



WE OFFER

PERFECT MIXING TECHNOLOGIES



PERMIX PAM VERTICAL PADDLE MIXERS
PRECISION, HYGIENE, AND EFFICIENCY
FOR EVERY INDUSTRY

www.permix-mixers.com

What is the PerMix PAM Vertical Paddle Mixer?

The PerMix PAM series Vertical Paddle Mixer is a super innovation that combines all the advantages of precise mixing homogeneity, highly hygienic design, complete discharge with minimum residue, wide range of loading volume, robust design with long duty life, and many others. It is an efficient and versatile blending machine designed for batch mixing of free-flowing powders, granules, and pellets. It is widely used across various industries, including food, enzymes, cosmetics, fine chemicals, nutraceuticals, and pharmaceuticals.



Why choose a Vertical Paddle Mixer?

Choosing a vertical paddle mixer offers several unique operational advantages compared to horizontal models. First, its vertical design requires significantly less floor space (a smaller footprint), making it ideal for facilities with limited room. It provides highly gentle mixing, making it incredibly effective even for abrasive, fragile, or heat-sensitive materials.

The gravity-assisted bottom discharge ensures that almost no residue is left in the tank after the batch is completed. Furthermore, it boasts an exceptionally hygienic design with no seals or bearings in contact with the mixed product, completely eliminating cross-contamination risks. Finally, it offers unmatched flexibility, allowing you to handle small to large batches on the very same machine, with mixing volumes starting from as low as 10% of the Max. Mixing capacity.



How It Works

PAM Vertical Paddle Mixers are designed with a single shaft featuring a uniquely designed paddle or ribbon that provides a multi-dimensional movement of the materials. During operation, the mixing element moves the materials upward from the bottom of the vessel to the top, where they then drop by gravity back into the center. This generates an excellent counter-flow of the product particles, creating a complex lifting action with enhanced mixing and heat transfer efficiency.

Key Features & Advantages



Key Features & Advantages

- **Gentle & Precise Mixing:** Material particles are mixed with minimal mechanical and thermal stress, making this the perfect solution for delicate products.
- **Highly Hygienic & Easy to Clean:** Designed for the highest hygienic requirements, ensuring complete flushing with minimal waste.
- **Zero Seal Contamination:** Engineered so that shaft bearings and seals are above the working area, ensuring they never contact the product.
- **High Efficiency:** Offers a high rate of heat transfer and excellent mixing efficiency, especially for difficult-to-handle powders.

Options & Customization

Available in various materials of construction including Stainless Steel, Carbon Steel, and wear-resistant Hardox for enhanced performance. The mixers can be equipped with customized feeding and discharging configurations, CIP (Clean-in-Place) nozzles (supplied as standard), Flat bottom for height restricted places, and heavy-duty drive systems



Advanced "Easy-Clean" Execution To meet the most stringent sanitation protocols, PerMix offers an exclusive Easy-Clean design configuration for the PAM series:

- **Retractable Main Shaft:** The entire main mixing shaft and drive assembly can be engineered to lift and completely extract out of the mixing vessel. This provides operators with 100% unobstructed access to both the tank interior and the agitator for effortless and thorough cleaning.
- **Retractable Choppers:** We also offer an advanced extraction system for our high-speed side choppers. The choppers can be easily pulled out from the vessel trough, ensuring rapid cleaning and maintenance without the need to enter confined spaces.



PAMD: Vertical Vacuum Mixer Dryers and Steam Sterilizers

The PAM mixing technology can be upgraded into a highly efficient turbulent mixing reactor-dryer. By integrating a full vacuum-rated construction and ASME/PED-certified (optional) heating jackets, the PAM serves as a high-speed vertical vacuum mixer dryer.

- **Process Advantages:** Operating under vacuum significantly lowers the boiling point, allowing for agglomeration-free rapid drying at lower temperatures. This perfectly protects heat-sensitive ingredients.
- **Vertical Efficiency:** The vertical design provides a larger surface area contact for heat transfer per volume compared to horizontal mixers, accelerating the drying time while taking up less production space.



PAM-SS: Dynamic Steam Sterilization Systems

Based on the PAM mixer's robust design, the PerMix PAM-SS Steam Sterilizer is an advanced solution for the food and spice industries.

- **The Regulatory Shift:** Against the backdrop of increasing regulatory trends that are tightening the restrictions on the use of gamma radiation for food sterilization, and in the wake of growing prohibitions, steam sterilization is becoming the preferred and, in many cases, the only viable option.
- **Dynamic Sterilization:** Unlike static chambers, the PAM-SS uses the mixer's multi-dimensional lifting action to continuously expose every single particle to high-pressure steam, ensuring a 100% uniform and validated 5-stage sterilization process.



Specifications



PAM Vertical Paddle Mixers

Model	Total L	Useful L, 10%	Useful L, 70%	kW	RPM	L (mm)	W (mm)	H (mm)	KG
PAM-10L (*)	10	1	7	0.75	200	1,200	800	1,600	160
PAM-15L (*)	15	1.5	11	0.75	180	1,200	800	1,600	170
PAM-20L (*)	20	2	14	1.1	150	1,250	800	1,650	230
PAM-30 (*)	30	3	21	1.1	150	1,300	800	1,665	320
PAM-45 (*)	45	4.5	32	1.5	134	1,300	800	1,750	400
PAM-50 (*)	50	5	35	1.5	134	1,300	800	1,770	460
PAM-60 (*)	60	6	42	1.5	130	1,350	800	1,800	550
PAM-70 (*)	70	7	49	2.2	129	1,450	800	1,750	630
PAM-100 (*)	100	10	70	3	115	1,500	800	1,780	690
PAM-150 (*)	150	15	105	4	104	1,650	900	1,800	810
PAM-200 (*)	200	20	140	4	95	1,730	900	1,850	920
PAM-250	250	25	175	5.5	89	1,250	850	1,550	480
PAM-300	300	30	210	5.5	85	1,270	880	1,560	520
PAM-400	400	40	280	7.5	74	1,350	900	1,680	580
PAM-500	500	50	350	7.5	72	1,410	1,000	1,730	630
PAM-600	600	60	420	11	67	1,600	1,050	1,850	810
PAM-700	700	70	490	11	65	1,750	1,100	1,950	940
PAM-750	750	75	525	11	65	1,840	1,190	2,030	1,090
PAM-800	800	80	560	11	58	1,900	1,280	2,050	1,270
PAM-1000	1000	100	700	11	55	1,920	1,320	2,070	1,550
PAM-1200	1200	120	840	15	51	2,000	1,450	2,250	1,840
PAM-1500	1500	150	1050	15	49	2,050	1,490	2,390	2,070
PAM-2000	2000	200	1400	18.5	45	2,185	1,560	2,675	2,300
PAM-2500	2500	250	1750	22	43	2,260	1,700	2,850	2,470
PAM-3000	3000	300	2100	22	40	2,320	1,730	2,985	2,650
PAM-4000	4000	400	2800	30	38	2,535	1,950	3,105	2,930
PAM-5000	5000	500	3500	37	36	2,740	2,070	3,355	3,220
PAM-6000	6000	600	4200	37	33	2,800	2,180	3,515	3,450
PAM-7000	7000	700	4900	45	30	3,000	2,300	3,680	4,370
PAM-8000	8000	800	5600	45	30	3,120	2,420	3,790	5,000
PAM-9000	9000	900	6300	55	28	3,200	2,580	3,900	5,750
PAM-10000	10000	1000	7000	55	28	3,320	2,660	4,050	6,440
PAM-12000	12000	1200	8400	75	26	3,480	2,700	4,255	7,070
PAM-15000	15000	1500	10500	90	24	3,750	2,890	4,500	7,590
PAM-20000	20,000	2000	14000	110	22	3,900	3,000	4,600	8,200

(*) A skid movable design

Specifications



PAMD Vertical Vacuum Dryers & Sterilizers

Model	Total L	Useful L, 10%	Useful L, 70%	kW	RPM	L (mm)	W (mm)	H (mm)	KG
PAMD-10 (*)	10	1	7	1.5	140	1,400	800	1,700	200
PAMD-15 (*)	15	1.5	11	1.5	126	1,400	800	1,700	200
PAMD-20 (*)	20	2	14	2.2	105	1,400	800	1,700	300
PAMD-30 (*)	30	3	21	2.2	105	1,500	800	1,700	400
PAMD-45 (*)	45	4.5	32	3	94	1,500	800	1,800	500
PAMD-50 (*)	50	5	35	3	94	1,500	800	1,900	600
PAMD-60 (*)	60	6	42	3	91	1,600	800	1,900	700
PAMD-70 (*)	70	7	49	4	90	1,700	800	1,800	800
PAMD-100 (*)	100	10	70	5.5	81	1,700	800	1,900	900
PAMD-150 (*)	150	15	105	7.5	73	1,900	900	1,900	1,100
PAMD-200 (*)	200	20	140	7.5	67	2,000	900	1,900	1,200
PAMD-250	250	25	175	11	62	1,400	850	1,600	600
PAMD-300	300	30	210	11	60	1,500	880	1,600	700
PAMD-400	400	40	280	15	52	1,600	900	1,800	800
PAMD-500	500	50	350	15	50	1,600	1,000	1,800	800
PAMD-600	600	60	420	18.5	47	1,800	1,050	1,900	1,100
PAMD-700	700	70	490	18.5	46	2,000	1,100	2,000	1,200
PAMD-750	750	75	525	18.5	46	2,100	1,190	2,100	1,400
PAMD-800	800	80	560	18.5	41	2,200	1,280	2,200	1,700
PAMD-1000	1000	100	700	22	39	2,200	1,320	2,200	2,000
PAMD-1200	1200	120	840	22	36	2,300	1,450	2,400	2,400
PAMD-1500	1500	150	1050	22	34	2,400	1,490	2,500	2,700
PAMD-2000	2000	200	1400	30	32	2,500	1,560	2,800	3,000
PAMD-2500	2500	250	1750	37	30	2,600	1,700	3,000	3,200
PAMD-3000	3000	300	2100	37	28	2,700	1,730	3,100	3,400
PAMD-4000	4000	400	2800	45	27	2,900	1,950	3,300	3,800
PAMD-5000	5000	500	3500	55	25	3,200	2,070	3,500	4,200
PAMD-6000	6000	600	4200	55	23	3,200	2,180	3,700	4,500
PAMD-7000	7000	700	4900	75	21	3,300	2,300	3,900	5,700
PAMD-8000	8000	800	5600	75	21	3,400	2,420	4,000	6,500
PAMD-9000	9000	900	6300	90	20	3,500	2,580	4,100	7,500
PAMD-10000	10000	1000	7000	90	20	3,700	2,660	4,300	8,400
PAMD-12000	12000	1200	8400	110	18	3,800	2,700	4,500	9,200
PAMD-15000	15000	1500	10500	132	17	4,100	2,890	4,700	9,900
PAMD-20000	20000	2000	14000	160	15	4,300	3,000	4,800	10,700

(*) A skid movable design



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Besides, PerMix has been building a network of agents located in Southeast Asia, Australia, Russia, Middle East, Africa, and other countries & regions.