



# **IQ and QQ Milking Units**

A smarter way to milk cows



engineering for  
a better world

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# **IQ and QQ Milking Units: Designed for modern milking efficiency**

The IQ and QQ milking units stand for intelligent milking. With a revolutionary four-chambered claw, these units help dairies achieve maximum milk quality, optimal flow rates and udder health, along with easy handling.



The milk-channeling technology on the IQ and QQ is designed to emulate the structure of the cow's udder.

It is sub-divided into four channels, and each channel collects the milk separately, guiding it to the central output. Supported by a gradient in each milk chamber, this takes place rapidly with minimal turbulence to protect the quality of the milk. In addition, the four-chambered unit reduces teat-to-teat cross-contamination of bacteria, promoting optimum udder health.



# IQ Milking Unit

Automatic vacuum shut-off for a quiet milking focused on milk quality.

**Automatic vacuum shut-off** — the IQ unit is equipped with four stainless steel balls in each milk chamber, to block vacuum when cups are not attached. In other words, full vacuum for each of the four quarters is only activated when the teat cup has been closed-off by the teat. This helps to eliminate contaminants from being sucked into the milk supply during attachment or unit fall-off.

**Less vacuum fluctuations** — the milking unit is attached without the admission of air for a more stable vacuum level, which decreases vacuum fluctuations and air squawks.

**Maximum milk quality** — with less manure and other soil contaminants sucked into the milk line, you won't believe how clean your filters will be with the IQ units.

**Quiet operation** — the individual quarter vacuum shut-off makes for virtually noise-free milking in the parlor, providing a stress-free environment for both the cows and the operators.



# QQ Milking Unit

Designed for farms who put an emphasis on fast attachment rates and maximizing flow rates.

**Engineered for speed** — the QQ unit is designed without individual quarter shut-off (no stainless steel balls blocking vacuum), and can be attached with maximum speed, with immediate vacuum at the teat cup – keeping your throughput goals on target.

**Optimized milk flow path** — milk-outs are fast and unit on-times are minimized due to complete vacuum stability at the teat-end and maximized flow rates, further benefiting parlor efficiency.

**Compatible with sand bedding** — with no internal components in the milk path, sand is less likely to adhere to the unit, which means less maintenance.





**IQ and QQ Milking Units:**  
**Taking Milk Harvest to the Next Level**  
Revolutionary four-chambered technology promotes  
the most efficient milking while maximizing milk  
quality and udder health.

# Reliable performance you can count on – milking after milking

Your entire herd will benefit from the IQ and QQ's flexibility and optimum weight distribution.

**Holds on any udder shape** — the flexibility of the short milk tubes allow for an optimum fit and easy attachment on virtually any udder shape.

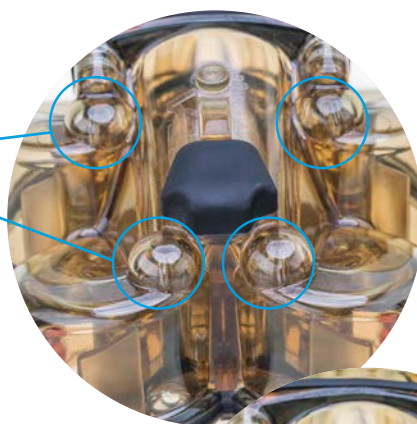
**Ideal unit positioning** — the claw's center of gravity is adjusted to the finest detail, along with the hose connection to keep your IQ or QQ units in the optimum position. This optimized balance point supports a quick milk-out of all four quarters.

**Slim profile** — the optimized hose placements make the unit harder to kick-off. This greatly reduces the need for re-attaches for a more efficient parlor.

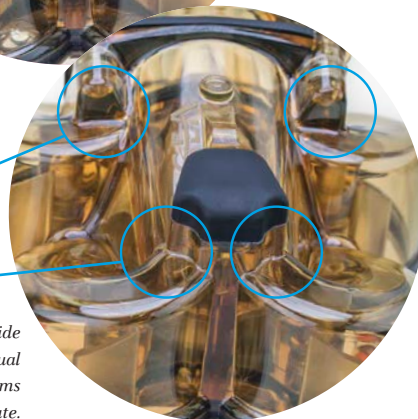


# Four chambers for better milk quality

Following the natural structure of the cow's udder, the revolutionary claw design is sub-divided into four guide chambers.



*IQ: Four separate guide chambers with stainless steel balls for individual quarter vacuum shut-off.*



*QQ: Four separate guide chambers without individual quarter vacuum shut-off for farms with a fast attachment rate.*

Unlike conventional milking claws that collect milk in the unit bowl, the IQ and QQ units quickly and efficiently guide milk by individual quarter to the milk hose outlet. An optimized gradient in each of the four milk chambers facilitate the fastest milking speeds — even on your highest producers.

Milk is also moved with minimal turbulence, helping to prevent mechanical stress on the milk structure and have a positive effect on free fatty acids. In addition, the four-chambered design prevents teat-to-teat cross contamination from one quarter to another, keeping the cow's udder healthy and productive.

All combined, the IQ and QQ feature unmatched engineering details that can maximize the milk quality level on your operation.

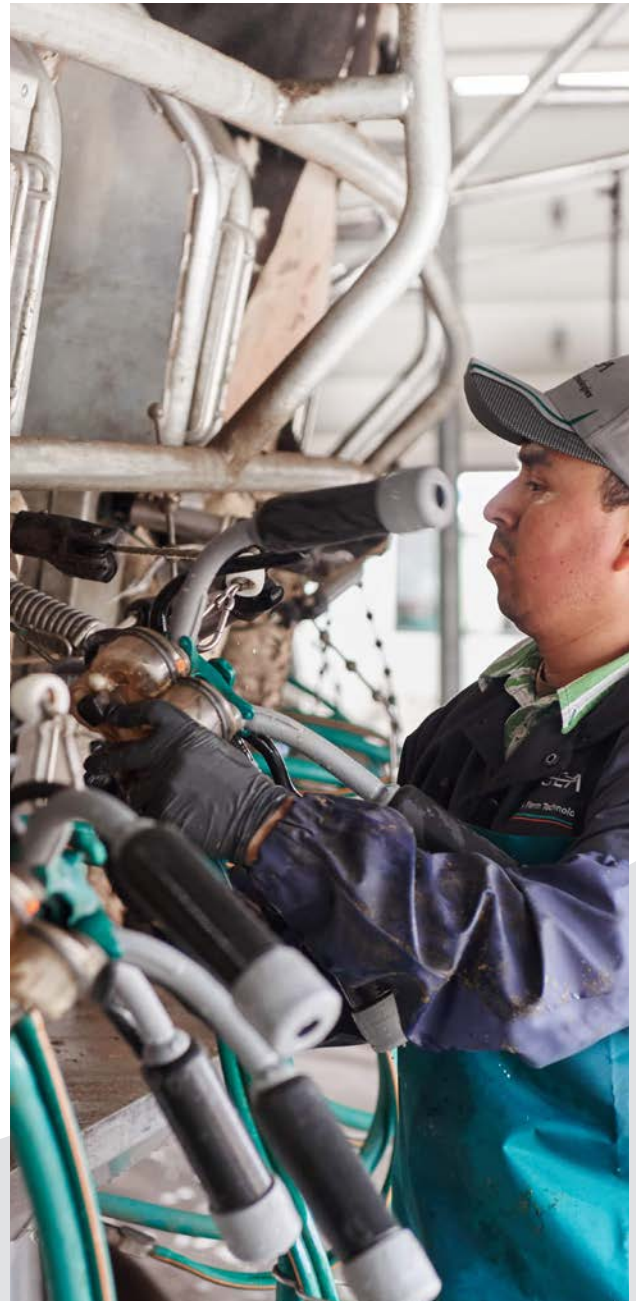
# Operation and maintenance is easier than ever

From attachment to unit removal, to regular liner changes, operating efficiency benefits surround the IQ and QQ.

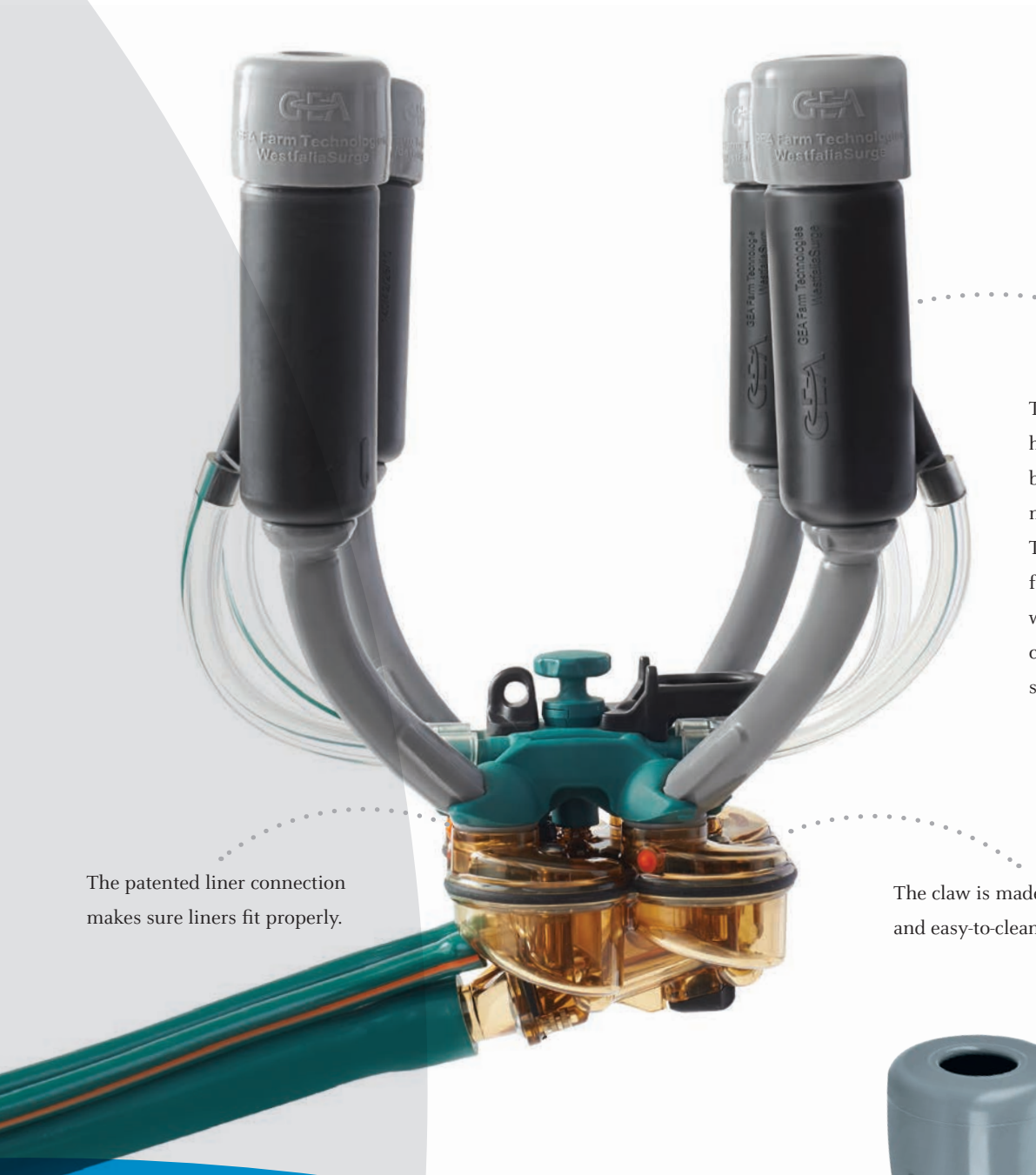
**Maximize operators' efficiency** — the IQ and QQ's slim profile make it easy to attach between the rear legs of cows – on rotaries or straight-line parlors, keeping operators consistently moving and meeting throughput goals. All four teatcups can be attached at once, or one at a time, it is completely up to the operator. And, the unique removal bracket ensures that upon detach, the unit falls to the proper position for a smooth attachment on the next cow.

**Easy maintenance** — the patented liner connection and liner attachment bracket is extremely well thought-out, and makes liner replacements quick and easy – while making sure the liners are inserted into the shells properly without twisting. Shells, liners, and brackets can be pre-assembled, reducing change-out times to minutes instead of hours, saving precious downtime in the parlor.

**Self-cleaning air inlet nozzles** — the four air inlet nozzles pulse during milking so they are virtually self-cleaning. When cleaning or service is necessary, it's quick and easy – no tools required.



*Using the IQ and QQ units is easier than ever – easy attaching, milking, unit removal and maintenance!*



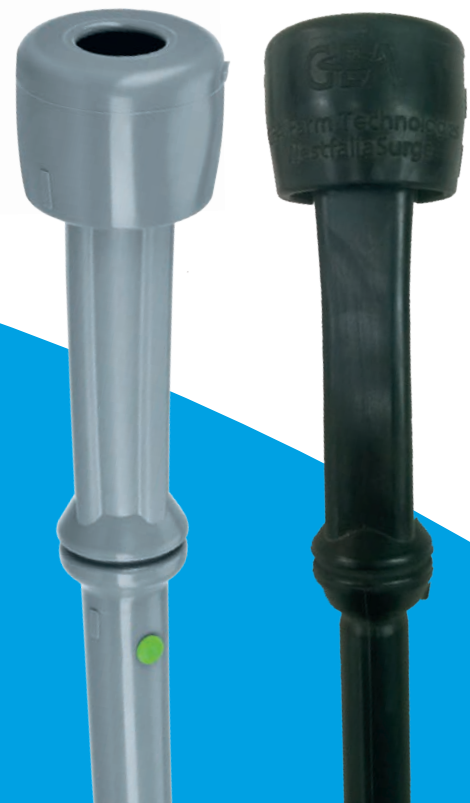
The lightweight composite shell helps to increase parlor efficiency by reducing liner slips while maintaining milking performance. They also help to reduce operator fatigue and enhance attachment with their ergonomic design. The composite shell is durable and very silicone-friendly.

The patented liner connection makes sure liners fit properly.

The claw is made of highly durable, and easy-to-clean Radel® material.

### Rubber or Silicone Liners:

Choose from rubber or silicone liners — either material is engineered to fit precisely into the shells to prevent liner twisting.



# Frequently Asked Questions

1. What makes the IQ and QQ milking units so unique?

The revolutionary four-chambered IQ and QQ units offer several advantages over the current generation of milking units, including better fit for all sizes of udders, enhanced milk quality, faster milk-outs, faster liner replacements, more efficient operators and healthier udders.

2. How are the IQ and QQ milking units different from previous attempts at four-chamber milking units?

Each teatcup is connected to a separate guide chamber, which sends milk quickly to the milk line with minimal turbulence. Milk is not collected in the unit bowl, so flow is much faster than in older machines.

3. How do the IQ and QQ milking units improve milk quality?

Milk is moved with minimal turbulence, helping to prevent mechanical stress on the milk structure. Also, the four-chambered design prevents teat-to-teat cross contamination of bacteria from one quarter to another, keeping the cow's udder healthy and productive. The IQ's unique vacuum-shifting feature prevents contaminants from being sucked into the milk line when the liner is not attached. This means cleaner milk filters and lower bacteria counts.

4. How can the IQ and QQ units improve parlor efficiency?

Milk flow from the teatcup to the milk hose outlet is transported much faster, even for high production cows, which means reduced unit on times. And, with immediate vacuum at the teat-end, the QQ facilitates the fastest attachment rates to maximize throughput goals.

5. How can the IQ and QQ milking units make my operators more productive?

First, the unique removal bracket ensures the unit is always in position for quick and immediate attachment. Secondly, better unit flexibility and alignment, along with the slimmer profile make for a streamlined attachment and fewer trips back to units already attached because of less slips, squawks and kick-offs.

6. How does the design of the IQ and QQ milking units make maintenance easier?

A patented liner connection makes liner changes quick and easy and helps to prevent twisted liners in the shells. In addition, shells, liners and brackets can be pre-assembled, reducing change-out times to minutes instead of hours, keeping downtime to a minimum.



# Customer proven performance with the IQ Milking Units

“The first big improvement was the quietness of the unit. The vacuum stability means much less air suction during attachment. This meant calmer cows in the parlor, especially in our two-year-old heifer pen. Also, during attachment, or if the unit falls-off, it does not suck up all the manure, milk, water, etc., so we saw an immediate improvement to our milk filter cleanliness.

In addition, because of the stability of the claw, milk flow rates improved, and we had a 1-2% reduction in bi-modal milking curves. If you prep cows properly, the IQ will do a tremendous job of evenly milking out cows with an improved flow rate, and a decrease in unit on-time.

Also, liner changes with the IQ milking unit have now become a 10-15 minute job. We simply change out those tops that are pre-loaded by our dealer, and within minutes we are back to milking. For us, that is huge.”

**Scott Brennen and Linda Barker**  
Hunter Haven Farms, Pearl City, IL  
900 cows

“Our new IQ milking units have been working very well for us. We notice less vacuum noise when attaching the units and our cows are more relaxed. Vacuum stability at attachment and fewer slips during milking has resulted in the lowest SCC our dairy has seen in over 10 years. We have also noticed that teat health has been very good with the IQ units. And, our employees say they like working with the IQ's. I am very pleased with the decision to go with these units.”

**Craig Thiel**  
Ledge Crest Farms, Inc., Hilbert, WI  
450 cows

“Since we switched to the IQ milking unit, we have noticed fewer slips and less squawking — we really like the vacuum stability of the IQ. We also like the fact that the unit is easier to handle when attaching between the cow's rear legs since the unit is narrower and lighter.”

**Darin Strauss**  
Majestic Crossing Dairy, Sheboygan Falls, WI  
1,900 cows

“When we switched to the IQ, we saw some major improvements in milk production — herd average went to 80 lbs. with the high group averaging 110 lbs. The IQ handles high production cows better — we're now averaging 11 lbs. per minute. Also, SCC went down to 98,000. Teat end health continues to improve — even in cold weather. We've noticed the milk filters are a lot cleaner too, since the unit does not suck up manure and water. The IQ fits the cows better too. We love how the unit hangs under the cow. Slips are minimal and we hardly have any squawks, which is important on an external AutoRotor.”

**Delmar Brubaker**  
Bru-Crest Dairy, Lebanon, PA  
270 cows

“Since using the IQ, we have noticed an improvement in SCC. Because it doesn't suck air while attaching or during a kick-off, dirt, water and manure stay out of the milk line. The IQ unit fits different udder sizes better, especially cows with teats close together. We have fewer slips and less squawking too.”

**Nick Slomp**  
Ridgeview Dairy, Alberta, Canada  
200 cows

# There's nothing else like it... and it can't be copied

The design of the IQ and QQ is so unique, GEA has no less than five patents applied for — from liner design to the milk collection pieces. Don't expect the competition to come anywhere close to the IQ and QQ milking units.



Talk to your local GEA dealer today about upgrading your milking units to the latest in milking technology with the incomparable IQ or QQ milking units.

## Apollo™ MilkSystem + IQ or QQ — an even smarter way to milk cows

The Apollo™ MilkSystem is an automated post-dipping and backflushing milking unit that utilizes the proven successful four-chambered IQ or QQ claw. The combination of the reliability and performance of the IQ and QQ with the advanced automation technology of the Apollo™ MilkSystem makes the pair an unbeatable asset to your parlor — dedicated to quality milk production.

Ask your local GEA dealer for more information if you are interested in the features of the IQ or QQ Milking Unit and want to add on automated post-dipping and backflushing on your dairy.

*Apollo™ MilkSystem*





## We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries.

Founded in 1881 the company is one of the largest providers of innovative equipment and process technology.

GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.

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