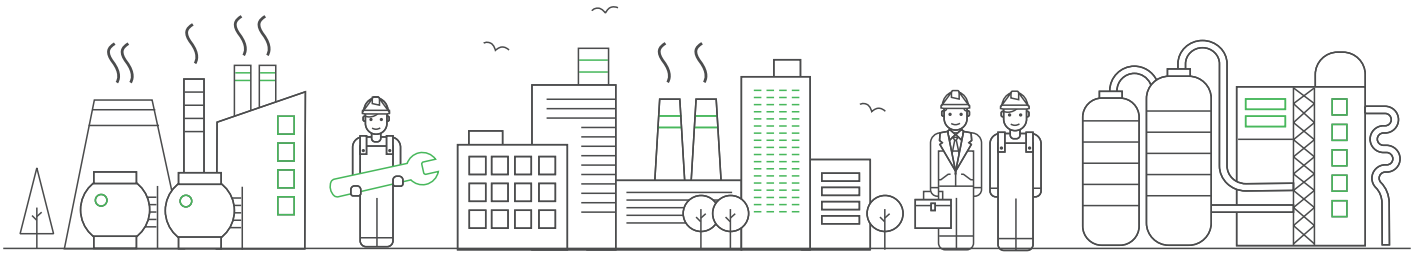


Maintenance recommendation for polyolefin high cycle valves

Metal seated valves			
Component	Element	Recommended maintenance 300k-500k cycles / 2-4 years	Recommended maintenance 500k-1000k cycles / 3-6 years
Valve	Ball	Check *	Replace
	Seats	Check *	Replace
	Shaft	Check *	Check *
	Bearings	Replace	Replace
	Spare part set	Replace	Replace
Actuator	Lever arm	Check *	Replace
	High cycle spare part set	Replace	Replace
	Spring assembly	Check *	Replace after 4 milj. kcycles
Solenoid valve	Solenoid valve	Check *	Replace
Booster / quick exhaust valve	Booster / quick exhaust valve	Check *	Replace
Limit switch	Limit switch	Check *	Check *
Air filter	Air filter	Replace	Replace

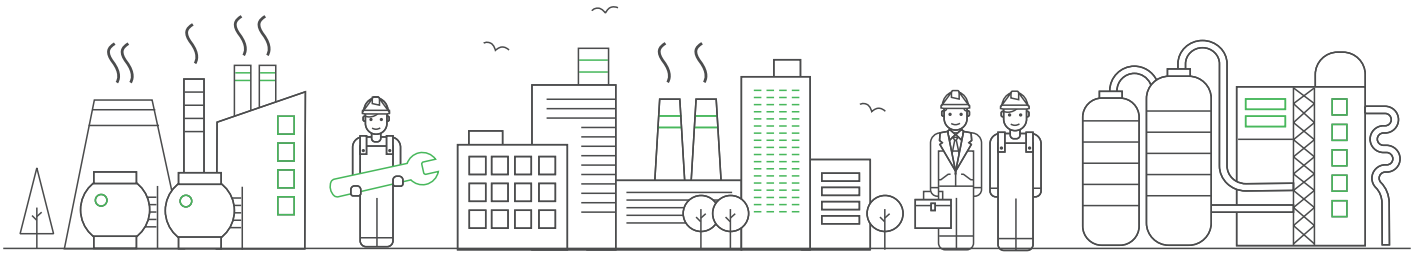
Soft seated valves			
Component	Element	Recommended maintenance 200k-300k cycles / 1.5-2.5 years	Recommended maintenance 300k-500k cycles / 2-4 years
Valve	Ball	Check *	Replace
	Seats	Check *	Replace
	Shaft	Check *	Check *
	Bearings	Replace	Replace
	Spare part set	Replace	Replace
Actuator	Lever arm	Check *	Replace
	High cycle spare part set	Replace	Replace
	Spring assembly	Check *	Replace after 4 milj. kcycles
Solenoid valve	Solenoid valve	Check *	Replace
Booster / quick exhaust valve	Booster / quick exhaust valve	Check *	Replace
Limit switch	Limit switch	Check *	Check *
Air filter	Air filter	Replace	Replace

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.

* Replace if needed

Operational benefits:

- Improved plant availability
- Optimized performance
- Ensured quality
- Improved safety



Soft seat valve upgrade to metal seat valve

Class 300 rated valve face to face equivalence				
Size	Soft seat valve type	Face to face (mm)	Metal seat type	Face to face (mm)
12	6300/9300	648	XG12	648
10	6300/9300	568	XG10	568
8x12*	DZF30S	298	XG08_TY	502 **
8x12*	6300	387	MY08_TY	387
8x12*	9300	419	MH08_TY	419
8	530S/730S***	292	XG08	502**
8	6300/9300	419	MH08	419
8	930L	502	XG08	502
6	6300/9300	403	XG06	403
4	6300/9300	305	XG04	305
3	6300/9300	282	XG03	282
2	6300/9300	216	XG02	216
11/2”	6300/9300	191	XA1H	191
1	6300/9300	165	XA01	165

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.

* Manual operated reactor isolation valves with oversized flange (NPS12)
** No direct replacement for face to face
*** 530S/730S body style is reduced bore.

Wearing out of devices:


Bearings and sealing elements


Lever arm, bearings and sealing elements


Valve controller components


Instrumentation components

Operational benefits:

- Improved plant availability
- Optimized performance
- Ensured quality
- Improved safety