

component	KKS	Component	Maintenance and repair	operating hours	if necessary	daily	weekly	monthly	every 3 month	every 6 month	once a year
KONDENSATOR											
K	HTA0xBR0xx	Flue gas lines	Check for contamination and clean if necessary		x						x
K	HTA0xCT0xx	Temperature sensor	See general instruction								
K	HTC01AN001	Flue gas fan: impeller	An impeller inspection must be done immediately, if • the permissible limits are exceeded • running noises occur Check Impeller every 5,000 hours and check for changes (cracks, geometrical changes, balancing condition, wear and sticking) at least 1 time per year. The test may e.g. done by a non-destructive crack testing. Fans with heavy dynamic loads are checked as per additional agreement (Maintenance Plan) within the prescribed intervals (see fan manual).	5000 h							x
K	HTC01AN001	Flue gas fan: shaft seal	The seals must be inspected and replaced if the seal gas consumption or leakage increases.								x
K	HTC01AN001	Flue gas fan: shaft grounding	Correct operation of the shaft grounding is checked regularly depending on the operating conditions: the contacts must be replaced as required								x
K	HTC01AN001	Flue gas fan: motor	Check operational noise and smooth running, remove any dust deposits			x					
K	HTC01AN001	Flue gas fan: motor	Retighten the screws, check bearing						x		
K	HTC01AN001	Flue gas fan: motor	Check the motor, if necessary replace bearing, see maintenance schedule of motor manufacturer								x
K	HTC01AN001	Flue gas fan: bearing	Lubricated for life of bearings The grease in the bearings suffice under normal operating conditions for several years. If the operating conditions of the motors speeds up to 3600 rpm after 20 000 operating hours or after 3 years the bearing must be replaced.	20'000h / spätestens 3 Jahre							
K	HTC01AN001	Flue gas fan: bearing	Bearing lubrication is not necessary								(x)
K	HTC01AN001	Flue gas fan: motor terminal box	Clean inside, tighten screws								x
K	HTC01AN001	Flue gas fan: monitoring and auxiliary connections	Measurement data acquisition			x					
K	HTC01AN001	Flue gas fan: monitoring and auxiliary connections	Functional check								x
K	HTC01AN001	Flue gas fan: compensator	Check at regular intervals and as needed when changes in processes								x
K	HTC01AN001	Flue gas fan: compensator	Check, if necessary retighten screws or replace if worn		x						x
K	HTC01AN001	Flue gas fan complete	Check for operational noise and smooth running				x				
K	HTC01AN001	Flue gas fan complete	Check impeller, motor bearing, shaft seal, expansion joints for wear and repair or replace if necessary								x
K	HTC01AN001	Flue gas fan complete	Check current and voltage (values → type plate)			x					
K	HTC01AN001	Flue gas fan complete	Check for vibrations and noises (especially for grinding noises) of the fan (Vibration Monitoring Section 9.1.2 Limits)			x					
K	HTC01BRxxx	Compensator	See general instruction		x						x
K	HTD01AA00x	Solenoid valve	See general instruction					x		x	
K	HTD01AA0xx	Butterfly valve	Functional check, clean or replace if necessary								x
K	HTD01AAxxx	Ball valve	See general instruction								
K	HTD01AA9xx	Valve (back flushing heat exchanger)	Functional check, clean or replace if necessary								x
K	HTD01AC002	Plate heat exchanger	Clean the heat exchanger (pressure <1.5bar) without disassembly (See heat exchanger manual)								x
K	HTD01AC002	Plate heat exchanger	Clean the heat exchanger with disassembly, if not possible without disassembly (See heat exchanger manual)								x
K	HTD01AC002	Plate heat exchanger	Inspect heat exchanger for leaks, especially at the water connections				x				
K	HTD01AC002	Plate heat exchanger	Keep support and guide rod clean and lubricated. Keep clamping bolt clean and lubricated		x						
K	HTD01AP0xx	Process water pump	The pump must run quietly and without vibration			x					
K	HTD01AP0xx	Process water pump	Check shaft seal					x			
K	HTD01AP0xx	Process water pump	Check for running noise of the bearing. Vibrations, noise and increased power consumption at similar constant operating conditions indicate wear			x					

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K	HTD01AP0xx	Process water pump	Monitor the bearing temperature. The bearing temperature should not exceed 90 ° C (measured at the motor housing).			x					
K	HTD01AP0xx	Process water pump	Monitor the function of any auxiliary connections					x			
K	HTD01AP0xx	Process water pump	Check the pump for leaks and special noises			x					
K	HTD01AP0xx	Process water pump; shaft sealing	The seals must be inspected and replaced if leaks are present								x
K	HTD01AP0xx	Process water pump; motor	Check for operational noises and smooth running, remove any dust deposits			x					
K	HTD01AP0xx	Process water pump; motor	Retighten the screws, check bearing						x		
K	HTD01AP0xx	Process water pump; motor	Check the motor, if necessary replace bearing, see maintenance schedule of motor manufacturer								x
K	HTD01AP0xx	Process water pump; motor terminal box	Clean inside, tighten screws								x
K	HTD01AT001	Droplet separator	Soluble and porous deposits can normally be removed by selective spraying. Crystalline and solid deposits can be removed with the help of high-pressure cleaners. Remaining deposits can be removed with a suitable tool (e.g. plastic scrapers). Pay attention to the plastic lamellas' strength and toughness.						x		
K	HTD01BB0xx	Process water tank	Check for contamination and clean if necessary		x						
K	HTD01BB031	Balance tank	Check for contamination and clean if necessary		x						
K	HTD01BB050	Conductivity sensor fitting	Check for contamination and clean if necessary							x	
K	HTD01BB052	pH-electrode container	Check for contamination and clean if necessary					x			
K	HTD01BNxxx	Nozzles	Check for wear and clean								x
K	HTD01BR00x	Fresh water supply pipe	Functional check or replace if necessary								x
K	HTD01BR004	Return pipe droplet separator	Check for contamination and clean if necessary								x
K	HTD01BR0xx	Process water pipe	Check for contamination and clean if necessary		x						
K	HTD01BR301	Drain balance tank	Check for contamination and clean if necessary								x
K	HTD01BR501	Part flow to pH-measurement	See general instruction: hose								
K	HTD01BR8xx	Compensator	See general instruction								
K	HTD01BR8xx	Rubber compensator	See general instruction								
K	HTD01BR814/24	Connection process water tank to balance tank	Check for contamination and clean if necessary					x			
K	HTD01CF0xx	Flow rate measurement (pump meter)	Functional check or replace if necessary						x		
K	HTD01CG0xxH/L	Limit switch actuator	Functional check or replace if necessary				x				
K	HTD01CL1xx	Float switch	See general instruction								
K	HTD01CP001	Underpressure measurement (differential pressure)	Functional check or replace if necessary								x
K	HTD01CP001	Underpressure measurement (differential pressure)	Clean the measuring hose							x	
K	HTD01CP0xx	Pressure measurement	Functional check or replace if necessary								
K	HTD01CP5xx	Manometer	Functional check or replace if necessary								x
K	HTD01CQ011	Conductivity measurement	Clean any contamination and clogging								x
K	HTD0xCT0xx	Temperature sensor	See general instruction								
K	HTS01AP051	pH-Pump	Functional check or replace if necessary								x
K	HTS01AP051	pH-Pump	Compare pH-value with test strip measurement				x				
K	HTS01AP051	pH-Pump	Check level of neutralizer			x					
K	HTS01AP051	pH-Pump	Clean parts that guide liquid (filter and valves)		x						
K	HTS01AP051	pH-Pump	Check dosage head screw (tightness)		x				x		
K	HTS01AP051	pH-Pump	Check metering (tightness)				x				
K	HTS01AP051	pH-Pump	Discharge and suction valve (tightness)				x				
K	HTS01BB051	Caustic soda tank	Check level, if empty replace immediately			x					
K	HTS01CQ051	pH-electrode	Compare pH-value with Lakmuspapier measurement, possibly recalibrate					x			
K		Generally	Check the system infrastructure: stairs, ladders, platforms and railings are fastened securely and undamaged.								x
K		Generally	Check the electric equipment: cable are routed safely and not damaged. covers defects						x		
K		Generally	Check the compressed air: hoses are routed safely and not bent or damaged.						x		
K		Generally	Check the hydraulic: hoses are routed safely and not bent or damaged.						x		
K		Generally	Examination of the screw and welded connections for corrosion and proper attachment.								x

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K		Generally	Check the panel on alarms			x					
K		Generally	Add citric acid to the process water tank stage 1								x
K		Generally	Check function of the chemical treatment. Order in advanced necessary chemicals to prevent lacks.				x				
K		Generally	Check the chloride content of each process tank. The amount of chloride must not exceed 150 ppm				x				
K		Generally	Check the pressure on the process water pipe. The minimum allowable pressure is 1.5 bar				x				
K		Generally	Check the air filter in the cabinet. Clean it if necessary						x		
K		Generally	Lubricate the bearings of the fan and the pump if grease fittings are available								x
K		Generally	Clean the condenser								x
Bypassklappe											
B		Generally	Functional check				x				
B		Generally	Remove any deposits in the damper (flap)							x	
B		Generally	Check adjustment of flap, flap must be centered, no touching of the flap on its surrounding allowed							x	
B		Generally	Check compressed air supply			x					
B		Generally	Release water from compressed air water separator				x				
B		Generally	Check the compressed air: hoses are routed safely and not bent or damaged.						x		
B		Generally	Examination of the screw and welded connections for corrosion and proper attachment.								x
B		Generally	Check the panel for alarms			x					
WASSERBEHANDLUNG											
W	HTM01AA0xx	Diaphragm valve	Check diaphragm								x
W	HTM01AA0xx	Solenoid valve	See general instruction								
W	HTM01AA3xx	Ball valve	See general instruction								
W	HTM01AA7x1	Check valve	Check for leaks			x					
W	HTM01AA7x1	Check valve	Functional check							x	
W	HTM01AN031	Back flush compressor	Check piping and fittings for leaks and for tightness; if necessary seal and retighten						x		
W	HTM01AN031	Back flush compressor	Check terminal box and cable inlet holes for leaks : seal if necessary								x
W	HTM01AN031	Back flush compressor	Clean regulating valve, air vents of the machine and engine cooling fins						x		
W	HTM01AN031	Back flush compressor	Clean regulating valve, air vents of the machine and engine cooling fins . When heavy dust, clean the spaces between the cooling fins and cooling pipes after removing the suction grill (Fig. 2 / G) by blowing out.								
W	HTM01AN031	Back flush compressor	The machine has a grease lubrication for the bearing and does not need to be lubricated.								
W	HTM01AN031	Back flush compressor	Clean / replace filter cartridges					x		x	
W	HTM01AN031	Back flush compressor	Check blades vane; exchange if necessary	5.000 h / 1.000 h							
W	HTM01AT131	Filter-Compressor	Clean / replace filter cartridges							x	
W	HTM01AP0xx	Diaphragm pump (sludge pump)	Disassemble, clean the internal parts and replace if necessary								x
W	HTM01AP0xx	Diaphragm pump (sludge pump)	Check the sludge pump for leaks			x					
W	HTM01AP0xx	Diaphragm pump (sludge pump)	Visual inspection weekly				x				
W	HTM01AP0xx	Diaphragm pump (sludge pump)	Screw connections (tie rod, metal strap)				x				
W	HTM01AP0xx	Diaphragm pump (sludge pump)	Replace wear parts		x						
W	HTM01AP041	Sand filter back flush pump	Cleaning and condition test							x	
W	HTM01AP041	Sand filter back flush pump	Check motor for leaks			x					
W	HTM01AP051	Dirt water pumpe lamella separator	Cleaning and condition test							x	
W	HTM01AP051	Dirt water pumpe lamella separator	Check motor for leaks			x					
W	HTM01AP061	Return pump to K	See general instruction								
W	HTM01AP071	Condensate pump	Cleaning and condition test							x	
W	HTM01AP071	Condensate pump	Check motor for leaks			x					
W	HTM01AT0xx	Lamella separator	Check for clogging and clean if necessary		x						
W	HTM01AT0xx	Sand filter	Check for clogging and clean if necessary		x						
W	HTM01BB041	Clean water tank	Check for clogging and clean if necessary		x						

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W	HTM01BB051	Back flush tank	Check for clogging and clean if necessary		x						
W	HTM01BB061	Return tank condenser	Check for clogging and clean if necessary		x						
W	HTM01BB071	Condensate tank	Check for clogging and clean if necessary								x
W	HTM01BN9xx	Filter nozzles	Check during sand replacement and replace if necessary		x						
W	HTM01BR003	Return pipe to condenser	Check for clogging and clean if necessary							x	
W	HTM01BR0xx	Pipe	Check for clogging and clean if necessary							x	
W	HTM01BR8xx	Hose	See general instruction								
W	HTM01CLxxx	Suspended Float Switches	See general instruction								
W	HTM01CLxxx	Float switch	See general instruction								
W	HTM01CP51x	Filter pressure controller	Clean the container and polycarbonate inspection opening with an alkaline solution (soapy water). Do not use solvents								x
W	HTM01CP51x	Filter pressure controller	Drain the water from the two water separators						x		
W	HTM01CP51x	Filter pressure controller	Change filter when polluted and clogged		x						
W	HTM01CP51x	Filter pressure controller	Clean container with soapy water		x						
W	HTM01KA0x1	Vacuum braker	Functional check or replace if necessary								x
W	HTM01KT00x	Filter sand (fine /coarse)	The sand should be loose and ease to churn								x
W		Generally	Check the system infrastructure: stairs, ladders, platforms and railings are fastened securely and undamaged.								x
W		Generally	Check the electric equipment: cable are routed safely and not damaged. Defective covers						x		
W		Generally	Check the compressed air: hoses are routed safely and not bent or damaged.						x		
W		Generally	Check the hydraulic: hoses are routed safely and not bent or damaged.						x		
W		Generally	Examination of the screw and welded connections for corrosion and proper attachment.								x
W		Generally	Check the panel for alarms			x					
W		Generally	Check the water treatment system for leaks and abnormal noise of the pump			x					
W		Generally	Check the water levels in the tanks: •The lamella seperator must be filled completely during normal operation •The water level on the sand filter must be the same level as drain to the condensate tank, when no backflushing takes place. •The dirt water tank is normally empty, except when backflushing or shortly after tank contains water			x					
W		Generally	Check the functionality of the sand filter, and other components of the water treatment system by a manual backflushing						x		
W		Generally	During the annual inspection or revision, the lamellas can be cleaned with a high-pressure cleaner								x
SCHLAMMBEHANDLUNG											
S	HTN01BB001	BigBag	Level control				x				
S	HTN01BB001	BigBag	Check the bag for wear or overload				x				
S	HTN01BR00x	Pipe	Check, cleaning and fuctional check if necessary						x		
S	HTN01CL101	Suspended float switch	See general instruction								
ALLGEMEIN											
		Solenoid valve	Functional check or replace if necessary				x				
		Solenoid valve	Check whether valve switches, and that the water flows				x				
		Solenoid valve	Tightness				x				
		Ball valve	Functional check: replace if necessary								x
		Temperature sensor	Functional check: replace if necessary								x
		Float switch	Functional check: replace if necessary				x				
		Float switch	Clean, no blocking				x				
		Suspended float switch	Functional check: replace if necessary							x	
		Suspended float switch	Clean						x		
		Compensator	Check, if necessary retighten screws or replace if worn								
		Hose	Check, if necessary retighten screws or replace if worn								