

## BIOGAS DEHUMIDIFICATION SYSTEM

### HRS BDS SERIES



The HRS BDS Series is an efficient solution to cool and dehumidify biogas for combustion with two standard options. The system condenses up to 90% of the water contained in the gas, which is continuously separated before the lean biogas is ready for use. This is a necessary process for all bio-energy plants that use biogas as fuel in CHP engines.

A heat recovery step can be included as a standard option thus reducing energy costs up to 20%. Cold gas at 5°C is used to precool the incoming gas at 40°C, whilst raising the temperature of the dehumidified gas to approximately 36°C before use. A chiller is included to provide the energy required for the process.

The BDS comes complete with controls in a packaged 'plug and play' skid.

## TECHNICAL DATA

### APPLICATIONS

Biogas Dehumidification  
Biogas Cooling

### SURFACE FINISH

External: Matt  
Internal: Matt

### STANDARD MATERIALS OF CONSTRUCTION

Service Side: AISI 304 Stainless Steel  
Biogas Side: AISI 316L Stainless Steel  
*Other material options available*

### STANDARD DESIGN CONDITIONS

Service Side: 6 bar/80°C  
Biogas Side: 2 bar/80°C

### STANDARD CONNECTIONS

Service Side: Flange  
Product Side: Flange  
*All flange types available*

### FEATURES

- Condenses >90% of the water present in biogas
- Up to 20% energy recovery available, reducing energy costs
- Skid-mounted for easy access and freedom of movement
- Automatic control panel
- ATEX-compliant version available
- Unit insulated with Armaflex

### RANGE

MODELS	GAS FLOW (kg/hr)	T GAS IN (°C)	T GAS MIN (°C)	T GAS OUT (°C)	T SERVICE IN (°C)	T SERVICE OUT (°C)	THERMAL DUTY CHILLER (kW)	ELECTRICITY CONS. (kW)
BDS 13	161 - 200	40	7	31	0.5	5.5	10.8	4.5
BDS 21	200 - 350	40	7	32	0.5	5.5	15.3	6.6
BDS 37	350 - 540	40	7	34	0.5	5.5	26.1	11.4
BDS 55	540 - 700	40	7	34	0.5	5.5	30.2	12.6
BDS 73	700 - 1050	40	7	36	0.5	5.5	45	20.7
BDS 121	1050 - 1700	40	7	36	0.5	5.5	72.5	30.4

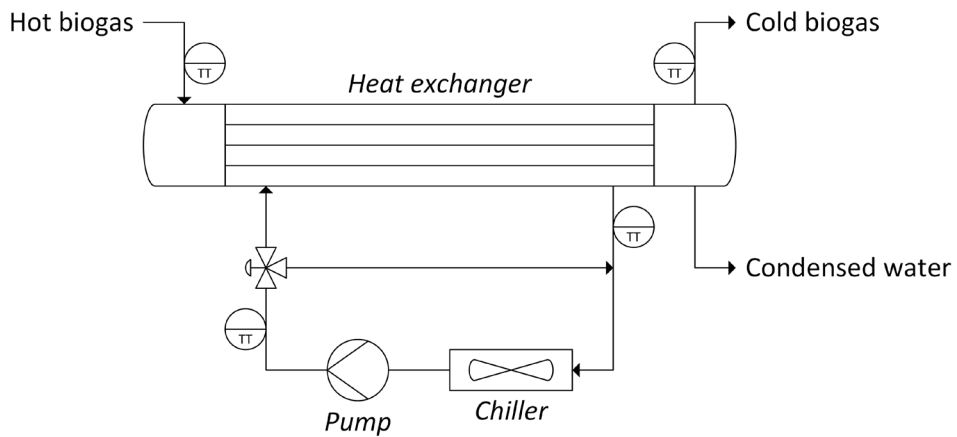
### DESIGN CODE AND COMPLIANCE

PD 5500, PED 2014/68/EU, ASME | TR CU 032, DOSH Compliant

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#### STANDARD OPTION



#### HEAT RECOVERY OPTION

