

## 200 Series

CENTRIFUGAL PUMPS



The 200 Series Centrifugal Pump Line offers the pump user the benefits of Waukesha Cherry-Burrell's traditional quality, value and service with higher levels of performance.

Through the use of 316L stainless steel in all wetted parts, and extra heavy duty motor and solid drive linkage the 200 Series centrifugal pumps are ideal product movers in a broad range of sanitary and industrial applications. In addition to being designed for cleaning in place, the pump is designed and manufactured to meet the requirements of U.S.D.A. 3A and EHEDG Standards.

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).

## 200 Series Centrifugal Pumps

### PRODUCT FEATURES AND BENEFITS

- Exclusive direct assembly of impeller-to-motor shaft for maximum rigidity and longer seal life.
- Clearance-ideal for all applications and a wide range of temperatures, up to 450°F (232°C)
- Designed for cleaning in place (CIP)
- Stronger JM-type motor has larger bearings and stronger shaft
- Base mounting options available for all sizes
- Extra deep impeller "eye" offers improved inlet characteristics
- Our design eliminates problems with vibration, short bearing life, low NPSH requirements, high seal maintenance costs and poor tolerance to adverse operating conditions.

### PRODUCT SPECIFICATIONS

#### Materials:

#### Pump Motor Bracket:

- Stainless Steel

#### Motor Types:

- NEMA JM Frame (standard)
- TEFC and Washdown enclosures optional
- Explosion proof and stainless steel
- Single phase or three phase, 60 or 50 Hz

#### Casing:

- Investment Cast 316L, satin exterior with sanitary finish in product zone

#### Port Connections:

- S-Clamp
- Bevel Seat
- Flanged
- NPT Threaded
- I-Line
- DIN
- Weld

#### Mounting:

- Heavy duty flange with clamp

#### Backplate:

- Machined from solid bar 316L stainless steel.

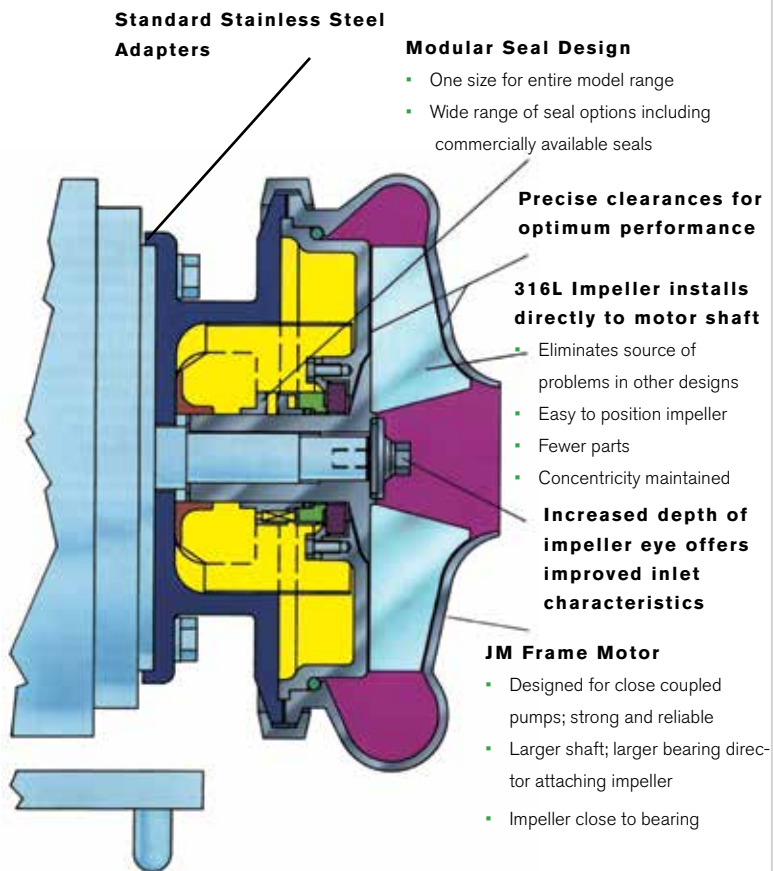
#### Impeller:

- Machined from solid bar 316L stainless steel with five compound curved vanes with integral motor shaft sleeve (2045 has four vanes). Directly bolted to motor shaft with impeller retaining nut.



## Waukesha Centrifugal Pumps are More Durable, Efficient, and Economical than Other Centrifugals

The Waukesha line offers an advanced generation of pumps. In all aspects of design, construction and performance, Waukesha Centrifugal pumps are a generation ahead of the industry.



**316L Casing - Rugged, strong construction with consistent dimensions**

## Typical product applications

### Bakery and Confectionery

Batters  
Fats & Oils  
Flavorings  
Sweeteners  
Yeast Slurry  
Syrups



### Dairy

Whey  
Cream, Milk  
Sweetened Condensed  
RO/UF Systems



### Pharmaceutical/Cosmetics

Emulsions  
Extracts  
Slurries  
Syrups  
High Purity Water  
WFI (Water for Injection)  
Dyes, Alcohols  
Essential Oils



### Chemical/Industrial

Detergents  
Dyes  
Soap Liquors & Solutions  
Ammonium Nitrate  
Propyl Alcohol  
Potassium Chloride  
Sodium Acetate



# Theory of Operation

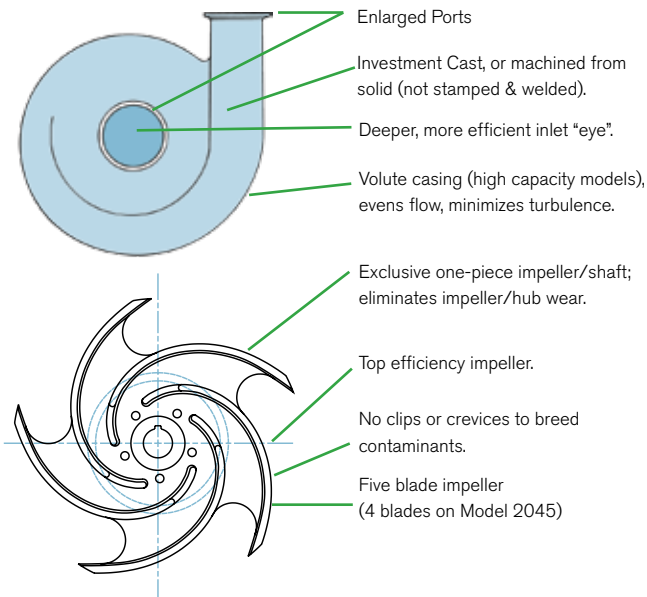
## THE WAUKESHA VOLUTE CASING

### (HIGH CAPACITY MODELS ARE MORE VERSATILE)

The optimized Waukesha design performs more efficiently over a wide range of operating conditions. The efficient casing and port design maximize performance under low NPSH conditions.

## WAUKESHA'S EXCLUSIVE IMPELLER DESIGN

The Waukesha impeller/shaft sleeve is a single, piece mounted rigidly on the motor shaft. Unlike C-flange mounted pumps, it stays aligned and performs with less vibration under the most rigorous operating conditions and maximizes seal life.



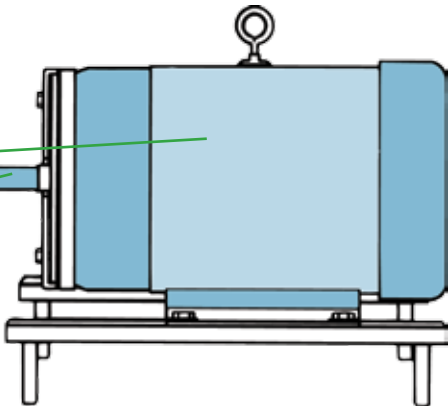
## OFFERING EXCLUSIVE NEMA JM FRAME MOTORS FOR BOTH SANITARY AND INDUSTRIAL APPLICATIONS

JM Frame Motors are specifically designed for centrifugal close coupled pumps and conform to NEMA, Hydraulic Institute and ANSI standards.

Heavier front bearing extends life.

Extra large motor shaft increases rigidity, reduces vibration.

Direct connecting impeller; no stub shaft required.



## PRODUCT SPECIFICATIONS

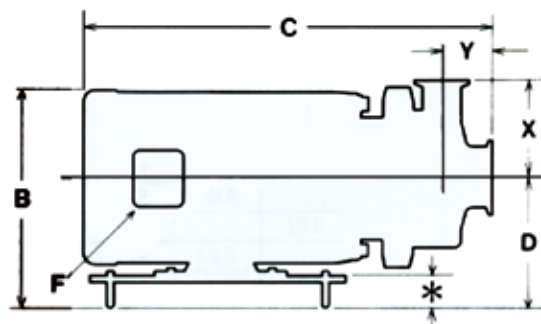
MODEL	INLET SIZE		OUTLET SIZE		MAXIMUM IMPELLER SIZE		MAXIMUM CAPACITY				MAXIMUM HEAD			
	IN	(MM)	IN	(MM)	IN	(MM)	1750 RPM		3500 RPM		1750 RPM		3500 RPM	
							GPM	(M <sup>3</sup> /HR)	GPM	(M <sup>3</sup> /HR)	FEET	(METERS)	FEET	(METERS)
2045	1.5	(38)	1.5	(38)	4.5	(114)	97	(22)	190	(43)	22	(7)	88	(27)
	2.0	(31)	1.5	(38)	4.5	(114)	97	(22)	190	(43)	22	(7)	88	(27)
2065LV	1.5	(38)	1.5	(38)	6.5	(165)	100	(23)	200	(45)	44	(13)	180	(55)
	2.0	(51)	1.5	(38)	6.5	(165)	100	(23)	200	(45)	44	(13)	180	(55)
2065	2.5	(65)	1.5	(38)	6.5	(165)	100	(23)	200	(45)	44	(13)	180	(55)
	2.5	(65)	2.0	(51)	6.5	(165)	245	(56)	400	(91)	47	(14)	190	(58)
2065HV	3.0	(76)	2.0	(51)	6.5	(165)	370	(84)	500	(114)	50	(15)	200	(61)
2075	3.0	(76)	1.5	(38)	8.6875	(218)	125	(28)	300	(68)	80	(24)	320	(98)
2085LV	2.0	(51)	1.5	(38)	8.5	(216)	70	(16)	145	(33)	81	(24)	330	(100)
2085	3.0	(76)	2.5	(64)	8.6875	(218)	480	(109)	840	(191)	85	(26)	342	(104)
	4.0	(102)	2.5	(64)	8.6875	(218)	480	(109)	840	(191)	85	(26)	342	(104)
2105	4.0	(102)	4.0	(102)	10.5	(267)	1400	(318)	N/A	N/A	133	(41)	N/A	N/A
	6.0	(152)	4.0	(102)	10.5	(267)	1400	(318)	N/A	N/A	133	(41)	N/A	N/A

# Product Dimensions

## Close-Coupled Model Dimensions

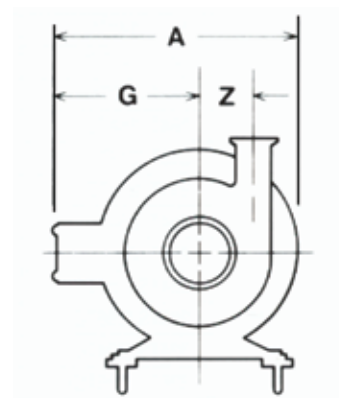
### Unit Width Height

FRAME	A IN (MM)	B IN (MM)	D IN (MM)	F IN (MM)	G IN (MM)
145 JM	8.56 (218)	7.87 (200)	4.5 (114)	.5 (13)	5.25 (133)
182JM	9.81 (249)	9.44 (240)	5.50 (140)	.75 (19)	5.87 (149)
184JM	9.81 (249)	9.44 (240)	5.5 (140)	.75 (19)	5.87 (149)
213JM	12.18 (309)	11.06 (281)	6.25 (159)	.75 (19)	7.38 (187)
215JM	12.18 (309)	11.06 (281)	6.25 (159)	.75 (19)	7.38 (187)
254JM	14.68 (373)	13.0 (330)	7.25 (184)	1.0 (25.4)	8.94 (227)
256JM	14.68 (373)	13.0 (330)	7.25 (184)	1.0 (25.4)	8.94 (227)
284JM	18.87 (225)	14.63 (372)	8.0 (203)	1.5 (38)	12.25 (311)
286JM	18.87 (225)	14.63 (372)	8.0 (203)	1.5 (38)	12.25 (311)
324JM	20.75 (527)	16.56 (421)	9.0 (229)	1.5 (38)	13.18 (335)
326JM	20.75 (527)	16.56 (421)	9.0 (229)	1.5 (38)	13.18 (335)



### Fluid Head

MODEL	INLET IN (MM)	OUTLET IN (MM)	X IN (MM)	Y IN (MM)	Z IN (MM)
2045	1.5 (40)	1.5 (40)	3.88 (98)	1.81 (46)	2.25 (57)
2045	2.0 (50)	1.5 (40)	3.88 (98)	1.81 (46)	2.25 (57)
2065LV	1.5 (40)	1.5 (40)	4.75 (120)	1.94 (49)	3.19 (81)
2065LV	2.0 (50)	1.5 (40)	4.75 (120)	1.94 (49)	3.19 (81)
2065LV	2.5 (65)	1.5 (40)	4.75 (120)	1.94 (49)	3.19 (81)
2065	2.5 (65)	2.0 (50)	4.44 (113)	1.94 (49)	3.94 (100)
2065HV	3.0 (75)	2.0 (50)	4.44 (113)	1.94 (49)	3.94 (100)
2075	3.0 (75)	1.5 (40)	6.69 (170)	1.75 (44)	4.5 (114)
2085LV	2.0 (50)	1.5 (40)	6.69 (170)	1.75 (44)	4.5 (114)
2085	3.0 (75)	2.5 (65)	5.63 (143)	2.53 (64)	5.06 (129)
2085	4.0 (100)	2.5 (65)	5.63 (143)	2.03 (52)	5.06 (129)
2105	4.0 (100)	4.0 (100)	6.94 (176)	2.86 (73)	6.75 (171)
2105	6.0 (150)	4.0 (100)	6.94 (176)	2.9 (74)	6.75 (171)



FRAME	MODEL/SIZE (INLET X OUTLET)									
	2045-ALL	2065LV-ALL	2065-2.5 X 2	2065HV-3 X 2	2075	2065LV-2 X 1.5	2085-3 X 2.5	2085-4 X 2.5	2105-4 X 4	2105-6 X 4
	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)	C IN (MM)
145JM	18.94 (481)	16.35 (415)	16.94 (430)	17.04 (433)	16.16 (410)	16.16 (410)	17.50 (445)	17.05 (433)		
182JM	21.81 (554)	19.66 (500)	20.25 (514)	20.35 (517)	18.09 (459)	18.09 (459)	19.43 (494)	18.96 (482)		
184JM	21.81 (554)	19.66 (500)	20.25 (514)	20.35 (517)	18.09 (459)	18.09 (459)	19.43 (494)	18.96 (482)	25.13 (638)	25.16 (639)
213JM		21.91 (557)	22.5 (572)	22.6 (574)	21.72 (552)	21.72 (552)	23.05 (585)	22.55 (573)	23.88 (507)	23.91 (607)
215JM		21.91 (557)	22.5 (572)	22.6 (574)	21.72 (552)	21.72 (552)	23.05 (585)	22.55 (573)	26.56 (675)	26.59 (675)
254JM		25.47 (647)	26.06 (662)	26.17 (665)	25.53 (648)	25.53 (648)	26.87 (682)	26.43 (671)	27.63 (702)	27.66 (703)
256JM			27.81 (706)	27.92 (709)	25.53 (648)	25.53 (648)	26.87 (682)	26.43 (671)	29.38 (746)	29.41 (747)
284JM				28.44 (722)	27.66 (703)	27.66 (703)	29.0 (737)	28.5 (724)	29.94 (760)	29.97 (761)
286JM				29.94 (760)	29.16 (741)	29.16 (791)	30.5 (775)	30.0 (762)	31.44 (799)	31.47 (799)
324JM					29.97 (761)	29.97 (761)	31.31 (795)	30.81 (782)	31.63 (803)	31.66 (804)
326JM					31.47 (799)	31.47 (799)	32.81 (833)	32.31 (821)	32.87 (835)	32.91 (836)

### Notes:

- (1) \*Frames 254-326: 2.50/64 adjustment  $\pm$  1.00/25.4    Frames 143-215: 2.00/51 adjustment  $\pm$  1.00/25.4
- (2) Dimensions X, Y & C apply to pumps with clamp connection.

PRODUCT DIMENSIONS

Pedestal Mounted Model Dimensions

MODEL	PUMP & PEDESTAL					B	
	INLET IN (MM)	OUTLET IN (MM)	X IN (MM)	Y IN (MM)	Z IN (MM)	SM. BORE IN (MM)	LG. BORE IN (MM)
P2045	1.5 (40)	1.5 (40)	3.88 (98)	1.81 (46)	2.25 (57)	14.1 (358)	
P2045	2.0 (50)	1.5 (40)	3.88 (98)	1.81 (46)	2.25 (57)	14.1 (358)	
P2065LV	1.5 (40)	1.5 (40)	4.75 (120)	1.94 (49)	3.19 (81)	13.83 (351)	
P2065LV	2.0 (50)	1.5 (40)	4.75 (120)	1.94 (49)	3.19 (81)	13.83 (351)	
P2065LV	2.5 (65)	1.5 (40)	4.75 (120)	1.94 (49)	3.19 (81)	13.83 (351)	
P2065	2.5 (65)	2.0 (50)	4.44 (113)	1.94 (49)	3.94 (100)	14.42 (366)	
P2065HV	3.0 (75)	2.0 (50)	4.44 (113)	1.94 (49)	3.94 (100)	14.53 (369)	21.3 (541)
P2075	3.0 (75)	1.5 (40)	6.69 (170)	1.75 (44)	4.5 (114)	17.19 (436)	20.42 (581)
P2085LV	2.0 (50)	1.5 (40)	6.69 (170)	1.75 (44)	4.5 (114)	13.80 (351)	20.42 (581)
P2085	3.0 (75)	2.5 (65)	5.63 (143)	2.53 (64)	5.06 (129)	15.01 (381)	21.64 (550)
P2085	4.0 (100)	2.5 (65)	5.63 (143)	2.03 (52)	5.06 (129)	14.51 (368)	21.14 (537)
P2092	3.0 (75)	2.0 (50)	6.64 (169)	2.47 (63)	4.62 (117)	14.46 (367)	21.09 (536)
P2105	4.0 (100)	4.0 (100)	6.94 (176)	2.86 (73)	6.75 (171)		22.57 (573)
P2105	6.0 (150)	4.0 (100)	6.94 (176)	2.9 (74)	6.75 (171)		22.6 (574)

Motor & Base

MOTOR FRAME	A IN (MM)	SC		H		SH	
		SM. BORE IN (MM)	LG. BORE IN (MM)	SM. BORE IN (MM)	LG. BORE IN (MM)	SM. BORE IN (MM)	LG. BORE IN (MM)
56 (56C)	11.5 (292)	8.7 (221)		8.85 (225)		9.6 (244)	
142T (142TC)	11.5 (292)	8.7 (221)		8.85 (225)		9.6 (244)	
143T (143TC)	12.5 (318)	8.7 (221)		8.85 (225)		9.6 (244)	
145T (145TC)	12.5 (318)	8.7 (221)		8.85 (225)		9.6 (244)	
182T (182TC)	16.18 (411)	8.7 (221)		8.85 (225)		9.35 (238)	
184T (184TC)	16.25 (413)	8.7 (221)		8.85 (225)		9.35 (238)	
213T (213TC)	19.81 (503)	8.7 (221)	11.96 (304)	9.71 (247)	12.9 (328)	9.35 (238)	13.7 (348)
215T (215TC)	19.81 (503)	8.7 (221)	11.96 (304)	9.71 (247)	12.9 (328)	9.35 (238)	13.7 (348)
254T (254TC)	21.75 (552)	8.7 (221)	7.51 (191)	9.71 (247)	12.9 (328)	10.15 (258)	13.7 (348)
256T (256TC)	23.5 (597)	8.7 (221)	7.51 (191)	9.71 (247)	12.9 (328)	10.15 (258)	13.7 (348)
284TS (284TC)	25.0 (635)		9.96 (253)		13.7 (348)		13.7 (348)
286TS (286TC)	26.75 (680)		9.96 (253)		13.7 (348)		13.7 (348)
324TS (324TC)	28.88 (733)		7.25 (184)		13.7 (348)		14.45 (367)
326TS (326TC)	30.38 (772)		7.25 (184)		13.7 (348)		14.45 (367)
364TS (364TC)	31.68 (805)		5.34 (136)		13.7 (348)		14.45 (367)
365TS (365TC)	32.68 (830)		5.34 (136)		13.7 (348)		14.45 (367)

MOTOR FRAME	D		SD		W		SW	
	SM. BORE IN (MM)	LG. BORE IN (MM)	SM. BORE IN (MM)	LG. BORE IN (MM)	SM. BORE IN (MM)	LG. BORE IN (MM)	SM. BORE IN (MM)	LG. BORE IN (MM)
56 (56C)	24.0 (610)		20.0 (508)		10.0 (254)		10.0 (254)	
142T (142TC)	24.0 (610)		20.0 (508)		10.0 (254)		10.0 (254)	
143T (143TC)	24.0 (610)		20.0 (508)		10.0 (254)		10.0 (254)	
145T (145TC)	24.0 (610)		20.0 (508)		10.0 (254)		10.0 (254)	
182T (182TC)	26.25 (667)		20.0 (508)		10.0 (254)		10.0 (254)	
184T (184TC)	26.25 (667)		20.0 (508)		10.0 (254)		10.0 (254)	
213T (213TC)	28.75 (730)	32.0 (813)	26.0 (660)	32.0 (813)	15.0 (381)	15.0 (381)	10.0 (254)	15.0 (381)
215T (215TC)	28.75 (730)	32.0 (813)	26.0 (660)	32.0 (813)	15.0 (381)	15.0 (381)	10.0 (254)	15.0 (381)
254T (254TC)	32.0 (813)	38.0 (965)	32.0 (813)	32.0 (813)	15.0 (381)	15.0 (381)	15.0 (381)	15.0 (381)
256T (256TC)	32.0 (813)	38.0 (965)	32.0 (813)	32.0 (813)	15.0 (381)	15.0 (381)	15.0 (381)	15.0 (381)
284TS (284TC)		38.0 (965)		32.0 (813)		15.0 (381)		15.0 (381)
286TS (286TC)		38.0 (965)		32.0 (813)		15.0 (381)		15.0 (381)
324TS (324TC)		50.0 (1270)		32.0 (813)		18.0 (457)		18.0 (457)
326TS (326TC)		50.0 (1270)		32.0 (813)		18.0 (457)		18.0 (457)
364TS (364TC)		50.0 (1270)		32.0 (813)		18.0 (457)		18.0 (457)
365TS (365TC)		50.0 (1270)		32.0 (813)		18.0 (457)		18.0 (457)

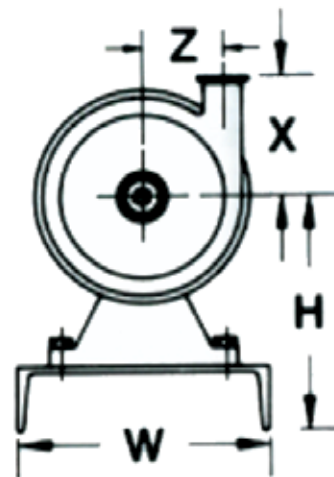
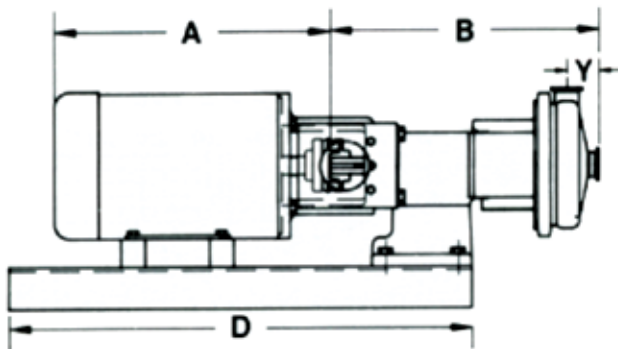
## PRODUCT DIMENSIONS

### Motor & Pedestal

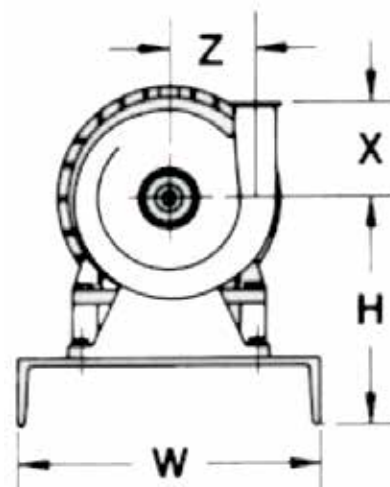
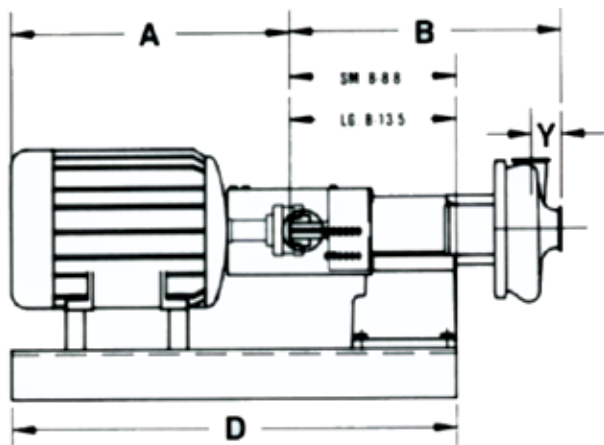
MOTOR HP/RPM	PUMP MODEL							
	P2045	P2065LV	P2065	P2065HV	P2085LV	P2085	P2092	P2105
Up to 5/3500	SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	
Up to 5/3500	SM.B.	SM.B.	SM.B.					
7 <sup>11/42</sup> /1750						SM.B.	SM.B.	LG.B.
7 <sup>11/42</sup> /3500		SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	
10/1750						SM.B.	SM.B.	LG.B.
10/3500		SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	
15/1750								LG.B.
15/3500			SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	
20/1750								LG.B.
20/3500			SM.B.	SM.B.	SM.B.	SM.B.	SM.B.	
25/1750								LG.B.
25/3500				LG.B.		LG.B.	LG.B.	
30/1750								LG.B.
30/3500				LG.B.		LG.B.	LG.B.	
40/1750								LG.B.
40/3500						LG.B.	LG.B.	
50/1750								LG.B.
50/3500						LG.B.	LG.B.	
60HP 3500 RPM						LG.B.	LG.B.	
75HP 3500 RPM						LG.B.	LG.B.	

Note: Sm.B. = Small Bore Lg.B. = Large Bore

#### Style B



#### Style C (Standard)



Note: Dimensions X, Y & B apply to pumps with clamp connection.

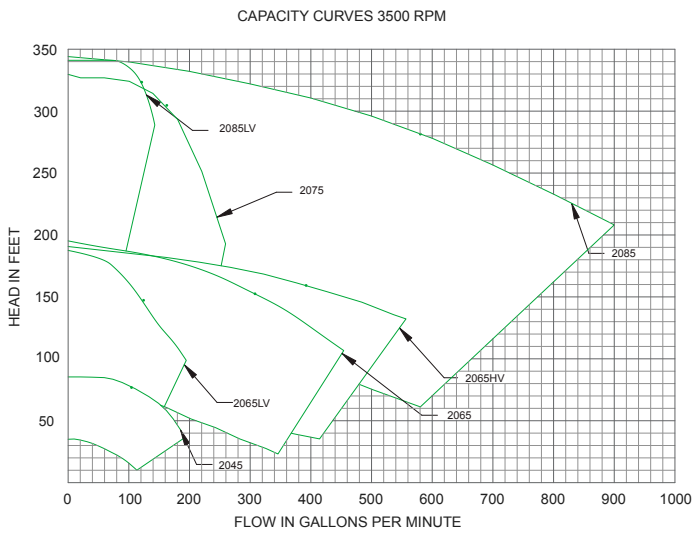


# Additional Technical Data

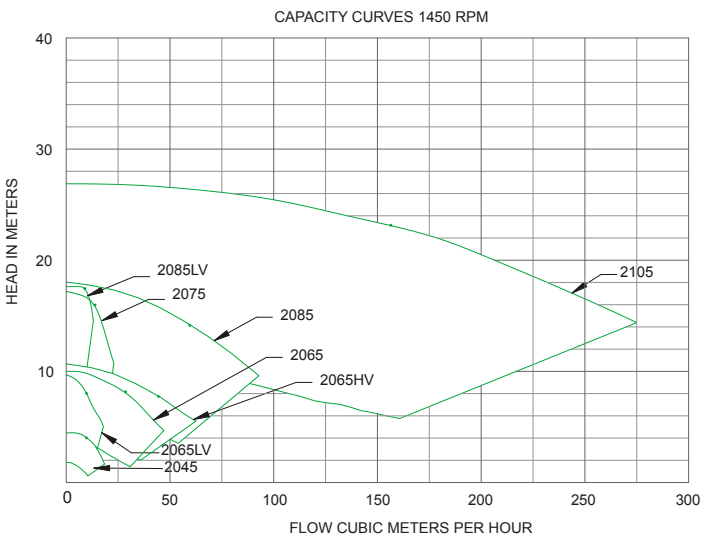
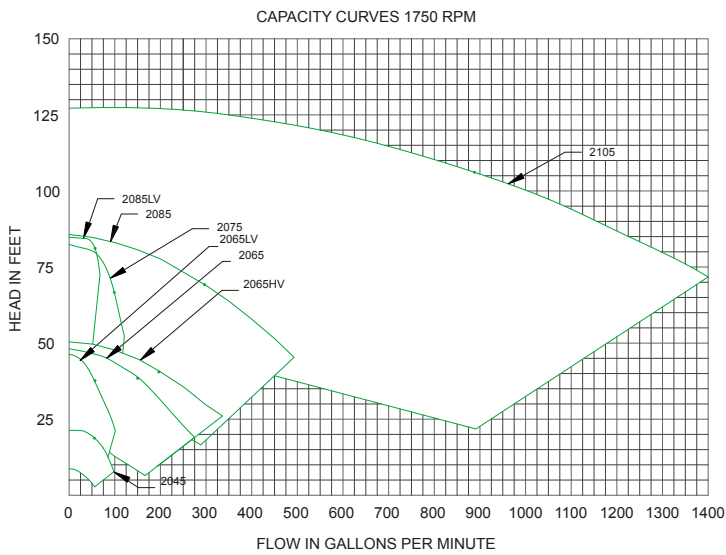
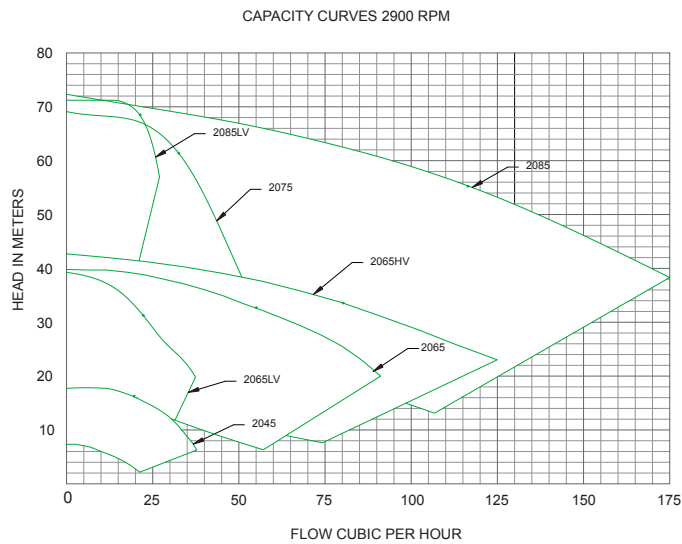
## CAPACITY CURVES

Based on water at 70°F. (22°C.)  
Maximum Inlet Size = Best Efficiency Point

### 60 HZ



### 50 HZ





# Options and Accessories

## SEALS - ONE SEAL SIZE FITS ALL WAUKESHA 200 SERIES MODELS

The 200 Series one-piece impeller/shaft sleeve design not only extends the life of seals, but it reduces the number of shaft seal sizes to one, resulting in a minimum spare parts inventory requirement.

These stationary seals are designed to last longer with a siliconized carbon (standard) lapped seat that is replaceable and reversible. This provides an excellent mating surface for the variety of rotary seals including food grade hard carbon, siliconized carbon, silicon carbide and tungsten carbide. No matter how demanding your application, there's a Waukesha seal that's tough enough to handle it.

Waukesha's pump offering includes eight sizes of pumps from 4.5" (114 mm) to 10.5" (267 mm) impeller diameter. All use the same size seal.

These pumps have:

### Seal combination options of:

- Single external mechanical seal
- Single mechanical with a water cascade
- Double mechanical seal

### Optional Elastomer Choices:

- Fluoroelastomer (FKM) O-Ring Standard
- EPDM
- Silicone
- Perfluoroelastomer (FFKM)

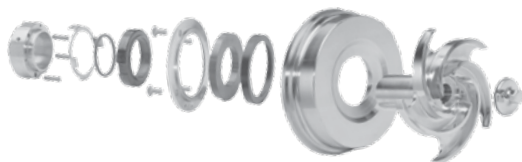
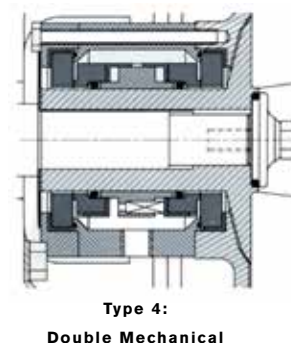
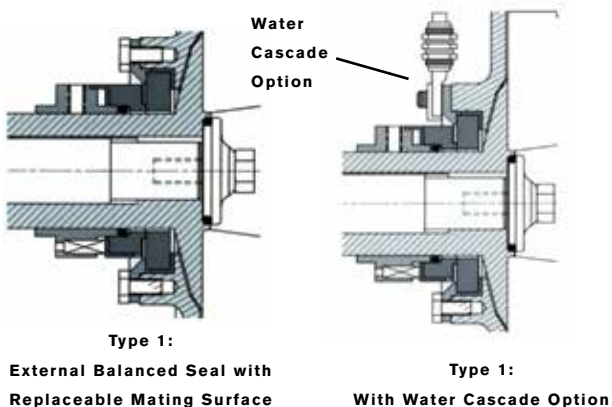
200 Series pumps are also set up to accept, as standard, a large number of commercially available mechanical seals.

### For Example:

- John Crane Type 8-1 (inside mounted seal)
- John Crane Type 8B2 (outside mounted seal)
- John Crane Type 8-1 Double Seal
- John Crane Type 9 (inside mounted seal)
- John Crane Type 9 Double Seal
- John Crane Type 21 (inside mounted seal)
- John Crane Type 21 (Double seal)
- Chesterton 440 (outside mounted seal)
- Chesterton 880 (inside mounted seal)
- Flowserve/Durametallic Type "CRO" Double Seal
- Flowserve/Durametallic Type "RA" (externally mounted seal)
- Flowserve/Durametallic Type "RO" (internally mounted seal)

An optional water cascade attachment is available for handling products that tend to crystallize. It also protects the seal against overheating due to high vacuum conditions or high product temperatures. For particularly adverse applications, Waukesha pumps are also available with an external balanced seal with replaceable silicon carbide mating surface. The water-cooled rotary double seal (Type 4) features two seals fully enclosed with a stainless steel seal housing. Water or other suitable coolant circulates through the housing under moderate pressure to cool the seal surfaces. Higher coolant pressures may be used to assure proper interface between product seal face and products which have a tendency to solidify or otherwise denature when in contact with hot, rotating surfaces. For unique applications not covered by stock seals:

**Consult the factory for specific recommendations and other commercial seal types available.**



# Options and Accessories

## S200 SERIES ALL MACHINED CENTRIFUGAL PUMPS

Designed for use in the Bio-Pharmaceutical industry, these pumps are manufactured to ASME BPE specification criteria. All product contact components are machined from wrought <5% ferrite level, 316L SS, and feature a 20 Ra product contact surface finish. Material heat numbers are available on all product contact components.

### STANDARD FEATURES:

- High efficiency, low NPSHR design for a wide variety of applications
- One size mechanical seal for all 200 Series models; reducing parts inventory and cost (commercial seals available)
- Integral impeller/shaft design for fewer parts, greater concentricity and easy maintenance
- Close coupled pumps use NEMA JM Frame motors with larger diameter shafts and bearings (compared to C Frame motors)
- Impellers, casing and backplate are made from wrought 316L SS
- Horizontal, vertical, and 45° angle discharge port orientation available

### SPECIAL FEATURES:

- Manufactured to ASME BPE specification criteria
- All product contact components machined from wrought, <5% ferrite level, 316L SS
- 20 Ra product contact surface finish
- Material heat numbers on all product contact components

### OPTIONAL:

- 15 Ra, electropolish and passivation of product contact surface finishes
- WFI (Water for Injection) shaft seal design
- Double mechanical seals
- Commercial seal options
- Casing drain
- USP Class VI elastomers
- 304 SS motor adapters
- SS motors
- SS leg kits
- Ra mapping
- Certified and witness performance testing
- Frame mounted pumps
- SS bases and coupling guards



## HIGH PRESSURE CENTRIFUGAL PUMPS



SPX FLOW offers three single stage and one multistage high-pressure 200 Series centrifugal pump models. Designed for use in membrane filtration systems (reverse osmosis and ultra filtration), they can accommodate high system pressure inlet conditions to 1000 psi (69 bar) producing a smooth, pulse-free high discharge pressure for reduced membrane wear and increased product quality.

### FEATURES:

- Sanitary design for food and dairy processing service.
- Strong cast iron bearing frames, that provide support for the pump independent of the motor.
- Coupling alignment is assured by motor flange adapter resulting in longer pump life by reducing coupling wear, bearing loads and improving shaft seal performance.
- Large bearings with non-wearing labyrinth seals for longer life; low maintenance.
- Balanced double mechanical shaft seals that are the same size as used on all 200 series pumps; reducing inventory costs.
- Mounted on heavy plate steel bases with adjustable sanitary legs.

### SPECIFICATIONS:

#### Model 2085HPLV

Inlet Size: 2.0" Discharge: 1 1/2"

Max Head: 330 Ft. THD\*

Max Flow: 140 GPM \*

Max discharge Pressure: 700 PSI

**\*at 3500 RPM**

**Casing:** 316SS

**Port Connections:** Sanitary S-Line  
(Clamp)

**Backplate:** 316L Stainless Steel

**Impeller with Integral Shaft:** 316L  
Stainless Steel

**Steel Impeller Retainer:** 316L  
Stainless Steel

#### Model 2085HP

Inlet Size: 2 1/2" Discharge: 2"

Max Head: 340 Ft. THD\*

Max Flow: 400 GPM \*

Max discharge Pressure: 700 PSI

**\*at 3500 RPM**

**Shaft Seal:** Double Mechanical - Type 4

**Rotary Seal Material:** Silicon Carbide  
inboard / Carbon outboard

**Stationary Seal Material:** Silicon  
Carbide inboard/Siliconized graphite  
outboard

**Elastomers:** Fluoroelastomers FDA  
approved

#### Model MS 2085 Multistage

Inlet Size: 2 1/2" Discharge: 2"

Max Head: 600 Ft. THD\*

Max Flow: 250 GPM \*

Max discharge Pressure: 1250 PSI

**\*at 3500 RPM**

**Finish:** All product contact surfaces  
polished to 150 grit (32 Ra)

**Base Mounting:** Stainless Steel

## ASEPTIC CENTRIFUGAL MODELS

For aseptic flow applications, centrifugal models are available that retain the benefits of the Waukesha Heavy-Duty Centrifugal but also include special design features that protect the product zone against contamination. Modifications assure that every potential entry point for contaminated air or liquid is bathed in sterile steam.

The JM motor, equipped with a stainless steel shaft, is standard. Aseptic models may be specified in either pedestal or close-coupled configuration.

**Note: Dimensions of close coupled and pedestal models are the same as those on pages 4 through 7.**





#### **SPX FLOW Warranty**

**Seller warrants its products to be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. This warranty shall not apply to products which require repair or replacement due to normal wear and tear or to products which are subjected to accident, misuse or improper maintenance. This warranty extends only to the original buyer. Products manufactured by others but furnished by seller are exempted from this warranty and are limited to the original manufacturer's warranty.**



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