



Smart solutions.  
Strong relationships.

## AC Drives

CG Drive - SV

We have a drive...

CG Drive - SG



**CAUTION:**

Risk of Electric Shock.  
Device is live up to 5 minutes after  
removing input voltage.

Do not connect power source  
to inverter outputs.

Do not perform  
voltage test with megger  
on regulation card terminals.

**ATTENTION:**

Risque de décharge  
électrique.  
L'appareil  
est sous  
tension pendant  
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après l'arrêt.



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après l'arrêt.

... to meet any need.



## CG Drive-SK

Simple to Use... Compact to fit  
Power to Perform  
0.25kW to 45kW  
AC inverter

### SIMPLE TO USE...

CG Drive-SK is an easy drive - easy to connect, easy to configure and easy to install.

**Easy to connect** - All connectors are generously sized and clearly labeled.

**Easy to configure** - The configuration settings you need for most applications are detailed on the front facia of the drive.

**Easy to install** - Flexibility allows you to install the drive in the best way for your application.

### SIMPLE & COMPACT YET POWERFUL...

- Easy to set up - all the parameters you need for typical Applications are shown on the front facia - it could not be easier.
- Easy installation - choose between simple panel mounting and DIN-rail mounting (up to 1.5 kW/2hp).
- Simple connections- easy access terminals with clear marketing.
- Simple start up - simple push button set up - no need for complex programming.
- Built in EMC filter.
- Display Keypad included as standard.
- Software and Documentation CD included as standard.
- Communications Port Rs485 - Modbus RTU as standard.
- Available up to 45kW/60hp.
- Unbeatable performance- Try it! Compare it!.

### General Characteristics

- Maximum overload 150% of rated current for 60s.
- Intelligent Thermal Management (ITM) optimises switching frequency.
- 8 preset speeds.
- Flying restart.
- Mains dip ride through.
- Automatic no-spin autotune for fast performance optimisation.
- Keypad access to all parameters for more demanding set-ups.

### Environment

- IP20.
- UL Type 1 kit and cover options up to 4kW
- Ambient temperature -10°C to 40°C.
- Electromagnetic immunity complies with EN61800-3 and EN61000-6-3 and 4.
- Humidity 95% maximum (non-condensing).
- Electromagnetic emissions (Second environment) as Complies with EN61000-6-3 (residential) EN61000-6-4 (industrial) standards with optional EMC filter.

### PROTECTION

- Undervoltage.
- Supply and DC Link over voltage.
- Phase loss.
- Drive overload.
- Instantaneous over current.
- Short circuit.
- Ground fault.
- Drive thermal.
- Watchdog.
- Motor thermal.



### SIMPLICITY OF SET UP TO DRIVE YOUR MACHINE AT OPTIMUM EFFICIENCY...

- Automatic no-spin for rapid performance optimisation.
- 8 preset speeds available.
- Keypad access to all parameters - basic and advanced menus.
- Open loop vector control. Speed or Torque control.
- Speed reference input: 0-10V, 0-20mA, 4-20mA (-10V to +10V SM-I/O Lite option).
- Switching frequency from 3kHz up to 18kHz - quiet motor operation.
- Output frequency from 0 to 1500 Hz.
- Linear and S type acceleration and deceleration ramps.
- ModBus RTU RS485 via RJ45 connector as standard.
- DC injection braking as standard.
- Dynamic braking transistor as standard.
- Energy savings with dynamic motor flux V/Hz.
- Fan and pump optimisation with quadratic motor flux V/Hz.

### REPLACE PLC...

The CG Drive-SK from Crompton Greaves establishes its dominant status in simple general purpose drives providing a level of performance and flexibility not found in any other low-cost, open loop AC Drive. It is the first economical drive that a user can add PLC functionality into, to save both space and cost on systems. The LogicStick and the free of charge SyPTLite programming software can be used to replace a nano or micro PLC, or to replace relays and timers.

### LOW COST SOLUTION FROM PREMIUM TECHNOLOGY...

CG Drive-SK includes premium functionalities as standard: Logic functions, comparators, motorised potentiometer, PID regulator, dynamic braking transistor with optional external braking resistor and DC injection braking as standard. Optional functions include SM-I/O Lite that can control an external encoder and even allow real-time clock functions with SM-I/O Timer.

Dynamic performance, PLC functionality, Premium functionalities and Plug-in options ensure that in more complex applications CG Drive-SK can deliver more than the average general purpose drive-giving you lower cost solutions and better productivity in your motor control applications.

### POWERFUL AND RELIABLE...

CG Drive-SK has been developed, tested and proven in the harshest operating conditions by dedicated electrical, mechanical and software engineering groups. The result: a strong drive that gets your machine running quickly and consistently with the highest productivity.



# CG Drive-SK

## CG Drive-SK ORDER CODES

380 / 480 VAC +/- 10% 3 phase		Normal Duty			Heavy Duty		
		Max Continuous Current (A)	Typical Output (kW)	Motor Power (HP)	Max Continual Current (A)	Typical Output (kW)	Motor Power (HP)
Order Code	Size						
CGK4300037	B				1.3	0.37	0.5
CGK4300055	B				1.7	0.55	0.75
CGK4300075	B				2.1	0.75	1
CGK4300110	B				2.8	1.1	1.5
CGK4300150	B				3.8	1.5	2
CGK4300220	C				5.1	2.2	3
CGK4300400	C				9	4	5
CGK4300750	2	15.3	7.5	10	13	5.5	7.5
CGK4301100	2	21	11	15	16.5	7.5	10
CGK4301500	2	29	15	20	25	11	15
CGK4301850	2				29	15	20
CGK4302200	3	43	22	30	40	18.5	25
CGK4303000	3	56	30	40	46	22	30
CGK4303700	4	68	37	50	60	30	40
CGK4304500	4	83	45	60	74	37	50

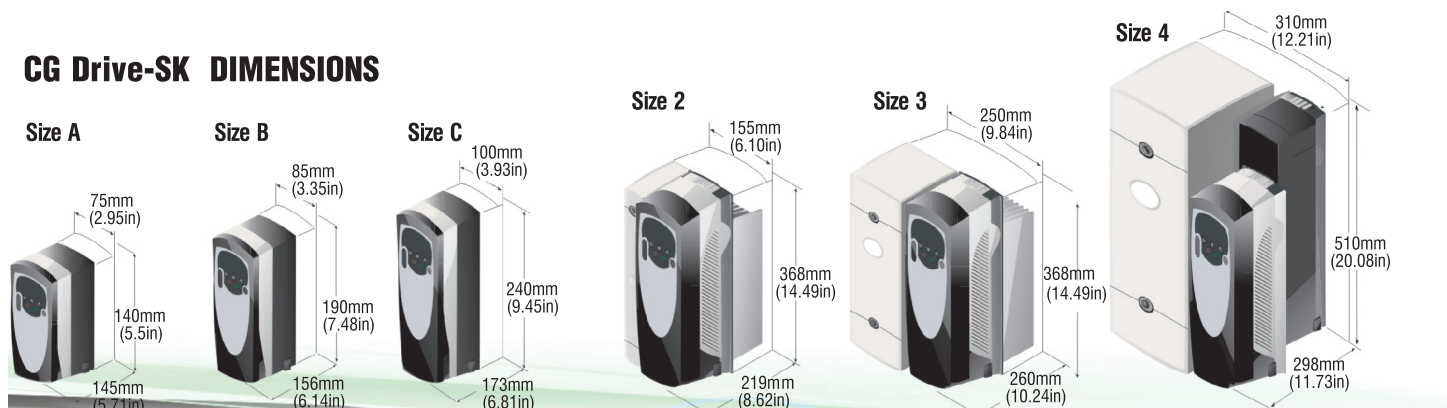
200 / 240 VAC +/- 10% 1 phase		Normal Duty			Heavy Duty		
		Max Continuous Current (A)	Typical Output (kW)	Motor Power (HP)	Max Continual Current (A)	Typical Output (kW)	Motor Power (HP)
Order Code	Size						
CGK2100025	A				1.7	0.25	0.33
CGK2100037	A				2.2	0.37	0.5
CGK2100055	A				3	0.55	0.75
CGK2100075	A				4	0.75	1
CGK2D00110	B				5.2	1.1	1.5
CGK2D00150	B				7	1.5	2
CGK2D00220	C				9.6	2.2	3

<b>Normal Duty</b>	For applications which use self-ventilated induction motors and require a low overload capability (e.g. fans, pumps)
<b>Heavy Duty</b>	150% overload current for 60 s. For constant torque applications which require a high overload capability (e.g. cranes, hoists).

## OPTIONS

FUNCTION	ORDER CODE
Remote Keypad	SK-Keypad Remote
	SK-Keypad Plus
Parameter Storage	SmartStick
Fieldbuses	SM-PROFIBUS DP
	SM-DeviceNet
	SM-CANOpen
	SM-INTERBUS
Extra I/O	SM-ETHERNET
	SM-I/O Lite
	SM-I/O Timer
Software	SM-PELV
	CTSoft
PLC Functions	CT Comms cable
	SyPTLite
Power Hardware	LogicStick
	Additional EMC Filters
	Braking Resistors
	Grand cover Size A,B & C
	Top Cover Size A,B & C

## CG Drive-SK DIMENSIONS



## CG Drive-SG

### High Performance AC Drives 5.5kW to 200kW

#### AC inverter-General purpose

The CG Drive SG inverter series has been designed to satisfy the typical needs of modern control systems, where innovative technical solutions and high performance are essential. Especially developed to provide the best performance in applications where high torque is required at the start or at low frequencies. A simple programming structure, guarantees a quick motor "Start-up" or more complex systems regulation, either through the simple to use standard keypad or using the E@syDrives PC tool.

#### A Single Drive for every solution...

- Supply: 3 Phase, 230V...480V 50/60Hz.
- Motor powers from 5.5kW(7.5HP) upto 200kW(250HP).
- Output frequency 500Hz.
- Integrated braking module upto 55kW.
- Speed feed-back with closed loop through encoder (option).
- Digital I/O logic control in PNP and/or NPN configuration.
- 3 Differential analog inputs +/- 10V (or current).
- 2 Analog outputs (+/- 10V).
- 8 Digital inputs.
- 4 Digital outputs (2 static and 2 relays).
- Programmable overload up to 150% in accordance with IEC 146-1-1 Class1/Class 2.
- LED display keypad (optional LCD Multilanguages keypad).
- RS485 Serial communication (ModBus RTU protocol).
- Interfacing with fieldbus protocol as:
- ProfiBus (ProfiDrive)- CANOpen-DeviceNet.
- Integrated CANOpen/DeviceNet version.
- Protection degree Ip20 (option IP54 for external heatsink mounting).

#### Full Flexibility...

- Motor parameters self tuning.
- Programmable and predefined V/F curves.
- 4 Independent programmable ramps.
- 16 Programmable multispeed.
- "Autocapture" function (Flying restart).
- Mains loss detection with controlled stop.
- Programmable autorestart.
- PID Application block.
- Energy saving function.
- Skip frequencies.
- Motor thermal protection.
- Virtual and remote I/O standard management.

#### Accessories

- Dedicated EMC Filters (in compliance with CEE-EN61800-3 european directive).
- Braking resistors (Standard for the whole line).
- Input and output choke (Standard for the whole line).
- NEMA 1 type kit.
- Programming remote keypad kit.

Please refer main catalogue or compact disc for more details...



## CG Drive-SG Standard Configuration

#### "CGG.....-4" Series

- Supply 3ph 230V-15%...480V+10% 50/60Hz ±5%
- Motor powers from 5.5kW upto 200kW
- Standard version with default setting for supply 400V-50Hz
- Standard setting with LED keypad "KBG-1"

#### Environmental Conditions

Enclosures	IP20 (NEMA type 1 option)
Ambient temperature	0 -40°C, +40°C.... +50°C with derating
Humidity	from 5% to 85%, relative humidity (without condensation)
Altitude	up to 1000 m above sea level (beyond 1000 m, current is reduced by 1.2% for each additional 100 m)

#### Certifications and marks

CE	in compliance with CEE directives, for low voltage devices.
EMC	in compliance with CEE - EN 61800-3 electromagnetic compatibility directive, using optional filters.
UL, cUL, CSA	in compliance with American and Canadian market directives.*

\*Available on request

#### Typical Applications...

- Centrifugal Pumps & Fans.
- Compressors.
- Conveyors.
- Converting, Extruders, Winders.
- Material Handling.
- Machine Tool.
- Packaging.
- Test Benches.
- Wire & Cable, wire draw.
- Tube Mills.
- Rolling Mills.
- Glass.
- Paper.

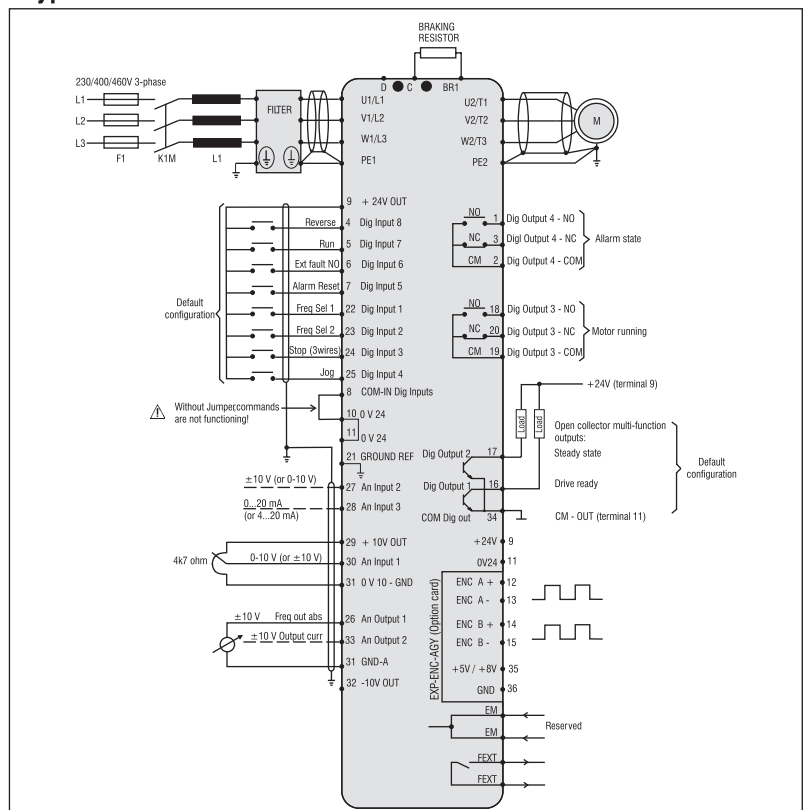
## Rating Table

Model No.	CGG-.....4	2055	2075	3110	3150	4185	4220	4300	4370	5450	5550	6750	7900	71100	71320	81600	82000
200 V Class																	
Recommended Motor Capacity	kW	3	4	5.5	7.5	10	11	18.5	22	22	30	37	55	55	75	90	100
	HP	4	5	7.5	10	10	15	25	30	30	40	50	75	75	100	125	125
Output	Rated Current (A)	12.6	17.7	24.8	33	39	47	63	79	93	114	142	185	210	250	324	400
	Over Load Current Capacity(5)	136 % for 60 Seconds															
Recommended Motor Capacity	kW	3	4	5.5	7.5	9	11	15	18.5	22	30	37	45	55	55	90	100
	HP	4	5	7.5	10	10	15	20	25	30	40	50	60	75	75	100	125
Output	Rated Current (A)	11.5	16.1	22.5	30	35	43	57	72	85	104	129	168	191	227	295	364
	Over Load Current Capacity(6)	150 % for 60 Seconds															
400 V Class																	
Recommended Motor Capacity	kW	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	200
	HP	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175	200	250
Output	Rated Current (A)	12.6	17.7	24.8	33	39	47	63	79	93	114	142	185	210	250	324	400
	Over Load Current Capacity(5)	136 % for 60 Seconds															
Recommended Motor Capacity	kW	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	200
	HP	7.5	10	15	20	25	30	40	50	60	75	100	125	150	175	200	250
Output	Rated Current (A)	11.5	16.1	22.5	30	35	43	57	72	85	104	129	168	191	227	295	364
	Over Load Current Capacity(6)	150 % for 60 Seconds															
Input AC Power Supply	Rated Voltage, Frequency	3 Phase, 400 VAC, 50/60 HZ															
	Tolerable Voltage Fluctuation	230V-15%...480V+10%															
	Tolerable frequency Fluctuation	+/-5%															
Overvoltage Threshold		440 Vdc (for 230 V ac mains) ,820 Vdc(for 400 V ac mains)															
Undervoltage Threshold		230 Vdc (for 230 V ac mains) ,380 Vdc(for 400 V ac mains)															
Protection Class		IP20 (NEMA1 Optional)															
Maximum Braking Torque %		150	150	150	150	150(3)	150(3)	150(3)	150(3)	150(3)	150(3)	(4)	(4)	(4)	(4)	(4)	(4)
Approximate Weight (kg)		4.95	4.95	8.6	8.6	18	18	22	22.2	34	34	59	75.4	80.2	86.5	109	109

## Typical Connection Scheme

### Dimensions & Weight

Model No.	Width mm	Height mm	Depth mm	Weight kg
2055	151.5	306.5	199.5	4.95
2075	151.5	306.5	199.5	4.95
3110	208.0	323.0	240.0	8.60
3150	208.0	323.0	240.0	8.60
4185	309.0	489.0	268.0	18.00
4220	309.0	489.0	268.0	18.00
4300	309.0	489.0	308.0	22.00
4370	309.0	489.0	308.0	22.20
5450	376.0	564.0	308.0	34.00
5550	376.0	564.0	308.0	34.00
6750	509.0	741.0	297.5	59.00
7900	509.0	909.0	297.5	75.40
71100	509.0	909.0	297.5	80.20
71320	509.0	909.0	297.5	86.50
81600	509.0	965.0	442.0	109.00
82000	509.0	965.0	442.0	109.00



## CG Drive - SV

### Field Oriented Vector Inverter 0.75kW to 315kW

An extensive, versatile range

Power supply:

3x230V...480V 50/60Hz

3x575V 50/60Hz

Motor powers from 0.75kW(1Hp) to 315kW (425Hp).

Regulated control modes:

Flux Vector closed-loop with feedback.

Flux Vector open-loop without feedback (Sensorless).

SV is extremely adaptable to every technical requirement of state-of-art process and control systems, not to mention that its extensive range and a series of specialized configurations successfully guarantee virtually universal automation solutions.



## CG Drive - SV

### Version 690V Cabinet & Open Frame Range 75kW to 1.2MW

Power Supply - 3 Phase 690Vac +/-10%, 50/60Hz +/-5%.

Control Modes

- Closed loop flux vector control.
- Flux Vector control with encoder feedback(sensorless).
- V/F scalar control.

Standard IP 20 - for wall mounting, with motor ratings from 75kW to 132kW.

Standard IP 00 - for Panel builders, with motor rating of 250kW.

Special, for DC bus power supply, IP 00 - for panel builders and system integrators, with motor ratings from 500kW to 1200kW.

For more details on CG Drive-SV series please contact us.....



## CG Drive - SV

### Cabinet Solutions 400kW to 800kW

- 3 Phase power supply:  
400Vac - 15%...480Vac + 10%, 50/60 Hz
- Motor ratings: 400kW(500Hp), 500kW(600Hp), 630kW(700Hp),  
800kW(1000Hp).
- Standard version with power supply setting at 400Vac, 50Hz.
- Control modes  
Closed loop flux vector control.  
Flux vector control without encoder feedback.  
V/f Scalar control.
- Housing: IP23 in Cabinet as standard.  
IP54in Cabinet on request.





## CG Drive

### Package Solutions:

CG Drive with Electrical enclosure and LT Motor  
5.5kW to 1.2 MW

Single source for AC Motor, Drive & panel.  
Single source to provide smart solutions.  
Single source to guarantee the performance.  
Single source to provide most economic solutions.

### All your worries are now over because CG provides you

- Single point contact for your drive system.
- CG understands applications better hence provides optimum selection of Motor & Drive Panel.
- Package Performance guarantee through combined testing of job motor & drive in our lab.
- Package supply provides uniform warranty for entire package.
- Entire package gets delivered to site.
- Site commissioning facility for total system.
- After sales support for entire package.

### Standard Configuration:

Line circuit breaker  
Extra-fast line fuses  
Input inductance  
Rectifier bridge and inverter bridge  
(separate or integrated according to power)  
Auxiliary electro mechanics  
Control panel on door  
Protection rating IP42 (IP54 optional)

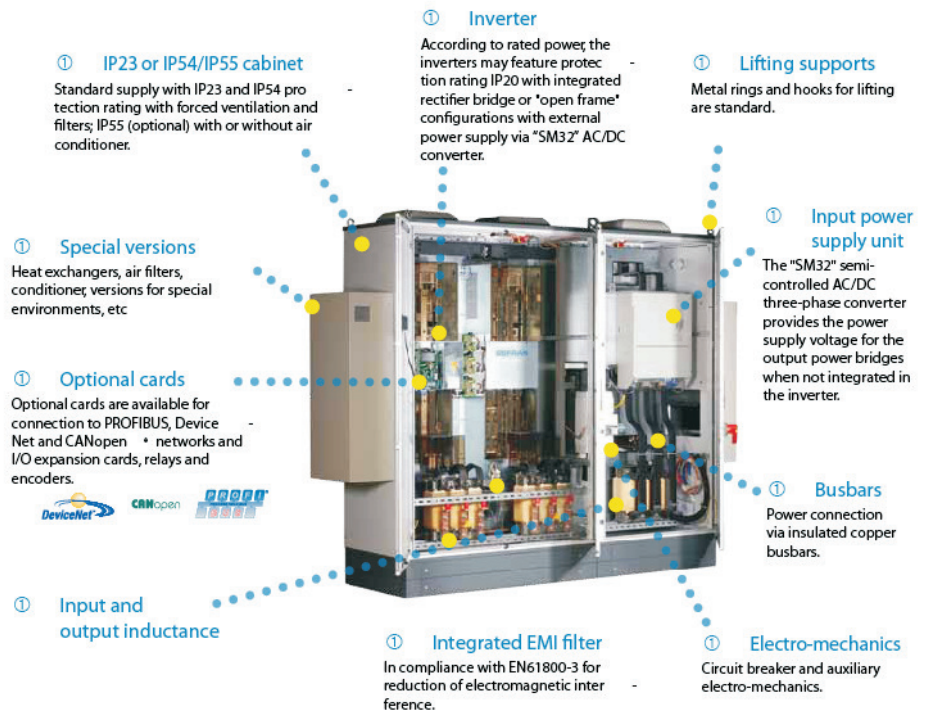
### Control Panel on door

The following are fitted on the door in the standard configurations:  
Start-stop button  
Programming keypad  
Reset and emergency button  
Mains present and alarms light  
Line circuit breaker handle  
Volt meter & Ammeter  
On request, special versions for specific application requirements.



### Optional accessories

Dedicated EMC filters (in compliance with EC Directive EN61800-3)  
Output inductance (normalized for the entire range)  
Dynamic braking module  
Braking resistances (normalized for the entire range)



### Sales Offices

#### Northern Region

**New Delhi** : (011) 30416300/15  
**Jalandhar** : (0181) 3940990/93  
**Lucknow** : (0522) 3018850/79  
**Jaipur** : (0141) 3018800/30

#### Eastern Region

**Kolkatta** : (033) 22829681-85  
**Bhubaneshwar** : (0674) 2531128, 2531429  
**Guwahati** : (0361) 2543830, 2545018

#### Western Region

**Mumbai** : (022) 67558000/8600-01  
**Ahmedabad** : (079) 40012000/201  
**Pune** : (020) 25534675-77  
**Indore** : (0731) 2498269, 2498276  
**Nagpur** : (0712) 2531271, 2560870-71  
**Raipur** : (0771) 4022215

#### Southern Region

**Chennai** : (044) 28257375  
**Bangalore** : (080) 41391908/901  
**Cochin** : (0484) 2370860-63, 2360240  
**Secunderabad** : (040) 40002300/06

NOTE: As the design and manufacture of Crompton Greaves electrical equipment are subject to constant improvement, the product supplied may differ in some details from the specifications and illustrations given in this booklet.

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