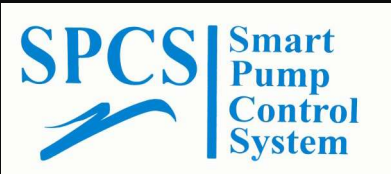


# SPCS FD



Energy Saving Solutions



## For Pool and Fountain Circulation Pumps



Offering the most common required and specified features for circulation pump applications in commercial and educational swimming pools as well as fountains, splash pads and water features; the **SPCS BC** is ideally suited for applications involving:

- Swimming Pool Circulation Pumps
- Splash Pad Circulation Pumps
- Water Slide Pumps
- Decorative Fountains
- Spas
- Filtration
- Pressure Boosting

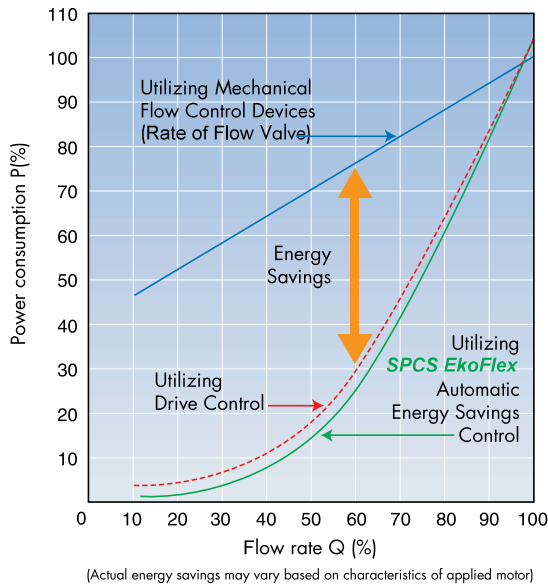
## SPCS BC Features

- NEMA 3R Steel Enclosure
- 2 Contactor Full ByPass
- Control Transformer with CB Protection
- Integrated Motor Branch Circuit Protection, up to 100kA Short Circuit Current Rated Packages
- 3% Line Reactor for Reducing Harmonics
- Soft-Switching PWM Drive Output
- Catch-a-spinning Motor Functionality
- Enhanced Automatic Energy Savings, Reduces Power Consumption of Both the Motor and Drive
- Simple Construction Leads to Ease of Maintenance
- Touch screen interface for monitoring and control
- 110v Motor Running Output
- Power Monitoring from the Drive's Keypad or Software
- Built-in E-Stop Protection
- Communication Protocols: Modbus RTU, Metasys® N2, & APOGEE® FLN are built-in the Drive
- PC Software for Drive Set-Up & Monitoring





## Lower Energy Bills & CO<sub>2</sub> Emissions



Energy savings is achieved by matching the pump performance to the filter load as it dynamically changes during the filter cycle. By applying the Affinity Laws for centrifugal loads, we can calculate the cost of operation of a conventional starting method and operation with an **SPCS BC**

### Energy Savings Example:

Replacing a valve controlled pump system with an across the line motor starter to an **SPCS BC** system with maintaining the Health Department mandated flow rate for 8,736 hrs/yr, and operated by a 25Hp motor.

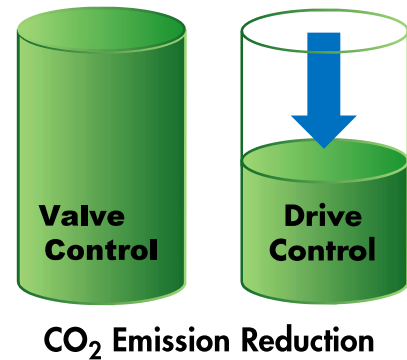
Energy required by using valve control: 168,287kWh/yr  
 Energy required by using drive control: 100,396kWh/yr  
 Energy Savings by using the **SPCS BC**: 67,890kWh/yr

Energy savings achieved by using drives can correlate to reducing the amount of carbon dioxide (CO<sub>2</sub>) emitted into the environment from power generation plants.

### CO<sub>2</sub> Emission Reduction Example:

Using the Energy Savings previously calculated at 67,890kWh/yr and a CO<sub>2</sub> Emission factor of 1.36lbs/kWh<sup>(1)</sup>

Estimated reduction of CO<sub>2</sub> emissions: 92,330lbs/yr



## Reduce Maintenance Cost & Ambient Noise

Drives inherently soft-start the motor, reducing wear and tear on the attached mechanical components, resulting in reduced maintenance.

Pool circulation pumps controlled by valves can produce undesirable ambient noise. A reduction in ambient noise can be accomplished by applying the **SPCS BC** drive system.



<sup>(1)</sup> Source: U.S. Environmental Protection Agency Office of Atmospheric Programs Climate Protection Partnerships Division The Emissions & Generation Resource Integrated Database For 2006 (eGRID2006), April 2007



# SPCS

## Smart Pump Control System®

H2O-TECHNOLOGIES.COM

<b>SPCS FD</b>	
<b>Ratings</b>	
Horsepower & Voltage	2 - 60Hp, 208/230V 2 - 100Hp, 460V
NEMA Type 3R Enclosure	S
Ambient Temperature	-10° to 40° C
<b>Features</b>	
Input Disconnect & Branch Circuit Protection	Standard Circuit Breaker
Electronically & Mechanically Interlocked Drive and ByPass Conactors	S
Motor Overload Realy	Class 20
DC Link	Standard
3% Line Reactor	S
5% Line Reactor	O
Control Power Transformer with Mini Circuit Breaker Protection	S
Power On Indication	via Touchscreen
Drive Run Indication	via Touchscreen
Energy Efficient Mode Indication	via Touchscreen
Fault Indication	via Touchscreen
ByPass Run Indication	via Touchscreen
Drive-Off-Bypass Selector Switch	S
BecSys- Off - Bypass Selector Switch	S
Voltage Fault Indication	O
110v Pump Running Powered Interlock Output	S
Automatic Run Command Input	S
E-Stop	S
Two Pump Manual Alternating	O
Two Pump Simultaneous Operation	O
Under Voltage Automatic Bypass Protection	O
Access Drive via Internet	O
Early Pump Wear Detiction	S
<b>Communication Protocols</b>	
Modbus RTU	S
Metasys® N2	S
APOGEE® FLN (P1)	O
LonWorks®	O
BACnet	O
Profibus DP	O
DeviceNet	O
Ethernet	O
<b>Codes &amp; Standards</b>	
UL 508 & cUL	S
Applicable NEMA & NFPA Standards	S

S = Provided As Standard

O = Optional

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LonWorks is a registered trademark of Echelon Corporation.

Metasys is a registered trademark of Johnson Controls, Inc.

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