

Atlas Copco Tools & Assembly Systems



Air Line Accessories

Optimizers- FRL

MIDI Optimizer FRL

- Why use an Atlas Copco FRL?
 - Atlas Copco filters, regulators, and lubricators are designed to help you get maximum productivity from your assembly tools.
 - Ensure minimal pressure drop and thus
 - Minimize energy losses in the air distribution system
 - benefiting the environment and cutting your operating costs
 - Extend the life of your tools
 - Lower repair costs and less downtime.



MIDI Optimizer FRL

- Productivity
 - Superior flow characteristics
 - FRD units up to 116 cfm
 - Minimal pressure drop
 - Lubricator
 - Increase output 10-15% in vane motors
 - Extend service intervals 2-3 times
- Energy efficiency
 - Prevents unnecessary consumption of air
 - Correct air flow for tool
 - Extend tool lifetime



MIDI Optimizer FRL

- General information
 - Polymer housing
 - NBR diaphragm
 - NBR sealings.
 - In comparison to silicone rubber, NBR seals has lower temperature resistance. They are mainly suitable for air, gas and oil at low temperatures.
 - Polymer bowl with plastic insert
 - Operating temperature -40°F to +140°F
 - Operating pressure inlet 0-232 psi
 - Operating pressure outlet 7-116 psi
 - On request outlet pressure 7-217 psi



MIDI Optimizer FIL

- Filter – FIL
 - Water and dirt in your compressed air system will cause extensive corrosion, damage, and wear.
 - Productivity
 - Atlas Copco filters are equipped with a cyclone system, this separates out a high percentage of the heavier solid water particles to ensure that the amount of dirt entering your tool is kept to a minimum. This means longer working cycles for the tools and minimum service time.



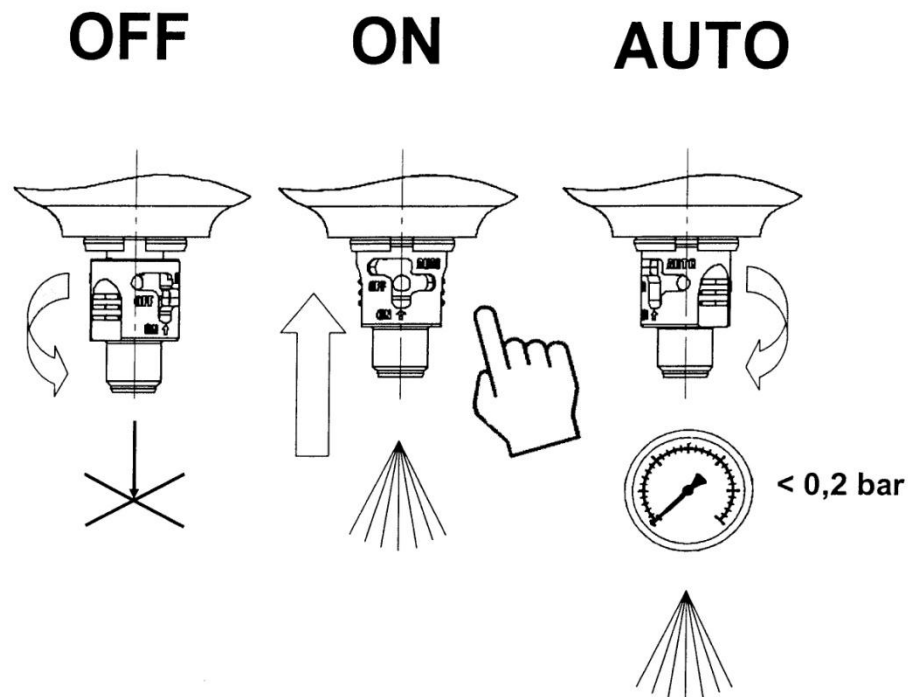
MIDI Optimizer FIL

- FIL - water separator
 - 248 cfm maximum air flow
 - Supply pressure 116 psi, pressure drop is equal to 14 psi
 - Cyclone system
 - Centrifugal force to separate the heavier solid water particles
 - Standard filter 30 μm , 5 μm optional
 - Water separation efficiency >90%
 - Sight glass for maximum condensate level (60cm³)
 - Two versions for drain valve
 - manual/semiautomatic
 - Fully automatic



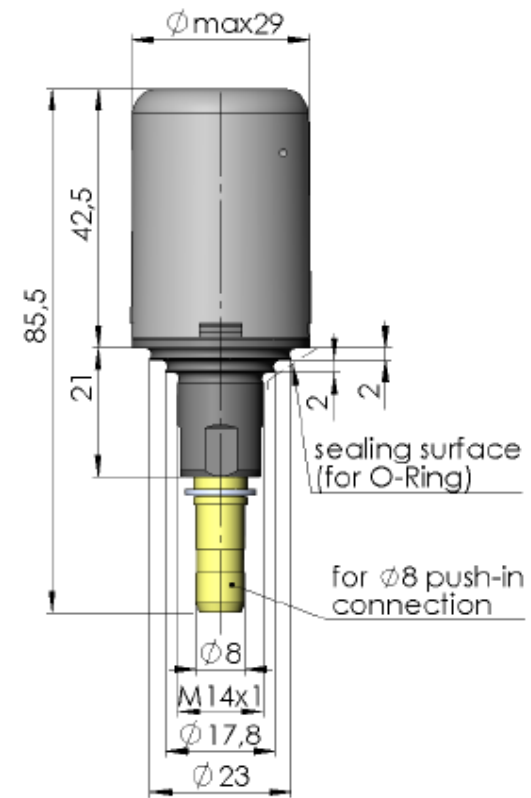
MIDI Optimizer FIL

- Drainage system
 - Combined manual and semiautomatic drain
 - Opens when operated manually
 - Opens if bowl pressure < 3 psi
 - Closes again if pressure > 12 psi



MIDI Optimizer FIL

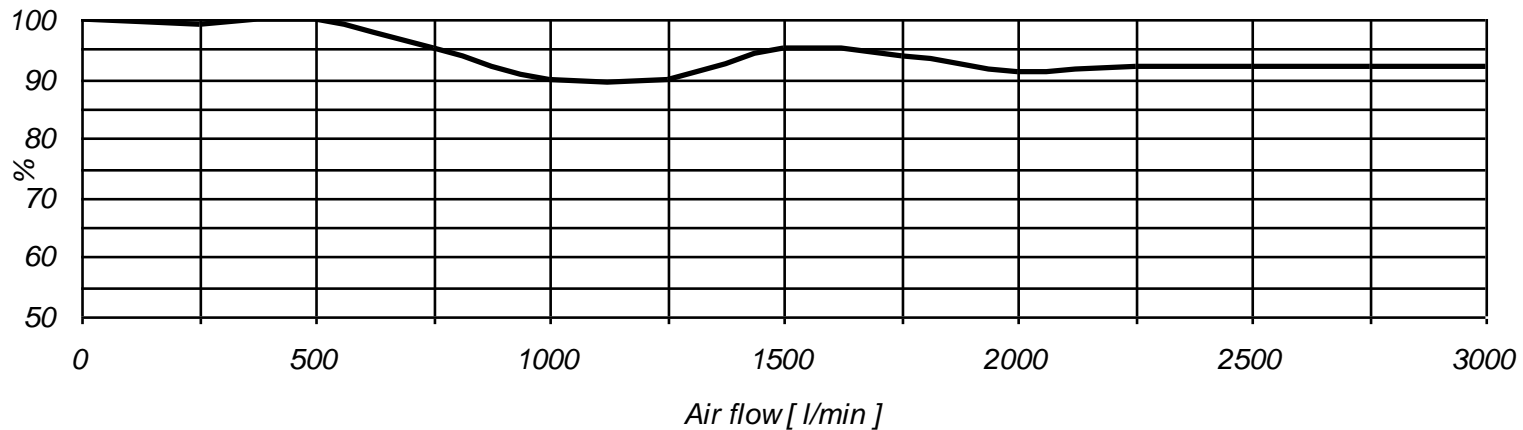
- Drainage system
 - Fully automatic drain controlled by floater
 - Includes semi-automatic drain function
 - Pressure range
 - Semi-automatic 12 – 290 psi
 - Automatic 22 – 290 psi
 - Opens as soon as the condensate reaches a preset level
 - Opens when operated manually
 - Opens if bowl pressure < 3 psi
 - Closes again if pressure > 12 psi
 - Temperature range: 35°F to 140°F



MIDI Optimizer FIL

- FIL – water separator
 - Water separation efficiency > 90%

Water separation efficiency at $p_1 = 6,3\text{bar}$



MIDI Optimizer REG

- Regulator – REG

- Ensure optimal flow at the specific flow rates required by Atlas Copco tools, or other pneumatic tools.

- Energy efficiency

- By installing a regulator you will ensure that there will not be any unnecessary consumption of compressed air. The regulators reduce a variable primary pressure to a practically constant secondary pressure with a minimum of pressure drop.

- Productivity

- The regulator will optimize the performance of your tool, ensure torque accuracy and boost productivity.



MIDI Optimizer REG

- Regulator
 - Interchangeable with MIDI C
 - Innovative design
 - Excellent standard performance with a start up pressure drop of max 0.3 bar
 - High flow capacity 206 cfm
 - Supply pressure 116 psi, regulator set pressure at 91 psi(static no flow) and pressure drop 14 psi
 - Different outlet pressure ranges available



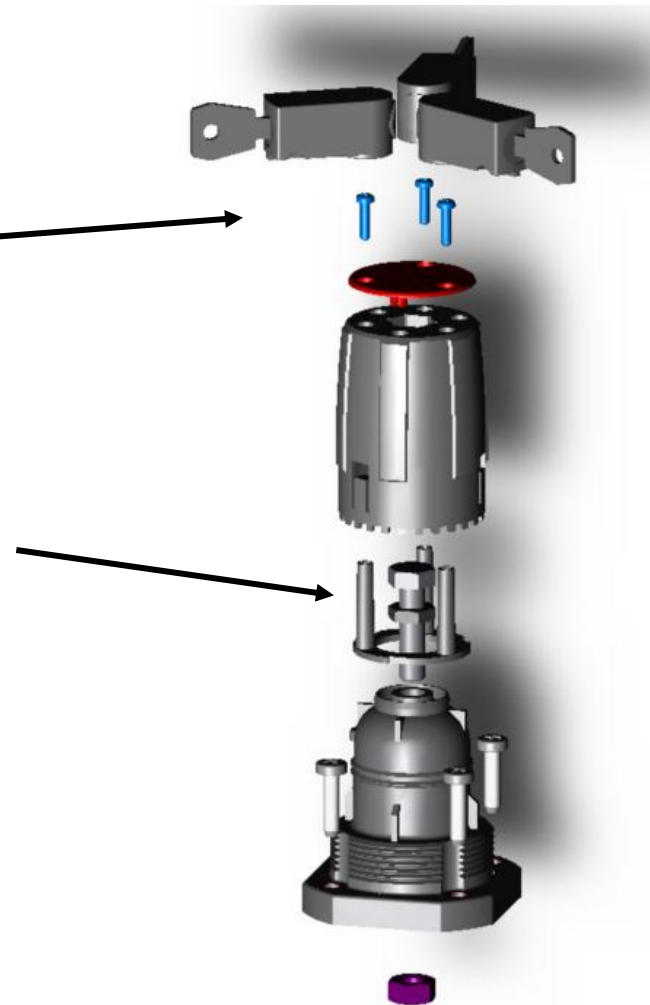
MIDI Optimizer REG

- Productivity
 - Best air flow characteristics on the market
 - Optimized flow at the specific flow rates required by Atlas Copco tools
 - Ensure torque accuracy in pulse tools
 - Minimal pressure drop
 - 14 psi pressure drop from 91 psi means 20% lost efficiency



MIDI Optimizer REG

- Lockable regulator
 - 3-times lockable
 - Customer friendly output pressure limitation
 - The mechanical block consisting of a hexagonal screw and nut is easy to adjust to the desired pressure limit



MIDI Optimizer DIM

- Lubricator – DIM
 - Atlas Copco oil lubricators ensure a long, efficient and trouble-free life for your pneumatic tools and components.
 - Productivity
 - The use of a lubricator will increase the power in vane motors by about 10-15%.
 - Energy efficiency
 - With the use of a lubricator you will prolong the lifetime of a vane motor up to three times and the motor will work much more efficiently, and with less friction.



MIDI Optimizer DIM

- Energy efficiency
 - Ensure the correct amount of oil at all flow rates
 - Self regulating nano lubricator
 - First time the oil feed adjusts automatically to the flow demand (constant oil/air mixture)
 - Minimal lubrication
 - Prolong the lifetime of vane motors up to three times
 - More efficient motor with less friction
- Productivity
 - Increase the power of the tool by about 10-15%



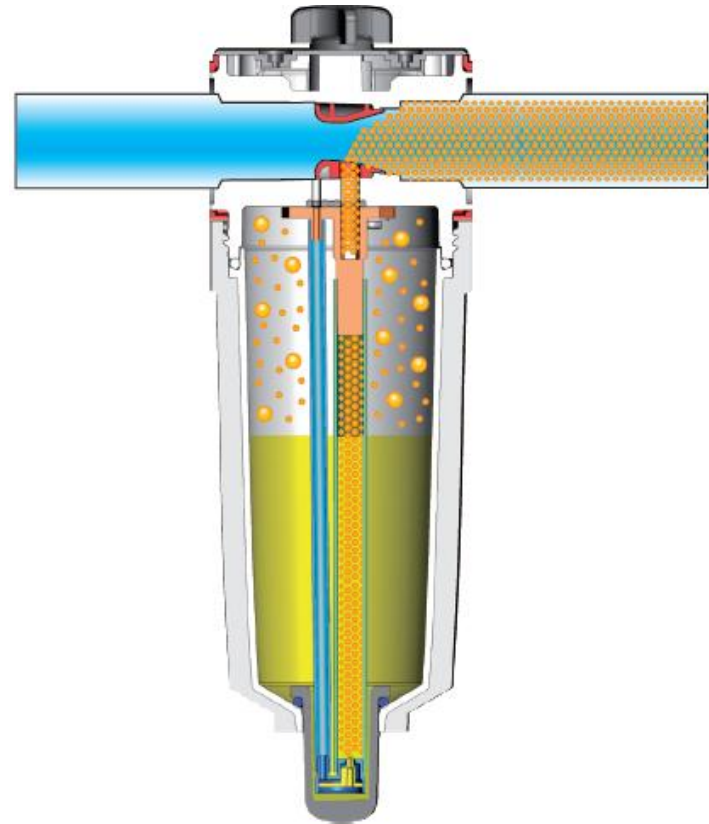
MIDI Optimizer DIM

- MIDI lubricator
 - Innovative design
 - Laskin principle and vaporisation
 - Patent pending
 - Nano oil mist
 - Particle size 200 nm
 - Oil admixture approx 50 mg/Nm³
 - Nano oil mist transported by the air stream up to 40 m
 - No oil in hose
 - No Direct lubrication needed
 - Refill during operation
 - Sight glass for minimum and maximum oil level (90 cm³)



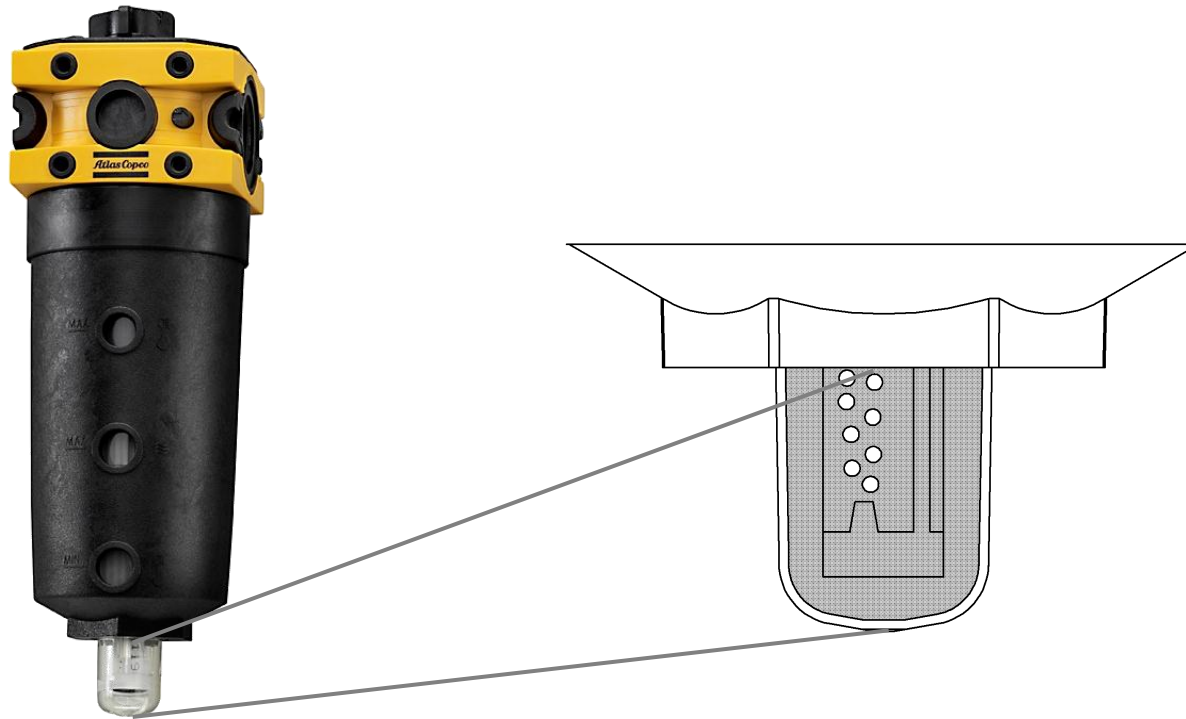
MIDI Optimizer DIM

- Lubricator
 - The principle
 - An oil particle generator system
 - Use compressed air to generate particles of the oil in the lubricator.
 - Creates an aerosol mist of the oil particles and the compressed air.
 - The oil particles in the mist will not fall out under 1 sec and therefore the oil can be transported in a hose up to 40 m without sticking to the hose.



MIDI Optimizer DIM

- Checking the lubricating function in sight glass



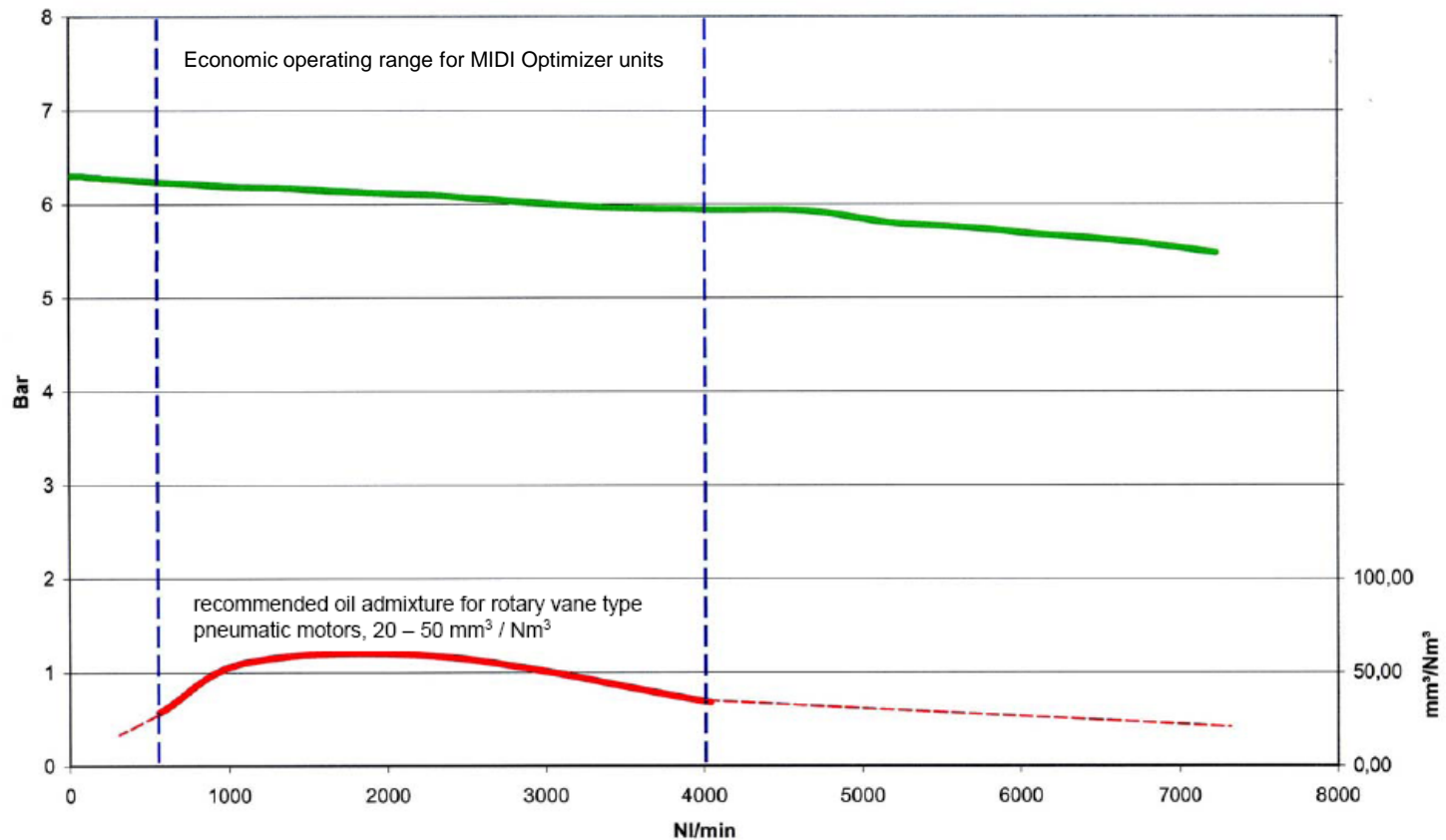
MIDI Optimizer DIM

- Main benefits
 - Permanent readjustments of oil droplets is avoided
 - No more misadjustments by the operator
 - No baffle plate is necessary for oil vaporization, to provide the best efficiency for the tool
 - Nano oil mist is transported up to 40 m within the air line system
 - Extended refill periods by most economical oil consumption



MIDI Optimizer DIM

- Flow characteristics (green) and oil ratio (red)



MIDI Optimizer F/R

- MIDI Optimizer F/R
 - Interchangeable with MIDI C
 - Excellent standard performance with a start up pressure drop of max 4.3 psi
 - High flow capacity 190 cfm
 - Different pressure ranges available
 - Inlet pressure 0-232 psi
 - Outlet pressure 7-116 psi
 - Standard spring for 116 psi
 - Optional spring 232 psi
 - Standard filter 30 μ m
 - Either with combined manual / semiautomatic condensate drain valve or with automatic condensate drain valve
 - Sight glass for max condensate level
 - Lockable regulator on request



MIDI Optimizer F/RD

- Filter/regulator + lubricator
 - Interchangeable with MIDI C
 - Excellent standard performance with a start up pressure drop of max 4.3 psi
 - High flow capacity 116 cfm
 - Different pressure ranges available
 - Inlet pressure 0-232 psi
 - Outlet pressure 7-116 psi
 - Standard spring for 116 psi
 - Optional spring 232 psi
 - Standard filter 30 μ m
 - Either with combined manual / semiautomatic condensate drain valve or with automatic condensate drain valve
 - Sight glass for max condensate level
 - Sight glass for max / min oil level
 - Manual oil refilling – also during operation
 - Lockable regulator on request



MIDI Optimizer FRD

- Filter + regulator + lubricator
 - Interchangeable with MIDI C
 - Excellent standard performance with a start up pressure drop of max 4.3 psi
 - High flow capacity 116 cfm
 - Different pressure ranges available
 - Different pressure ranges available
 - Inlet pressure 0-232 psi
 - Outlet pressure 7-116 psi
 - Standard spring for 116 psi
 - Optional spring 232 psi
 - Standard filter 30 μm
 - Either with combined manual / semiautomatic condensate drain valve or with automatic condensate drain valve
 - Sight glass for max condensate level
 - Sight glass for max / min oil level
 - Manual oil refilling – also during operation
 - Lockable regulator on request



**We are committed to your
superior productivity through
interaction and innovation.**



Atlas Copco

