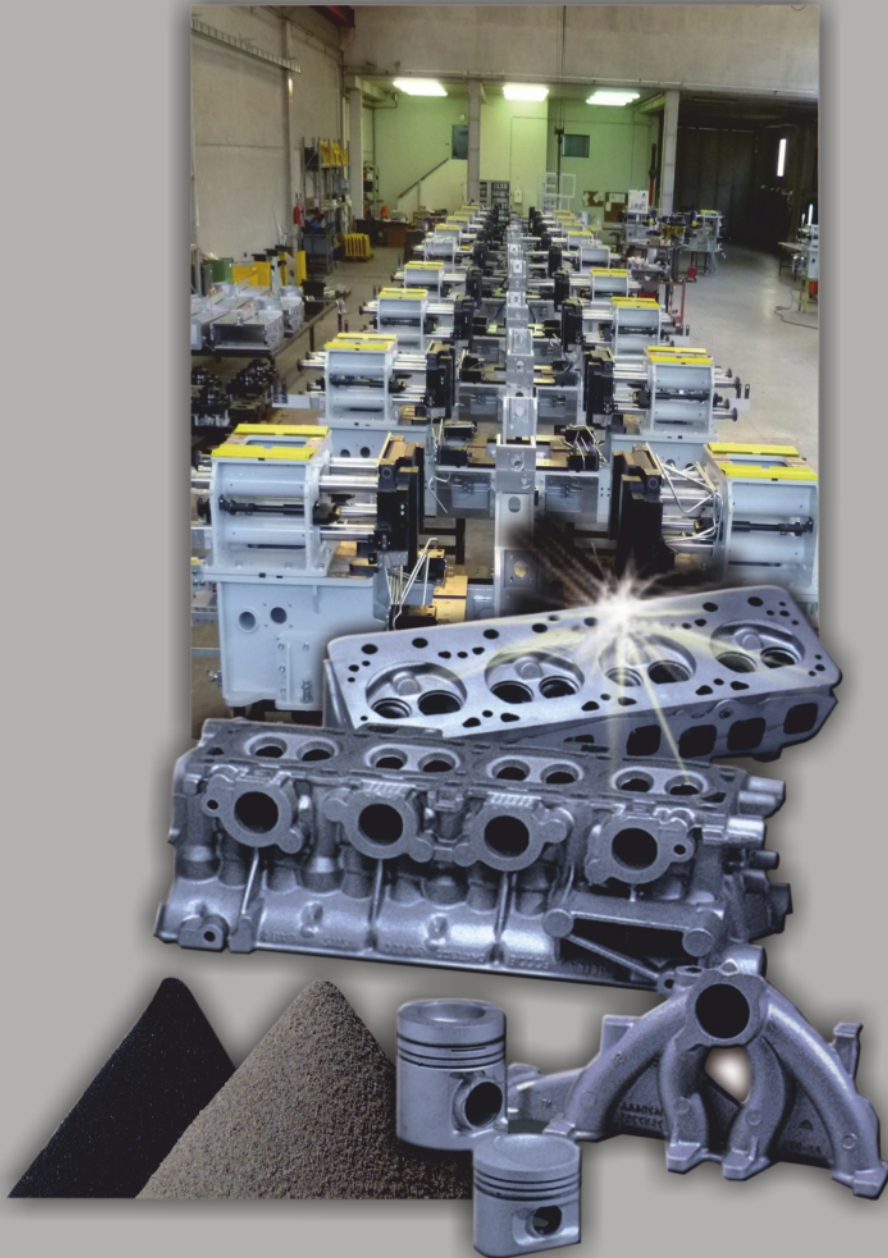


FATA ALUMINUM

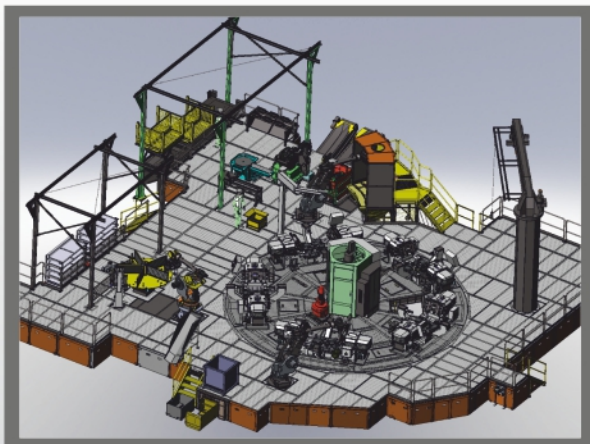
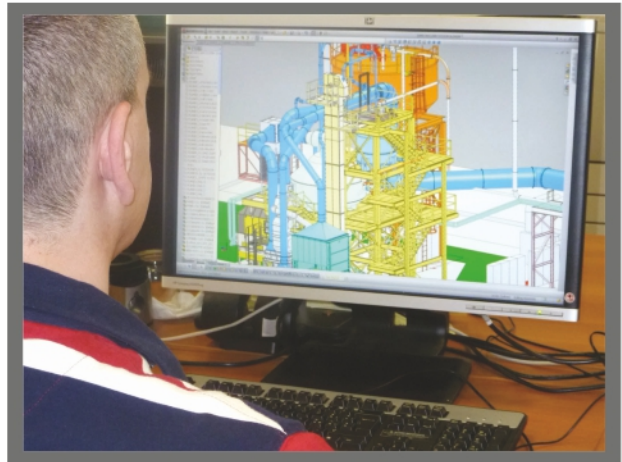


www.fataaluminum.com

A recognized "world class" leader for more than 60 years in the design, manufacturing and installation of automated aluminum casting equipment.

Acknowledged partner to major worldwide foundries for its superior production Fata Aluminum integrates the latest technological advances into its traditionally reliable engineering and design of machines and systems.

Fata Aluminum can assist you with your foundry needs regardless of the size of your operation and geographical position. If your goal is to maximize cost efficiency whilst guaranteeing return on investment and quality of your products Fata Aluminum is your partner to meet and exceed your needs.



Fata Aluminum range of products and services include:

- Technical product and process analysis
- Complete feasibility and engineering studies including simulations and Return on Investment calculations
- Automated gravity casting systems for the production of Aluminum cylinder heads, blocks, pistons and various automotive components
- Lost foam systems for the production of a wide range of automotive components
- Machinery for aluminum casting finishing lines
- Sand regeneration systems for green sand
- Sand regeneration systems for organic binders
- After sales support and assistance

CASTING CAROUSELS FOR CYLINDER HEADS



The core of Fata Aluminum production is the machinery for gravity casting of petrol and diesel cylinder heads and engine blocks, including the production of engine blocks with cast iron liners integrated in a single casting process.

CASTING IN - LINE SYSTEMS FOR CYLINDER HEADS

Fata Aluminum production ranges from high-productivity carousel casting systems, designed to include up to 6 casting benches with production capability reaching 300,000-350,000 castings/year, to in-line casting systems including up to 4 casting machines with potential output of



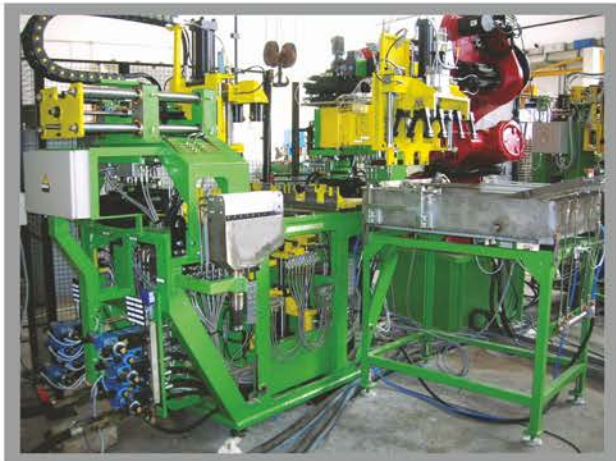
CASTING IN - LINE SYSTEMS FOR ENGINE BLOCKS



200,000-250,000 castings/year, and to individual casting cells with potential output of 50,000 cylinder head/year or 30,000 blocks/year.

All core setting, casting and unloading operations can be fully automated.

GRAVITY CASTING SYSTEMS FOR PISTONS



Fata Aluminum is a worldwide leader in the production of gravity casting machines for diesel and petrol pistons, with or without Alfin inserts and salt cores.

In-line or carousel systems include fixed or tilting machines casting 1 to 4 pistons each, for a potential maximum output of 800,000-900,000 pistons/year per machines

4 CAVITY PISTON MACHINE

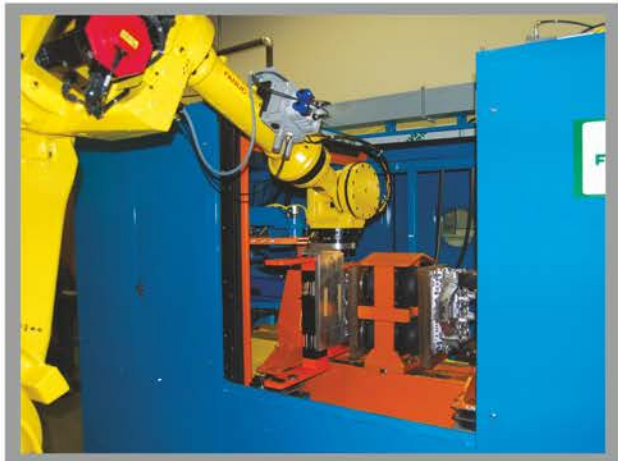


CASTING IN - LINE SYSTEMS FOR ENGINE BLOCKS



The Lost Foam process was developed by Fata Aluminum in the early 80's for high-volume production of complex automotive castings. Dedicated machines for specific process operations (from foam pattern making to pouring) have been continuously developed and implemented in the last years. All operations can be fully automated. Potential production output of 60 castings/hour.

DECORING MACHINE FOR CYLINDER HEAD



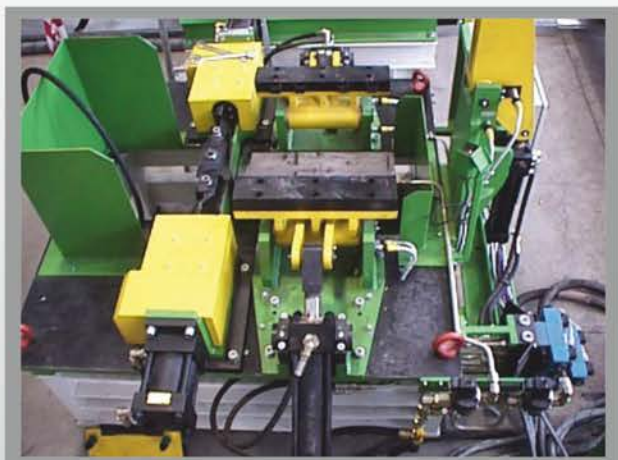
Along with casting machinery, Fata Aluminum has developed special machines for auxiliary processes, such as core and casting handling, decorating, core removal, degating and riser cutting.

In particular, our vibration decorating machines for 2-cavity cylinder heads can achieve an output of about 60 castings/hour with automated or manual part loading/unloading.

DE-GATING MACHINE



CORE BREAKING MACHINE



External core breaking machines and cutting for shearing machines for runners and/or risers typically operate in combination with our casting line, minimizing net casting size and allowing conveyance of cores and runners/risers to sand regeneration and remelting areas.

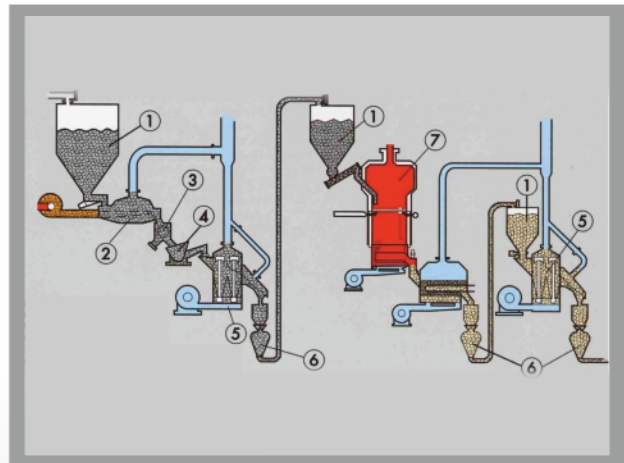
HOT REC TYPE SYSTEMS WITH CAPACITY FROM 5 TO 12 TONS/HOUR



Thermal sand regeneration systems are designed and manufactured by Fata Aluminum based on the fluidized bed principle as a solution to problems associated to exhausted sands containing both ferrous and non-ferrous metal.

Fata Aluminum supplies three different type of systems to suit various requirements from the foundries.

1. Buffer hopper
2. Sand drier
3. Magnetic separator
4. Crusher
5. Mechanical recovery unit
6. Pneumatic transport
7. Calcination furnace



The hot rec furnace, available with capacity ranging from 5 to 12 tons/hour, features an internal heat recovery to minimize energy consumption.

The furnace is designed for operation in large foundries and is suitable for the treatment of sands with organic binders in thermal processes, and sand containing bentonite and black minerals in thermal-mechanical processes.

The machines for mechanical treatment are also a product of Fata Aluminum know-how.

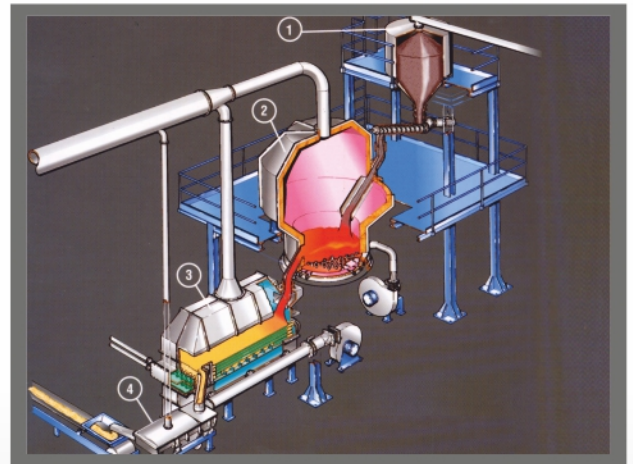
Regeneration systems for sand with binders

ECO REC TYPE SYSTEM WITH 1 TO 5 TONS/HOUR CAPACITY



For small and medium-sized foundries, Fata Aluminum manufactures an Eco Rec type furnace with capacity ranging from 1 to 5 tons/hour equipped with external heat recovery systems and exhaust fume cooling to minimize energy consumption.

For small-sized foundries, Fata Aluminum manufactures a Compact Rec type furnace with a capacity of 1 to 2 tons/hour, equipped with internal heat recovery system. Its compact size results in minimum working space required.



COMPACT REC TYPE SYSTEM WITH 1 TO 2 TONS/HOUR CAPACITY



1. Used sand infeed
2. Calcination furnace
3. Cooler
4. Final Screen

Both systems are typically used for the regeneration of sands containing organic binders.