

a clear edge

*Reducing your energy usage with
STP maglev turbopumps*



Vacuum science... product solution.



a clear edge

technology you can trust

*Consciously
reducing your
carbon footprint*

*Reduce your
energy usage
with the latest
technology*



STP maglev turbopumps

Reducing energy consumption is key to the fight against global warming, and with increased utility costs our customers are under greater pressure to meet their energy reduction targets. Simply switching from a Diffusion pump to the latest STP maglev turbopump can have dramatic and immediate impact on your energy consumption. Edwards energy saving technologies are incorporated into the design phase of our product development to ensure reduced energy consumption with no compromise on quality or performance.

Economise by switching to the latest technology

- Maintenance free - eliminating additional maintenance and consumable costs
- Low power and utilities compared to other technologies
- Fast pump down to base pressure with speeds up to 4500 l/s
- Controllable pumping speeds and throughput for process flexibility
- No hot oil or hot surfaces ensure safe operation
- Rapid start up and shut down
- Ultra clean oil-free operation with no oil waste to dispose of



power consumption
reduced by >90%
at ultimate



We recommend replacing 10" diffusion pumps with 2200 l/s maglev turbopumps

	Edwards HT10 diffusion pump	STP-iXR2206 maglev turbopump	% reduction	CO ₂ reduction per year (tonnes)
Power consumption	5.1 kW	0.2 kW*	96%	23.1 pa**
Water consumption	400 l/hr	180 l/hr	55%	

We recommend replacing 16" diffusion pumps with 3300 l/s maglev turbopumps

	Edwards HT16 diffusion pump	STP-iXA3306 maglev turbopump	% reduction	CO ₂ reduction per year (tonnes)
Power consumption	9 kW	0.3 kW*	97%	40.9 pa**
Water consumption	700 l/hr	180 l/hr	74%	

We recommend replacing 20" diffusion pumps with 4500 l/s maglev turbopumps

	Edwards HT20 diffusion pump	STP-XA4503C maglev turbopump	% reduction	CO ₂ reduction per year (tonnes)
Power consumption	12.6 kW	0.3 kW*	98%	57.9 pa**
Water consumption	960 l/hr	180 l/hr	81%	

* at 300 sccm gas load power
** energy source units vs kW/h
Kg CO₂ = kWh 0.537

Source: Department for Environment, Food, Rural Affairs, UK

Fully integrated controller and power supply

- Excellent pumping performance with speeds from 300 to 4500 l/s
- Compact design with fully integrated controller and power supply eliminates cabling requirement
- Self-sensing magnetic bearing system will allow installation in any angle
- Can be configured to run in corrosive or harsh processes
- Automatic Balancing System (ABS) as standard
- Automatic Vibration Reduction (AVR) as standard
- Profibus® available
- IP54 rated
- Easy installation



Edwards STP maglev turbopumps

Technology you can trust

With a consistent, reliable performance and zero maintenance, the Edwards STP maglev turbopump is the ideal choice for critical and demanding applications. The multi-axis magnetic bearing system is used to suspend the rotor during operation, ensuring there is no risk of contamination while minimising noise and vibration. Advanced Edwards STP Maglev TMP's incorporate built in diagnostic capability that provides real-time information regarding pump health and rotor balance preventing unforeseen maintenance problems, thereby increasing process uptime.



Ultra high vacuum series

- Pumping speeds of 300 to 1000 l/s
- $<10^{-10}$ mbar (CF flange) ultimate pressure
- Low vibration
- Highest reliability
- Maintenance free
- Harsh process compatible (C version)

Ultra high vacuum low vibration series

- Pumping speeds of 300 to 450 l/s
- Built-in vibration isolator gives ultra low vibration performance
- Increased pumping performance $<10^{-10}$ mbar (CF flange) ultimate pressure
- Low magnetic field variants
- Highest reliability
- Maintenance free
- Harsh process compatible (C version)



Advanced high throughput maglev turbopumps

- Pumping speeds from 300 to 4500 l/s, with throughput up to 6 slm.
- Advanced series rotor technology and 3D blade design
- Holweck drag stage with reversed spiral for high gas throughput
- Digital 5-axis control
- Harsh duty compatible
- Class leading performance on ISO250
- Increased H_2 , N_2 and Ar performances



Edwards corporate aim

We are committed to minimising our impact on the environment and improving our environmental performance. Our priorities are:

Reduce our customers' carbon footprints

- by providing equipment to abate our customers' emissions
- and introducing high efficiency vacuum and abatement products

Reduce the carbon intensity of our operations

- by reducing carbon consumption in our value chain
- and developing detailed energy efficiency plans at each manufacturing site

Reduce water usage at our facilities

- by minimizing water consumption in all manufacturing processes
- and developing opportunities to implement water recycling

Reduce waste from our facilities

- by eliminating all waste to landfill
- and enabling the reuse of our products through service and remanufacture

Maintain a global Environment Management system and ISO14001 compliance for the business

*the path
to a greener future*



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