



For a Greener Future



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SMALL MEDIUM SIZED MODULAR LNG PLANT

C-LNG Solutions Pte. Ltd.
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somf member

Small / medium-sized modular LNG plant

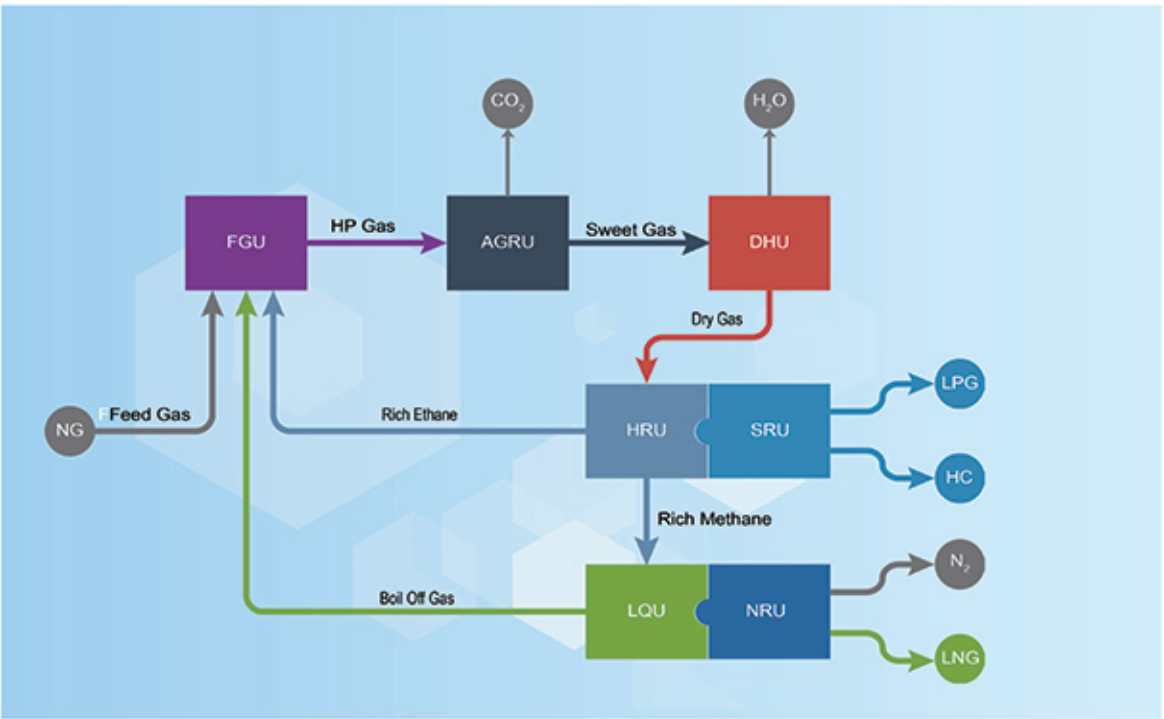
Natural gas liquefaction unit is a device that uses cold energy provided by refrigeration module to liquefy natural gas after removing impurities in natural gas successively.

It mainly includes intake unit (FGU), acid gas removal unit (AGRU), dehydration unit (HRU), heavy hydrocarbon removal unit (HRU), heavy hydrocarbon separation unit (HSU), liquefaction unit (LQU), nitrogen removal unit (NRU).

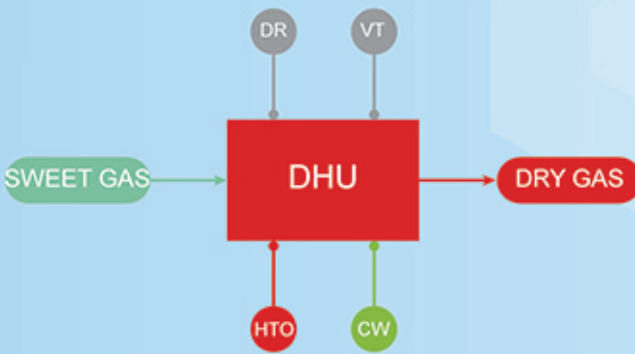
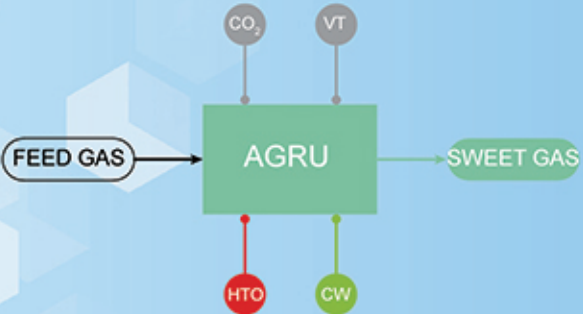
Capacity range from 5 to 100MMscfd, and modules can be optimized depending on gas composition. Unit energy consumption 400-650KW/t, total investment 350-450USD/ ton*a.

Technical specifications

Capacity: 5~100MMscfd
Specific duty: ≤0.45kW/kg
Investment : 550-850USD/ ton*a

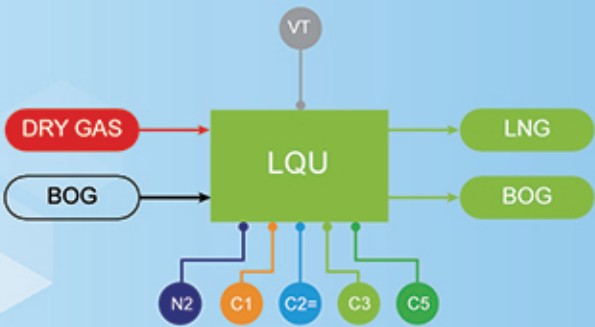


When the carbon dioxide content of natural gas exceeds the limit, it can cause clogging of the cold tank. AGRU uses activated MDEA solvent to remove CO₂ to ensure CO₂ content < 50ppm. The solvent is regenerated using hot oil. If necessary, we will use a two-stage absorption or regeneration process to reduce the energy consumption of regeneration.



When the dew point of natural gas exceeds the limit, the cold box will be frozen and blocked. DHU uses a three - or two-column molecular sieve dehydration process to ensure that the water dew point is below -70°C. Molecular sieve is regenerated using hot oil.

Natural gas liquefaction unit is a refrigeration cycle composed of mixed refrigerants to provide cold energy and ensure that natural gas meets storage conditions. The optimal refrigerant composition is obtained through optimization calculation to ensure the lowest energy consumption in the liquefaction process.



20MMSCFD Modular LNG Plant Module List

NO.	Module name	Length * width * height, unit: m	Weight (t)	QTY	Total weight (t)
1	Feed gas metering, filter system Module	12*3*4	30	2	60
2	Deacidification system Module	12*3*4	35	3	105
2.1	Absorption tower/desorber	φ0.82m, height: 25m/φ0.82m, height:	30	1	30
3	Dehydration system and Mercury removal system	12*3*3.4	35	1	35
3.1	Molecular sieve tower	φ1.5m, height: 10m	12	3	36
5	Liquefaction system and Heavy hydrocarbon separation	4*4*15	35	1	35
6	Refrigerant circulation system Module	12*3*3.5	30	4	120
7	Refrigerant makeup system Module	1 batch of cylinders	25	1	25
8	Plant power distribution E-house	12*3*3	30	4	120
9	Plant control E-house	12*3*3	35	2	70
12	Utilities (IA,N ₂ , desalted water,) Module	12*3*3	35	2	70
11	Dispersion system	12*3*3/φ3m, height: 18m	25	1	25

10MMSCFD Modular LNG Plant Module List

NO.	Module name	Length * width * height, unit: m	Weight (t)	QTY	Total weight (t)
1	Feed gas metering, filter system Module	12*3*4	20	1	20
2	Deacidification system Module	12*3*4	35	2	70
2.1	Absorption tower/desorber	φ0.52m, height: 21m/φ0.52m, height:	20	1	20
3	Dehydration system and Mercury removal system	12*3*3.4	35	1	35
3.1	Molecular sieve tower	φ1m, height: 6m	8	3	24
5	Liquefaction system and Heavy hydrocarbon separation	3.5*3.3*15	35	1	35
6	Refrigerant circulation system Module	12*3*3.5	30	4	120
7	Refrigerant makeup system Module	1 batch of cylinders	25	1	25
8	Plant power distribution E-house	12*3*3	30	3	90
9	Plant control E-house	12*3*3	35	1	35
12	Utilities (IA,N ₂ , desalted water,) Module	12*3*3	35	1	35
11	Dispersion system	12*3*3/φ3m, height: 12m	25	1	25

