

BIOBOX 1500 LP

Upgrading - membrane filtration

Our **Biobox 1500 Low Pressure** is equipped with a **highly efficient 3-stage membrane filtration system**. These membranes allow the separation of CO₂ from the gas, achieving a flow of natural gas greater than 99% in methane.

In our membrane filtration system, the gas initially enters the pretreatment towers. Through the activated carbon adsorption process, we ensure that components such as hydrogen sulfide (H₂S), siloxanes and volatile organic compounds (VOCs) are removed. Next, the gas is compressed by an MX 400™ reciprocating compressor efficiently integrated into the upgrading process, thus reaching the necessary pressure to enter the membrane system.

Thanks to the difference in permeability between carbon dioxide and methane gas, the separation in the membranes of the components results in **vented CO₂ minimal CH₄ losses (less than 1%) while producing high quality gas (+98% CH₄)**.

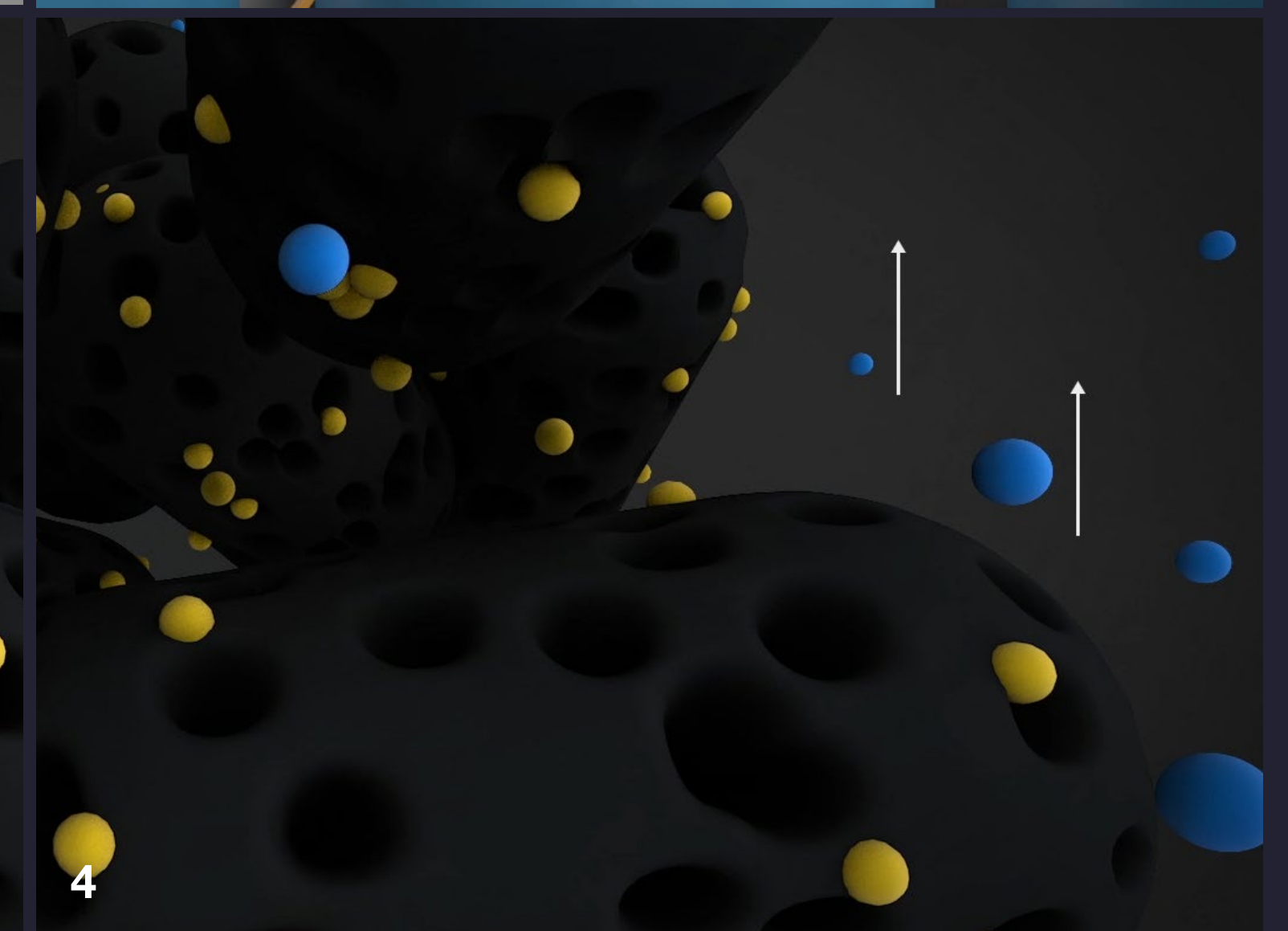
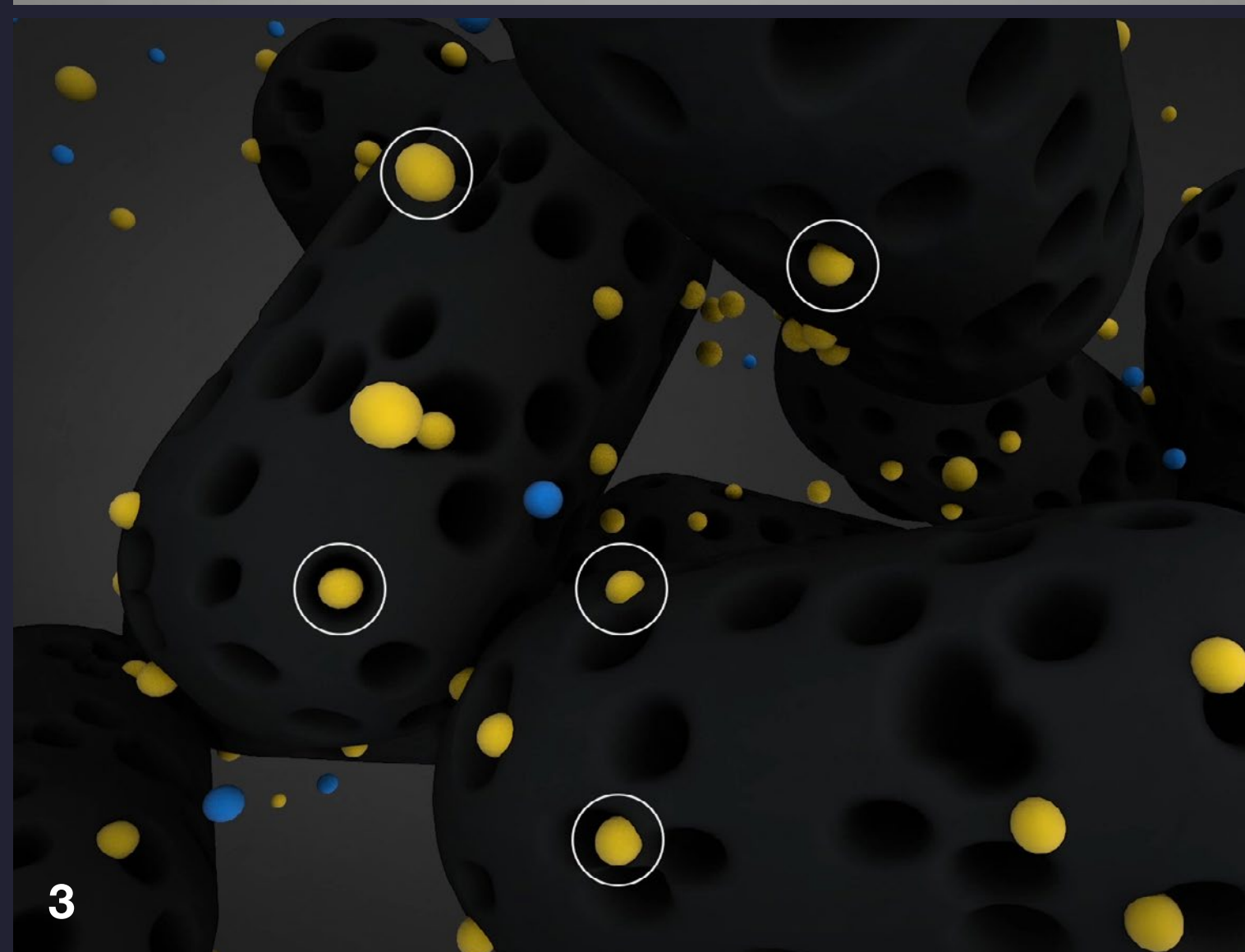
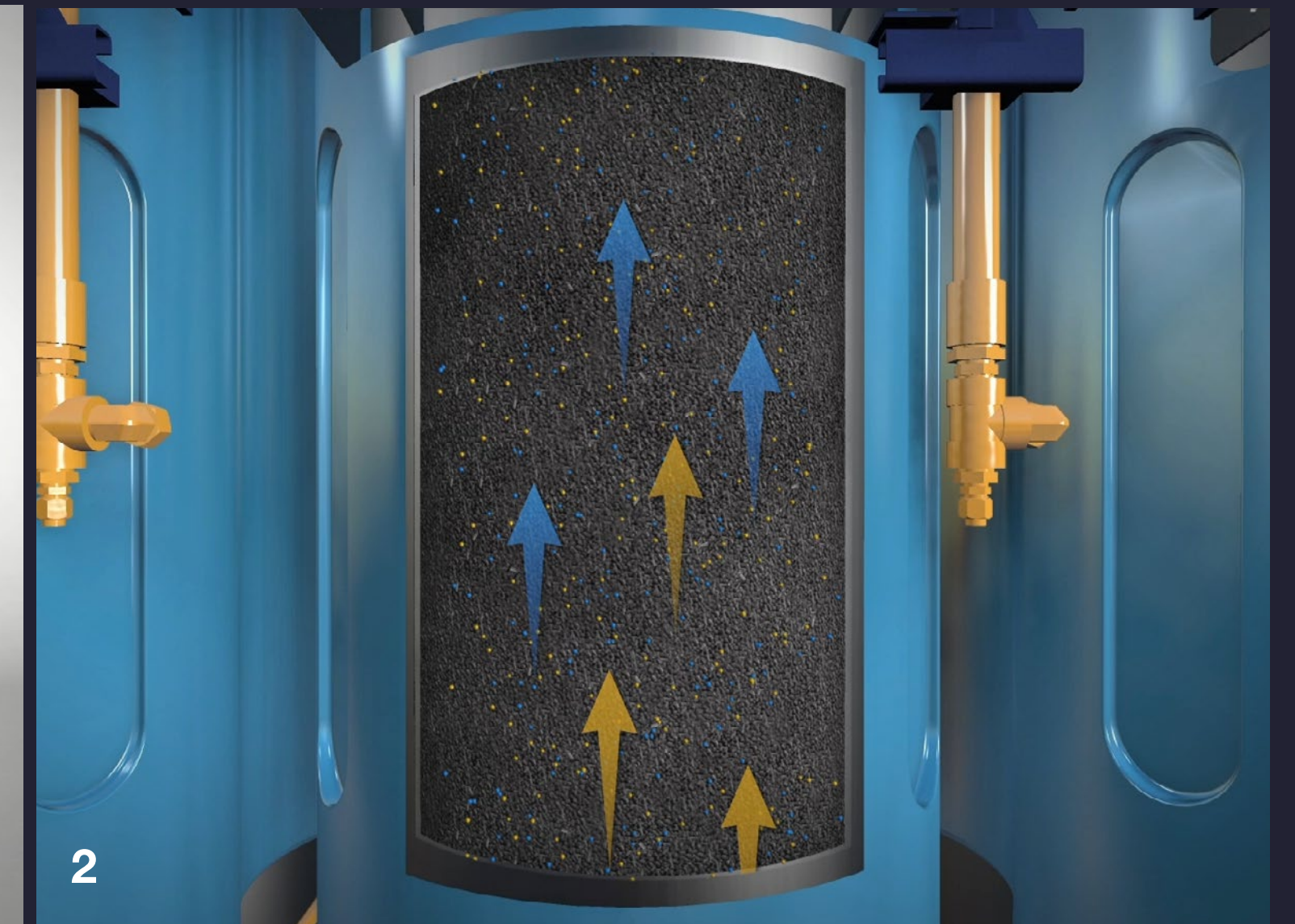
Humacao, Puerto Rico



Process description:

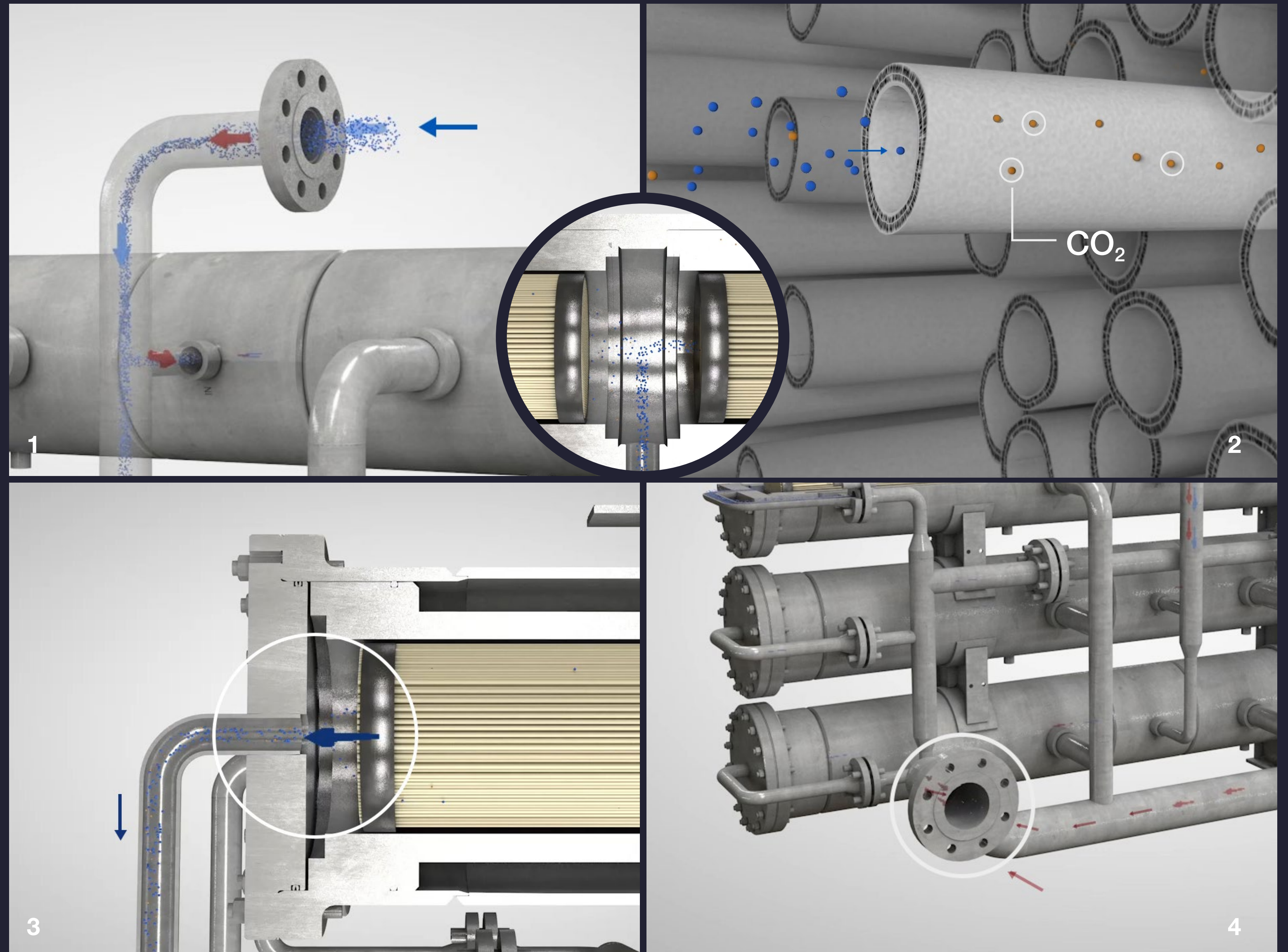
Adsorption treatment with activated carbon

1. Modular pre-treatment towers.
2. The raw gas enters the adsorption column.
3. H_2S and Siloxanes adhere to the surface of the activated carbon.
4. Biogas outlet.



Process description:
Filtered by membranes

1. Gas inlet into the membrane filter.
2. Separation of CO₂ due to its permeability with respect to CH₄ within the membranes.
3. Obtaining pipeline quality natural gas.
4. CO₂ capture/vent.



Datasheet

		BIOBOX 1500 Low Pressure	
Electric Installed Power	KW	425	
	HP	570	
Gas characteristics		Inlet	Outlet
Pressure (Min/Max)	barg	0.8 to 1	up to 13
	psig	11.6 to 14.5	up to 188
Temperature (Min/Max)	°C	10 to 50	30 to 45
	°F	50 to 122	86 to 113
Flow (Min/Max)	Sm ³ /h	1500	750
	MSCFD	1275	636
Water	H ₂ O	Saturated	Dry
Carbon Dioxide	CO ₂	30% to 50%	< 0.2%
Hydrogen Sulfide	H ₂ S	up to 2000 ppm	< 5 ppm
Nitrogen	N ₂	0.5% to 2%	< 4%
Methane	CH ₄	40% to 60%	> 96%
Oxygen	O ₂	0.5% to 1%	< 0.5%
Siloxanes	-	up to 20 ppm	< 0.1 ppm
Features			
Intrinsically Safe	Yes		
Monitoring	Yes. 24/7 through our Galileo Global Link Scada System		
Modularity	Yes		
Plug & Play	Yes		
Scalability	Yes		

All values are expressed under a regular operation and may present changes with variation of gas composition and environmental conditions.

Datasheet

BIOBOX 1500 Low Pressure			
Dimensions	Towers	3.4m L x 2.25m W x 4.9m H	11.15 ft L x 7.38 ft W x 16.07 ft H
	Main Module	12.8m L x 2.2m width x 2.8m H	42 ft L x 7.22 ft W x 9.18 ft H
Weight	Towers	23 ton (carbon included)	50706 lb (carbon included)
	Main Module	26 ton	57320 lb
Features			
Transportable		Yes	
Intrinsecally Safe		Yes	
Monitoring		Yes, 24/7 through our Galileo Global Link Scada System	
Modularity		Yes	
Plug & Play		Yes	
Scalability		Yes	
Electrical parameters*			
Main Compressor Start System		Inverter	

*For lower pressures than 0.8 barg (11.6 psig), a blower skid can be incorporated before the inlet to the unit (optional).
 All values are expressed under a regular operation and may present changes with variation of gas composition and environmental conditions.

Tracked under Galileo Global Link Scada System

We don't just sell technology; we provide a service. We will be with you 24/7, monitoring key parameters through our **Galileo Global Link Scada System*** and providing on-the-ground support to keep your uptime as high as possible.

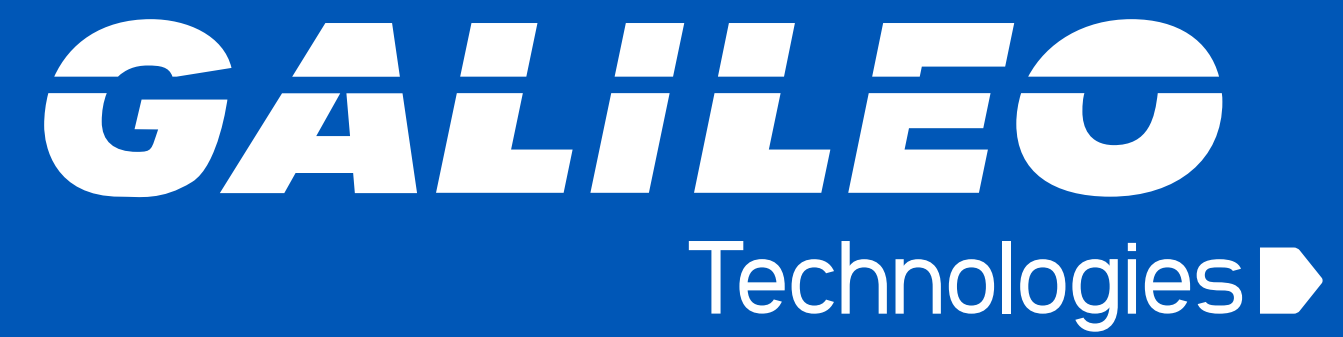
Up to 99% Methane Recovery, easily tracked through a single integrated system.

Key variables from production, transportation and delivery to end user can be tracked on-line, remotely and in real time in our proprietary SCADA system.

Our integrated solution not only favors efficient troubleshooting and resolution, but it also provides a single control system for the complete operation, from inlet, to gas upgrading, to the outlet of the Virtual Pipeline.



*This is an additional service and is contracted separately.



info@galileoar.com

www.galileoar.com

Follow us:



New Jersey
333 Cedar Ave
Middlesex, NJ 08846
United States

Buenos Aires
Av. General Paz Provincia 265
(B1674AOA) Sáenz Peña,
Partido de Tres de Febrero
Pcia. de Buenos Airees,
Argentina

São Paulo
Rua Doutor Renato Paes de
Barros, 750, Cj. 32,
Itaim Bibi, São Paulo, SP, Brasil
CEP 04530-001