

StirLNG-16

4-10 T/day LNG Conditioning system

Stand-alone, plug and play

Stirling Technology

For over sixty years Stirling Cryogenics has been designing and manufacturing gas liquefaction systems, serving customers all over the world under all possible conditions. This experience is incorporated in our Methane liquefiers called StirLNG. The cooling power of the StirLNG is created by the so called reversed Stirling cycle: compression and expansion of helium gas in a closed cycle by mechanical pistons.

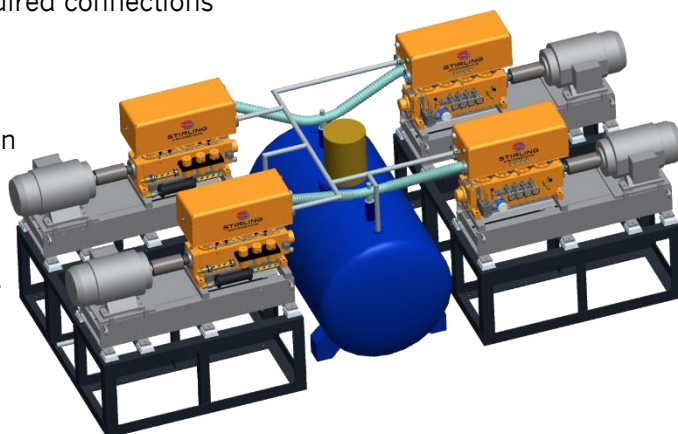
LNG Conditioning with StirLNG-16

LNG Boil off gas can be re-liquefied with our stand-alone, plug and play, StirLNG-16 system. The system consists of 4 StirLNG-4 Cryogenerators, an intermediate tank and a LNG pump, all mounted on a skid. Depending on the gas pressure, the StirLNG-16 can re-liquefy from 4 up to 10 metric ton of LNG per day (2.500 – 8.000 gal/day).

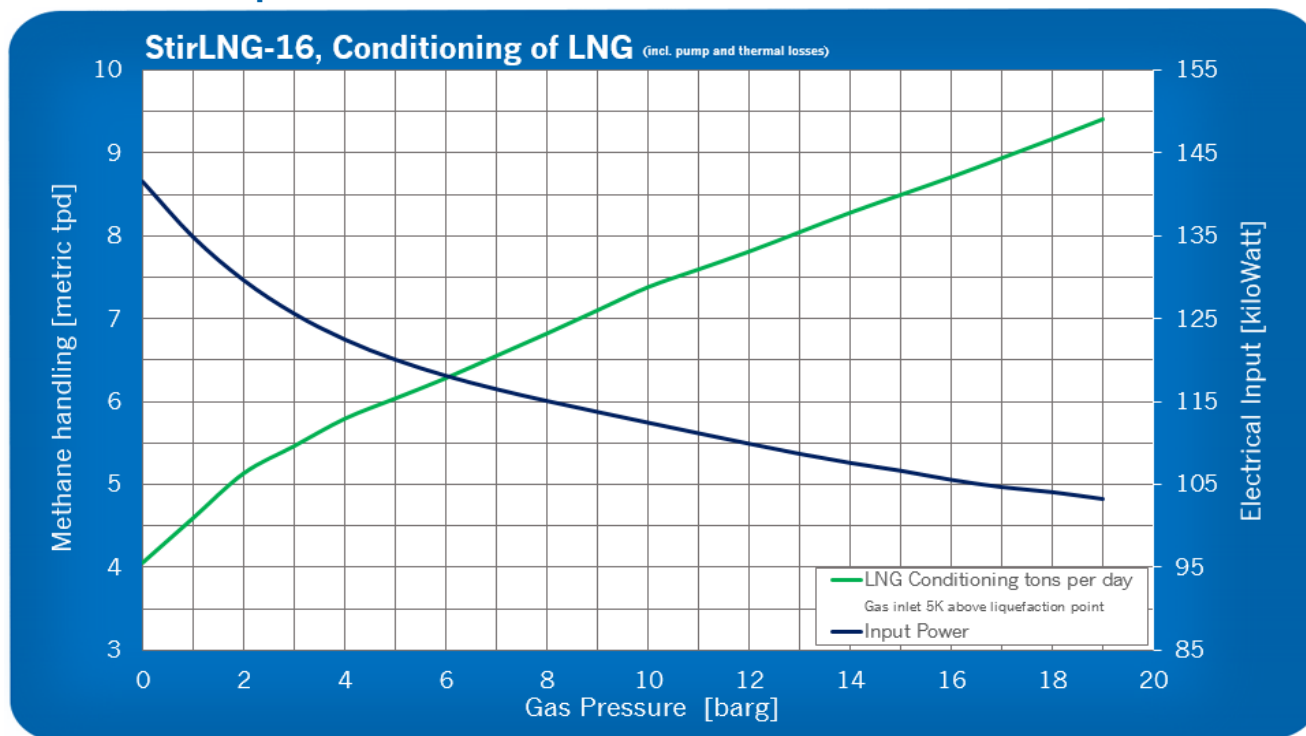
Features

The StirLNG-16 re-liquefaction system has the following features and advantages:

- Plug and play design:
All equipment will be installed, aligned and pre-wired on a skid, ensuring minimum installation time. The only required connections are process lines, cooling water and power.
- Fully automated operations.
- Compact design.
- Any of the 4 Cryogenerators (alone or multiple) can operate at any time, giving maximum flexibility, redundancy and efficiency.
- High reliability:
The system design is based on proven technology. It uses the high reliable Stirling Cycle based Cryogenerators, which over 3.000 units have been installed worldwide since 1950.
- Preventive maintenance is only required after 6.000 operating hours.
- Suitable for working in different environmental conditions. Standard -5°C to 45°C (optional -20°C to 45°C).



StirLNG-16 Specifications



Gas Pressure	Temp. Liquid	Electrical Input	Quantity BOG	Capacity based on Inlet gas temperature 5K above liquefaction point based on pure methane		
Barg	K	kW	Nm³/hr	l/hr	T/day	Gal/day
0	112	142	235	400	4,05	2530
2	127	128	297	535	5,13	3389
4	136	123	335	627	5,79	3968
6	142	119	364	701	6,28	4440
8	147	116	395	780	6,82	4942
10	152	112	427	859	7,38	5438
12	156	109	452	937	7,81	5936
14	160	104	480	1016	8,28	6436
16	162	101	504	1092	8,71	6916
18	165	97	531	1175	9,17	7442
20	168	93	559	1264	9,65	8003

Specifications		<div>Feed gas composition limits</div> <div>Deviations from pure methane will affect capacity above.</div> <div>Please contact us with your gas composition for a specific calculation</div> <div>Main stream: CH₄ C_xH_y (C2 to C4) 10% C_xH_y (C5+) < 1 ppm CO₂ < 50 ppm(°) H₂O < -70°C dew point H₂S < 3,3 ppm Oil content < 0,01 mg/m³ Particles < 0,1 micron N₂/O₂ < 10%,(°)</div> <div>1: The amount of allowable CO₂ in the feed gas depends on the working pressure. Higher amounts can be allowed, due to its solubility in LNG. However at decreasing pressure, further in the logistic chain, solid CO₂ may deposit.</div> <div>2: The actual re-liquefaction capacity might be lower, based on the composition of the boil off gas. Especially N₂ and O₂ will lower the re-liquefaction temperature and therefore will reduce the available cooling power and liquefaction</div>	
Explosion proof classification	ATEX Zone 2 or 1 Nec 500, Class 1 Div 2 or 1, gas group D Other, upon request		
Max. gas pressure	20 barg 290 psig		
Water consumption (incl. 20% EG)	12.000 l/hr @ 15°C		
System size (l x w x h)	5,90 m 2,35 m 2,20 m		