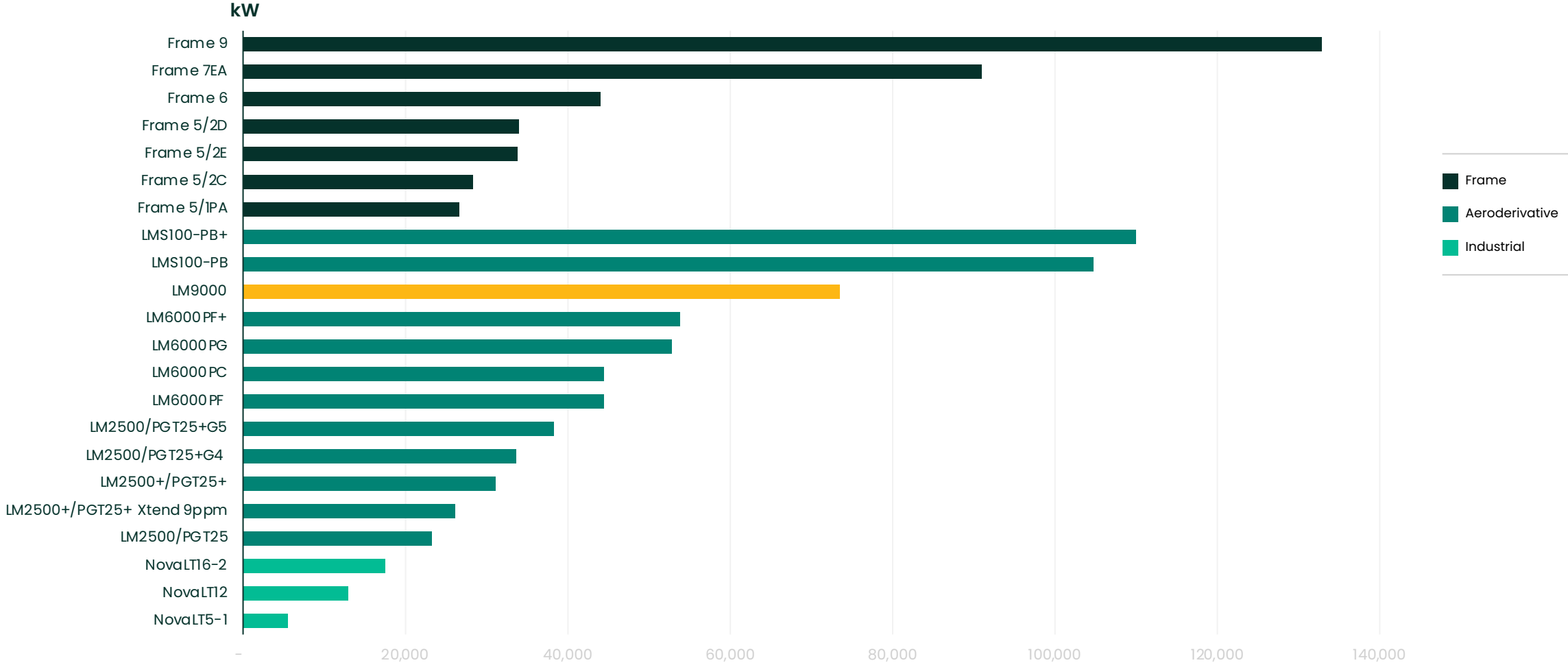


# LM9000 gas turbine (73.5 MW, 50/60 Hz)

The world's most efficient simple-cycle gas turbine

# Industry leader in gas turbine technology



# LM9000

Fast power availability with minimum carbon footprint

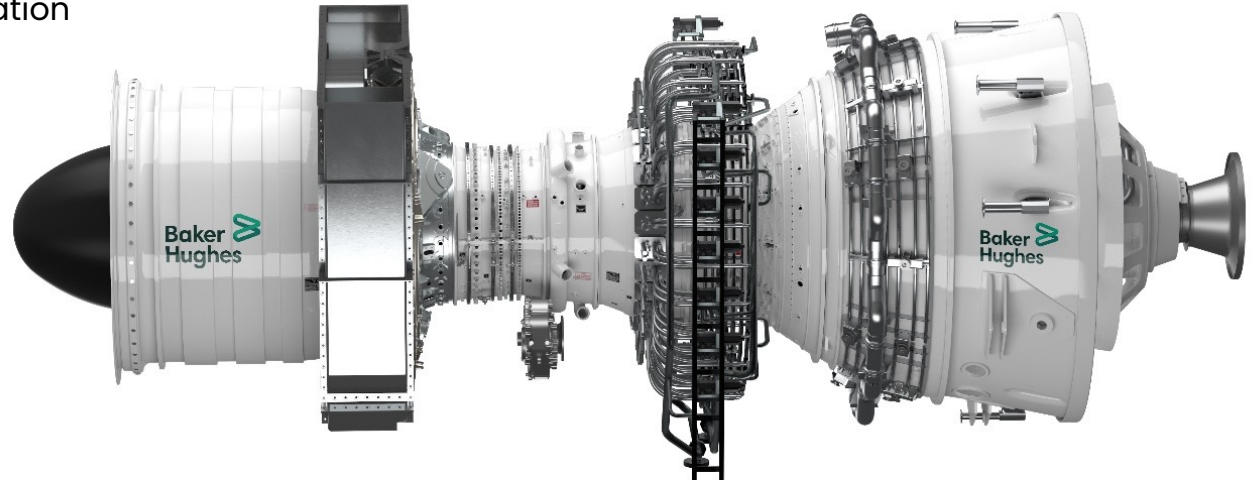
The LM9000 aeroderivative gas turbine has the highest availability and best total cost of ownership in its power class. Its DLE technology enables dual-fuel capability and reduces NOx emissions while eliminating water use in emissions abatement.

## Key technical and benefits

- Output: 73.5 MW in mechanical drive
- 44% efficiency in simple cycle, 80% in cogeneration
- Higher availability thanks to long maintenance intervals, and modular package enabling 24-hour engine swap
- Pressurized LNG compressor startup capability without a helper motor
- Compact, modular package for fast installation and lower costs than field-erected units; ideal for stringent space requirements
- Designed for easy inspection and condition-based maintenance—delivering high reliability and maintainability

## Main applications

- LNG
- Industrial power generation



# Package

## Overview

The LM9000's modular package design enables shorter manufacturing cycles and faster installation—and the compact footprint helps meet stringent space requirements.

It includes all the lessons learned from our most successful aeroderivative and industrial gas turbine packages.

And it leverages our LM6000 SeaSmart mini-skid concept to maximize safety and enable 24-hour engine swap during major overhauls.



# Datasheet

## Mechanical drive

<b>Power</b>	MW	73.5
--------------	----	------

<b>Efficiency</b>	%	44
-------------------	---	----

<b>NOx</b>	ppm	15
------------	-----	----

<b>Exhaust</b>	°C	455
----------------	----	-----

<b>Speed</b>	RPM	2,400 to 3,780
--------------	-----	----------------

## Main inspections

<b>Boroscope</b>	hr	12,000
------------------	----	--------

<b>Hot section</b>	hr	36,000
--------------------	----	--------

<b>Major insp.</b>	hr	72,000
--------------------	----	--------

## Power generation (50/60 Hz)

<b>Power</b>	MWe	71.1
--------------	-----	------

<b>Efficiency</b>	%	42
-------------------	---	----

<b>NOx</b>	ppm	15
------------	-----	----

<b>Exhaust</b>	°C	456
----------------	----	-----

<b>Speed</b>	RPM	3,000 to 3,600
--------------	-----	----------------

## Package

<b>LxWxH</b>	m	13.3 x 5 x 18.2
--------------	---	-----------------

<b>Weight</b>	ton	77
---------------	-----	----

## Other capabilities

- Single annular combustor technology
- Gas only; dual fuel (gas + liquid) capability in development
- 36 to 55 MWI fuel flexibility
- Up to 5% vol H<sub>2</sub> capability

# Projects

## Arctic LNG 2

In December 2018, NOVATEK selected Baker Hughes to supply LM9000 aeroderivative gas turbines for the Arctic LNG 2 Project. Successful FETT completion in May 2020 has paved the way for the LM9000's use in NOVATEK's other new LNG projects.

The test confirmed LM9000 as the most powerful and efficient aeroderivative gas turbine in its class—with more than 44% simple-cycle efficiency and power output 15% higher than industry peers.

This efficiency is key to driving lower NOx emissions—15 ppm in dry condition, 40% lower than competing technology—making LM9000 a more environmentally sensitive solution.

With a small footprint and innovative module design for fast and easy maintenance, LM9000 is the ideal gas turbine for all mechanical drive and power generation applications.

Our scope of work for Arctic LNG 2 includes the supply of turbomachinery equipment for power generation and three liquefaction trains on gravity-based structures (GBS) that will produce 6.6 million tons of LNG per annum each, for a total production of 19.8 MTPA.

