

Magnetic Billet Heater – Superior Efficiency in Non-Ferrous Metal Processing

Zenergy's Magnetic Billet Heater revolutionises industrial aluminium, brass, bronze, and copper processing. The innovative heating technology sets new standards for productivity, process flexibility, and energy efficiency. Magnetic billet heating enables substantial increases in extrusion speed by delivering a homogeneous temperature level throughout every heated billet. The process meets the most exacting heating requirements and reduces unit costs dramatically. It offers compelling competitive advantages – in quality and cost.

Key features of Zenergy's Magnetic Billet Heater include

Best process quality:

Best possible radial temperature homogeneity by improved deep heating inside the billet;
precise temperature tapers accomplish ideal quality conditions for your production;

Higher productivity:

Faster extrusion process due to homogeneous radial billet temperatures and precise temperature tapers;
productivity increases facilitated by significantly shorter heating cycles;

Improved flexibility:

Single block heating process; no coil changes required to accommodate different billet sizes and materials;

Lower operating cost:

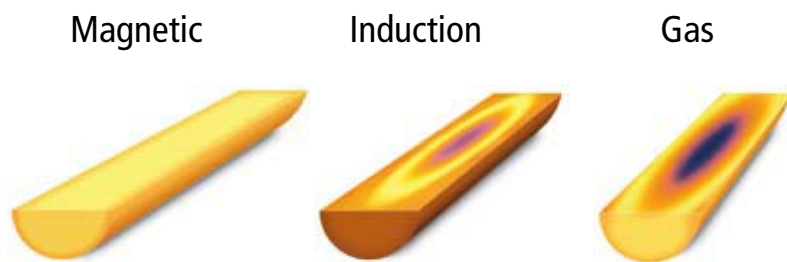
Power consumption reduced by 50%; heating system not subjected to thermal and mechanical loads;
prolonged service life of all operating components; minimized maintenance;

Easy installation:

Very compact machine with low floor space requirement; no massive coil cooling devices;
no medium voltage power supply and reactive power compensation required.



Superior Performance – Compelling Cash Savings



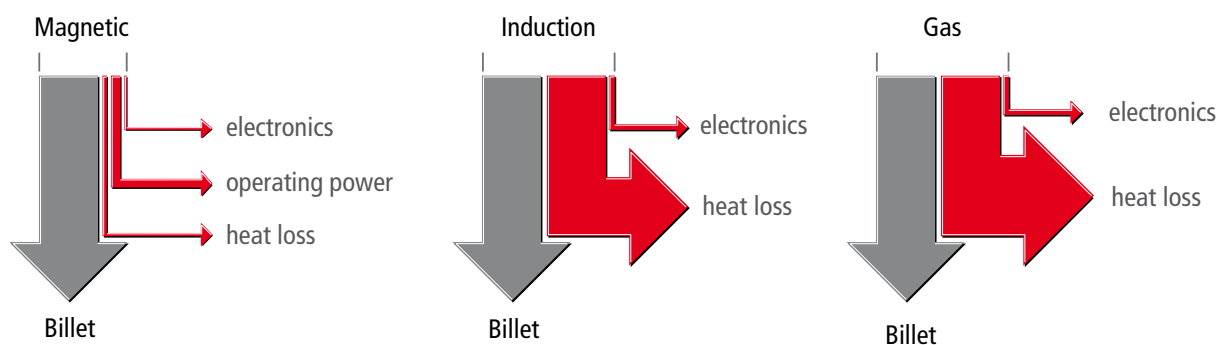
	Magnetic	Induction	Gas
Productivity compared to induction:	125%	100%	80%
Energy use:	~ 140 kWh/t ¹	~ 230 kWh/t ²	~ 370 kWh/t ³
Energy cost savings:	> 180.000 € p.a. ⁴	-	-
Heating homogeneity:	± 5K	± 15K	± 30K
Start-up time:	instantaneous	5-10 min	2 h
Heating time:	70 sec.	3 - 10 min.	7 - 30 min.
Processing:	single block heating	single block heating	serial heating
Reactive power compensation:	-	required	-

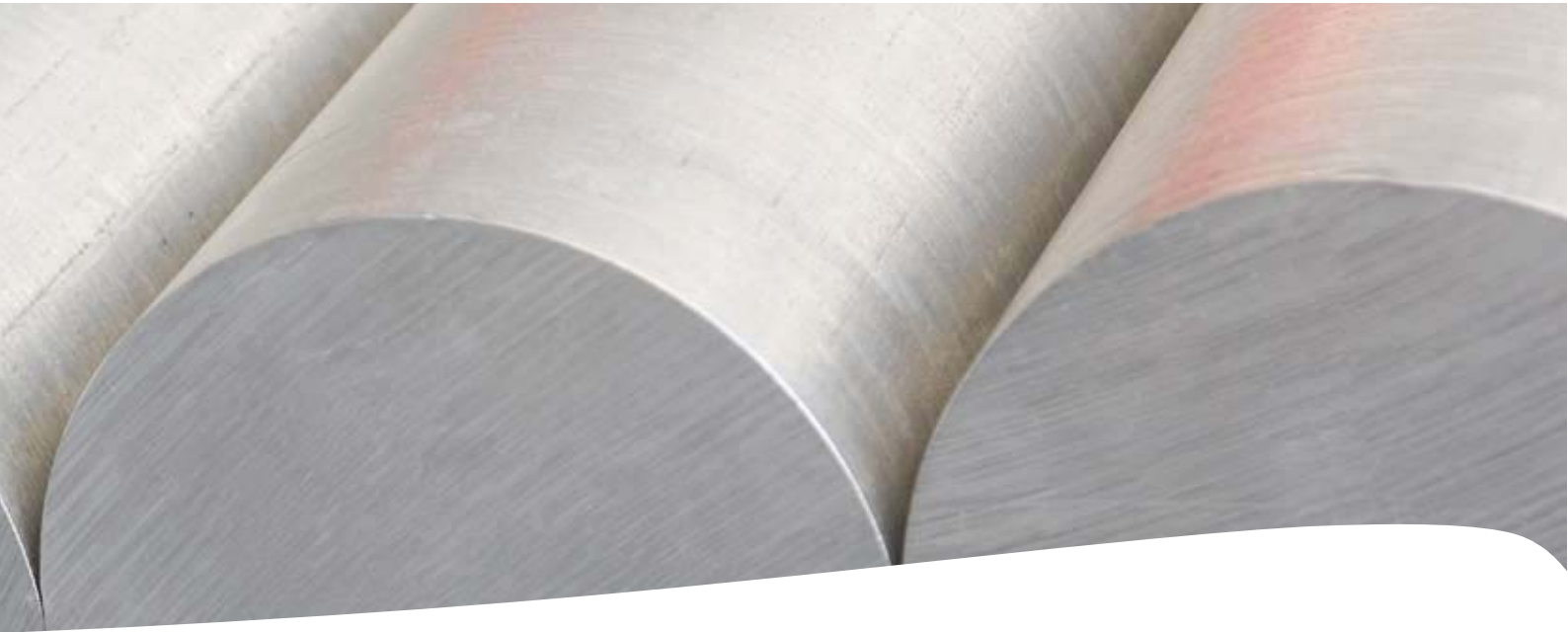
¹ while heating to 420° C

² 210 kWh/t plus 20 kWh/t for the cooling

³ 340 kWh/t plus 30 kWh/t for the cooling

⁴ at 5,000 operating hours annually and electricity costs of 0.07 €/kWh





Functional Advantages:

- Best possible radial temperature homogeneity
- Precise temperature tapers
- Lower billet temperature
- Faster extrusion process
- Facilitates isothermal extrusion
- Exceptional product quality
- Improved recovery

Economic & Operational Advantages

- 25% productivity increase
- Savings in power costs: >180.000 € p.a.
- Savings in maintenance costs >30.000 € p.a.
- Instantaneous start-up
- Flexible single block heating
- Very fast heating process
- No coil changes for different billet dimensions and materials
- Rapid part changes

Installation & Maintenance Advantages

- Compact machine; low floor space requirement
- No reactive power compensation
- No massive coil cooling installations
- No medium voltage power installations
- Easy-to-install in existing production layouts
- No thermal or mechanical load on heating chamber components
- Service life of magnetic system >20 years
- Very low maintenance requirement

