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# MIXERS

A RESOURCE GUIDE FROM TRIMARK

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When selecting a mixer, a few things are simply non-negotiable. For starters, it must be reliable, it must be durable and it must be able to provide consistent results every time. Before you select a mixer, though, you need to research what is available and learn more about the features and benefits of each brand and size.

You also need to consider what types of products you will be preparing and the batch size appropriate for the number of people you plan to serve. It's a lot to think about, and that's why we're breaking it all down here to make your decision easier.

Soon, you will be able to stop planning and start mixing.



## Types of Mixers

### 1. Spiral Mixer

Spiral mixers are commonly used in high-volume operations such as commissaries, bakeries and pizzerias. They are much gentler on dough. That's why Neapolitan pizza shops LOVE them! Spiral mixers have a stationary hook that sticks directly into the product, which rotates on a base with a motor. Spiral mixers are best for dough-based foods, because they're good for keeping a thick viscosity and for not heating up the product like a traditional planetary mixer.

They are also good for operators who want to increase their production of breads, dough and foods of similar consistencies. Spiral mixers are typically available with belt-driven drive systems in either countertop or floor models.

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## 2. Planetary Mixer

With planetary mixers, the bowl remains stationary while the arm moves swiftly to mix the food. Planetary mixers are useful when preparing desserts, icings, fillings, meringues, as well as heavy dough. They are easy to operate, dismantle quickly and clean with little fuss. Accessories and attachments such as vegetable slicers or meat grinders may be added to the power drive hubs for additional applications. Depending on the manufacturer, planetary mixers are available with belt or gear-driven drive systems in either countertop or free standing floor models.



## 3. Vertical Cutter Mixer

A vertical cutter mixer is used to cut and mix a wide variety of foods such as sausage, vegetables, cheese, nuts, sauces and even mayonnaise. Most vertical cutter mixers feature a high-horsepower motor, which makes them useful for operators who need to do bulk food production. They are versatile, durable and easy.

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# Mixer Drive Systems

Commercial mixer drive systems are typically gear-driven or belt-driven.



## Gear-Driven

- Gear-driven mixers come with three or four preset speeds.
- Gear-driven mixers with a variable frequency drive (VFD) can change speeds on the fly. Otherwise, the machine must be stopped.
- The higher the horsepower on a gear-driven mixer, the more reliable it will be when mixing heavy loads.
- Gear-driven mixers generally cost more upfront than belt-driven mixers.
- If needed, repair costs will be higher than with belt-driven mixers; maintenance costs, however, will be virtually nothing.
- Typically found in planetary mixers.



## Belt-Driven

- Belt-driven mixers, also known as variable-speed mixers, generally use torque-sensing pulleys to drive a reinforced belt.
- When in use, the machine can change speeds on the fly.
- Belt-driven mixers are less expensive upfront, but over time belt slipping will require maintenance, especially if the unit is routinely overworked.
- Found in both spiral and planetary mixers.

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## Horsepower and Speed

The higher the horsepower, the more the mixer will be able to handle high volumes or thick dough. You should not specify a mixer for your operation based solely on horsepower, as more horsepower may not necessarily be better. Horsepower becomes less important if the mixer is used infrequently and the product is on the lighter side.

Speed is a factor as well. Most machines have at least three speeds, while some go as high as five. High-speed mixers will be able to prep more products in less time and allow power drive hub attachments to run more efficiently. Always follow the manufacturer's directions to operate at the proper speed and duration for your type of product.



Second speed should never be used on mixtures with less than 50 percent AR (Absorption Ratio = Water Weight Divided by Flour Weight).

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When calculating what size mixer is right for your application, a general rule of thumb is that  
8.3 lb. = 1 gallon of water &  
2.08 lb. = 1 quart.

## What Size Mixer Do You Need?

Spiral and Planetary Mixers are available in both countertop and free standing floor models. Determining which is right for you is ultimately a function of the size mixer you will need for your operation, but there are other factors to consider, as well, such as what you will be preparing and in what quantity.

### Countertop Mixer

Countertop mixers are designed specifically for establishments that make small batches of things like cookie dough, egg whites, mashed potatoes and sauces, and their compact design allows them to fit in a small footprint. Countertop mixers sometimes feature a swing-out bowl to add ingredients or to remove mixed product, as well as, locks and guards to provide for safe operation and cleaning. Depending on the size and brand, most come with a dough hook, wire whisk and flat beater but be certain to check your spec before you buy.

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## Floor Mixer

Floor mixers are best suited for operations that produce high volumes of products. Most models are equipped with bowl sizes ranging from 30 to more than 100 quarts. Floor mixers are commonly used in restaurants, bakeries, pizzerias, schools, and other institutions because they produce a high volume of products that require larger mixed batches. Floor mixers also feature safety locks to provide for safe operation and cleaning.

Keep in mind that dough and batter will expand in the mixing process. That's why it's important to get a mixer that's large enough to handle both your recipes and the number of people you'll be serving.

- When mixing dough (pizza, bread or bagels) check your "AR" or absorption ratio.
- Example: If a recipe calls for 5 lb. of water and 10 lb. of flour, then  $5 \div 10 = 0.50 \times 100 = 50$  percent AR. If high-gluten flour is used, reduce dough batch size by 10 percent.

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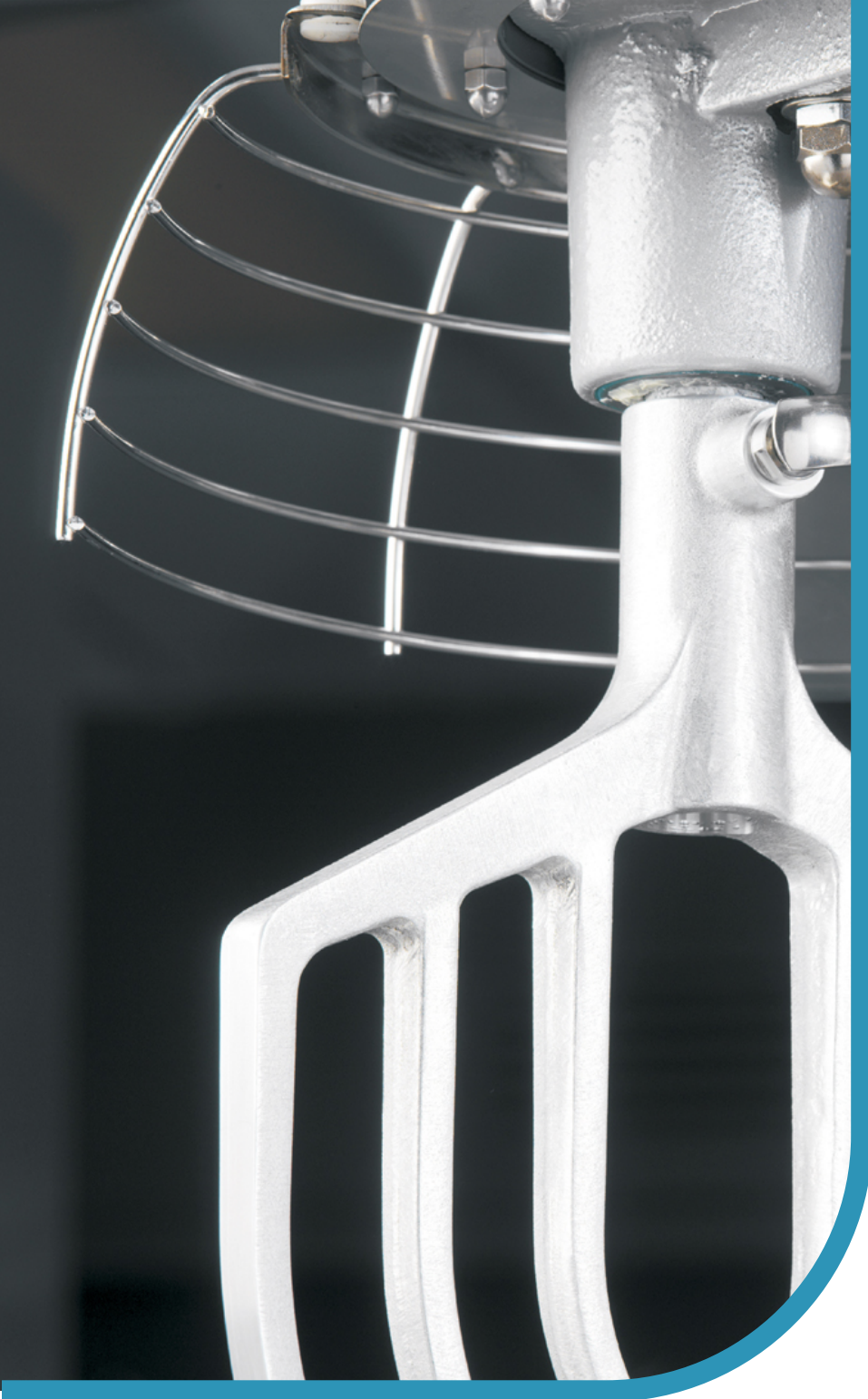
# Mixer Capacity

Many establishments are finding creative ways to use mixers to prepare a wide variety of food. When it comes to dough-based products, though, it's important to determine the amount of flour you put in each batch, whether you'll be using high-gluten flour, and if you use chilled water or ice.

## MAXIMUM BOWL CAPACITY

Product Description	Agitator	Speed	Countertop Mixers			Floor Mixers			
			7 Quart	10 Quart	20 Quart	30 Quart	40 Quart	60 Quart	80 Quart
Bread and roll dough - 60% AR	Dough hook	1st speed only	4 lb	5 lb	25 lb	45 lb	50 lb	90 lb	90 lb
Heavy bread dough - 55% AR	Dough hook	1st speed only	2 lb	3 lb	15 lb	30 lb	40 lb	70 lb	80 lb
Pizza dough, thin - 40% AR	Dough hook	1st speed only	2 lb	3 lb	9 lb	14 lb	25 lb	40 lb	50 lb
Pizza dough, medium - 50% AR	Dough hook	1st speed only	3 lb	4 lb	10 lb	20 lb	32 lb	60 lb	90 lb
Pizza dough, thick - 60% AR	Dough hook	1st speed only	4 lb	5 lb	20 lb	40 lb	50 lb	70 lb	100 lb
Raised donut dough - 65% AR	Dough hook	1st speed only	2 lb	2 lb	9 lb	15 lb	25 lb	40 lb	50 lb
Pasta, Basic Egg Noodle	Dough hook	1st speed only	1 1/2 lb	3 lb	5 lb	8 lb/15 lb	17 lb	35 lb	50 lb
Pie dough	Flat beater	All speeds	4 lb	4 lb	18 lb	30 lb	35 lb	60 lb	70 lb
Mashed potatoes	Flat beater	All speeds	4 lb	5 lb	15 lb	23 lb	30 lb	45 lb	50 lb
Cake batter	Flat beater	All speeds	6 lb	8 lb	20 lb	30 lb	40 lb	60 lb	90 lb
Waffle or hot cake batter	Flat beater	All speeds	3 qt	4 qt	8 qt	12 qt	16 qt	24 qt	30 qt
Pound cake batter	Flat beater	All speeds	6 lb	8 lb	20 lb	30 lb	40 lb	60 lb	90 lb
Fondant Icing	Flat beater	All speeds	4 lb	6 lb	12 lb	18 lb	25 lb	36 lb	60 lb
Egg whites	Wire whisk	All speeds	3/4 pt	1 pt	1 qt	1 1/2 qt	2 qt	3 qt	2 qt
Meringue	Wire whisk	All speeds	1/2 pt	3/4 pt	1 qt	1 1/2 qt	2 qt	3 qt	3 qt
Whipped cream	Wire whisk	All speeds	1.8 qt	2 qt	4 qt	6 qt	8 qt	12 qt	16 qt





## What About Accessories?

Whether you're mashing potatoes, creating meringues, kneading dough or grinding meats, there are a wide variety of accessories to meet your needs. Mixer accessories can include bowl dollies, wire whips, dough hooks, pastry knives, splash covers, bowl scrapers, bowl adapters, ingredient chutes and more.



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## Mixer Care and Maintenance

Mixers, bowls, attachments and accessories must be cleaned after every use. To clean the mixer, always use soapy water and a soft rag or brush. Never use abrasive pads or steel wool to clean any part of a mixer. Always follow the manufacturer's directions when cleaning a mixer.

### Lubricate Moving Parts Regularly

Consult the owner's manual for directions on proper machine lubrication. Be sure to use food-grade lubricant, especially on parts that could come into contact with food product, like the mixer shaft.

### Never Overload the Mixer

Be sure you have the right size mixture to handle the type of products you are producing and the number of people you serve. In any case, do not overload the mixer to prevent damage or breakage.

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## Mixer Safety

As with any piece of kitchen equipment, make sure you and your staff practice safety to prevent injury, avoid food contamination and help maintain the life of your mixer.

### Equipment Safety Precautions

- Use caution when operating, taking apart or cleaning any electrical equipment.
- Do not wear loose clothing or jewelry that could get caught in the machinery.
- Always turn off the appliance and turn off the circuit breaker, wall switch or unplug from the electrical outlet before cleaning equipment.
- Keep your hands and utensils away from the mixer bowl and blades when operating.
- Follow manufacturer's directions when operating or cleaning equipment.

### Food Safety Precautions

To prevent cross-contamination, clean and sanitize the equipment, bowls, beaters and mixer accessories when you use the mixer for more than one item. Refer to the owner's manual for specific cleaning instructions.

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# Conclusion

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The right mixer can be an invaluable tool in your kitchen, but finding that perfect model requires research and an understanding of your business's needs. It's worth the effort, though, and the right mixer will deliver the quality and efficiency your business expects and your customers deserve.



## Are you ready to take your kitchen to the next level?

Let TriMark help you take your food preparation to the next level. Our experienced team can help you select a mixer that's right for you. Whether it's a restaurant, hospital, educational institution, country club, or large scale entertainment venue, we can guide you toward a mixer that suits your needs.



TriMark offers foodservice operators a new level of service by combining the hands-on support and local market knowledge of a strong regional supplier with the purchasing strength, industry expertise, and delivery capabilities of a national company. We work closely with our customers; who include national restaurant chains, independent restaurant operators, healthcare facilities, entertainment venues, and many other segments; to provide the products and services that will help them operate more efficiently and realize better bottom line results.



Special acknowledgement to Hobart and Vollrath for providing much of the content found in this resource guide.

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