

# StirLNG-16

## 2-6 T/day LNG Liquefaction 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.

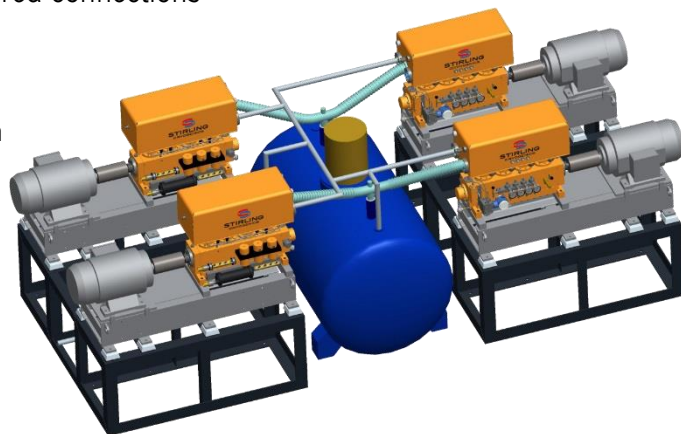
### LNG Production with StirLNG-16

Convert your own clean gas stream into LNG, at site, 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 and temperature, the StirLNG-16 can liquefy from 2 up to 6 metric ton of LNG per day (1.500 – 5.700 gal/day).

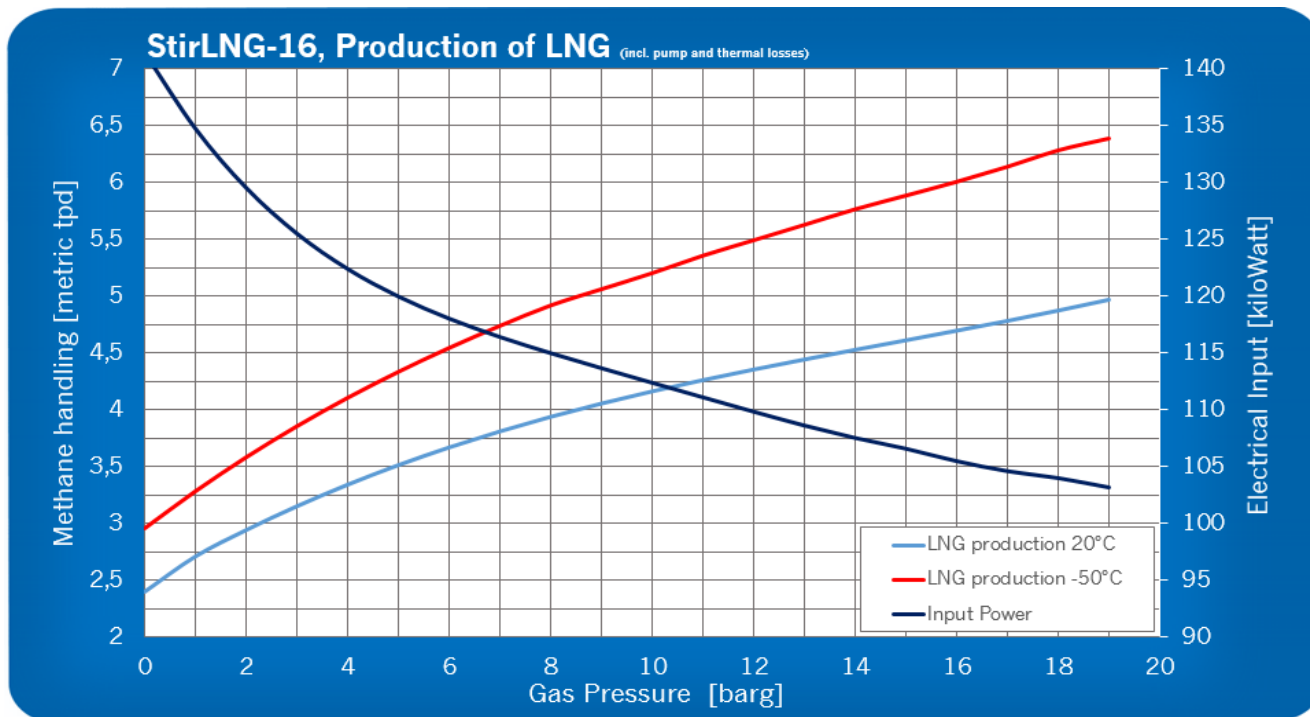
### Features

The StirLNG-16 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	Capacity based on an Inlet gas temperature 20°C				Capacity based on an Inlet gas temperature -50°C			
Barg	K	kW	Nm³/hr	l/hr	T/day	Gal/day	Nm³/hr	l/hr	T/day	Gal/day
0	112	142	136,1	232	2,35	1470	163,9	279	2,83	1767
2	127	128	172,6	311	2,98	1972	210,8	380	3,64	2407
4	136	123	194,6	364	3,36	2308	240,4	450	4,15	2851
6	142	119	211,4	407	3,65	2582	264,1	508	4,56	3220
8	147	116	227,0	449	3,92	2844	286,1	565	4,94	3584
10	152	112	240,9	488	4,16	3095	306,4	621	5,29	3935
12	156	108	255,4	529	4,41	3355	328,4	680	5,67	4310
14	160	104	267,0	566	4,61	3587	346,3	733	5,98	4648
16	162	100	278,6	603	4,81	3821	364,9	789	6,30	5003
18	165	96	289,6	641	5,00	4062	382,8	846	6,61	5366
20	168	92	300,6	679	5,19	4307	401,4	907	6,93	5752

Specifications			
Explosion proof classification	ATEX Zone 2 or 1 Nec 500, Class 1 Div 2 or 1, gas group D Other, upon request	Feed gas composition limits Deviations from pure methane will affect capacity above.  Please contact us with your gas composition for a specific calculation	Main stream: CH <sub>4</sub> C <sub>x</sub> H <sub>y</sub> (C2 to C4) 10% C <sub>x</sub> H <sub>y</sub> (C5+) < 1 ppm CO <sub>2</sub> < 50 ppm(!) H <sub>2</sub> O < -70°C dew point H <sub>2</sub> S < 3,3 ppm Oil content < 0,01 mg/m <sup>3</sup> Particles < 0,1 micron N <sub>2</sub> /O <sub>2</sub> < 10%,(!)
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		
		1: The amount of allowable CO <sub>2</sub> 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 CO <sub>2</sub> may deposit.  2: The actual re-liquefaction capacity might be lower, based on the composition of the boil off gas. Especially N <sub>2</sub> and O <sub>2</sub> will lower the re-liquefaction temperature and therefore will reduce the available cooling power and liquefaction	