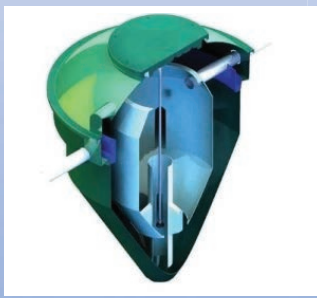


# Blue Diamond Pumps Inc

## Product Brochure 2016-2017



## Waste Water Treatment Range

# About us

Blue Diamond Pumps Inc supplies aeration pumps/blowers and accessories for use in domestic waste water treatment units for both the US and overseas markets. Blue Diamond Pumps are also proud to offer first class customer support, offering a wealth of knowledge, technical support and high quality products.

All these pumps are UL certified and carry a multi year warranty.



UL Approval

UL Number - QDGS.E348002

UL Installation Requirements

Ordinary locations, as defined in the NEC, include:

Damp location - partially protected locations under canopies, marquees, roofed open porches and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, barns and cold-storage warehouses.

Wet location - installations underground or in concrete slabs or masonry in direct contact with the earth, and locations subject to saturation with water or other liquids, such as vehicle washing areas, and locations exposed to weather and unprotected.

Outdoor use - in general, individual appliances and equipment have been investigated only for use indoors, in dry locations. An exception is where outdoor use is specifically permitted by the Article of the NEC concerned with the product installation. See also the general Guide Information for the product category or included in the individual listing. In some cases of the title (eg., Snow Movers, Swimming Pool Fixtures) indicates the conditions for which the product has been investigated.

## Testimonial

Marsh Industries - "We have used Charles Austen compressors since they were first launched, over that period they have proved extremely reliable with only one reported failure out of over two thousand used, and even that one it was debatable whether it was the unit at fault. Charles Austen are very competitive on pricing but more importantly excel on service!"



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# Ordering

Phone our order hotline & for product enquires:

**+1 770 831 1122**

Email your order to:

**[info@bluediamondpumps.com](mailto:info@bluediamondpumps.com)**

For more product information and a look at our whole range of pumps you can visit our website:

**[www.bluediamondpumps.com](http://www.bluediamondpumps.com)**

## **Blue Diamond Pumps Inc**

4850 Golden Parkway, Suite B  
409, Buford, USA  
GA 30518

## **Charles Austen Pumps Ltd**

Royston Road, Byfleet  
Surrey,  
KT14 7NY



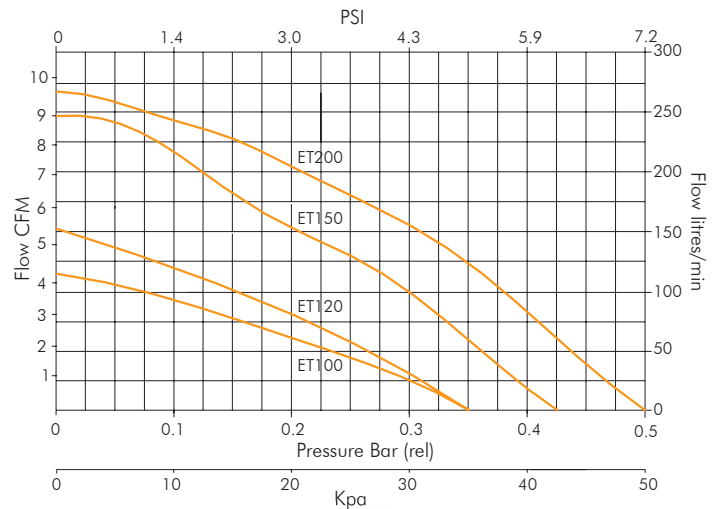
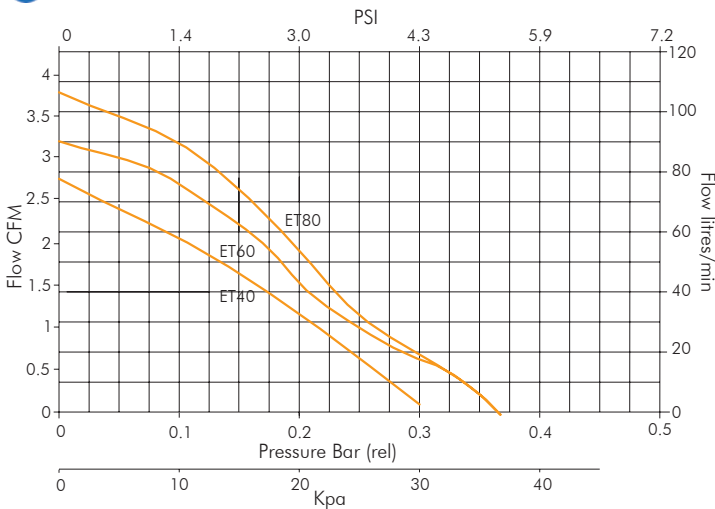
**@CAPumps**

## envir-o<sup>®</sup> ET series



### Performance

- ✓ 1.41 to 7.06 CFM flow
- ✓ Green drive technology - energy efficient motors low power consumption
- ✓ Specially formulated diaphragm material for extended life
- ✓ Robust and compact construction - weatherproof
- ✓ Easy to service with competitively priced spares kit
- ✓ Suited to intermittent or continuous duty applications
- ✓ Used by original equipment manufacturers of NSF certified residential sewage treatment systems
- ✓ Thermally protected



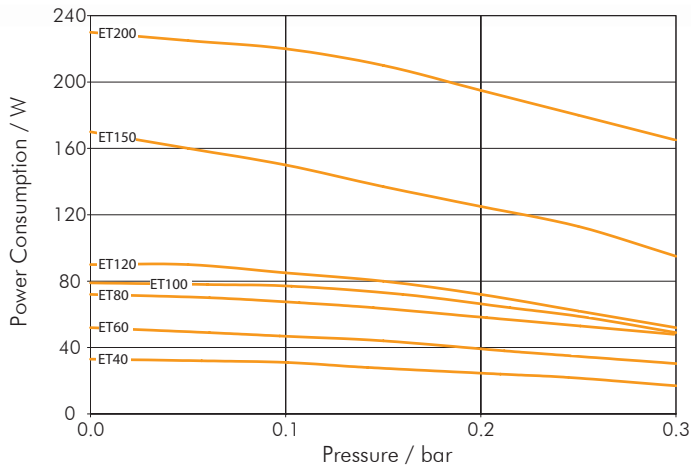
At Blue Diamond Pumps Inc we recommend Envir-o<sup>®</sup> pumps are serviced every 12 months, service kits for each pump can be purchased from us.

Service kit



Ideal for use with our diffuser range

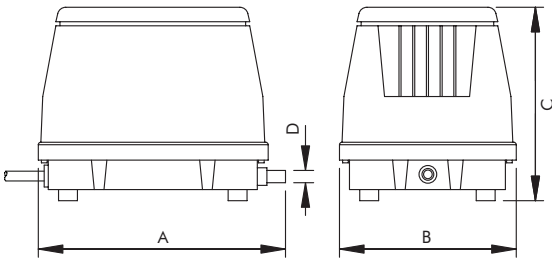
## envir-o<sup>®</sup> ET series



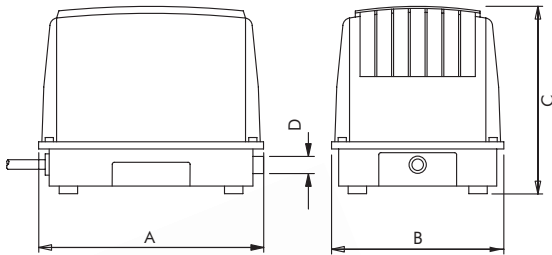
Model no.	Performance	Power consumption (w)	Noise level (db)
	Flow (cfm/min) @ Pressure (bar)		
ET40	1.41 @ 0.15	30	40
ET60	2.12 @ 0.15	55	40
ET80	2.83 @ 0.10	85	40
ET100	3.53 @ 0.10	105	45
ET120	4.24 @ 0.10	125	45
ET150	5.30 @ 0.15	130	45
ET200	7.06 @ 0.15	195	45

### Dimensions

#### ET30, ET40, ET150 & ET200



#### ET60, ET80, ET100 & ET120



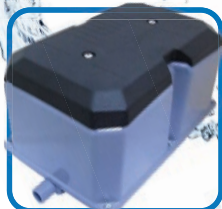
#### Other models in the envir-o<sup>®</sup> range



ETA Series



ETK Series



ET250/300



ETP Series

Model no.	Weight kg	Dimensions mm (inches)			
		A	B	C	D
ET40	4.3	220 (8.66)	155 (6.10)	190 (7.48)	14 (0.55)
ET60	6.0	203 (7.99)	165 (6.49)	153 (6.02)	18 (0.70)
ET80	7.0	210 (8.26)	185 (7.28)	171 (6.73)	18 (0.70)
ET100	8.5	238 (9.37)	196 (7.71)	177 (6.96)	18 (0.70)
ET120	9.5	265 (10.43)	215 (8.36)	198 (7.79)	18 (0.70)
ET150	9.0	256 (10.07)	200 (7.87)	222 (8.74)	18 (0.70)
ET200	9.0	256 (10.07)	200 (7.87)	222 (8.74)	18 (0.70)

### Connections

**ET40** - Plain, horizontal, connection 14.0mm (0.55") OD also supplied with screw in barbed connector 10.0mm (0.39") OD

**ET60, ET80, ET100, ET120** - Plain, horizontal, connection 18.0mm (0.71") OD also supplied with screw in barbed connector 12.0mm (0.47") OD

**ET150, ET200** - Plain, horizontal, connection 18.0mm OD

### Accessories

Elbow connector (included)



Large brass barbed connector 18.0mm and 20.0mm (optional)



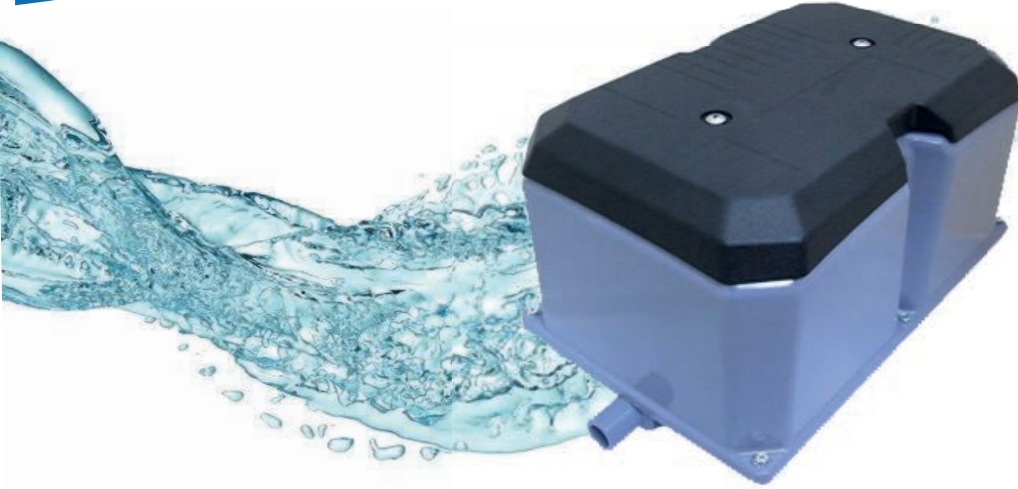
Please note - it is important that you ensure the motor specification stated and the range of materials offered in the pump are compatible with the performance, environmental limitations and chemical resistance requirements of the application.

For further information or details of our extensive range of pumps, contact our technical sales office who will be pleased to help you select the most suitable pump for your application.



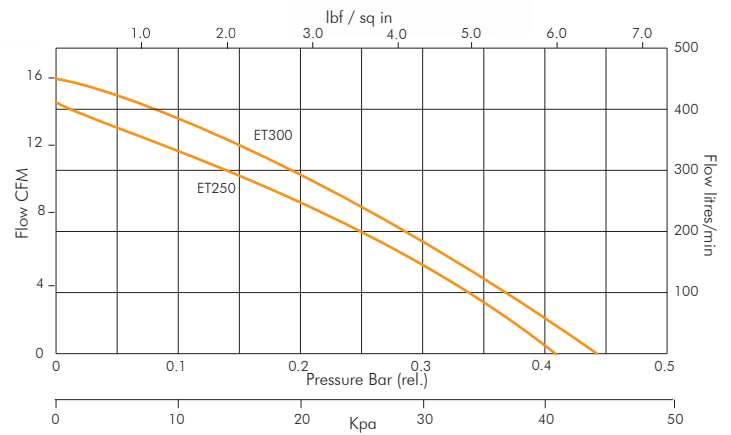
# Air

## envir-o<sup>®</sup> ET double series

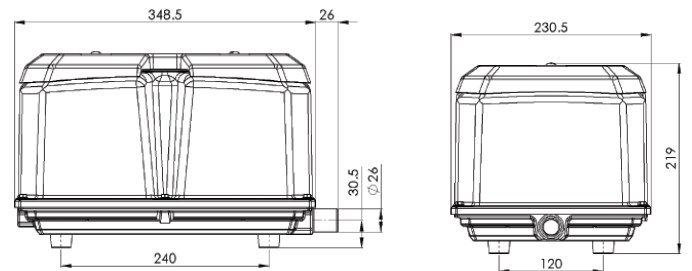


✓ Using the same technology as the envir-o<sup>®</sup> ET series but with two pump blocks for high flow.

Model no.	Performance	Power consumption (w)	Noise level (db)
	Flow (cfm/min) @ Pressure (bar)		
ET250	8.80 @ 0.20	221	40
ET300	10.60 @ 0.20	275	40

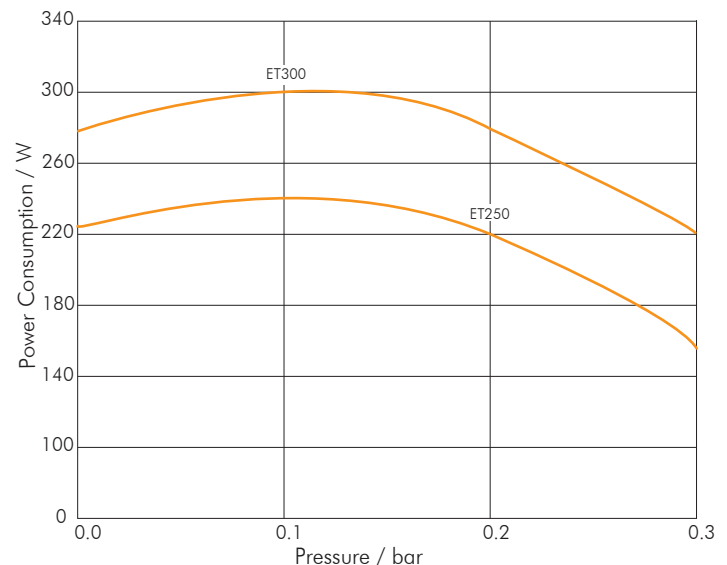


Model no.	Weight kg	Dimensions mm (inches)			
		A	B	C	D
ET250	17.5	348.5 (13.72)	230.5 (9.07)	219 (8.62)	17.5 (1.02)
ET300	18.0	348.5 (13.72)	230.5 (9.07)	219 (8.62)	17.5 (1.02)



**Connections**  
**ET250, ET300** - Outlet connector 26mm (1"), also supplied with a straight rubber connector which can be used to increase pipe size to 29mm (1") ID

**Accessories**  
 Elbow connector (included)

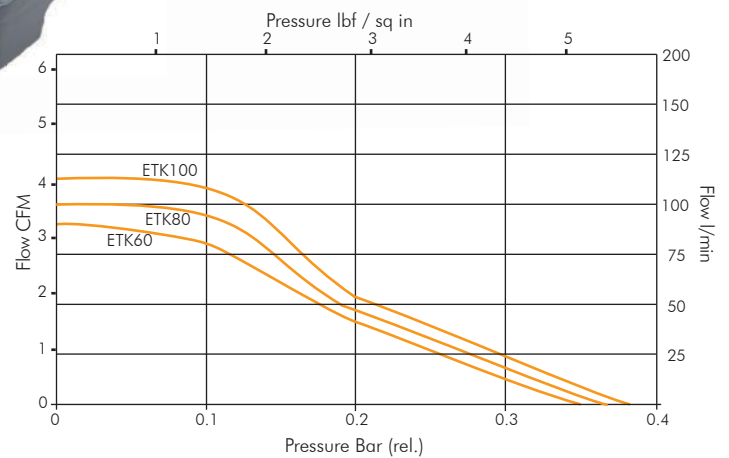


## envir-o<sup>®</sup> ETK series

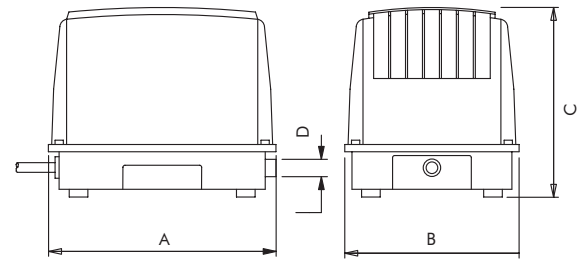


✓ Using the same technology as the envir-o<sup>®</sup> range but with cool air technology for use in hot humid environments.

Model no.	Performance	Power consumption (w)	Noise level (db)
	Flow (cfm/min) @ Pressure (bar)		
ETK60	2.12 @ 0.15	55	45
ETK80	2.83 @ 0.10	85	45
ETK100	3.53 @ 0.10	105	45



Model no.	Weight kg	Dimensions mm (inches)			
		A	B	C	D
ETK60	6.0	203 (7.99)	165 (6.49)	153 (6.02)	18 (0.70)
ETK80	7.0	210 (8.26)	185 (7.28)	171 (6.73)	18 (0.70)
ETK100	8.5	238 (9.37)	196 (7.71)	177 (6.96)	18 (0.70)



### Connections

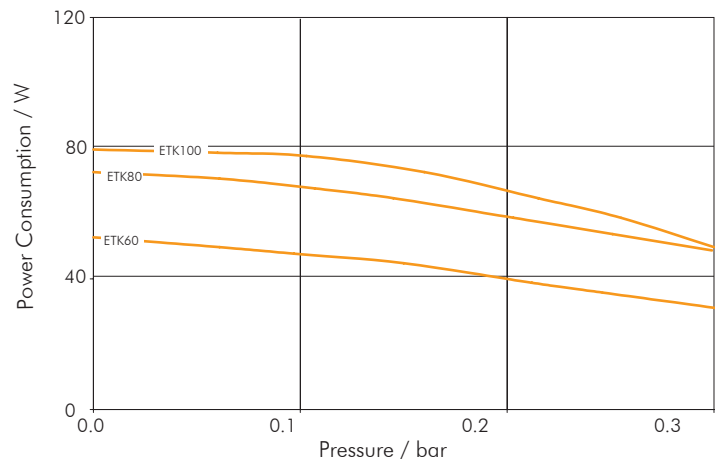
**ETK60, ETK80, ETK100** - Plain, horizontal, connection 18.0mm (0.71") OD also supplied with screw in barbed connector 12.0mm (0.47") OD

### Accessories

Elbow connector (included)



Large brass barbed connector 18.0mm and 20.0mm (optional)

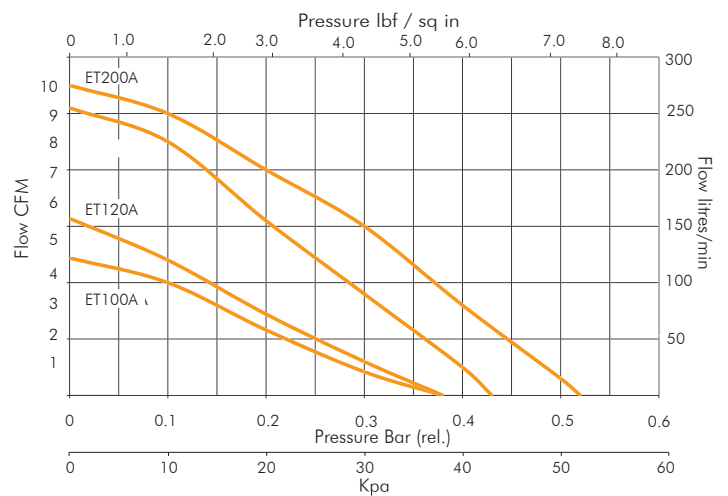
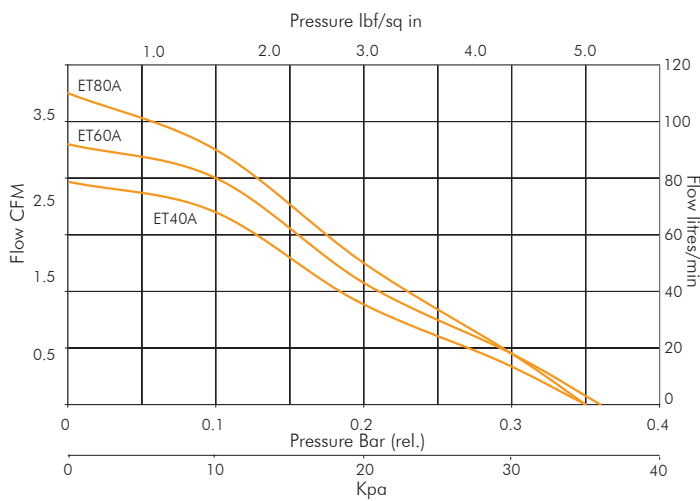


## envir-o<sup>®</sup> ETA series



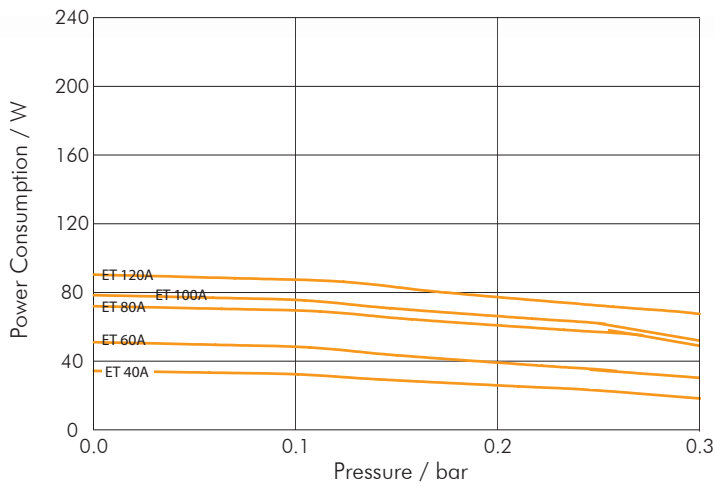
### Performance

- ✓ 1.41 to 4.24 CFM flow
- ✓ Envir-o air blower with built in alarm which detects low pressure in the airline
- ✓ Integral high sounding buzzer and bright LED warning signals
- ✓ Robust, compact construction which is suitable for intermittent or continuous duty
- ✓ Meets legislation avoiding environmental hazards and fines
- ✓ Equipped with thermal overload protection



Ideal for use with our diffuser range

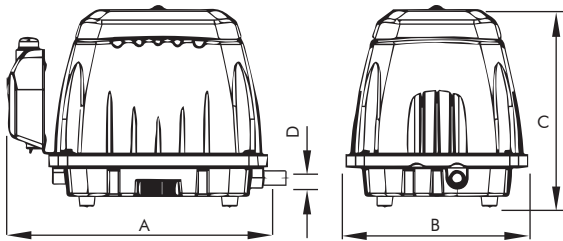
## envir-o<sup>®</sup> ETA series



Model no.	Performance	Power consumption (w)	Noise level (db)
	Flow (cfm/min) @ Pressure (bar)		
ET40A	1.41 @ 0.15	30	40
ET60A	2.12 @ 0.15	55	40
ET80A	2.83 @ 0.10	85	40
ET100A	3.53 @ 0.10	105	45
ET120A	4.24 @ 0.10	125	45

### Dimensions

ET40A, ET60A, ET80A, ET100A, ET120A



Model no.	Weight kg	Dimensions mm (inches)			
		A	B	C	D
ET40A	4.3	220 (8.66)	155 (6.10)	190 (7.48)	14 (0.55)
ET60A	6.0	253 (9.96)	165 (6.50)	183 (7.20)	18 (0.70)
ET80A	7.0	260 (10.24)	185 (7.28)	201 (7.91)	18 (0.70)
ET100A	8.5	288 (11.34)	196 (7.71)	207 (8.15)	18 (0.70)
ET120A	9.5	315 (12.40)	215 (8.36)	228 (8.98)	18 (0.70)

### Connections

**ET40A, ET60A, ET80A, ET100A & ET120A** - Plain, horizontal, connection 18.0mm (0.71") OD also supplied with screw in barbed connector 12.0mm (0.47") OD

Other models in the envir-o<sup>®</sup> range



### Accessories

Elbow connector (included)



Large brass barbed connector 18.0mm and 20.0mm (optional)



Please note - it is important that you ensure the motor specification stated and the range of materials offered in the pump are compatible with the performance, environmental limitations and chemical resistance requirements of the application.

For further information or details of our extensive range of pumps, contact our technical sales office who will be pleased to help you select the most suitable pump for your application.



# Air

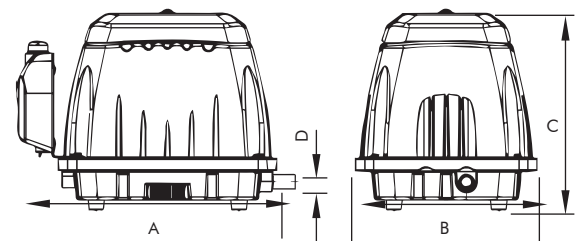
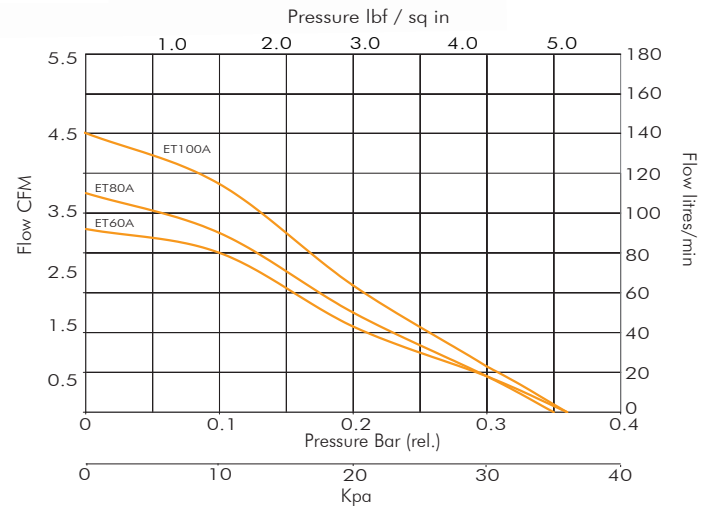
## envir-o<sup>®</sup> ETKA series



- ✓ Using the same technology as the envir-o<sup>®</sup> ETA range but with cool air technology for use in hot humid environments.

Model no.	Performance	Power consumption (w)	Noise level (db)
	Flow (cfm/min) @ Pressure (bar)		
ETK60A	1.41 @ 0.15	30	40
ETK80A	2.12 @ 0.15	55	40
ETK100A	2.83 @ 0.10	85	40

Model no.	Weight kg	Dimensions mm (inches)			
		A	B	C	D
ETK60A	6.0	253 (9.96)	165 (6.50)	183 (7.20)	18 (0.70)
ETK80A	7.0	260 (10.24)	185 (7.28)	200 (7.91)	18 (0.70)
ETK100A	8.5	288 (11.34)	196 (7.71)	207 (8.15)	18 (0.70)



### Connections

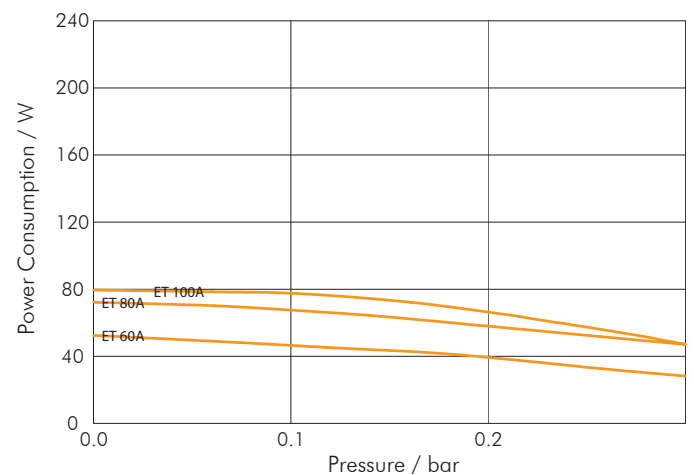
**ETK60A, ETK80A & ETK100A** - Plain, horizontal, connection 18.0mm (0.71") OD also supplied with screw in barbed connector 12.0mm (0.47") OD

### Accessories

Elbow connector (included)



Large brass barbed connector 18.0mm and 20.0mm (optional)



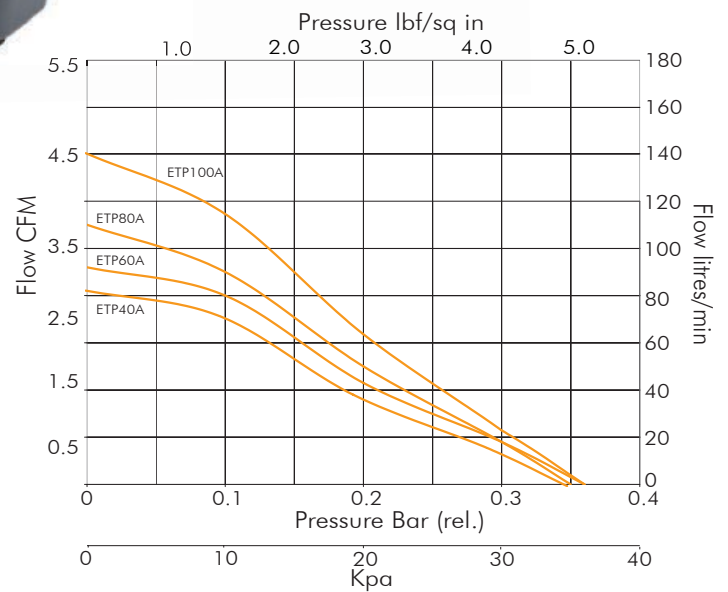
**2** year  
warranty

## envir-o<sup>®</sup> ETP series

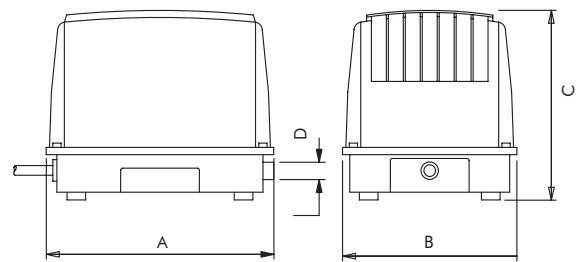


✓ Using the same technology as the envir-o<sup>®</sup> ET range but with extended pressure for deep tanks and high altitude installations.

Model no.	Performance	Power consumption (w)	Noise level (db)
	Flow (cfm/min) @ Pressure (bar)		
ETP80	3.53 @ 0.10	105	40
ETP40A	2.12 @ 0.15	55	40
ETP60A	2.83 @ 0.10	85	40
ETP80A	3.53 @ 0.10	105	40
ETP100A	4.24 @ 0.10	125	40
ETP80K	2.83 @ 0.17	85	40
ETP40KA	2.12 @ 0.15	30	40
ETP80KA	2.83 @ 0.10	85	40

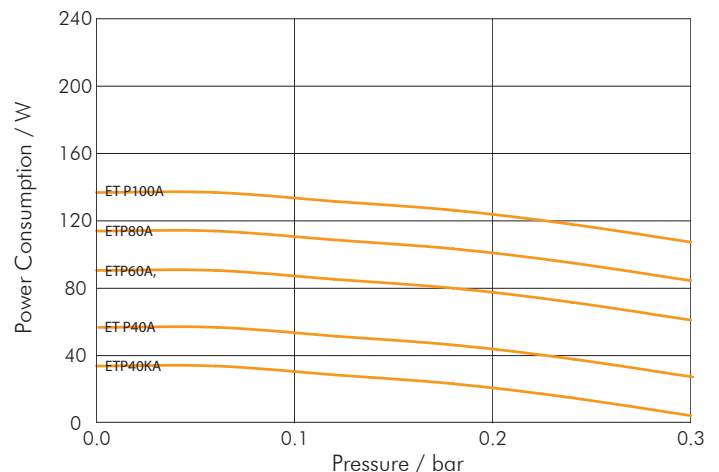


Model no.	Weight kg	Dimensions mm (inches)			
		A	B	C	D
ETP80	7.0	210 (8.26)	185 (7.28)	171 (6.73)	18 (0.70)
ETP40A	4.3	220 (8.66)	155 (6.10)	190 (7.48)	14 (0.55)
ETP60A	6.0	288 (11.34)	196 (7.71)	207 (8.15)	18 (0.70)
ETP80A	7.0	260 (10.24)	185 (7.28)	200 (7.91)	18 (0.70)
ETP100A	8.5	288 (11.34)	196 (7.71)	207 (8.15)	18 (0.70)
ETP80K	7.0	210 (8.26)	185 (7.28)	171 (6.73)	18 (0.70)
ETP40KA	4.3	220 (8.66)	155 (6.10)	190 (7.48)	14 (0.55)
ETP80KA	7.0	260 (10.24)	185 (7.28)	200 (7.91)	18 (0.70)

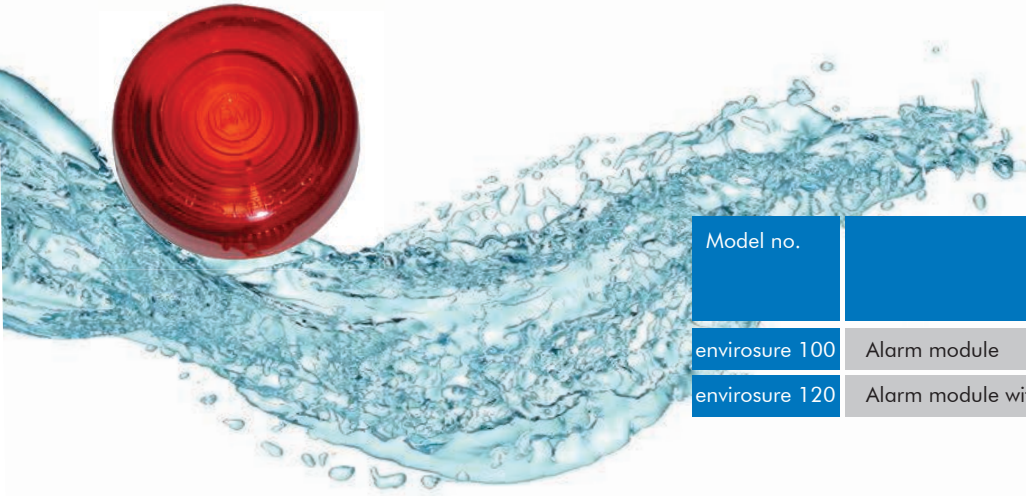


### Connections

**ETP80, ETP40A, ETP60A, ETP80A, ETP100A, ETP80K, ETP40KA & ETP80KA** - Plain, horizontal, connection 18.0mm (0.71") OD also supplied with screw in barbed connector 12.0mm (0.47") OD



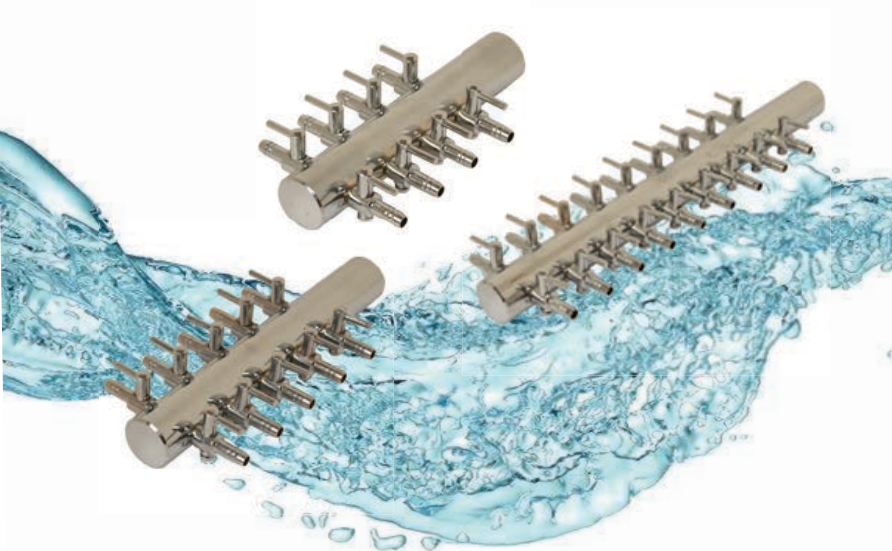
## envir-o<sup>®</sup>sure Alarms



Model no.	Description	Product code
envirosure 100	Alarm module	A07-001
envirosure 120	Alarm module with beacon & inline transformer	A07-004

- ✓ Detects aeration pump failures or power cuts immediately
- ✓ Versatile installation - installs in minutes with quickfit install kit, ideal for retro fit use
- ✓ Multiple variants - options include bright LED beacon, Plugin or hardwire
- ✓ Patent pending

## Fitting Accessories



Model no.	Description	Outlet size (")	Inlet size (")
6 way manifold	Steel	0.16	0.70
8 way manifold	Steel	0.16	0.70
10 way manifold	Steel	0.16	0.70
12 way manifold	Steel	0.16	0.70
18 way manifold	Steel	0.16	0.70



Elbow connector



Brass barbed connector  
18.0mm and 20.0mm



18mm braided tubing

## Diffusers



Coarse bubble diffuser	3.93"
Connection	0.75"
Operation temperature	212°F
Material - membrane	High grade EPDM, Silicon
Material - support parts	ABS



Disk diffuser	9.84"	12.60"
Quantity of bubble	6600	8300
Size of bubble	0.04-0.12"	0.04-0.12"
Connection	0.75"	0.75"
Continuous operation	4.9-27.9ft <sup>^</sup> 3h Max: 27.9ft <sup>^</sup> 3/h	8.2-49.2ft <sup>^</sup> 3h Max: 49.2ft <sup>^</sup> 3/h
Operation temperature	0~+212°F	0~+212°F
Material - membrane	High grade EPDM, Silicon	High grade EPDM, Silicon
Material - support parts	ABS	ABS



Tube diffuser	9.84"	19.69"	13.37"
Quantity of bubble	4000	8300	18000
Size of bubble	0.04-0.12"	0.04-0.12"	0.04-0.12"
Connection	0.75"	0.75"	0.75"
Continuous operation	4.9-27.9ft <sup>^</sup> 3h Max: 27.9ft <sup>^</sup> 3/h	8.2-37.1ft <sup>^</sup> 3h Max: 37.1ft <sup>^</sup> 3/h	78.7ft <sup>^</sup> 3h Max: 78.7ft <sup>^</sup> 3/h
Operation temperature	0~+212°F	0~+212°F	0~+212°F
Material - membrane	High grade EPDM, Silicon	High grade EPDM, Silicon	High grade EPDM, Silicon
Material - support parts	PVC	PVC	PVC

### Testamonial

S & S Site Services - "We are a company in the north west specialising in waste water treatment. We have been using the ET range of compressors on various systems for several years and find them to be easy to fit, very quiet and extremely reliable. I would estimate that we have fitted 200-300 over the last three years and we haven't had a single failure or problem to date."

# Envir-o® Warranty

All Envir-o® pumps are covered by a two year warranty on the pump motor.

To validate this warranty, the aerator must be serviced on a yearly basis. We recommend that the consumables including the diaphragms and filter are changed at this point. The wear and tear parts are outside the two year warranty but are covered by a year's warranty providing they have been used correctly and not subjected to back pressure or water damage.

**2** year  
warranty

This warranty is only valid for pumps that are used as recommended.

## Pump Troubleshooting

In the unlikely event that you are experiencing problems with your Envir-o® pump, please consider the following:

Problem	Possible Cause	Solution
Pump gets hot and shuts off	Overheating causing the thermal cutout to activate	<ul style="list-style-type: none"><li>• Check for a clog or blockage in the airline to stop excessive back pressure overheating the pump this can also cause premature diaphragm failure.</li><li>• Ensure the pump is the correct size for the application. If under sized not enough air will be produced, if over sized excessive back pressure is caused, overheating the pump.</li><li>• If oversized, drill a small hole in the rubber elbow on the pump to allow a small amount of pressure to escape. Leave to cool and then try pump again.</li><li>• If in excessive heat and using an ET series pump, an ETK series pump may be more ideal. ETK pumps allow cooler running.</li></ul>
Pump not pushing out air	Torn diaphragm  Rust inside pump	<ul style="list-style-type: none"><li>• Replace diaphragm by following our service instructions.</li><li>• If you are experiencing frequent diaphragm failures, please check for excessive back pressure in the system, as above.</li><li>• If the pump is getting wet inside, rust will appear causing increased friction and premature failure.</li><li>• If the pump is wet inside, the warranty is no longer valid. Use a wire brush to remove rust from the coils, once clean and dry, reassemble and try the pump again.</li></ul>
Pump trips electric	Check for water, pump may have flooded	<ul style="list-style-type: none"><li>• Remove pump from the system and allow to dry.</li><li>• Retest pump only when completely dry.</li><li>• Water damage can damage the pump beyond repair.</li></ul>

If the guidelines above have been followed, the pump is defective and may be in need of replacement. Please contact Blue Diamond Pumps Inc on +1 770 831 1122.

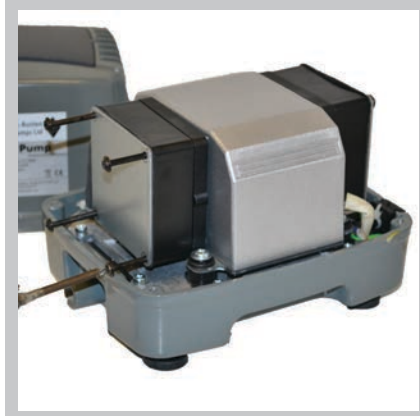
We will need to have the air pump returned to us or a photo provided of the inside of the pump and diaphragms. This ensures that the pump is not failing due to damaged diaphragms or rust.

# Service Instructions

At Blue Diamond Pumps Inc we recommend Envir-o® pumps are serviced every 12 months, service kits for each pump can be purchased from us or one of our distributors.



Unscrew the four corner screws and remove the cover from the air pump.



Unscrew the four corner screws from the chamber cover at one end of the pump. Separate the chamber cover at the seam to expose the screw holding the white round plastic diaphragm depressor in place.



Remove the screw along with the diaphragm depressor, electrostatic membrane and diaphragm. Repeat on the opposite end of the pump.



Link up the diaphragm with the diaphragm frame and position in place.



Gently remove one of the magnet bar ends by pulling it out of the housing, being careful not to scratch or break the housing or magnet bar.



Gently slide in a new magnet bar. Put on the end cap, the first electrostatic membrane, diaphragm, second electrostatic membrane, diaphragm depressor and use single screw to hold in place.



Put chamber cover back and screw four screws in. Repeat with other chamber cover.



Finally, put housing back together.

Our two year warranty cover does not cover diaphragm failures or magnet bars due to being wear and tear parts.

If you are experiencing frequent diaphragm failures, please check for excessive back pressure against the pump. Adding more diffusers, ports, or putting a tee in the line with a ball valve on the third side of the tee should resolve this. Ensure you open the ball valve fully before slowly closing until you find the spot where maximum air flow with minimum back pressure is achieved.

Please contact Blue Diamond Pumps Inc on +1 770 831 1122 to purchase a service kit or for further help with servicing your blower.

