

## Universal Centrifugal Pump (UC)

CENTRIFUGAL PUMPS



**Waukesha Cherry-Burrell®**

Engineering excellence, allied to stringent quality control, ensures that SPX FLOW's unrivalled range of Waukesha Cherry-Burrell products complies with the highest international standards for hygiene. In the light of growing pressure worldwide to deliver safe, high quality food, all SPX FLOW products are designed for easy cleanability, while minimizing the use of valuable resources, such as energy.

The Waukesha Cherry-Burrell product portfolio includes a wide range of pumps and valves designed for use in the food, dairy and brewing industries, as well as in chemical, health care, pharmaceutical processing and heavy industries.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit [www.spxflow.com](http://www.spxflow.com).

## Flexibility with the Reliability of a Waukesha Cherry-Burrell

The Universal Centrifugal Pump (UC) is the latest addition to the Waukesha Cherry-Burrell pump family. Following the tradition of quality, reliability and ease of maintenance, the UC fills the high efficient centrifugal pump sector complementing the Universal PD pump product line.

### PRODUCT FEATURES AND BENEFITS

#### Sanitary Features

- Fully Clean-In-Place (CIP) capability with options available for aseptic processing
- Flow directed to the seal area assures cleaning and sanitation
- Seal spring is located outside the product contact area to maintain cleanliness
- Ease of seal maintenance with very little disassembly required for replacement

#### Product Features

- Adapter is all stainless steel, no painted parts near the product zone
- Easy to maintain front loaded pump seals
- Direct visual access to the pump shaft for inspection for leaks
- Large product range, over 17 pumps, to allow for the best fit to application
- Spiral Volute positioned in the back plate to increase efficiency and lower vibration
- Improved impeller design enhances the pump efficiency
- Outlet design of the pump allows for a constant velocity and less turbulence at the pump outlet
- Housing is held in place by a clamp ring allowing for ease of maintenance and positioning of the outlet
- Multiple leg options to allow for the best fit during installation

#### Seal Features

- Robust seal with the number of parts minimized to allow for easy maintenance and reliability
- Only two sizes of seal will cover the entire range of the UC pump
- Conversion from a single to a double mechanical seal is simple and the seal faces for both the seals in the double mechanical seal are the same
- Large selection of seal materials are available to fit the application



## Typical product applications

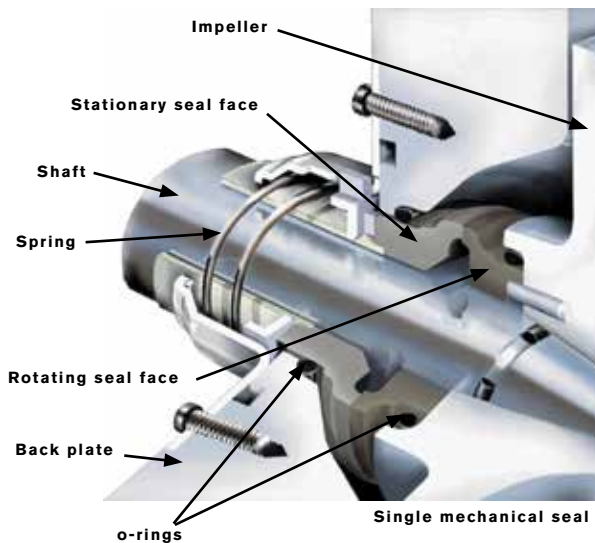
### Beverage

Beer  
Cider  
Fruit Drinks  
Liquid Sugar and Glucose  
Soft drinks  
Wine  
Wort



### Food

Animal oils  
Flavourings  
Pet food  
Soups & Sauces  
Vegetable juice  
Vegetable oils  
Vinegars



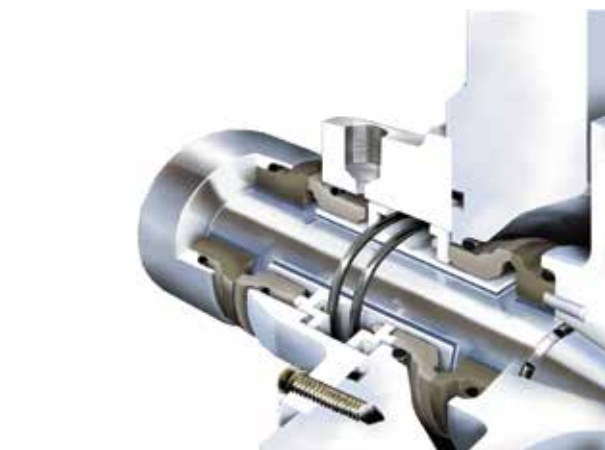
### Dairy

Cream  
Milk  
Milk concentrate  
Raw milk  
Skimmed milk  
Whey  
Whey concentrate



### Pharmaceutical and Toiletries

Emulsions  
Extracts  
Lotions  
Perfumes  
WFI (Water for Injection)  
High Purity Water  
Pure water



Double mechanical seal prepared for flushing or a steam barrier

### Chemical

Additives  
Adhesives  
Coatings  
Contaminated liquids  
Detergents  
Emulsions  
Paint



## MODULARITY AND FLEXIBILITY – PRODUCT VARIANTS

The UC pump is a highly modular product with a variety of product alternatives to meet the application requirements.

### UCi Inducer Pump

The UCi is a variant of the UC pump that includes a modified case and an inducer installed in place of the impeller nut. This allows the pump to reduce NPSH requirements by 50 to 70% while maintaining the same pump curve as the corresponding UC pump. This lowers the cavitation risk and allows the pump to operate with fluids closer to their vapor pressure and in processes that have vacuum conditions. The addition of the inducer also extends the operational viscosity range of the pump allowing for a larger application potential. The inducer provides the capability to also pump gas laden liquids with a lower risk of damage to the pump and system.

### UCh High Pressure Pump

The UCh is a high pressure model of the standard UC range. The pump is designed to endure system pressures up to 870 psi (60 bar) the solid construction increases stability and reliability.

### UC Multistage Pump

The UC 50/200 can provide pressures up to 217 psi (15 bar) while operating within a system that can be up to 870 psi (60 bar). Unlike other multistage pumps, the UC 50/200 is CIP friendly, so can be used in systems that use CIP as a standard operating procedure. The pump is mounted to a bearing frame, so any motor can be coupled with the pump without worry of motor bearing failure due to the radial and axial loading of the pump.

### UCa Aseptic Pump

The UCa is the aseptic version of the UC pump and is designed to fit the modern food and pharmaceutical production process. All seals within the pump are designed to be sterile flushed, including the special fittings that are standard. Even with this capability, the UCa still retains the same basic seal construction and parts, so there are no "special" mechanical seals required to maintain.

### UCs Self Priming Pump

The UCs is unique in the self-priming pump market with the innovative eccentric air screw and standard UC impeller. This design allows for the pump to have far less noise than traditional liquid ring pumps plus be significantly more efficient once flow is established due to the pump performing like a standard UC pump. Other result of the innovative design includes the ability to limit the risk of damage during operation from particulate matter.



UCi



UCh



UC Multistage



Aseptic fitting



UCs

## PRODUCT SPECIFICATIONS

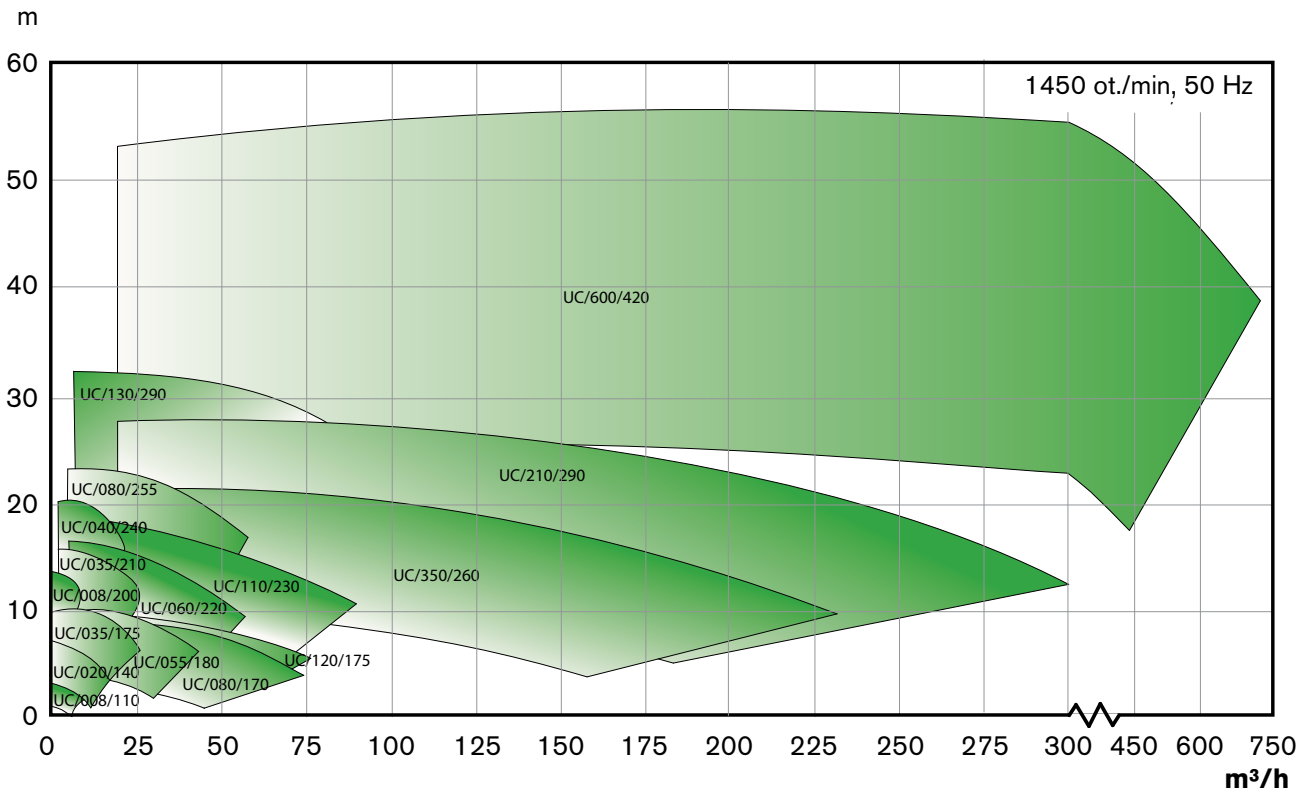
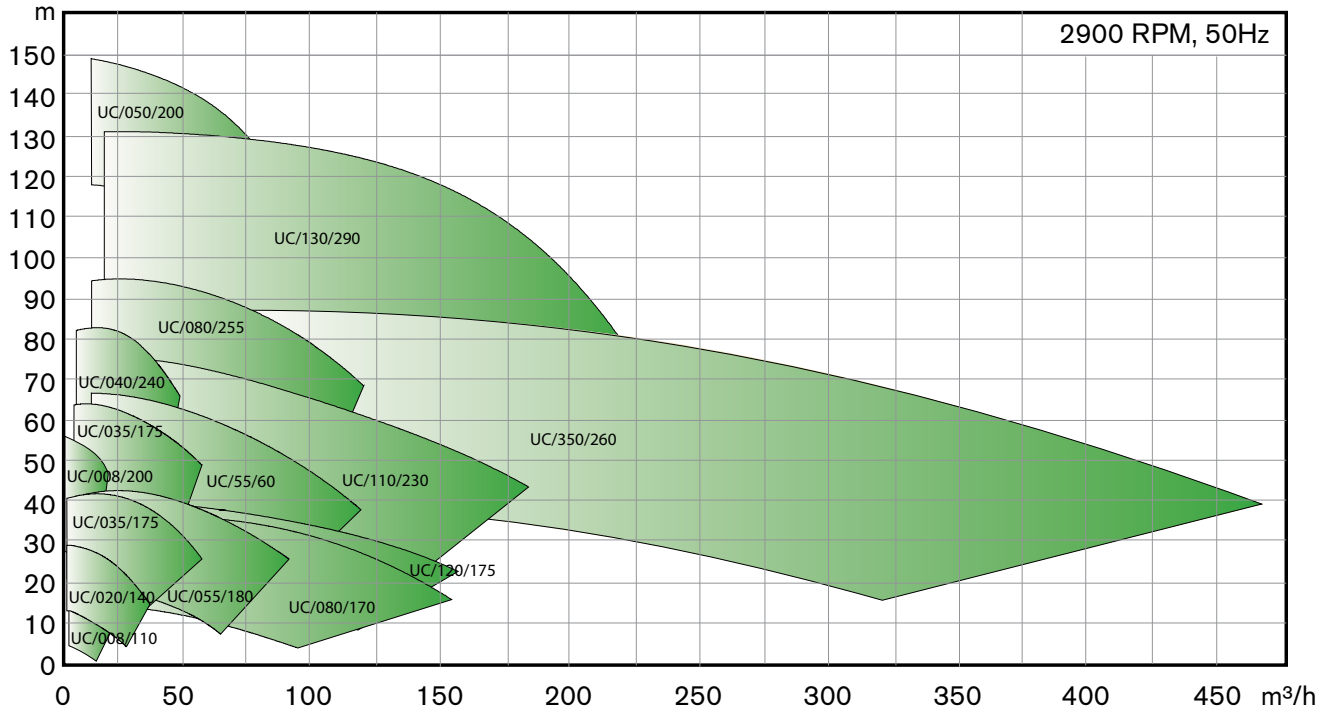
MATERIALS	
CASING	SS316L
IMPELLER	SS316L
IMPELLER NUT	SS316L
BACK PLATE	SS316L
SHAFT	SS316L
CLAMP RING	SS304
ADAPTOR	SS304
SUPPORT	SS304
SHAFT SEAL	Carbon/Silicon Carbide Optional: Silicon Carbide/Silicon Carbide
ELASTOMERS	EPDM Optional: FKM, PTFE
TECHNICAL DATA	
MAX. DISCHARGE PRESSURE	261 psi (18 bar): UC/008/110, UC/020/140, UC/080/170, UC/055/180, UC/035/175, UC/130/290 203 psi (14 bar): UC/210/290, UC/120/175, UC/008/200, UC/035/210, UC/060/220, UC/110/230, UC/350/260, UC/040/240, UC/080/255 Heavy Duty Clamp Ring Available, contact SPX FLOW for information
MAX. OPERATING TEMPERATURE	203°F (95°C) as Standard, > 408°F (209°C), contact SPX FLOW for information
PORT CONNECTIONS	
S-Line Standard Bevel Seat, I-Line, ISO and other fittings available, aseptic fittings available on UCa Pumps	
MOTOR	
Standard: ABB motor, 50/60 Hz, IP55, Insulation Class F, IE2 efficiency level Other motor options are available, contact SPX FLOW for information	

## DIMENSIONS

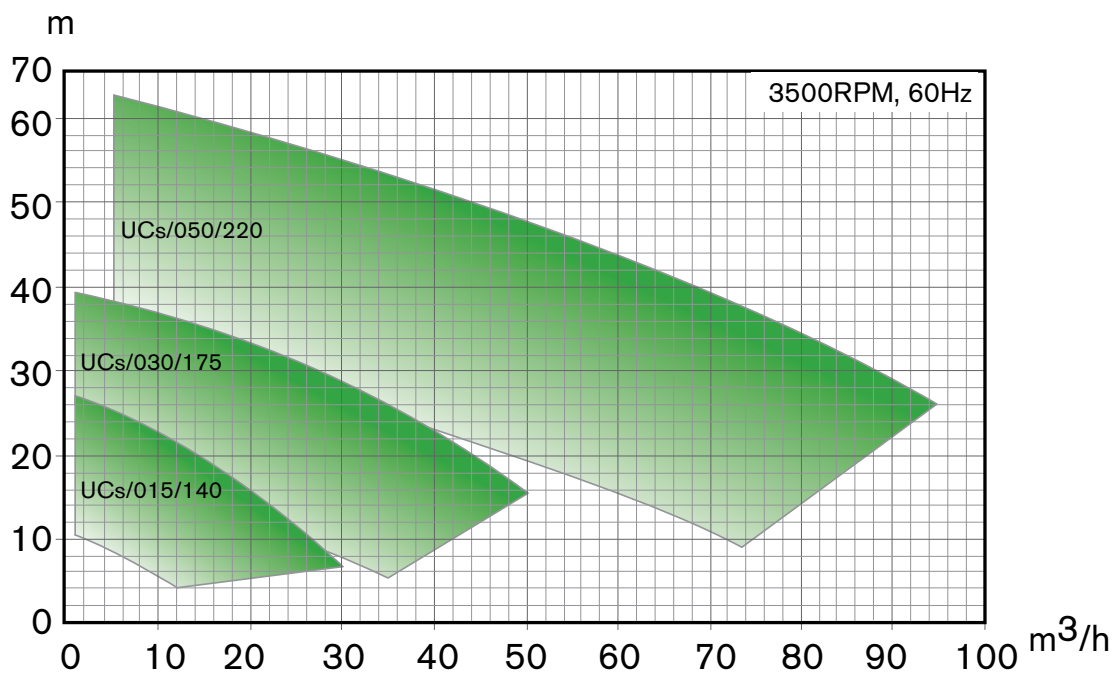
MODEL	INLET SIZE (IN) mm	OUTLET SIZE (IN) mm	MAX. IMPELLER (IN) mm	MAX. CAPACITY (M <sup>3</sup> /H)		MAX. HEAD (MWC)	
				1450 RPM	2900 RPM	1450 RPM	2900 RPM
UC/008/110	1.50 (38)	1.00 (25)	4.33 (110)	-	12	-	10
UC/008/200	1.50 (38)	1.00 (25)	7.87 (200)	8	16	14	55
UC/020/140	2.00 (51)	2.00 (51)	5.60 (142)	18	33	7	28
UC/035/175	2.56 (65)	2.00 (51)	6.90 (175)	27	55	10	42
UC/035/210	2.56 (65)	1.50 (38)	8.27 (210)	26	46	16	63
UC/040/240	2.56 (65)	1.50 (38)	9.45 (240)	21	44	21	82
UC/055/180	3.00 (76)	2.56 (65)	7.09 (180)	43	88	10	42
UC/060/220	3.00 (76)	2.00 (51)	8.66 (220)	57	116	17	66
UC/080/170	4.00 (102)	3.00 (76)	6.69 (170)	59	122	9	36
UC/080/255	3.00 (76)	2.00 (51)	10.04 (255)	58	61	23	94
UC/110/230	4.00 (102)	3.00 (76)	9.06 (230)	89	183	19	75
UC/120/175	4.00 (102)	3.00 (76)	6.90 (175)	77	152	10	40
UC/130/290	4.00 (102)	3.00 (76)	11.42 (290)	108	198	31	126
UC/210/290	6.00 (152)	4.00 (102)	11.42 (290)	303	-	28	-
UC/350/260	6.00 (152)	4.00 (102)	10.24 (260)	235	433	21	84

## CAPACITY CURVES

### Universal Centrifugal



### UC Self Priming





## Global locations

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Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit [www.spxflow.com](http://www.spxflow.com)

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