

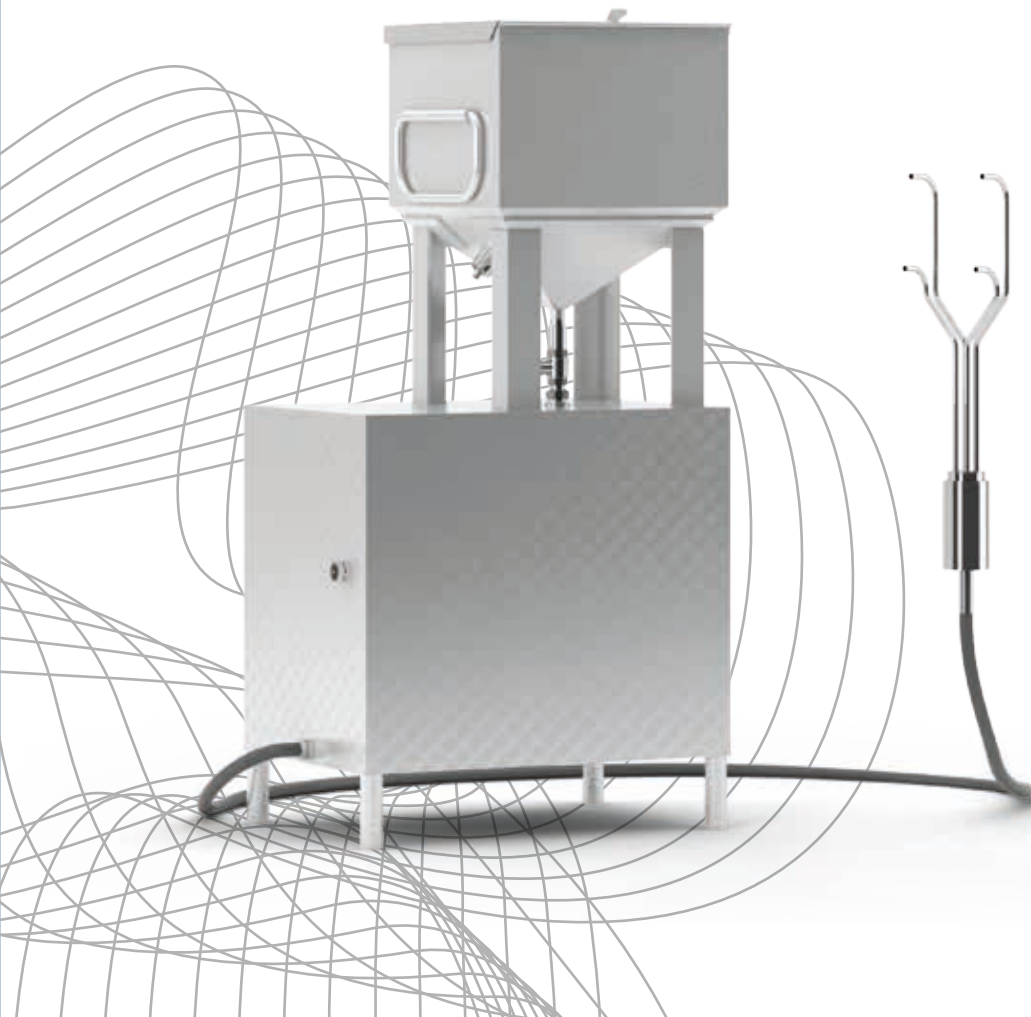


ergolines
INNOVATION PARTNER

MPF – AUTOMATIC POWDER FEEDING SYSTEM.

MPF is a device developed for continuous casting with protected pouring, where it is necessary to automate the powder feeding on the liquid pool into the mould.

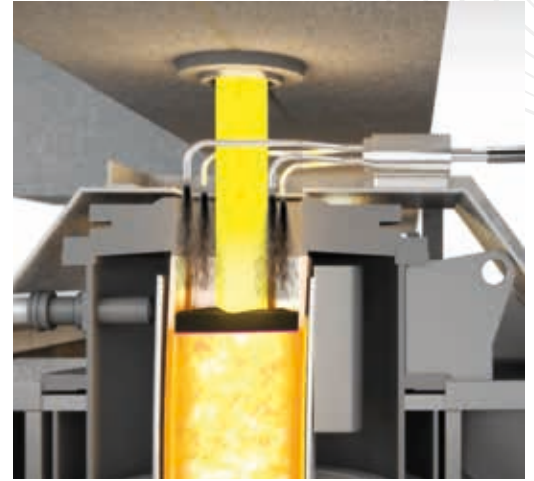
Automatic powder feeding is a priority to ensure the stability of the steel level and quality. The MPF system provides the required amount of powder during casting, ensuring even distribution thanks to calibrated and continual doses at regular time intervals.



HOW IT WORKS

MPF dispenses calibrated powder doses. The powder flow rate can be adjusted by changing the number of doses per minute. The number of doses is set by the operator or can be automatically adjusted in combination with the powder control system PTC developed by Ergolines.

Conveyance is achieved with an intermittent gas stream (argon or nitrogen); this enables extremely accurate distribution and reduces gas consumption compared to continuous-flow systems. The amount of powder in the single doses is set a priori in view of the casting format and the required powder flow rate per hour. The distribution on the bath is made even and uniform thanks to multi-area distributors specifically developed for the different casting formats.



INSTRUMENT MAIN FEATURES

The automatic powder feeder system - MPF is built to work with any section and format (billets, blooms and slabs) and allows fine adjustment of the powder flow rate and attainment of even distribution on the casting bath.

The device was developed to be integrated with the PTC powder thickness measuring and control technology developed by Ergolines.



BENEFITS OFFERED

- › reduces the meniscus instability
 - › reduces level fluctuations
 - › an operator need not be present to check and feed the powder into the mould
 - › reduces the risks for the operator and increases safety
 - › gives the possibility of setting the powder thickness in the mould before and after casting
 - › improves productivity and the quality of the steel, reducing breakout risk
 - › ensures optimum lubrication, regular feeding and appropriate powder distribution.
-

INSTALLATION

Each casting line is equipped with an independent powder distribution module which can be added to a shared unit or to separate units, according to the installation requirements of the Client. The conveyance technology adopted allows the use of long conveyance pipes, making it easy to prepare the hopper layout on the casting floor.

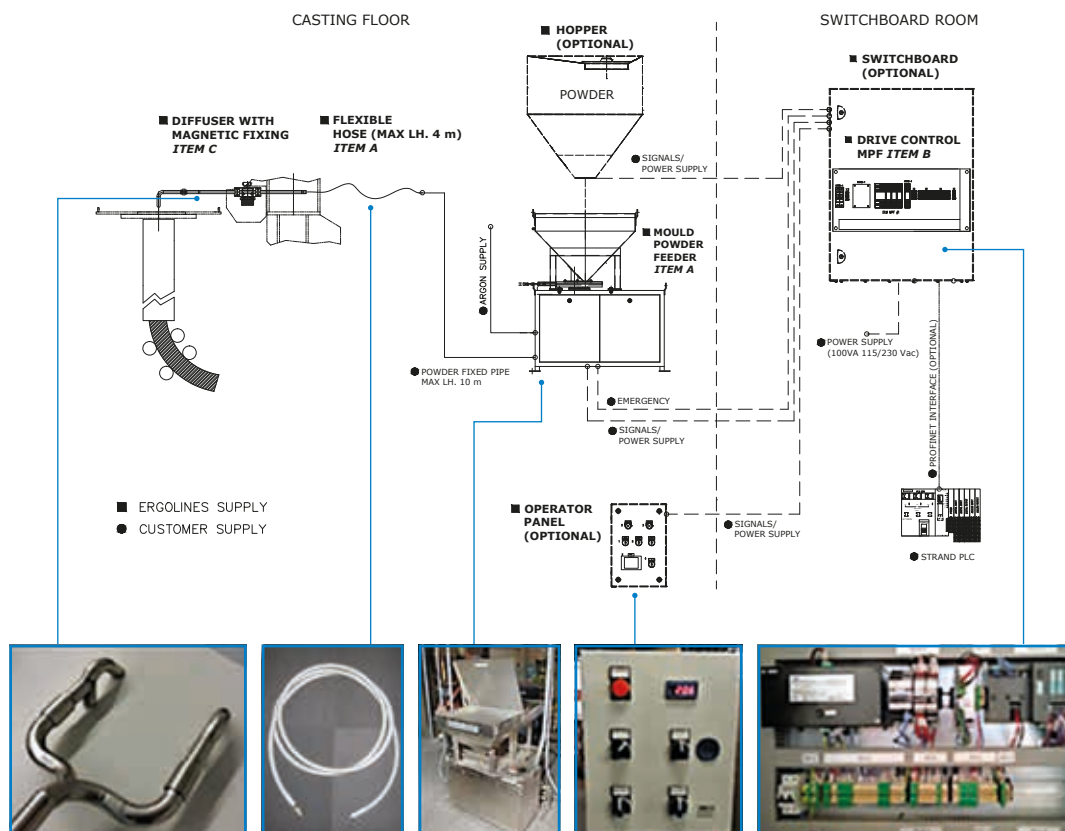
The system is designed to store an amount of powder based on consumption, to ensure that there is enough for a complete casting cycle. Additional large storage tanks connected directly to the distribution units can also be installed where required by the Client.



SYSTEM COMPONENTS

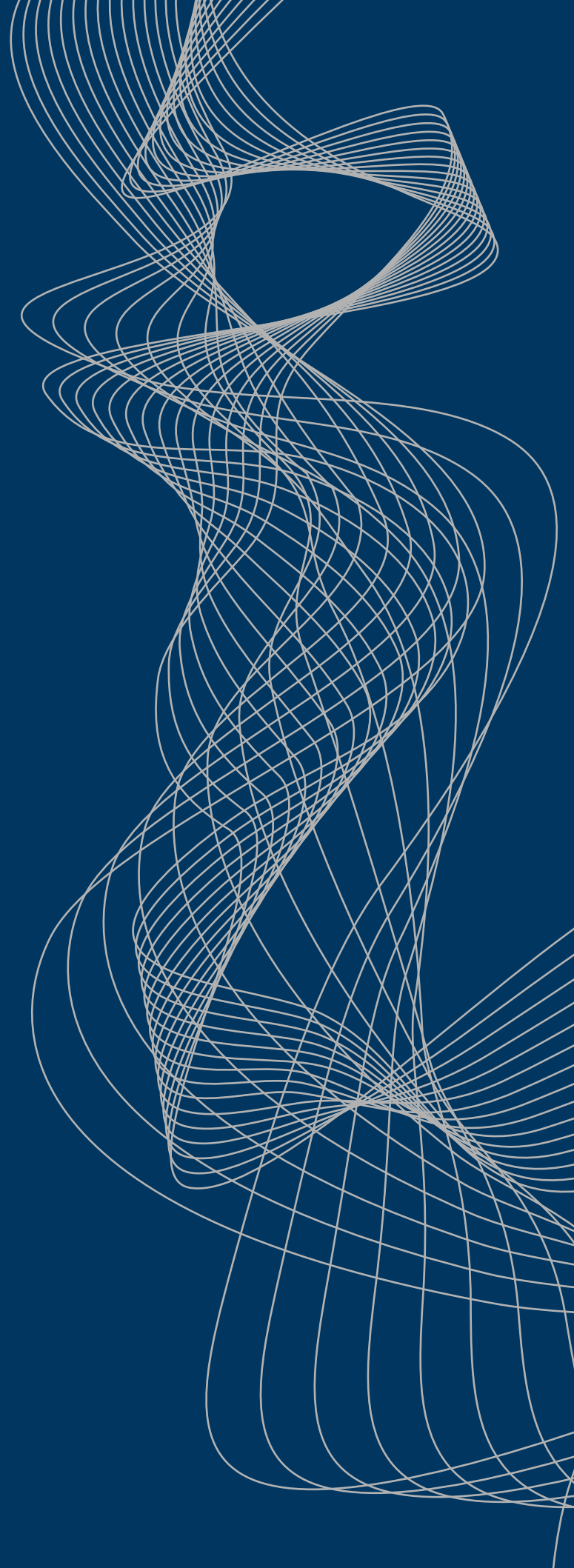
The system is made up of the following components:

- > electrical panel with control unit
- > feeder system complete with regulating valves, electronic devices and powder tank
- > multi-area powder distributor for billets, blooms or slabs
- > heat-resistant flexible pipes with quick connectors
- > operator panel
- > additional tank (optional).



TECHNICAL DATA

Uses	Billets, Blooms or slabs
Powder type	Granular 0.1 – 1 mm
Control parameters	Powder feeder frequency
Working pressure	4– 20 bar
Power supply voltage	24 V DC
Weight without tank	100 KG
Installation	Casting floor or tundish car



ergolines lab s.r.l.

in Area Science Park, Bldg. R3
Padriciano 99, 34149
Trieste, Italy
C.F./P.IVA 00955410329

P +39 040 375 5422
F +39 040 375 5421
infosteel@ergolines.it
www.ergolines.it