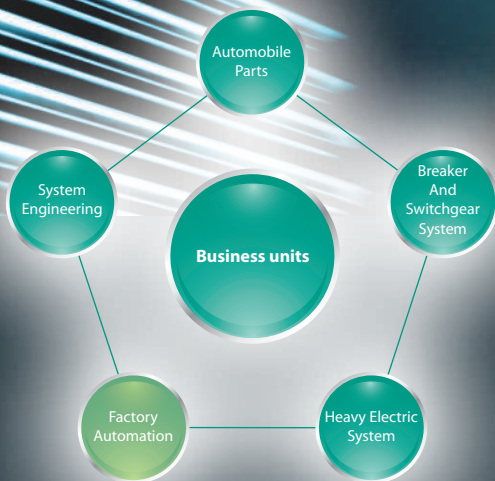




Factory Automation



About US

Shihlin Electric Group was established in 1955 with headquarter located in Taipei, Taiwan. The company has offered a wide range of services that cover the areas of power distribution system, automobile equipment, low-voltage electrics, factory automation, and system engineering. The products of Shihlin Electric, including universal circuit breaker, molded case circuit breaker, mini circuit breaker, contactor, thermal overload relay, surge protection device, automatic transfer switch, power transformer, switch cabinet, high-voltage switch, capacitor, programmable controller, ac drives, human-machine interface, servo motors & drives, temperature controller, sensor, car alternator, starter motor, etc., are famous for their excellence in quality, which are well appreciated by the clients in the industries.

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Factory Automation Division Introduction

In view of the continuous industrial and technological advancement, Shihlin Electric established the Automation Business Group in 1984 to search for talents in advanced technology and management. The main objective of Automation Business Group is to provide automation equipment for the industries and to help the development of industries toward automation, technologization and digitization. The Shihlin Automation Business Group is one of the well-known manufacturers in Taiwan capable of providing the client a complete set of industrial automation products including Programmable Logic Controller (PLC), Human-Machine Interface (HMI), Temperature Controller, AC Drives, and Servo Motors and Drives.

The Automation Business Group was founded for selling Programmable Logic Controller (PLC), AC Drives, Servo Motors and Drives as Mitsubishi distributor initially in the following years. To achieve sustainable operation, it began the development and manufacturing of the next generation Shihlin Electric inverter that has the advantages of high efficiency and compact design. Later, the Automation Business Group employed the high-speed SMT automated production line as well as the high-precision testing equipment (i.e., ICT), and began the development of novel Human-Machine Interface (HMI), AC Drives, Servo Motors and Drives, etc. Based on the accumulated experience in technology R&D, the Automation Business Group of Shihlin Electric has become a key automation products and service provider.

Manufacturing and Products Milestone

SuZhou Factory Milestone (China)		HsinFun Factory Milestone (Taiwan)
SE3 series AC Drive launch ●	2017	● SDP series Servo launch SE3 series AC Drive launch
SC3 series AC Drives launch ●	2016	● SDE series Servo launch
SA3 series AC Drives launch ●	2015	● SA3 series AC Drives launch
Inauguration of the New Plant (Suzhou) ●	2014	● SDH series Servo launch
EC series HMI, SDA series Servo launch ●	2013	● SF-GT Series AC Drives; PLC AX1S; SDB series Servo launch
SS2 series AC Drives launch ●	2012	● PLC AX2N Special Module launch
New Plant (Suzhou) Start Construction ●	2011	● HMI EC series, SE2/SS2 series AC Drives
SF/SE2/SS2 series AC Drives ●	2010	● Servo motors and Drives launch
SE/SC series AC Drives ●	2009	● SE series AC Drives launch
Eaton OEM, ROHS Production Line ●	2008	● PLC AX1N Series Producing; HMI EU series
SMT for ROHS Requirement ●	2007	
SH series 18.5-22kW AC Drives ●	2006	● ROHS Producing, PLC FX2N Power OEM
SS and SH series under 15kW AC Drives ●	2005	● SS series AC Drives
AC Drives R&D center ●	2004	● Cell Production Line
SMT Line Setup, Sensor OEM ●	2003	● PLC AXON Extension Module
SuZhou Factory Funded ●	2002	● SH series AC Drives
	1998	● SL series AC Drives
	1997	● PLC AXON series Producing
	1996	● Second SMT Line
	1994	● The first SMT Line, OEM for SUNX
	1993	● OEM for Mitsubishi (Power card)
	1984	● Factory Automation Division Founded



Inverter Family



SC3
0.2-5.5kW

Compact Inverter with Vector Control



SE3
0.4-22kW

High Speed Closed Loop Inverter



SA3
0.75-315kW

Closed Loop Communication Inverter



SF3
3.7-355kW

Communication Vector Control Inverter



SS2
0.4-5.5kW

General Vector Control Inverter



SF-G
5.5-355kW

General Vector Control Inverter



Servo Motor and Drive Family



SDE

50W~3kW
Resolution: 22 bit
Speed response: 1.2kHz

High Efficiency



SDP

50W~7kW
Resolution: 24 bit
Speed response: 2.5kHz

EtherCAT
Conformance tested

Communication



SC3 Series Compact Inverter with Vector Control

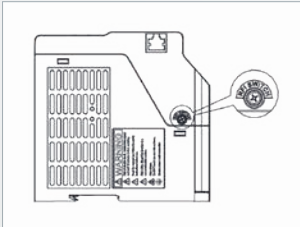
Product Range

Model	kW (HP)	0.2 (0.25)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)
SC3	SC3-021	1 phase 220V						
	SC3-023	3 phase 220V						
	SC3-043	3 phase 440V						

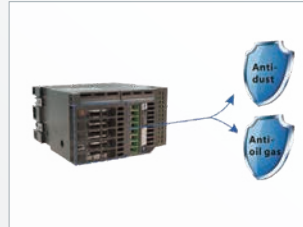
Main Features

- * Compact design for space saving and DIN rail mounting
- * Improved torque characteristic in low frequency operation
- * Reduced noise in low frequency operation
- * Built-in PID feedback control
- * Built-in RFI switch
- * Shock and vibration resistance design
- * Overload rating 150% 60s 200% 1s

Product Features



Built-in RFI filter



Coating & Isolated Air Duct



Quick Connect to External Keypad



Easy Maintenance

Applications



Conveyor Belt



Sealing Machine



Band-sawing Machine



Pressure Fan



Noodle Machine



Slicer



SE3 Series High Speed Closed Loop/Communication Inverter

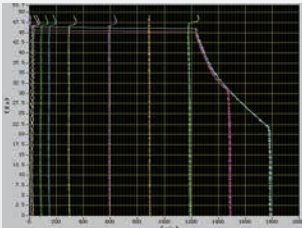
Product Range

Model		kW (HP)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)
SE3	SE3-021	1 phase 220V											
	SE3-023	3 phase 220V											
	SE3-043	3 phase 440V											

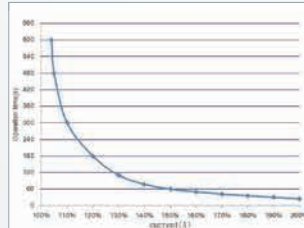
Main Features

- * With one expansion card slot for closed loop/communication/IO
- * High performance closed loop vector control with 200% 0.5Hz starting torque
- * Up to 1500Hz high speed frequency output
- * Synchronous motor compatible: SPM/IPM
- * Closed loop control: Speed/ Torque/ Position/ Tension mode with mode switch function
- * Built-in PLC with free ladder software
- * Built-in RFI filter
- * Support Modbus TCP/ CANopen/ Profibus/ DeviceNet/ EtherCAT communication card
- * Overload rating 150% 60s 200% 3s

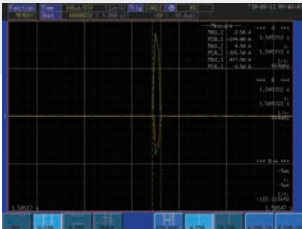
Product Features



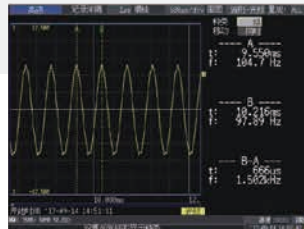
High-performance sensorless vector control technique



Excellent overload current rating of 150% 60s; 200% 3s



Complete protection functions



Up to 1500Hz high speed frequency output

Applications



Air Compressor



Injection Molding Machine



Machine Tools



Carving Machine



CNC tooling Machine



Wood cutting



SA3 Series Advanced Closed Loop Communication Inverter

Product Range

Model		kW (HP)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)	75 (100)	90 (120)	110 (150)	132 (175)	160 (215)	185 (250)	220 (300)	250 (335)	280 (375)	315 (420)	355 (475)	
SA3	SA3-023	3 phase 220V	150%60s →																									
		200%3s →																										
	SA3-043	3 phase 440V	150%60s →																									
		200%3s →																										

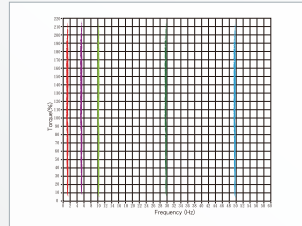
Main Features

- * With three expansion card slots for closed loop, communication and IO
- * Support LCD keypad to operate in different language, monitor multiple values
- * High performance closed loop vector control with 180% 0Hz starting torque
- * 4 quadrant torque control
- * Synchronous motor compatible: SPM/IPM
- * Closed loop control: Speed/ Torque/ Position/ Tension mode with mode switch function
- * Online inertia estimate function
- * Built-in PLC with free ladder software
- * Built-in RFI filter
- * Support Modbus TCP/ CANopen/ Profibus/ DeviceNet/ EtherCAT communication card
- * Overload rating 150% 60s 200% 3s

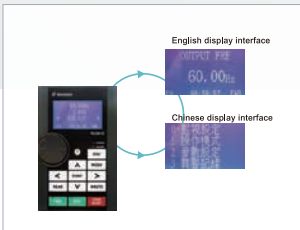
Product Features



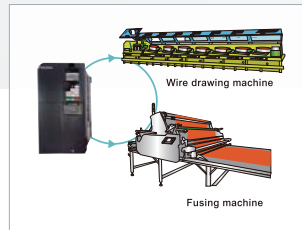
Advanced Synchronous Motors Control Technology



Outstanding performance of overloading and accuracy

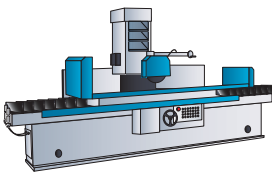


User-friendly LCD operating interface

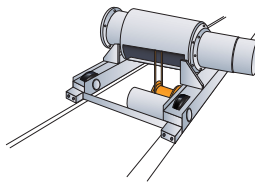


Multiple control mode for various applications

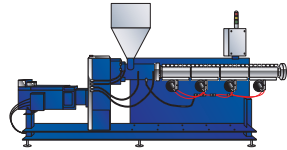
Applications



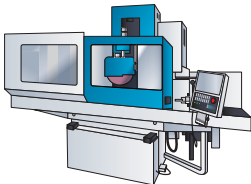
Milling Machine



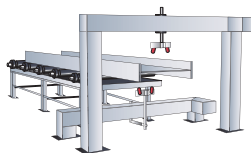
Cranes



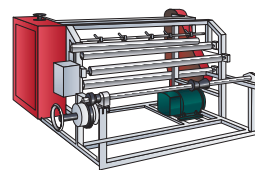
Extrusion Machine



Grinding Machine



Constant Pressure Pump



Slitting Machine



SF3 Series Communication Vector Control Inverter

Product Range

Model	kW (HP)	3.7 (5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)	75 (100)	90 (120)	110 (150)	132 (175)	160 (215)	185 (250)	220 (300)	250 (335)	280 (375)	315 (420)	355 (475)
SF3	SF3-043	3 phase 440V	150%60s → 200%3s →																				

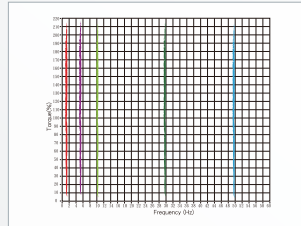
Main Features

- * With one expansion card slot for communication/IO
- * Support LCD keypad to operate in different language, monitor multiple values
- * Fire mode function for HVAC application
- * Drive up to 6 pumps with pump card
- * Synchronous motor compatible: SPM/IPM
- * Built-in PLC with free ladder software
- * Built-in RFI filter
- * Support Modbus TCP/ CANopen/ Profibus/ DeviceNet/ EtherCAT communication card
- * Overload rating 150% 60s 200% 3s

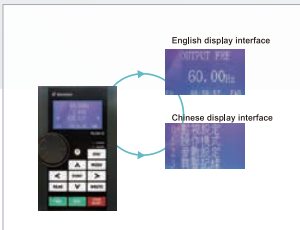
Product Features



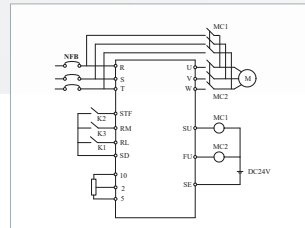
Advanced Synchronous Motors
Control Technology



Outstanding performance of
overloading and accuracy



User-friendly LCD operating interface



Equipped with grid power frequency
switching mechanism

Applications



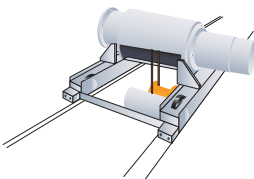
Pressure Fan



Conveyor Belt



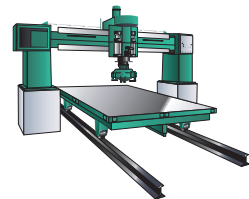
Air Compressor



Cranes



Constant Pressure Water Supply



Polishing Machine



SS2 Series General Vector Control Inverter

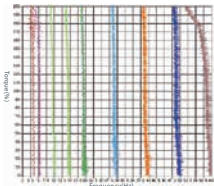
Product Range

Model	kW (HP)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7.5)
SS2	SS2-021	1 phase 220V					
	SS2-023	3 phase 220V					
	SS2-043	3 phase 440V					

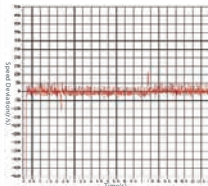
Main Features

- * Built-in shuttle knob to adjust output frequency easily.
- * Built-in RS-485 communication interface.
- * Support MODBUS -ASCII, MODBUS-RTU, and Shihlin communication protocol.
- * Built-in proportion linkage control function to support multiple inverters connection.
- * Maximum 650Hz frequency output enable to support special and high-speed motors.
- * Support DIN rail mount installation.
- * Support 2 analog setting types: 0-10V and 4-20mA.
- * Constant pressure setting for water pump.
- * Overload rating 150% 60s 200% 1s

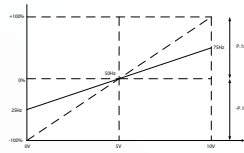
Product Features



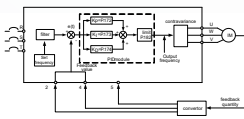
High-performance flux vector control technique



Speed accuracy within 1% (0%~100% loading changes)



Proportion linkage function



PID feedback control function

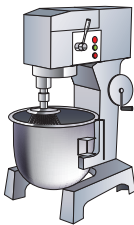


DIN rail mounting

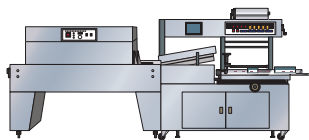


Side-by-side installation

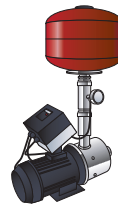
Applications



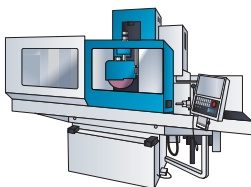
Mixer Machine



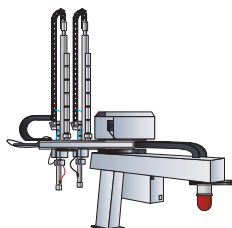
Packing Machine



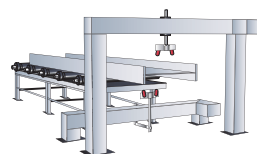
Constant Pressure Water Supply



Grinding Machine



Robot Arm



Painting Machine



SF-G Series General Vector Control Inverter

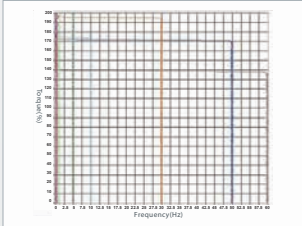
Product Range

Model	kW (HP)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)	75 (100)	90 (120)	110 (150)	132 (175)	160 (215)	185 (250)	220 (300)	250 (335)	280 (375)	315 (420)	355 (475)
SF-G	SF-020-G	3 phase 220V	120%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		150%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	SF-040-G	3 phase 440V	120%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		150%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

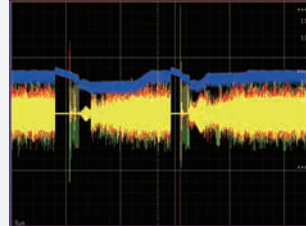
Main Features

- * Dual specification with Heavy Duty: 150% 60s / Light Duty: 120% 60s.
- * Support PM Card for injection machine application, and WS01 card for fan and water pump control.
- * Hardware type circuit protection design.
- * Embedded regeneration brake transistor(22kW or below).
- * Strengthened PID function, multiple machine(fan/pump) control function.
- * RS-485 interface, selection between Shihlin protocol/standard Modbus protocol.
- * Built in DC reactor (Frame C E F)
- * Overload rating 150% 60s 200% 1s

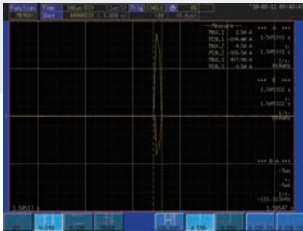
Product Features



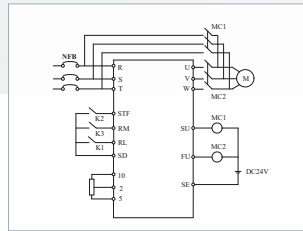
High performance vector control



Tracking compensation mechanism

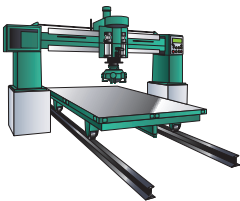


Over current and output short circuit protection

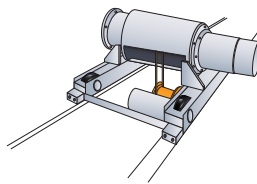


Equipped with grid power frequency switching mechanism

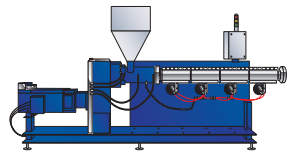
Applications



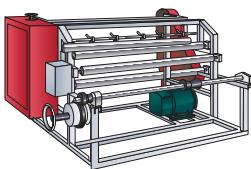
Polishing Machine



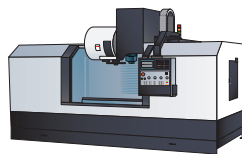
Crane



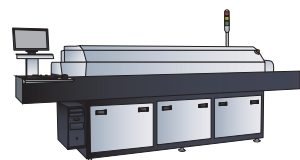
Extruder



Slitting Machine



CNC Tooling Machine



Solder Equipment



SDE Series Servo Motor and Drive

Product Range

	kW (HP)	50W	100W	200W	400W	750W	1kW	1.5kW	2kW	3kW
Drive	1 phase 200~240V	●	●	●	●	●	●	●	●	
	3 phase 200~240V	●	●	●	●	●	●	●	●	●
Motor	Low Inertia	●	●	●	●	●	●	●	●	●
	Medium Inertia						●	●	●	●

Main Features

- * High resolution encoder 22 bit.
- * Speed response: 1.2kHz
- * 5 sets of vibration suppression filter which works automatically
- * Motor speed up to 6000rpm and excellent torque output.
- * Low inertia motor capacity up to 3kW
- * Advanced free PC software for tuning, monitoring
- * Absolute type encoder with battery
- * Two direction motor power cable to fit in all machines
- * Built-in 64 points single axis control mode
- * UL certificate



EtherCAT®
Conformance tested

SDP Series Servo Motor and Drive

Product Range

	kW (HP)	50W	100W	200W	400W	750W	1kW	1.5kW	2kW	3kW	5kW	7kW
Drive	1 phase 200~240V	•	•	•	•	•	•	•	•			
	3 phase 200~240V	•	•	•	•	•	•	•	•	•	•	•
Motor	Low Inertia	•	•	•	•	•	•	•	•	•		
	Medium Inertia						•	•	•	•	•	•

Main Features

- * High resolution encoder 24 bit.
- * Speed response: 2.5kHz
- * EtherCAT communication with certificate, cycle time up to 100μs
- * 5 sets of vibration suppression filter which works automatically
- * Built-in 64 points single axis control mode
- * One touch tuning function
- * Electronic Cam function with up to 720 adjustable points
- * High speed probe function
- * Complete closed loop function
- * Safe torque off(STO) function



EC200 H Series (EC207/208/210)

Main Features

- * LCD size: 7inch, 8inch, and 10.2 inch
- * Screen: TFT 65K colors
- * Resolution: EC208 (8") : 800x600 DPI 、 EC207/EC210 (7",10.2") : 800x480 DPI
- * CPU performance 800Mhz
- * Memory capacity 256MB
- * Provide COM port for RS232/ RS422/ RS485/Modbus/Ethernet communication
- * Support USB port to transfer data between HMI and PLC
- * Support large recipe (20MB) for thousands of data planning
- * Support HMI database and recipe search

Software features

- * First page assignable
- * Time action
- * Clock function
- * Numeral blink function
- * Print screen function
- * Confirm box function
- * Advanced recipe function
- * Blacklight lighting for alarm trigger
- * History trend chart
- * Combo box function
- * Slider function
- * The library function
- * The alarm record function
- * The recipe function
- * The floating alarm function
- * The security function
- * Screen design software:
EU Work 2

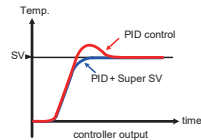


WT Series Temperature Controller

Excellent Control Performance

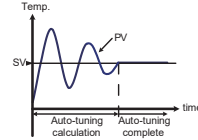
PID Control

Super SV function can effectively suppress temperature overshoot and quickly reach the set temperature.



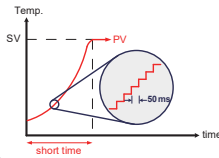
Auto-tuning

Calculate the optimal PID of the system value automatically, to achieve precise control effect.



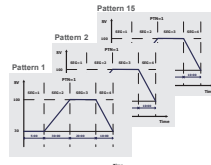
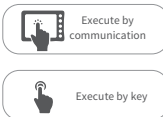
High speed control

50ms sampling time for fast and precise control of the occasion.



Powerful Program Control

Provides 15 patterns of 10 segments of program control, each segment can be arbitrarily set to ramp, soak, step or cool down temperature, the user can be arbitrary according to the demand, the maximum can support to 150 segments program control.



High Accuracy

Input with 14 bit A/D resolution, 0.1% accuracy of FS. Build in Auto Zero- Auto Span function to keep good accuracy.

Modbus Communication

WT series sport both Modbus RTU.
Communication between controller and HMI or other equipment is more convenient. (*optional Function)

Support Various Input Sensor

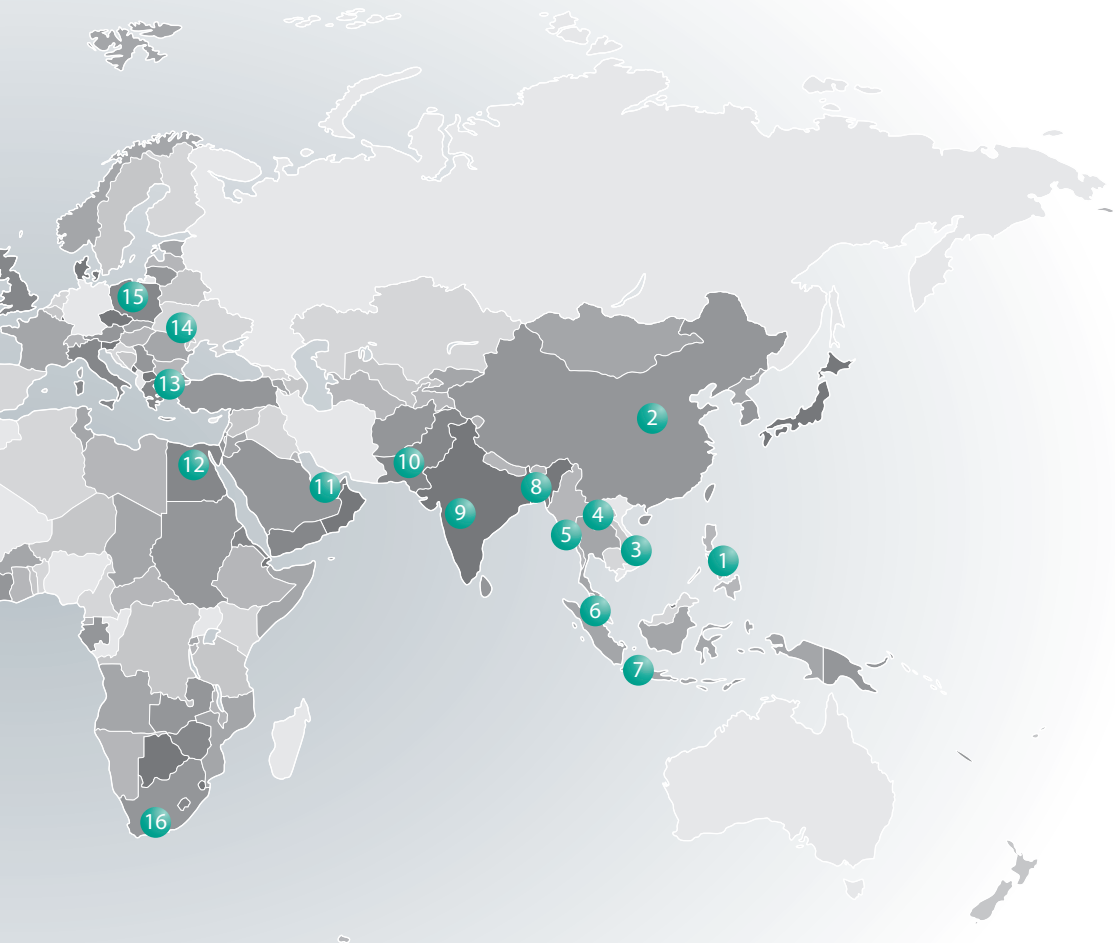


Global Sales Network

FA Distributor



-
- | | |
|-----------------------------|--|
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| 2 China | 6 Malaysia, Johor, Penang Kuala Lumpur |
| 3 Vietnam, Ho Chi Minh City | 7 Indonesia(Jakarta, Surabaya, Semarang) |
| 4 Vietnam, Hanoi | 8 Bangladesh, Dhaka |
-



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12 Egypt, Cairo

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14 Ukraine, Kiev

15 Poland, Warszawa

16 South Africa, Cape town

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