

UNITED

SURFACE SOLUTIONS

CENTRIFUGAL BARREL DEBURRING



Centrifugal Barrel Finishing



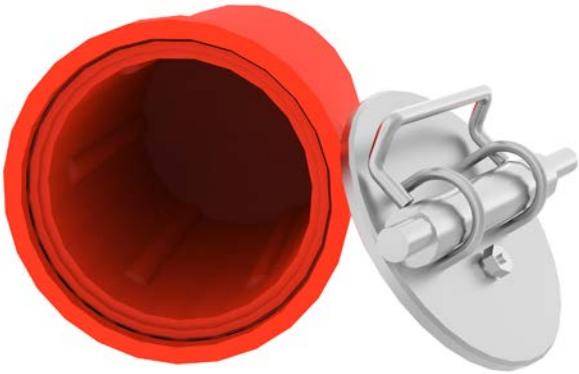
The CPC250 is United's smallest deburring system. The CPC250 is an upright centrifugal barrel deburring machine. It spins along a vertical axis and contains four small barrels. The CPC250 is perfect for small parts that require quick processes without sacrificing power. It is more powerful and consistent than vibratory machines and tumblers while having a smaller footprint. Equipped with United's touchscreen controls, the CPC250 can be programmed quickly and easily to meet all deburring and mass finishing needs.

Unlike vibratory bowls, the CPC250 Centrifugal Barrel Finishing System yields quick and consistent results. Although it is smaller than other CBFs, it can deburr small parts 10 times faster than any vibratory tumbler with more consistency and precision. With additional barrels on standby, parts and media can be changed in less than a minute. Due to its smaller barrels, the CPC250 consumes less media and compound than mini harperizers or other vertical barrel finishers.



CPC250

Precision Deburring for Smaller Parts



While barrels are fixed to the turret, the CPC250's urethane liners are removable for easy loading and unloading. Liners are easily replaceable and allow for easy preparation and replacement.



A touchscreen and push-button controls make operating the CPC250 simple. Process storage allows operators to repeat processes without reprogramming. Other control schemes are available as options.



The CPC250 is perfect for small parts such as those used medical, dental, and precision products. Processes can be fine-tuned to consistently produce perfect finishes after every run.

Specifications

Max Capacity	0.25 Cubic Feet (7.07 Liters)
Barrel Capacity	0.0625 Cubic Feet (1.77 Liters)
Barrel Dimensions	W 4.5" (114mm) x H 6" (152mm)
Machine Dimensions	W 28.5" x H 48" x D 28.5"
User Interface	Touchscreen with Process Storage
Main Drive/Motor	1HP, inverter controlled, single-phase
Turret Speed	0 - 350* RPM, fully adjustable
Rotation Ratio	1:1.25 - Turret : Barrel
Construction	Machine: 304 Stainless Steel Barrels: Painted Steel
Power Requirements	208/230 VAC
Compressed Air	Not required.
Dry Floor Compatible	Yes
Warranty	Up to 3 yrs, determined by component.
Options	Extra Barrel Liners Digital Touch Controls Allen-Bradley Controls

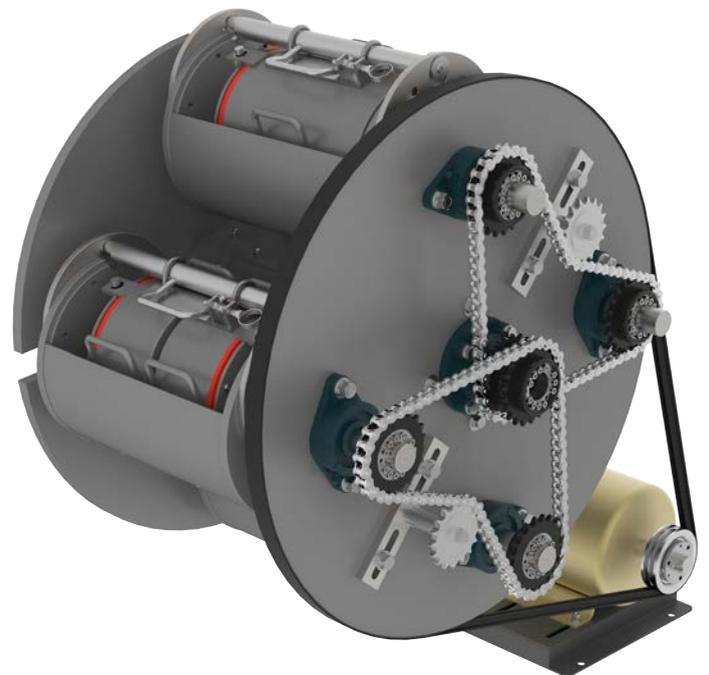
* Max RPM dependent on process

Centrifugal Barrel Finishing



The CPC1000 is United's most economical deburring system available. Gone are the long process times of tumblers and vibratory finishers. The CPC1000 can reach speed in excess of 250 RPM and can generate forces exceeding 30Gs, processing parts quickly and consistently. The system can deburr and finish parts up to 7" x 9.5". Equipped with United's exclusive PLC and touchscreen controls, precision finishes are at your fingertips. Processes can be stored and recalled for consistent results every time.

Although simpler than other machines, the CPC1000's turret design still features United's butterfly chain design and makes no sacrifices. The CPC1000 is powerful and modular. Because barrels are separate from the turret's cradles, various types of parts can be processed during the same run. Barrels are secured using United's cam system, but can be easily removed and taken to a workstation such as United's TC250 to complete processing.



CPC1000

Modular Processing

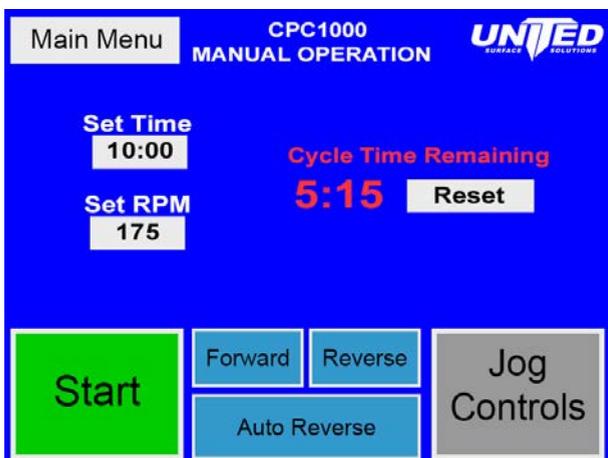


Barrels are locked with a simple lid and cam system, ensuring parts are secure. United's secure locking cam system doesn't require tools and is easy to use.

Barrels are available in 2 sizes, 1/4 cubic foot volume and 1/8 cubic foot volume.



The CPC1000 can process a wide variety of parts with high precision. Its modular barrel design allows for different parts to be processed at the same time, offering versatility and efficiency.



United's simple touchscreen controls give operators complete control over each process. Settings can be stored so processes can be started quickly and easily.

Specifications

Max Capacity	1 Cubic Foot (28.3 Liters)
Barrel Capacity	0.25 Cubic Feet (7.07 Liters) up to 4 0.125 Cubic Feet (3.54 Liters) up to 8
Barrel Dimensions	0.25 Cu.Ft. 10" x 6.5" 0.125 Cu.Ft. 4" x 6.5"
Machine Dimensions	W 35.5" x H 46.25" x D 46"
User Interface	Touchscreen with Process Storage
Main Drive/Motor	3HP, inverter controlled, three-phase
Turret Speed	0 - 250* RPM, fully adjustable
Rotation Ratio	1:1 - Turret : Barrel
Construction	Machine: 304 Stainless Steel Barrels: Painted Steel
Power Requirements	208/230 VAC
Compressed Air	Not required.
Dry Floor Compatible	Yes
Warranty	Up to 3 yrs, determined by component.
Options	Extra Barrel Liners Stainless Steel Barrels Allen-Bradley Controls

* Max RPM dependent on process

Centrifugal Barrel Finishing



The CPC4000 Mass Finishing System is the most versatile unit available. Just like all of the other systems offered by United, the CPC4000 comes standard with a PLC and touchscreen controls and a stainless steel construction. It can be upgraded to be fully automated with an elevator and media & water fill system. The CPC4000 can process both small and large parts up to 27.5" long. Barrel lids weigh only 19 lbs. The urethane barrels can be divided up to 10 separate compartments and can be adjusted to meet any deburring or mass finishing needs.

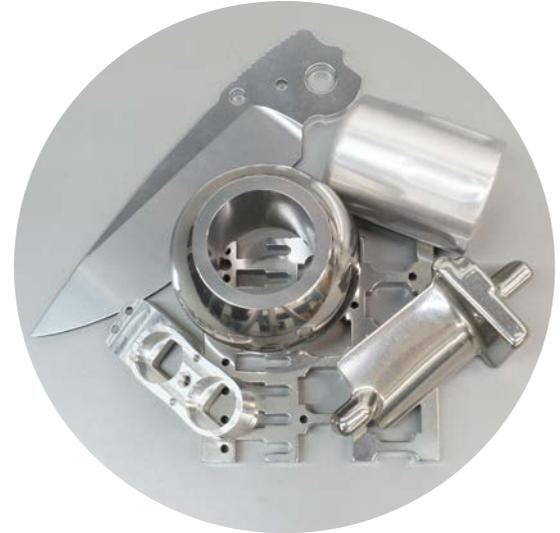


The automated rinse and separation system separates and rinses parts and media through interchangeable stainless steel separation screens which come in different sizes and are easily changed. The CPC4000 eliminates the need to remove barrels from the machine to access parts and media. Simply remove the lid and dump contents below.



CPC4000

Powerful & Compact



The CPC4000FA is the fully automated model of the CPC4000. It includes a media elevator as well as a media, water, and optional liquid compound fill system. Media is stored in a hopper above the main unit to allow for quick process turnaround and eliminates heavy lifting. The CPC4000FA reduces downtime by keeping media in the system, allowing operators to continuously run processes.

The CPC4000 is capable of processing a high variety of parts thanks to its powerful drive system and barrels with optional divided compartments. United can tailor custom processes for any part at no extra cost, ensuring any part can be processed with ease and precision.

Specifications	
Max Capacity	4 Cubic Feet (113.27 Liters)
Barrel Capacity	1 Cubic Foot (28.32 Liters) Up to 10 compartments per barrel.
Barrel Dimensions	L 27.5" (698.5mm) x W 8.75" (222.3mm)
Machine Dimensions	W 86.75" x H 58.44" x D 50.5"
User Interface	Touchscreen with Process Storage
Main Drive/Motor	10HP, inverter controlled, three-phase
Turret Speed	0 - 225* RPM, fully adjustable
Rotation Ratio	1:1 - Turret : Barrel
Construction	Machine: 304 Stainless Steel Barrels: Stainless Steel + Urethane
Power Requirements	460/480VAC
Compressed Air	Required for CPC4000FA
Dry Floor Compatible	Yes
Warranty	Up to 3 yrs, determined by component.
Options	Divided barrels with dividers. Allen-Bradley Controls Indicator Beacon

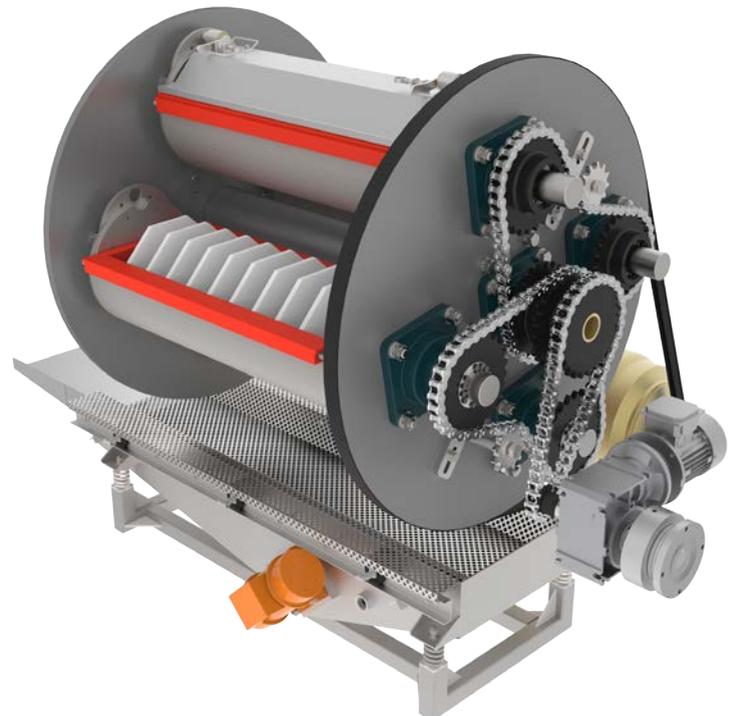
* Max RPM dependent on process

Centrifugal Barrel Finishing



The CPC6000 is United's newest system available. It combines the simple operation of United's other machines while offering unmatched power. Parts as long as 30" can be processed with ease and precision. Each barrel can be divided into as many as 10 compartments, providing the versatility to process a wide variety of parts. The CPC6000 can be equipped with our automated media and compound fill system as well as United's advanced media elevator.

The drive system in the CPC6000 is powerful and robust. It features United's signature butterfly chain design. United's control system allows processes to range from heavy material removal to delicate surface refinement on a large scale. Available with up to 10 divided compartments per barrel, the CPC6000 continues United's attention to process versatility and precision finishes. Just as with the CPC4000, the CPC6000 features a vibrating separator with easily interchangeable screens, specially designed not to damage parts.



CPC6000

High Capacity & Power



The CPC6000FA is the fully automated model of the CPC6000. It includes a media elevator as well as a media, water, and optional liquid compound fill system. Media is stored in a hopper above the main unit to allow for quick process turnaround and eliminates heavy lifting. The CPC6000FA reduces downtime by keeping media in the system, allowing operators to continuously run processes.



Barrels on the CPC6000 are longer and deeper than the CPC4000, offering 50% more capacity and having the space to process larger parts.

Specifications

Max Capacity	6 Cubic Feet (170 Liters)
Barrel Capacity	1.5 Cubic Feet (42.47 Liters) Up to 10 compartments per barrel.
Barrel Dimensions	L 30" (762mm) x W 10.5" (267mm)
Machine Dimensions	W 99" x H 72" x D 72"
User Interface	Touchscreen with Process Storage
Main Drive/Motor	20HP, inverter controlled, three-phase
Turret Speed	0 - 175* RPM, fully adjustable
Rotation Ratio	1:1 - Turret : Barrel
Construction	Machine: 304 Stainless Steel Barrels: Stainless Steel + Urethane
Power Requirements	460/480VAC
Compressed Air	Required
Dry Floor Compatible	Yes
Warranty	Up to 3 yrs, determined by component.
Options	25HP Motor Divided barrels with dividers. Allen-Bradley Controls Indicator Beacon

* Max RPM dependent on process

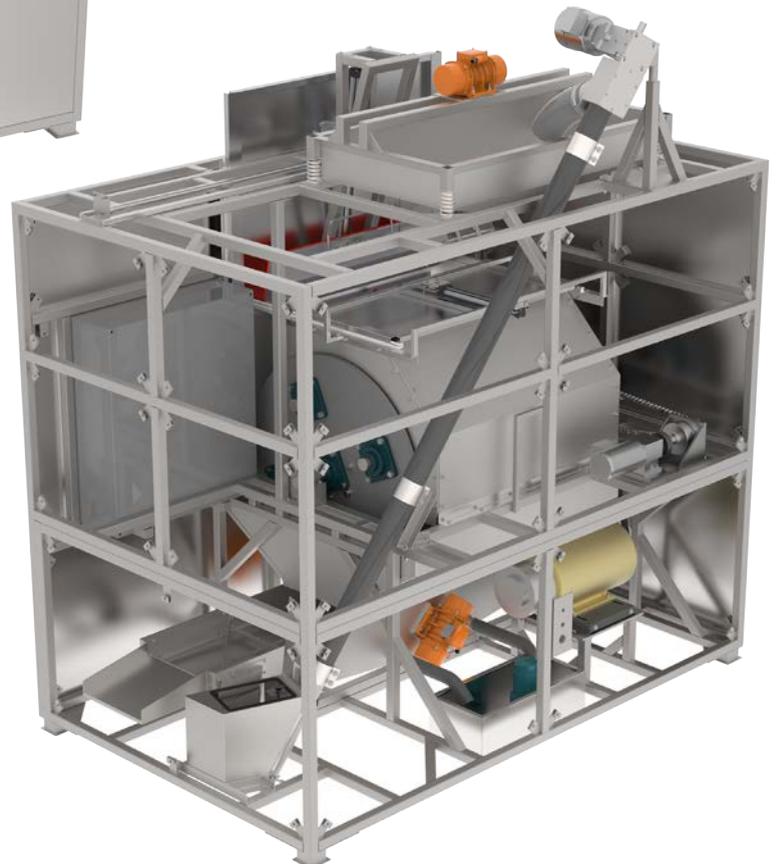
Centrifugal Barrel Finishing



The CPC12000 is the most advanced and automated system available. Parts as long as 44" can be processed with ease. It contains our automated media and liquid compound fill system as well as United's advanced media elevator. Its automatic doors and lid lift system alleviate the need for any heavy lifting. It comes standard with United's PLC and touchscreen controls, retaining the simplicity of United's smaller machines without sacrificing power or precision.



Close-up of the CPC12000's lid lift.

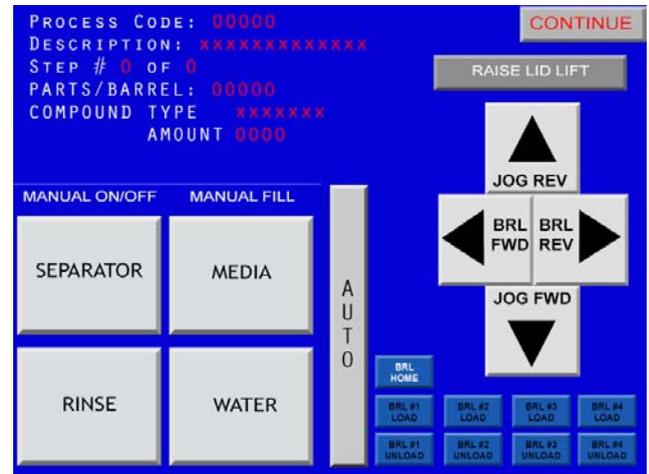


CPC12000

Advanced Automated Deburring



The CPC12000's automated material handling system removed the need for any heavy lifting. When each barrel's contents are emptied underneath, the separator sends parts down the chute, media to the elevator back up to the hopper, and pumps water out to be recycled.



The CPC12000's touchscreen controls gives operators access to all of its advanced features. These include the media elevator, hopper, and elevator, the parts/media separator with rinse system, turret & barrel controls, process storage, the lid lift, and maintenance tasks.

Specifications

Max Capacity	12 Cubic Feet (346 Liters)
Barrel Capacity	3 Cubic Feet (85 Liters) Up to 15 compartments per barrel.
Barrel Dimensions	L 44" (1118mm) x W 12" (305mm)
Machine Dimensions	W 128" x H 140" x D 78"
User Interface	Touchscreen with Process Storage
Main Drive/Motor	30HP, inverter controlled, three-phase
Turret Speed	0 - 135 RPM, fully adjustable
Rotation Ratio	1:1 - Turret : Barrel
Construction	Machine: 304 Stainless Steel Barrels: Stainless Steel + Urethane
Power Requirements	460/480VAC
Compressed Air	Required
Dry Floor Compatible	Yes
Warranty	Up to 3 yrs, determined by component.
Options	Divided barrels with dividers. Allen-Bradley Controls

* Max RPM dependent on process

ARS1500 • ARS1000 • TC250 • ARS200

United's deburring machines paired with its automated water recycling systems allow processes to run around the clock by processing wastewater in large batches. All of United's water recycling equipment allows recycled water to be recirculated into your system or to be dumped straight into a drain with no special permits in nearly all locales. Just like every one of United's deburring machines, all water recycling units are constructed with stainless steel and are Made in USA.



Water Recycling

System Comparison and Process

ARS1500 & ARS1000

Water Recycling Systems

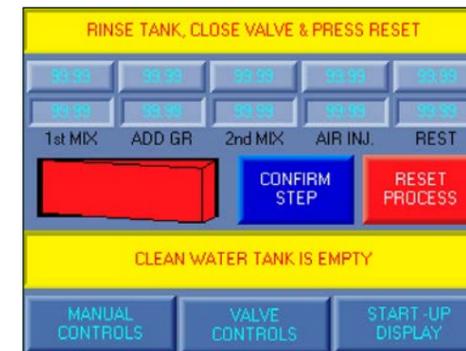
Comparison of Water Recycling Systems

	Process Capacity	Total Capacity	Process Time	Max. Trays	Controls	Power
ARS1500	200 gal	400 gal	25 min	2	Touchscreen	208/230VAC
ARS1000	125 gal	250 gal	25 min	2	Touchscreen	208/230VAC
ARS200	50 gal	50 gal	25 min	2	Start/Stop/Reset	110/115VAC
TC250	55 gal	110 gal	25 min	1	Start/Stop/Reset	110/115VAC



The ARS1500 is United's exclusive water recycling system. It is able to process wastewater in 200 gallon batches with a 400 gallon capacity. With simple touchscreen controls and a semi-automatic system, clean water is less than an hour away. Its closed-looped system makes it simple to set up and does not require any special permits or connections. With a stainless steel construction and UL approved controls, the ARS1500 is the most reliable and inexpensive way to treat and recycle wastewater. The ARS1500 can also be configured to process smaller batches in the form of the ARS1000.

	Specifications
Description	Automatic water recycling system.
Maximum Capacity	ARS1500: 400 gallons (1500 L) ARS1000: 250 gallon (1000 L)
Process Capacity	ARS1500: 200 gallons (750 L) ARS1000: 125 gallons (500 L)
Controls	Touchscreen with memory.
Construction	304 stainless steel.
Dimensions	ARS1500: W106" x D45.25" x H121" ARS1000: W106" x D45.25" x H95"
Mixing Pump	1.25HP - 1 phase
Sump Pump	1" NPT
Power Requirements	208/230 VAC, 50/60Hz,
Compressed Air	80psi (550 kPa)
Warranty	Up to three years.
Options	pH sensor, 2nd tray, UV Filter
Country of Origin	USA



United's touchscreen controls allow processes to be stored and recalled easily to ensure minimal setup and process time.

Options

pH Sensor	Monitors pH levels and alerts operator when adjustments are needed.
2nd Holding Tray	Allows a second process to be started while the first one de-waters.
UV Filter	Periodically passes clean water through UV filter to eliminate microorganisms and odors.

Treatment with Reactive Separating Agents

Reactive Separating Agents (RSAs) remove emulsified oils, heavy metals, phosphates and suspended solids from wastewater through flocculation, precipitation, and pH adjustment. Unlike conventional wastewater treatment systems that require multiple chemical additions throughout the process, RSAs are applied in a single step. RSAs' proprietary blend of separating agents activate and react in a predetermined sequence to remove wastewater contaminants.

RSAs are composed of minerals, inorganic and organic acids and bases, and cationic polymers.

Wastewater treatment with RSAs takes only minutes, yet several complex chemical reactions occur. First, the acidic component of the RSA causes oily contaminants to coalesce and separate from the wastewater. Next, the polymeric cationic portion of the formulation attracts any remaining oils and larger, more highly charged anions. Finally, the basic component activates, precipitating metallic hydroxides and driving the system to a fully flocculated condition where the cationic polymer molecules (with any adsorbed oil), metallic ions, and positively charged contaminants are attracted to the RSA's clay particles. Heavy metal cations remaining in solution will exchange with the sodium on the clay and will bond to the clay platelets by electrostatic forces. The fully reacted mass is a complex mixture of encapsulated contaminants and waste solids held together by Van der Waals (weak), as well as electrostatic (strong) forces. The clay particles agglomerate, entrapping and surrounding suspended solids completely. Pozzolanic reactions also occur, forming cementitious particles which settle to the bottom of the vessel. The entire microencapsulation process is completed in just minutes, leaving clear and sewerable water.



TC250

Water Recycling System with Optional Workstation

ARS200

Water Recycling System with Optional Holding Tray



TC250 without Workstation

The TC250 is United's exclusive automated recycling system. Its closed-loop system allows for efficient and clean water recycling. The automated recycling system has a large process capacity. Through United's easy-to-use controls, wastewater can be processed and recycled in batches in under 30 minutes. The TC250 can be configured without a sink/workstation feature. The TC250 will still process 55 gallons of water and will not lose functionality. With the TC250, no special connections are required. It is a self-contained, closed-loop system. When the recycling process is complete, clean water can be added back into the system or dumped into the drain. In almost all cities, no special permits are required.



TC250 with Workstation

Specifications	
Description	Semi-automatic water recycling system. Optional sink and workstation.
Maximum Capacity	55 gallons (208 L)
Controls	Simple buttons and valves.
Construction	304 stainless steel.
Dimensions	W 49.4" x D 42" x H 104.7"
Mixing Pump	1.25HP - 1 phase
Sump Pump	1" NPT
Power Requirements	115 (± 10%) VAC, 50/60Hz,
Compressed Air	None
Warranty	Up to three years.
Options	Holding tray, external pumps. Flocculant feeder.
Country of Origin	USA



The ARS200 is United's smallest water recycling system. It is specially designed to treat wastewater in 50-gallon batches. Processes are semi-automatic and take less than 30 minutes to complete. Like all of United's equipment, the ARS200 is constructed with 304 stainless steel and simple controls. The ARS200 is also designed to be mobile, making it easy to treat wastewater throughout your facility. Its optional holding tray allows you to process additional wastewater while the first batch continues.



Ideal for wastewater and cutting fluid.

Specifications	
Maximum Capacity	50 gallons (208 L)
Controls	Simple buttons and valves.
Construction	304 stainless steel.
Dimensions - No Tray	W 37" x D 30" x H 65"
Dimensions - With Tray	W 64" x D 30" x H 65"
Mixing Pump	1.25HP - 1 phase
Sump Pump	1" NPT
Power Requirements	115 (± 10%) VAC, 50/60Hz,
Compressed Air	None
Warranty	Up to three years.
Options	Holding tray, external pumps.
Country of Origin	USA