

## Data Sheet

CMS 2000/20

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The IKA CMS 2000 is an in-line mixer that creates a strong vacuum to feed powders at high flow rates and disperse them into a liquid stream. The extremely high suction capacity is ideal for wetting out difficult-to-mix powders. The CMS is typically installed in a batch (re-circulation) arrangement.

The machine CMS offers a functional and cost-efficient method of incorporation of solids into liquids in a simple way – without additional dosing systems. Additionally, this method of incorporation eliminates the disadvantages associated with traditional batch processes with a stirrer in a vessel.

The IKA CMS has two horizontal liquid connections and a vertical solid connection. The liquids connection (liquid inlet and mixture outlet) are attached to a vessel. The solids are aspirated over the vertical connection (solid inlet).

A liquid phase is filled into the vessel. A negative pressure is created inside the machine by displacement of the liquid in connection with high flow speeds. This enables suction of the solids directly from a packing (bag, barrel, big bag empty station or similar) by means of a suction pipe or from a run-down funnel. Solids and liquids are conveyed in two separate rotor stages and are only combined in the area with the highest turbulence, which guarantees an agglomeration-free dispersion of the product.

The IKA CMS 2000 is available in eight different sizes. The possible suction rates vary from 44 to 61,730 lbs/h. All sizes of the machine work with the same circumferential speed of the rotor which ensures a reliable scale-up.

Advantages of the IKA CMS 2000:

- Efficient suction system with high throughput performances
- Simple, yet robust design
- Self-adjusting supply of solids and liquids
- No additional dosing system necessary
- Closed system, preventing dust and solvent emission
- Wetting particle to particle, thus preventing the agglomerate formation
- No loss of raw materials by bundle handling
- Impressive reduction of production times
- Reduced raw material insertion by better disintegration of the raw materials
- Compact manufacturing method
- Easy scale-up processes developed with the laboratory machines CMS onto production machines CMS
- Machined is self-draining and CIP, SIP capable
- All wetted parts are 316L or 316 Ti stainless steel
- Fully automatable
- 3A-Sanitary conformed and certified
- Pharmaceutical execution available upon request

IKA engineers and application experts are available to assist you with questions regarding installation of the machine CMS into your existing process system or regarding expansion of the scope of supply for a new complete production plant.



#### Technical Data

Total capacity	350 gpm
Powder incorporation from	440 lbs/h
Powder incorporation to	19,000 lbs/h
Motor power	50 Hp
Motor speed	3,600 rpm
Tip speed	23 m/s
Single mechanical seal	Yes
Double mechanical seal	Yes
Speed regulation possible	Yes
Mixing tools	Rotor
Ex-proof possible	Yes
Cleaning	Yes, CIP
Sterilization	Yes, SIP
Inlet solid	2"
Inlet liquid	3"
Outlet	3"

**Ident. No.** CMS 2000/20

