

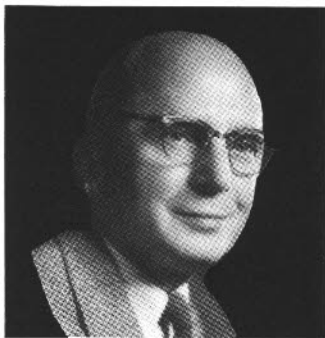
JACOBSEN®



Made in Wisconsin

THE JACOBSEN STORY

By Ted Pankau



OSCAR T. JACOBSEN
Co-founder
President, 1937-1958



KNUD F. JACOBSEN
Co-founder
President, 1921-1937



EINAR A. JACOBSEN
Engineer
President, 1958-1969

Off to a Fast Start

The famous 4-Acre Mower started Jacobsen Manufacturing Company off strong in 1921. This engine-driven reel mower was specifically designed for use in parks, cemeteries, large estates and golf courses because it mowed 4 acres of grass in one day. It was the first mower equipped with a gasoline engine specifically tailored to power mower requirements.

Jacobsen, which began in Racine, Wisconsin and is still there today, has come a long way in the mowing industry since the 4-Acre Mower. Many of the company's philosophies which made it a leader are making it a leader today.

Industry Firsts

The company has compiled a long list of other industry "firsts," and continues to be a leader in a growing and competitive marketplace. Some of these "firsts" include: the first powered greensmower; the first riding attachment for power mowers; the first mechanical recoil starter for small mower engines; the first successful polyethylene

grass catcher; the first rotary mower with 4 reversible, replaceable blades; the first pneumatic-tired equipment; and the first all-hydraulic triplex greensmower.

Even in 1986, Jacobsen is still showing its leadership by introducing the revolutionary Turf Groomer™ greens conditioner, and the industry's first diesel-powered triplex greensmower.

Founding Father

Knud F. Jacobsen founded the Jacobsen Manufacturing Company in 1920. He was born in Hjørring, Denmark in 1869 and emigrated to America where he settled in Racine, Wisconsin in 1891. After serving as President of the company for 17 years, he retired in 1937. His son, Oscar T. Jacobsen, took over as President and General Manager for the next 21 years. In 1958, Oscar assumed a new position as Chairman of the Board, while his brother, Einar, was advanced to President and General Manager.

Jacobsen Merges

The company remained family-operated for 49 years un-

Professional Turf Equipment

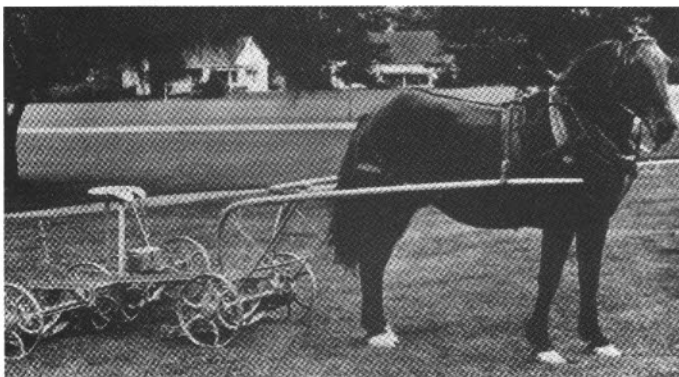
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Jacobsen's 4-Acre Mower, introduced in 1921, was the first mower equipped with a gasoline engine specifically tailored to power mower specifications.

The **New JACOBSEN** *Lawn Queen* **OPENS BIG FIELD FOR PROFIT**

The industry's first homeowner type power mower. Introduced in the Spring of 1939, its F.O.B. price, Racine, Wisconsin was \$87.50.



Jacobsen purchased the Worthington Mower Corporation in 1945 to broaden its line of large area mowers. These large area mowers included horse-drawn gang mowers such as the one pictured here.

til it merged with Allegheny Ludlum in 1969. During those 49 years, the company had grown from 35 employees in 1921 to over 1,400 employees. It had acquired several companies to expand its mower line including the Johnston Lawn Mower Company in 1940, the Worthington Mower Company in 1945, and the Standard Manufacturing Company in 1948.

Jacobsen was purchased from Allegheny Ludlum in 1978 by Textron Inc., Providence, Rhode Island. One change under the new ownership was to turn over Jacobsen's consumer line of lawn mowers and snowblowers to Textron's Homelite Division in North Carolina. As a result, the "Turf Division" of Jacobsen became an independent company specializing in commercial turf maintenance equipment.

Today, Jacobsen Division of Textron Inc., in Racine, Wisconsin, makes turf maintenance products for golf courses, parks, schools, municipal grounds, and other large turf areas, as well as for professional landscaping applications.

Jacobsen has two plant locations. A 115,000 square foot plant in Arrowood, North Carolina employs 77 people. The main plant and headquarters in Racine has 490,000 square feet and 526 employees.

Quality is Essential

John R. Dwyer, Jr. was named President of Jacobsen in 1981, and has kept the company competitive by stressing the need for quality projects.

"With growing competition in the industry, it's not enough to be first. . . . you have to be the best," comments Dwyer. "At Jacobsen, we do extensive testing on all of our products to make sure they are top quality and able to withstand the punishment of turf and commercial applications before we introduce them for sale."

Jacobsen products are subjected to the most severe conditions to test durability under a variety of circumstances. Test cells control the environment to see how the equipment will perform in sub-zero temperatures as well as in extremely hot temperatures. Prototype machines are run under varied load and speed conditions in the lab to test for wear and tear. Then they are extensively field tested to be sure they will function the way the customer wants under actual mowing conditions.

Dwyer feels that the more testing that is done on a product, the higher the quality will be.

"Engineering is a vital step in producing quality products," he added.

How a Product Develops

Anthony J. Saiia is Vice President of Engineering. In the creation of new products, Saiia believes that the customer plays a vital role.

"We listen to their needs and problems and try to create products that will meet those needs and solve those problems," comments Saiia.

Saiia points to a recent example to show how an idea for a new product evolves:

"Golf course superintendents have been telling us that they love the way our Greens King IV cuts, but many wish it was available with a diesel engine for better fuel

economy, more power, and greater durability. Many were afraid that a diesel engine would put too much weight on the green. We responded by designing the Greens King IV Diesel which has the same cutting quality as our gas models in a lightweight design to minimize compaction on greens."

Once the need for a new product is established, Jacobsen's Engineering Department uses its CAD/CAM system to speed the development process. The CAD/CAM system allows the engineers to look at several different designs at once to select the best design for both function and reliability.

The Engineering Department typically builds several test models, or prototypes, before releasing a new product for production. The most important test of a product comes when the prototype is put into the hands of an end user under actual field conditions.

"This field testing gives us valuable feedback on the prototype so we can make any other necessary product changes before introducing the product to the public," comments Saiia.

Jacobsen's emphasis on new product development has been recognized by the Governor of Wisconsin. This year, Jacobsen received the Governor's "New Product Award" for its 5/7 Ram-Lift Ranger and the HR-15. The award was given for new product innovation and its effect on Wisconsin's economic climate.

Customer Service & Education

Jacobsen is genuinely concerned about the customer even long after the sale is made. A Customer Service Department provides training for customers as well as distributors. Several sessions are held in Racine throughout the fall and winter months to train customers and offer tips on how to care for equipment.

In addition, Jacobsen service personnel travel all over the country for field service training sessions.

Training sessions are held for dealers and distributors also. These sessions cover equipment set-up, maintenance procedures, engine teardown and troubleshooting.

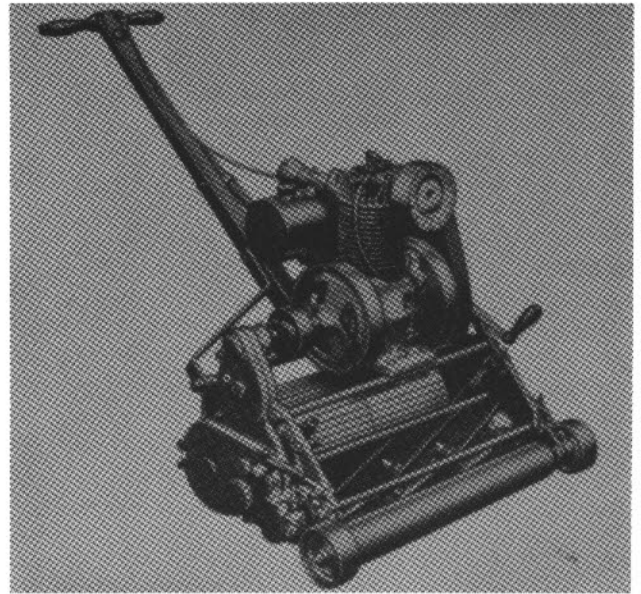
John A. Oldenburg, Manager of Customer Service, believes that the greatest need for continuing education in turf equipment is in the area of preventative maintenance.

"Our ultimate goal is to have satisfied customers," comments Oldenburg. "We're trying to get a better level of maintenance on our products so our customers can protect their investments."

Oldenburg believes that training is a continuous process, as new people are constantly entering the turf maintenance field, and products change. He also gets a chance to receive valuable feedback from both customers and technical personnel on the products.

"The training sessions are a 2-way street of communication," observes Oldenburg. "We learn from our customers by hearing about special needs, suggestions for future product development, or new service techniques."

According to Oldenburg, Jacobsen has always stood



Jacobsen introduced the industry's first power greensmower in 1924.



The first all-hydraulic riding triplex greensmower was introduced in 1969—Jacobsen's Greens King.

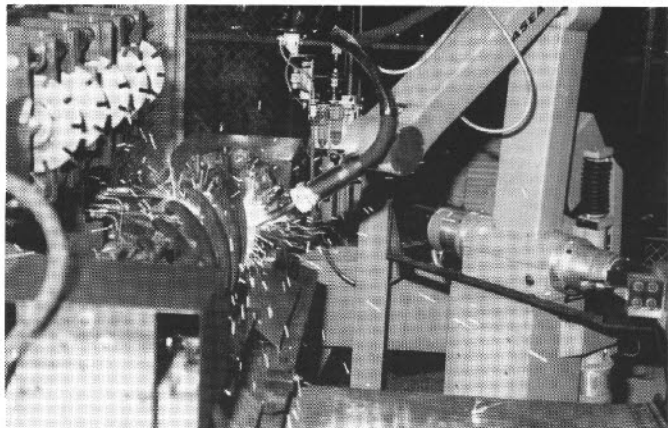
behind its products, and listened to the needs of the customer before and after the sale, and service training is one way to keep both the customer and distributor informed.

Training doesn't stop with customers and distributors. A College Student Seminar is held once a year at the Racine headquarters. College students who are studying Turfgrass Maintenance and Management or related fields fly in from all over the country to attend the week-long seminar.

Thirty-eight students attended this year's seminar, which included a field day for hands-on operation of turf maintenance equipment, lectures on turf maintenance and management, equipment maintenance workshops, panel discussions with turf maintenance experts, and a tour of the Jacobsen manufacturing plant.

"The seminar gives students very practical insight on

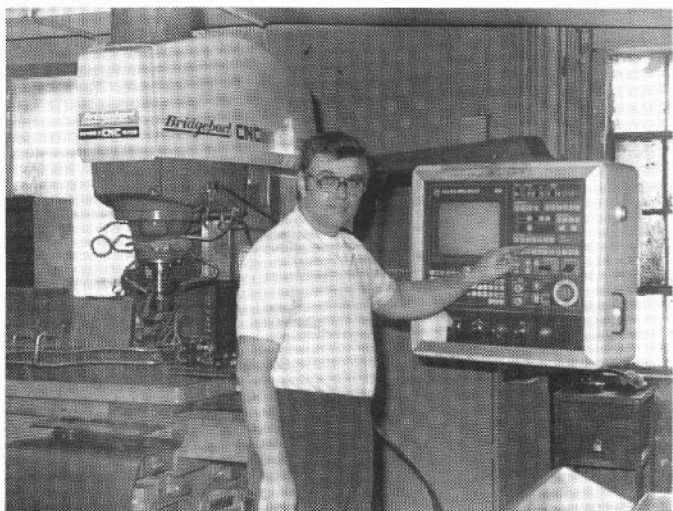
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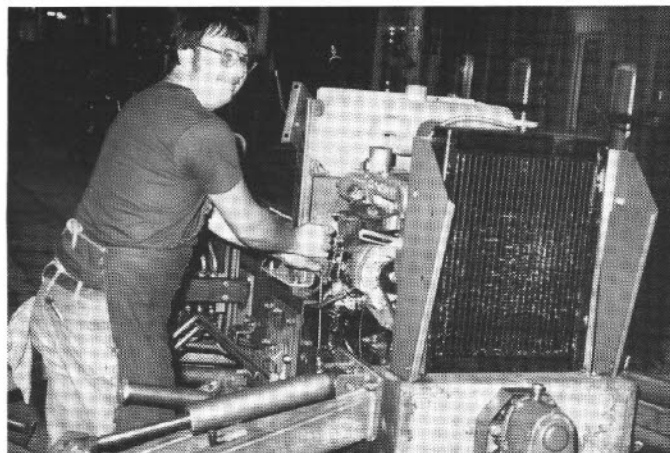
Modern manufacturing machinery such as this robot welder help Jacobsen to pass cost savings on to its customers. The robot welder is capable of making 660 welds in a single hour.



Jacobsen uses a laser cutter to cut sheet metal parts. The laser cutter operates off programs developed by the company's CAD/CAM system, and provides fast, simple, uniform cutting for such parts as couplings, necks, fenders, and other sheet metal parts.



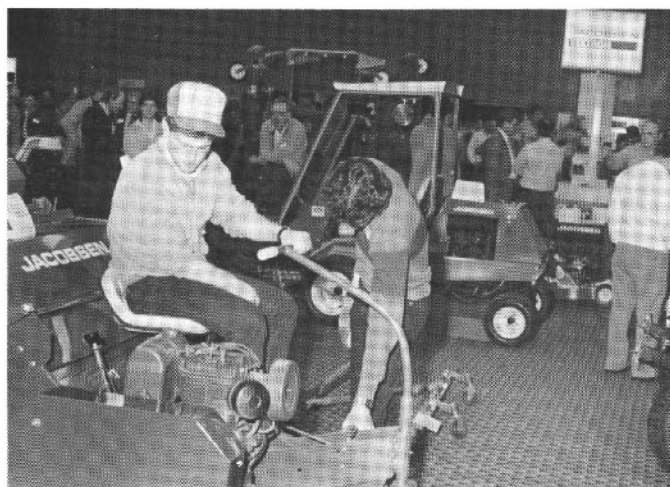
This modern blade manufacturing cell mills hardened blades after they are bent. A computer monitor allows programming for movement of the table and speed of operation.



Jacobsen workers are concerned with producing quality products. Here a worker assembles an HF-15.



An HF-5 5-gang fairway mower is examined and evaluated after extensive field testing.



Jacobsen Distributors play a vital role in linking the company to the customer. Wisconsin Turf, one of Jacobsen's Wisconsin-based Distributorships, recently held an Open House at the Americana Resort in Lake Geneva, WI. The Open House gave the customers a chance to see and learn about new equipment.



Jacobsen's annual College Student Seminar gives students a chance to gain practical knowledge in the turf maintenance field.



A panel of turf maintenance and management experts spoke with students at this year's College Student Seminar.



One of the many workshops at the College Student Seminar deals with small engine maintenance.



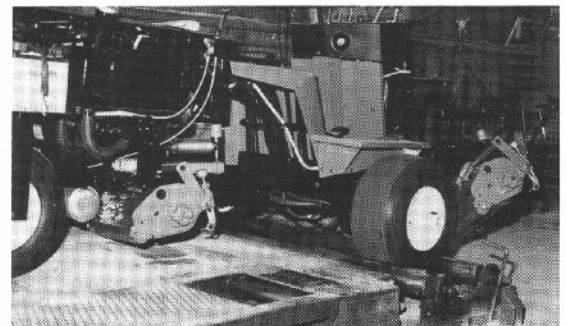
Jacobsen stocks over 25,000 parts at its Racine plant.



Another truckload of Jacobsen products pulls out from the Racine plant.



A hydraulic hose pressure testing center checks hydraulic hoses before they are installed in Jacobsen products.



This shaker tester shakes machines vigorously to make sure they are assembled solidly.

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what is needed to maintain and manage a golf course or other turf areas," states Oldenburg. "It also gives them practical knowledge about the careers they want to pursue."

James Byrnes, Advertising Manager, sees the seminar as a chance for students to get educated on new products so they can carry that knowledge into their profession.

"Most of the students will be using these same types of products in their professions," comments Byrnes. "We want them to have an opportunity to learn as much as possible about the machines, so when they get out in the field, they're prepared."

Jacobsen relies on many turf experts from Wisconsin to serve on panels and speak to students. These experts give students valuable information on what the profession is really like.

"The turf experts give students a great deal of information that you just can't get out of a textbook," adds Byrnes.

Distributor Network

Jacobsen distributors play a vital role in the company's success.

Ned Brinkman, Vice President of Sales, comments: "We want our customers to be satisfied, but we don't often get a chance to talk with them face to face. This is where our distributors and salesmen come into play. They represent Jacobsen."

Jacobsen distributors are true professionals for turf products. The average Jacobsen distributor has over 30 years of association with Jacobsen products. Some were even around when the 4-Acre Mower was introduced in 1921.

"Our distributors are able to offer the most in professional service to the customer," adds Brinkman. "This makes the customer's job much easier in choosing the right equipment, getting parts, obtaining professional services, or getting questions answered."

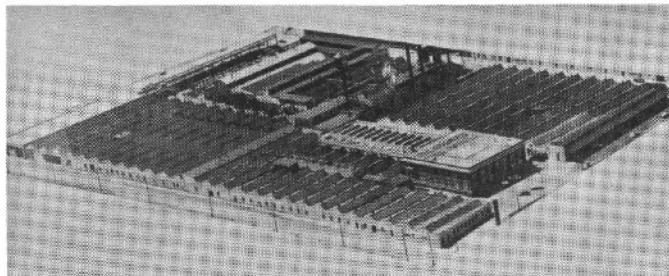
The distributors carry large inventories of both products and parts, so that customers can get what they need when they need it. Large, modern service areas help to keep customers' equipment running properly with minimal downtime.

Jacobsen's parts distribution system is among the most advanced in the industry. It's called REACT (remote entry and customer order tracking), and it helps to get needed parts into the hands of the customer as fast as possible.

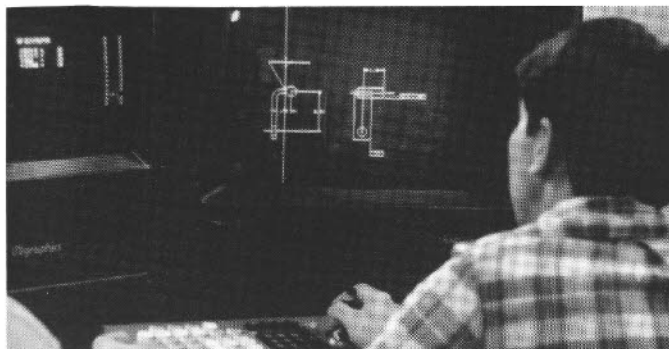
Each Jacobsen distributor has a mini-computer programmed to place parts orders directly into the main computer at Racine. The distributor can also use the system to place orders for finished goods. The REACT system improves turn-around time and gives the customer options for mode of transportation and release time.

"This is the most economical way to get our parts delivered," says Jerry Betker, General Parts Manager.

Jacobsen has nearly 25,000 different parts in its system. In addition, distributors carry a \$20-million field inventory in replaceable parts. If a distributor is out of a particular part, the customer rarely has to wait more than 24 hours



Jacobsen's main plant and headquarters in Racine has 490,000 square feet. The company has been a part of the Racine community since 1920.



Jacobsen's CAD/CAM system speeds the development of new products.

for the part to be delivered from the factory.

Another program for helping customers get parts is the "Trader Jake" program. The "Trader Jake" program utilizes the same computer used for the REACT system. It allows the distributor to appeal to all other Jacobsen distributors for an out-dated, rare or hard-to-find part.

"The Trader Jake system works very well," comments Betker. "We look at it as one more way we can help to satisfy our customers."

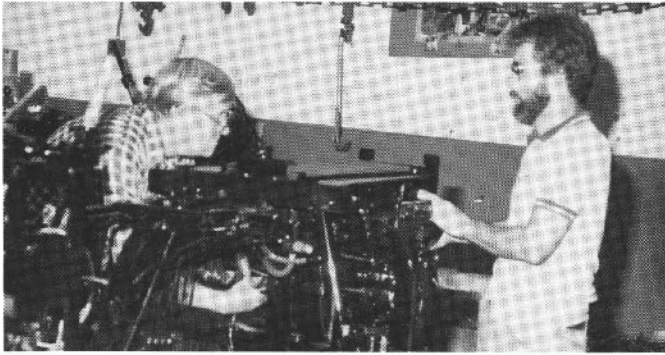
Future of Turf Maintenance

The turf maintenance industry is constantly changing. New products are introduced. New methods of maintaining turf are tried. And new companies are getting into the business.

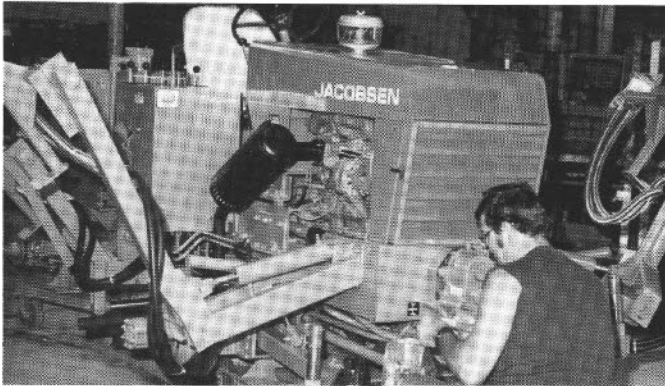
Thomas M. Carter, Vice President of Marketing and New Product Development for Jacobsen, points out the present trend toward producing more finely-manicured turf on golf courses.

"It's not just the greens anymore," comments Carter. "Many golf course superintendents are using triplexes and lightweight 5-gang mowers on their fairways for higher quality cutting, and Jacobsen is leading the industry in developing new products to meet that trend."

Carter also points out that there has been an increase in demand for rotary and flail-type mowers for parks, schools and other large turf areas. Jacobsen has responded with a full line of rotary mowers along with a new line of unique fine-cut flails. The new fine-cut flails combine a high-quality cut with quiet operation, even discharge of clippings along the entire mowing width and



A Greens King IV triplex greensmower is carefully assembled at the Racine plant.



An HF-15 Fairway mower nears completion.

less chance of thrown debris.

Carter also sees a trend toward diesel engines to keep mowing costs down.

"Diesel engines offer more power, durability and fuel economy to the customer," comments Carter.

Diesel engines are already incorporated into many of Jacobsen's turf machines. Their latest diesel entry is the new Greens King IV Diesel, which is the industry's first diesel-powered triplex greensmower.

"Jacobsen is committed to leading the way in product innovation and development to meet the demands for precision-quality turf," adds Carter.

Brinkman agrees, and adds that Jacobsen must also continue to be price competitive in an industry that is attracting more competitors each year.

Brinkman believes that Jacobsen's emphasis on engineering and research and development gives Jacobsen a competitive edge.

"Technology has moved faster than ever in the past five years," comments Brinkman. "Products are always changing, and companies without solid engineering and research departments are going to get lost in the marketplace among their competitors."

Modern Manufacturing

Jacobsen's manufacturing methods are also a sample of industry leadership. Although the Racine plant is not new from the outside, the inside is very modern.

New laser cutting machines provide faster, more efficient cutting of steel plates. Robotic technology is used

for welding to increase productivity and accuracy. Numerically-controlled machining centers provide precise multiple duplication of a part.

Such modern manufacturing methods save the company in manufacturing costs. These savings can then be passed on to the customer. Jacobsen has always put the customer first, ever since the introduction of the 4-Acre Mower in 1921. Now, over 65 years later, Jacobsen continues to listen to the needs of the customer and respond to those needs.

Many familiar products roll off the line at Jacobsen's Racine plant every day being shipped off to care for some of the finest turf in the world. . . . much of it right here in Wisconsin.

Just some of those Wisconsin-built products include:

- Greens King IV family (triplex greensmowers)
- Turfcats II series (out-front implement system machines)
- HF-5 (self-contained 5-gang mower)
- HF-15 (self-contained 7-gang reel mower)
- 5/7 Ram-Lift (ranger mower)
- HR-15 (self-contained rotary mower)
- Turf Groomer™ (greens conditioner)
- Trim King (triplex)
- Turf King (triplex)
- TF-60 (triplex)
- Walking Greens Mower
- C-118 (out-front implement system machine)
- DW220 (diesel-powered system machine)

Jacobsen and Wisconsin

Wisconsin has been home to Jacobsen since the company's origin. Jacobsen is committed to improving Wisconsin industry and economy. As an example of that commitment, Jacobsen is investing hundreds of thousands of dollars each year in upgrading and modernizing its facilities.

President John R. Dwyer, Jr. is happy with the relationship between Jacobsen and Wisconsin.

"We have a long, successful history in Wisconsin, and we hope to stay right here in Racine for a long time to come."

LAKE SHORE SAND TDS 2150 TOP-DRESSING SAND

- CREATES A TRUER PUTTING SURFACE
- IMPROVES WATER INFILTRATION RATE
- HELPS CONTROL WEEDS—INCLUDING POA ANNUA
- MATCHES USGA SPECIFICATIONS

— TYPICAL DISTRIBUTION —		
MESH	MM	% RETAINED
30	0.60	0.2
35	0.50	0.8
40	0.42	3.4
50	0.30	28.0
60	0.25	25.9
70	0.21	23.5
100	0.15	18.0
140	0.10	0.2

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