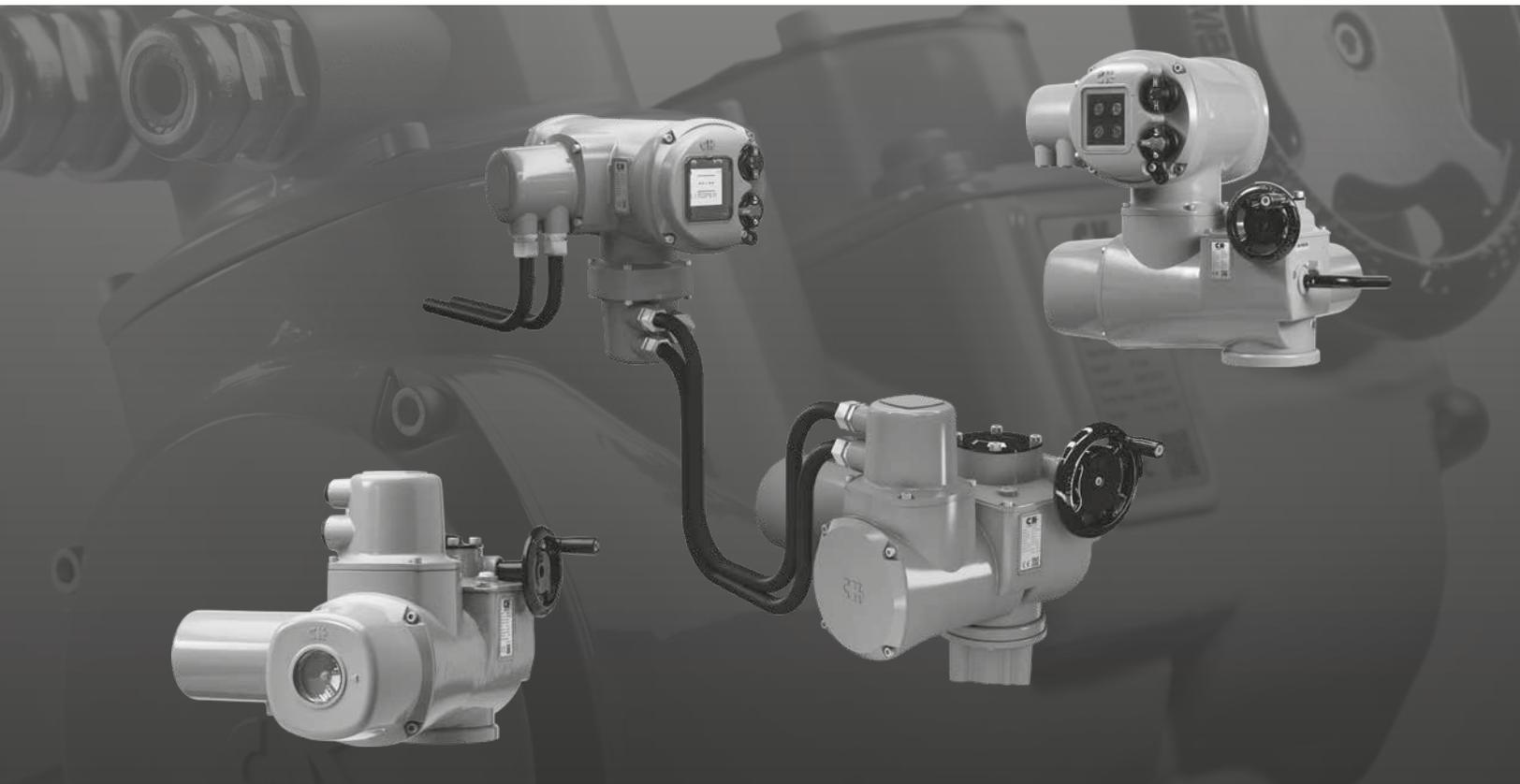


# rotork®

Keeping the World Flowing  
for Future Generations

## CK Range Spare Parts Manual



### Modular Design Electric Valve Actuators

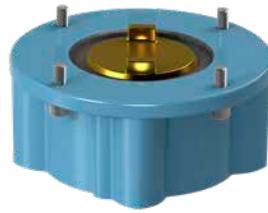
**Note:**

Full details from the actuator nameplate must be given when enquiring about or ordering spare parts

## Spares Modules



**Module 1:**  
Gearcase



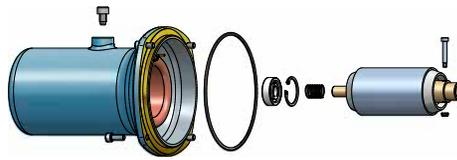
**Module 2:**  
Bases & Drive Couplings



**Module 3:**  
Mechanical Switch Mechanism  
/ Digital Switch Mechanism



**Module 4:**  
Handwheel



**Module 5:**  
Motor



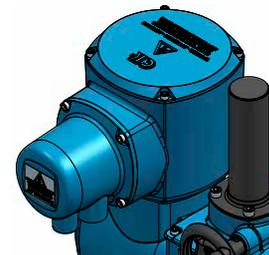
**Module 6:**  
Centronik



**Module 7:**  
Terminal Plug



**Module 8:**  
Additional Indicator Drive



**Module 9:**  
Standard Single-phase  
Starter Pack



**Module 20:**  
Mechanical Switch Mechanism  
/ Digital Switch Mechanism Cover



**Module 66:**  
Atronik

**Note:** Full details from the actuator nameplate must be given when enquiring about or ordering spare parts

### Health and Safety

The electrical installation, maintenance and use of these actuators should be carried out in accordance with the National Legislation and Statutory Provisions relating to the safe use of this equipment, applicable to the site of installation.

**For the UK:** Electricity at Work Regulations 1989 and the guidance given in the applicable edition of "IEE Wiring Regulations" should be applied. Also the user should be fully aware of his duties under the Health and Safety Act 1974.

**For the USA:** NFPA70, National Electrical Code® is applicable.

The mechanical installation should be carried out as outlined in the manual and also in accordance with relevant standards such as British Standard Codes of Practice.

Only persons competent by virtue of their training or experience should be allowed to install, maintain and repair Rotork actuators. Work undertaken must be carried out in accordance with instructions in the manual. The user and those persons working on this equipment should be familiar with their responsibilities under any statutory provisions relating to the Health and Safety of their workplace.

### **WARNING: Motor Temperature**

**With excessive use the motor surface temperature could reach 132 °C (270 °F).**

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### Before starting work on actuator

Before commencing work, isolate all electrical supplies to the actuator and observe site safety regulations.

On completion of repair, refer to publication PUB111-007 for commissioning and start up procedures.

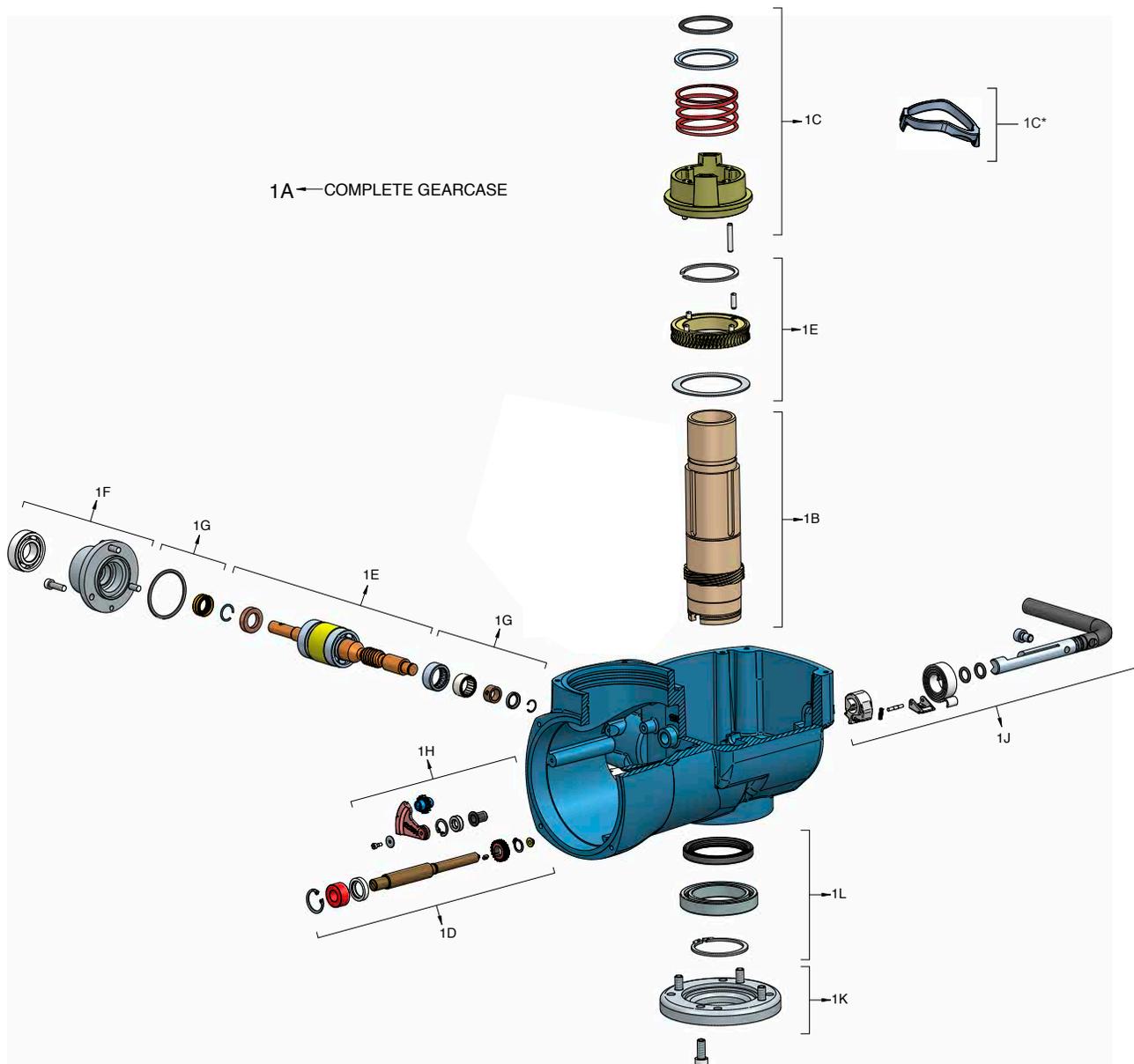
Remember that your actuator is only as watertight as you make it, after completing work. Conduit entries should be sealed in accordance with surrounding environment and with any requirements of the regulatory authority.

Seal unused entries with threaded metal plugs.

### Ordering of spare parts

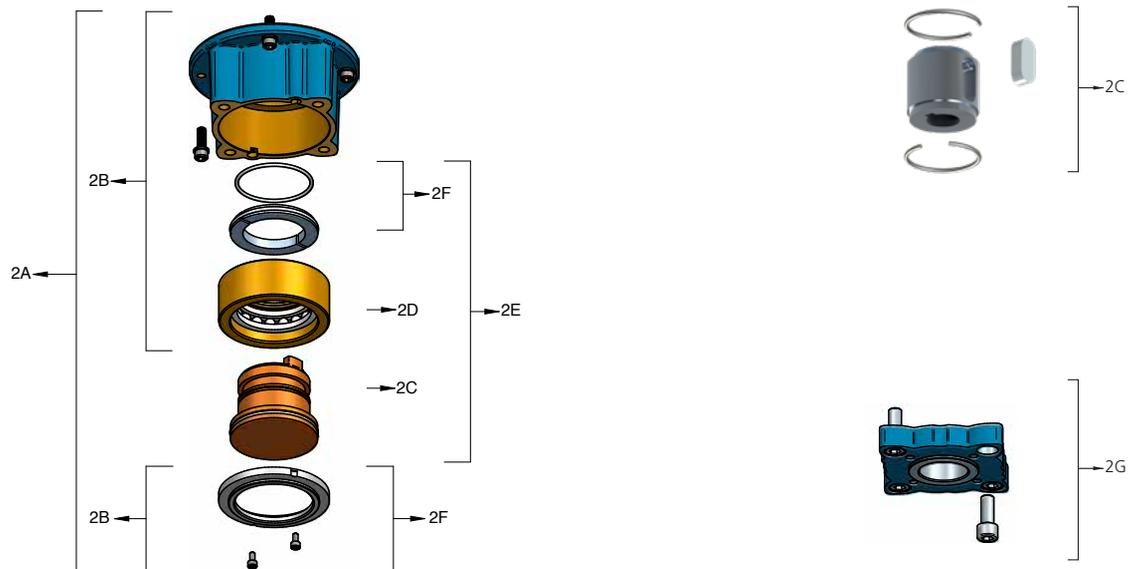
**It is essential when ordering a spares module to give the actuator type and serial number.**

Additional information obtained from the actuator name plate would be helpful to enable Rotork to double check the actuator specification. Spares modules may be ordered from your local representative, valve supplier, or direct from Rotork.



- |  |   |
|--|---|
| <p>1A Complete gearcase, centre column, wormshaft &amp; wormwheel, torque spring pack</p> <p>1B Centre column</p> <p>1C Sliding clutch, coil spring, washer, o-ring.<br/>* NOTE: Yoke only fitted in CK500.</p> <p>1D Switch mechanism / encoder drive shaft, bush, clip, seal</p> <p>1E Wormwheel &amp; wormshaft including spring pack</p> <p>1F Wormshaft thrust end cap bearing assembly</p> | <p>1G Wormshaft maintenance kit. Bearings, seals, o-rings, screws etc.</p> <p>1H Torque mechanism, lever, quadrant gear, gear drive</p> <p>1J Hand / Auto mechanism, lever, cam, spring, stop bolt, seal</p> <p>1K Gearcase base flange plate</p> <p>1L Gearcase maintenance kit. O-rings, seals, bearings, circlips, screws etc.</p> |
|--|---|

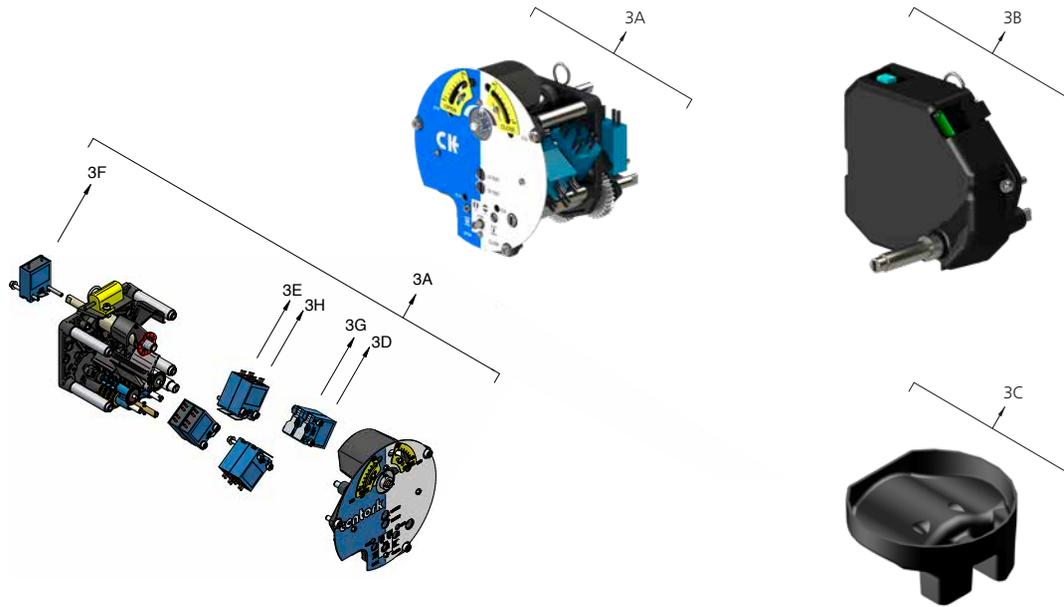
## Spares Module 2: Bases: Thrust / Non-Thrust



- 2A Thrust base assembly complete, all variants
- 2B Thrust base assembly less drive coupling
- 2C Drive coupling only
- 2D Thrust bearing assembly only
- 2E Drive coupling and thrust bearing assembly

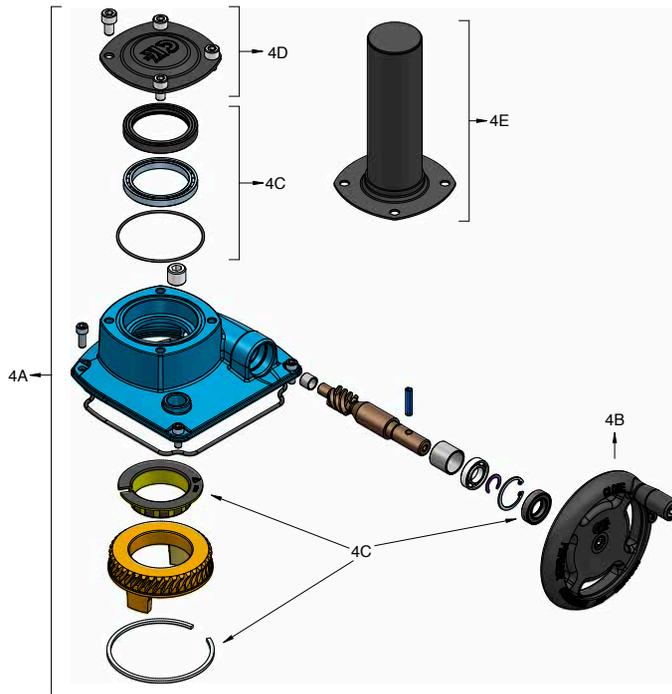
- 2F Base maintenance kit. O-rings, split ring, retainer clip
- 2G Thrust base adaptor F10 to F7 / FA10 to FA7  
Note: only available for CK30/60

## Spares Module 3: Mechanical Switch Mechanism / Digital Switch Mechanism



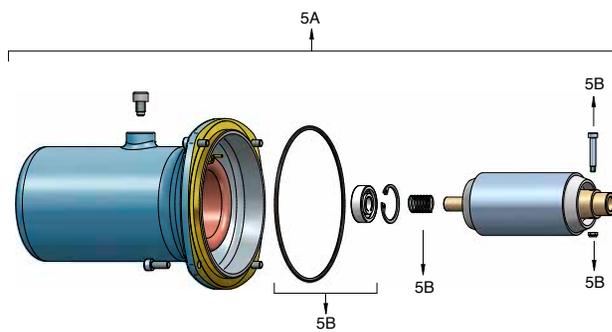
3A	Mechanical switch mechanism	3F	Blinker switch including loom
3A1	Mechanical switch mechanism (anti-clockwise)	3G	Additional torque indication switches x2 including looms
3B	Digital switch mechanism	3H	Additional limit switches x2 including looms
3C	Cable guide	3J	Heater
3D	Torque switches x2 including looms		
3E	Limit switches x2 including looms		

## Spares Module 4: Handwheel



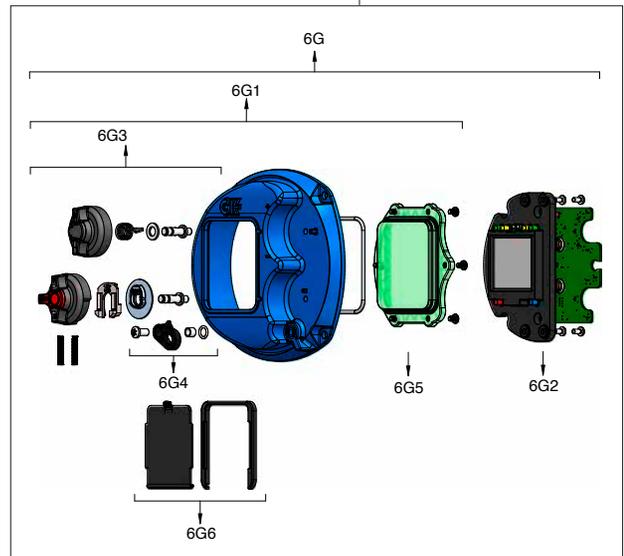
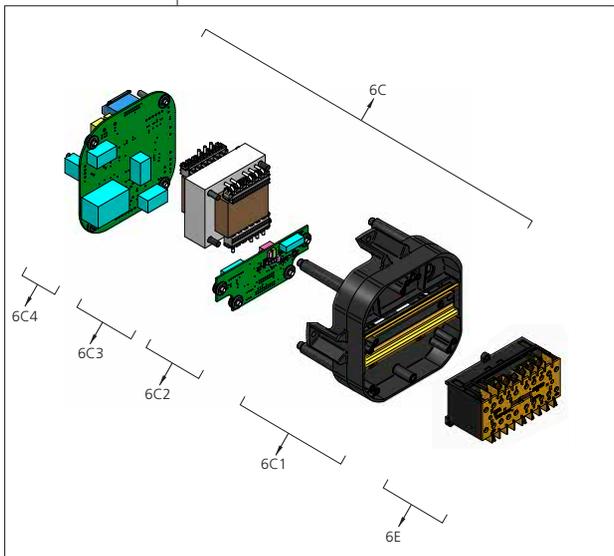
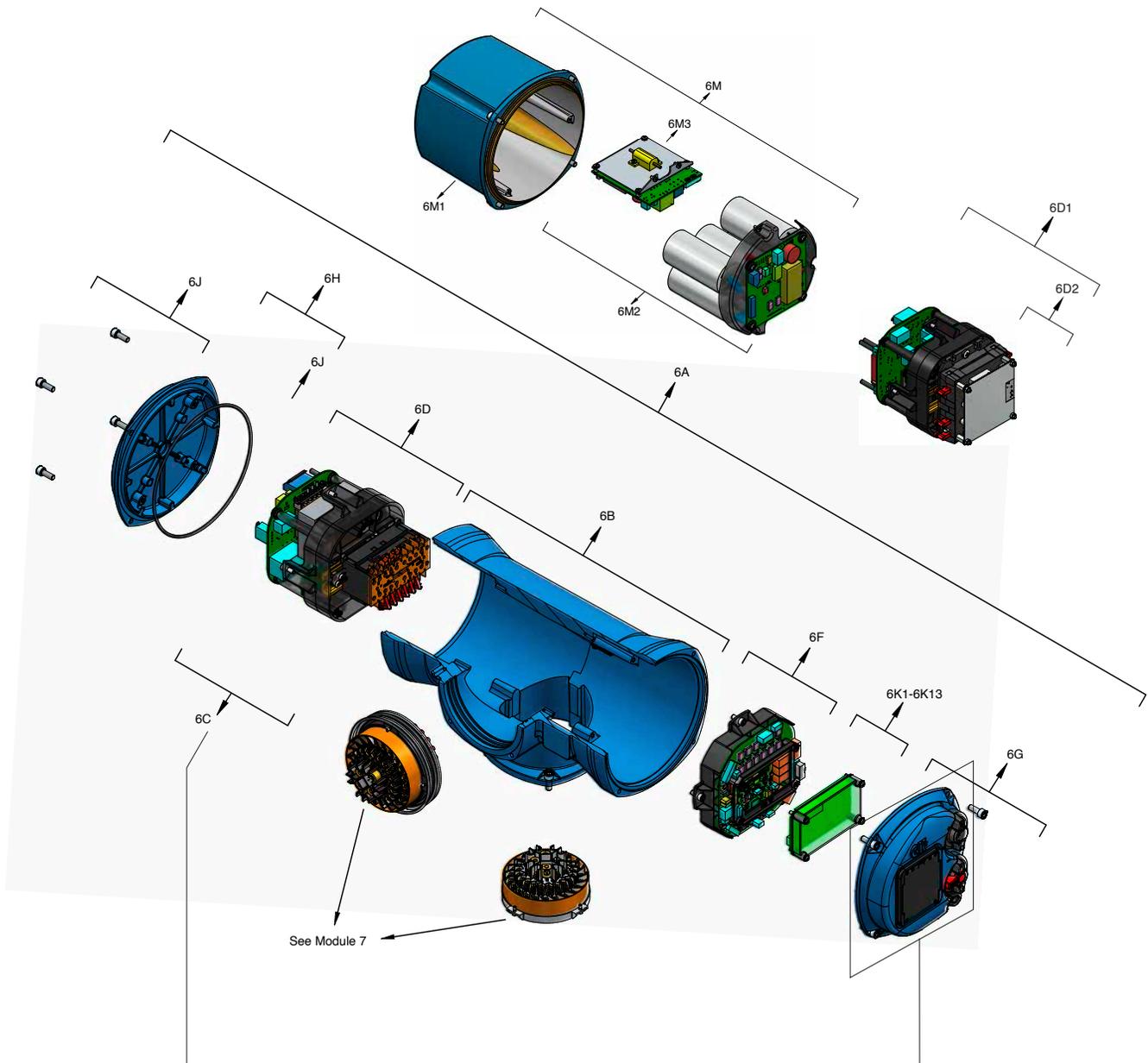
- 4A Handwheel assembly complete - worm gearing & hand wheel
- 4B Handwheel only
- 4B1 Anti-clockwise label and screws
- 4C Side handwheel maintenance kit, bearing, o-rings, seals etc.
- 4D Hand wheel spur box cover, plastic cover, o-ring, screws
- 4E Spindle cover tube

## Spares Module 5: Motor



- 5A Motor assembly complete, stator/rotor, Motor cover, bearing, screws & o-ring
- 5B Motor maintenance kit, bearing, spring, screws & o-ring

Spares Module 6: Centronik

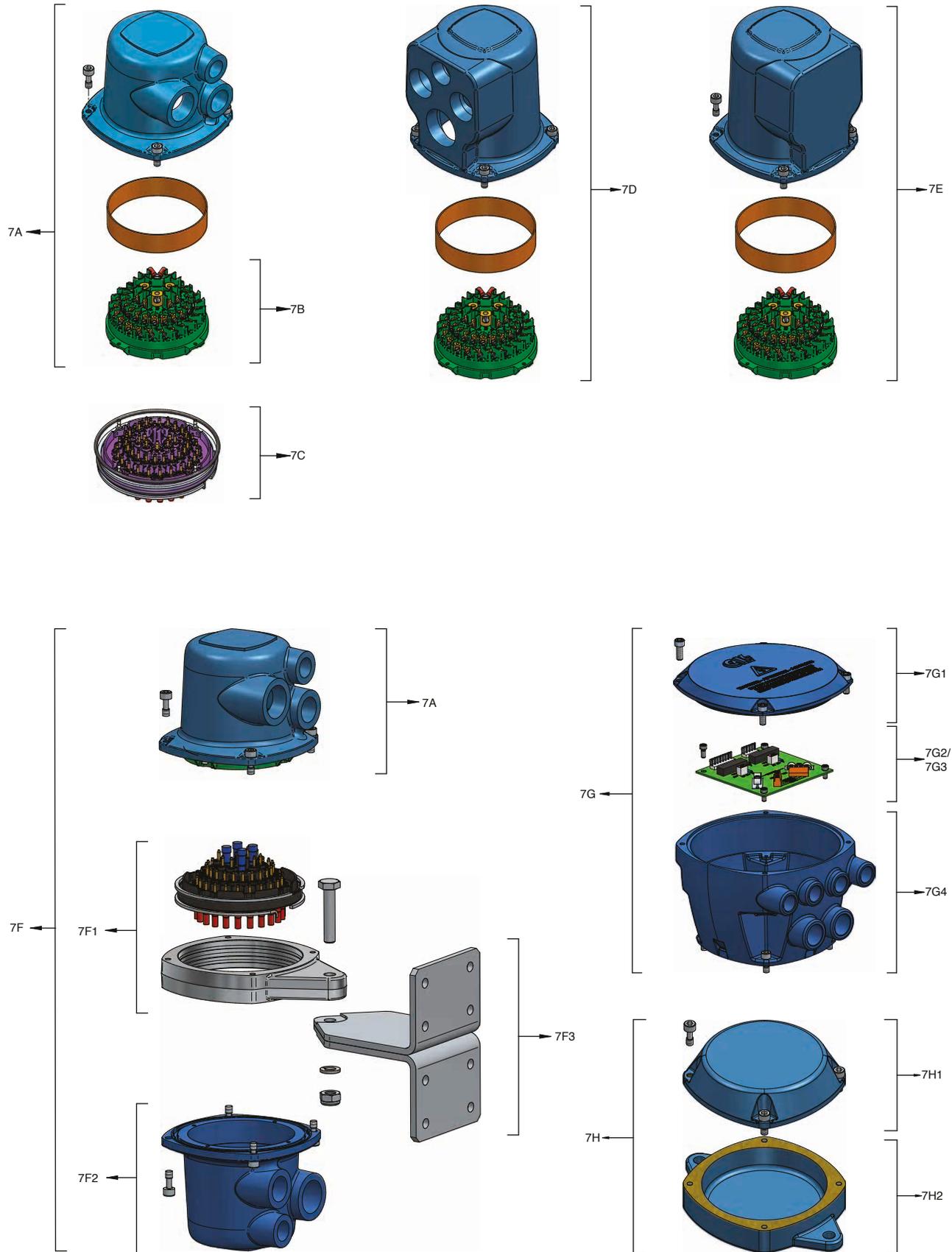


## Spares Module 6: Centronik

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6A	Centronik assembly complete	6K1	Profibus® DP
6B	Centronik cast body only	6K2	Profibus® DP dual channel
6C	Power module only	6K3	Modbus® RTU
6C1	Power module chassis	6K4	Modbus® RTU dual channel
6C2	Power PCB	6K5	Foundation Fieldbus®
6C3	Transformer	6K6	HART®
6C4	Fuse PCB	6K7	Extra 4 indication relay card
6D	Power module including reversing contactor	6K8	Analogue positioner + current position transmitter
6D1	Power module including solid state starter	6K9	Analogue current position transmitter (CPT)
6D2	Solid state starter only	6K10	Analogue current torque transmitter (CTT)
6E	Reversing contactor assembly only	6K11	Analogue current position transmitter (CPT) Loop powered
6F	Control PCB	6K12	Analogue current torque transmitter (CTT) Loop powered
6G	User interface cover complete assembly - Cover, control knobs, HMI PCB, o-ring	6K13	<i>Pakscan</i> ™
6G1	Cover, control knobs. Not including HMI PCB	6L	Auxiliary DC to DC card
6G2	User interface PCB	6M	Single-phase motor starter capacitor pack Variable item
6G3	Both control knobs -Open Close and Local Remote	6M1	Deep cover - o-ring and screws
6G4	Locking latch assembly	6M2	Capacitor pack and switch PCB
6G5	Window	6M3	Switch PCB
6G6	Window UV cover		
6G7	Bluetooth® PCB		
6H	End cover including o-ring		
6J	Cover screws and o-rings		

Spares Module 7: Terminal Plug / Connector Blocks



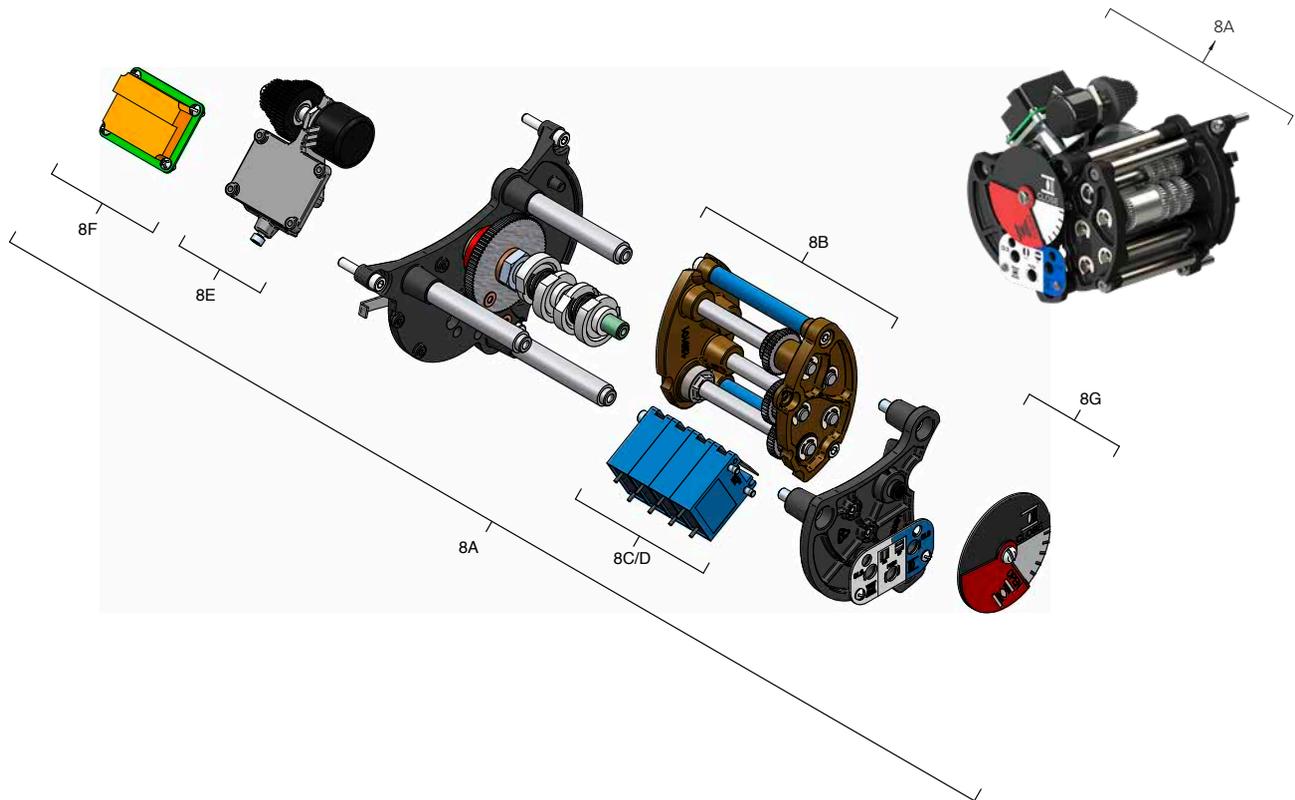
## Spares Module 7: Terminal Plug / Connector Blocks

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7A	Complete assembly
7B	Connector block with sockets
7C	Connector block with pins
7D	Plug assembly 4 conduit entries including connector block
7E	Plug assembly blank for customer customisation including connector block
7F	Remote mounting kit complete
7F1	Remote mounting frame
7F2	Connector housing
7F3	Mounting bracket, M10 fixing bolt, lock nut
7F4	DSM isolator PCB (not shown)
7G	Profibus disconnect module including PCB and connector block
7G1	Module cover
7G2	Profibus disconnect PCB only
7G3	Profibus dual channel disconnect PCB only
7G4	Profibus disconnect housing and connector block only
7H	Parking module
7H1	Parking cover
7H2	Parking frame
7J	Terminal plug maintenance kit, o-ring, snap ring, spacer, screws (not shown)

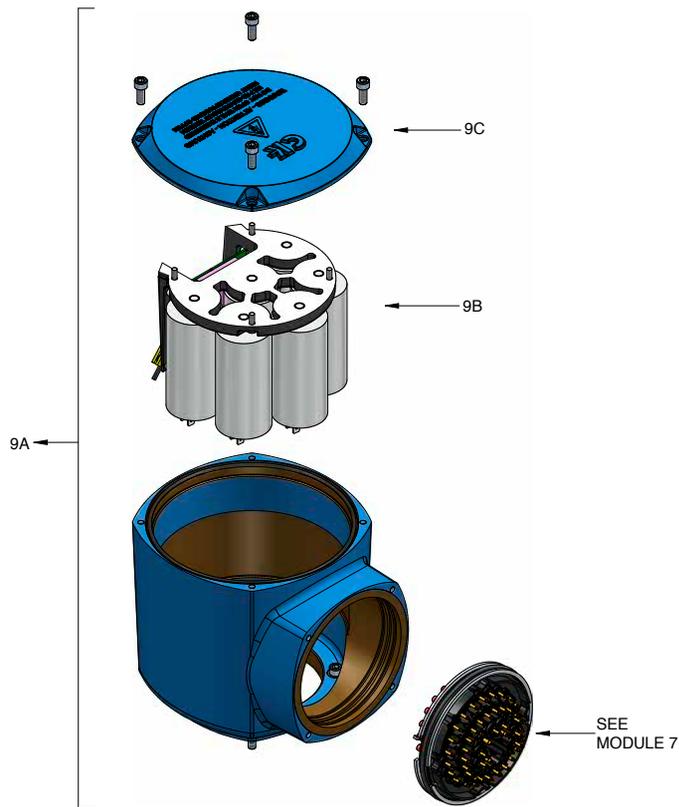
**Note: The same connector blocks are used for terminal plug / Centronik and Centronik / gearcase.**

## Spares Module 8: Additional Indicator Drive



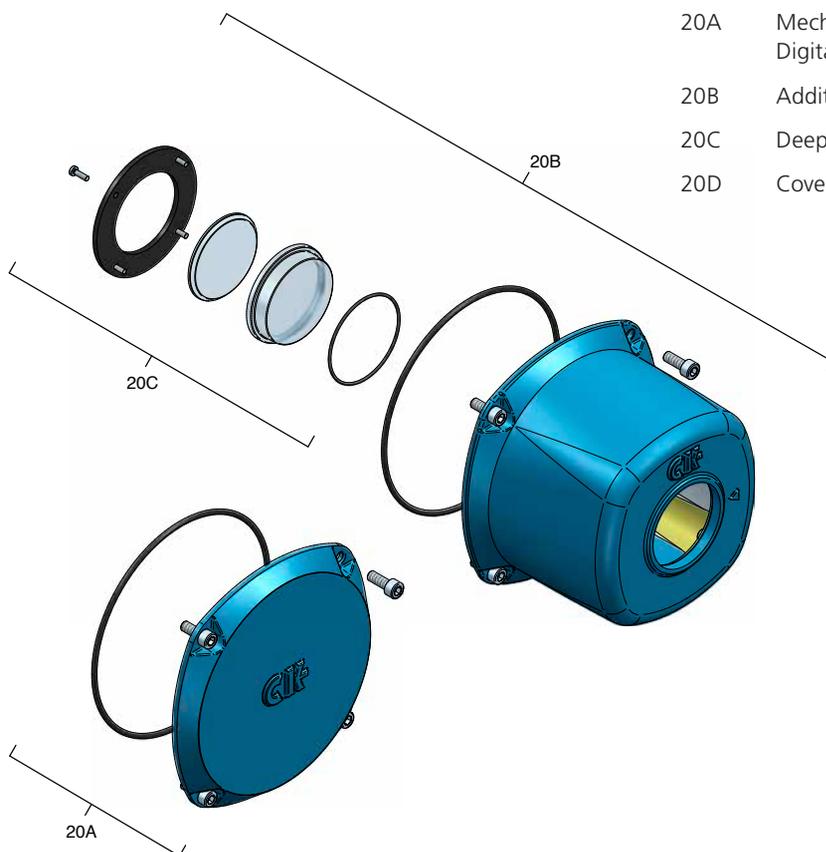
8A	Gear drive including, position indicator, switches Variable item	8E	Potentiometer + drive gear
8B	Gear cassette	8F	Analogue current position transmitter (CPT) Standard build only.
8C	Middle travel switches x2	8G	Mechanical position indicator disc
8D	Middle travel Switches x4		

**Spares Module 9: Standard single-phase motor starter pack**



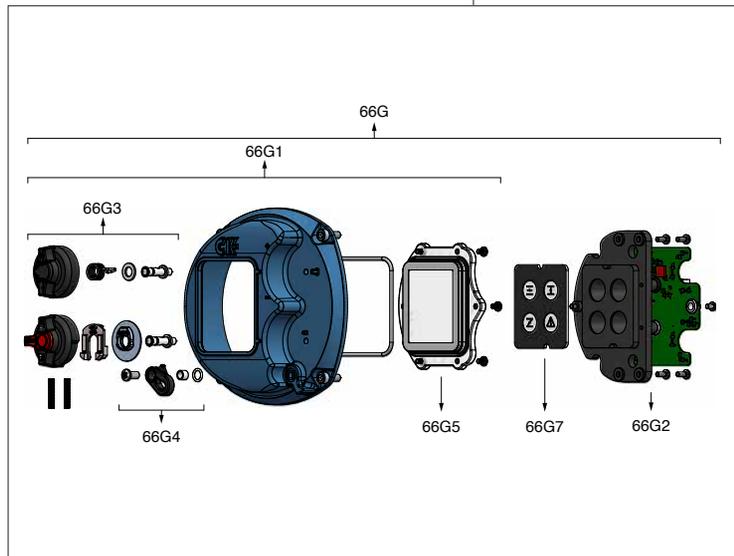
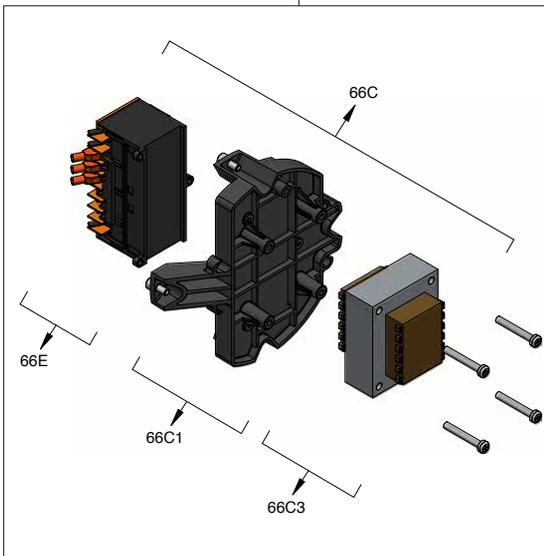
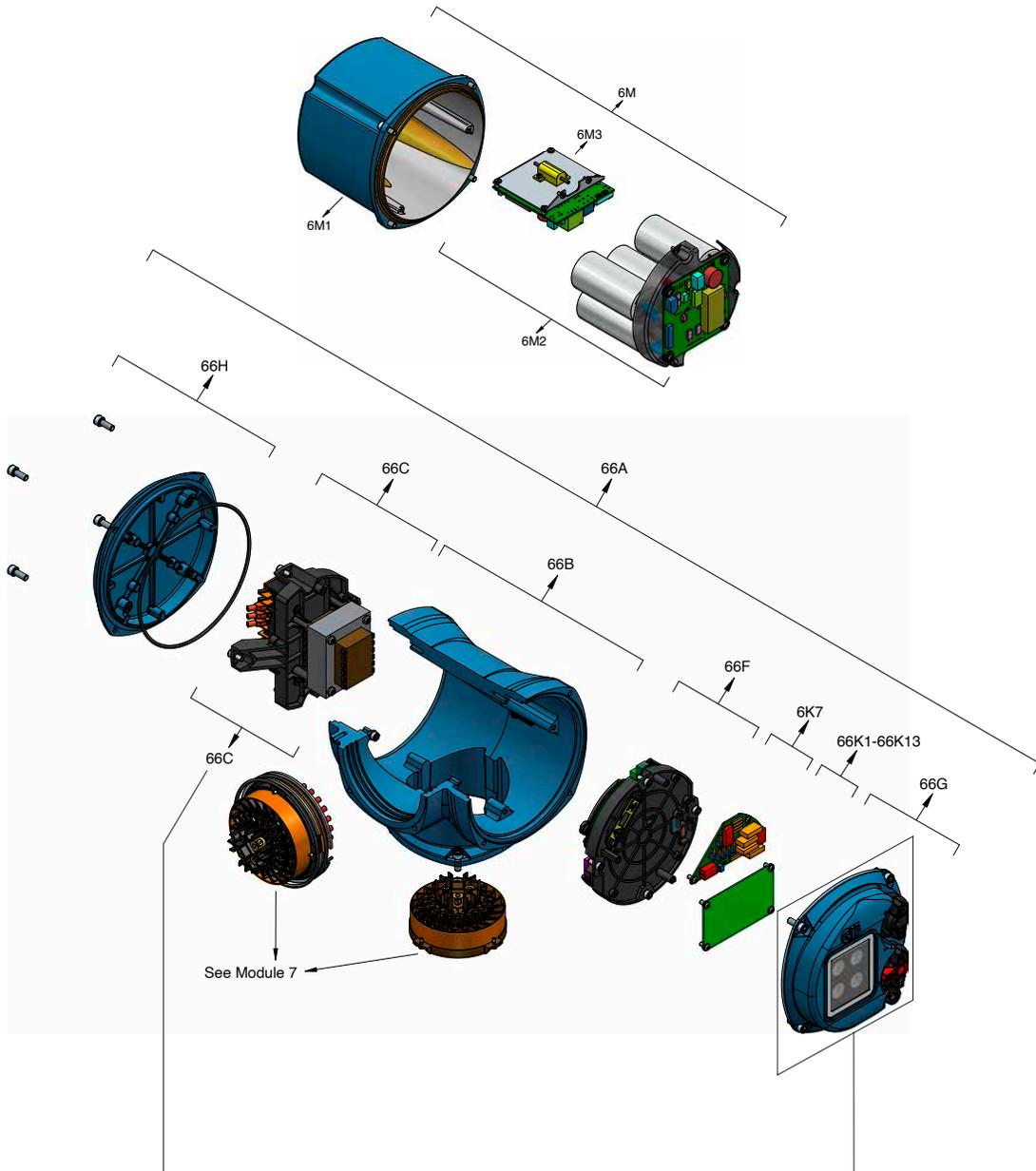
- 9A Standard single-phase motor starter pack complete  
Variable item
- 9B Single-phase motor starter capacitor pack  
Variable item
- 9C Cover

**Spares Module 20: Mechanical Switch Mechanism / Digital Switch Mechanism Cover**



- 20A Mechanical Switch Mechanism /  
Digital Switch Mechanism cover
- 20B Additional Indicator Drive deep cover
- 20C Deep cover window
- 20D Cover maintenance kit. O-ring, screws.

Spares Module 66: Atronik



## Spares Module 66: Atronik

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66A	Atronik assembly complete	66K1	Profibus® DP
66B	Atronik cast body only	66K3	Modbus® RTU
66C	Power module assembly including reversing contactor	66K5	Foundation Fieldbus®
66C1	Power module chassis only	66K6	HART®
66C3	Transformer only	66K7	Extra 4 indication relay card
66E	Contacting only	66K8	Analogue positioner + current position transmitter PCB
66F	Control & Power PCB	66K11	Analogue positioner + loop powered current position transmitter PCB
66G	User interface complete assembly, LED status PCB, o-ring & screws	66K13	<i>Pakscan</i> ™
66G1	Cover assembly, control knobs. Not including LED status PCB		
66G2	LED status PCB		
66G3	Both control knobs, Open / Close and Local / Remote.		
66G4	Locking latch assembly		
66G5	Window		
66G7	Window icon card		
66H	End cover including o-ring and screws		
66J	Cover screws and o-rings kit		

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