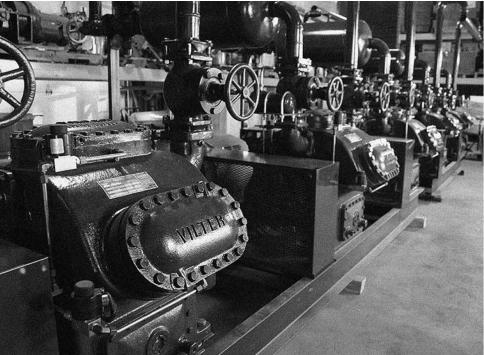




The WILLIAMS - CARVER CO.

Established 1955

WILLIAMS-CARVER CO. | CAPABILITY OVERVIEW



WILLIAMS
WC
CARVER CO.



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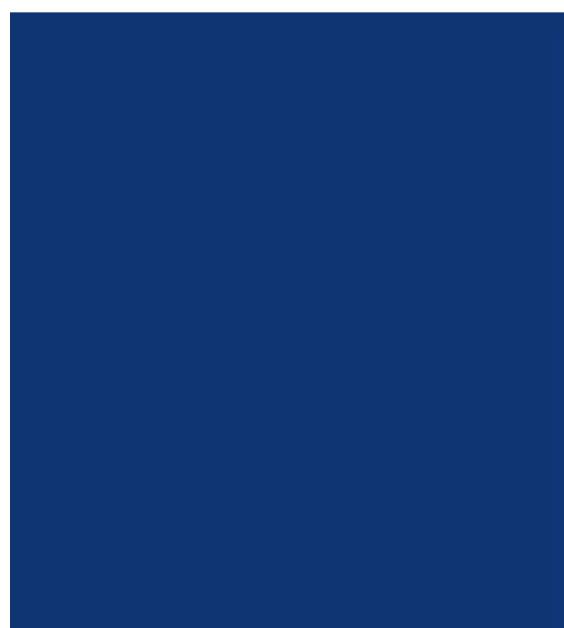
WILLIAMS
WC
CARVER CO.

The Williams-Carver Company, Inc. was established in 1955 to serve the food & beverage, dairy, and pharmaceutical industries. As a third-generation mechanical engineering contractor, **Williams-Carver** is a leading supplier of both process stainless steel, sanitary processing, and industrial refrigeration equipment. Our corporate office and distribution center is located in Kansas City, KS, USA. This central location allows us to ship our products throughout the United States and the world. Our large inventory of both sanitary stainless steel and industrial components, equipment, and parts allows us to be a single source supplier for all your processing requirements. Quality and Personal Service is what has allowed **The Williams-Carver Company, Inc.** to grow into the industry leader it is today.



For over 70 years, **The Williams-Carver Company, Inc.** has provided innovative solutions in the sanitary/industrial processing, dairy, brewery, pharmaceutical, animal health, and food & beverage industries.

To learn more about our company as well as the products and services we provide, please visit www.williamscarver.com



Common Applications: Food, Dairy, Beverage, Brewery, Pharmaceutical, Personal Care, Pulp & Paper, Automotive Paint, Hydro-Carbon Processing, Films, Coatings, Adhesives, etc.

PRODUCT	UNIVERSAL 1 AND 2 SERIES - POSITIVE DISPLACEMENT PUMPS
	<ul style="list-style-type: none"> Models available in rectangular flange or aseptic configurations with non-galling 88 alloy rotors Pumps can be remanufactured Close-coupled Tru-Fit mounting options available Universal II - Pressures up to 500 psi (34.5 bar), CIP design Universal I - Pressures up to 200 psi (14 bar), COP design Multiple seal configurations available
	<h3>UNIVERSAL 3 SERIES - POSITIVE DISPLACEMENT PUMP</h3> <ul style="list-style-type: none"> Rotor/shaft connection is completely sealed from product zone Front loading seal design Stainless steel gear case standard Universal III - Pressures up to 500 psi (34.5 bar), CIP design Many sizes are a direct drop in for Universal 1 and Universal 2 size pumps
	<h3>UNIVERSAL TWIN SCREW PUMP (UTS) PUMP</h3> <ul style="list-style-type: none"> Dual functionality. Both product and CIP pump Extensive range of applications and viscosity Easy maintenance and servicing Foreign and domestic support From low viscosity substances to high viscous materials, this exceptional pump meets the demands of various applications where hygiene and operational efficiency are paramount
	<h3>CENTRIFUGAL PUMPS</h3> <ul style="list-style-type: none"> High efficiency, minimal vibration, longer life pumps One size seal fits all 200 Series models Designed for low viscous applications Available models include 200 Series, C-Series, Multi-Stage, Self-Priming, Water for Injection, and stub shaft pump versions
	<h3>VALVES</h3> <ul style="list-style-type: none"> Sanitary, hygienic valves manufactured of stainless steel Mix Proof Valves: To provide separation of dissimilar products within same valve body Heavy-duty construction for long service life Easy to maintain, can be remanufactured Designed to be cleaned in place or out
	<h3>VOTATOR SCRAPE SURFACE HEAT EXCHANGERS</h3> <ul style="list-style-type: none"> Models available for processing moderate to ultra high viscosity products Options for controlling residence time and for maintaining product integrity Material selection to meet specific process requirements Horizontal and Vertical mounting choices

Common Applications: Food, Dairy, Beverage, Brewery, Healthcare, Marine, Power, Chemical, Biotechnical, Industrial

PRODUCT	HEAT EXCHANGERS
	<ul style="list-style-type: none">Invented Plate Heat Exchanger in 1923Wide portfolio including Gasket, Brazed, and Semi-Welded Plate, Tubular, Scrapped Surface, Hybrid and District Heating UnitsHeat exchangers suitable for <u>Hygienic, Ammonia, and Industrial applications</u>
	<h3>HOMOGENIZERS</h3> <ul style="list-style-type: none">Rannie & Gaulin BrandsHigh PerformanceModular design for greater flexibilityInnovative service and maintenance concepts
	<h3>PUMPS</h3> <ul style="list-style-type: none">Centrifugal Pumps, Positive Displacement Pumps, Self-Priming PumpsExtensive product range including high capacity, aseptic, water for injection, high pressureEnergy efficient
	<h3>VALVES</h3> <ul style="list-style-type: none">Includes Butterfly, Single-Seat, Mixproof, Aseptic, Regulating and Process ValvesHighest hygienic and aseptic standards. 3A, EHEDG, PMO, FDA approvedDesigned for CIP

APV, an established centennial engineering legacy, is an important part of the SPX FLOW brand, integrated over a decade ago. Addressing the food/beverage, dairy, pharmaceutical and healthcare markets, APV offers highly effective turnkey automation and process engineering solutions. These industrial solutions combine the extensive array of heat exchangers (for evaporation, pasteurization and UHT), pumps (rotary, centrifugal, inducer, etc.), valves, mixers, dissolvers and homogenizers that we manufacture with numerous services which will maximize the effectiveness of systems throughout the whole of their life-cycle. These services cover original system inception, equipment deployment, upgrades and eventual decommissioning, as well as plant optimization.



ULTRA HIGH TEMPERATURE (UHT) SYSTEM

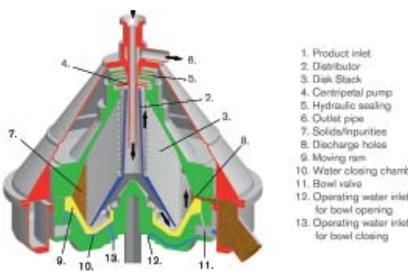
Common Applications: Oil & Gas, Petrochemical, Chemical, Food, Beverage, Personal Care, Pharmaceutical, Pulp & Paper, Water Treatment

PRODUCT	PROCAM METERING PUMPS
	<ul style="list-style-type: none"> Modular, single and multi-stream pump configurations to match process requirement Double Diaphragm and Plunger Pumps Pressures up to 20 bar (300 PSI) (Diaphragm) and 80 bar (1200 PSI) (Plunger) Flow rates up to 3000 l/h (790 GPH) per pump head
NOVADOS METERING PUMPS	NOVADOS METERING PUMPS
	<ul style="list-style-type: none"> Horizontal and vertical metering pumps Modular, single and multi-stream pump configurations to match the process requirements Pressures up to 1000 bar (15,000 PSI) Flow rates up to 22600 l/h (6000 GPH) per pump head Variable speed drive & variable stroke adjustment for manual or automatic flow control Double diaphragm and plunger pumps, API 675 compliant Remote condition monitoring with the NOVALINK-CSM online diagnostic system

SEITAL SEPARATION

THE WILLIAMS-CARVER COMPANY, INC.

Common Applications: Chemicals, Dairy, Food & Beverage, Brewery, Pharma & Biotech

PRODUCT	VERTICAL DISK STACK CENTRIFUGES
	<ul style="list-style-type: none"> Solids-retaining and self-cleaning centrifuges Self-cleaning nozzle centrifuges Wide range of hydraulic capacities, from 132 to 2641 g/h (500 to 10,000 l/h) for solids-retaining models and from 132 to 18,492 g/h (500 to 70,000 l/h) for self-cleaning models Hygienic & Gas-tight design Most common applications: corn oil recovery from bioethanol production, milk skimming and bacteria clarification, tea clarification, wine & beer clarification, yeast and bacteria recovery
TECHNOLOGY SOLUTIONS	TECHNOLOGY SOLUTIONS
	<ul style="list-style-type: none"> High performance Centrifuges Focused on R&D for continuous improvement on performance and materials Excellence in design, mechanical and hydraulic analysis and testing Internal manufacturing of all components and parts that are strategic for separators efficiency, quality and safety Standards conformity checked by CMM machine on all strategic parts On-site testing available with complete separation units or in SPX lab and/or pilot plant

Common Applications: Food & Beverage, Dairy, Personal Care, Pharma, Chemical Transfer

PRODUCT	AIR-OPERATED DIAPHRAGM PUMPS
	<ul style="list-style-type: none"> Designed for rigorous, continuous use with quick knockdown for easy cleanability and sanitation Ideal for applications requiring high flow rates and portability Higher flow rates give flexibility to process more applications with ranging viscosities Increased durability and reduced repair time with fewer moving parts
ELECTRIC-OPERATED DIAPHRAGM PUMPS	PISTON PUMPS
	<ul style="list-style-type: none"> Electric drive to reduce energy consumption and accurately meter fluid Quieter and cleaner work environment Built in controls Reduces energy consumption up to 8x compared to traditional air-operated diaphragm pumps Reduce or eliminate high energy consuming air compressors
	<ul style="list-style-type: none"> Move materials faster and increase efficiency Pump high viscosity materials Various lengths to fit multiple container sizes Maximize unloading
DRUM UNLOADERS	BIN UNLOADERS
	<ul style="list-style-type: none"> Unload materials from straight-sided or tapered drums Inflatable wiper seals for increased efficiency and faster change-out of drums Over 99% evacuation rate Liner guard to prevent bags from entering pump Sanitary flange clamps for quick disassembly
	<ul style="list-style-type: none"> Extremely fast evacuation with flow rates up to 300 gpm Designed with inflatable wiper seals for increased efficiency and faster change-out bins Unique floating ram plate eliminates the need for exact positioning of bin under the ram plate Available in manual and electronic control options

ITT ENGINEERED VALVES

THE WILLIAMS-CARVER COMPANY, INC.



Common Applications: Biopharm, Animal Health, Sterile and Aseptic Processing.

PRODUCT	PURE-FLO DIAPHRAGM VALVES
 A row of five different Pure-Flo diaphragm valves, each with a different handle style (rotary, linear, etc.) and body design.	<ul style="list-style-type: none">Engineered for cleanability & drainabilityIndustry proven high-purity diaphragm technologyBonnet isolation: isolating working parts of valve from process fluidsPrecision manufacturing ensures reliable sealingFull traceability for regulatory complianceLong diaphragm life reduces maintenance frequency
 A collection of integrated multi-port block body valves, showing various configurations of ports and handle types.	<ul style="list-style-type: none">Minimizes dead legs for higher product purityImproves drainability & reduces hold-up volumeReduces CIP cycle times, boosts process efficiency, & enhances system yieldLowers installation, validation, and long-term operating costsCustom configurations engineered to meet exact process needs
 A group of four different automated topworks actuators, each with a different housing color (black, silver, etc.) and handle style.	<ul style="list-style-type: none">Advantage 2.1 actuator allows diaphragm interchangeability without disassemblyCompact, lightweight design ideal for bio-process and pharmaceutical space constraintsMultiple closure modes for flexible valve operation33 Series actuators provide major size and weight reductions for 3"-4" valvesACS stainless actuator delivers maintenance-free, high-cycle durability for demanding SIP environments, and compact design to reduce holdup volume
 Two Envizion valves, one with a black handle and one with a silver handle, both featuring a unique integrated sensing platform.	<ul style="list-style-type: none">Tool-less diaphragm replacement in minutesMount-and-turn design eliminates loose fasteners and boltsActive sealing maintains consistent compressionNo re-torquing required after thermal cyclingEnhanced cleanability reduces contamination riskSee page 7 for more information
 Three pieces of instrumentation and control equipment: a small sensor with a green LED, a linear positioner, and a larger cylindrical device.	<ul style="list-style-type: none">Integrated Sensing Platform (ISP)ISP provides smart, auto-calibrating valve sensing with reliable position feedback.Broad range of feedback switches and sensors integrate easily with ITT actuators73 Series PositionersOffers precise pneumatic control with fast, accurate valve response.
 A collection of various diaphragm components, including EPDM, PTFE Enhanced Backing, Buna, and Black/White Butyl Rubber.	<ul style="list-style-type: none">EPDMPTFE Enhanced BackingBunaBlack/White Butyl RubberEngineered for long diaphragm lifeUSP-compliant, fully traceable materialsPrecision molding for reliable sealingFast, repeatable installation (Envizion)

Envizion Valve

Experience the Future with Envizion

The Biopharm industry relies on hygienic diaphragm valves for demanding process applications due to their unique balance of clean-ability, drain-ability and pressure/temperature capability. For more than 40 years the technology of these valves has changed very little. Advances in performance have been nominal as the basic design concept has remained the same: body, diaphragm, topworks, and four fasteners. This design requires experienced personnel and stringent maintenance practices to assure consistent, reliable valve performance. All while the industry is forced to increase productivity, extend preventative maintenance intervals, and reduce operating costs.

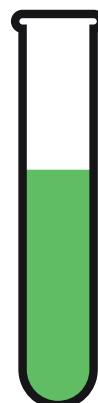
ITT's breakthrough technology, the Envizion valve, sets a new standard for the future of hygienic diaphragm valves. The Envizion valve is designed specifically to help customers install, operate, and maintain their valves more efficiently. This unique design provides a significant reduction in total cost of ownership while supporting the industries' goals to increase productivity, improve reliability and enhance clean-ability.

The Envizion valve utilizes a breakthrough mount and turn design that allows for quick and easy valve disassembly.

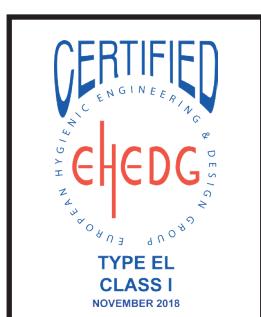
- Tool-less maintenance - no tools required for valve installation and diaphragm replacement, simplifying the maintenance process.
- Fasteners eliminated - no more handling loose parts or accessing fasteners in tight spaces.
- Save time - diaphragm changes reduced from an industry average of 23 minutes to 3 minutes, resulting in a 90% reduction in maintenance time.



TOOL-LESS
ASSEMBLY



CONTAMINATION
FREE



SEALING SYSTEM
3RD PARTY
CERTIFIED



LEAK FREE
SEAL INTEGRITY



FASTENER FREE



ZERO
RETORQUES

QSM (TRU-FLO)

THE WILLIAMS-CARVER COMPANY, INC.



Common Applications: Dairy, Beverage, Brewery, Pharmaceutical, Personal Care, Pulp & Paper, Automotive Paint, Industrial, Chemical, etc.

PRODUCT	SANITARY BALL VALVES
	<ul style="list-style-type: none">▪ 2-way, 3-way, and 3-way multiport ball valves▪ Live loaded, self-adjusting packing and Belleville washers provide better sealing and defense against leaking▪ 316L stainless steel▪ 3-PC body design facilitates inspection and easy inline repair▪ Available in standard or cavity filled seats
	<ul style="list-style-type: none">▪ 316L mirror finish disc provides even flow preventing restrictions▪ Opposing body bolt design prevents loosening between body sections due to vibration and operation, and provides positive sealing▪ 316L stainless steel▪ Multi-position, 304SS, spring loaded lock handle▪ Up to 12" connection available for immediate delivery
	<ul style="list-style-type: none">▪ Ideal for high cycle applications▪ Compact design utilizes the same body for double acting and spring return units▪ Stainless steel fasteners▪ Pneumatic Aluminum Actuators▪ Pneumatic Stainless Actuators▪ Electric Actuators
	<ul style="list-style-type: none">▪ Limit switches▪ Indication▪ Specialty switches▪ Positioners▪ Solenoids▪ Proximity switches



SANITARY FLEXIBLE HOSE ASSEMBLIES

THE WILLIAMS-CARVER COMPANY, INC.

PRODUCT LINE	ACE SANITARY: HOSE ASSEMBLIES / SEAL-RITE
 Ace Sanitary	<ul style="list-style-type: none">Food grade rubber, fluoropolymer, silicone, PVC, jacketed and heated hose assembliesWashdownReusable and molded ends, molded labelsClamps, gauge reducers, hose supports, hose bumpers, SS hose racks, mobile hose racks, wash down stations, crimping & testing equipment
 Rubber Fab a Garlock Hygienic Technologies company	RUBBERFAB: HOSE ASSEMBLIES <ul style="list-style-type: none">Food grade rubber, fluoropolymer, silicone, PVC, washdown hose supports, vibration isolators, washdown spray nozzles, sight gauges

SANI-MATIC

THE WILLIAMS-CARVER COMPANY, INC.

PRODUCT LINE	SANI-MATIC CIP SYSTEMS & EQUIPMENT
 SANI-MATIC	<ul style="list-style-type: none">CIP SkidsCOP Immersion WashersVat & Tunnel WashersStrainersSpray DevicesTank Components & Accessories 

SANITARY FITTINGS

THE WILLIAMS-CARVER COMPANY, INC.

PRODUCTS	S-LINE FITTINGS
<ul style="list-style-type: none">▪ Clamps▪ Elbows▪ Tees▪ Reducers▪ End Caps▪ Adapters▪ Customized Fittings▪ Polished Tubing 	
I-LINE & Q-LINE FITTINGS	
	
WELD FITTINGS	
	
OTHER SANITARY FITTING OPTIONS	
	

GASKETS & ELASTOMERS

THE WILLIAMS-CARVER COMPANY, INC.

PRODUCT	GASKETS & ELASTOMERS
	<ul style="list-style-type: none">▪ Buna, Teflon, Viton, EPDM, Silicone, etc.▪ Gaskets for S-Line, I-line, Q-Line, & bevel fittings.▪ Assorted o-rings▪ Screen gaskets



THE
WILLIAMS-CARVER COMPANY, INC.

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Phone: 913-236-4949 | Toll Free: 800-736-4411

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--- PRODUCT LIST ---

SANITARY PROCESS AND INDUSTRIAL EQUIPMENT

- **SPX FLOW:** Heat Exchangers, Votators, Pasteurizing Systems
 - **WAUKESHA/CHERRY BURRELL:** Positive Displacement & Centrifugal Pumps, (Sanitary & Industrial), Manual & Automatic Valves, Replacement Parts,
 - **APV:** Positive Displacement & Centrifugal Pumps, Manual & Automatic Valves, Replacement Parts, Heat Exchangers, Homogenizers (Gaulin & Rannie)
 - **JOHNSON PUMP:** Lobe, Centrifugal, Gear, Flexible Impeller Pumps
 - **BRAN+LUEBBE:** High Pressure & Metering Pumps
 - **SEITAL:** Separation Technology (Centrifuges)
- **GRACO:** Diaphragm Pumps, Piston Pumps, Tote Unloaders & Bin Evacuation Systems
- **ITT:** Pure-Flo and EnviZion High Purity Diaphragm Valves, Actuators, & Components for pharmaceutical, animal health, and biopharm.
- **FLEXIBLE HOSE ASSEMBLIES:** ACE Manufacturing, Rubberfab
- **TRU-FLO:** Stainless Steel Manual & Automatic Butterfly & Ball Valves
- **REOTEMP:** Temperature & Pressure Instrumentation
- **ANDERSON INSTRUMENTATION:** Pressure Gauges, Level Transmitters, Digital Thermometers, Recorders, Controllers & Flowmeters
- **DCI:** Food & Pharmaceutical Stainless Steel Tanks, Silos & Processors
- **PROVISUR TECHNOLOGIES:** Grinding Systems and Equipment
- **METTLER-TOLEDO:** Metal Detection Systems and Equipment
- **LACROSSE BRUSH:** Plant Sanitation Equipment
- **SANI-MATIC:** CIP/COP Systems, Equipment Washers, and Spray Assemblies
- **GASKETS:** Buna, Teflon, Viton, EPDM, and Silicone for S-Line, Bevel Seat, Q & I Line Fittings
- **SANITARY TUBING & FITTINGS:** Custom Designed Sanitary Fittings, 304 & 316L Stainless Fittings and Tubing: S-Line, Bevel Seat, I-Line & Q-Clamp Style, and Flow Panels.
- **GOULDS:** Industrial Centrifugal Pumps & Parts
- **CONTINENTAL:** Industrial Progressive Cavity Pumps
- **NETZSCH:** Twin Screw Pumps, Peristaltic Pumps, and Progressive Cavity Pumps

***** FACTORY CERTIFIED WAUKESHA PUMP & VALVE REPAIR CENTER**

REFRIGERATION SYSTEMS AND EQUIPMENT

- **US COOLER:** Refrigeration Walk-In Cooler Boxes
- **COMPRESSORS:** VILTER, GEA, FRICK, M&M, MYCOM
- **VILTER:** Refrigeration Compressors, Condensers, Vessels, Air Units and Parts
- **HANSEN TECHNOLOGIES:** Refrigeration Valves- Regulators, Solenoids, Reliefs, Liquid Level Controllers, Auto Purger Systems, Parts
- **REFRIGERATION SPECIALTIES:** Refrigeration Valves - Regulators, Solenoids, Reliefs, Parts
- **HENRY:** Refrigeration Valves, Regulators, Solenoids, Relief, Parts
- **KRACK:** Refrigeration Air Coils
- **EVAPCO:** Refrigeration Condensers & Air Coils
- **BALTIMORE AIRCOIL (BAC):** Refrigeration Condensers & Air Coils
- **PHILLIPS:** Liquid Level Controls & Systems
- **PRESSURE VESSELS:** Receivers, Accumulators, Oil Pots
- **AMMONIA PLATE HEAT EXCHANGERS**

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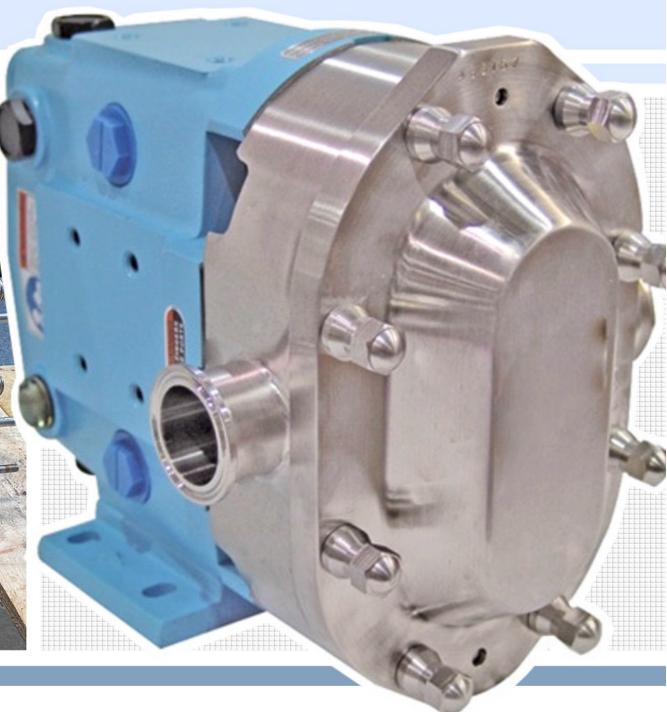
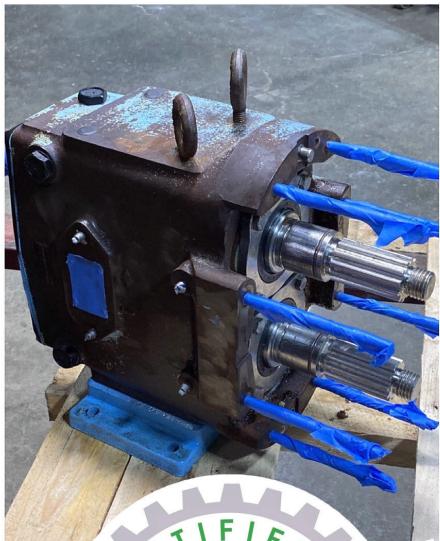
CERTIFIED PUMP & VALVE REPAIR CENTER

SERVICE & REPAIR

OUR SERVICE DEPARTMENT IS TRAINED & AUTHORIZED AS A CERTIFIED SPX FLOW PUMP & VALVE REPAIR CENTER. WE SPECIALIZE IN THE EVALUATION, SERVICE & REPAIR OF ALL WAUKESHA POSITIVE DISPLACEMENT PUMPS & VALVES.

OUR CAPABLE STAFF HAS EXTENSIVE HANDS-ON EXPERIENCE TO PRESENT YOU WITH THE PROPER & MOST COST-EFFECTIVE RECOMMENDATION.

WHETHER IT BE A MINOR ISSUE, MODERATE RECONDITION, OR EXTENSIVE REBUILD; LET WILLIAMS-CARVER HELP GET YOU BACK UP AND RUNNING.



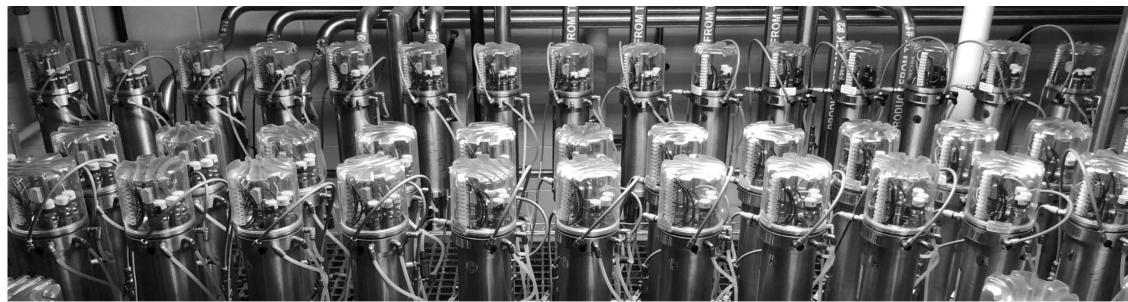


Williams-Carver offers a full range of after-sales products to ensure that the original equipment continues to operate at its maximum performance. A worldwide network of companies and vendors ensures that you are never far from the help you need to get back up and running quickly and get the ultimate performance from your investment.

Please reach out for more detailed information and inquiries.

The Williams-Carver Company, Inc.

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