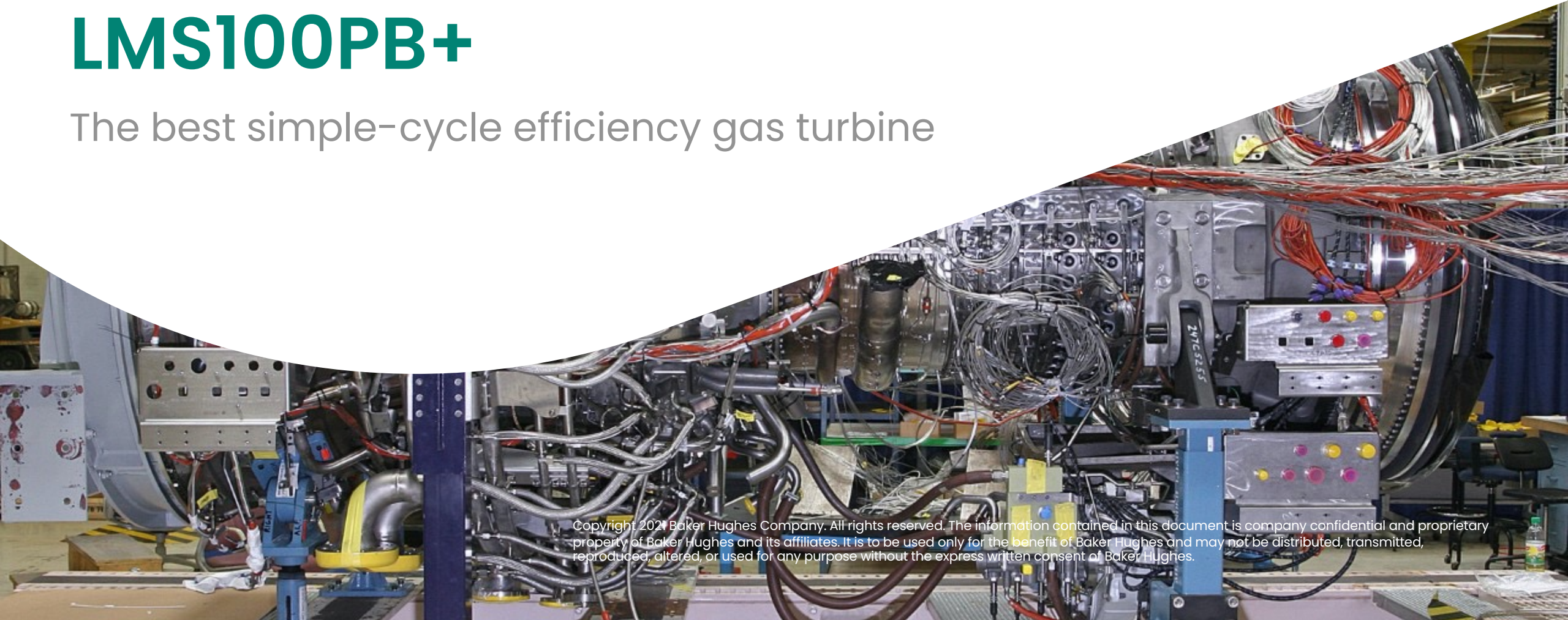


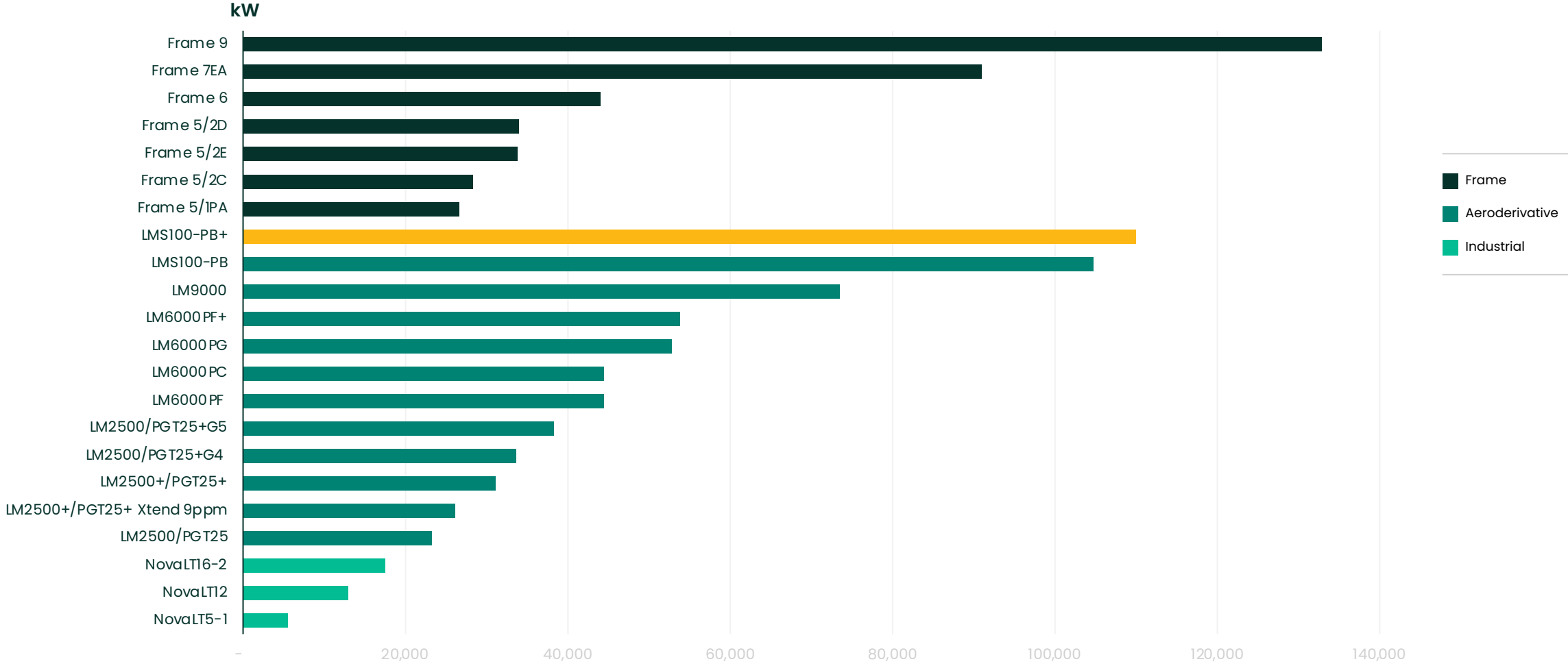
## LMS100PB+

The best simple-cycle efficiency gas turbine



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# Industry leader in gas turbine technology



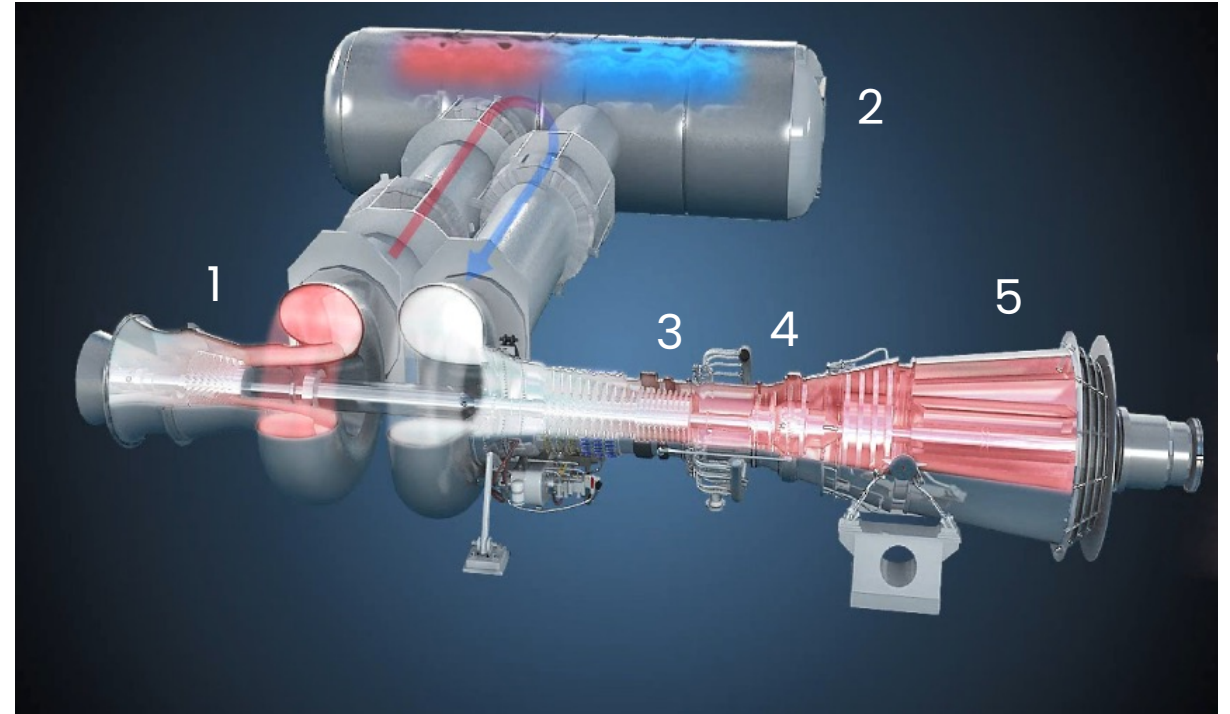
# LMS100PB+

Best simple-cycle efficiency  
for lowest CO<sub>2</sub> emissions

The LMS100 is the only modern industrial gas turbine with an intercooling system between the low-pressure compressor (LPC) and the high-pressure compressor (HPC). This reduces the compression work by 30% (at parity of pressure ratio) versus a conventional cycle delivering best-in-class simple-cycle efficiency (>44%) and minimum CO<sub>2</sub> emissions.

The free power turbine (aerodynamically coupled with the supercore but mechanically independent) makes the LMS100 engine suitable for both mechanical drive and generator drive applications—with no need of a gearbox. It also permits pressurized start-ups in LNG plants without a helper motor.

The LMS100 design is largely based on proven technology, mixing heavy-duty (LPC and PT assembly) and aeroderivative (supercore: core + IPT) components



1. LPC derived from the first 6 stages of the compressor of the heavy-duty Frame 6FA gas turbine
2. Intercooler
3. Core section (HPC, turbine, and combustion system) in common with the LM6000 aeroderivative engine
4. Intermediate-pressure turbine (IPT) driving the LPC
5. Free power turbine (PT)

# Package

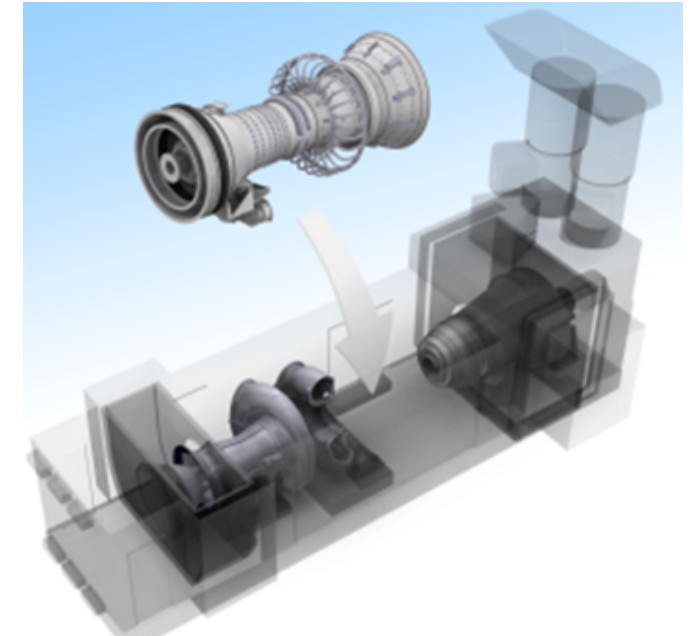
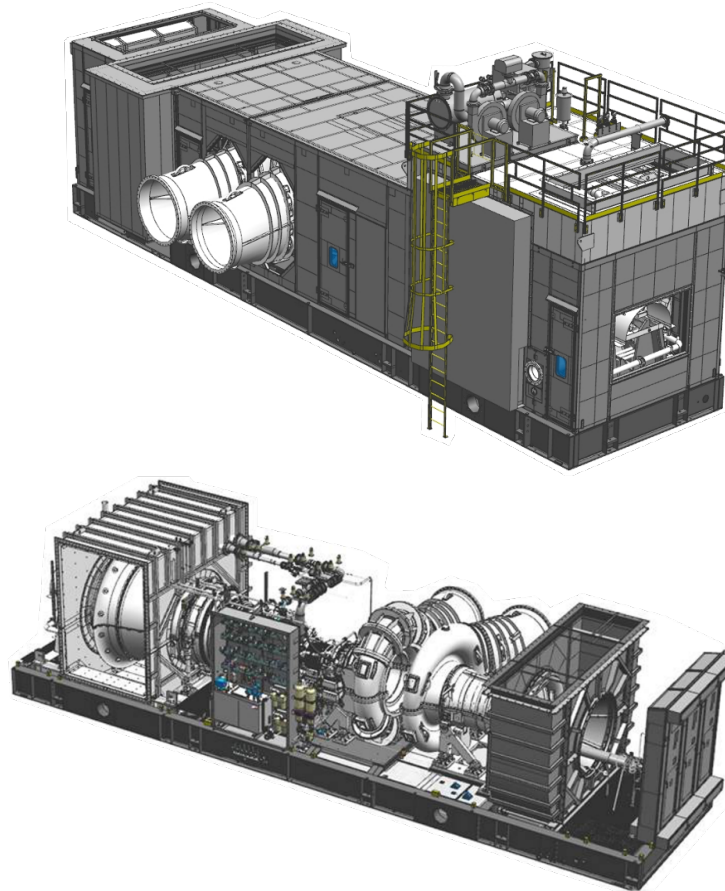
LMS100PB+ package is a perfect mechanical-drive solution to maximize economies of scale for LNG liquefaction trains.

Its three-shaft architecture enables both for 50 and 60 Hz power generation/CHP.

Start-up in less than 10 minutes makes it ideal for integration with renewable energy systems.

The package has been specifically designed to satisfy oil and gas applications requirements:

- Classified for Hazardous Area Zone 2 Class T3, Gas Group IIB
- Compliant with winterization and marinization requirements
- Implemented TMR instrument configuration (triple redundancy)
- Gas turbine installed on a single skid
- Key components from the legacy GTG package have been maintained



## Optimized package design

For maintenance tasks and supercore exchange in less than 3 days

# Datasheet

## LMS100PB+

### Power generation

<b>Power</b>	MWe	108
<b>Efficiency</b>	%	43
<b>Nox</b>	ppm	25
<b>Exhaust</b>	°C	413
<b>Speed</b>	RPM	3,000/3,600

### Package

<b>LxWxH</b>	m	19x7.3x7
<b>Weight</b>	ton	232

### Mechanical drive

<b>Power</b>	MWe	110
<b>Efficiency</b>	%	44
<b>Nox</b>	ppm	25
<b>Exhaust</b>	°C	410
<b>Speed</b>	RPM	3,429

### Main inspections

<b>HGP</b>	hr	25,000
<b>Major insp.</b>	hr	50,000

### Key features

- Best-in-class simple-cycle efficiency (>44%)
- Minimum CO<sub>2</sub> footprint (55 tons CO<sub>2</sub>/year less than the main competitor at parity of output power)
- Dry low emission combustion system, capable of <25 ppm NOx @ 15% O<sub>2</sub>, at 75–100% load
- Free power turbine speed range: 2,880–3,600 rpm, suitable for
  - Power generation, 50 and 60 Hz with no gearbox
  - Mechanical drive
- More than 40 kN-m breakaway torque capability of the tower turbine demonstrated by test, sufficient to enable pressurized start-ups in LNG applications without a helper motor
- Supercore exchange capability in 3 days to maximize availability

ISO conditions with natural gas fuel, ambient temperature 15°C, no inlet or exhaust losses, sea level, 60% relative humidity. Mechanical Package dimensions driven equipment excluded.

# Modular solution

## Key features

- LMS100PB+ O&G package
- Driven compressors
- Balance of plant
- Intercooler
- Control room
- 52 x 21 m footprint, 25 m height
- 3,000 metric tons total gross weight



Built, commissioned, and tested (optionally at full speed, full power) in Baker Hughes facility



Shipped as a single unit for minimized installation and commissioning activities at customer site