

PUXIN Assembly Biogas Plant

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1. General introduction of PUXIN Assembly Biogas Plant

(1) Definition

PUXIN Assembly Biogas Plant is a Do It Yourself (DIY) Kit BIOGAS SYSTEM for convenient transport and easy assembly. It is surface-mounted; there is no need for earthwork and heavy construction. It can be assembled by client itself according to the manual we provide without any training. It is a high efficient biogas system with hollow sunlight sheet green house and pad for insulation and heating.

(2) Application

It is applied to treating organic waste to get biogas for generating electricity, cooking etc. and nutritious liquid or solid organic fertilizer for gardening, agriculture etc.

It is the ultimate solution for families, restaurants, hotels, resorts, livestock farms, slaughter house, food processing plant, municipalities to treat their organic wastes (food waste, sewage sludge and animal manure etc.)

(3) Composition

The product is composed of a green house made with hollow sunlight sheet and mental supporting frame, a membrane digester with a gas storage bag combined in one, a stainless steel sink, a stainless steel outlet, a biogas filter and a biogas booster pump. The membrane of the digester has the characteristics of anti-aging, acid and alkali resistant and rodent resistance.

When required,

A feeding pump for sewage sludge disposal can be added;

A circulating pump for raw material feeding and anaerobic digestate mixing can be added;

A grinder for food waste shredding can be added.

And an electric heater can be added for cold regions.

(4) MATERIAL SPECIFICATION

Inlet and outlet of digester: Stainless steel

Mental supporting frame: Galvanized iron

Hollow sunlight sheet of green house: PE

(5) EXCELLENT SAFETY FEATURE

There is no safety problem of the biogas digester, each digester is installed with pressure releaser, when biogas pressure in the digester is too big, biogas will flow into atmosphere through pressure releaser.

(6) ODORLESS

The biogas fermentation process is happened in the sealed membrane digester and biogas is collected and desulfurized and be used, so there is no smell for the unit.

(7) TEMPERATURE FOR BIOGAS FERMENTATION

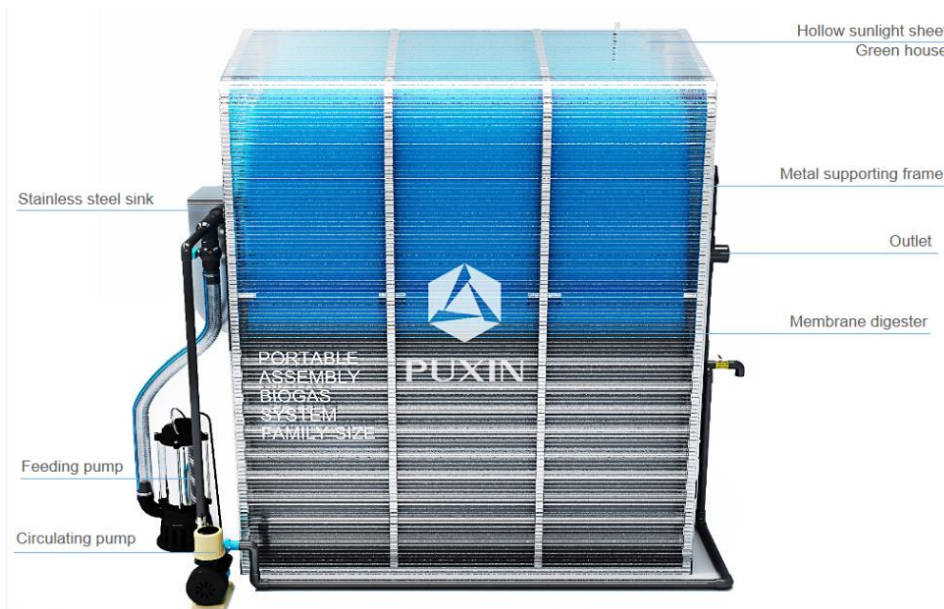
Normal temperature: 10 -30 Celsius

Middle temperature: 30 -35 Celsius

Higher temperature: 50-55 Celsius

Note: the temperature is not higher than 60 Celsius

1. Puxin family size assembly biogas plant PX-ABS-3.4M3



(1) Application

It makes you treat your organic waste locally, use the biogas for cooking and electricity, feed your garden with nutritious liquid fertilizer, save on your energy bill and garbage disposal fee!

It is the ultimate solution for families, restaurants, hotels and resorts to treat their organic wastes (food waste, sewage sludge and animal manure etc.)



(2) TECHNICAL DATA

Waste Treatment Capacity:

Raw material	Maximum (Kg/d)	Biogas production (M3/d)
Food waste	25	2
Pig manure	45	2
Cow manure	60	2
Chicken manure	26	2
Human manure	32	2
Vegetable	65	2

Output: Biogas 2m³/day and Clean natural liquid fertilizer, biogas is enough for one family daily cooking and lighting purpose.

Portable Assembly Biogas System
Family Size

Transportation
Industrialized and commercialized product. Pre-packed, easy for transportation.

Operation and maintenance
Portable assembly biogas system design is like a sun room, this design can make gas production efficiency at high level. The operation is simple & easy, user can do operation by himself.

Installation
Installation is simple, no need of engineering facilities. No need special tool, user can easily do installation. The biogas digester is removable, portable and it can be combined with one another together.

Safety
Portable biogas digester is setup on the ground, this design avoid potential risk falling into pool for human & animal by accident. When discharge material, no need go inside the digester (traditional design need go inside digester pool). Biogas storage & production bag is made of macromolecular structure poly layer design. There is no leaking risk.

Weight for digester (empty): 150 kg

Dimensions: 195H/156L/120W cm

Space of green house: 3.4m³

Volume of digester: 1.7m³

Volume of gas storage: 1.3m³

PS: The product is convenient for commercialization: It can be easily carried, displayed on exhibitions and supermarkets, and be delivered in cardboard boxes.

2. Puxin medium size assembly biogas plant PX-ABS-15M3, PX-ABS-66M3



(1) Application

It is designed for livestock farm, Slaughter house and food processing plant to treat their organic wastes and waste water; for restaurants, hotels, and campus and residence community to treat their organic wastes (food waste, sewage sludge and animal manure etc.)

(2) TECHNICAL DATA

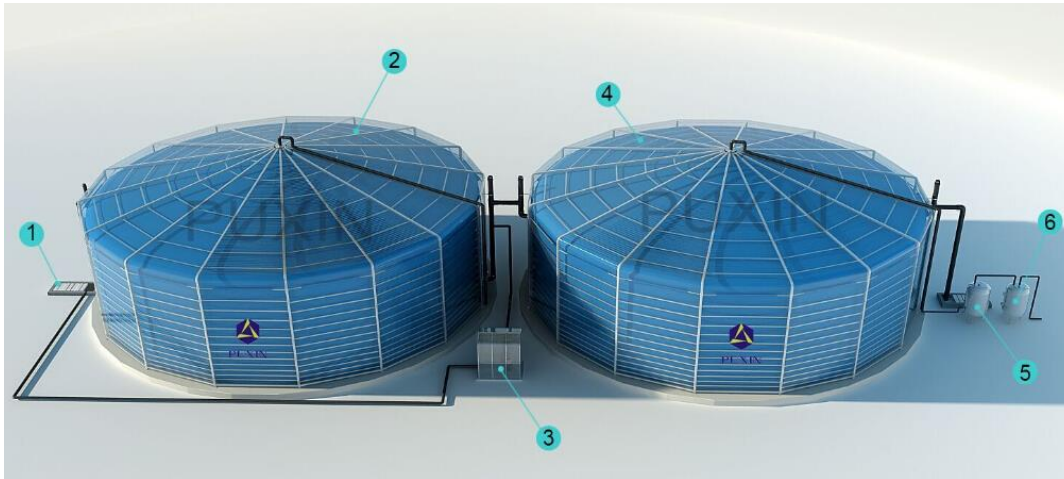
Waste capacity:

Raw material	Maximum (Kg/day)	Maximum (Kg/day)
Food waste	180	625
Pig manure	320	1100
Cow manure	450	1500
Chicken manure	200	660
Human manure	250	830
Vegetable	500	1600

Output: Biogas 15m³ per day and 50m³ per day and organic liquid fertilizer, it can produce 22.5KWH and 75KWH of electricity per day or can be used for cooking purpose.

No.	Greenhouse volume (m ³)	Dia. of digester (m)	Height (M)	Water level (m)	Fermentation capacity (m ³)	Gas storage (m ³)
1	15.0	2.908	2.5	1.25	8.3	6.2
1A	15.0	2.98	2.5	2	13.28	1.22
2	66.0	5.88	3	2	54.38	3.21

3. Puxin large size assembly biogas plant PX-ABS-260M3, PX-ABS-1380M3



1 Pretreatment tank ② First stage digester ③ Circulation pump ④ Second stage digester ⑤⑥ Biogas dehydrator and desulfurizer

(1) Application

It is designed for medium and large farm, medium and large amount of waste water or medium and large size of MSW treatment.

(2) TECHNICAL DATA

Waste capacity:

Raw material	Maximum (Ton/d)	Maximum (Ton/d)
Food waste	2.5	12.5
Pig manure	4.5	22.5
Cow manure	6	30
Chicken manure	2.7	13.5
Human manure	3.4	17
Vegetable	6.5	32.5

Output: Biogas 200m³ per day and 1000m³ per day and organic liquid fertilizer, it can produce 300KWH and 1500KWH of electricity per day or can be used for cooking purpose.

No.	Greenhouse volume (m ³)	Dia. of digester (m)	Height (M)	Water level (m)	Fermentation capacity (m ³)	Gas storage (m ³)
1	260.0	8	5.72	4	200	50
2	1380	16	7.46	5	1000	200