FEED AND BIOFUEL

FAST AND EFFICIENT BATCH MIXING

OPTIMIX – THE KEY TO HIGH QUALITY FEED

ANDRITZ

ENGINEERED SUCCESS

A wide range of Single shaft batch mixers

OptiMix 2000 (Mineral mixer)

OptiMix 4000

OptiMix 6000/8000

OptiMix 10000/12000

The ANDRITZ OptiMix paddle mixer is fast and efficient. Designed for dual rotation via VSD to obtain clean mixing aggregate. Improved outlet damper for reduced cross-contamination.

The OptiMix series combines the best of current mixing technology with proven features from our long-established family of mixers, offering short and efficient mixing time.

THE OPTIMIX SERIES OFFERS

- **Fast mixing in a wide range of applications**
- **Capacities up to 170 t/h (0.6 t/m³ dry mix)**
- **Dual rotation for clean mixer unit**
- **Hygienic design**
- **Improved outlet damper with optional air sealing.**
- **CV value below 5% at 1:100,000**
- **Up to 38 batches per hour (dry mix)**
- **Safe and easy access to nozzles from outside**
- **High liquid inclusion rate**
- **Up to 8 liquid additions**
- **Adjustable wear plates**
- **Certified 3rd party mixing quality**
- **Easy access for inspection**

Standard features for easy maintenance

CLEANLINESS, HYGIENE, AND FEED SAFETY

Hygiene is an important matter in feed production. Cleaning on a regular basis and high hygienic standards will help prevent bacterial growth and cross-contamination. That is why the OptiMix series has been designed with a range of features that helps clean production as well as easy cleaning and maintenance.

EASY ACCESS TO LIQUID SYSTEMS

It is possible to clean and maintain the nozzles without entering the mixer. The door can be opened and the nozzles cleaned. This is a safe and fast way to maintain the liquid system.

OUTLET DAMPER

The outlet damper is hinged on one side and locked on the other side. To prevent any leakages, two sealing systems are provided:

1. Metal seal set to face the trough.
2. Inflatable air seal that makes the bottom damper completely air-tight during mixing. The new outlet damper will reduce cross-contamination between batches.

EASY CLEANING AND MAINTENANCE

Wiring and other installations are integrated into the construction, making it easy to clean and maintain. For easy access, a ladder is built into the end of the mixer.

AVAILABLE IN STAINLESS STEEL

All OptiMix models have the option of being produced in stainless steel – this is the optimum choice for clean production and long life time.

A

B

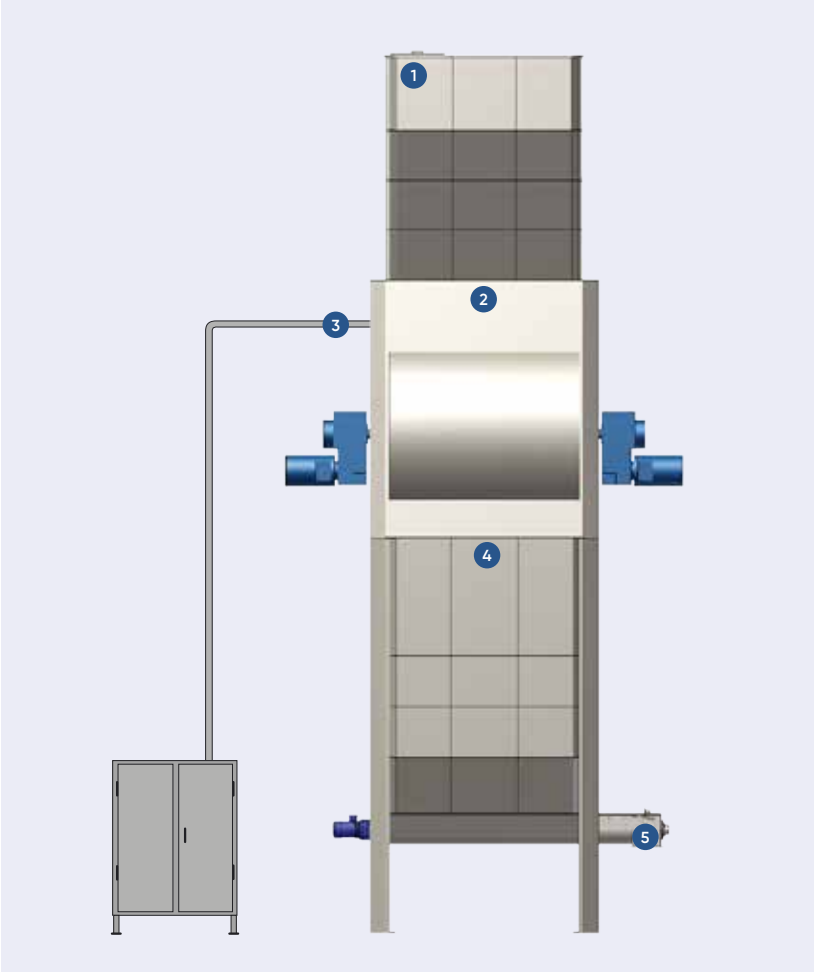
C

D

E

A Easy access manhole
B Dual rotation shaft
C Outlet damper
D Easy access to liquid system
E Mixing unit with dual rotation paddles

Mixing line in high-end design



Flow diagram of mixing line

OPTIONAL EQUIPMENT FOR MIXING LINE

1. Pre-bin with cover plate, manhole, empty level indicator, and outlet flange fitted to mixer inlet
2. Inlet section with pneumatically operated outlet and prepared for nozzle pipes. Outlet flange fitted to mixer
3. Liquid unit for macro-fluid addition
4. Surge bin with empty level indicator, manhole, and outlet flange fitted to our standard discharge screw
5. V-shaped discharge screw with progressive pitch, overflow gate with microswitch, and direct-mounted gear motor

LOCATION OF LIQUID SYSTEM

On OptiMix 2000 and 4000, the liquid system is a part of the basic machine. This means that the inlet section is only needed if the pneumatically operated outlet is required.

On OptiMix 6000, 8000, 10000 and 12000, the liquid system is not a part of the basic machine. The inlet section is needed if the liquid system is required. The inlet can be prepared for the liquid system only or may also include a pneumatically operated outlet as an option.

Basic OptiMix 4000 machine

* Liquid system

OPTIMIX

Type	Volume	Motor size	Dry mixing time	Filling/Discharge time*
	liter	kW	sec	sec
OptiMix2000	2000	22	75	10+10
OptiMix4000	4000	45	90	10+10
OptiMix6000	6000	2x30	105	15+15
OptiMix8000	8000	2x37	105	15+15
OptiMix10000	10000	2x45	120	20+20
OptiMix12000	12000	2x55	120	20+20

*Filling and discharge time are approximated and must be verified in specific application.

EXAMPLE WITH AND WITHOUT LIQUIDS

OptiMix 4000 batch cycle time

	Dry mixing	Mixing with liquids
Filling time	10 sec	10 sec
Dry mixing time	90 sec	90 sec
Spray time (minimum)	0 sec	45 sec
Wet mixing time	0 sec	5 sec
Discharge time	10 sec	10 sec
Total cycle time	110 sec	160 sec
Theoretical batch per hour	3600 sec/110 sec = 32 pcs	3600 sec/160 sec = 23 pcs

Spray time is at least 50% of dry mixing time.

Basic OptiMix 8000 machine with inlet section

Basic OptiMix 8000 machine

* Liquid system

Liquid unit for macro-fluid addition

The liquid application unit is a complete liquid system for controlled addition of a liquid flow of fat, oil, molasses, or other liquids. The liquid addition is controlled by a computer or operates with a fixed amount preset at a control panel.

The ANDRITZ liquid application unit is ready for installation in a closed cabinet with connecting nozzles. The unit is made of steel grades suitable for the liquid media.

THE LIQUID APPLICATION UNIT MAY CONSIST OF

- Insulated cabinet with hinged front doors for operation and service. Side, back, and top cabinet covers are bolted onto the frame and are detachable.
- Dosing pump suitable for the liquid medium
- Electronic flow meter, optional
- Liquid filter for manual cleaning when the unit is idle
- Manual drawing off for control of dial gauge/flow meter
- Thermometers, pressure gauges, ball valves, and safety valves
- Hot-water boiler with thermostatically controlled heating coil, pressure expansion tank, circulation pump, and heating surface for internal heating of cabinet or external heating of coater, nozzle pipe, and other pipes where a constant temperature is desired.

LIQUID UNIT

A complete liquid system for controlled addition of a liquid flow of fat, oil, molasses, or other liquids.

Excellent mixing quality at short mixing time

Short dry mixing time, high efficiency and no leakage or carry-over is the key to high quality feed. This is what the OptiMix series delivers. A unique mixing device design with dual rotation ensures minimum material build-up. Together with full discharge through a large outlet door with locking device and an optional air seal, the OptiMix provides high-quality.

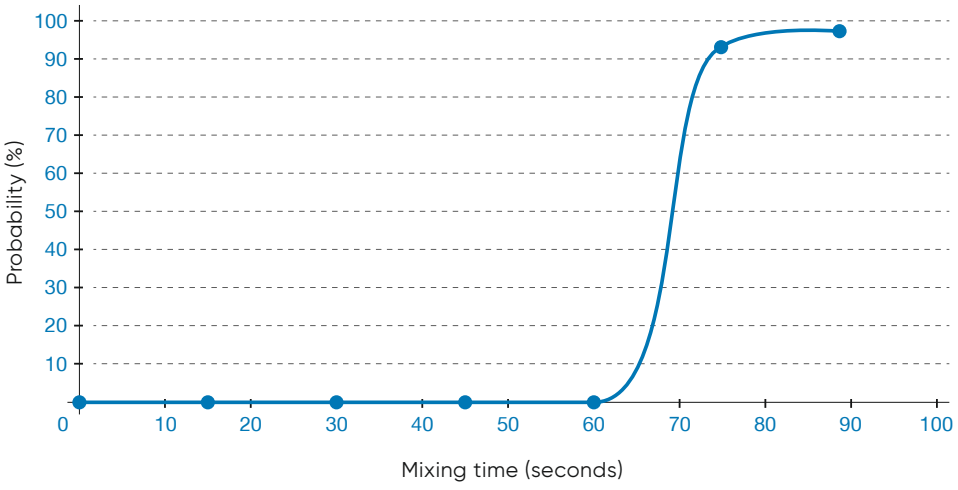
The OptiMix is tested using Microtracer in a ration of 1:100.000 (10g/ton) and obtains a quality CV of less than 5%. The Microtracer method measures probability, but this translates into CV.

Every OptiMix is supplied with a generic mixing certificate. A specific certificate may be requested for special customer applications. Tests are performed and certificates are issued during commissioning by a certified third party.

The mixing quality is evaluated using the standardized Microtracer system. These are food-grade, colored ferrous particles that are added to the mixer. Samples are taken either from inside the mixer or during discharge from the surge bin, and all samples should contain the same amount of particles.

Every OptiMix is supplied with a generic mixing certificate.

OPTIMIX 4000 MIXING QUALITY VERSUS TIME



GLOBAL SUPPLIER – LOCAL PRESENCE

With sales, service, engineering, manufacturing and production sites located all around the world, ANDRITZ Feed and Biofuel is truly a global organization with a local presence. ANDRITZ is vital to ensuring a reliable global supply of aqua feed, animal feed, pet food, and biofuel. With full process lines accounting for half the world's production of aqua feed and biomass alone, we continuously support leading producers in achieving the highest levels in safety, quality, and control from feedstock to final product.

How can we help grow your business?

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