

# QUICK REFERENCE

## Turboexpander Design & Manufacturing Configurations & Specifications

Turboexpander Configurations <sup>(1) (2)</sup>		EC*/EG/ED	EC/EG/ED	EC/EG/ED	EC/EG	EC/EG	EC/EG
Frame Sizes		L1000	L2000	L3000	L4000	L5000	L6000
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	Labryinth Seal/ Dry Gas	Labryinth Seal/ Dry Gas	Labryinth Seal/ Dry Gas	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
Bearing Types <sup>(3)</sup>		Oil	Oil/AMB	Oil/AMB	Oil/AMB	Oil/AMB	Oil/AMB

### Applications:

- Hydrocarbon Processing: LNG | LPG | NGL | DPC
- Geothermal Power Generation
- Air Separation
- Refrigeration
- Industrial Power Recovery | Pressure Letdown

### In-House Capabilities:

- 90,000 square feet dedicated to Design | Engineering | Parts Machining | Fabrication | Quality Control | Inspection & Testing
- Engineering expertise in Gas Dynamics | Rotor Dynamics | FEA Analysis | Tribology | Structural Design
- Specialization in Anti-Surge Systems | Automatic Thrust Control | Oil & Magnetic Bearings | IGV Systems
- State-of-the-art design and manufacturing tools applied: 3D CAM, CAD & Laser Scanning, CNC Machines
- ISO 9001: 2008 Certified Supplier

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(1) Configurations: EC\* = Expander-Compressor / EG = Expander-Generator / ED = Expander-Dyno (Oil Brake)\*\*

(2) High Pressure/High Power does not apply on ED equipment

(3) Bearing Types: AMB = Active Magnetic Bearings / Oil = Oil Bearings

\*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



Rethinking Turboexpanders

[www.LATurbine.com](http://www.LATurbine.com)

L.A. Turbine designs and manufactures application-specific, highly engineered turboexpanders used in hydrocarbon processing, geothermal power generation and other industrial power recovery or refrigeration applications.

The company is also a recognized leader in aftermarket repair, redesign, maintenance and production of spare parts for all brands and configurations of turboexpanders worldwide.

A global field service team provides diagnostics, maintenance and emergency support 24/7/365.

**24/7/365**  
**Support Services**

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# L.A. Turbine: Your On-Call Turboexpander Experts

## Turboexpanders

Turboexpander configurations include expander-compressor, expander-generator, expander-dyno (oil brake) and expander-compressors with active magnetic bearing units. Turboexpanders range from 3kW to 14MW, are capable of handling up to 3,000 PSIG pressure, can operate at speeds up to 105,000 RPM, and accommodate temperatures between -195°C to 260°C.

## Ability to Deliver

From concept to commissioning, L.A. Turbine controls and manages the entire design, engineering manufacturing, assembly and testing process for all new and aftermarket equipment. As a result, we are able to deliver faster-to-market customized solutions than competitive firms, and our equipment not only meets but often exceeds clients' output performance requirements. All engineering design and development processes comply with ISO 9001:2008.

## Global Presence

L.A. Turbine has established a global presence on five continents, in 16 world offices and partner locations. U.S. headquarters and manufacturing is located in Valencia, California, with sales and service facilities in California, Texas and Belgium. U.S. operations also support the needs of Canada, South America, Asia and Australia. European headquarters in Belgium serve Europe, the Middle East and Africa.

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