9 kg  |

| Product Description                | Order No. |
|------------------------------------|-----------|
| STPH301C ISO100K Inlet             | B71901010 |
| STPH301C DN100CF Inlet             | YT340Z004 |
| STPH301CV TMS ISO100F Inlet        | YT3416001 |
| STPH301CV TMS DN100CF Inlet        | YT3416005 |
| Accessories & Spares               | Order No. |
| SCU-800 Control unit               | YT49Z2Z00 |
| Power Cable 5m                     | PT49Y0A00 |
| Power Cable 10m                    | PT49Y0A01 |
| Connection Cable 3m                | B75130050 |
| STP straight connection Cable, 5m  | B75130020 |
| STP straight connection cable ,10m | B75130060 |
| TMS Connection Cable Kit           | PT330V000 |
| TMS Connection Cable Kit           | PT330V001 |
| TMS Connection Cable Kit           | PT330V002 |

## STPH451 Turbomolecular Vacuum Pump



Edwards high performance STPH451C turbomolecular pump has been designed for use in the harshest of semiconductor applications. The pumps field proven reliability and class-leading performance give maximum process flexibility. The STPH451C has been approved for use by major equipment manufacturers in the semiconductor and magnetic media industries.

#### Features & Benefits

- Advanced rotor technology
- Higher gas throughput
- Maximized process flexibility
- Oil free
- Low vibration

#### Dimensions

## 

A Electrical connector
 B Outlet port
 C Purge port
 D Cooling water out
 E Cooling water in

#### Applications

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                            | ISO160K                                     |
|---|---|
| Outlet port                             | KF40  |
| Purge port                              | KF10  |
| Water cooling fitting                   | PT1/4                                       |
| Pumping Speed                           |   |
| N <sub>2</sub>                          | 450 ls <sup>-1</sup>                        |
| H <sub>2</sub>                          | 300 ls <sup>-1</sup>                        |
| Compression ratio                       |   |
| N <sub>2</sub>                          | >10 <sup>8</sup>                            |
| H <sub>2</sub>                          | 10 <sup>3</sup>                             |
| Ultimate pressure with bake out heating | 10 <sup>-7</sup> Pa (10 <sup>-9</sup> Torr) |
| Max continuous outlet pressure          | 660 Pa (5 Torr)                             |
| Max Nitrogen throughput                 | 2500 sccm                                   |
| Rated speed                             | 48000 rpm                                   |
| Starting time                           | 4 min                                       |
| Max inlet flange temperature            | 120 °C                                      |
| Input voltage                           | 100 to 120 (± 10) V a.c. or                 |
|   | 200 to 240 (± 10) V a.c.                    |
| Power consumption                       | 0.6 kVA                                     |
| Pump weight                             | 15 kg                                       |
| Controller weight                       | 9 kg  |

| Product Description                | Order No. |
|------------------------------------|-----------|
| STPH451C ISO160K Inlet             | B71901001 |
| STPH451C DN160CF Inlet             | PT340Z005 |
| STPH451CV TMS ISO160F Inlet        | YT3416007 |
| STPH451CV TMS DN160CF Inlet        | YT3416006 |
| Accessories & Spares               | Order No. |
| SCU-800 Control unit               | YT49Z2Z00 |
| Power Cable 5m                     | PT49Y0A00 |
| Power Cable 10m                    | PT49Y0A01 |
| Connection Cable 3m                | B75130050 |
| STP straight connection Cable, 5m  | B75130020 |
| STP straight connection cable ,10m | B75130060 |
| TMS Connection Cable Kit           | PT330V000 |
| TMS Connection Cable Kit           | PT330V001 |
| TMS Connection Cable Kit           | PT330V002 |

## STPA803C Turbomolecular Vacuum Pump



Edwards STPA803C turbomolecular pump is designed for use in semiconductor applications. Edwards advanced rotor technology gives class-leading performance for maximum process flexibility. The STPA803C has been approved for use by major equipment manufacturers in the semiconductor and magnetic media industries.

#### Features & Benefits

- Advanced rotor technology
- Maximized process flexibility
- Oil free
- Low vibration
- High reliability

#### Dimensions



A Electrical connector B Outlet port C Purge por

#### Applications

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                            | ISO160F                                     |
|---|---|
| Outlet port                             | KF40  |
| Purge port                              | KF10  |
| Water cooling fitting                   | PT1/4                                       |
| Pumping Speed                           |   |
| N <sub>2</sub>                          | 800 ls <sup>-1</sup>                        |
| H <sub>2</sub>                          | 520 ls <sup>-1</sup>                        |
| Compression ratio                       |   |
| N <sub>2</sub>                          | >10 <sup>8</sup>                            |
| H <sub>2</sub>                          | 10 <sup>3</sup>                             |
| Ultimate pressure with bake out heating | 10 <sup>-7</sup> Pa (10 <sup>-9</sup> Torr) |
| Max continuous outlet pressure          | 270 Pa (2 Torr)                             |
| Max Nitrogen throughput                 | 1500 sccm                                   |
| Rated speed                             | 32500 rpm                                   |
| Starting time                           | 7 min                                       |
| Max inlet flange temperature            | 120 °C                                      |
| Input voltage                           | 200 to 240 (± 10) V a.c                     |
| Power consumption                       | 0.85 kVA                                    |
| Pump weight                             | 39 kg                                       |
| Controller weight                       | 9 kg  |

| Product Description                | Order No. |
|------------------------------------|-----------|
| STPA803C ISO160F Inlet             | YT36B0040 |
| STPA803C DN160CF Inlet             | YT36B0010 |
| STPA803CV (TMS) ISO160F Inlet      | YT3626000 |
| STPA803CV (TMS) DN160CF Inlet      | YT3626003 |
| Accessories & Spares               | Order No. |
| SCU-800 Control unit               | YT49Z2Z00 |
| Power Cable 5m                     | PT49Y0A00 |
| Power Cable 10m                    | PT49Y0A01 |
| STP straight connection Cable, 5m  | B75130020 |
| STP straight connection cable ,10m | B75130060 |
| TMS Connection Cable Kit           | PT330V000 |
| TMS Connection Cable Kit           | PT330V001 |
| TMS Connection Cable Kit           | PT330V002 |
|                                    |           |

## STPA1303C Turbomolecular Vacuum Pump



Edwards STPA1303C is a turbomolecular pump designed for use in semiconductor applications. Edwards advanced rotor technology gives class-leading performance for maximum process flexibility. The STPA1303C has been approved for use by major equipment manufacturers in the semiconductor and magnetic media industries.

## Features & Benefits

- Advanced rotor technology
- Higher gas throughput
- Maximized process flexibility
- Oil free
- Low vibration

#### Dimensions







Applications

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
- Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                            | ISO200F                                     |
|---|---|
| Outlet port                             | KF40  |
| Purge port                              | KF10  |
| Water cooling fitting                   | PT1/4                                       |
| Pumping Speed                           |   |
| N <sub>2</sub>                          | 1300 ls <sup>-1</sup>                       |
| H <sub>2</sub>                          | 800 ls <sup>-1</sup>                        |
| Compression ratio                       |   |
| N <sub>2</sub>                          | >10 <sup>8</sup>                            |
| H <sub>2</sub>                          | 10 <sup>3</sup>                             |
| Ultimate pressure with bake out heating | 10 <sup>-7</sup> Pa (10 <sup>-9</sup> Torr) |
| Maximum continuous outlet<br>pressure * | 270 Pa (2 Torr)                             |
| Maximum Nitrogen throughput *           | 1500 sccm                                   |
| Rated speed                             | 32500 rpm                                   |
| Starting time                           | 7 min                                       |
| Maximum inlet flange temperature        | 120 °C                                      |
| Input voltage                           | 200 to 240 (± 10) V a.c.                    |
| Power consumption                       | 0.85 kVA                                    |
| Pump weight                             | 39 kg                                       |
| Controller weight                       | 9 kg  |

## Ordering Information

| Product Description                | Order No. |
|------------------------------------|-----------|
| STPA1303C ISO200F Inlet            | B71802020 |
| STPA1303C DN200CF Inlet            | YT36B0030 |
| STPA1303C TMS ISO200F Inlet        | YT3626005 |
| STPA1303C TMS DN200CF Inlet        | YT3626004 |
| Accessories & Spares               | Order No. |
| SCU-800 Control unit               | YT49Z2Z00 |
| Power Cable 5m                     | PT49Y0A00 |
| Power Cable 10m                    | PT49Y0A01 |
| Connection Cable 3m                | B75130050 |
| STP straight connection Cable, 5m  | B75130020 |
| STP straight connection cable ,10m | B75130060 |
| TMS Connection Cable Kit           | PT330V000 |
| TMS Connection Cable Kit           | PT330V001 |
| TMS Connection Cable Kit           | PT330V002 |

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\* Water cooled

## STPA1603C Turbomolecular Vacuum Pump



The small and powerful Edwards STPA1603C turbo-molecular pump has been designed using Edwards advanced rotor technology. This provides high throughput, maximum reliability and class leading performance which is demanded by the latest generation of semiconductor processes. Its half rack controller and compact design provide considerable space saving, whilst its advanced deposition reduction system gives improved reliability and performance. The STPA1603C has been qualified on the latest 200 mm etch tools as well as on new generation 300 mm oxide etch processes.

#### Features & Benefits

- Advanced rotor design
- Increased performance
- Higher gas throughput
- High reliability
- Maintenance free

#### Dimensions

# 



#### **Applications**

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                            | ISO200F                  |
|---|--------------------------|
| Outlet port                             | KF40                     |
| Purge port                              | KF16                     |
| Water cooling fitting                   | PT1/4                    |
| Pumping Speed                           |                          |
| N <sub>2</sub>                          | 1600 ls <sup>-1</sup>    |
| H <sub>2</sub>                          | 1200 ls <sup>-1</sup>    |
| Compression ratio                       |                          |
| N <sub>2</sub>                          | >10 <sup>8</sup>         |
| H <sub>2</sub>                          | >7 x 10 <sup>3</sup>     |
| Ultimate pressure with bake out heating | 10 <sup>-7</sup> Pa      |
| Max allowable backing pressure          | 266 Pa (2 Torr)          |
| Max Nitrogen throughput                 | 2500 sccm                |
| Rated speed                             | 36500 rpm                |
| Starting time                           | 7 min                    |
| Mounting position                       | Any                      |
| Water cooling flow                      | 2 Imin <sup>-1</sup>     |
| Temperature                             | 5-25 °C                  |
| Pressure                                | 0.3 MPa                  |
| Recommended purge gas flow              | 20 sccm                  |
| Input voltage                           | 200 to 240 (± 10) V a.c. |
| Power consumption                       | 0.85 kVA                 |
| Pump weight                             | 35 kg                    |
| Controller weight                       | 9 kg                     |
|   |                          |

## Ordering Information

| Product Description                | Order No. |
|------------------------------------|-----------|
| STPA1603C ISO200F Inlet            | B75100010 |
| STPA1603C DN200CF Inlet            | B75100100 |
| STPA1603CV TMS ISO200F Inlet       | YT4616004 |
| STPA1603CV TMS DN200CF Inlet       | YT4616005 |
| Accessories & Spares               | Order No. |
| SCU-800 Control unit               | YT49Z2Z00 |
| Power Cable 5m                     | PT49Y0A00 |
| Power Cable 10m                    | PT49Y0A01 |
| STP straight connection Cable, 5m  | B75130020 |
| STP straight connection cable ,10m | B75130060 |
|                                    |           |

## STPA2203C Turbomolecular Vacuum Pump



Edwards STPA2203C is a new turbomolecular pump designed for use in semiconductor applications. It has advanced rotor technology that gives class-leading performance for maximum process flexibility. A new half rack controller gives additional space savings and incorporates d.c. drive technology for battery-free operation. The STPA2203C has been approved for use by major etch, ion implant and deposition equipment manufacturers in the semiconductor and magnetic media industries.

### Features & Benefits

- Advanced rotor design
- Higher gas throughput
- Maximized process flexibility
- 5 Axis Magnetic Suspension System
- Zero contamination

#### Dimensions





#### **Applications**

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                       | ISO250F                                     |
|------------------------------------|---|
| Outlet port                        | KF40  |
| Purge port                         | KF10  |
| Water cooling fitting              | PT1/4                                       |
| Pumping Speed                      |   |
| N <sub>2</sub>                     | 2200 Is <sup>-1</sup>                       |
| H <sub>2</sub>                     | 1700 ls <sup>-1</sup>                       |
| Compression ratio                  |   |
| N <sub>2</sub>                     | >10 <sup>8</sup>                            |
| H <sub>2</sub>                     | >2.5 x 10 <sup>4</sup>                      |
| Ultimate pressure                  | 10 <sup>-6</sup> Pa (10 <sup>-8</sup> Torr) |
| Maximum allowable backing pressure | 400 Pa (3 Torr)                             |
| Maximum Nitrogen throughput        | 1500 sccm                                   |
| Rated speed                        | 27000 rpm                                   |
| Starting time                      | 7 min                                       |
| Mounting position                  | Any   |
| Water cooling tlow                 | 2 Imin <sup>-1</sup>                        |
| Water cooling temperature          | 5-25 °C                                     |
| Pressure                           | 0.3 MPa                                     |
| Recommended purge gas flow         | 20 sccm                                     |
| Input voltage                      | 200 to 240 (± 10) V a.c.                    |
| Power consumption                  | 1.5 kVA                                     |
| Pump weight                        | 61 kg                                       |
| Controller weight                  | 12 kg                                       |
|                                    |   |

## Ordering Information

| Product Description                | Order No. |
|------------------------------------|-----------|
| STPA2203C ISO250F Inlet            | YT4V0Z002 |
| STPA2203C DN250CF Inlet            | YT4V0Z003 |
| STPA2203CV TMS ISO250F Inlet       | YT4V66001 |
| STPA2203CV TMS DN250CF Inlet       | YT4V66002 |
| Accessories & Spares               | Order No. |
| SCU-1600 Control unit              | YT76Z0Z00 |
| Power Cable 5m                     | B75030020 |
| Power Cable 10M                    | PT35Y0A00 |
| STP straight connection cable, 5m  | B75030010 |
| STP straight connection cable, 10m | B75030040 |
| 5m TMS connection cable kit        | PT351V000 |
| 10m TMS connection cable kit       | PT351V001 |
| 15m TMS connection cable kit       | PT351V002 |
|                                    |           |

## STP-XA2703 Turbomolecular Pump



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

This pump is 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 & 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

#### Dimensions



## Applications

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering

Shop online at www.edwardsvacuum.com

Ion implantation source, beam line pumping end station

#### Performance Curves



Feat

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| Inlet flange                   | VG250   |
|--------------------------------|---|
| Pumping Speed                  |   |
| N <sub>2</sub>                 | 2650 Is <sup>-1</sup>                                       |
| H <sub>2</sub>                 | 2050 Is <sup>-1</sup>                                       |
| Compression ratio              |   |
| N <sub>2</sub>                 | >10 <sup>8</sup>  |
| H <sub>2</sub>                 | >6 x 10 <sup>3</sup>  |
| Ultimate pressure              | 10 <sup>-7</sup> Pa   |
| Max allowable backing pressure | 266 Pa  |
| Max allowable gas flow         |   |
| N <sub>2</sub> (water cooled)  | 2300 sccm (3.8 Pam <sup>3</sup> s <sup>-1</sup> )           |
| Ar (water cooled)              | 1900 sccm (3.2 Pam <sup>3</sup> s <sup>-1</sup> )           |
| Rated speed                    | 27500 rpm   |
| Starting time                  | 8 min   |
| Mounting position              | Any orientation   |
| Water cooling Flow             | 3 Imin <sup>-1</sup>  |
| Water cooling Temperature      | 5-25 °C (41-77 °F)  |
| Pressure                       | 0.3 MPa   |
| Recommended purge gas flow     | 50 sccm (8.4 x $10^{-2}$ Pam <sup>3</sup> s <sup>-1</sup> ) |
| Input voltage                  | 200 to 240 V a.c. (± 10)                                    |
| Power consumption              | 1.5 kVA   |
| Pump weight                    | 75 kg (165 lb)  |
| Controller weight              | 12 kg (26.4 lb)   |

| Product Description                | Order No. |
|------------------------------------|-----------|
| STP-XA2703C VG250                  | YT660Z110 |
| STP-XA2703C ISO250                 | PT660Z140 |
| STP-XA2703C DN250CF                | YT6610010 |
| Accessories & Spares               | Order No. |
| SCU-1600 Control unit              | YT76Z0Z00 |
| Power Cable 5m                     | B75030020 |
| Power Cable 10M                    | PT35Y0A00 |
| STP straight connection cable, 5m  | B75030010 |
| STP straight connection cable, 10m | B75030040 |
|                                    |           |

## STP-XA3203 Turbomolecular Pump



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

This pump is 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 & 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

#### Dimensions





|   | 100.040.7    | 318 318 *    |                  |
|---|--------------|--------------|------------------|
|   | VG300        | ISO320F      | ICF356 (DN320CF) |
| А   | 400 (15.8)   | 425 (16.7)   | 356 (14.0)       |
| *В  | 18 (0.7)     | 20 (0.8)     | 28.5 (1.1)       |
| *C  | 415.5 (16.4) | 415.5 (16.4) | 454.5 (17.9)     |
| *D  | 370.5 (14.6) | 370.5 (14.6) | 409.5 (16.1)     |
| *E  | 339 (13.3)   | 339 (13.3)   | 378.5 (14.9)     |
| *F  | 280.5 (11.0) | 280.5 (11.0) | 320.5 (12.6)     |
| *G  | 223.5 (8.8)  | 223.5 (8.8)  | 262.5 (10.3)     |
| *H  | 341 (13.4)   | 341 (13.4)   | 380.5 (15.0)     |
| *J  | 348.5 (13.7) | 348.5 (13.7) | 388 (15.3)       |
| mm (inch)   |              |              |                  |
| A Temperature management system (TMS) sensor<br>B TMS Heater (TMS sec only)<br>C TMS heater (TMS sec only)<br>D Outlet port KF40<br>E Cooling water port Rc 14 ISO<br>F Purge port KF10 |              |              |                  |

#### **Applications**

- Plasma etch (chlorine, fluorine and bromine chemistries) for metal (aluminum), tungsten and dielectric (oxide) and polysilicon
  Electron cyclotron resonance (ECR) etch
- Film deposition CVD, PECVD, ECRCVD, MOCVD
- Sputtering
- Ion implantation source, beam line pumping end station

#### Performance Curves



| Inlet flange                   | ISO320F   |
|--------------------------------|---|
| Pumping Speed                  |   |
| N <sub>2</sub>                 | 3200 ls <sup>-1</sup>   |
| H <sub>2</sub>                 | 2300 ls <sup>-1</sup>   |
| Compression ratio              |   |
| N <sub>2</sub>                 | >10 <sup>8</sup>  |
| H <sub>2</sub>                 | >6 x 10 <sup>3</sup>  |
| Ultimate pressure              | 10 <sup>-7</sup> Pa   |
| Max allowable backing pressure | 266 Pa  |
| Max allowable gas flow         |   |
| N <sub>2</sub> (water cooled)  | 2300 sccm (3.8 Pam <sup>3</sup> s <sup>-1</sup> )                   |
| Ar (water cooled)              | 1900 sccm (3.2 Pam <sup>3</sup> <sup>-1</sup> )                     |
| Rated speed                    | 27500 rpm   |
| Starting time                  | 8 min   |
| Mounting position              | Any orientation   |
| Water cooling                  |   |
| Flow                           | 3 Imin <sup>-1</sup>  |
| Temperature                    | 5-25 °C (41-77 °F)  |
| Pressure                       | 0.3 MPa   |
| Recommended purge gas flow     | $50 \text{ sccm} (8.4 \times 10^{-2} \text{ Pam}^3 \text{ s}^{-1})$ |
| Input voltage                  | 200 to 240 (± 10) V a.c.  |
| Power consumption              | 1.5 kVA   |
| Pump weight                    | 80 kg (176 lb)  |
| Controller weight              | 12 kg (26.4 lb)   |

| Product Description                | Order No. |
|------------------------------------|-----------|
| STP-XA3203C ISO320F                | YT660Z050 |
| STP-XA3203C DN320CF                | PT660Z080 |
| STP-XA3203C VG300                  | YT660Z150 |
| Accessories & Spares               | Order No. |
| SCU-1600 Control unit              | YT76Z0Z00 |
| Power Cable 5m                     | B75030020 |
| Power Cable 10M                    | PT35Y0A00 |
| STP straight connection cable, 5m  | B75030010 |
| STP straight connection cable, 10m | B75030040 |
|                                    |           |

## STP-XA4503C Turbomolecular Pump



The STP-XA4503C magnetic bearing turbomolecular pump 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 light and harsh duty applications, such as etch, implant, lithography and FPD processes.

#### Features & Benefits

- Advanced Rotor Design
- Increased Argon performance
- Highest pumping speed in its class
- Wide process window
- Higher throughput at lower pressure

#### **Performance Curves**



P-Q characteristics of STP-4503C series

#### **Ordering Information**

| Product Description                | Order No. |
|------------------------------------|-----------|
| STP-XA4503C ISO320F Inlet          | YT670Z040 |
| Accessories & Spares               | Order No. |
| SCU-1600 Control unit              | YT76Z0Z00 |
| STP straight connection cable, 5m  | B75030010 |
| STP straight connection cable, 10m | B75030040 |
| Power Cable 5m                     | B75030020 |
| Power Cable 10M                    | PT35Y0A00 |

### Dimensions



| Inlet flange size   | VF300, ISO320F, VG350   |
|---|---|
| Backing port size   | KF40  |
| Pumping speed   |   |
| N <sub>2</sub>  | 3800 to 4300 ls <sup>-1</sup> (dependant on model)                |
| H <sub>2</sub>  | 2500 ls <sup>-1</sup>   |
| Compression ratio   |   |
| N <sub>2</sub>  | >10 <sup>8</sup>  |
| H <sub>2</sub>  | 6 x 10 <sup>3</sup>   |
| Ultimate pressure   | 10 <sup>-7</sup> Pa / 10 <sup>-9</sup> mbar                       |
| Max allowable backing pressure                            | 266 Pa / 2.66 mbar  |
| Max allowable gas flow N <sub>2</sub> (Water cooled only) | 2800 sccm / 4.73 Pam <sup>3</sup> s <sup>-1</sup>                 |
| Maximum allowable gas flow<br>Ar(Water cooled only)       | 2150 sccm / 3.63 Pam <sup>3</sup> s <sup>-1</sup>                 |
| Rated speed   | 24000 rpm   |
| Run up time to 90% rated speed                            | 12 minutes  |
| Mounting position   | Any orientation   |
| Water cooling   |   |
| Flow  | 3 ls <sup>-1</sup>  |
| Temperature   | 5 – 25 °C / 41 – 77 °F  |
| Pressure  | 0.3 MPa   |
| Recommended purge gas flow $N_2$                          | 50 sccm / 8.4 x 10 <sup>-2</sup> Pam <sup>3</sup> s <sup>-1</sup> |
| Input voltage   | 200 – 240 ±10 % V a.c.  |
| Maximum input power (without TMS)                         | 1.5 KVA   |

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