IMI NORGREN

Excelon® Plus

Air Preparation Range 1/2”
Installation and Maintenance Instructions

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https://www.imi-precision.com/excelon-plus

TECHNICAL DATA

Fluid:	Compressed air
Maximum pressure:	Transparent bowl: 10 bar (145 psig) Metal bowl: 20 bar (290 psig)
Operating temperature*:	Transparent bowl: -10 °C to +60 °C (+14 °F to +140 °F) Metal bowl: -20 °C to +65 °C (-4 °F to +149 °F) * Air supply must be dry enough to avoid ice formation at temperatures below +2 °C (+35 °F)
Particle removal:	5 µm & 40 µm filter elements
Oil removal:	Coalescing and vapour cartridge elements
Air quality:	Within ISO 8573-1, Class 6 (5 µm) and Class 7 (40 µm)
Manual drain connection:	1/8”
Automatic drain connection:	1/4” & 6 mm PIF options
Port threads:	3/8”, 1/2” and 3/4” PTF and ISO G
Typical flow:	100 l/sec - with 10 bar (150 psig) inlet pressure, 6.3 bar (90 psig) set pressure and 1 bar (15 psig) drop from set
Materials:	Body - Aluminium Covers - ABS Bowl - Aluminium or Polycarbonate/PP Valve - PP/Geolast® Elements - Sintered PP Elastomers - Nitrile
Service kits:	See illustrations below

II 2 GD
Ex h IIC T6 Gb
Ex h IIIC T85°C Db * See overleaf for ATEX declaration of conformity.

CAUTION
Water vapour will pass through these units and could condense into a liquid form downstream as air temperature drops. Install an air dryer if water condensation could have a detrimental effect on the application.

WARNINGS
1. These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under Technical Data.
2. Polycarbonate plastic bowls can be damaged and possibly burst if exposed to such substances as certain solvents, strong alkalis, compressor oils containing ester-based additives or synthetic oils. Fumes of these substances in contact with the polycarbonate bowl, externally or internally, can result in damage.
3. Use metal bowl in applications where a plastic bowl might be exposed to substances that are incompatible with polycarbonate.
4. An outlet pressure more than the pressure setting could cause downstream equipment to rupture or malfunction. Install a pressure relief device downstream of the filter-regulator/regulator. Do not modify or interfere with the adjusting mechanism.
5. The relief pressure and flow capacity of the relief device must satisfy system requirements.
6. The accuracy of the indication of pressure gauges can change both during shipment (despite care in packaging), and during the service life. Ensure the gauge readings are accurate if a pressure gauge is to be used with these products and if inaccurate indications may be hazardous to personnel or property.
7. Before using these products with fluids other than air, non-industrial applications or for life-support systems, consult IMI Precision Engineering.

INSTALLATION
1. Turn off air pressure prior to installing units into the air-line. Units should be installed:
- with air flow in the direction of the arrow on the body
- with lubricators and cycling valves downstream of regulators and filter-regulators
- as close as possible to the device being serviced.

2. Connect piping to ports using pipe thread sealant on male threads only. Do not allow sealant to enter the interior of the unit.
3. Push the bowl, or bowl with guard, into the body and turn fully clockwise. Ensure the clip and cover arrow are aligned before pressurising.
4. Automatic drain flexible tube requires a minimum internal diameter of 5 mm (3/16”). Drain may fail to operate if the tube ID is less than 5 mm. Avoid restrictions in the tube.
5. Install a pressure gauge or plug the gauge port if no gauge is present. Gauge ports can also be used as additional outlets for regulated air.

ADJUSTMENT (Regulator and filter-regulator)
1. Before applying inlet pressure, pull the adjusting knob up (exposing the red indicator ring) and turn the adjusting knob counter-clockwise to remove all force on the regulating spring.
2. Apply inlet pressure, then turn the adjusting knob clockwise to increase and counter-clockwise to decrease the pressure setting.
3. Always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired, then bring up to the desired pressure.
4. Once the required pressure is achieved, push the knob down (red indicator ring covered) to lock pressure and apply a padlock if required. For T-bar adjustment, tighten lock-nut to lock pressure setting.

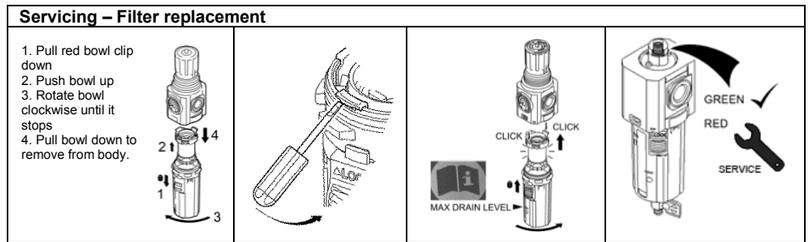
SERVICING
See illustrations below. Note, any replacement O-ring seals should be lubricated. See IMI website for recommended lubricants. Use QR code or link above.

CLEANING
1. Clean the plastic bowl with warm water only. Clean other parts with warm water and soap.
2. Rinse and dry parts. Blow out internal passages in the body with clean, dry compressed air.
3. Inspect parts. Replace any that are found to be damaged.

Service Kits

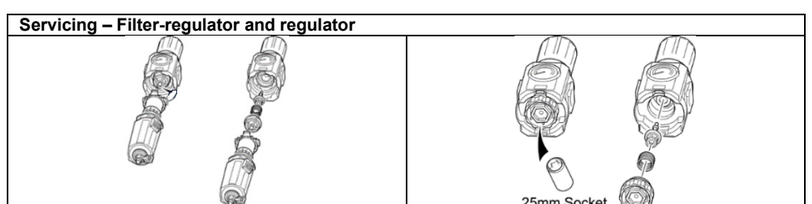
Part No.	Description
840025-51KIT	Guarded bowl with auto drain 6 mm PIF
840025-50KIT	Guarded bowl with manual drain
840003-51KIT	Metal bowl and sight glass with auto drain 6 mm PIF
840003-50KIT	Metal bowl and sight glass with manual drain
840025-53KIT	Guarded bowl with auto drain 1/4" PIF
840003-56KIT	Metal bowl and sight glass with auto drain 1/4" PIF
6000-60KIT	Auto drain 6 mm PIF
6000-61KIT	Auto drain 1/4" PIF
840038-50KIT	5 µm cartridge element (F84G)
840038-51KIT	40 µm cartridge element (F84G)
840044-50KIT	Coalescing cartridge element (F84C)
840041-50KIT	Vapour removal element (F84V)

Servicing – Filter replacement



Remove bowl	Unclip and remove element cartridge	Replace element cartridge and fit bowl	Coalescing elements must be replaced when indicator is fully red

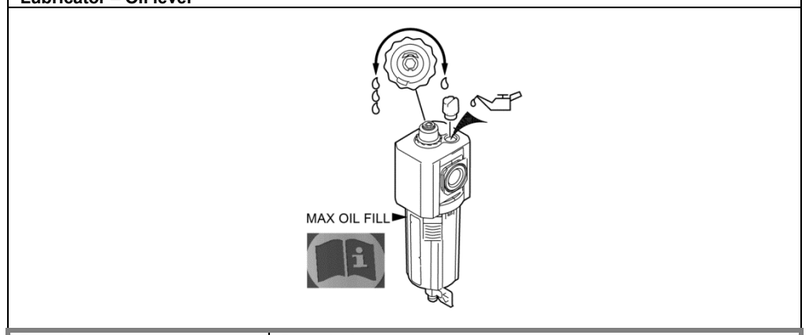
Servicing – Filter-regulator and regulator



Remove bowl, unscrew valve retainer using spanner and remove spring and valve	Unscrew bottom plug using socket as shown and remove spring and valve

Part No.	Description
FRLB84-KIT	Elastomers kit

Lubricator – Oil level

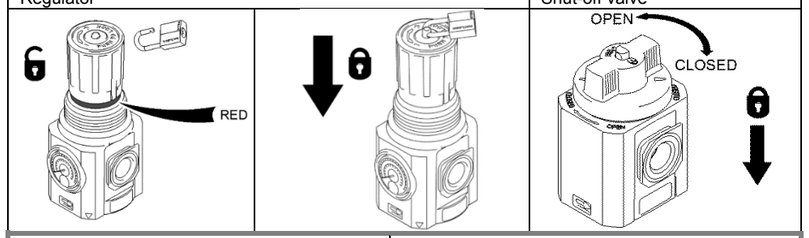


Part No.	Description
840055-50KIT	Micro-fog Sight dome kit
840055-51KIT	Oil-fog Sight dome kit

Open oil fill screw (with Micro-fog lubricator ensure pressure is turned off and fully exhausted).
Fill oil no more than max oil fill indicator.

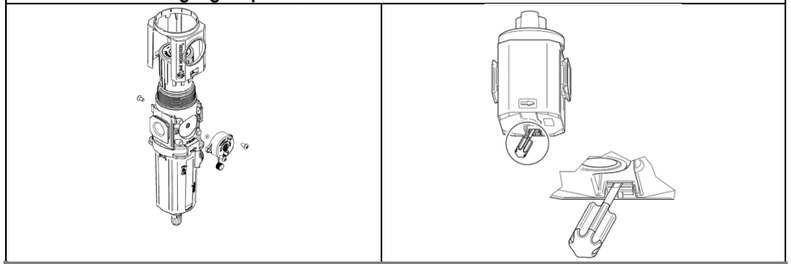
Tamper proofing

Regulator		Shut-off valve



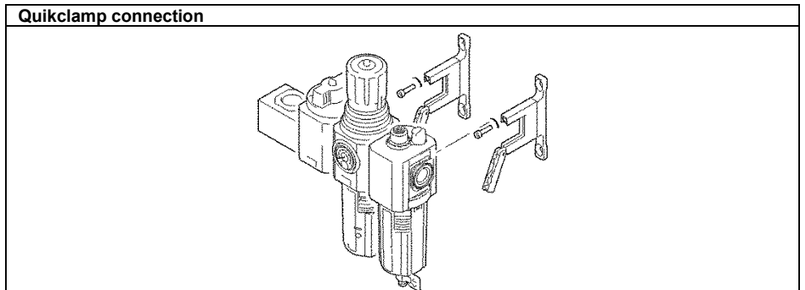
Part No.	Description
840055-01KIT	Padlock kit
840055-02KIT	Hasp lock-out device

Cover removal and gauge replacement



Part No.	Description
840073-01KIT	Integrated gauge (10 bar) kit
840073-02KIT	Integrated gauge (20 bar) kit
840100-01KIT	Gauge adaptor kit 1/8” NPT
840100-02KIT	Gauge adaptor kit R1/8

Quikclamp connection



Part No.	Description
840014-51KIT	Connecting clamp
840014-52KIT	Connecting clamp and bracket

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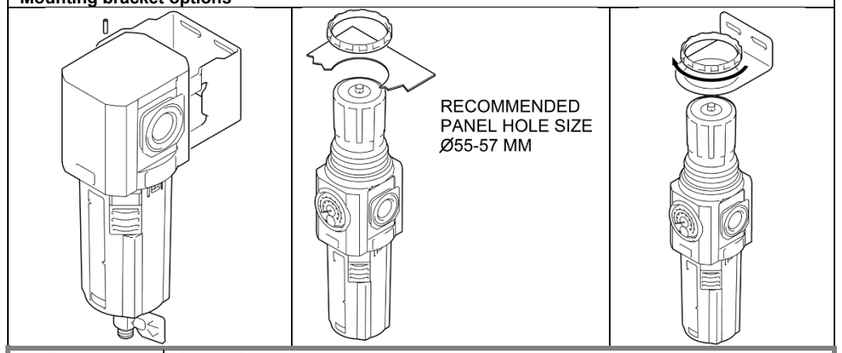
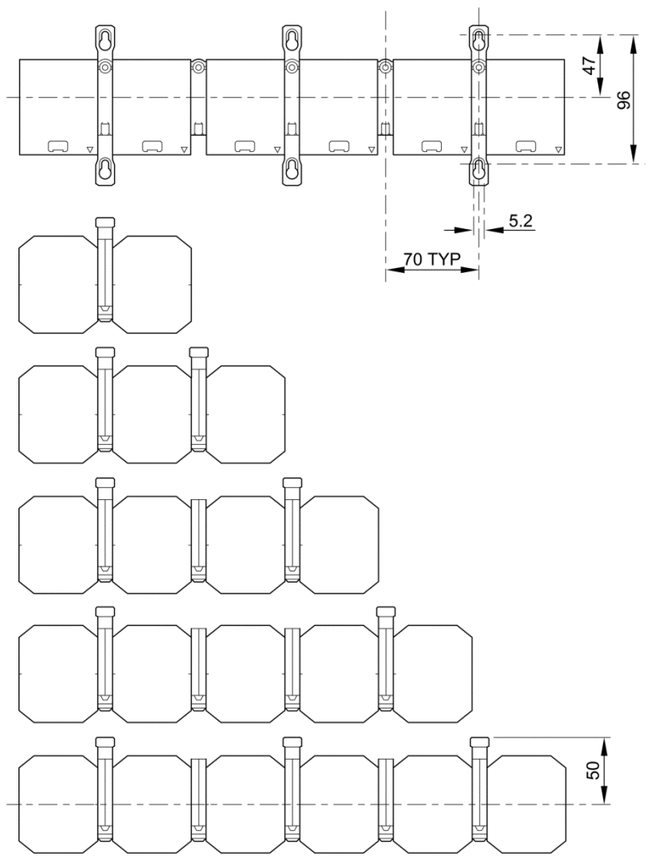
Mounting bracket options



Part No.	Description
840024-50KIT	Mounting bracket
840048-89KIT	Panel nut
840068-51KIT	Neck mount bracket and panel nut

Bracket configuration



ATEX Declaration of conformity

EU Declaration of conformity (DoC) 2014/34/EU
Product: Excelon® Plus T84, F84, R84 & B84
Manufacturer: Norgren Ltd, Blenheim Way, Fradley Park, Lichfield, Staffordshire, WS13 8SY

We declare that this declaration of conformity is issued under the sole responsibility of the above manufacturer

2014/34/EU Equipment and protective systems intended for use in potentially explosive atmospheres

The following harmonised standards and technical specifications have been applied
ISO 4414:2010 – Pneumatic fluid power – General rules and safety requirements for systems and their components; ISO 80079-36:2016 – Explosive atmospheres – Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements; ISO 80079-37:2016 – Explosive atmospheres – Part 37: Non-electrical equipment for explosive atmospheres – Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k".

II 2 GD

Ex h IIC T6 Gb

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ATEX Certification No.: NORGREN 18.0001X

Under certain extreme circumstances, the non-metallic cover may generate an ignition-capable level of electrostatic charge. The equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. Additionally, the equipment shall only be cleaned with a damp cloth.

Attestation of Conformity for components in accordance with Directive 2014/34/EU

We confirm the following equipment: All lubricators (Oil-fog and Micro-fog), gauges, connections kits, filter elements, brackets, and porting blocks conform to essential Health & Safety requirements of Directive 2014/34/EU and as such contain no potential ignition hazard for explosive environments.

Technical Director:
James Robinson
June 2018