

# SECOM

Power Electronic Equipment & Components



Since 1975 we are operating in the market of distribution of components and devices for power electronics



Founded in 1975, **SECOM** is a leading company in the components market distribution with agreements with the main brands on the market and manufacturing of systems for power conversion (AC/DC, DC/AC, DC/DC and AC/AC).

For almost **50 years** SECOM has been studying and creating customized technical solutions for its customers, providing them with a technical crucial support for the achievement of their goal, especially in terms of **performance** and **power quality**.

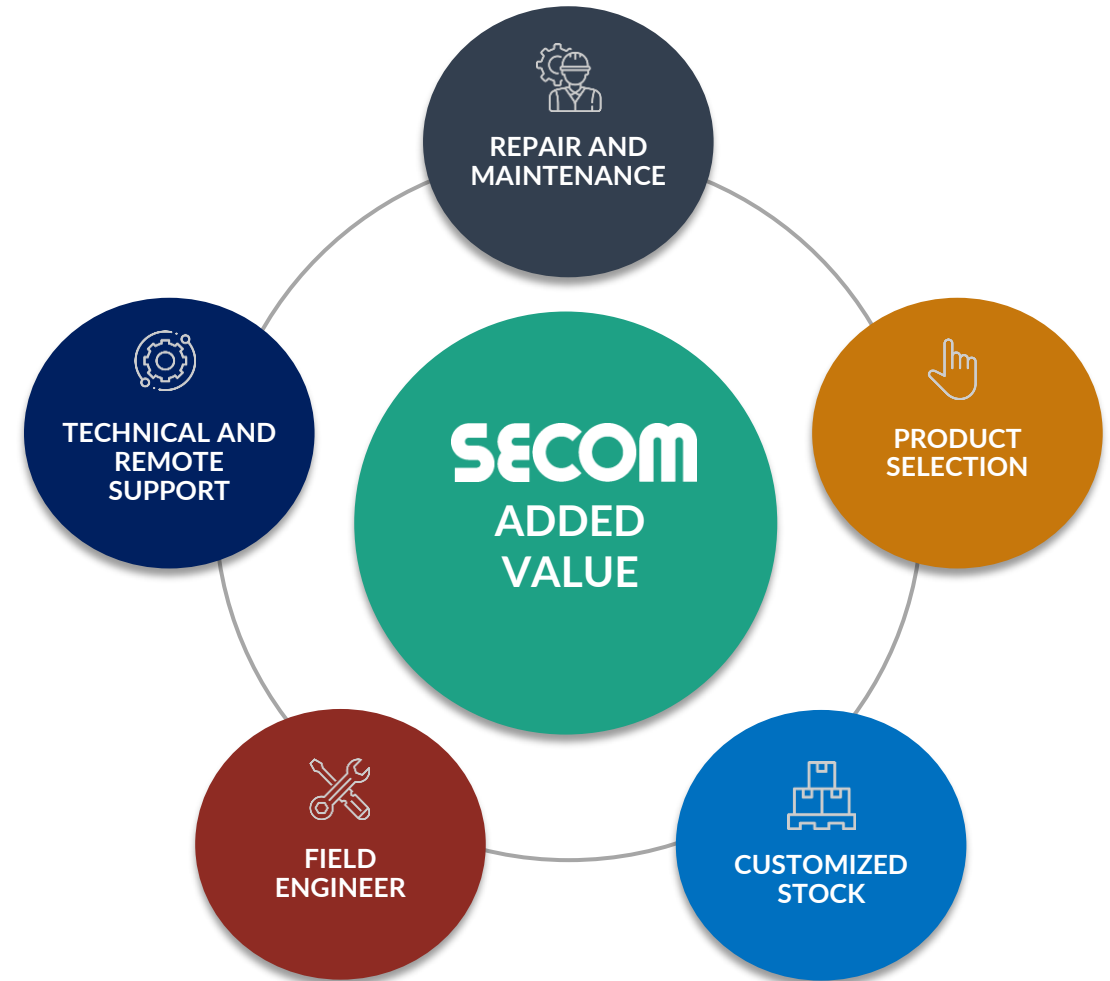
SECOM can supply components, sub-systems for system integrators or complete cabinets for plant integrators becoming the ideal partner along all possible levels of the supply chain.



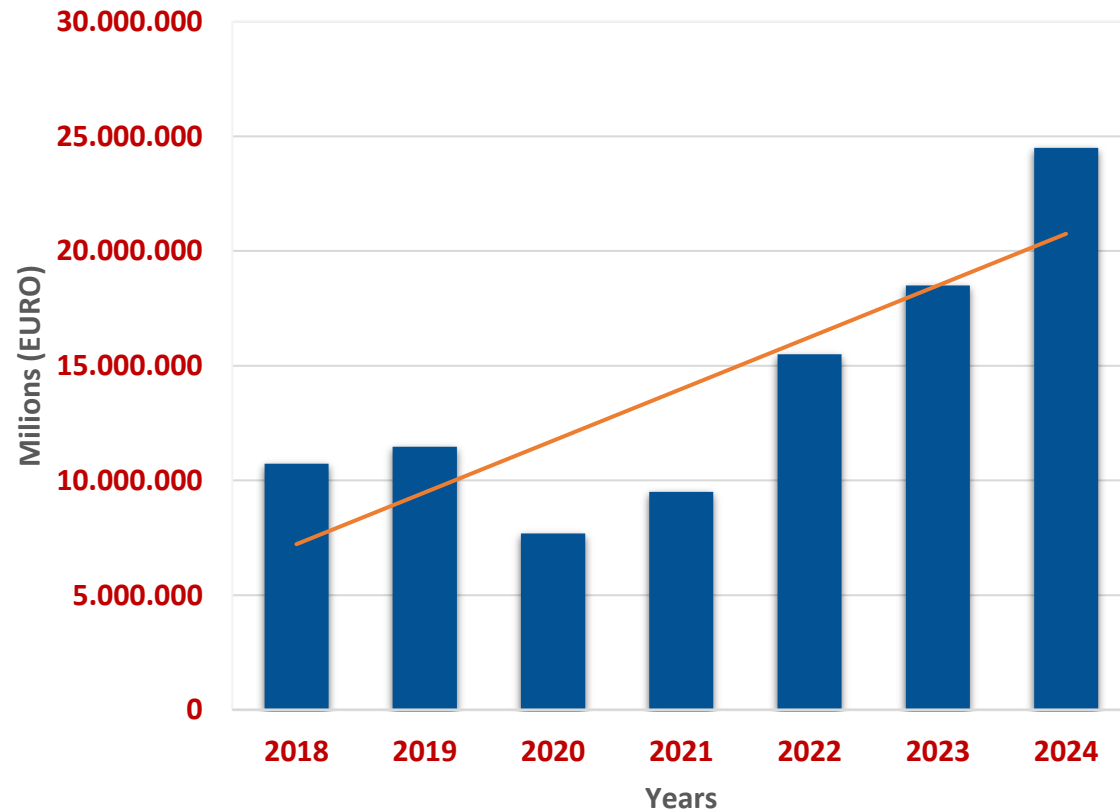
Thanks to the company nature of manufacturer, distributor and engineering support, SECOM can always offer the best **actual and innovative technological solutions**.

The high engineering knowledge in the field of power electronics related to static power conversion allows the company to always find a solution that meets the best compromise between **cost, quality and performance**.

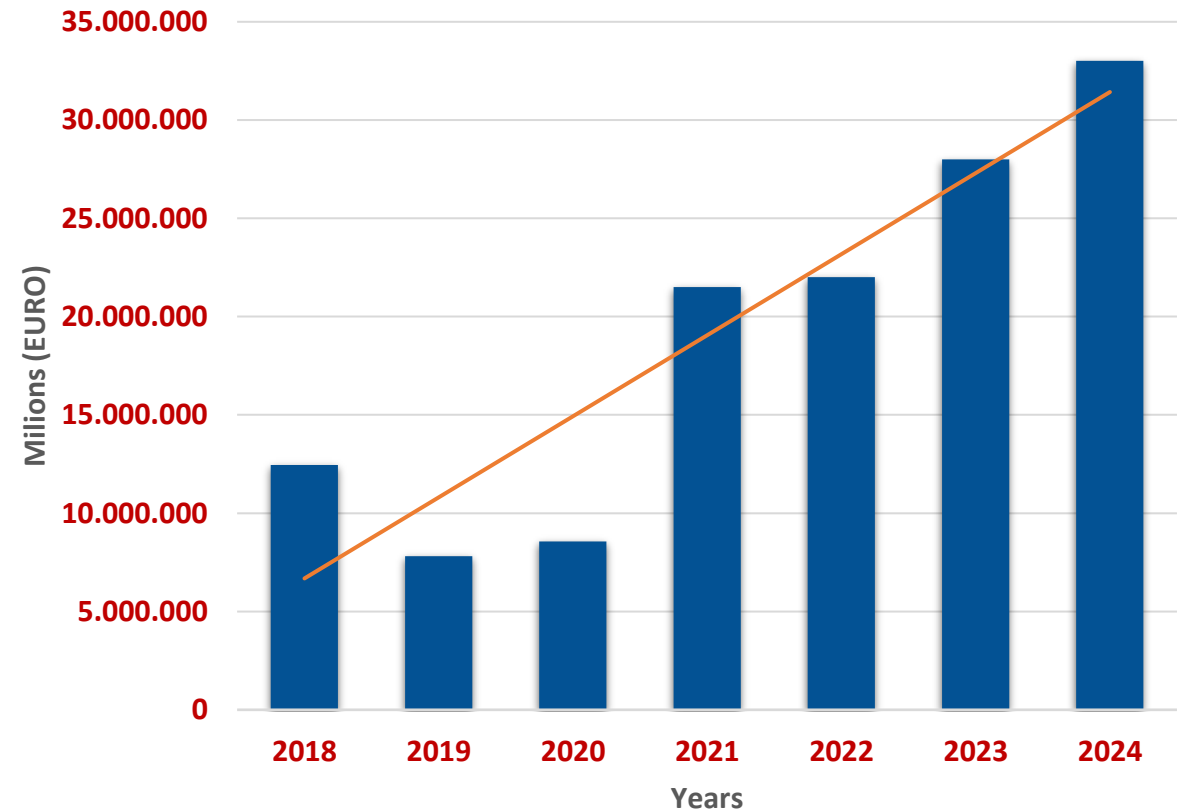
Thanks to the possible use of converters in several application fields, SECOM has acquired experience in **many applications** that can be exploited in new developments, **working closely with the customer** and responding to project requirements.



## Annual Turnover



## Annual Orders



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## Employees/staff 2021/2022

Department	2021		2022	
	Employees	External	Employees	External
Management	3	0	3	0
Sales	3	1	6	1
Technical department	6	1	10	5
Purchase	1	1	2	1
Warehouse	3	0	3	1
Production	4	0	6	6
Testing	3	0	3	1
Service	1	1	2	1
Administration	3	0	3	0
Total	24	4	38	16
	28		54	

## Surface of manufacturing

Two different production sites:

- Via Archimede 18, Sesto San Giovanni (MI)  
450 sqm (office) + 1000 sqm (production, storage and testing)
- Viale Edison 623, Sesto San Giovanni (MI)  
250 sqm (office) + 800 sqm (production, storage and testing)

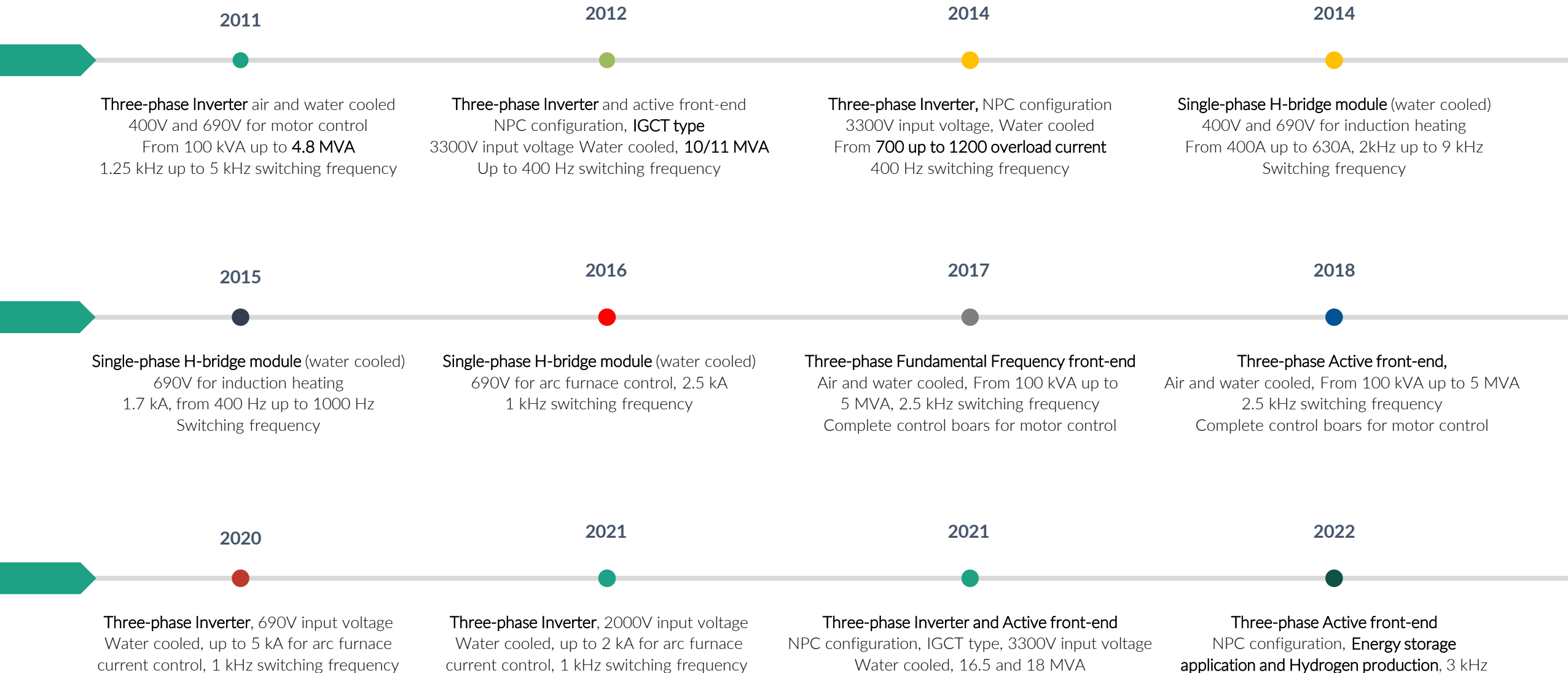
**Total**

700 sqm (office) + 1800 sqm (production, storage and testing)

## ISO 9001



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01

## ELECTRICAL DIMENSIONING

Electrical dimensioning of  
power circuits

02

## THERMAL DIMENSIONING

Thermal dimensioning of the  
cooling circuit

03

## 3D

3D mechanical  
development

04

## CARD DEVELOPMENT

Development of IGBT  
driver card

05

## INTERFACE DEVELOPMENT

Development of  
electronics interface to  
protect converters

06

## TECHNICAL ASSISTANCE

Troubleshooting and  
technical support

The passion and the desire to grow have pushed us over the years to a continuous improvement. We have taken on challenges from different industrial sectors, expanding our technical knowledge.

Today we can consider ourselves an important player for different production realities.

These are the **markets** in which we are most active:

**Chemical, Oil & Gas**



**Power electronics**



**Alternative energy**



**Steel**



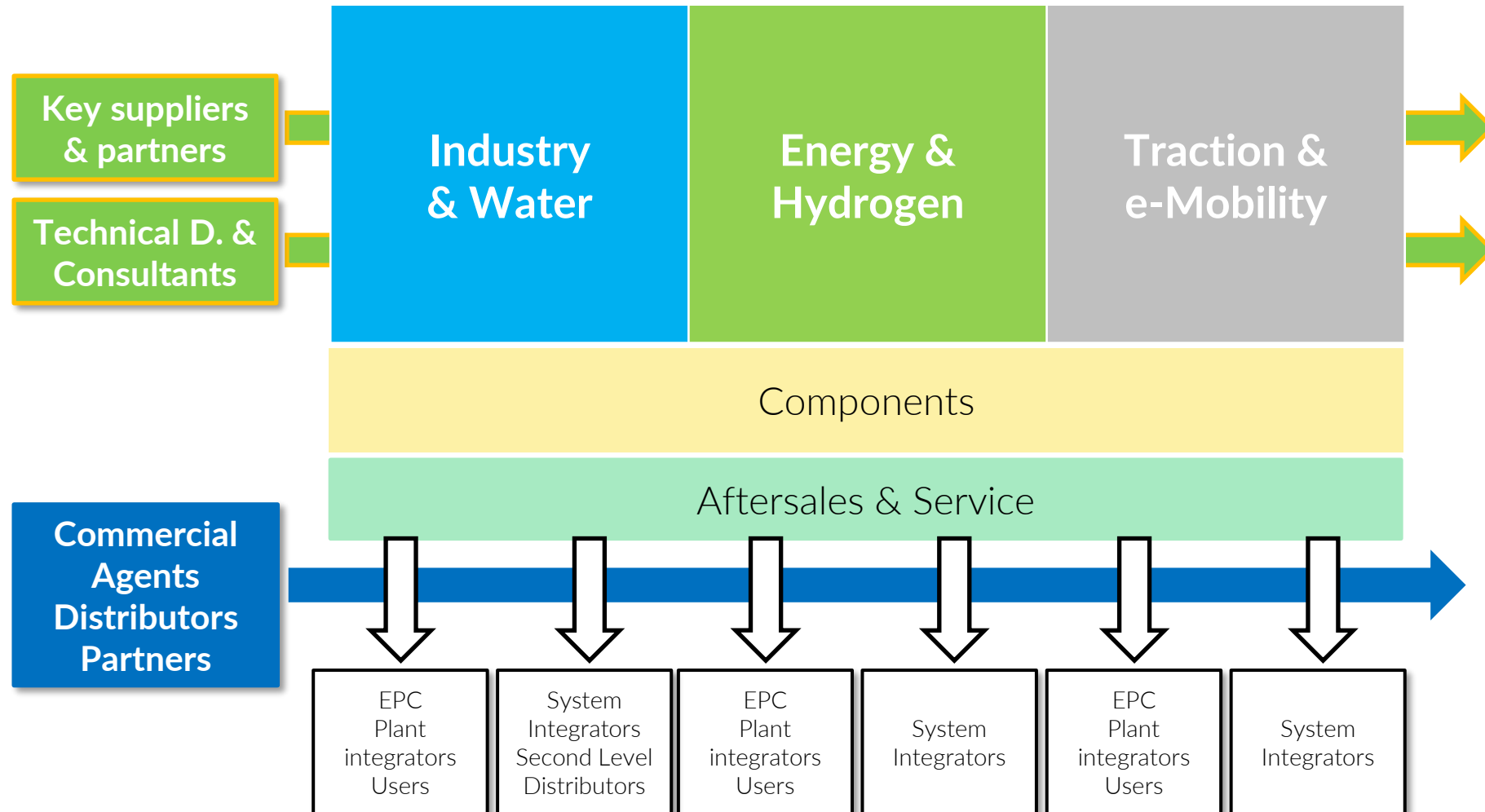
**Galvanic**



**Traction**







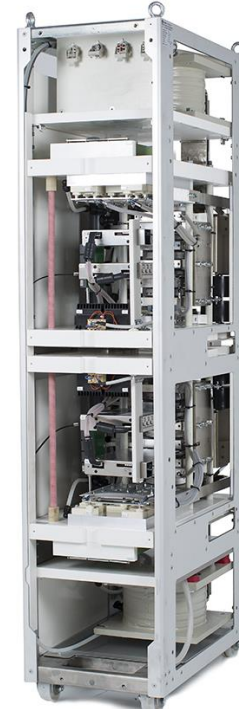
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**COMPONENTS**



**LV DRIVES**



**MV DRIVES**



**SPECIALS**

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# Our components

01

## **Fuses**

British, Ferrule, North American  
Square body, PV, Traction Accessories

02

## **Semiconductors**

Diodes, Thyristors, Modules  
IGBT, IGCT, Assembly

03

## **Capacitors**

Film capacitors, AC Power  
capacitors, DC Power capacitors

04

## **Resistors**

Tubular, lamina type, steel-grid fixed  
resistors, load and testing resistors

SECOM is a main distributor of **EATON BUSSMAN SERIES** fuses for every industrial applications and especially for high-speed fuses for power electronics.

We offer different types of fuses:

- British
- Ferrule
- North American
- Square body
- PV Fuses
- Traction
- Accessories



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SECOM partners with many companies that intend to develop their own special products. For this reason, the company has established over time a strong relationship with several important semiconductor's producers (ABB, Powerex, Infineon, Mitsubishi, Dynex, Hitachi, Proton, etc.).

We offer different types of semiconductors:

- Diodes
- Thyristors
- Modules
- IGBT
- IGCT
- Assembly



SECOM is a main distributor of **ELECTRONICON** GmbH, for every industrial applications, especially film capacitors for power electronics.

- E50 PK16 - *High density film capacitor*
- E51 AC/DC - *High voltage, low inductance*
- E53/E55 AC/DC - *High current and low self-inductance*
- E56 DC / E59 AC/DC - *Large capacitor*
- E60 AC/DC - *Hermetical case capacitor*
- E63 DC - *With integrated safety mechanism*
- E62 3ph AC Filter - *AC filtering and power factor correction*

**ELECTRONICON**  
*always in charge*

SECOM is also a main distributor of **Sheng Ye Electrical Co. Ltd.** for DC link capacitors, AC filter capacitors, Impulse capacitors, and Snubber capacitors.

DCLJ1 DC-Link capacitor



DCLJ2 DC-Link capacitor



FFCT4 AC Filter capacitor



DCLJ2 DC-Link capacitor



FFC3 Heavy duty AC filter



SNUT1 Snubber capacitor



DCL DC-Link capacitor



EST Impulse capacitor



SNUT2 Snubber capacitor



FFC1 Heavy duty AC filter



DCLT5 DC-Link capacitor







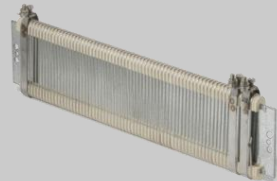
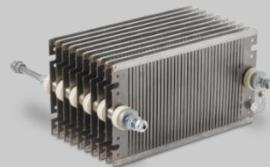
SNUT3 Snubber capacitor



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SECOM is the Italian exclusive distributor of **FRIZLEN** industrial power resistors. FRIZLEN power resistors represent the highest quality standards “made in Germany”. FRIZLEN product range is extremely extensive and covers a broad power spectrum from 10 W to 500 kW with a protection degree from IP00 up to IP67.

T100	T200	T300	T400	T500	T600
					
Tubular fixed resistors. The original ones	Wirewound potentiometers. The flexible ones	Wirewound flat resistors. The innovative ones	Load and testing resistors. The loadable ones	Lamina type fixed resistors. The modular ones	Steel-grid fixed resistors. The robust ones

## Our products

01

### **AC/DC converter**

Forced Air, Natural Air Converter,  
Water Cooled Converter

02

### **Inverters**

AFE, F3E, Inverter

03

### **Medium voltage drives**

IGBT Power Stack, IGCT Power Stack,  
Multilevel Cells

04

### **Chopper**

05

### **H Bridge**

Deep Purple, Spartan, Viola  
Teseo

06

### **SD-MCU**

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Item Name	Converter type	Cooling	Voltage	Current
<u>GR91</u>	Three-phase diode bridges Semi-controlled DC bus power supply Three-phase thyristor bridges Three-phase static switches Single-phase unidirectional bridges Single-phase static switches Bidirectional thyristor bridges	Forced air	380 ÷ 480V 500 ÷ 690V	60 ÷ 700 Adc
<u>GR93</u>	Diode rectifier Unidirectional DC converter Bidirectional DC converter Regenerative DC converter	Forced air	380 ÷ 480V 500 ÷ 650V 660 ÷ 750V 850 ÷ 990V	750 ÷ 4500 Adc
<u>GR00</u>	Three-phase diode rectifier Three-phase unidirectional DC converter Three-phase AC switch	Natural air	380 ÷ 480V 500 ÷ 650V 660 ÷ 750V 850 ÷ 990V	100 ÷ 2000 Adc
<u>GR6</u>	Diode rectifier Unidirectional DC converter Bidirectional DC converter Regenerative DC converter 12-pulse rectifier	Forced air	380 ÷ 480V 500 ÷ 850V	900 ÷ 5000 Adc
<u>GRW6</u>	Diode rectifier Unidirectional converter	Water cooled	400V 690 ÷ 850V	1500 ÷ 4500 Adc
<u>GR19</u>	Unidirectional converter Bidirectional converter	Forced air	500 ÷ 690V 800 ÷ 900V 950 ÷ 1250V	3500A; 4000A 4500A; 5000A



GR19, 5000A  
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SECOM has developed expertise and gained experience in the power converter market for various industrial applications.

Drives and auxiliary device designed in collaboration with our customers are further examples of the added value that the company can offer to innovative applications.

Inverter family provides a different and new answer for all AC applications: Driving AC motor, renewable power sources, regenerative converter as Front-End power supply. SECOM has started selling LV drives **since 2007**.



MAIN GENERAL DATA	
Main supply Voltage	380 ÷ 480V, 500 ÷ 690 V
Tolerance	±10% power supply
Current range	Up to 830A for the single Inverter to 6480A with 8 module in parallel
Switching frequency	From 1,25kHz to 5KHz
Protection degree	Case IP20
Converter protection	Overtemperature switch
Auxiliary voltage	24V for interface 230V 50Hz / 60Hz for cooling system
Safety Function	STO (SIL3) integrated
Cooling system	Forced air or water cooling
Installation type	Removable by wheels for frame 2 Fixed for frame 3
Dimensions (W*H*D)	F2: 245*1398*650mm F3: 245*830*500mm
Weight	Up to 178kg (F2) Up to 100kg (F3)

### SECOMDRIVE MV IGBT

Inverter are high-performance water-cooled drives in three level Neutral point Clamped (NPC) topology.

The line-side and motor-side converters use IGBT modules in a range from 4 MVA to 8 MVA.

The IGBT Power Stack is a complete 3phase Inverter solution in a unique wheel stand module and each phase is on a single removable drawer.



Technical Data	SECOM IGBTs module
Line side converter	Diode DFE rectifier or 4Q - AFE module
Motor side converter	IGBT INV module
Unit power ratings	4 MVA ÷ 8 MVA
Rated output current (In)	870 A ÷ 1400 A continuously
Rated output voltage	3150 Vac
Efficiency	> 98%
Motor type	Induction or synchronous
Main supply voltage (50/60 Hz)	3150 Vac +/- 10%
Inverter output frequency	up to 65 Hz
Input power factor	≥ 0.93
Cooling	Water cooled type only
Auxiliary voltages range	380 ÷ 480 Vac 50/60 Hz
Protection degree	IP00 (module)
Overall module dimensions	697 mm(W) x 750 mm(D) x 1735(H)
Single module weight	300 ÷ 450 kg
Applicable standards	IEC 60146 – IEC 61800-3/4/5 IEC60204-11 – IEC62103 – EN62271

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### SECOMDRIVE MV IGCT

Inverter are high-performance water-cooled drives

in three level Neutral point Clamped (NPC) topology.

### SECOMDRIVE MV IGBT

Inverter meet the following requirements:

The IGCT Power Stack is a complete 3phase Inverter solution in a unique wheel stand module and each phase is on a single removable drawer.



Technical Data	SECOM IGBTs module
Line side converter	Diode DFE rectifier or 4Q - AFE module
Motor side converter	3 x IGCT module phase (AFE or INV)
Unit power ratings	10MVA – 11MVA – 12MVA – 15MVA – 16.5MVA – 18MVA
Maximum output current (In)	1750A – 1890A – 2100A – 2650A 2890A - 3150A continuously (3 module)
Rated output voltage	3150 Vac
Efficiency	> 98%
Motor type	Induction or synchronous
Main supply voltage (50/60 Hz)	3150 Vac +/- 10%
Inverter output frequency	up to 65 Hz
Input power factor	≥ 0.93
Cooling	Water cooled type only
Auxiliary voltages range	380 ÷ 480 Vac 50/60 Hz
Protection degree	IP00 (module)
Overall 1 ph module dimensions	390 mm(W) x 690 mm(D) x 1740(H)
Single 1ph module weight	278 kg
Applicable standards	IEC 60146 – IEC 61800-3/4/5 IEC60204-11 – IEC62103 – EN62271

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SECOMDRIVE MV Multi-level Inverter are based on IGBT cascades H bridges cells (CHB), in a 3L NPC topology.

CHB cells are available in air or water-cooled solution.

No regenerative configuration as standard with output voltage levels from 3,3 kV up to 11 kV and output power from 200 kVA (at 3,3 kV) up to 13 MVA (at 11 kV).



Technical Data	SECOM IGBTs
Line side converter	Diode DFE rectifier (six and twelve pulses)
Motor side converter	N (6,9, 15) cells
Unit power ratings	200 kVA ÷ 15 MVA
Rated output current (In)	35 ÷ 700 A
Rated output voltage	3,3 ÷ 11 kV
Efficiency	> 98%
Motor type	Induction
Main supply voltage (50/60 Hz)	3,3 ÷ 11 kV
Inverter output frequency	up to 100 Hz
Input power factor	≥ 0.97
Cooling	Air (water as option)
Auxiliary voltages range	230 V (50 Hz)
Protection degree	IP00
Overall 1ph module dimensions	<ul style="list-style-type: none"> <li>• 35 ÷ 147 A: 240*550*850 mm</li> <li>• 192 ÷ 262 A: 290*590*920 mm</li> <li>• 306 ÷ 402 A: 380*590*990 mm</li> <li>• 472 ÷ 700 A: 474*815*1470 mm</li> </ul>
Single module weight	65 ÷ 130 kg
Applicable standards	IEC 60146 – IEC 61800-3/4/5 IEC60204-11 – IEC62103 – EN62271



The **braking chopper CHT** is designed for applications where large amounts of energy are required to be dissipated from the DC bus. SECOM's available range of CHT brake choppers covers currents ranging from 100A up to 1500A.

CHT units are available in three **different mechanical sizes**, based on the current required. Thanks to the removable mounting bracket present in each unit, the low voltage brake chopper can be mounted in different positions, depending on the available space.



### Technical Data

Altitude	1000 m above sea level
Operating temperature Storage temperature	0 ÷ 40°C
Height Width Depth Weight	550/725/1398 mm 243 mm 500/650 mm 35-80 kg
Semiconductor	IGBT
Cooling system	Forced air
Nominal current	100 - 1500 A
Supply voltage	400 - 1150 Vdc
Braking	IGBT chopper

SECOM introduced in 2013 a new series of **high frequency converters** that incorporate the technology currently used in Induction Heating, hardening, melting and/or other applications where a resonant circuit is required.

The strengths of high frequency converters are:

- Use of IGBT HF technology
- A drastic gas and smoke emissions reduction typical of the old heating process;
- Reduced energy consumption
- Immediate heating availability. Long start or stop sequences are not necessary like in traditional heating furnaces.



### Technical Data

Main supply voltage	380 ÷ 480V, 500 ÷ 690V
Current range	400 ÷ 630A (2 kHz – 9 kHz) 1700 ÷ 2700A (400 Hz – 1 kHz)
Protection degree	Case IP20
Converter protection	Overtemperature switch
Installation type	Removable by wheels
Cooling type	Water

The unit **SD-MCU** is a proprietary control system that covers a wide range of types of controls for AC/DC rectifiers, LV Inverters, F3E, AFE.

The fiber optic connection between the control unit and the power section simplifies the wiring also in the parallelization of the converters.

It is equipped with an integrated realtime PLC (IEC61131-3) that allows you to create custom logics, manage automation at various levels, control both the I/O on board and interface I/O expansion modules or, again, interact with the control software.



#### Technical Data

Main supply voltage	24 Vcc
Consumption	300 mA
Protection degree	IP20
Installation	Wall mounting
I/O	16 input – 10 output (6 relay 125 Vac – 4 output collector) 3 analog input (+/- 5V or 4-20mA) 3 analog input (+/- 10V)
Communication	CANOpen (master/slave) – Modbus TCP/IP (master/slave) Other protocols on request
Internal device	Real time PLC
Dimensions	165 x 230 x 45 (W*D*H)
Weight	0.5 kg
Control type	≥ 0.93
Motor control system	Grid control type and motor control type
Grid control system	AFE – F3E – VAC





## Address

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