

SPXFLOW

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C-Series

CENTRIFUGAL PUMPS



Featuring Sealed Impeller Design!



Waukesha Cherry-Burrell[®]

Versatile Waukesha C-Series Centrifugal Pumps from Waukesha Cherry-Burrell find broad application throughout sanitary and industrial processes.

These rugged pumps accommodate a wide range of solids and liquids under a variety of flow conditions and deliver long service with minimum downtime.

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.

C-Series Centrifugal Pumps

FEATURES AND BENEFITS

- Long-life backplate and adapters - both backplate (with O-ring) and adapters are machined from solid bar stock stainless steel for optimum casing seal life and corrosion resistance.
- Long-life components — all “wet end” components are 316L stainless steel.
- 3-A and CE certified

MATERIAL SPECIFICATIONS

Materials

Casing:

- 316L stainless steel

Backplate:

- 316L stainless steel

Impeller:

- 316L stainless steel

Port Connection:

- S-Line Standard
- I-Line Female
- Bevel Seat threaded or NPT (Male or Female) are optional

Seal Type:

- Type D Seal, external balanced (standard)
- Type F Seal (Type D with Cascade Seal Flush)
- Type DG Seal (clamped in seal/seat)
- Type E Seal (double mechanical)

Note: DG, F and E seal not available on C-100

Rotary Seal:

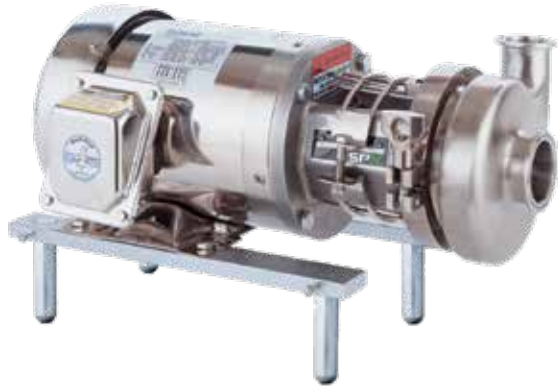
- Carbon (standard)
- Silicon Carbide & Tungsten Carbide (optional)
- DG Seal Seat Material: Silicon Carbide (standard)
- Siliconized Graphite, Ceramic & Tungsten Carbide (optional)

Elastomers:

- Buna (standard) or Fluoroelastomer (optional)

Finish:

- Sanitary Polish 32Ra (150 Grit)



PRODUCT SPECIFICATIONS

Mounting:

- Pump head mounted to C-face motor; leg kit optional

Nominal Capacity:

- To 780 GPM (177 m³/hr)

Nominal Speed Range:

- 1450 or 2900 RPM-50HZ
- 1750 or 3500 RPM-60HZ

Temperatures: To 212°F (100°C)

Motor :

- Standard C-face; 3 phase, 230/460 volts; 1750 and 3500 RPM
- TEFC and Washdown Duty, Foot Mounted
- Other motor types upon request

MODEL NUMBER	INLET INCH (MM)	OUTLET INCH (MM)	MAXIMUM IMPELLER DIAMETER INCH (MM)	MAXIMUM CAPACITY		MAXIMUM HEAD	
				1750 RPM	3500 RPM	1750 RPM	3500 RPM
C-100	1.5 (38)	1 (25)	3.68 (93)	33 GPM (7m ³ /hr)	73 GPM (17m ³ /hr)	17 ft (5mm)	55 ft (17mm)
C-114	1.5 (38)	1.5 (38)	4.0 (101)	74 GPM (17m ³ /hr)	148 GPM (34m ³ /hr)	18 ft (5mm)	74 ft (23mm)
	2 (51)			84 GPM (19m ³ /hr)	180 GPM (41m ³ /hr)	17 ft (5mm)	69 ft (21mm)
C-216	2 (51)	1.5 (38)	6.0 (152)	145 GPM (33m ³ /hr)	280 GPM (64m ³ /hr)	42 ft (13mm)	169 ft (52mm)
	2.5 (63)			168 GPM (38m ³ /hr)	280 GPM (64m ³ /hr)	42 ft (13mm)	169 ft (52mm)
C-218	2 (51)	1.5 (38)	8.0 (203)	217 GPM (49m ³ /hr)	300 GPM (68m ³ /hr)	78 ft (23mm)	317 ft (97mm)
	3 (76)			230 GPM (52m ³ /hr)	305 GPM (69m ³ /hr)	76 ft (23mm)	305 ft (93mm)
C-328	3 (63)	2 (51)	8.0 (203)	416 GPM (94m ³ /hr)	635 GPM (144m ³ /hr)	74 ft (23mm)	304 ft (93mm)
	4 (101)			460 GPM (104m ³ /hr)	900 GPM (204m ³ /hr)	764 ft (23mm)	131 ft (95mm)

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



DESIGN FEATURES

304 stainless steel adapters — standard, eliminate the rust, corrosion and chipping paint of conventional carbon steel adapters.

Tested performance — every pump passes strict testing before release for shipping.

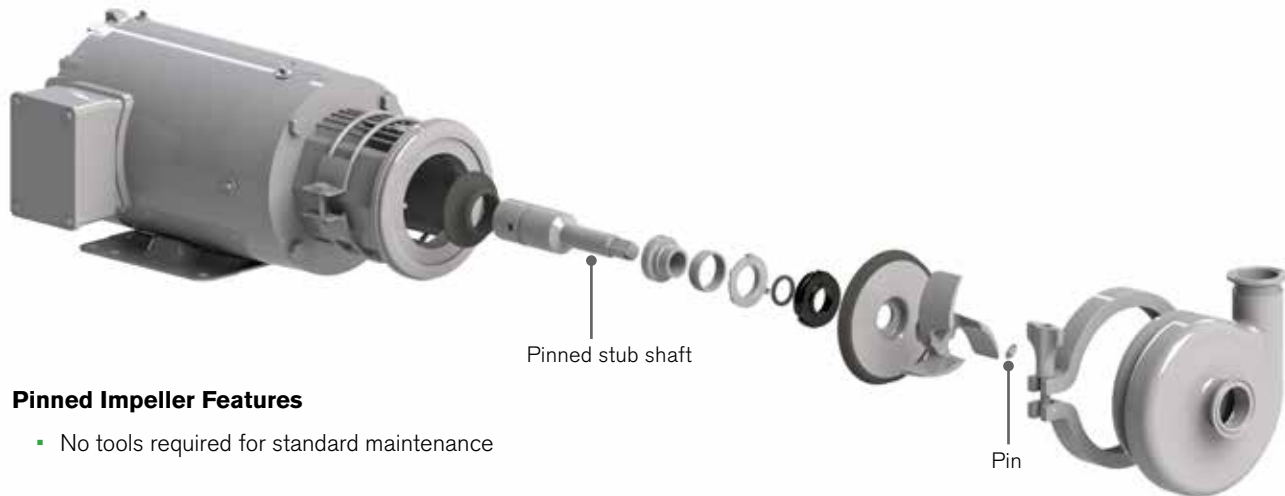
Longer seal life — wave spring provides more uniform loading on seal face than single coil spring; hydraulic balancing reduces sealing surface pressures for less wear and less downtime.

Casing matches job — choose from standard or enlarged inlet with port connection that meets your piping system.

Fast, easy take down — no tools required; quick-opening, heavy-duty cast clamp secures casing; impeller pin retained by centrifugal force.

CIP capability — grooves in impeller/shaft routes CIP chemical solutions to all critical areas for clean-in-place.

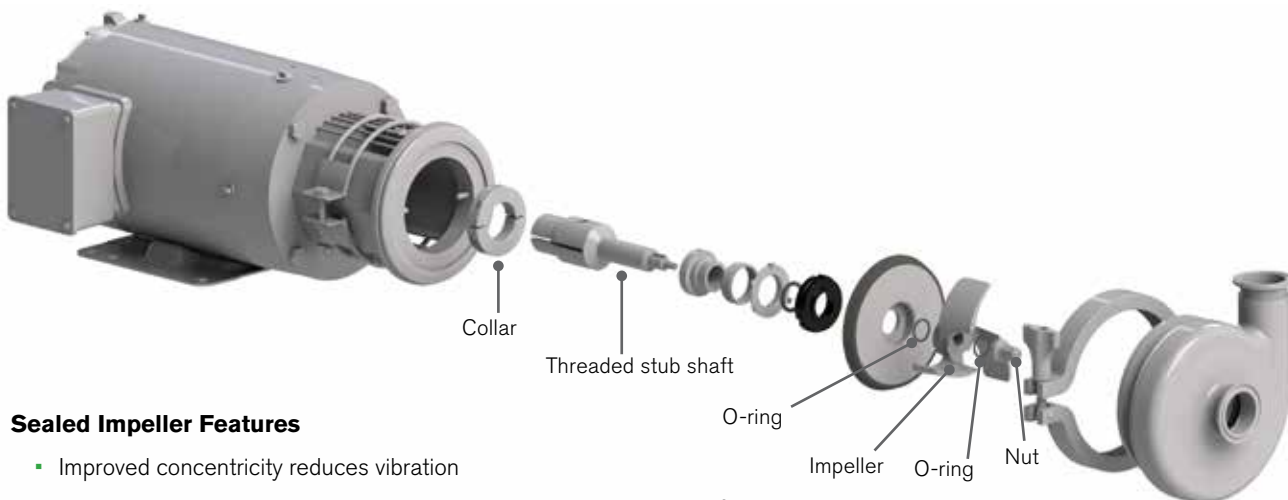
Pinned Impeller Design



Pinned Impeller Features

- No tools required for standard maintenance

Sealed Impeller Design

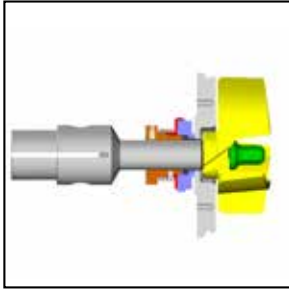


Sealed Impeller Features

- Improved concentricity reduces vibration
- Encapsulated dome nut eliminates wear between impeller and shaft
- Same seal options as pinned pump
- Retro kits available - EPDM and FKM elastomers standard
- More suitable design for challenging applications

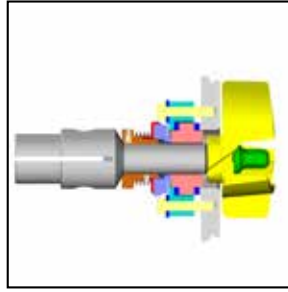
OPTIONS AND ACCESSORIES

Seal Options - Available for both pinned and sealed impeller designs



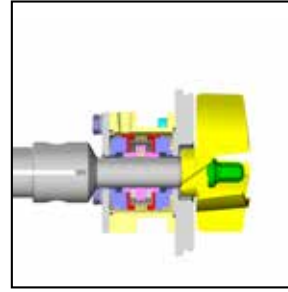
Type D
External Balanced Seal

This versatile, dependable seal finds broad use in sanitary and industrial applications. Seal material is carbon rotating on the stationary stainless steel.



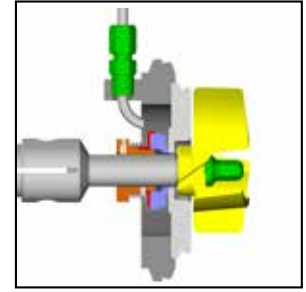
Type DG
Clamped-in Seal Seat

This seal is ideal for applications where resistance to corrosion is required or for abrasive or non-lubricating products. The DG utilizes Type D rotating seal components; however, the stationary seal seat material is silicon carbide, and is reversible for extended seat life.



Type E
Double Mechanical Seal

This double mechanical seal can be pressurized with a flush media and discharged to drain. Ideal for vacuum, high temperature, abrasive or non-lubricating applications.

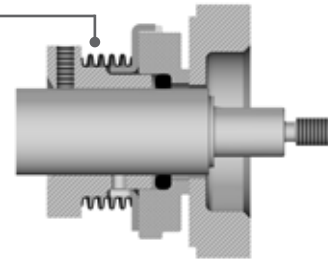


Type F
External Balanced, Water Cascade Seal

When Seal Type D applications include product temperatures that reach 212°F (100°C.) or vacuum over 14" Hg (355mm Hg), seal Type F is the choice. It includes the addition of a water cascading assembly that continually flushes the seal area.

Wave spring extends seal life

- Wave spring maintains uniform loading on seal faces for longer seal service.

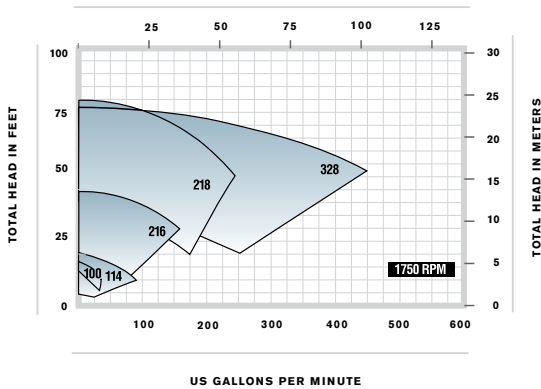


ADDITIONAL TECHNICAL DATA

60 Hz

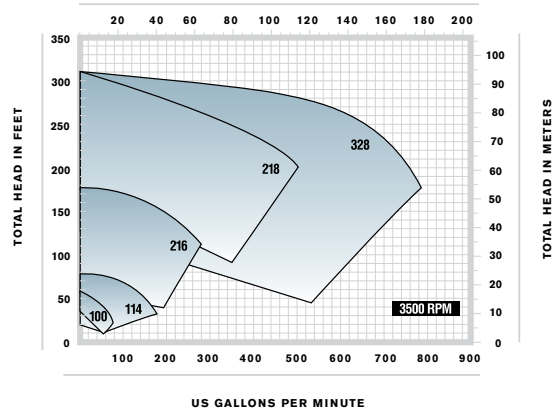
Pump Curves - 1750 RPM

CUBIC METERS PER HOUR



Pump Curves - 3500 RPM

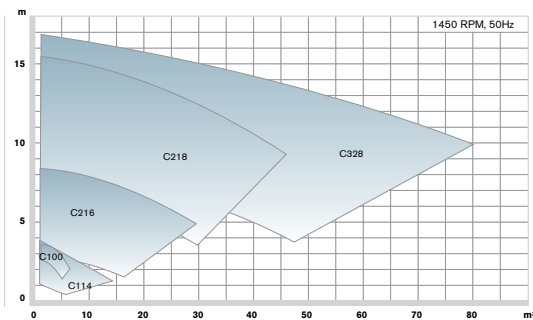
CUBIC METERS PER HOUR



50 Hz

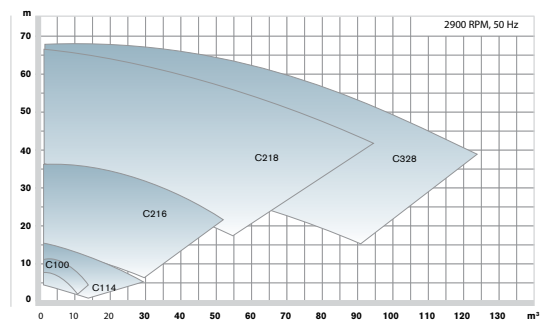
Pump Curves - 1450 RPM

1450 RPM, 50Hz

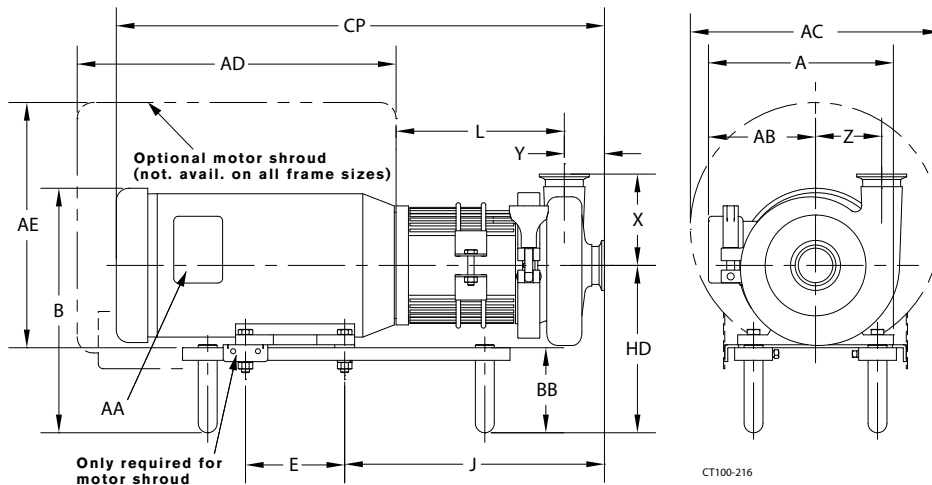


Pump Curves - 3500 RPM

2900 RPM, 50 Hz



PRODUCT DIMENSIONS - NEMA MOTOR TYPE



CT100-216

MODEL	FRAME	A IN (MM)	B IN (MM)	CP IN (MM)	J IN (MM)	E IN (MM)	L IN (MM)	HD IN (MM)	X IN (MM)	Y IN (MM)	Z IN (MM)	AA IN (MM)	AB IN (MM)
C100	56TC	6.50 (165)	9.49 (241)	17.60 (447)	6.85 (174)	2.99 (76)	2.76 (70)	5.47 (139)	3.46 (88)	1.50 (38)	1.46 (37)	0.47 (12)	3.23 (82)
	140TC	9.69 (246)	9.49 (241)	19.96 (507)	7.68 (195)	3.98 (101)	3.74 (95)	5.98 (152)	3.46 (88)	1.50 (38)	1.46 (37)	0.75 (19)	6.93 (176)
C114	56C	6.50 (165)	9.49 (241)	16.34 (415)	10.35 (263)	2.99 (76)	6.22 (158)	5.47 (139)	3.62 (92)	1.61 (41)	2.60 (66)	0.47 (12)	3.23 (82)
	140TC	9.69 (246)	9.49 (241)	19.21 (488)	10.67 (271)	5.00 (127)	6.22 (158)	5.98 (152)	3.62 (92)	1.61 (41)	2.60 (66)	0.75 (19)	6.93 (176)
	180TC	11.61 (295)	11.42 (290)	22.24 (565)	13.39 (340)	5.47 (139)	6.77 (172)	6.97 (177)	3.62 (92)	1.61 (41)	2.60 (66)	0.75 (19)	7.87 (200)
C216	56C	6.50 (165)	9.49 (241)	16.34 (415)	10.51 (267)	2.99 (76)	6.06 (154)	5.47 (139)	5.67 (144)	1.93 (49)	3.66 (93)	0.47 (12)	3.23 (82)
	140TC	9.69 (246)	9.49 (241)	19.21 (488)	10.83 (275)	5.00 (127)	6.06 (154)	5.98 (152)	5.67 (144)	1.93 (49)	3.66 (93)	0.75 (19)	6.93 (176)
	180TC	11.61 (295)	11.42 (290)	22.24 (565)	12.20 (310)	5.47 (139)	6.69 (170)	6.97 (177)	5.67 (144)	1.93 (49)	3.66 (93)	0.75 (19)	7.87 (200)
	210TC	13.11 (333)	12.91 (328)	25.79 (655)	13.94 (354)	5.98 (152)	7.80 (198)	7.72 (196)	5.67 (144)	1.93 (49)	3.66 (93)	0.75 (19)	8.86 (225)
C218	250TC	14.50 (368)	15.00 (381)	31.02 (788)	14.50 (368)	10.00 (254)	8.50 (216)	8.74 (222)	5.67 (144)	1.93 (49)	3.66 (93)	0.98 (25)	9.49 (241)
	140TC	9.69 (246)	9.49 (241)	19.21 (488)	10.98 (279)	5.00 (127)	6.30 (160)	5.98 (152)	5.47 (139)	1.93 (49)	4.72 (120)	0.75 (19)	6.93 (176)
	180TC	11.61 (295)	11.42 (290)	22.24 (565)	12.28 (312)	5.00 (127)	6.93 (176)	6.97 (177)	5.47 (139)	1.93 (49)	4.72 (120)	0.75 (19)	7.87 (200)
	210TC	13.11 (333)	12.91 (328)	25.79 (655)	13.27 (337)	5.98 (152)	7.28 (185)	7.72 (196)	5.47 (139)	1.93 (49)	4.72 (120)	0.75 (19)	8.86 (225)
	250TC	14.49 (368)	15.00 (381)	31.02 (788)	14.65 (372)	10.00 (254)	8.19 (208)	8.74 (222)	5.47 (139)	1.93 (49)	4.72 (120)	0.98 (25)	9.49 (241)
	280TC	20.63 (524)	17.28 (439)	32.24 (819)	15.28 (388)	10.98 (279)	8.82 (224)	9.49 (241)	5.47 (139)	1.93 (49)	4.72 (120)	1.97 (50)	13.11 (333)
C328	280TSC	18.58 (472)	16.30 (414)	31.93 (811)	15.28 (388)	10.98 (279)	8.82 (224)	9.49 (241)	5.47 (139)	1.93 (49)	4.72 (120)	1.97 (50)	12.20 (310)
	180TC	11.61 (295)	11.42 (290)	22.24 (565)	12.28 (312)	5.00 (127)	6.93 (176)	6.97 (177)	5.47 (139)	2.24 (57)	4.72 (120)	0.75 (19)	7.87 (200)
	210TC	13.11 (333)	12.91 (328)	25.79 (655)	13.27 (337)	5.98 (152)	7.28 (185)	7.72 (196)	5.47 (139)	2.24 (57)	4.72 (120)	0.75 (19)	8.86 (225)
	250TC	14.49 (368)	15.00 (381)	31.02 (788)	14.65 (372)	10.00 (254)	8.19 (208)	8.74 (222)	5.47 (139)	2.24 (57)	4.72 (120)	0.98 (25)	9.49 (241)
	280TC	20.63 (524)	17.28 (439)	32.56 (827)	15.93 (396)	10.98 (279)	8.82 (224)	9.49 (241)	5.47 (139)	2.24 (57)	4.72 (120)	1.97 (50)	13.11 (333)
	280TSC	18.58 (472)	16.30 (414)	32.24 (819)	15.93 (396)	10.98 (279)	8.82 (224)	9.49 (241)	5.47 (139)	1.93 (49)	4.72 (120)	1.97 (50)	12.20 (310)
	320TC	23.11 (587)	20.98 (533)	35.43 (900)	17.13 (435)	11.97 (304)	9.69 (246)	10.47 (266)	5.47 (139)	2.24 (57)	4.72 (120)	1.97 (50)	14.09 (358)
320TSC	23.11 (587)	20.98 (533)	35.43 (900)	17.13 (435)	11.97 (304)	9.69 (246)	10.47 (266)	5.47 (139)	2.24 (57)	4.72 (120)	1.97 (50)	14.09 (358)	

PRODUCT DIMENSIONS - IEC MOTOR TYPE

MODEL	FRAME	A IN (MM)	B IN (MM)	CP IN (MM)	J IN (MM)	E IN (MM)	L IN (MM)	HD IN (MM)	X IN (MM)	Y IN (MM)	Z IN (MM)	AA IN (MM)	AB IN (MM)	AC IN (MM)	AD IN (MM)	AE IN (MM)
C100	71-B5	4.69 (119)	7.64 (194)	14.31 (364)	6.02 (153)	3.54 (90)	6.22 (158)	5.30 (135)	3.46 (88)	1.50 (38)	1.46 (37)	0.69 (18)	4.00 (102)	9.94 (253)	12.66 (322)	9.80 (249)
C114	71-B5/B14	4.69 (119)	7.64 (194)	17.90 (455)	9.61 (244)	3.54 (90)	6.22 (158)	5.30 (135)	3.62 (92)	1.61 (41)	2.60 (66)	0.69 (18)	4.00 (102)	9.94 (253)	12.66 (322)	9.80 (249)
	80-B5/B14	5.69 (145)	8.50 (216)	19.44 (494)	6.43 (163)	3.94 (100)	6.78 (172)	5.65 (144)	3.62 (92)	1.61 (41)	2.60 (66)	0.88 (22)	4.51 (115)	9.94 (253)	12.66 (322)	10.00 (254)
	90-B5/B14	6.61 (168)	9.31 (237)	20.22 (514)	10.61 (270)	3.94 (100)	6.78 (172)	6.04 (154)	3.62 (92)	1.61 (41)	2.60 (66)	0.88 (22)	5.12 (130)	9.94 (253)	12.66 (322)	10.00 (254)
C216	80-B5/B14	5.69 (145)	8.50 (216)	19.66 (499)	10.59 (269)	3.94 (100)	6.69 (170)	5.65 (144)	5.67 (144)	1.93 (49)	3.66 (93)	0.88 (22)	4.51 (115)	9.94 (253)	12.66 (322)	10.00 (254)
	90-B5/B14	6.61 (168)	9.31 (237)	20.44 (519)	10.83 (275)	3.94 (100)	6.69 (170)	6.04 (154)	5.67 (144)	1.93 (49)	3.66 (93)	0.88 (22)	5.12 (130)	9.94 (253)	12.66 (322)	10.00 (254)
	100-B5/B14	7.87 (200)	10.41 (264)	23.28 (591)	12.23 (311)	5.51 (140)	7.81 (198)	6.44 (164)	5.67 (144)	1.93 (49)	3.66 (93)	1.06 (27)	5.87 (149)	12.11 (308)	15.53 (394)	12.20 (310)
	112-B5/B14	7.87 (200)	10.94 (278)	23.28 (591)	12.56 (319)	5.51 (140)	7.81 (198)	6.91 (176)	5.67 (144)	1.93 (49)	3.66 (93)	1.06 (27)	7.37 (187)	14.27 (363)	19.00 (483)	14.20 (361)
C218	132-B5/B14	9.56 (243)	12.56 (319)	30.26 (769)	13.94 (354)	5.51 (140)	8.50 (216)	7.70 (196)	5.67 (144)	1.93 (49)	3.66 (93)	1.06 (27)	7.38 (187)	14.27 (363)	19.00 (483)	14.20 (361)
	80-B5/B14	5.69 (145)	8.50 (216)	19.91 (506)	10.84 (275)	3.94 (100)	6.94 (176)	5.65 (144)	5.47 (139)	1.93 (49)	4.72 (120)	0.88 (22)	4.51 (115)	9.94 (253)	12.66 (322)	10.00 (254)
	90-B5/B14	6.61 (168)	9.31 (237)	20.69 (526)	11.08 (281)	3.94 (100)	6.94 (176)	6.04 (154)	5.47 (139)	1.93 (49)	4.72 (120)	0.88 (22)	5.12 (130)	9.94 (253)	12.66 (322)	10.00 (254)
	100-B5/B14	7.87 (200)	10.41 (264)	22.78 (579)	11.73 (298)	5.51 (140)	7.31 (186)	6.44 (164)	5.47 (139)	1.93 (49)	4.72 (120)	1.06 (27)	5.87 (149)	12.11 (308)	15.53 (395)	12.20 (310)
	112-B5/B14	7.87 (200)	10.94 (278)	22.78 (579)	12.06 (306)	5.51 (140)	7.31 (186)	6.91 (176)	5.47 (139)	1.93 (49)	4.72 (120)	1.06 (27)	5.87 (149)	14.27 (363)	19.00 (483)	14.20 (361)
	132-B5/B14	9.56 (243)	12.56 (319)	29.95 (761)	13.63 (346)	5.51 (140)	8.19 (208)	7.70 (196)	5.47 (139)	1.93 (49)	4.72 (120)	1.06 (27)	7.37 (187)	14.27 (363)	19.00 (483)	14.20 (361)
C328	160-B5/B14	12.94 (329)	15.44 (392)	32.66 (830)	15.88 (403)	8.27 (210)	9.69 (246)	8.80 (224)	5.47 (139)	1.93 (49)	4.72 (120)	1.38 (35)	9.51 (242)	19.00 (483)	27.11 (689)	18.50 (470)
	80-B5/B14	5.69 (145)	8.50 (216)	20.22 (514)	11.16 (284)	3.94 (100)	6.94 (176)	5.65 (144)	5.47 (139)	2.24 (57)	4.72 (120)	0.88 (22)	4.51 (115)	9.94 (253)	12.66 (322)	10.00 (254)
	90-B5/B14	6.61 (168)	9.31 (237)	21.00 (533)	11.39 (289)	3.94 (100)	6.94 (176)	6.04 (154)	5.47 (139)	2.24 (57)	4.72 (120)	0.88 (22)	5.12 (130)	9.94 (253)	12.66 (322)	10.00 (254)
	100-B5/B14	7.87 (200)	10.41 (264)	23.09 (587)	12.04 (306)	5.51 (140)	7.31 (186)	6.44 (164)	5.47 (139)	2.24 (57)	4.72 (120)	1.06 (27)	5.87 (149)	12.11 (308)	15.53 (395)	12.20 (310)
	112-B5/B14	7.87 (200)	10.94 (278)	23.09 (587)	12.37 (314)	5.51 (140)	7.31 (186)	6.91 (176)	5.47 (139)	2.24 (57)	4.72 (120)	1.06 (27)	5.87 (149)	14.27 (363)	19.00 (483)	14.21 (361)
	132-B5/B14	9.56 (243)	12.56 (319)	30.26 (769)	13.94 (354)	5.51 (140)	8.19 (208)	7.70 (196)	5.47 (139)	2.24 (57)	4.72 (120)	1.06 (27)	7.37 (187)	14.27 (363)	19.00 (483)	14.20 (361)
	160-B5/B14	12.94 (329)	15.44 (392)	32.97 (837)	16.19 (411)	8.27 (210)	9.69 (246)	8.80 (224)	5.47 (139)	2.24 (57)	4.72 (120)	1.37 (35)	9.51 (242)	19.00 (483)	27.11 (689)	18.50 (470)
	180-B5/B14	15.56 (395)	17.14 (435)	35.14 (893)	16.70 (424)	9.49 (241)	9.69 (246)	9.59 (244)	5.47 (139)	2.24 (57)	4.72 (120)	2.01 (51)	13.12 (333)	---	---	---

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SPX FLOW

611 Sugar Creek Road

Delavan, WI 53115

P: (262) 728-1900 or (800) 252-5200

E: wcb@spxflow.com

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