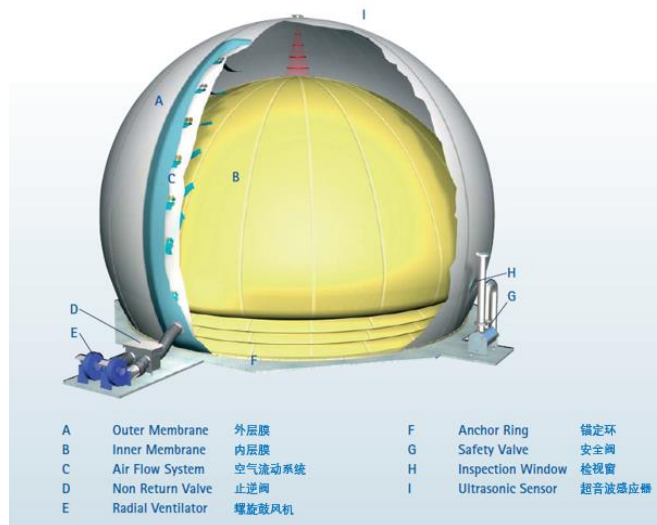




**Double Membrane  
Gas Storage Tank**  
双层膜生物气体储存器  
(DMGS)

## Introduction 简介

# Double Membrane Gas Storage (DMGS) Tank 赛特乐双层膜生物气体储存器



3D model of DMGS

双层膜生物气体储存器3D效果图

**Double Membrane Gas Storage (DMGS) Tank** consists of an outer membrane which forms the outer shape of the tank, as well as an internal membrane and a bottom membrane which form the actual gas space. The system is equipped with explosion-proof blower which automatically provides air to the space between inner and outer membrane, and thus keeps the gas pressure at a constant level – irrespective of inflow or outflow of gas. The pressurised air keeps the external membrane in shape and allows the gas holder to withstand the external load under adverse weather conditions. The volume of the gas holder is determined by the gas inflow and outflow. Air is delivered through the hose, which is installed in the external membrane, by the blower to the space between the external membrane and internal membrane. As the internal pressure increases, the biogas will be pressured out while the external membrane keeps in a sphere shape. The external membrane, internal membrane and bottom membrane are fused by HF welding process. The materials used are high strength polyester fibre and acrylic varnish with special PVC treatment. The maximum tensile strength of PES fibre is measured according to DIN 53354 and meets the standard of 5,000 N tension per 5 cm wide strip in both horizontal and vertical directions. According to DIN 4102 - B1, the fibre has high fire resistance and special finish formulation to provide UV protection and leakage protection. At the same time, the fiber will not react with or be affected by various biogas components and the color of the membrane is gray. The structure and the size of the Sattler DMGS meets all relevant standards. In addition, the biogas storage tank can operate under strong wind and heavy snow. Operate temperature is between -40°C and +70°C.

**赛特乐双层膜生物气体储存器 (DMGS)** 由外层膜和内层膜组成。外层膜和内层膜之间气密，外层膜构成存储器外部球体形状，内层膜则与底膜围成内部空间以存储生物气体。存储器设有防爆鼓风机自动按要求调节气体的进/出量，以保持存储器内气压的稳定，同时在恶劣天气条件下保护外层膜。空间的大小由进入与排出气体的体积决定。外层膜设有一道上下走向的软管，由上述鼓风机把外面空气经此软管送进外层膜与内层膜之间的空间，使外层膜保持球体形状并同时把生物气体压送出去。内外层膜及底膜均经HF熔接工序熔接而成，所用材料为经过表面特殊PVC处理的高强度聚酯纤维和丙烯酸脂清漆。PES纤维的最大拉伸强度是根据DIN 53354标准测试的，而且在经纬方向均达到了每5 cm宽的长条可以承受5,000 N拉力的标准。根据DIN 4102 - B1标准，该纤维具有高度防火性能，特殊表面处理的配方使之具有防紫外线及防泄漏功能。同时，该纤维不会与各种生物气体成分发生反应或受之影响，膜的颜色为灰色。赛特乐双层膜生物气体储存器的建造和面积符合所有相关标准。此外，存储器可抵抗强风的吹刮及积雪的重压，保证设备安全运行。适用温度为-40°C至+70°C。

## Major Features 主要特点

### Easy to Install 安装便易

During installation, intake pipe, exhaust pipe and condensate exhaust pipe need to be sealed with the bottom membrane completely airtight by using Sattler special sealing technology. The bottom membrane needs to be fixed on the cement foundation. The external and internal membrane are fixed to the cement foundation with embedded bolt or expansion bolts about 3/4 of radius from the centre of the foundation. Installation normally takes a few days.

安装时，进气管、排气管及冷凝水排水管道等使用赛特乐公司的特殊密封技术与底膜密封至完全气密，底膜固定在水泥基座上，然后在离球心四分之三处用固定环将储存器用预埋或膨胀螺栓固定在水泥基座上即完成储存器的安装工作，安装一般仅需几天。



Installation Process Diagram  
安装过程示意图

### Customised Size 定制大小

Different positioning/installation/sealing methods can be customised according to owner's requirements:

可因业主需求以定制不同的定位/安装/密封方法：

Model 型号	Volume (m <sup>3</sup> ) 容量	Diameter (m) 直径	Height (m) 高
B9 108/205	50	4.90	3.70
B9 110/205	100	6.10	4.60
B9 113/205	210	8.00	6.00
B9 116/205	400	9.80	7.40
B9 116/250	780	12.30	9.20
B9 118/250	1,190	14.10	10.60
B9 120/250	1,530	15.30	11.50
B9 124/250	2,640	18.40	13.80
B9 126/250	3,510	20.20	15.10
B9 128/250	4,560	22.00	16.50
B9 130/250	5,360	23.50	17.60

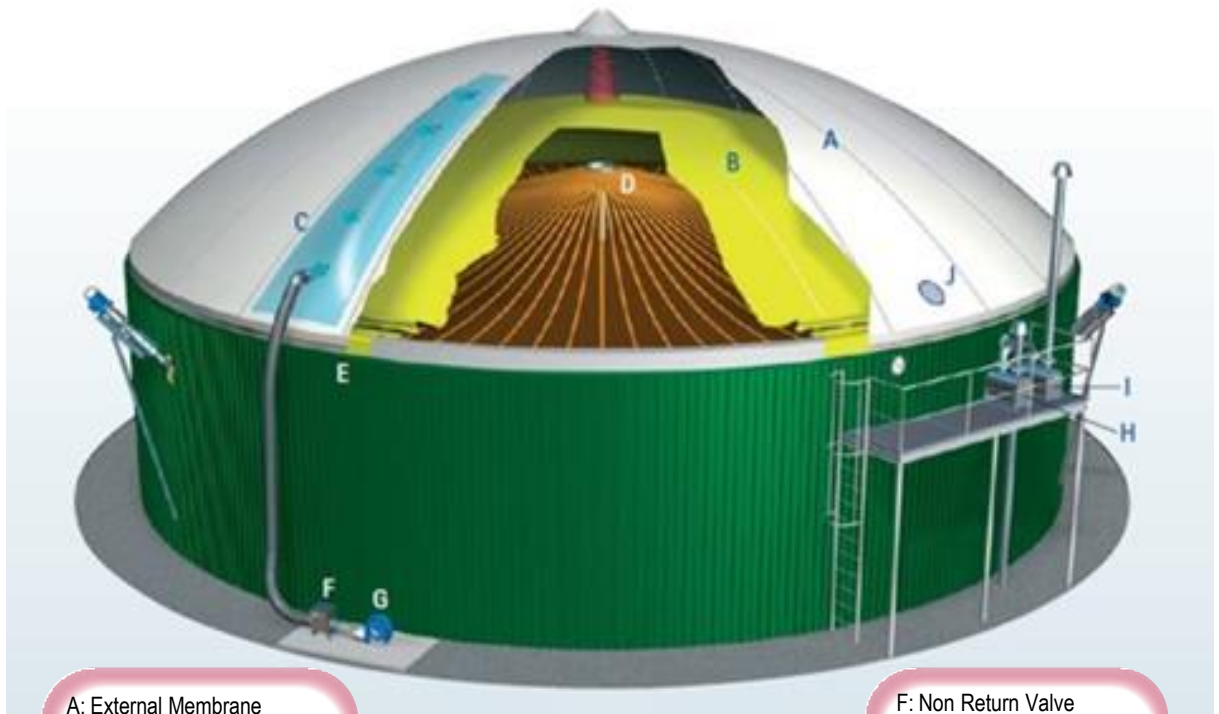
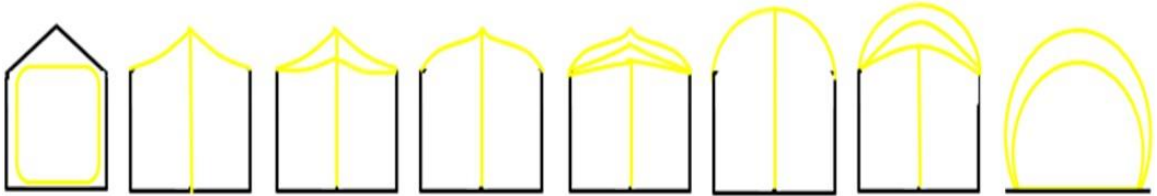
\* Other sizes are also customisable/其它大小也可定制

## Job Reference 案例

### Multiple Shape of Storage Tank 多种形状储存器

In addition to the DGMS, Sattler also offers a variety of biogas containers for customers to choose from:

除了双层式储存器柜外，赛特乐公司还提供多种形状的生物气体储存器供客户选择：



- A: External Membrane  
外层膜
- B: Internal Membrane  
内层膜
- C: Air Flow System  
空气流动系统
- D: Rope System  
支承缆索系统
- E: Anchor Ring  
锚定环

**Double Membrane Gas Storage Tank-Mounted**  
罐顶式生物气体储存器

- F: Non Return Valve  
止回阀
- G: Blower  
古风机
- H: Low Pressure Valve  
低压安全阀
- I: Excess Pressure Valve  
高压安全阀
- J: Inspection Window  
检视窗

#### Headquarters 总部

13/F, Island Place Tower, 510 King's Road, North Point, Hong Kong ☎ (852) 2561 8278  
香港北角英皇道 510 号港运大厦 13 楼

@ info.env@atal.com

[www.atal.com](http://www.atal.com)

#### Other Offices 其他办事处

UK 英國    Beijing 北京    Shanghai 上海    Nanjing 南京    Guangzhou 广州    Macao 澳门



ATAL offices



ATAL LinkedIn



ATAL WeChat