



Mapag™ BO valve maintenance recommendation for Vacuum Swing Adsorption (VSA) / Vacuum Pressure Swing Adsorption (VPSA) units

Components	Elements	Recommended maintenance 1,5M cycles	Recommended maintenance 3M cycles
Valve	Bearings, Seals	Check valve assembly performance and operation on site (1)	Replace
	Seat		Replace
	Shaft (2)		Check *
	Disc		Check *
Actuator (Mapag)	Bearings, Seals, Keilpack	Replace	Replace
	Housing, Cylinder	Check *	Check *
	Pistons	Check *	Check *
	Shaft connection (2)	Check *	Check *
Actuator (Neles™)	Lever arm	Check valve assembly performance and operation on site (1)	Replace
	High cycle spare parts		Replace
	Housing, Cylinder		Check *
Valve controller, Neles ND9000™	Complete device	Calibration	Calibration, replace after 4,500 cycles
	Spool valve	Replace	Replace
	Prestage	No action	Check *
Valve controller, Neles NDX™	Complete device	Download and analyse diagnostics Calibration and reset counters	Download and analyse diagnostics Calibration and reset counters
	Prestage bottom filter	Replace	Replace
	Silencers	Replace	Replace
	Pneumatic set	No actions	Replace
Booster / quick exhaust valve	Complete device	Check *	Replace
Solenoid valve	Complete device	Check *	Check *
Limit switch	Complete device	Check *	Check *
Air filter	Complete device	Replace	Replace

(1) External leakage = Damaged seals / Need in higher supply air pressure = Damaged Actuator, Bearing / Slow Opening, closing time = Damaged Seat, Actuator, Bearings / Noise = Damaged shaft connection, bearings.

(2) If valve shaft or actuator shaft connection is damaged both have to be replaced.

During maintenance Valmet technicians check parts that are not mentioned here and replace damaged parts if possible. Valmet technicians also make recommendations for future inspection and maintenance. Device condition monitoring helps determine whether a particular valve needs attention.

Oxygen (O₂) valves can be maintained only by authorized persons.

* Replace if needed

Operational benefits:



Improved plant availability



Optimized performance



Ensured quality



Improved safety