LVS systems are designed for solvent distillation / evaporation applications and comprise an oil-free, chemical duty diaphragm pump with optional control packages, liquid containment and exhaust vapor condenser for optimal solvent recovery.

- Wide choice of performance
  Available with 2 or 3 pumping stages to generate vacuum as low as 2mbar (1.5torr).
  Flow rate choices from 20 to 238L/min
- Modular design with options to complement your process.
  Digital control options and on board accessories tailor the LVS to your needs.
- Resistant to acid and solvent vapors
  Wetted parts in PTFE, PVDF, PEEK, PP and glass.
- Ergonomic design places controls and features where they are needed.
  Free up hood or bench space.

The LVS systems are available with a range of vacuum control options; unregulated, manually regulated and three different electronic control packages are available.

LVS 300 Z

Unregulated

- When ultimate vacuum is required at all times.

LVS 301 Z

Manually regulated

- A fine control valve is used to regulate the vacuum by acting as a bleed valve. Options available with one or two manual regulators.

LVS 310 Z

Standard digital control (cv)

- The standard electronic control package uses a chemically resistant solenoid valve to control the process vacuum while the pump runs continually.
- The user defined vacuum and hysteresis levels are used to open and close the control valve thus maintaining vacuum at the process between the high and low control points. This is known as two point control.

LVS 310 Z en

Economic digital control (en)

- Economic control uses the same two point control system, but as cv replaces the control valve with a relay which turns the pump on and off to maintain the process vacuum between the user defined vacuum and hysteresis levels. This method greatly reduces power consumption and extends the lifetime of the pump.
- Economic control is particularly useful for multi-user vacuum networks where the pump is located away from the user.

LVS 310 Z ef

Ecoflex digital control (ef)

- Ecoflex control varies the speed of the pump constantly to maintain the user defined vacuum level regardless of changes in the process requirements.
- The Ecoflex method exhibits genuine single point (hysteresis-free) control and therefore a stable vacuum level.
- Single point control results in up to 40% increase in evaporation rates with minimal bumping or foaming of precious samples. This is particularly important in ultimate rotary evaporation.

LVS Systems | Final Pressure <8 mbar

Model
LVS 110 Z

Model
LVS 300 Z

Model
LVS 301 Z

CE

Specifications

Model Final pressure <8 mbar	LVS 101 Z w/gauge	LVS 110 Z	LVS 300 Z	LVS 301 Z	LVS 301 Z w/gauge
Free Air Displacement					
m^3/hr @ 50Hz	1,0	1,0	2,3	2,3	2,3
cfm(l/min) @60Hz	16.7	16.7	38	38	38
Ult. Vac. Pressure, mbar (torr)	8 (0.006)	8 (0.006)	8 (0.006)	8 (0.006)	8 (0.006)
Vacuum Control Type	**Manual**	**Two Point**	**Unregulated**	**Manual**	**Manual**
Number of Vacuum Connections	1	1	1	1	1
Vacuum Display Type	Dial Gauge	Digital VCZ 521	-------	-------	Dial Gauge
Inlet/Exhaust Connection Type	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle
Tubing Needed I.D. in.(mm)	DN8	DN8	DN8	DN8	DN8
Coolant Tubing Needed	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.
Sound level, dB(A)	< 44	< 44	< 44	< 44	< 44
Motor Power watts(HP)	60(0.08)	60 (0.08)	180(0.25)	180(0.25)	180(0.25)
Type of Motor Protection, IP	IP 54	IP 54	IP 54	IP 54	IP 54
Weight, lbs.(kg)	25.6(11.6)	25.8(11.7)	35.5(16.1)	36(16.3)	36(16.3)
Overall Dimensions WxDxH in.(cm)	14.2x12.2x17.7 (36x31x45)	14.2x12.2x17.7 (36x31x45)	14.2x12.2x15.7 (36x31x40)	14.2x12.2x17.7 (36x31x45)	14.2x12.2x17.7 (36x31x45)
Ordering Information					
230V 50/60Hz 1Ph [1]	115027	115024	115041	115047	115047-10
115V 50/60Hz 1Ph [2]	115027-01	115024-01	115041-01	115047-01	115047-11

Notes: 1. With Schuko and UK plug leads. 2. With US plug lead. 3. With JP plug lead. 4. These pumps can be delivered on request

Applications

Laboratory Vacuum Systems(LVS)

LVS systems are specially designed for laboratory applications such as distillation, evaporation and drying. They comprise an oil-free chemical duty diaphragm pump (MPC) with optional control packages, liquid containment and exhaust vapor condenser. All wetted parts are made from high quality chemically resistant materials with clear plastic coated glassware to allow solvent and acid vapors to be pumped.

LVS 310 Z

Display Types

Digital VCZ 521
Vacuum Controller

LED VCZ 424
Vacuum Controller

Model
LVS 302 Z

Model
LVS 310 Z

Model
LVS 311 Z

Model
LVS 320 Z

Model
LVS 610 T en

LVS 302 Z	LVS 310 Z	LVS 311 Z	LVS 320 Z (424)	LVS 310 Z en	LVS 610 T en
2,3	2,3	2,3	2,3	2.3	4.5
38	38	38	38	1.5(41)	2.9(81)
8 (0.006)	8 (0.006)	8 (0.006)	8 (0.006)	8 (0.006)	2 (
Manual	**Two Point**	**Manual & Two Point**	**Two Point**	**Economic**	**Economic**
2	1	2	2	1	1
-------	Digital VCZ 521	Digital VCZ 521	LED VCZ 424	Digital VCZ 521	Digital VCZ 521
Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle
DN8	DN8	DN8	DN8	DN8	DN8
8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.
< 44	< 44	< 44	< 44	< 44	< 44
180(0.25)	180(0.25)	180(0.25)	180(0.25)	180(0.25)	370(0.5)
IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
36(16.3)	39.2(17.8)	40(18.1)	40.6(18.4)	38.6(17.5)	54.5(24.7)
14.2x12.2x17.7 (36x31x45)	14.2x12.2x17.7 (36x31x45)	14.2x12.2x17.7 (36x31x45)	14.2x12.2x17.7 (36x31x45)	13.8x12.6x17.3 (35x32x44)	13.8x12.6x17.3 (35x32x44)
115043	115044	115045	115046	115248-02	115258-02
115043-01	115044-01	115045-01	115046-01	115248-03	115258-03

Scope of Delivery:

- Chemical duty diaphragm pump mounted on chassis
  ON/OFF switch and internal protective thermal switch for the motor, mains cable and plug
- Vibration isolating feet
- Inlet separator
- Exhaust condenser (except for LVS 300 Z)
- Gas ballast valve (except for LVS 105 T - 10 ef)
- 8mm inlet / exhaust hose nozzle

Vacuum Control

Unregulated; no vacuum Control

Manual; vacuum is adjusted by user

Two Point vacuum is automatically controlled at set point using on/off solenoid valve

Ecoflex; pump speed is automatically controlled by vacuum controller

Economic; pump automatically turns on/off based on demand for vacuum

Accessories

Component	page
• Replacement Condensor	71
• Hose	67
• Service Kits	82

Model LVS 201 T

Model LVS 210 T

Model LVS 600 T

Model LVS 601 T

Specifications

Model Final pressure <2 mbar	LVS 201 T	LVS 201 T w/ gauge	LVS 210 T	LVS 600 T	LVS 601 T
Free Air Displacement					
m^3/h @ 50Hz	1.8	1.8	1.8	4.5	4.5
cfm(l/min) @60Hz	33	33	33	75	75
Ult. Vac. Pressure, mbar(torr)	< 2	< 2	< 2	< 2	< 2
Vacuum Control Type	**Manual**	**Manual**	**Two Point**	**Unregulated**	**Manual**
Number of Vacuum Connections	1	1	1	1	1
Vacuum Display Type	-------	-------	Digital VCZ 521	-------	-------
Inlet/Exhaust Connection Type	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle
Tubing Needed I.D. in.(mm)	DN8	DN8	DN8	DN8	DN8
Coolant Tubing Needed	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.
Sound level, dB(A)	< 44	< 44	< 44	< 44	< 44
Motor Power watts(HP)	90(0.12)	90(0.12)	90(0.12)	370(0.5)	370(0.5)
Type of Motor Protection, IP	IP 54	IP 54	IP 54	IP 54	IP 54
Weight, lbs.(kg)	15.0	15.3	15.7	23.2	23.50
Overall Dimensions WxDxH in.(cm)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 15.6 (36x31x40)	14.2x12.2x 17.7 (36x31x45)
Ordering Information					
230V 50/60Hz	115037	115037-10	115034	115051	115057
115V 50/60Hz	115037-01	115037-11	115034-01	115051-01	115057-01

Notes: 1. With Schuko and UK plug leads. 2. With US plug lead. 3. With JP plug lead. 4. These pumps can be delivered on request

Applications

Laboratory Vacuum Systems(LVS)

LVS systems are specially designed for laboratory applications such as distillation, evaporation and drying. They comprise an oil-free chemical duty diaphragm pump (MPC) with optional control packages, liquid containment and exhaust vapor condenser. All wetted parts are made from high quality chemically resistant materials with clear plastic coated glassware to allow solvent and acid vapors to be pumped.

LVS 610 T

Display Types

Digital VCZ 521
Vacuum Controller

LED VCZ 424
Vacuum Controller

Model LVS 602 T

Model LVS 610 T

Model LVS 611 T

Model LVS 620 T

Model LVS 1210 T

	LVS 601 T w/gauge	LVS 602 T	LVS 610 T	LVS 611 T	LVS 620 T (424)	LVS 1210 T
	4.5	4.5	4.5	4.5	4.5	8.3
	75	75	75	75	75	138
	< 2	< 2	< 2	< 2	< 2	< 2
	Manual	**Manual**	**Two Point**	**Manual & Two Point**	**Two Point**	**Two Point**
	1	2	1	2	2	1
	-------	-------	Digital VCZ 521	Digital VCZ 521	LED VCZ 424	VCB 521 es
	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle
	DN8	DN8	DN8	DN8	DN8	DN8
	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.
	< 44	< 44	< 44	< 44	< 44	< 44
	370(0.5)	370(0.5)	100(0.5)	370(0.5)	370(0.5)	370(0.5)
	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
	23.50	23.5	24.7	25.0	25.3	36.1
	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)	14.2x12.2x 17.7 (36x31x45)
	115057-10	115053	115054	115055	115056	115064
	115057-11	115053-01	115054-01	115055-01	115056-01	115064-01

Scope of Delivery:

- Chemical duty diaphragm pump mounted on chassis
  ON/OFF switch and internal protective thermal switch for the motor, mains cable and plug
- Vibration isolating feet
- Inlet separator
- Exhaust condenser (except for LVS 300 Z)
- Gas ballast valve (except for LVS 105 T - 10 ef)
- 8mm inlet / exhaust hose nozzle

Vacuum Control

Unregulated; no vacuum Control

Manual; vacuum is adjusted by user

Two Point vacuum is automatically controlled at set point using on/off solenoid valve

Ecoflex; pump speed is automatically controlled by vacuum controller

Economic; pump automatically turns on/off based on demand for vacuum

Accessories

Component	page
• Replacement Condensor	71
• Hose	67
• Service Kits	82

Model
LVS 310 Z ef

Model
LVS 105 T-10 ef

Model
LVS 210 T ef

CE

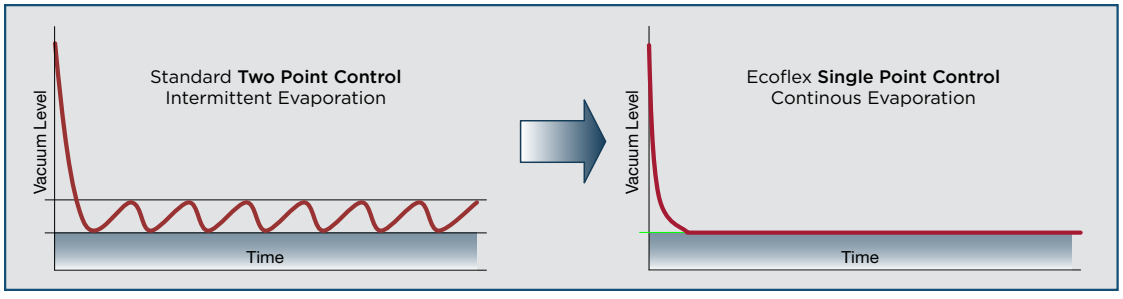
Specifications

Model Final pressure <8 mbar	LVS 310 Z ef	LVS 105 T -10ef	LVS 210 T ef	LVS 610 T ef	LVS 1210 T ef
Free Air Displacement					
m^3/hr @ 50Hz	2.6	1.2	2.2	4.9	9.1
cfm(l/min) @60Hz	1.5(41)	0.7(20)	1.3(36)	2.9(81)	5.3(151)
Ult. Vac. Pressure, mbar(torr)	< 8	< 2	< 2	< 2	< 2
Vacuum Control Type	Ecoflex	Ecoflex	Ecoflex	Ecoflex	Ecoflex
Number of Vacuum Connections	1	1	1	1	1
Vacuum Display Type	Digital VCZ 521	Digital VCZ 521	Digital VCZ 521	Digital VCZ 521	Digital VCZ 521
Inlet/Exhaust Connection Type	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle	Hose nozzle
Tubing Needed I.D. in.(mm)	DN8	DN8	DN8	DN8	DN8
Coolant Tubing Needed	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.	8 mm I.D.
Sound level, dB(A)	< 44	< 44	< 44	< 44	< 44
Motor Power watts(HP)	180(0.25)	90(0.12)	90(0.12)	370(0.5)	370(0.5)
Type of Motor Protection, IP	IP 54	IP 54	IP 54	IP 54	IP 54
Weight, lbs.(kg)	43.9(19.9)	20.9(9.5)	41.9(19.0)	59.1(26.8)	81.8(37.1)
Overall Dimensions WxDxH in.(cm)	13.8x12.6x17.3 (35x32x44)	9.8x10.2x17.3 (25x26x44)	13.8x12.6x17.3 (35x32x44)	13.8x12.6x17.3 (35x32x44)	21.3x13x18.1 (54x33x46)
Ordering Information					
90V to 260V 50/60Hz 1Ph [3]	------	115184	------	------	------
230V 50/60Hz 1Ph [1]	115244	------	115234	115254	115264

Notes:
1. With Schuko and UK plug leads. 2. With US plug lead 3. With Schuk, UK and US plug leads

Ecoflex preserves your sample while evaporating up to 40% faster

Ecoflex – ef control varies the speed of the pump constantly to maintain the user defined vacuum level regardless of changes in the process requirements. Variability is greatly reduced with the Ecoflex method and therefore the process will see genuine single point (hysteresis-free) control with stable vacuum level. Single point control results in up to 40% increase in evaporation rates with minimal bumping or foaming of precious samples.



Without foaming & bumping