

## Pacemaker Integral Quench Furnace System

The Lindberg/MPH Pacemaker® is a highly productive and efficient integral-quench furnace available in either gas-fired or electric models. It is the centerpiece of a complete heat treating system. The furnaces feature obstruction-free work chambers, large capacity re-circulation fans, and strategically located heat sources to ensure rapid heat transfer, low energy use, and excellent temperature and carbon uniformity. Multiple sizes and configurations are available to accommodate a variety of process needs.

### Features/Benefits

- Fully automatic movement of the load within the furnace, including quench
- Programmable logic controller eliminates sequencing circuit relay maintenance
- Temperature and atmosphere carbon potential are both automatically controlled
- Preheat oil quench with immersion heaters, temperature and excess temperature controllers, oil level sight gauge and level alarm
- Lindberg/MPH Quench Guard® quench water detection device
- Air-to-oil quench cooling heat exchanger
- Flowmeters for endothermic gas, natural gas additions, ammonia gas additions, and air for carbon burnout
- Emergency nitrogen gas purge circuit activates on power failure or loss of atmosphere
- SCR power control for electrically heated models
- Recuperative vertical radiant tubes for gas-fired models

### Applications

- Annealing
- Carbonitriding
- Carburizing
- Tool Steel Hardening up to 1850°F
- Normalizing
- Ferritic Nitrocarbizing



### Options

- Upper atmosphere cooling: An oil-cooled double walled chamber above the quench cools the workload under a protective atmosphere and features an atmosphere cool/oil quench selector switch. Upper cooling is available with or without a recirculating fan to accelerate load cool down.
- Hot oil quench with additional immersion heaters and insulation lagged to the quench tank shell
- Variable speed quench agitation
- Enhanced furnace control components
- Complete system automation to suit your unique requirements



Lindberg/MPH P.O. Box 131, 3827 Riverside Road Riverside, MI 49084  
Phone: (269) 849-2700 • Fax: (269) 849-3021 • [lindbergmph@lindbergmph.com](mailto:lindbergmph@lindbergmph.com)

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

# LINDBERG/MPH

## Companion Equipment

- Lindberg Pacemaker Companion Washer
- Lindberg Pacecar
- Lindberg Pacemaker Companion Draw Furnace

## Specifications

Model	Input (kW)	Gross Load (lbs)	Quench Oil (gal)	Workload Dimensions (in)			Overall Dimensions (ft)			Fit Dimensions (ft)			Work Height (ft)	OAL with Pacecar (K)
				W	D	H	W	L	H	W	L	D		
Electric 13-CT-243618-18AQ-1	65	850	650	24	36	18	9	14	10	N/A	N/A	N/A	48	21
Gas 13-243618-SER-18AQ-1	226													
Electric 13-CT-243624-18AQ-1	80	1.100	900	24	36	24	9	14	13	10	15	18	48	21
Gas 13-243624-SER-18AQ-1	301													
Electric 13-CT-304830-18AQ-1	145	2.250	1.700	30	48	30	10	17	15	11	17	34	48	24
Gas 13-304830-SER-18AQ-1	594													
Electric 13-CT-304836-18AQ-1	145	2.250	1.850	30	48	36	10	17	17	11	17	41	48	24
Electric 13-CT-364836-18AQ-1	170													
Gas 13-364836-SER-18AQ-1	785	3.200	3.000	36	48	36	13	17	19	16	18	58	48	25
Electric 13-CT-487236-18AQ-1	250													
Gas 13-487236-SER-18AQ-1	1220	6.000	3.800	48	72	36	14	22	20	15	23	49	48	33
Gas 13-487236-SER-18AQ-1	1220													

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