PRODUCT DATA SHEET

STP-iS1607 INTEGRATED TURBOMOLECULAR PUMP

edwardsvacuum.com

The STP-iS1607 magnetically levitated turbomolecular pump provides industry-leading performance and incorporates latest technology in small power supplies into the Onboard controller. With the new rotor design this enables the use of a smaller platform, resulting in a compact design with low power.

Edwards STP maglev turbomolecular pumps are at the forefront of vacuum for R&D institutes and high energy physics. The multi-axis, non-contact magnetic bearing system ensures there is no risk of contamination, while minimising noise and vibration. This also means zero maintenance for most applications and low cost of ownership, making the STP maglev turbomolecular pumps the ideal choice for critical and demanding applications.

The STP-iS1607 is one of the smallest pumps in the market providing 1600 l/s N2 pumping speed, offering high performance combined with installation flexibility to fit into challenging mounting locations.

Features and benefits

1 High performance
- Achieving highest pumping speed in class

2 Energy saving
- Maximum input power 750VA and yet providing high pumping speed performance

3 Advanced rotor technology
- High pumping speed with compact size
- Harsh process compatible (C version)

4 Communication options
- I/O Remote, RS232, RS485 are standard ports
- Profibus, EtherCat are optional

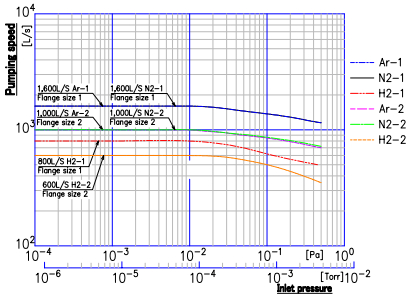
5 All-in-one compact design
- Compact fully integrated controller

6 Energy efficient
- Pump will operate efficiently with cooling water supply up to 35°C

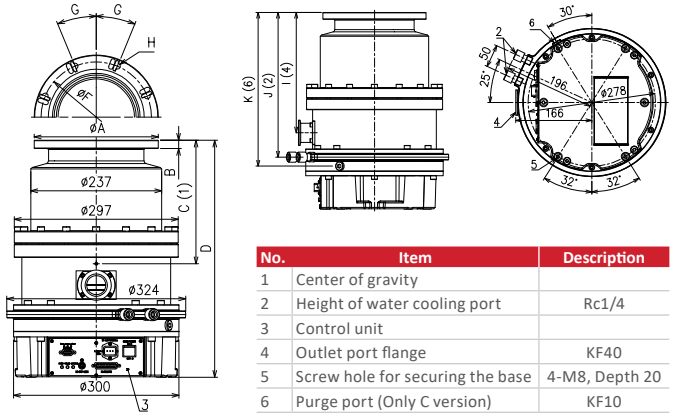
7 Compliant with international standards
- CE Marked, UL marked, RoHS Compliant

Technical Data and Dimensions

Item			STP-iS1607 STP-iS1607C	
Flange size	Inlet port flange		ISO160F VG150 ICF203	ISO200F VG200 ICF253
	Outlet port flange		KF40	
Pumping speed	N_2	L/s	1,000	1,600
	Ar	L/s	1,000	1,600
	H_2	L/s	600	800
Compression ratio	N_2, Ar		$>10^8$	
	H_2		6.0×10^2	
Ultimate pressure		Pa (Torr)	10^{-7} (10^{-9}) [after baking]	
Allowable flow backing pressure*1		Pa (Torr)	160 (1.2)	
Maximum backing pressure*2		Pa (Torr)	240 (1.8)	
Critical operating backing pressure*3		Pa (Torr)	440 (3.3)	
Maximum gas flow rate N2*6		Pa·m³/s (SCCM)	3.72 (2200)	
Rated speed		rpm	36,500	
Backup rotational speed *4		rpm	Approximately 6,000	
Starting time		min	≤8	
Stopping time		min	≤9	
Noise		dB	45 (at 36,500 rpm)	
Baking temperature		°C	<120	
Lubricating oil			Not necessary	
Installation position			Free	
Cooling method			Water cooling	
Mass *5		kg	48	
Ambient temperature range		°C	0 to 40	
Ambient temperature range		°C	-25 to 55	
Input voltage		ACV	200-240	
Input power		VA	750 maximum	
Input frequency		Hz	50/60 ± 2	



STP-iS1607 Series Pumping Speed
(Flange size 1: ISO200F/VG200/ICF253/ ICF250F without inlet screen)
(Flange size 2: ISO160F/VG150/ICF203 without inlet screen)



No.	Item	Description
1	Center of gravity	
2	Height of water cooling port	Rc1/4
3	Control unit	
4	Outlet port flange	KF40
5	Screw hole for securing the base	4-M8, Depth 20
6	Purge port (Only C version)	KF10

Inlet port flange	ICF203	ISO160F	VG150	ICF253	ISO200F	VG200	ISO250F
ϕA	203	225	235	253	285	300	335
B	22	15	15	25	16	16	16
C (1)	228	224	222	220	192	190	186
D	450	450	450	448	410	410	410
ϕF	181	200	210	231.8	260	270	310
G	9º	22.5º	22.5º	15º	15º	22.5º	15º
H	20-ϕ8.4	8-ϕ11	8-ϕ12	24-ϕ8.4	12-ϕ11	8-ϕ15	12-ϕ11
I (4)	223	263	263	261	223	223	223
J (2)	316	316	316	314	276	276	276
K (6)	335	335	335	333	295	295	295

**1 Allowable flow backing pressure is the pressure when N2 gas is continuously exhausted using a back pump (maximum pumping speed 1300L/min).*
**2 Maximum backing pressure is the pressure when the working pressure rises suddenly without flowing gas.*
**3 Critical operating backing pressure is the pressure that allows continuous operation without flowing gas.*
**4 A backup rotational speed is the lowest rotational speed to which the magnetic bearing can be backed up at a power failure.*
**5 Mass is a value of state that the only standard accessory was installed (except the optional accessory).*
**6 The maximum gas flow-rate is applicable under conditions that N2 or Ar gas is vacuumed continuously using a back pump (maximum pumping speed 1300L/min). It is changed depending on condition. For example, when the gas is exhausted intermittently, the gas more than the maximum gas flow-rate can be exhausted. In this case, contact Edwards.*

Publication Number: YT94E 1908n, Issue X

Edwards Ltd, registered in England and Wales
No. 6124750, registered office: Manor Royal,
Crawley, West Sussex RH10 9LW, United Kingdom.

GLOBAL CONTACTS

EMEA

UK	+44 (0) 1444 253 000 (local rate) 0845 921 2223
Belgium	+32 2 300 0730
France	+33 1 4121 1256
Germany	0800 000 1456
Italy	+ 39 02 48 4471
Israel	+ 972 8 681 0633

ASIA PACIFIC

China	+86 400 111 9618
India	+91 20 4075 2222
Japan	+81 47 458 8836
Korea	+82 31 716 7070
Singapore	+65 6546 8408
Taiwan	+886 3758 1000

AMERICAS

USA	+1 800 848 9800
Brazil	+55 11 3952 5000