

ALL-IN-1 FURNACE SYSTEM

HEAT TREATING KNIVES FIREARMS AMMUNITION

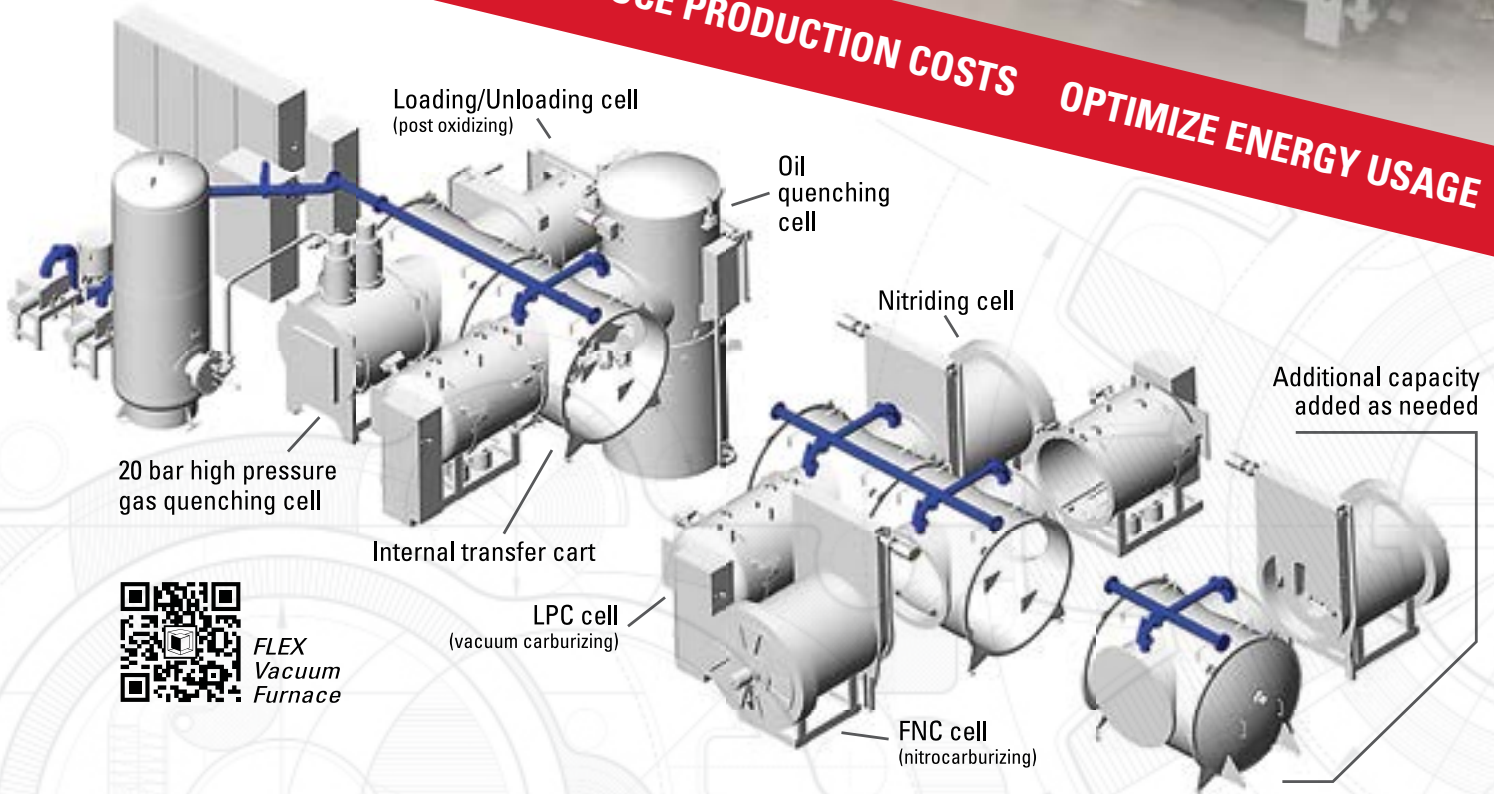
✓FNC-NITROCARBURIZING ✓NITRIDING ✓CARBURIZING ✓HARDENING ✓POST-OXIDE



SMALL BATCH PROCESSING

REDUCE PRODUCTION COSTS

OPTIMIZE ENERGY USAGE



FLEX
Vacuum
Furnace



ECMUSA inc
VACUUM FURNACES

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- VACUUM FURNACE SYSTEMS
- AUTOMATION & ROBOTICS
- PROCESS & RECIPE TESTING

- AFTERSALES & SPARE PARTS
- SERVICE & RETROFITS

KNIVES, FIREARMS & AMMUNITION HEAT TREATING



Utilizing an ECM vacuum furnace system for heat treating your knives, firearms components, and ammunition not only improves surface hardness qualities, but significantly reduces cycle time, optimizes energy consumption and thereby improves productivity.

MOST RECOMMENDED FURNACE SYSTEMS FOR KNIVES & FIREARM MANUFACTURING



VESUVE Nitriding & FNC

The Vesuve hot wall, vacuum purged forced convection furnace is designed for nitriding and FNC applications in a heat resistant alloy muffle.



NANO Small Batch

Multiple heating cells integrated with 20 bar HPGQ or Oil Quench. For rapid processing, one-piece-flow in line production. Ideal for total automation.



FLEX Large Batch

Expandable systems with reversible HPGQ up to 20 bar and/or oil quench. Flexible for multiple process and maximum capacity. Automation adaptable.

	ECO	MONO	FLEX	JUMBO	NANO	CRISTAL	FULGURA	VESUVE
ADDITIVE MFG						⬢	⬢	
ANNEALING	⬢	⬢	⬢	⬢	⬢	⬢	⬢	
AGEING	⬢	⬢	⬢	⬢	⬢	⬢	⬢	⬢
BRAZING	⬢	⬢	⬢	⬢	⬢	⬢	⬢	
CARBONITRIDING (LPCN)	⬢	⬢	⬢	⬢	⬢		⬢	
CARBURIZING (LPC)	⬢	⬢	⬢	⬢	⬢		⬢	
DEGASSING						⬢	⬢	⬢
FERRITIC NITROCARBURIZING (FNC)			⬢	⬢				⬢
HARDENING	⬢	⬢	⬢	⬢	⬢	⬢	⬢	
NITRIDING		⬢	⬢	⬢			⬢	⬢
POST OXIDATION			⬢	⬢				⬢
SINTERING	⬢	⬢	⬢	⬢	⬢	⬢	⬢	
STRESS RELIEVING						⬢	⬢	⬢
TEMPERING	⬢	⬢	⬢	⬢	⬢	⬢	⬢	⬢

Ferritic nitrocarburizing is an ideal process in comparison to a standard nitriding process as it takes much less time to achieve case depth requirements - mainly in part due to the addition of carbon to achieve faster diffusion.

ABOUT ECM USA The US subsidiary of ECM Technologies of Grenoble, France, ECM USA is the leading manufacturer of vacuum furnaces and automated solutions provider for all heat treat industries in the Americas. ECM's complete heat treat systems work on one PLC based system, which includes: preheating, automation, heat treating (low pressure carburizing, carbonitriding, neutral hardening - with oil or gas quenching) and tempering equipment.

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