Power Saving Accessory for Dry Pumps ECO-SHOCK

ECO-SHOCK is a revolutionary dry pump accessory that can reduce power consumption by attaching to the dry pump exhaust line.
ECO-SHOCK is available for dry pumps that mainly pump inert gas at semiconductor and FPD plants.

Features

- **ECO-SHOCK Contributes to Energy Savings**
  Max.80% reduction of power consumption of dry pump. *1
  Effective in suppressing heat generation of dry pump resulting in reduction of air conditionaing costs.
  ECO-SHOCK runs with only 65 Watts of power and without N_2 and cooling water.
  **Unusable when pumping flammable and toxic corrosives gases.*
- **Effective When Used with a Capacity Transfer Type of Dry Pump**
  Excellent results when used with a multi-stage root type. *2
  Very effective when dry pump runs lower than 1000Pa.
- **Overall Dry Pump Performance is Improved**
  Improves ultimate pressure performance.
  Reduction in exhaust gas noise.
  No reduction in pumping speed in all pressure range.
- **User-friendly**
  Easy installation by attaching a valve unit to the exhaust pipe. *3

**1 A power consumption reduction rate changes with depending on pump model and gas volume, etc.*
•2 ECO-SHOCK could not be used with certain claw root, screw type or shaft seal pumps, etc. Contact ULVAC for details.
•3 Modification could be required prior to installation of the ECO-SHOCK. Contact your nearest ULVAC service center for installation.

Applications

- Power saving of dry pumps used as fore pumps of turbo molecular pump on sputtering and evaporation system.
- Power saving of dry pumps for load lock chambers.
- Power saving of dry pumps for vacuum laminator and vacuum packing, etc.

Effects

ULVAC pump model	LR60	LR90	LR180
Pumping speed *4	1333 L/min, 47CFM	2100 L/min, 74CFM	3950 L/min, 139CFM
Actual measured power consumption *5	2.1 kW	3.6 kW	6.6 kW
Actual measured power consumption when ECO-SHOCK is used *5 *6 *7	0.7 kW	1.0 kW	1.6 kW
Power saved	67%	72%	76%

*4 At 60Hz power
*5 Power consumption at ultimate pressure
*6 Including power consumption of ECO-SHOCK
*7 Reading at ultimate pressure, with shaft seal and gas ballast at 0 Pa·m^3/s. These values change slightly depending on the gas flow at ballast and shaft seal.

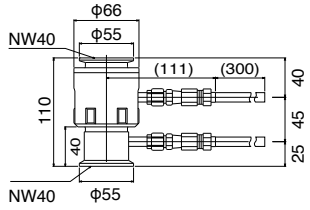
Specifications

Model		ES10
Power	Requirements	AC100V-220V 50/60Hz 1phase (Automatic change)
	Consumption	65W (Reading when pressure is at ultimate puressure, and gas for shaft seal and gas ballast are 0 Pa·m^3/s)
Control system	Input	Remote start / stop (contact energized 24V DC) Contact capacity: No-voltage contact with a contact capacity of 2.0A is required CLOSE: Start, OPEN: Stop
	Output	Over current output (No-voltage contact) Contact capacity: DC24V 1.0A
	Operation	Start switch by manual
	Display	Running time
Dimensions	Basic unit	175mm×330mm×240mm
	Valve unit	ϕ66mm×110mm (NW40)
Weight		Basic unit: 9.2kg Valve unit: 800g
Conection	Port size	G1/4″ (INLET, OUTLET) The connector has been installed.
	Recommended piping	Over 9.52mm dia, Shorter than 3m long

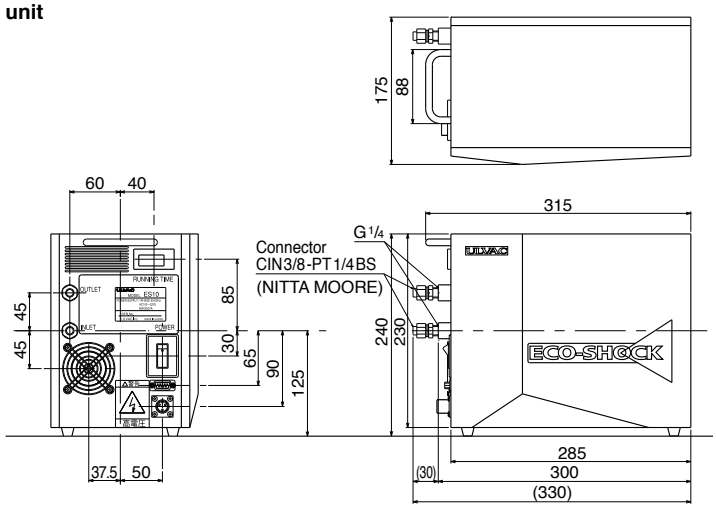
Dimensions

(unit: mm)

Valve unit



Basic unit



- *Scope of warranty is only for the basic unit, ECO-SHOCK, and valve unit. ULVAC does not take any responsibility for product guarantee of periphery devices (dry pump etc).*
- *Any profit loss resulting by a fault in ECO-SHOCK is beyond the scope of warranty.*