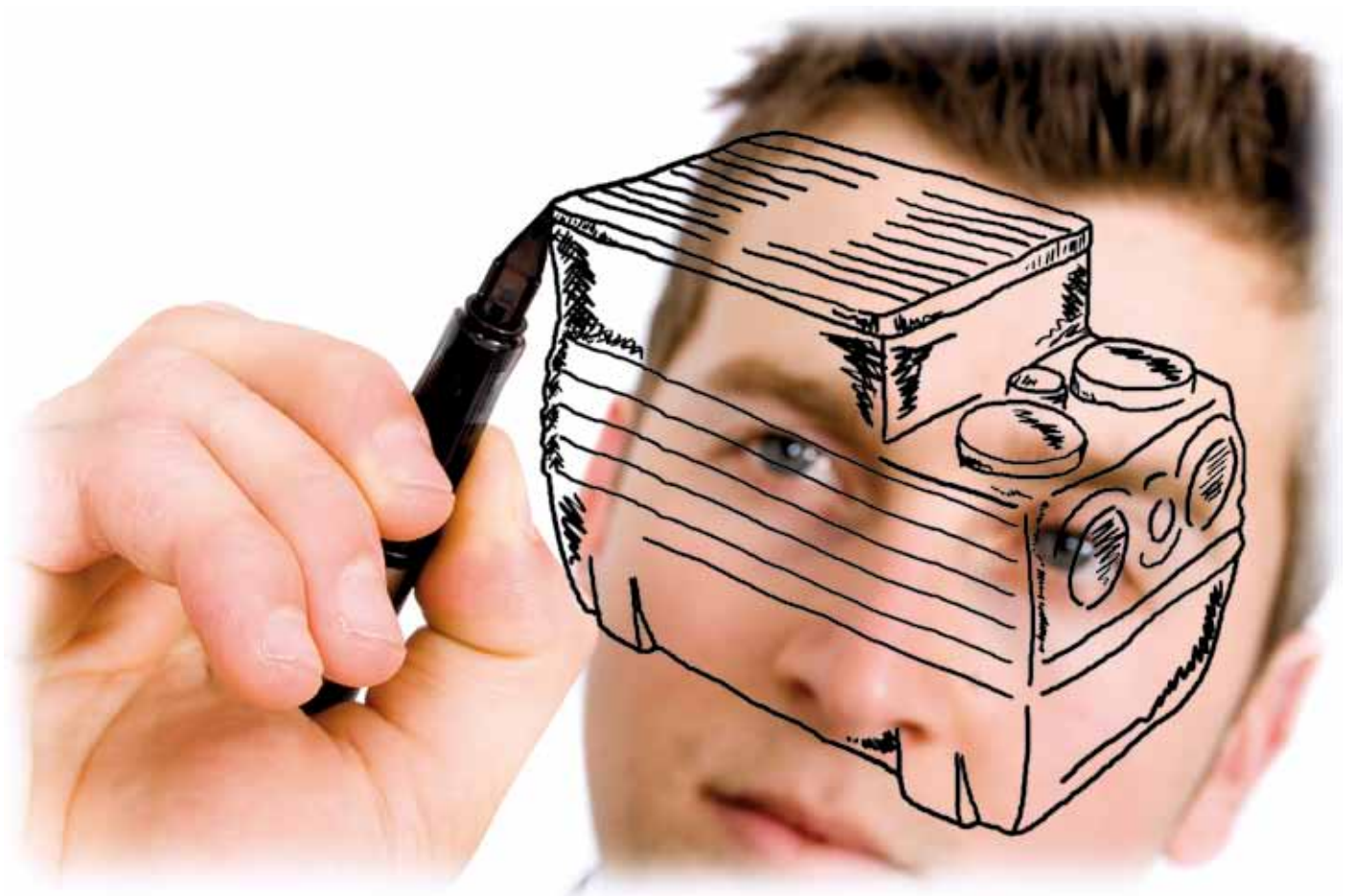


# 3.0

## LIFTING STATIONS



# 3.1 Lifting stations

Prefabricated **lifting stations** are an effective, economical solution for collecting domestic wastewater and transferring it to a sewer at a higher level or where there are barriers to gravity run-off, or where the wastewater requires grinding.

The **BlueBOX** series consists of rotary moulded polyethylene tanks of 90, 150, 250 litres, fitted to take one pump or 400 litres for two pumps. The special shape is inspired by the Pininfarina design of the Blue Series pumps. Their construction characteristics make BlueBOX systems extremely versatile and easy to install.



All product images are indicative only

## Operation and Use



The collection tank receives household wastewater from drains of any kind, and any rainwater or seepage drains.

The pump installed inside the tank refluxes the wastewater into the sewer.

The cover and pipe joints are fitted with seals to ensure airtight connections.

BlueBOX units are designed to allow a large number of intake, outlet and ventilation pipe connection options, allowing effective use whatever the space available.

A grinder pump capable of breaking down any solids in the wastewater, and refluxing it to large distances, can be installed inside the unit. This allows the pumped liquid to be passed through even small-diameter pipelines, with considerable financial savings on the total cost of the system.

# The BlueBOX range

BlueBOX stations are suitable for collecting and lifting clear, rain and waste water from washing machines, sinks and WCs in systems installed at a lower level than the sewer, in locations such as garages or basements.

The 90 and 150 models are compact and easy to install, making them ideal for civil and residential contexts.

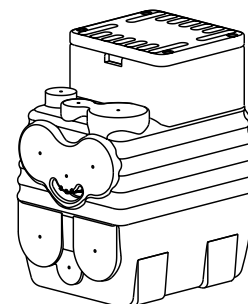
Thanks to the rich assortment of electrical and hydraulic accessories available, the 250 and 400 litre versions are suitable for industrial and residential installations.

\*The capacity is guideline and refers to the maximum volume capacity before the contents overflow from the tank.

## \* BlueBOX 90L

Capacity*	90 L
Dimensions (mm)	480x370x610
Nr. of pumps	1
Operation temperature	40°C (90°C short time)
Recommended pumps	DG Blue

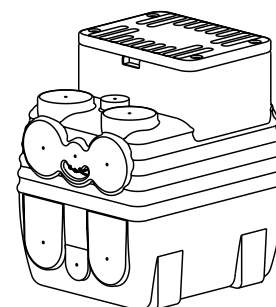
**Are included:** cable gland, PVC delivery pipe Ø 1 1/2", emergency draining connector, gasket kit for inlet pipe 1xØ110, 1x75, 1x50 mm, nr.1 special support to reduce the float switch level, use and maintenance booklet. Overflow alarm level OPTIONAL



## \* BlueBOX 150L

Capacity	150 L
Dimensions (mm)	580x480x660
Nr. of pumps	1
Operation temperature	40°C (90°C short time)
Recommended pumps	DG Blue, DG BluePRO, GR BluePRO

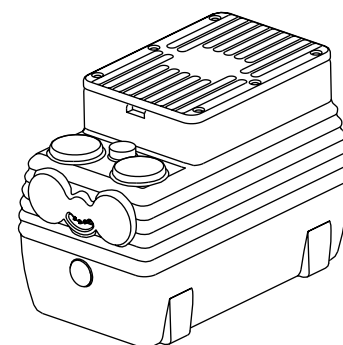
**Are included:** cable gland, PVC delivery pipe Ø 1 1/2", emergency draining connector, gasket kit for inlet pipes 2xØ110, 1xØ75 and 1xØ50 mm, nr.1 special support to reduce the float switch level, use and maintenance booklet. Overflow alarm level OPTIONAL



## \* BlueBOX 250L

Capacity	250 L
Dimensions (mm)	900x500x660
Nr. of pumps	1
Operation temperature	40°C (90°C short time)
Recommended pumps	DG Blue, DG BluePRO, GR BluePRO

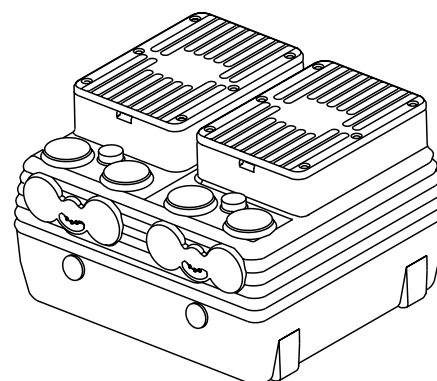
**Are included:** cable gland, nr. 2 gaskets pipe Ø110, nr. 1 gasket pipe Ø75 mm.



## \* BlueBOX 400L

Capacity	400 L
Dimensions (mm)	900x1000x660
Nr. of pumps	2
Operation temperature	40°C (90°C short time)
Recommended pumps	DG Blue, DG BluePRO, GR BluePRO, DGO

**Are included:** cable gland, nr. 4 gaskets pipe Ø110, nr. 2 gasket pipe Ø75 mm.



\* All weights and dimensions are indicative only

# How it's made

## Technical features

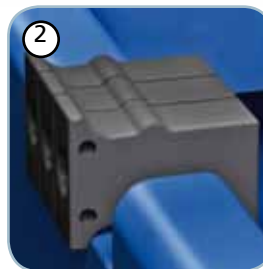
- 90 and 150 litres version for one pump directly installed
- 250 litre version for one pump and 400 litre version for two pumps with coupling device or directly installed
- walk-over cover
- O-ring seal between tank and cover
- simplified inlet, outlet and air venting pipe connections with seal
- integral lifting handles
- fitted for emergency emptying using a tap
- PATENTED airtight cable gland allowing easy pump removal for any maintenance work
- the side fins, in the middle of the tank, guarantee an excellent grip if the unit is installed in-floor (refer to relevant manual)



All product images are indicative only



**1** Sturdy walk-over cover  
The large top opening allows a backup pump to be used for emergency emptying, ensuring operations are simple and hygienic.



**2** PATENTED modular cable gland system allowing the pump to be removed with no need to disconnect or extract the power supply cable (refer to relevant manual).



**3** Guaranteed airtight thanks to "C" shaped double-lip NBR rubber seals. The seal allows the BlueBOX to be connected to the various pipelines quickly, solving the vibration problem.



**4** Wastewater pipeline inlet ports also provided on sides.



**5** Two integral handles for lifting and transport, for easy transfer even by hand.



**6** Emergency drainage fitting located low down in the unit.



# Recommended pumps

Additional configurations with submersible pumps from other Zenit families are possible. For further information, contact the Zenit Customer Service.

With vortex impeller	V	Phases	P2 (kW)	A	Rpm	Ø	Free passage	Suitable for BlueBOX			
								90L	150L	250L	400L
DG Blue 40/2/G40V A1BM/50	230	1	0.3	2.3	2900	G 1 1/2"	40 mm	●			
DG Blue 50/2/G40V A1BM/50	230	1	0.37	2.8	2900	G 1 1/2"	40 mm	●	●		
DG Blue 75/2/G40V A1BM/50	230	1	0.55	4.1	2900	G 1 1/2"	40 mm	●	●		
DG Blue 100/2/G40V A1BM/50	230	1	0.74	5.6	2900	G 1 1/2"	40 mm	●	●	●	●
DG BluePRO 50/2/G40V A1BM/50	230	1	0.37	2.8	2900	G 1 1/2"	40 mm		●		
DG BluePRO 75/2/G40V A1BM/50	230	1	0.55	4.1	2900	G 1 1/2"	40 mm		●		
DG BluePRO 100/2/G40V A1BM/50	230	1	0.74	5.6	2900	G 1 1/2"	40 mm		●	●	●
DG BluePRO 150/2/G50V A1CM/50	230	1	1.1	7.5	2900	G 2"	50 mm			●	●
DG BluePRO 200/2/G50V A1CM/50	230	1	1.5	10.0	2900	G 2"	50 mm			●	●
DG BluePRO 50/2/G40V A1BT/50	400	3	0.37	1.15	2900	G 1 1/2"	40 mm		●		
DG BluePRO 75/2/G40V A1BT/50	400	3	0.55	1.6	2900	G 1 1/2"	40 mm		●		
DG BluePRO 100/2/G40V A1BT/50	400	3	0.74	2.15	2900	G 1 1/2"	40 mm		●	●	●
DG BluePRO 150/2/G50V A1CT/50	400	3	1.1	3.2	2900	G 2"	50 mm			●	●
DG BluePRO 200/2/G50V A1CT/50	400	3	1.5	4.3	2900	G 2"	50 mm			●	●
DGO 150/2/G65V A1CM/50	230	1	1.1	8.2	2900	G 2 1/2"	65 mm				●
DGO 200/2/G65V A1CM/50	230	1	1.5	9.9	2900	G 2 1/2"	65 mm				●
DGO 150/2/G65V A1CT/50	400	3	1.1	2.7	2900	G 2 1/2"	65 mm				●
DGO 200/2/G65V A1CT/50	400	3	1.5	3.6	2900	G 2 1/2"	65 mm				●

l/s	0	2	4	6	8	10	12
l/min	0	120	240	360	480	600	720
m <sup>3</sup> /h	0	7.2	14.4	21.6	28.8	36.0	43.2

DGBLUE 40/2/G40V A1BM/50	6.0	4.0	1.7				
DGBLUE 50/2/G40V A1BM/50	7.6	5.5	2.9				
DGBLUE 75/2/G40V A1BM/50	10.1	8.5	5.7	2.6			
DGBLUE 100/2/G40V A1BM/50	11.6	10.2	7.6	4.3			
DG BluePRO 50/2/G40V A1BM(T)/50	7.0	4.9	2.4				
DG BluePRO 75/2/G40V A1BM(T)/50	10.2	8.0	5.5	2.6			
DG BluePRO 100/2/G40V A1BM(T)/50	11.4	9.8	7.4	4.4			
DG BluePRO 150/2/G50V A1CM(T)/50	12.3	10.7	8.8	6.5	4.4	2.4	
DG BluePRO 200/2/G50V A1CM(T)/50	15.3	13.7	11.7	9.4	7.1	4.7	2.5
DGO 150/2/G65V A1CM(T)/50	8.0	7.2	6.1	4.7	3.0		
DGO 200/2/G65V A1CM(T)/50	9.7	8.8	7.7	6.3	4.7	3.0	

Grinders	V	Phases	P2 (kW)	A	Rpm	Ø	Suitable for BlueBOX			
							90L	150L	250L	400L
GR BluePRO 100/2/G40H A1CM/50	230	1	0.74	5.5	2900	G 1 1/2"-DN32 PN6	●	●	●	●
GR BluePRO 150/2/G40H A1CM/50	230	1	1.1	7.5	2900	G 1 1/2"-DN32 PN6			●	●
GR BluePRO 200/2/G40H A1CM/50	230	1	1.5	10.0	2900	G 1 1/2"-DN32 PN6			●	●
GR BluePRO 100/2/G40H A1CT/50	400	3	0.74	2.7	2900	G 1 1/2"-DN32 PN6	●	●	●	●
GR BluePRO 150/2/G40H A1CT/50	400	3	1.1	3.2	2900	G 1 1/2"-DN32 PN6			●	●
GR BluePRO 200/2/G40H A1CT/50	400	3	1.5	4.3	2900	G 1 1/2"-DN32 PN6			●	●

l/s	0	1	2	3	4	5
l/min	0	60	120	180	240	300
m <sup>3</sup> /h	0	3.6	7.2	10.8	14.4	18.0

GR BluePRO 100/2/G40H A1CM(T)/50	18.0	16.4	14.4	11.5	6.9		
GR BluePRO 150/2/G40H A1CM(T)/50	21.1	19.6	17.9	15.1	10.4	3.0	
GR BluePRO 200/2/G40H A1CM(T)/50	27.0	25.6	23.6	20.7	16.1	9.3	



# Types of installation

BlueBOX lifting stations can be installed on-floor or in-floor.

They are prefitted for use with Zenit pumps with vortex impeller or with grinding systems, which must be ordered separately depending on the customer's specific requirements.

The large number of intake and outlet pipeline fittings allow optimal installation even on existing plants.

What's more, the many hydraulic and electric accessories make BlueBOX lifting stations convenient to install and use.

## BlueBOX 90 - 150

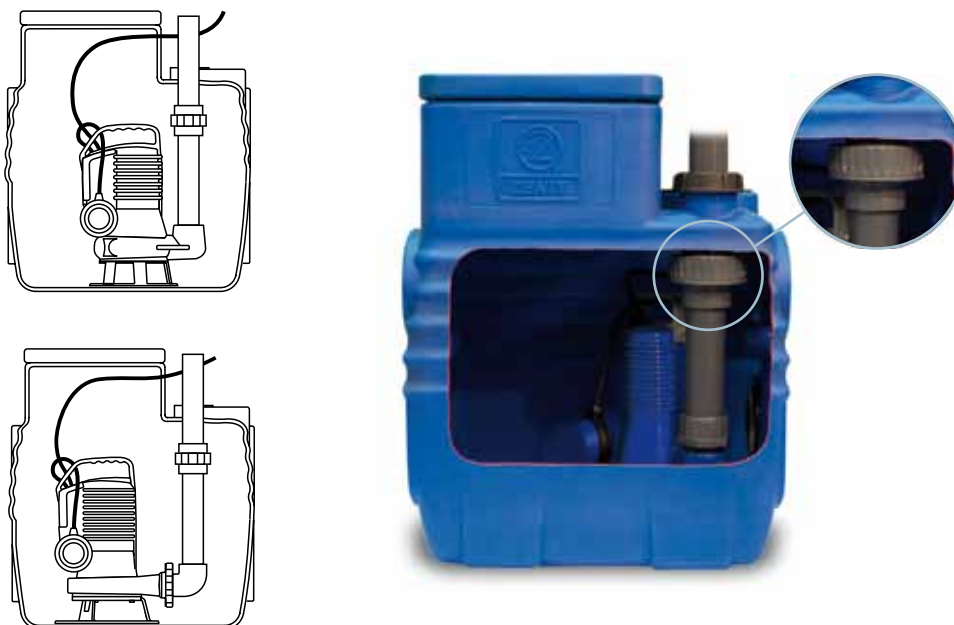
### Installations

In view of their small size, 90 and 150 litre models can be installed coupled directly to the pump. The bottom of the BlueBOX is shaped to hold the pump in position without the aid of additional accessories.

DG Blue pumps with vortex impeller or GRBlue models with grinder can be used.

With grinders, an ordinary threaded 90° bend must be used to change the direction of the delivery line.

The PVC outlet pipe connected to the pump has a threaded coupling which allows the pump to be easily separated from the pump for any maintenance requirements, without disconnecting the pipelines from the lifting stations.



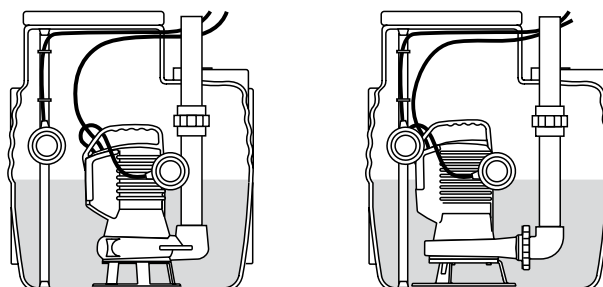
All product images are indicative only

### Electrical accessories

In these models, the use of pumps with start/stop float-switch is recommended.

This makes installation simple and inexpensive.

An optional float switch with an overflow alarm function, for connection to an electrical control panel, can be used if required.

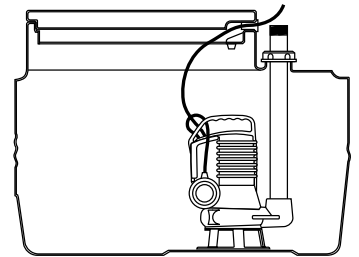


# BlueBOX 250 - 400

## Installations

### Fixed installation

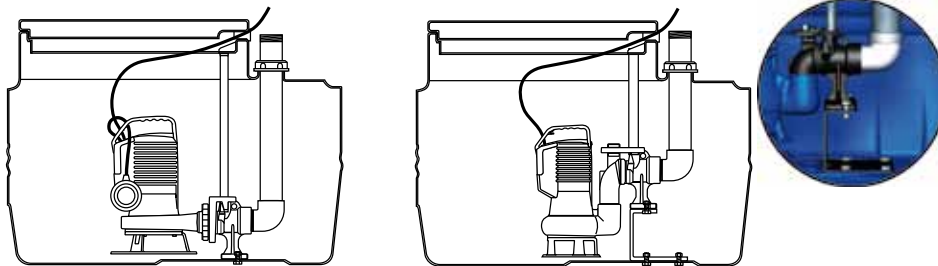
Ideal installation for pump with vertical delivery outlet up to 21/2”  
 The pump rests on the bottom of the tank. The specially shaped bottom keeps the pump in the correct position.  
 A ball check valve and/or a gate valve can be connected to the end of the delivery pipeline.  
 Permanent installation is definitely the simplest and most economical.



### Installation with bottom coupling device (DAC)

Installation with the bottom coupling device allows the pump to be raised and repositioned easily, with no need to empty the tank.  
 Vertical delivery pumps can be installed using a special kit for horizontal DAC units.  
 This is a versatile installation option which simplifies pump maintenance or replacement.

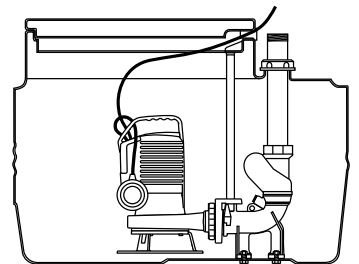
See Accessories section for further information.



### Installation with bottom coupling device (DAC) and ball valve (VAP)

This special, compact accessory provides all the benefits of an ordinary DAC, and also, thanks to an integral venting valve, it prevents air pockets from forming inside the pump body if the unit runs dry.  
 Thanks to this feature, a special ball check valve can be directly connected to the outlet of the DAC inside the BlueBOX, ensuring compact size and removing installation constraints.

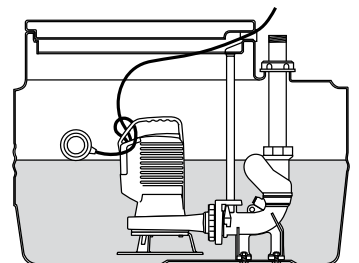
See Accessories section for further information.



## Electrical accessories

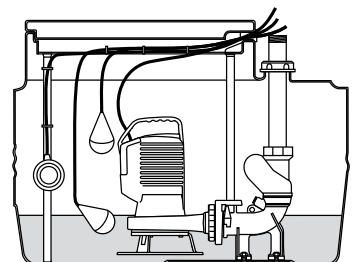
### With integral float switch

In the event of use of pumps with float switch, BlueBOX lifting stations can be used with no further electric accessories. The float switch starts and stops the pump depending on the level reached.



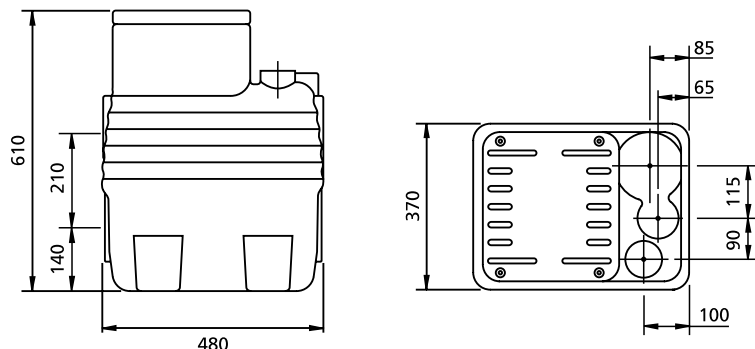
### Without integral float switch

In the event of use of pumps without float switch, the BlueBOX lifting station must be equipped with minimum and maximum level float switches, and alarm float switch if required.  
 The electrical panel complete with all features required for operation of one or two pumps (BlueBOX 400L) and accessories such as alternating control device or alarm with buzzer and light is available on request.



# Overall dimensions and weights

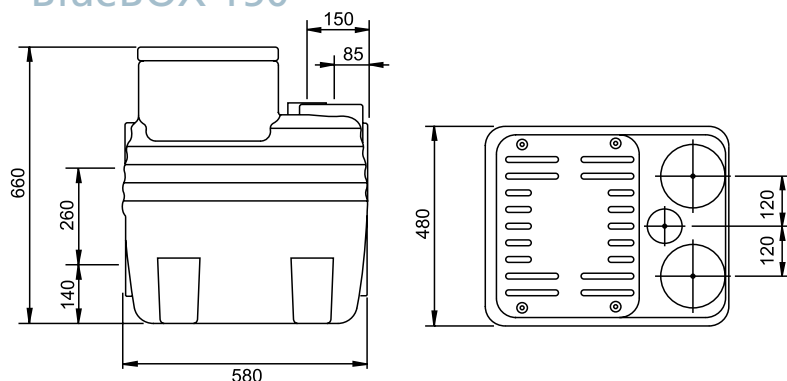
## \*BlueBOX 90



<b>Inlet</b>	9 x Ø 110mm 1 x Ø 75 mm
<b>Outlet</b>	1 x Ø 1 1/2" - 2"
<b>Weight</b>	kg 9

Dimension in mm  
Data without pump and accessories

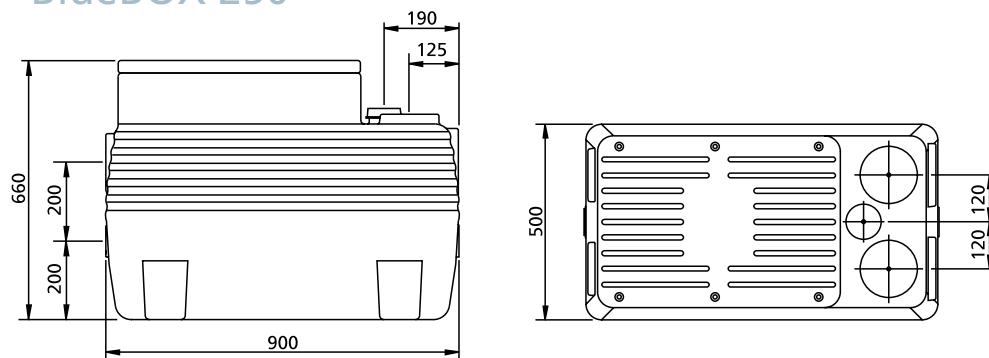
## \*BlueBOX 150



<b>Inlet</b>	10 x Ø 75 or 110mm
<b>Outlet</b>	1 x Ø 1 1/2" - 2"
<b>Weight</b>	kg 11

Dimension in mm  
Data without pump and accessories

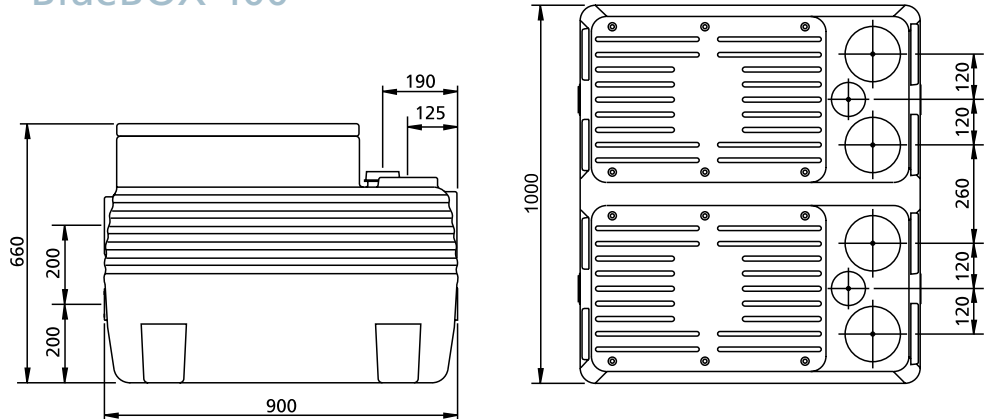
## \*BlueBOX 250



<b>Inlet</b>	10 x Ø 75 or 110mm
<b>Outlet</b>	1 x Ø 1 1/2" - 2"
<b>Weight</b>	kg 15

Dimension in mm  
Data without pump and accessories

## \*BlueBOX 400



<b>Inlet</b>	20 x Ø 75 or 110mm
<b>Outlet</b>	2 x Ø 1 1/2" ÷ 2 1/2"
<b>Weight</b>	kg 31

Dimension in mm  
Data without pump and accessories

\* All weights and dimensions are indicative only



# How to install it

Installing a BlueBOX lifting station could not be easier. It is supplied partially assembled to speed up installation by the customer. A large number of construction features simplify installation, and the accessories supplied allow the system to be optimised in all conditions.



The BlueBOX tank can be installed on-floor or in-floor. Inlet and output pipeline fittings are provided on three sides, allowing installation to be optimised to requirements.



Before the unit is actually placed in position, holes are drilled in the sides using a flared grinding tool to take the seals and then the pipes in the chosen positions.



To ensure perfect sealing, the double lip seal provided is fitted. No additional sealants are required, making installation an extremely quick procedure.



Once our BlueBOX has been placed in the installation position, the wastewater inlet and ventilation pipes are fitted.

## How to install it



The next step is to install the pump, which will certainly be easier if a BlueBOX with DAC was chosen. In this case, the flange provided has only to be slid along the guide tubes to achieve perfect coupling to the body of the DAC. The BlueBOX contains an accessory that can be fitted to allow emptying in emergencies through the drainage hole low down in the unit.



The electrical cables are passed through special patented rubber cable glands that ensure a perfectly airtight seal. Before fitting the cable, perforate the chosen cable glands with a sharp tool, but leave the others intact to keep liquids or smells inside the unit.



Once installation is complete and operation of the pump and its float switches has been checked, the cover can be screwed into place. The cover is walk-over but will not support vehicles.



The BlueBOX lifting station is ready for use. The vast range of plumbing and electrical accessories covers all installation requirements.