



# Rethinking Turboexpanders

Company: L.A. Turbine (LAT), A Chart Industries Company

Founded: January 15, 2003 - Celebrating 20 years of turboexpander excellence!

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# **Products, Services and Presence**

L.A. Turbine delivers innovative turboexpander design, manufacturing and testing of application-specific, highly engineered turboexpanders used in hydrocarbon processing, geothermal power generation, industrial gas, power-recovery and refrigeration applications. LAT turboexpanders play an important role in providing hydrogen and helium liquefaction solutions for Chart Industries Nexus of Clean™ offerings for the clean energy transition. The company is also a leader in aftermarket service, repair, redesign, maintenance and spare part production for LAT and non-LAT turboexpander brands. A global FX-TURBO Field Service Team provides commissioning, diagnostic, maintenance and emergency support 24/7/365 via the +1 855 FX-TURBO Hotline.

L.A. Turbine's global headquarters are in Valencia, California with sales and service centers in California and Europe. In addition, LAT's partner and agent network provides customer sales, distribution and aftermarket service support across five continents.

## We Offer . . . Expertise, Innovation, Performance, Reliability and Results

- ➤ We deliver. Since 2003, LAT has been the go-to FX-TURBO aftermarket service provider to thousands of global customers regardless of the turboexpander make or model. Since 2007, LAT has sold, engineered, built and delivered 200+ L.A. Turbine turboexpanders, and of those, have commissioned 100+ units.
- ➤ We are innovators, diagnosticians and solution providers. LAT's best-in-class engineering team, with rotating equipment experience in the aerospace, transportation and medical device industries, works in partnership with shop craftsman to create specialized turboexpander designs for new equipment and aftermarket LAT and non-LAT turbomachinery. The first-of-a-kind design and delivery of a fully tested and operational ARES active magnetic bearing (AMB) turboexpander-compressor with skid-mounted control panel in < two years is a testament to this expertise and collaboration.</p>
- We keep our promise. LAT designs, manufactures, builds, and tests all equipment within its shop so turboexpanders are ready to commission upon delivery. Plus, agreed upon client timelines are not dependent on other vendors as LAT controls the process and deliverables. Only LAT holds this unique position within the turboexpander manufacturing and service marketplace.
- > We bring trustworthy expertise to your site. Our FX-TURBO field service personnel are turboexpander specialists, not generalists, with an average 20+ years of hands-on experience working on LAT and non-LAT turboexpander brands.
- > We perform and so do our machines. Customers give LAT above average to excellent ratings, year after year, when scoring our technical knowledge, accuracy, responsiveness, testing capabilities, and machine performance.

# **Turboexpander Configurations & Specifications**

L.A. Turbine provides turboexpander configurations in a range from 3kW to 14MW, capable of handling up to 3,000 PSIG, and temperatures between -195°C and 260°C, which include:

> Expander/Compressor\*

> Expander/Generator > Expander/Gear/Generator

> Expander/Dyno (Oil Brake)\*\*

Turboexpander Configurations (1) (2)		EC*/EG/ED	EC/EG/ED	EC/EG/ED	EC/EG	EC/EG	EC/EG
Frame Sizes		L1000	L2000	L3000	L4000	L5000	L6000
Bearing Types (3)		Oil	Oil/AMB	Oil/AMB	Oil/AMB	Oil/AMB	Oil/AMB
Inlet Flow (max.)	ACMH (SI Unit)	600	1,500	4,000	7,500	10,000	16,000
	ACFM (English Unit)	350	880	2,350	4,400	5,900	9,400
Inlet Pressure (max.)	BARG	206	206	206	206	206	206
	PSIG	3,000	3,000	3,000	3,000	3,000	3,000
Temperature	Celsius	-195 to 260°C	-195 to 260°C	-195 to 260°C	-195 to 260°C	-195 to 260°C	-195 to 260°C
	Fahrenheit	-320 to 500°F	-320 to 500°F	-320 to 500°F	-320 to 500°F	-320 to 500°F	-320 to 500°F
RPM (max.)		105,000***	52,000	31,000	29,000	18,000	15,000
Seal Types		Labryinth Seal	Labryinth Seal/ Dry Gas				
Wheel Power (max.)	kW	800 kW	1,500 kW	3,000 kW	6,000 kW	10,000 kW	14,000 kW
	hp	1,070 hp	2,000 hp	4,000 hp	8,000 hp	13,400 hp	18,700 hp

(1) Configurations:

EC\* = Expander-Compressor EG = Expander-Generator

does not apply on ED equipment

(3) Bearing Types: AMB = Active Magnetic Bearings

Oil = Oil Bearings

ED\*\* = Expander-Dyno (Oil Brake)

(2) High Pressure/High Power

\*EC is available with Oil and Active Magnetic Bearings \*\*Operates at a lower power level than the range shown above \*\*\*Maximum RPM of 105,000 applicable to ED only

## **Global Headquarters**

### L.A. Turbine

#### Headquarters

28557 Industry Drive Valencia, CA 91355 USA

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#### **Services**

Design, Sales, Manufacturing and Aftermarket Service -LAT & Non-LAT Equipment

#### **Worldwide Partners & Agents**

# **Locations**

Asia Australia Europe Middle East

North America South America

#### **Services**

Sales, Distribution Manufacturing and Aftermarket Service - LAT &

Non-LAT Equipment

#### **Learn More**





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