

Info Sheet

- Eliminates drift
- Low maintenance
- Easy to install
- Simple operation
- Cost Effective
- Pneumatically operated



**Mechanical Cleaner
For
Scan G series and spectrolyser**

What is it?

DCM's mechanical cleaner comprises a special bypass mounting block to hold the V1 or V2 G series or spectro:lyser sensor combined with a pneumatically operated piston and cleaning blade system. The cleaning blade utilises a chemically resistant non-absorbent soft urethane which is moulded onto a 316 stainless steel base layer. The cleaning blade has 5 separate cleaning surfaces edges and effectively creates 10 lens wiping actions for every forward /backward motion of the blade. The blade is moved forward and backwards via a dual direction air driven piston mounted on the side of the measuring block.

How it works

The DCM mechanical cleaner is operated by any s::can controller or con::nect module via the cleaning relay or any other on board relay. The relay is programmed to provide a contact closure for 1 second on the time base defined for cleaning. Note that the relatively fast action of the unit with no wait time required means that the blade can run on a relay not programmed as a cleaning relay in most situations as the blade is clear of the sample prior to the actual measurement pulses being made. The relay operates a low wattage 12V DC 4 way air solenoid with flywheel protection diode and integral power on LED. The solenoid provides air from either port A or port B at all times with port B being active when no power is applied. The solenoid has an integral pressure regulator which is used to define the power being applied to the cleaning blade system. This allows control of the forward and backward action of the cleaning blade. The solenoid valve also has a push and lock function to allow the cleaning blade to hold in the extended position.

The solenoid valve ports A and B are connected to the extension and retraction end of the piston respectively. As port B is active when no power is applied, the normal air cylinder shaft position is the retracted position. The piston shaft has an attachment fitting on it to allow mounting of a special DCM cleaning blade specific to the measuring gap on the spectrometer and to the slot in the mounting block. (Mounting blocks have slots for 5mm blades (version 5.3V2) or for 2mm and smaller blades (version 2.3V2). The piston unit and the mounting block are linked by an adapter which has a bore of sufficient size for the piston shaft attachment fitting and blade to pass through. O ring seals seal both ends of the adapter.

In the retracted position, the tip of the cleaning blade is engaged in the mounting block locating slot but is clear of the path the spectrometer installs or is removed through. The spectrometer measurement slot is lined up with the blade by either the air cleaning hole on the V1 version spectrometers and using a locating collar fitting on the V2 spectrometers. The cleaning blade has 5 vertical urethane fins moulded onto the 316 stainless base resulting in 5 lens wipes on both the forward and backward stroke of the piston. The cleaning blade is pushed through the measuring slot to wipe the lenses of the spectrometer on a time base defied by the application

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