



ALPINE METAL TECH
A COMPANY OF MONTANA TECH COMPONENTS AG

POWDER FEEDER

Continuous casting





Mould powder dosing feeders for high quality continuous slab casting.

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Continuous casting

Mould powder dosing feeder for high quality continuous slab casting.

Most flexible and reliable solution for fully automated feed and distribution of all common mould granules or powder types. Adjustable to different slab dimensions. Precisely follows the defined constant or variable feed rate defined by the caster control system.

Adjustable movement of feed arms for homogeneous powder distribution. Heated container keeps powder dry. An integrated stirrer prevents agglutination and distributes the powder to both feeding tubes. Reliable powder transport within the feeding tubes by non-blocking spiral conveyor.

YOUR ADVANTAGES

- » **Wide range of consumables**
Suitable for all types of mould powder and granules
- » **Lower operating costs**
Reduced overall costs due to precise dosing of mould powder and little effort for handling
- » **Flexibility**
Easy handling and seamless integration into existing and new casting lines
- » **Quality improvement**
Proper distribution of mould powder improves steel quality and increases mould lifetime

OPERATIONAL PRINCIPLE

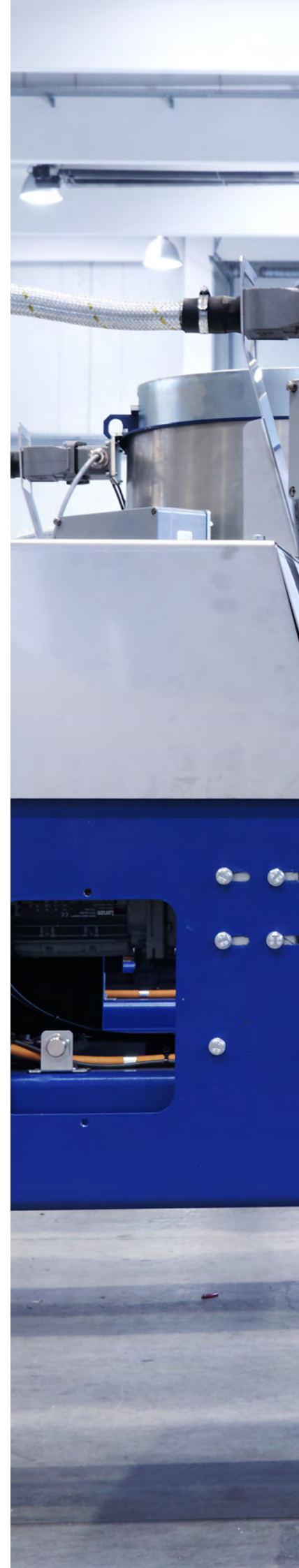
Casting powder is manually filled into the powder container with a total capacity of 100 liters. An integrated screen is separating large particles or other contaminants to protect the machine from malfunction and damages. The container is equipped with an electrical heating and a stirrer to keep the powder dry and to avoid agglutination and clogging. The heating is attached to the outer surface of the powder container. At the inside of the container, the stirrer also makes sure that the powder is properly flowing down into the two feeder housings. From the feeder housings, the powder is transported onward through the feeding tubes by driven spirals. At the tube ends, the powder is eventually trickling down to the mould.

For operation, the ends of the feeding tubes have to be aligned above the mould. The powder feeders' carriage is supported by wheels to facilitate maneuvering. For adjustment of powder feeding height, the wheels can be attached at different levels.

The stirrer inside the powder container also serves for distributing powder to both feeding housings. From there, powerful feeding spirals are transporting the powder through the feeding tubes to the outlet tubes that are positioned above the mould. Both feeding tubes are performing a permanent sweeping movement to cover the entire width of the mould.

Speed controlled motors are driving the feeding spirals. Therefore, the quantity of powder is directly linked to the selected speed.

During casting process, the powder feed rate is adjusted to the casting speed. This information is obtained by the caster control system (Level 1). A sensor is monitoring the powder level and triggers a warning for refilling. At the end of casting both powder shut-off sliders have to be closed in order to empty the feeding pipes.







① Handle

② Spiral drive

③ Feeding spiral

④ Powder shut-off slider

⑤ Heating jacket

⑥ Feeding tube

⑦ Stirrer drive

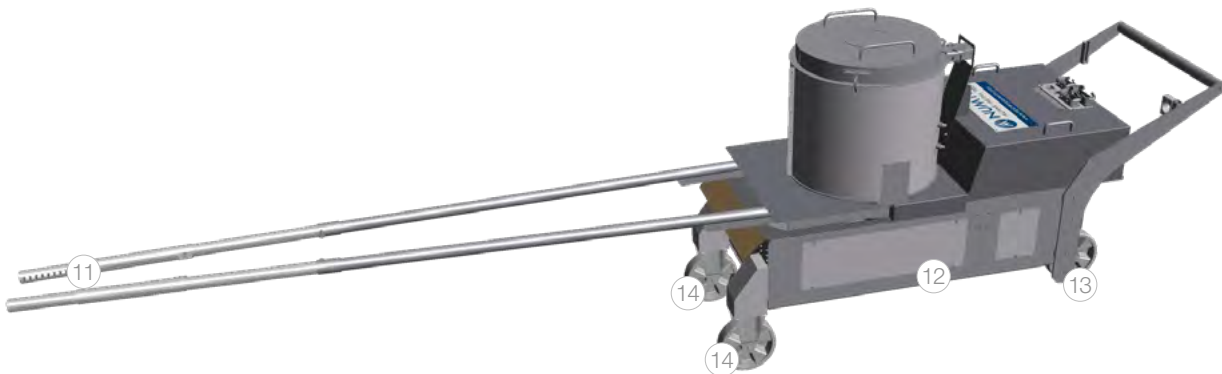
⑧ Powder stirrer

⑨ Powder fill with integrated coarse screen

⑩ Feeding tube sweeping drive

TECHNICAL DATA

Usual application	Slab caster	
Electrical data	Main supply:	3 x 400 V, 50 Hz (other voltages possible)
	Power consumption	Approx. 6 kVA
Main supply	Type of design:	2-arm spiral conveyor on carriage
	Powder container:	100 l volume
	Feeding of casting powder:	Speed-controlled for different amounts of consumption corresponding to casting capacity and type of powder
	Capacity per feeding tube:	0.5 to 3 l/min infinitely variable set-up from host computer
Dimensions	Height:	Approx. 1400 mm
	Weight:	Approx. 800 mm
	Length:	Approx. 5000 mm



① Powder feeding tubes with spiral cover

② Carriage

③ Caster wheel

④ Fixed wheel

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