Birotor Mixer

Blades Discontinuous

Capacity: 48 to 5,000 liters
Objectives: homogenization and mixing of products with different characteristics

MIXING AND HOMOGENEIZATION OF SEVERAL MATERIALS (SUCCESSIVE BATCHES)

The BRP double shaft mixer with blades is a continuous mixer with two parallel tanks, each fitted with blades which promote a homogeneous mixing regardless of the particle size and density.
The intensive mixing action ensures, even with delicate or very brittle products, an optimal process without the formation of fine particles. The mixer can be started fully loaded.

TECHNICAL SPECIFICATIONS

- **Coefficient of variation reached (CV): less than 3%**
- **Mixing ratio: 1/100,000**
- **High homogeneity (CV < 5%)**
- **Bearing end with rotor sealing group in various versions with optional air or gas pressurization**
- **Double bomb bay discharge**
- **Robust mixing tank made of carbon steel or 304 L stainless steel**

FUNCTION

The BRP batch mixer is used for dry solids (powders, granules, short fibers), dry solids + liquids (moistening, granulating, coating), as well as for liquid and low-viscosity pastes.

Advantages

Shorter discharge time due to double discharge mouth

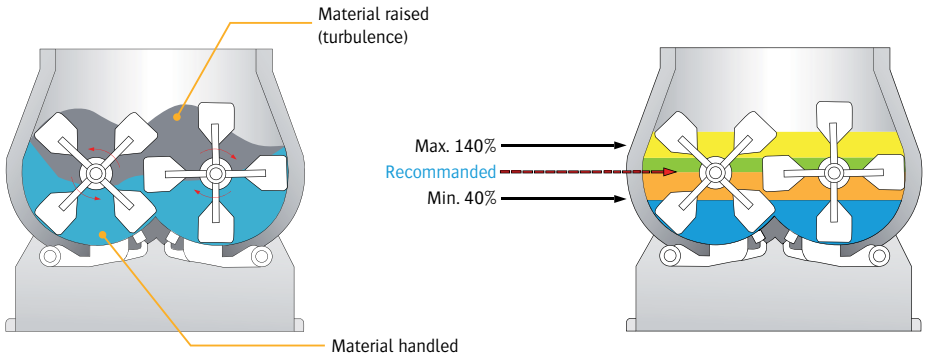
Low residue (0-5.5% of the volume)

Short mixing time (5-30 sec.)

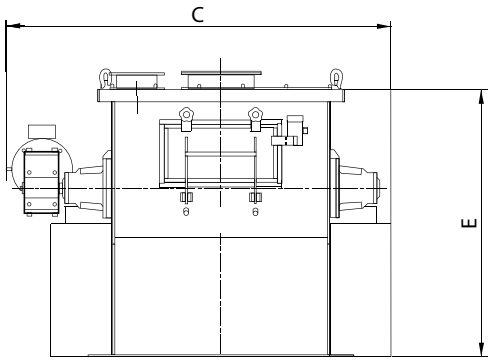
Easy cleaning

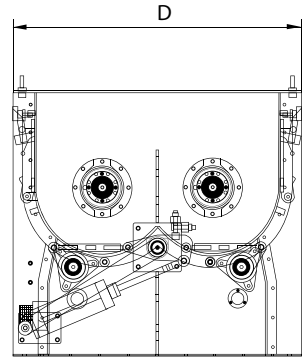
OPERATING MODE

The horizontal rotors, which rotate in opposite directions, create a fluidization zone which ensures accurate mixing of products. The fluidization zone is generated by combining two technologies, the first in turbulence and the second in conveying. In these fluidized zones, powders and granules are dispersed optimally within a very short time. The double shaft mixer with blades, BRP, guarantees high performance in terms of homogeneity and mixing speed.



DIMENSIONS in mm.





Models	C	D	E	Nominal volume in litres	Operating capacity in litres		
					Min.	Max.	
BRP 120	1,484	1,059	1,004	120	48	168	Possibility to manufacture tanks with a capacity up to 5,000 liters
BRP 250	1,784	1,363	1,104	250	100	350	
BRP 500	2,269	1,835	1,630	500	200	700	
BRP 1000	2,690	2,170	2,036	1,000	400	1,400	
BRP 2000	3,170	2,662	2,373	2,000	800	2,800	

Options

Double casing heating/cooling

Tank and rotor shaft manufactured in 316 L stainless steel

Birotor Mixer Blades Continuous

Rate: 4 to 34 m³/hr.
Objectives: homogenization and mixing of dry or wet materials

SIMULTANEOUS CONVEYING AND MIXING OF TWO OR MORE PRODUCTS

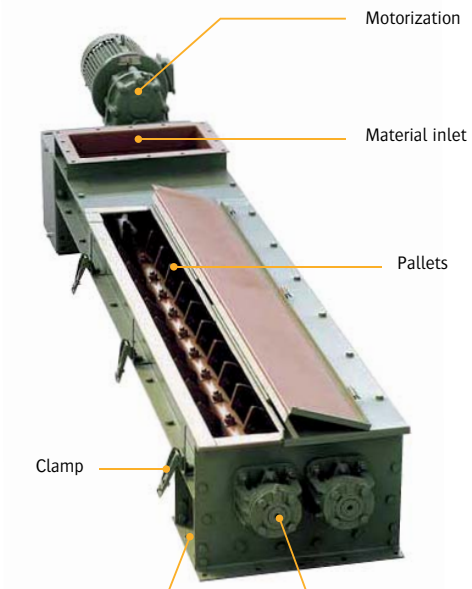
PALAMATIC PROCESS continuous mixer with overlapping blades is ideal for homogenization and mixing of dry or wet materials.
These machines, of simple and robust design, are fitted with double parallel rotors and ensure the mixing of two or more materials but also their conveying during the mixing process. These mixers are ideal to carry out neutralization of sludge with lime, moistening of dust, extinction of quicklime etc...

TECHNICAL SPECIFICATIONS

- **Possibility to add up to 20% of liquid material**
- **Robust mixing tank made of carbon steel or stainless steel 304 L/316 L**
- **Trough shaped tank with bolted or welded flanges**
- **Gasket at the passage of the shaft supporting the rotor, external bearings**
- **Driven by gear motor with hollow shaft or coupling**

OPERATING MODE

Double shaft mixers with blades BRPC are adapted to dust mixing, granulation, neutralization of sludge and moistening of dust, ash or sludge. The overlapping of the blades and the adjustment of their inclination ensure a very good adaptation to the products to be mixed. The continuous mixer is made of a tank which contains two parallel rotors fitted with blades which intersect during operation thus covering the entire surface of the trough. The start of the mixer is also possible when fully loaded.



[+] Most common application

- Powder handling
- Sludge granulation
- Inerting of sewage sludge
- Conditioning of dust, ash and sludge of industrial origin (metallurgy, fly ashes)

This mixer enables sludge handling with quicklime or dead lime.

The horizontal shaft continuous mixers consist of:

- a mixing vessel equipped with a filling mouth
- a discharge mouth
- two mixing rotors
- two-end closure plates
- detached end bearings with passage of the shaft by packing gland
- gear units with power transmission

Advantages

Homogeneous conveying and mixing

Self-cleaning rotors thanks to overlapping blades

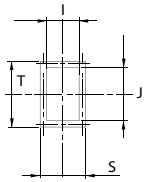
Adjustable blades with or without wear protection

Powers adapted to demand

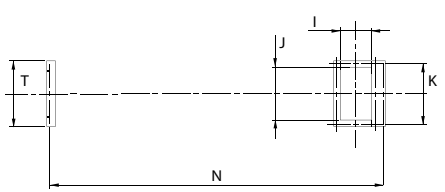
DIMENSIONS in mm.

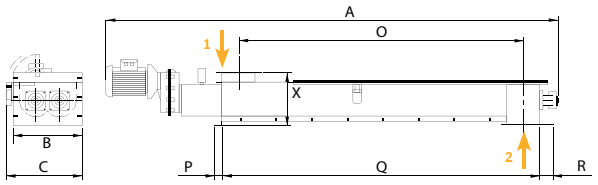
Models	A	B	C	I	J	K	N	O	P	Q	R	S	T	X	Installed power in kW		Rate in m³/h.	Kg
BRPC 200	3,180	522.5	528	225	390	445	2,349	2,003	56	2,228	96	311	476	390	1.5	2.2	4 to 6	400
BRPC 300	4,414	742.5	755	325	595	655	3,439	3,004	70	3,329	100	433	703	540	3.0	4.0	7.5 to 12	700
BRPC 400	5,181	922.5	905	425	745	815	4,083	3,504	80	3,929	134	533	853	675	5.5	7.5	15 to 24	870
BRPC 500	5,934	1,147.5	1,130	525	950	1,027	4,679	4,004	90	4,529	120	653	1,078	870	7.5	15.0	25 to 34	1,050

View 1



View 2





Options

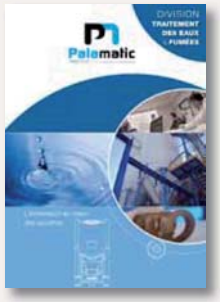
Antiwear coating

Liquid additive system

Birotor Mixer

Sludge Processing Facility

Blades Continuous



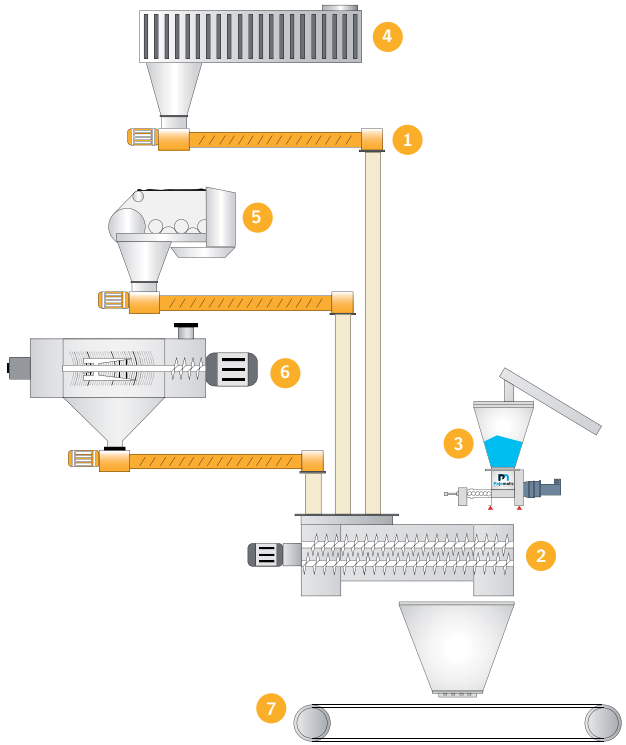
PALAMATIC PROCESS designs mixing tanks for preparing lime milk or activated carbon slurry. Our offer includes the incorporation of carbonate in smoke ducts, activated carbon dispersion or urea dissolution. The stirring methods we offer are various: homogenization, dissolution, suspension, dilution, flocculation...

- Lime milk preparation
- Urea Dissolution
- Activated carbon treatment
- Sludge processing/Conveying/Storage/ Cooling
- Smoke treatment

Sack discharging and conveying of sewage sludge

SLUDGE INERTIZATION PROCESS

Typical diagram of a sludge liming facility.



1 Screw conveyor

2 Double shaft mixer with blades

3 Dosing system for incorporation of lime

4 Press filter

5 Belt filter

6 Sludge centrifuge

7 Belt conveyor