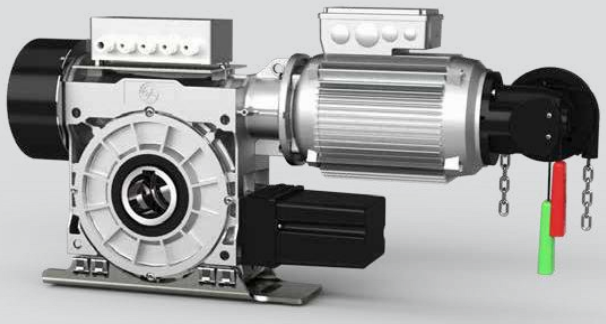
IP65i Enhanced Protection Equipment

- Safedrive® models from 350Nm to 1400Nm
- Ranger models for Roller shutter and Sectional Overhead Doors
- Low level stainless steel hand chain operation as standard
- Totally encapsulated cam operated limit switches
- Enhanced protection controls with anti-condensation heaters.



Description

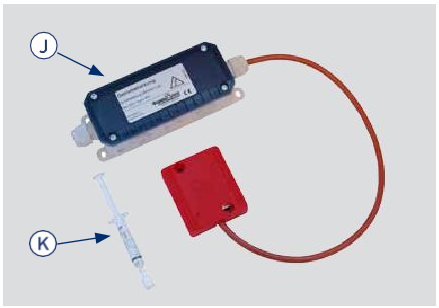
IP65i is an enhanced level of protection over and above the normal IP65 developed for drive units that are to be sited in challenging environments where high humidity and mildly corrosive atmospheres may be encountered. Some typical examples of this type of environment are; Waste transfer sites, Waste processing plants, Composting plants, Sewerage / water treatment plants and other sites where the equipment may be exposed to weather conditions or if coastal, Marine conditions.

Features

The drive units incorporate either stainless steel or specially coated hollow shafts and foot mountings, hand chain operators fitted with stainless steel hand chain, special terminal box for connections to the limits and motor, totally encapsulated limit switches, totally encapsulated brake unit (on drives fitted with an electromagnetic brake), drive unit finished in a special corrosion resistant coating.

Additional options

For environments where temperatures can fall below -5°C the drive unit can be fitted with a thermostatically controlled gear box heater (2 off required on the large gearbox).



Where only a single phase electric supply is available we can provide certain IP65i drive units in a configuration suitable to be able to run off a specially designed Inverter control panel.

Standard Controls

We provide a range of standard IP65i control panels featuring the TS959 and TS971 controllers which are suitable for the environment, the TS control is housed in an IP66 rated GRP enclosure with a viewing window, the enclosure is equipped with a thermostatically controlled anti-condensation heater which requires a permanent 230V mains supply. The panel does not incorporate any push buttons so an external push button station would need to be wired back to the panel, The panel is fitted with an interconnection cable to go to the drive unit the length of which should be specified at quotation stage.

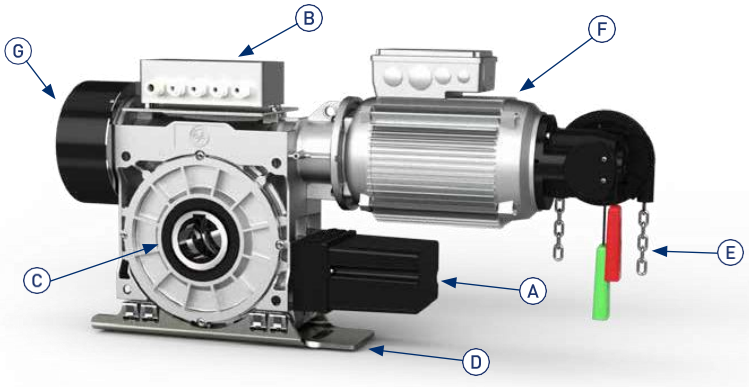
Special Controls

We can offer a proprietary door controller with integrated frequency inverter housed in an IP66 rated GRP enclosure with viewing window, the inverter allows the correctly configured drive unit to be powered from a single phase mains supply. In addition the enclosure is equipped with a thermostatically controlled anti-condensation heater. The panel can also accept various expansion modules. One module allows door status monitoring signals to be connected to a Building Management System. Another module will allow two doors with identical control panels to be interlocked to form an "airlock" system, a further panic override module is also available to allow the doors to be operated independently.

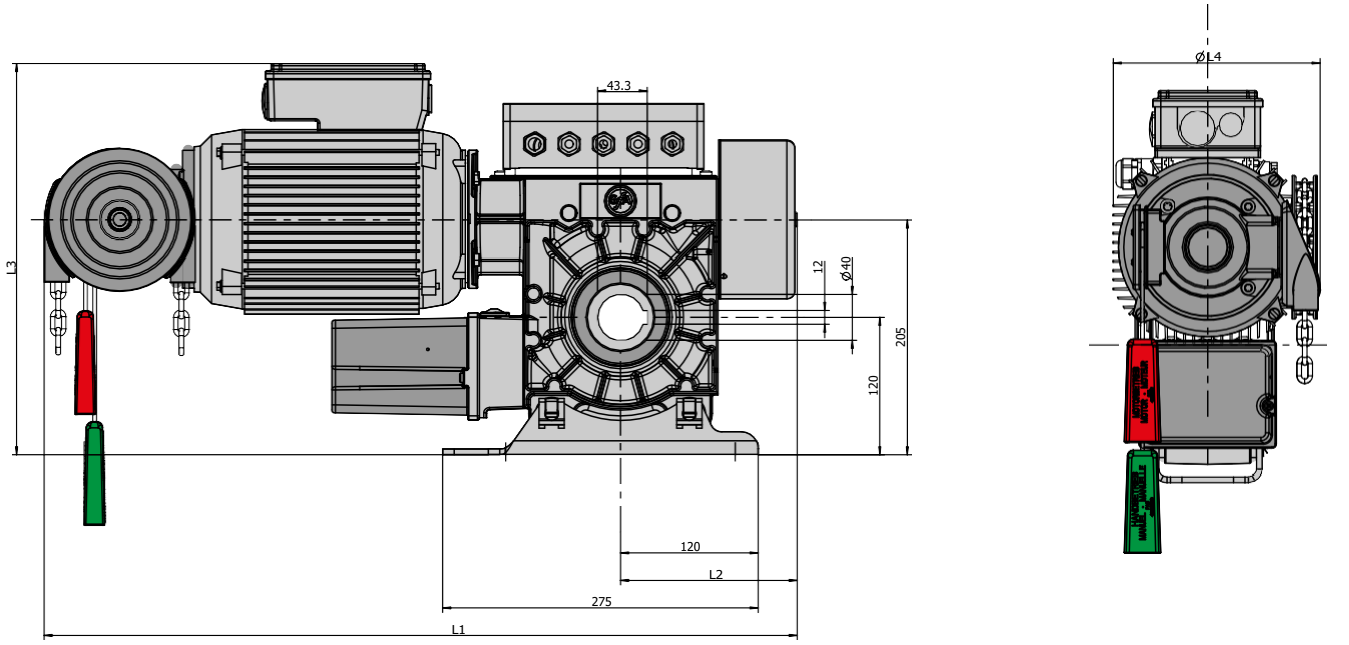
Bespoke Controls

Certain applications may require control systems outside of our normal controls if this is the case then the specification for the controls should be forwarded to our technical department for assessment and quotation.

A Totally Encapsulated Limit Switches
B Special Terminal Box for connecting limits and motor
C Stainless Steel or Specially coated Hollowshaft
D Stainless Steel or Specially coated Foot mount
E Stainless Steel Handchain
F Drive unit finished in special corrosion resistant coating
G Totally Encapsulated Brake Unit (on Drives with Electromagnetic Brake)
H Limit Cover with drain hole (this will be an optional extra for drives which are mounted vertically
I Heater fitted to Gearbox of drive unit
J Heater Connection Box with integrated thermostat
K Heat Sink Paste used when fitting heater to the gearbox

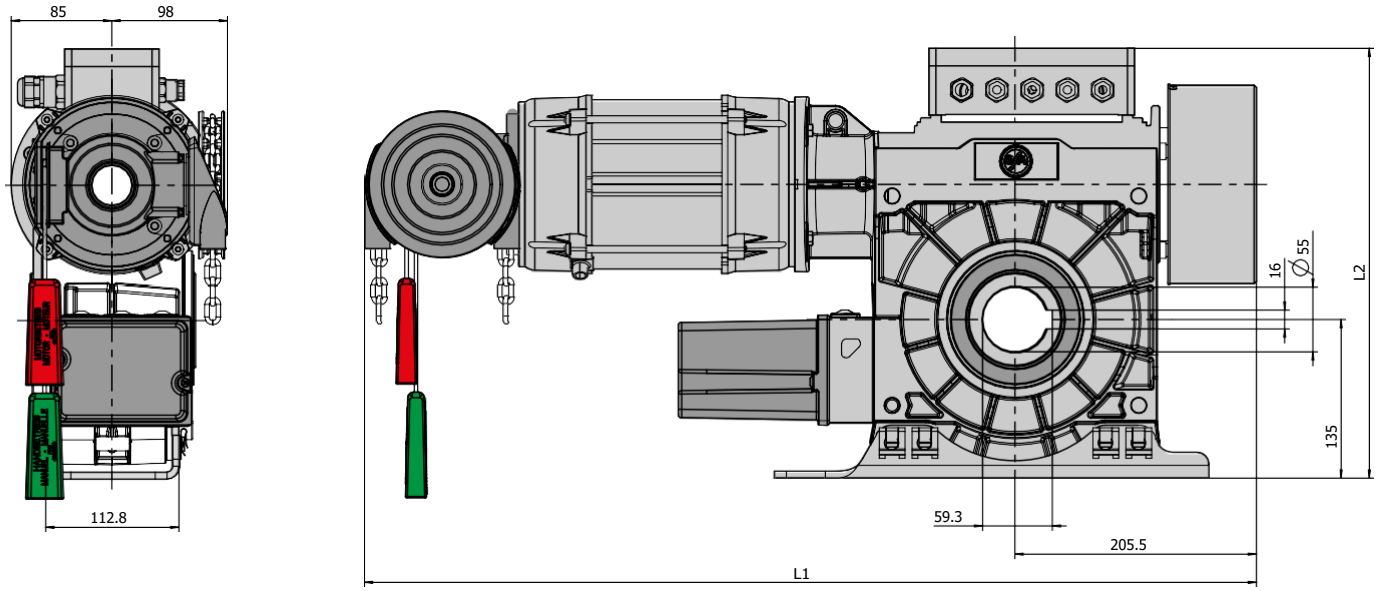


GA35/15G/IP65i, GA45/15G/IP65i, GA55/15G/IP65i & GA65/15G/IP65i



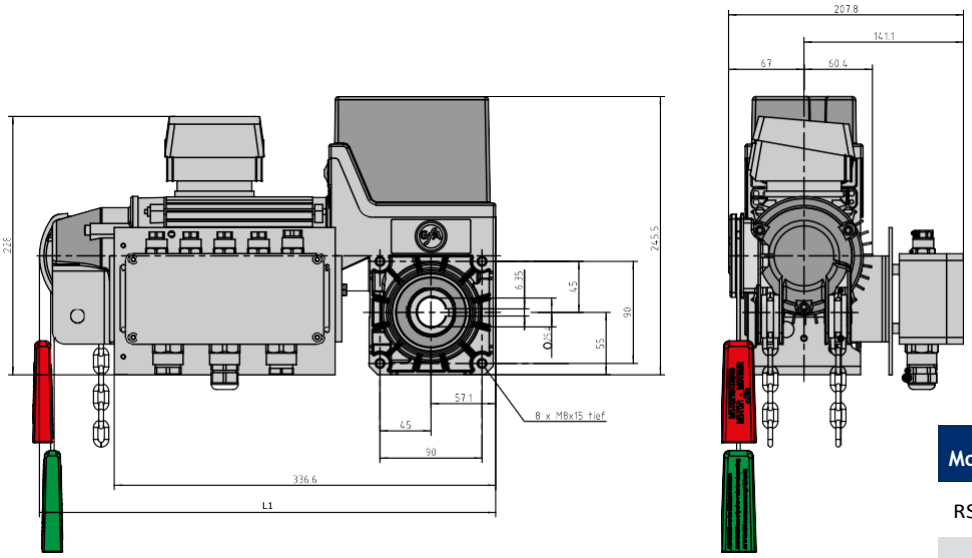
Other Dimensions					
Model	**L1**	**L2**	**L3**	**L4**	**Brake Fitted**
GA35/15G/IP65i	566	N/A	306	164	No
GA45/15G/IP65i	587	N/A	306	177	No
GA55/15G/IP65i	657	154	342	181	Yes
GA65/15G/IP65i	655	154	306	177	Yes

GA85/10G/IP65i, GA100/10G/IP65i & GA140/07G/IP65i



Other Dimensions		
Model	**L1**	**L2**
GA85/10G/IP65i	750	366
GA100/10G/IP65i	760	366
GA140/07G/IP65i	830	382

RS09/24R/IP65i & RP09/32R/IP65i

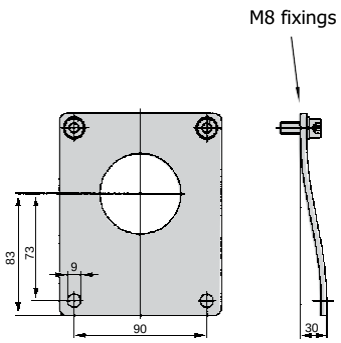


Handing of drive should be advised at time of order

Model	L1	Mounting System
RS09/24R/IP65i	403	RK6
RP09/32R/IP65i	440	RK1 or RK3

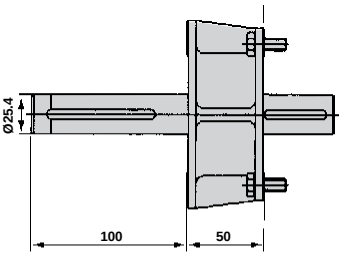
Torque mount

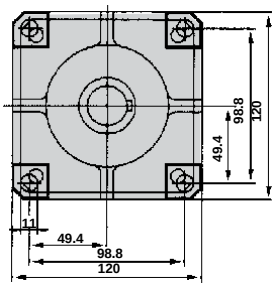
RK6 for sectional doors



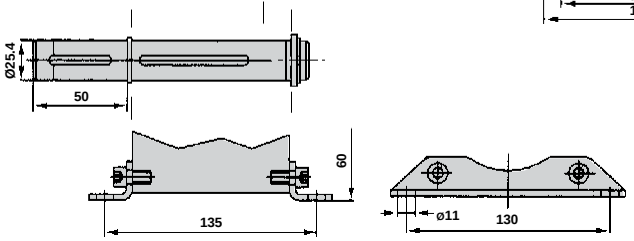
Drive mounting and shaft details

RK1





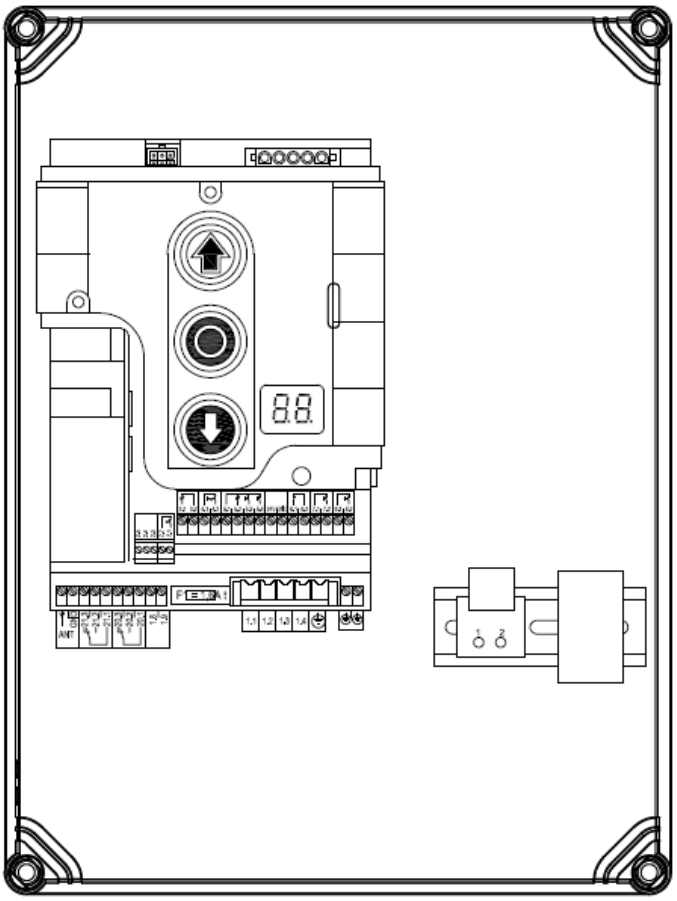
RK3



Model		Safedrive	Safedrive	Safedrive	Safedrive	Safedrive	Safedrive	Safedrive	Ranger	Ranger
Part Ref		GA35/15	GA45/15	GA55/15	GA65/15	GA85/10	GA100/10	GA140/07	RP09/32	RS09/24
Output Torque	Nm	350	450	550	650	850	1000	1400	90	90
Output Speed	rpm	15	15	15	10	10	10	7	32	24
Supply Voltage	V	3 x400/PE	3 x 400/PE	3 x 400/PE	3 x 400/PE	3 x 400/PE	3 x 400/PE	3 x 400/PE	3 x 400/PE	3 x 400/PE
Motor rated current	A	2.55	3	4.5	4.9	4.9	6.5	4.1	2	1.2
Frequency	Hz	50	50	50	50	50	50	50	50	50
Locking Torque	Nm	760	1100	1100	1100	2800	2800	2800	N/A	N/A
Safety brake approval no.		14-003612-PR03	14-003612-PR03	14-003612-PR03	14-003612-PR03	14-003305-PR01	14-003305-PR01	14-003305-PR01	N/A	N/A
Maxhandforce	N	133	170	158	179	253	282	212		
Max movements per hr	H^{-1}	16	12	16	10	14	12	10	16	20
Limit switch capacity	Turns	20	20	20	20	20	20	20	40	20
Weight	Kg	35	37	42	44	62	57	63	25	22
Hollow shaft dia	mm	40	40	40	40	55	55	55	1"	1"
Protection		IP65i	IP65i	IP65i	IP65i	IP65i	IP65i	IP65i	IP65i	IP65i

CONTROL PANELS - CC61071, CC61090 & CC61027

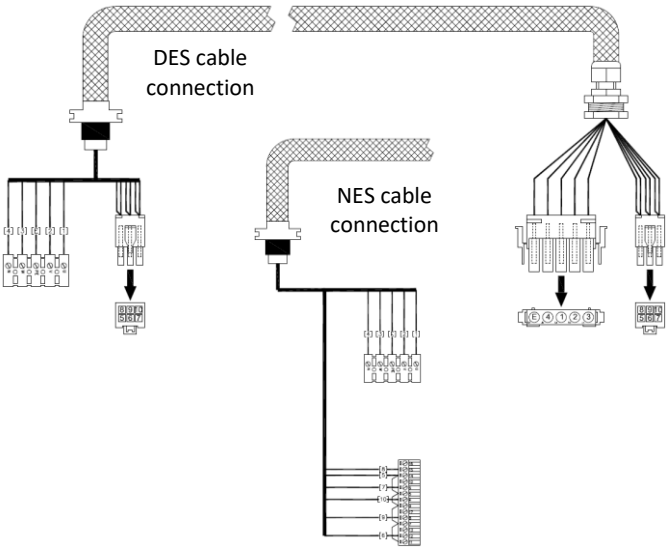
CC61071 & CC61090



CC61071 & CC61090

This panel comprises a TS 971 or TS 959 in an IP66 GRP Enclosure with transparent door; it is fitted with a thermostatically controlled anti-condensation heater.

GE23955 & GE24117

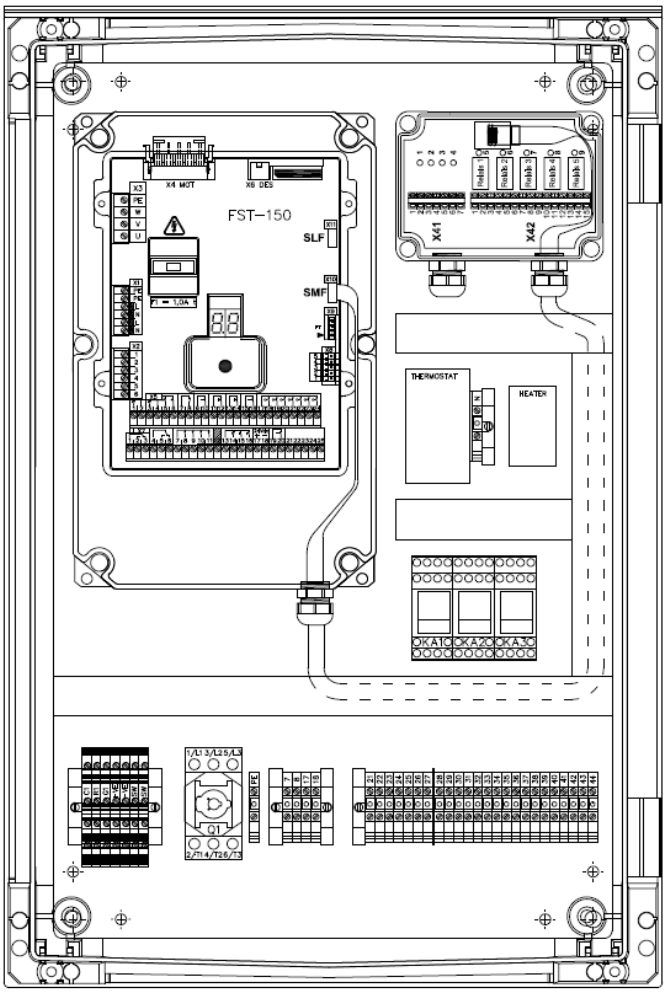


GE23955 & GE24117

Digital and mechanical limit cables available in different lengths and fitted with a M40 glad for IP65i controller applications. An NES cable can be supplied for connection to IP65i terminal boxes on request.

Part Number	Part	Description
20003955 00150	GE23955/015	1.5m cable with M40/M20 gland for non gfa enclosure (DES)
20003955 00300	GE23955/030	3m cable with M40/M20 gland for non gfa enclosure (DES)
20003955 00500	GE23955/050	5m cable with M40/M20 gland for non gfa enclosure (DES)
20003955 00700	GE23955/070	7m cable with M40/M20 gland for non gfa enclosure (DES)
20003955 00900	GE23955/090	9m cable with M40/M20 gland for non gfa enclosure (DES)
20003955 01300	GE23955/130	13m cable with M40/M20 gland for non gfa enclosure (DES)
20004117 00300	GE24117/030	3m cable with M40/M20 gland for non gfa enclosure (NES)
20004117 00500	GE24117/050	5m cable with M40/M20 gland for non gfa enclosure (NES)
20004117 00700	GE24117/070	7m cable with M40/M20 gland for non gfa enclosure (NES)
20004117 00900	GE24117/090	9m cable with M40/M20 gland for non gfa enclosure (NES)
20004117 01300	GE24117/130	13m cable with M40/M20 gland for non gfa enclosure (NES)

CC61027



CC61027

This is an example of a bespoke panel incorporating the FST150 inverter panel with status monitoring and additional interlocks.

Drive Heaters

On IP65i drives heater units can be fitted for low temperature environments, the drive units have a normal working temperature range of -10°C to +40°C. If the ambient temperature is likely to fall below this then the drive unit with the gearbox heater should be supplied. This requires a permanent 230V AC supply and is thermostatically controlled to operate at -5°C. The SG85 gearboxes would be fitted with one heater and the SG115 gearboxes would be fitted with 2 heaters. It is advisable to insulate the drive unit when heaters are fitted, as they are only rated at 50W the heat would dissipate to the atmosphere rather than heating up the drive unit and keeping the gearbox oil to the correct viscosity.

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