Masonry Heater Association of North America

Masonry Heaters: a different heating appliance

Fireboxes designed to burn large loads with unrestricted air:

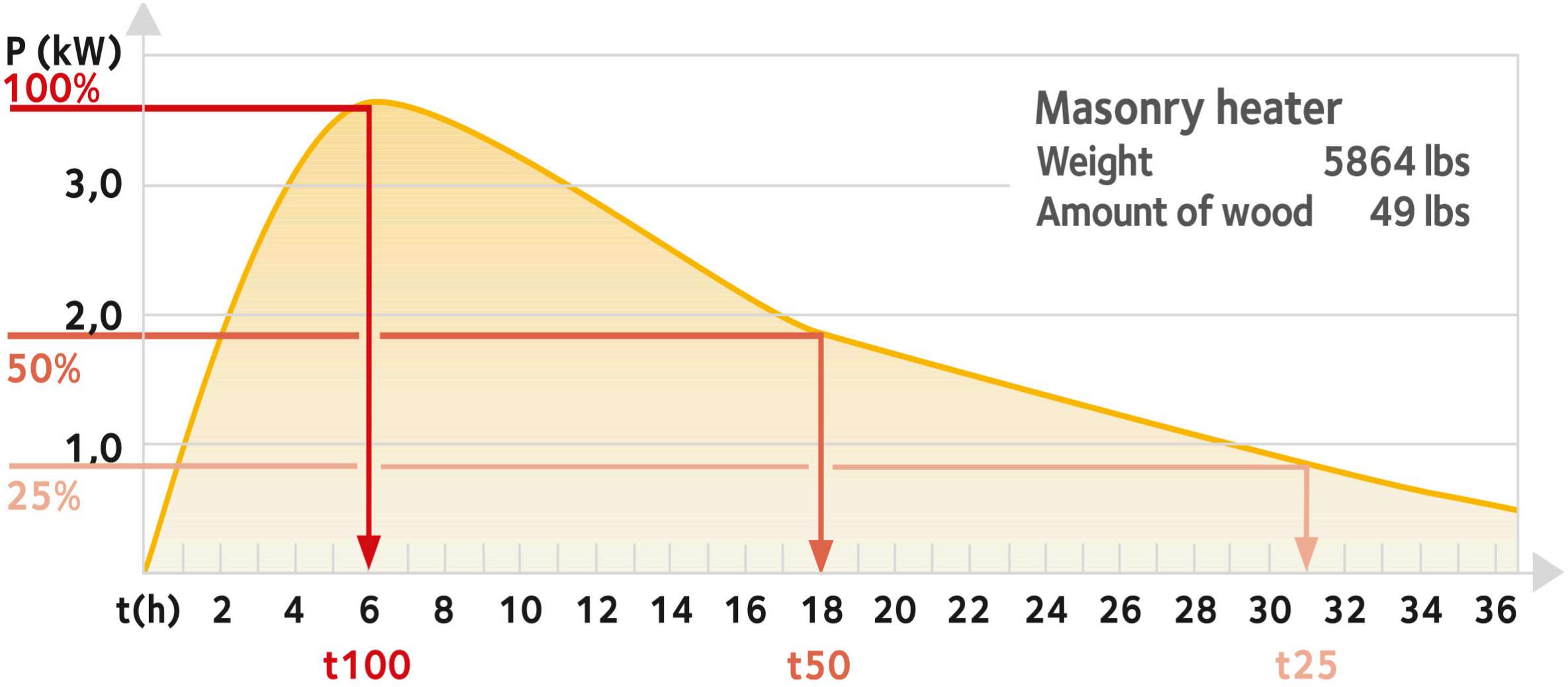
- high burn rates

- complete combustion

- top down burn
- cordwood is better
- big wood is better
- 1 or 2 fires per day

Integrated heat exchanger and thermal storage allow to disconnect burn rate and heat output : no need to slow down combustion

Slow heat release



A unique combination

- short burn time
- high burn rate
- slow heat release

To reduce the causes of high emissions

- low burn rates
- cold starts
- reloads

A Masonry Heater equivalent: a hydronic heater + thermal storage + radiant floor

How do MHs match heating requirements ?

- fuel load
- firing cycle

How clean –burning ?

- under-fire air : 2-5 g/kg
- over-fire air : 1-2 g/kg
- eco-firebox : 0.5-1 g/kg

How does it translate in g/hr ?

- 20 kg @ 2 g/kg = 40 g of PM
- during the 2 hours of firing = 20 g/hr
- over a 24-hour heating cycle : 1.67 g/hr

Why regulate Masonry Heaters ?

- good for air sheds : real life clean-burning
- good for home owners : safe, practical, thermal comfort
- help improve adoption
  - credibility & visibility
  - building permits
  - fire bans
  - grants & change-out programs
- better appliances, better user manuals
  - push for adoption of BSER
  - push to better educate operators

What is MHA doing to help getting regulated ?

- fundamental research
  - chemical composition of flue gasses
  - heat exchange / flow direction
- emission testing to create a database
- test method definition
- assist drafting regulation