

# LUCIFER FURNACES

Manufacturer of Industrial Heat Treating Furnaces and Ovens



## Series 7000 EQ - Elevator Quench Controlled Atmosphere Furnaces



Shown with optional air operated doors

Elevator Quench Furnaces combine a pre-heat section, hardening chamber, cooling vestibule and quench tank in one complete unit with operation to 2050°F. The workload is processed in the furnace chamber then pulled into the vestibule area where the parts can be automatically lowered by an air-operated elevator into a quench tank without exposing the parts to air. The furnaces are complete with an alloy muffle which separates the atmosphere and workload from the refractory and elements, and an inner door which separates the furnace chamber from the vestibule section. An outer door provides a positive seal against the vestibule. The EQ Models operate under a positive flow of protective atmosphere to minimize scale and oxidation on most tool steels. This design achieves lower dew points, reduces atmosphere consumption and shortens purge time.

Ruggedly constructed, compact design, easy installation, and simple, safe, dependable operation. All models are completely wired, test fired and shipped ready for connection to main power and regulated atmosphere pressure of 5 PSI. All models will operate with inert atmosphere. Flammable atmosphere may be used with the addition of Atmosphere Safety System per NFPA Code 86 C.

### Standard Features

- Welded sheet metal shell construction with structural reinforcement.
- Heavy gauge coil wound low watt density heating elements for longer life.
- High grade alloy muffle with inlet pipe and front flange.
- Manual vertical lift inner and outer door assemblies.
- Air operated elevator quench basket.
- Quench tank constructed from continuously welded mild steel.
- Multi-layered energy efficient lightweight firebrick and mineral block insulation for maximum heat storage and minimum heat loss.
- Elements mounted in easy-to-replace holders located on side walls and below the hearth for uniform temperature.
- Silicon carbide hearth plate for full muffle support and thermal transfer from floor elements.
- Honeywell digital temperature controller with type K thermocouple and contactor.
- Controls are mounted in separate side mounted NEMA 1 panel and operate on 115 volts.

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### Model Specifications

MODEL	CHAMBER			OVERALL			KW	VOLTAGE	MAX WORK LOAD (LBS.)	QUENCH TANK (GAL)	WEIGHT (LBS)
	H"	W"	L"	H"	W"	L"					
7EQ-C12	5	5	12	68	31	68	4	230/1	15	20	975
7EQ-C18	5	5	18	68	31	73	5.5	230/1	20	25	1100
7EQ-F12	7	7	12	70	33	68	6.5	230/1	25	30	1050
7EQ-F18	7	7	18	70	33	73	8	230/460/1	30	35	1175
7EQ-I12	10	10	12	73	36	68	8	230/460/1	30	35	1200
7EQ-I18	10	10	18	73	36	73	10	230/460/1	35	45	1325
7EQ-I24	10	10	24	73	36	86	13	230/460/3	45	55	1500
7EQ-I36	10	10	36	73	36	112	16	230/460/3	55	70	1700

**Options:** Air operated doors, quench tank agitation and heating, water or fan cooled vestibule, sight ports, flow meters, regulators, oxygen analyzers, dew point indicators, muffle thermocouples, cascade and multi-zone control systems, supervised flame curtains, supervised burn-off systems, program controllers, over temperature safety systems, cooling systems, timers, recorders, computer interface, special voltages, gloves, and tongs.