



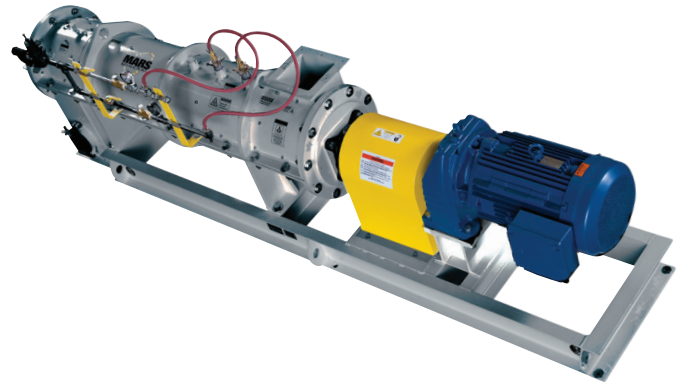
A global leader in agitation agglomeration technology — the conversion of fine powders and dusts into spherical pellets.

Pin Mixer


The Mars Mineral Pin Mixer is a pin-type solids processor designed for applications requiring high-energy input to materials for mixing or micro-pelletizing. It is a high-speed, conditioning and micro-pelletizing device that converts dust into small agglomerates through the action of a high-speed rotor shaft and pin assembly, and the addition of aqueous liquids such as water only, or water with organic or inorganic additives.

Application

The Pin Mixer is ideally suited for micro-pelletizing, agglomerating or conditioning powdered materials, such as carbon black, cement kiln dust, manure, pigments, coal dust, pesticides, electric furnace baghouse dust, limestone fines, coke, petroleum, coke fines, bauxite and silica fume for further processing in a pelletizer.



The material enters at one end of the cylinder and is whipped by the pins as it moves from the inlet through the shell and to the bottom outlets. As a fine spray of liquid is added at the entry section and distributed throughout the powder, fine mixing and micro-agglomeration will occur. The end result is a wetted, agglomerated and densified micro-pellet.

Pin Mixer	Used as Pelletizer	Used as Mixer	End Product		Capacity
			Size	Shape	
	Yes	Yes	0.125-2 mm	Spherical to Irregular	10-2200 ft ³ /hr 0.28-62.3 m ³ /hr

- Straightforward de-dusting/dust wetting
- Solids-liquid mixing
- Micro-pelletizing
- Pre-conditioning
- Chemical reaction

The Mars Mineral Pin Mixer features a cylindrical, stationary shell with a length-to-diameter ratio between 4:1 and 5:1. Inside the shell is a replaceable rubber liner and a shaft with radially extending rows of pins in a helix pattern. There is a close tolerance between the tips of the pins and the inside of the mixer shell.

Shaft rotational speed, and therefore tip speed, is high (several hundred RPM), which is higher than the speed of traditional paddle mixers, pug mills and Ampel conditioners.

Pin Mixer Specifications

Model	Diameter	Length	Capacity (ft ³ /hr)	Capacity (m ³ /hr)	HP
8D32L	8"	32"	10	0.28	20
12D54L	12"	54"	40	1.13	40
16D80L	16"	80"	100	2.83	50
20D90L	20"	90"	180	5.10	50
22D90L	22"	90"	225	6.37	75
26D100L	26"	100"	365	10.33	100
30D120L	30"	120"	550	15.57	150
40D160L	40"	160"	1,300	36.81	250
48D190L	48"	190"	2,200	62.30	350

Note: Capacity throughput based upon free-flowing material. Specifications and dimensions are for general use only. Actual HP may change depending on material bulk density.

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