

# YASKAWA

# THE YASKAWA QUALITY EXPERIENCE

MORE THAN A MEASUREMENT

IT'S PERSONAL



# QUALITY IS MORE THAN NUMBERS

IT'S AN EXPERIENCE



By any measurement, the quality of Yaskawa products is second to none.

We're the only industrial drives and motion control manufacturer to win the Deming Medal, the most prestigious quality award in manufacturing. Yaskawa constantly tracks and measures product failures in time (FIT). The actual FIT data demonstrates a high quality and reliability rate that is the envy of our Industry. This field data confirms that we do, in fact, exceed our design targets for reliability.



Edwards R. Deming Medal for Quality

Yaskawa's overall FIT is based on the failure reports received from the field for a period of time, monthly (including Warranty and Non-Warranty items). Our calculations follow the Bellcore TR-332 Standard.

## Yaskawa FIT Calculation

$$\frac{\text{Qty of Failures}}{[(30 \text{ days} \times 24 \text{ hours per day}) \times (\text{total qty of units shipped})]} \times 10^9$$

MTBF is defined for a repairable system and is calculated as the inverse number of FIT mentioned above

$$\text{MTBF} = 1/\text{FIT}$$

We earned our quality numbers long ago and have been diligent in maintaining our record of unparalleled reliability and value. We are ISO 9001:2008 certified.

At Yaskawa, Quality is more than numbers, more than awards.

It's the total experience of purchasing and owning Yaskawa products and working with Yaskawa people.

## THE YASKAWA QUALITY EXPERIENCE



We know that numbers tell only part of the quality story. What about innovative design? Knowledgeable and responsive application engineers who understand your business? Superior support and training? Those crucial aspects of any

business are a vital part of how a company is ultimately judged and what we mean by the Yaskawa Quality Experience.

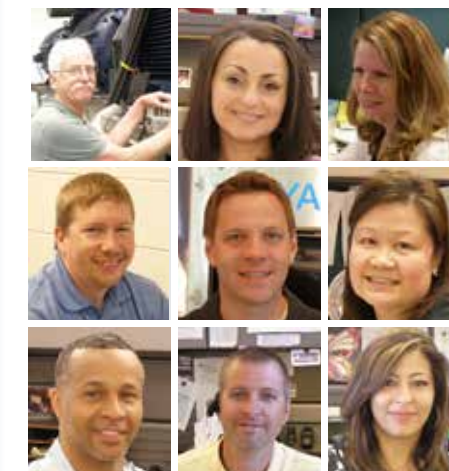
OUR COMMITMENT TO YOU.

IT'S PERSONAL

We take quality personally at Yaskawa. Our drives and servo packages offer the highest MTBF in the world. The relationships we have with our customers ensure mutual benefits. The partnerships we cultivate with our distributors add value to the way we work with you. We hire great people and continuously train them to be able to serve your needs better. We deliver product on time. It works out of the box. We answer questions promptly and never say, "we can't."

To us, quality means doing everything we can to make our customer, partner, and employee experiences great.

We commit to that philosophy every day. We make it happen. We can because, to us, IT'S PERSONAL.





# DESIGN AND DEVELOPMENT

The first step in new product design.

## LISTENING TO THE CUSTOMER

We gain a thorough understanding of the applications, the operating environment, the performance requirements, ease of use, and other customer expectations.

Our obsession with quality and reliability drives our design. It's planned just as carefully as the rest of the product. High reliability design targets are set based on decades of experience, benchmarking, customer input, and industry research.

We thoroughly test the reliability of new technologies, the consistency of new materials and the failure rate of every component within a new product to be certain that we will achieve our reliability objectives.

Yaskawa products are tested not only under normal spec conditions but also for extreme environmental conditions.



Washdown testing performed in our ISO certified test lab

## REAL WORLD TESTING

As a final step before release, Yaskawa drives and motion control products are installed in customer beta sites to perform application testing under actual conditions. Information learned during this process is incorporated into final product design before manufacturing begins.

The result of this obsessive dedication to quality design – **before we start to manufacture** – is the certainty that we have it right. This process will improve performance, increase uptime, and lower cost of ownership.

## CERTIFICATIONS

Yaskawa products are designed for use around the world, and carry agency certifications for all major geographic regions, including UL, CSA, TUV, CE, and RCM.



Listening to the customer is the first, and most important step in our design process.



Yaskawa global certifications

## DEVELOPMENT QC PROCESS

- Market and Customer Requirements (Product Plan)
- Product Plan/Review
- Conceptual/Detail Design
- Design Review
- Prototype Build
- Product Qualification (Test Plan/Review)
- Product Qualification (Test Result/Review)
- Production Preparation and (Manufacturing Quality Plan)
- First Article Inspection
- Product Release Approval
- Mass Production and Release

## TESTING AND QUALIFICATION

During the product qualification test, Yaskawa conducts its own product qualification testing in its ISO certified test lab. Yaskawa products are tested not only under normal conditions, but also for:

- Extreme Temperature/Humidity
- Vibration
- Package Drop
- Input Voltage Tolerance
- Noise Immunity
- Electrical Insulation Stress
- Under/Over-Voltage Protection
- Momentary Power Loss
- Output Short Circuit Protection
- Power ON/OFF & Start up Iterations
- Overload Protection
- Ground Fault Protection
- Washdown Test
- Input/Output Phase Loss Test



# OPERATIONS

Cost control and quality go hand in hand.

Providing a high-quality product actually lowers manufacturing costs. Lean processes, rigorous inventory control, less defects and waste, fewer returns, and minimal repair and replacement translate to reduced costs that enable Yaskawa to offer a superior product at a very competitive price.

## KAIZEN: CONTINUOUS IMPROVEMENT

Yaskawa has incorporated the Kaizen philosophy of continuous improvement into every facet of its operations. Kaizen literally means “change for the better”. Key elements of the process are teamwork, personal discipline, improved morale, quality circles, and suggestions for improvement from all levels of employees. The ultimate effects of the Kaizen process, elimination of waste and inefficiency, achieving discipline and standardization, mean that every day Yaskawa is improving the quality of its products while lowering costs.



The Kaizen philosophy allows for improved quality and reduced costs

## DEFECT PREVENTION IS THE KEY TO QUALITY

Yaskawa manufacturing processes are designed to prevent defects.

- Production associates have paperless on-line resources at their workstations, providing highly detailed and up-to-date work instructions for every process step.
- Practice mechanisms are available in the Kaizen center for them to improve their assembly skills.
- Complex assemblies are made simple with the use of animations and video.
- All components are verified and approved before they are installed, and frequent in-process quality checks prevent a unit from moving down the line until quality is assured.



“Yaskawa incorporates the Kaizen method of continuous incremental improvements along with our Total Quality Management processes to create a unique and highly effective approach to zero-defect manufacturing.”

Craig Espevik, VP, Operations



Paperless online resources for production associates

Our internal assembly failure rate is

**0.01%**

(assembly errors found in the actual assembly process)

The field assembly failure rate is

**0.0062%**

(assembly errors found after the product is installed in the field).



# SALES AND APPLICATIONS

A quality sales experience requires a knowledgeable and responsive sales team.

A critical component of the Yaskawa Quality Experience is the relationship you have with the person who helps you through your Yaskawa purchase.

More than just a salesperson, every Yaskawa sales associate is a highly trained applications specialist, certified on the products they support, experienced in the industries we serve, ready to assist you in achieving the best solution for your application.



### QUALIFIED SALES CHANNEL

Since Yaskawa is represented in some markets by Authorized Distributors and other channels, it is equally critical that these third-party partners are properly qualified so that we can entrust our customers into their hands.

They must earn their authorization by training and certification testing to be Drives and Motion Specialists.



“Yaskawa sales associates are experienced, certified problem solvers in the area of drives and motion control systems in the applications and the markets we serve. It’s our job to know what’s going on in your industry and your business. so that we can deliver the lowest cost solution and the lowest cost of product ownership.”

Mike Knapek, President and CEO

Yaskawa Sales and Application Engineers are product and industry specialists.

They are certified and re-certified every 2 years to assure they can provide the best customer solutions.



Yaskawa maintains certification levels for its distribution channels



# SERVICE AND SUPPORT

## YASKAWA SOLUTION CENTER

We recognize that our customers may not want to get help only by phone. That's why we created the Yaskawa Solution Center, an online tool to readily find resources for things like:

- Step-by-step instructions, including video tutorials
- Help configuring a product for a new application
- Starting up a product for the first time
- Transitioning from an older legacy product to a current one

## INSIDE SALES

When you call a Yaskawa Inside Sales Associate, you will experience something completely unique to us. Because our associates are highly trained on the accounts they serve and committed to delivering the best solutions, they will be better at providing you with a personalized experience. That means each one of them is well-versed on your needs and challenges.

## FIELD SERVICE

Nearly all questions from our customers are answered over the phone, at yaskawa.com, in the Solution Center or by email. However, there are times we need to be on-site to work out a challenge. Our associates are used to working in all sorts of environments on lots of different applications. In fact, the face-to-face exchange with end users results in a very mutually-beneficial situation. By having us there, not only are challenges overcome but customers also learn about the use and maintenance of Yaskawa products while we're gaining a deeper understanding of their applications.

## TRAINING

Yaskawa is well known for its extraordinary customer training. That's probably because our trainers grew up in manufacturing plants. Rolled through the carpet mills. Cut their teeth in metal cutting. You get the idea. This real world experience enables us to talk the way you talk. Work the way you work. And, help you learn the way you learn best. We work very hard to educate the folks that use our drives and motion control products with the knowledge they need to best impact their processes.



“Yaskawa is one of the few companies with a bona fide Customer Relationship Management program. It's an expensive investment but our customers' satisfaction and sense of family are part of the Quality experience we want to provide.”

Dennis Fitzgerald, VP, Customer Satisfaction

## CUSTOMER SATISFACTION SURVEYS

To ensure that our support continues to receive the highest quality ratings for customer satisfaction, we conduct annual customer surveys.

These surveys cover all facets of a customer's experience, but the predominant areas were after-sale support services and customer care.

We present the results to every associate, and then assign improvement teams to issues, create action plans for improvement, get approval at the top management level, and monitor the results.

The Yaskawa Quality Experience means that every point of contact that our customers have with Yaskawa has to be the best possible.

## MEASURING THE EXPERIENCE



Yaskawa has Received the Superior Customer Experience Award From Interaction Metrics

Interaction Metrics is an independent customer listening agency that helps companies achieve breakthrough accountability with customer experience programs. **We've won the award 6 straight years!**

This award is important because it recognizes our continual efforts to improve the customer experience. It shows we understand what our customers value most – and how we can continually improve upon that relationship.



Yaskawa Honored Again for Delivering World-Class Customer Service

Yaskawa received the prestigious NorthFace ScoreBoard Award for Excellence in Technical Support for **the 9th consecutive year.**



The Yaskawa Solution Center provides instant access to how-to videos, user manuals, technical documentation, and more

YASKAWA.COM



Yaskawa is the leading global manufacturer of low and medium voltage variable frequency drives, servo systems, machine controllers and industrial robots. Our standard products, as well as tailor-made solutions, are well known and have a high reputation for outstanding quality and reliability.

**YASKAWA**

**Yaskawa America, Inc.** | Drives & Motion Division

1-800-YASKAWA | Email: [info@yaskawa.com](mailto:info@yaskawa.com) | [yaskawa.com](http://yaskawa.com)

Document No. BL.YAI.02 | 10/01/2021 | © 2021 Yaskawa America, Inc.