



**SOLCON**  
MORE THAN A SMART START



**EXPERIENCE THE NEXT GENERATION**  
**IGBT BASED MEDIUM VOLTAGE SOFT STARTER**  
**HIGHER RATINGS AND VOLTAGE**

**DriveStart<sup>2</sup>**

IGBT BASED MEDIUM VOLTAGE SOFT STARTER  
UP TO 11kV & 18.5MVA

# DriveStart<sup>2</sup>

## SAVING COSTS, ENERGY AND SPACE WHILE MEETING TOP PERFORMANCE REQUIREMENTS

- » Reduction in operation expenses
- » Integrated bypass ensures no energy loss during operation; reducing energy waste and operational costs
- » Peak demand reduction
- » Cost saving while in bypass
- » Streamlined design translating to a reduction in space requirements

### CALCULATED SAVINGS USING DRIVESTART<sup>2</sup>

Motor Power	6000kW
Daily Duty Cycle	85%
Total VFD System Loss	4.0%
Price kW/H	0.14USD
Expected Project Lifetime	20 years

Estimated Yearly savings	\$250,185.60
Estimated Project Savings	\$5,003,712.00

\*\* Sample calculation for water pump application

## OPTIMIZED FOR APPLICATIONS THAT REQUIRE A LOW STARTING CURRENT AND/OR A HIGH STARTING TORQUE

## TECHNICAL SPECIFICATIONS - [ FULL DRIVESTART<sup>2</sup> SYSTEM ]

### INPUT VOLTAGE

≤ 13.8kV 50/60Hz +10%/-15%

### POWER RANGE

≤ 20 MW Starting Power

### BUILT IN SYNCHRONIZATION SYSTEM (BYPASS)

From Drivestart2 and back

### SOFT START & SOFT STOP

### MULTI-START CAPABILITIES

### 10" HMI OPERATOR INTERFACE SCREEN

### INTEGRATED DATA LOGGER SYSTEM (CONNEX)

Wave form capture - analytics and data sharing

### REMOTE DIAGNOSTICS & FAILURE ANALYSIS (optional)

### PINNACLE OF RELIABILITY

- » Medium-level alarm functions and redundant bypass control technology
- » Solcons' experience and know-how of over 40 years

### FIXED & VARIABLE TORQUE

- » For variable torque and fixed torque in applications
- » Option available for vector control fixed torque
- » Sensorless vector control for fixed torque applications

### LOW MAINTENANCE

- » Solcon reknowned air cooling
- » Touch Screen display panel for quick access to system status, statistics & parameters
- » Uncomplicated design

# BLUE BOX CONTROL TECHNOLOGY



## SOLCON BLUE BOX FOR DRIVESTART<sup>2</sup>

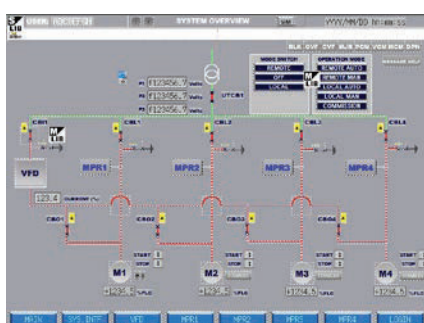
- » Full Control & Monitoring of the system IEC, UL and cUL conformed
- » Full graphic HMI - 10" colour Screen
- » Easy set-up from touch screen
- » Wireless connection for Data Transfer

## MANY SCENARIOS PRE-PROGRAMMED

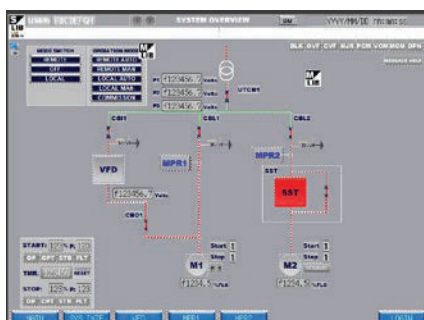
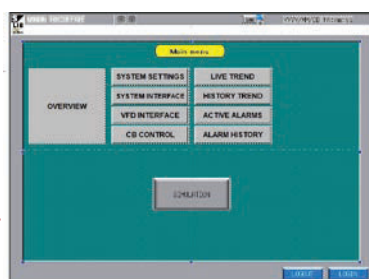
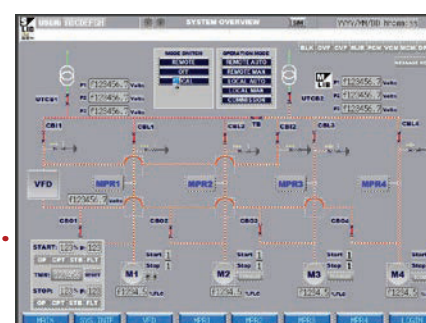
- » Single Motor Start
- » Multi-motor Start
- » DriveStart<sup>2</sup> & Soft Starter Combinations
- » Full Redundancy of DriveStart<sup>2</sup>
- » Double Busbar Solutions

# HAVE FULL CONTROL OF YOUR SYSTEM

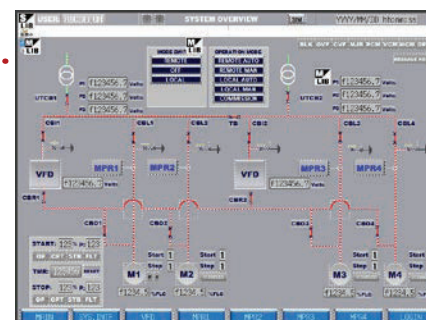
### • SAMPLE SCREEN SHOTS •



**MULTIPLE DEVICE CONNECTION AND DATA TRANSMISSION**



**REMOTE MONITORING AND OPERATION SOLUTIONS CAPABILITIES**



## CONNECTIVITY

- 3 Serial Ports (RS-232C/422/485)
- SD card
- USB Type A+B
- Ethernet (LAN)
- Wireless LAN
- Connex (Data Logger & Spectrum Analyser)

## ADVANTAGES

- » Specifically developed software IEC 61131-3 conformed
- » Optimal Adjustment Control
- » Full Control of the System parameters
- » Fault detection and tracking
- » Independent Operation and Communication
- » Power Failure Protection and restart 'on the fly'

# DriveStart<sup>2</sup>

## Models | UP TO 11kV & 18.5MVA - Inverter Section Only

kV	Rated Capacity	Rated Current	Unit Dimensions (mm)			Weight (kg)	
	kVA	A	H	W	D	Min'	Max'
3.3	550 - 1000	93 - 178	2,495	2900	1100	4,500	5000
	1,300 - 1,750	228 - 312	2,495	3,500	1300	6,250	6,800
	2,200 - 2,500	385 - 440	2,595	4,200	1,300	8,000	8,400
	2,850	500	2,570	4,700	1,400	9,600	
	3,600 - 3,850	635 - 675	3,110	6,900	1,600	11,300	
	5,200 - 5,500	914 - 962	3,110	7,400	1,700	13,500	13,700
4.16	700-1,250	97 - 178	2,460	2,600	1,900	3,800	4,600
	1,650-2,250	229 - 312	3,064	4,500	1,400	7,600	7,900
	2,750-3,200	382 - 440	3,064	5,400	1,500	10,000	10,200
6.6	500 - 1,100	44 - 93	2,460	2,500	1,600	2,950	3,700
	1,200 - 2,000	105 - 178	2,460	2,600	1,900	3,800	4,600
	2,250 - 3,600	197 - 312	3,064	4,800	1,400	7,100	8,000
	4,000 - 5,100	350 - 440	3,064	6,200	1,500	10,100	10,300
	5,400 - 5,700	472 - 500	3,064	6,800	1,500	11,700	11,800
	6,400 - 7,700	560 - 675	3,164	7,400	1,600	14,950	16,950
	8,250 - 11,000	722 - 962	3,164	11,100	1,600	22,500	25,500
10	500 - 1,600	29 - 93	2,460	3,400	1,700	3,700	5,000
	1,700 - 3,080	98 - 178	2,783	5,400	1,300	6,000	7,150
	3,350 - 4,600	193 - 266	3,064	7,100	1,500	9,900	11,800
	5,000 - 5,400	289 - 312	3,064	7,300	1,500	11,900	13,000
	5,850 - 6,600	338 - 381	3,064	8,300	1,500	13,050	14,200
	7,000 - 8,700	404 - 500	3,064	11,400	1,500	19,650	20,400
	10,500 - 11,700	606 - 675	3,119	12,500	1,500	21,400	22,400
	13,500 - 16,500	779 - 962	3,239	14,100	1,600	25,800	28,800
11	625 - 1,750	33 - 93	2,460	3,700	1,700	4,100	5,400
	1,850 - 3,400	97 - 178	2,873	6,600	1,500	8,100	9,500
	3,750 - 6,000	197 - 312	3,064	8,100	1,500	11,400	14,000
	6,600 - 8,400	346 - 440	3,064	11,800	1,500	21,100	21,700
	8,700 - 9,500	457 - 500	3,064	13,000	1,500	22,300	22,400
	11,500 - 12,800	604 - 675	3,170	15,700	1,600	29,000	30,000
	15,000 - 18,300	787 - 962	3,290	16,700	1,700	35,500	37,500

\* For reference purposes only.

\* Contact us for more information about a best matched solution for your requirements.

**DRIVESTART<sup>2</sup> IS CERTIFIED ACCORDING TO IEC 61800**



## SIMPLE COMPLETE SOLUTIONS COMBINED

### SINGLE MOTOR ■ MULTIPLE MOTOR

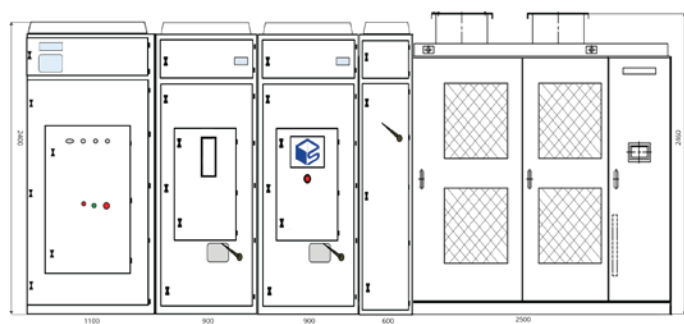
**ProGear** is Solcon's IEC Type Tested Metal Enclosed switchgear range, it is designed as a modular cabinet system.

The Progear can be tailored according to Customer requirements, and the cabinets can be fitted with a soft starter, protection apparatuses and / or control products allowing Solcon to supply the full package for single and for multiple motor requirements.

### SINGLE MOTOR START

- » Typical 6.6kV layout
- » Line Reactor
- » Inverter Module
- » Incoming Feeder Cabinet
- » Motor Feeder - Solcon Protection & Control apparatus
- » Blue Box Technology Inside

### SINGLE WIRES TO MOTOR FROM MOTOR FEEDER AND FEEDER CABINET ONLY



\* For illustration purposes only.

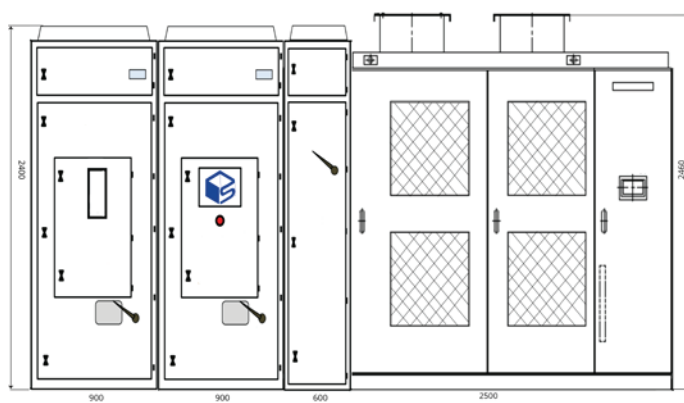
**IEC 62271-200**  
 Type Tested & Certified

**INTERNAL ARC PROTECTION**

**IP54 INSULATION**  
 ACCORDING TO IEC STANDARDS

**SHOCK & VIBRATION PROOF**  
 ACCORDING TO IEC STANDARDS

**SEISMIC STURDINESS**  
 ACCORDING TO IEC STANDARDS



\* For illustration purposes only.

### MULTIPLE MOTOR START

- » Typical 6.6kV layout
- » Line Reactor
- » Inverter Module
- » Incoming Feeder Cabinet
- » Motor Feeder - Solcon Protection & Control apparatus
- » Blue Box Technology Inside
- » Additional Motor Feeders can be added according to number of Motors

# DriveStart<sup>2</sup>

## ASYNCHRONOUS MOTORS ■ SYNCHRONOUS MOTORS ■ WOUND ROTOR MOTORS



WATER

- Water Pumps
- Waste Water Pumps
- Booster Pumps



OIL & GAS

- Compressors
- Oil Pumps
- LNG Pumps



INDUSTRY

- Compressors
- Chillers
- Mixers



MINING

- Fans & Blowers
- Conveyor Belts
- Ball Mills



MARINE

- Thrusters
- Ballads
- Injection Pumps



HVAC

- Heaters/Chillers
- Water Systems
- Compressors

## RANGE OF SOFT STARTERS FOR MULTIPLE MOTOR START

### MEDIUM VOLTAGE

Product	Description	Rated Current & Voltage
HRVS-DN	Digital - Heavy Duty	2,300-15,000V : 15-48MW

### LOW VOLTAGE

Product	Description	Rated Current & Voltage
iStart	Digital - Advanced	17 - 430A : 208- 690V
RVS - DN	Digital, Heavy Duty	8 - 3,000A: 220 - 1,200V
RVS - AXO	Analog	3 - 75A : 100 - 240V

## FULL RANGE OF CONTROL PRODUCTS AND PROTECTION RELAYS

### SOLCON INDUSTRIES

Solcon Industries is a dynamic power-electronics company that has been at the forefront of research, design, development and manufacturing of industrial power electronic systems for over 40 years. The company utilizes advanced technology with leading edge designs based on continuous field research, testing and development. Solcon offers a complete range of Soft Starters, including both Low Voltage and Medium Voltage units, for a range of applications both standard and heavy duty.

For additional product information please contact us

 [www.solcon.com](http://www.solcon.com) |  [contact@solcon.com](mailto:contact@solcon.com)