



Maintenance Checklist - In the Irrigation Room

TAKE NOTE

Ensure that irrigation design and specifications are available for reference - refer to it when necessary.
Always take the necessary safety precautions. Involve the necessary experts when required.

			CHECKLIST ITEM	ACTION & DETAILS
1	WATER SOURCE	a	Water level of sump/dam	
		b	Inlet grids from water source	Check that grids are clean .Clean pre-filter
		c	Suction point (If present)	Clear of obstructions (plants or mud) Check if deep enough & that there are no air vortexes Must be > 500 mm from foot valve Must be >700 mm below water surface
		e	Suction pipes	Check for leaks or air suction
		f	Water inlet and suction point	Positioned as far as possible from each other
		g	Backflush discharge point and suction position	Backflush discharge downstream or minimum 50 metres from suction point
		h	Water quality	Take water samples. As per Netafim guidelines (1 during winter & 1 during summer months)
		WARNING: Use extreme caution when working with electrical and mechanical components - Involve experts when necessary		
2	PUMPS	a	Number of pumps for number of valves open	According to design specification
		b	Variable speed drives (VSD)	Check efficient operation
		c	Pump flow delivery (m³/hour)	Confirm correct flow according to design
		d	AMPS on control panel and pressure gauge	Must be balanced and within range
		e	Check for excessive heat at pumps, VSDs & irrigation room in general	Feel by hand after switching off pumps Ensure sufficient ventilation in irrigation room
		f	Listen for excessive noise (Bearings)	When running
		g	Pump graphite packing	Must drip, but not leak excessively
3	VALVES	a	Main valves	Ensure 3-way valve is on AUTO if specified in design
		b	Block valves (Auto vs Manual)	Ensure correct valves are opened (on auto) for each shift according to design and scheduling
		c		Correct number open and within pressure range according to design specification

		CHECKLIST ITEM	ACTION & DETAILS
4	FILTERS	a Differential pressure [DP]	≤ 0.5 bar
		b Downstream pressure	According to design specification
		c Command filter	Isolate & open Check status of discs regularly (clean or dirty)
		d Backflush controller settings	According to filter specification
		e Activate manual flush	Monitor operation for each filter (manual check)
		f General (Inside irrigation room)	No leaks or venting
		g Outside: Observe backflush cycle	Water must be clean after flush
		h Outside: Backflush Manifold	No water must run from backflush pipe if not in back-flush mode. If water is running, setting can be on manual or seals may be leaking
		i Backflush duration	Must be in line with water quality
		j Peroxide treatment on filter discs (Adhere to safety protocols)	Date of last treatment & next required date Regular inspection
		k Peroxide treatment	According to protocol specifications
		l Upstream vs downstream pressure - before & after backflush cycle	According to design specifications
		m Filter inspection	Regular inspection required Water quality determines frequency All discs must be the same & correct colour (micron)
		n Recording of backflush cycles (DP/time)	Check weekly that settings are unchanged
		o Backflush settings: DP & time ratio	According to filter specification
		p Backflush manifold size	According to design specifications No back pressure on backflush
5	FLOW	a Water meter readings (Check that it takes reading)	Confirm that START & END readings are recorded
		b Flow rate	Compare actual rate to design specifications
		c Ensure that flow rate is 0 if valves are closed	
6	INJECTION	a Ensure that scheduling programme is available & accessible. Scheduling determines irrigation programme which determines injection rates & volumes	
		b Ensure that chemical treatment programme is available & accessible Ensure hardware is installed & in line with design specification Check both continuous & maintenance programmes	
		c Number of peroxide treatments scheduled	Confirm & check if up to date with programme
		d Check operation & calibration of injection & agitation	According to design specifications & fertilizer programme
		e Confirm that injection system can adapt to different applications if required	
		f Tanks & filters	No residue or contaminants in tank before new batch is added. No residue or contaminants on filter
7	GENERAL	a Overall cleanliness	Clean & neat inside & outside
		b Overall condition of equipment	Observe that there are no noticeable leaks or excessive noise
		c Rain gauge	Check if secure, clean, & recorded
		d Equipment & spares stock list	Check & record
		e Maintenance tools	All tools readily available

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Netafim Southern & East Africa

Industrial Road, Kraaifontein, Cape Town, 7570

T : +27 21 987 0477 | WhatsApp: +27 60 983 6058

www.netafim.co.za | infoza@netafim.com

