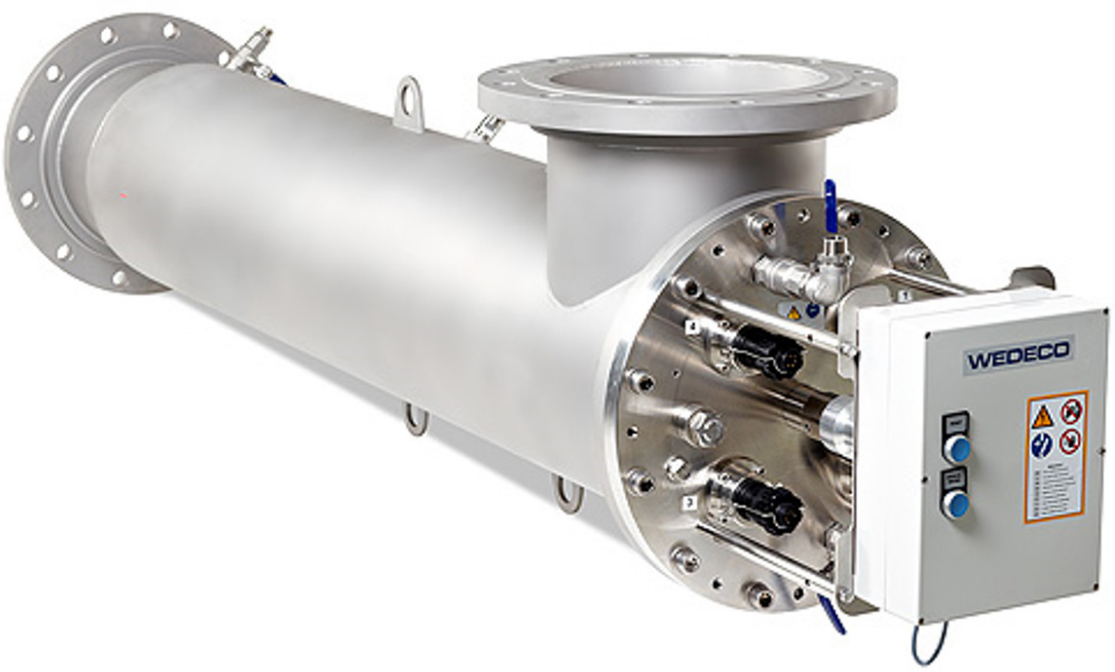
Industry: Municipal

SPEKTRON UV Series



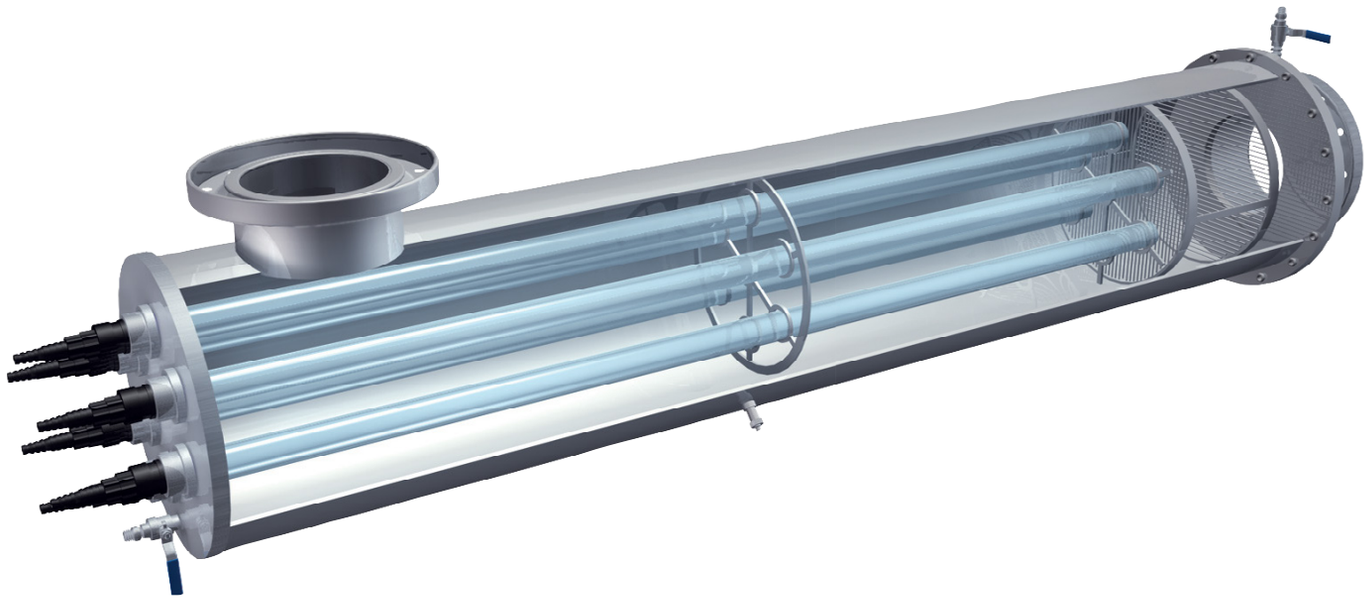
UV disinfection for drinking water

The Wedeco Spektron series is a proven, energy-efficient UV solution for the disinfection of drinking water, process water, and other high UV transmittance liquids.

For improved economics and maximum sustainability, Spektron units employ Wedeco low-pressure, high-output, amalgam Ecoray UV lamps and ballasts. Used in combination with the variable power option, the Ecoray technology results in excellent energy efficiency under all operating conditions. Particularly in dimmed mode, they realize average energy savings of up to 20% compared to existing technologies.

GENERAL INFORMATION

Featuring highly efficient UV lamps and advanced flow distribution technology, the Spektron series is a cost effective, reliable solution for drinking water plants.



Wide array of applications from domestic water supply and industrial uses to large municipal water plants with a capacity of more than 4,000 m3/h per unit.

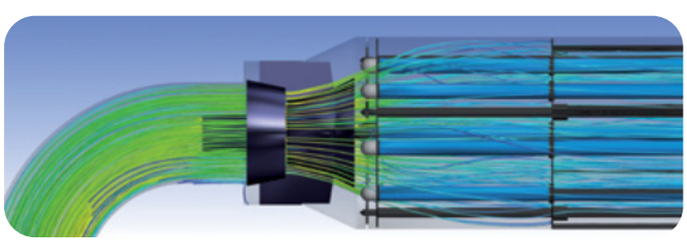
Certified and validated disinfection performance according to Austrian ÖNORM, German DVGW directives, and US EPA´s UV Disinfection Guidance Manual (UVDGM)

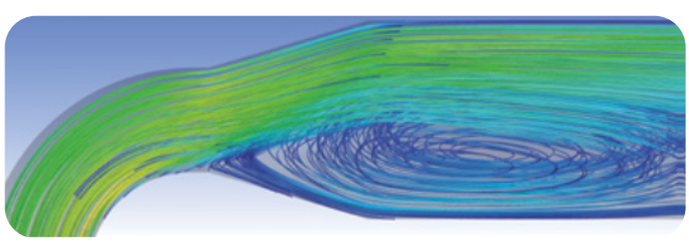
Low energy consumption with low-pressure high-output amalgam lamps (Spectrotherm) and optimized hydraulic conditions. Additional 20% energy savings are possible with the latest Ecoray® UV lamps and ballasts and OptiDose UV dose pacing for Spektron ‘e’ units.

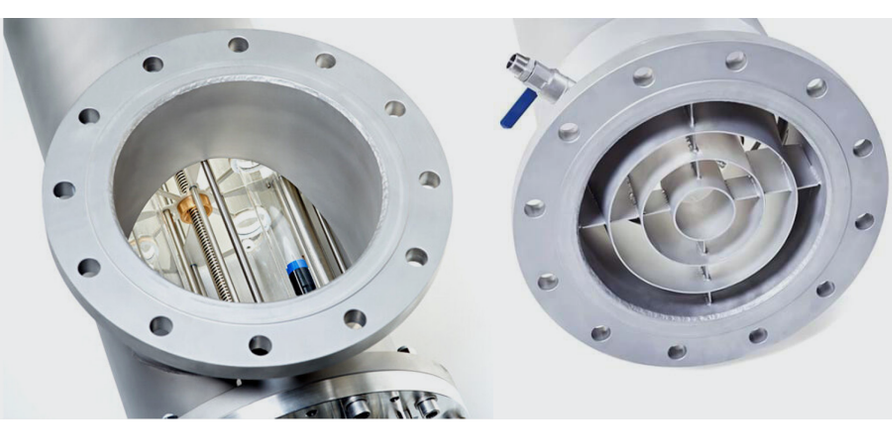
Excellent performance monitoring by latest sensor technology and sophisticated control system

Easy installation with multiple flange and mounting options regardless of inlet piping conditions

Optimized hydraulics for every installation. Optimal disinfection results require uniform velocities throughout the reactor chamber. The Wedeco flow distribution concept is the result of intensive development work using complex Computational Fluid Dynamics (CFD) simulations. The OptiCone flow diverter ensures optimal disinfection performance independent of the inlet situation, while also maintaining low water head loss.







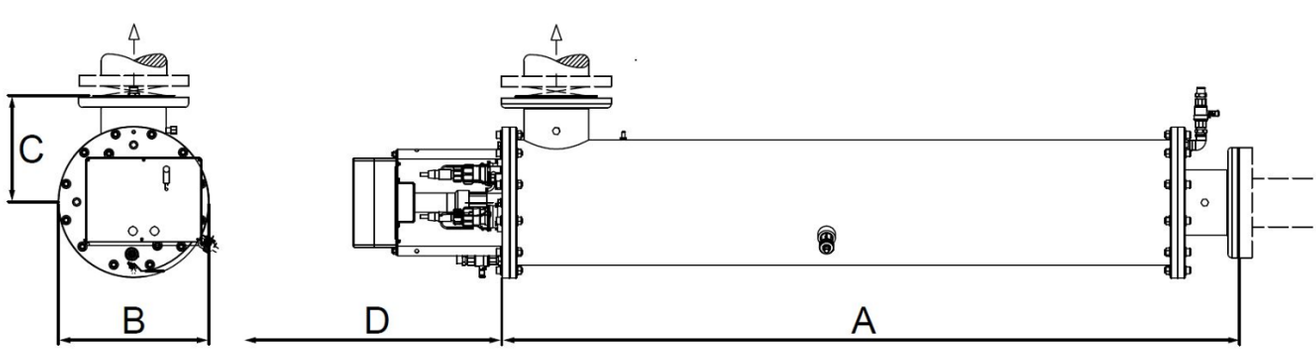
The optional chemical-free wiping system of most (2e 5e and 10e are unwiped only) Spektron ‘e’ units maximizes efficiency and reduces manual cleaning needs with poor drinking water qualities as low as 70% UV transmittance (UVT)

TECHNICAL SPECIFICATIONS

Model #	2e	5e	10e	15	25	30e	50e	75e	90e	180e	250e	350e	650e	900e	2000e	4000e
UV transmittance range in % (1cm)	70-98							60-98	70-98							
Maximum flow rate (m^3/h) *	6.6	10	18	20	42	49	101	130	152	223	390	670	1,247	1,795	3,020	6,032
DVGV certification	Yes					No	Yes									
ÖNORM certified & validated	Yes													No		
UVDGM validated	No										Yes					
UV Lamps and Monitoring System																
Lamp technology	Ecoray low-pressure high-output			Spektrotherm		Ecoray low-pressure high-output										
Power per lamp (W)	50	70	120	210	300	290			230	290				600		
Number of lamps	1					1	3	4	3	4	6	8	12		24	
UV intensity monitoring	Germicidal, ÖNORM compliant															
Individual lamp monitoring	Yes															
UV Reactor																
Protection class	IP 65					IP 65 / NEMA 4X		IP 54	IP 65 / NEMA 4X							
Flow diverter	Integrated							No	OptiCone							
Cleaning system	Manual					Automatic, mechanical (optional)										
Reactor material	Stainless steel 1.4404 / 1.4435 (ASTM 316L)															
Flange sizes (DN / ANSI)	40	50	65	65	80	80/3"	100/4"	150/ na	125/5"	150/6"	200/8" 300/12"	250/10" 350/14"	300/12" 450/18"	350/14" 500/20"	500/20"	700/28"
Dimensions (A) (mm / Inch) **	430/ 16.9	520/ 20.5	770/ 30.3	1340/ 52.8	1660/ 63.4	1660/ 65.4	1665/ 65.6	1530/ 60.3	1607/ 63.3	2010/ 79.1	2061/ 81.1	2283/ 89.9	2501/ 98.5	2389/ 94.1	2711/ 106.7	2732/ 107.6
Dimensions (B) (mm / Inch) **	170/ 6.7	170/ 6.7	170/ 6.7	168/ 6.6	168 / 6.6	210/ 8.3	278/ 10.9	215/ 8.5	390/ 15.4	390/ 15.4	470/ 18.5	525/ 20.7	725/ 28.5	725/ 28.5	883/ 34.8	1093/ 43.0
Dimensions (C) (mm / Inch) **	115/ 4.5	125/ 4.9	130/ 5.1	170/ 6.7	175/ 6.9	175/ 6.9	227/ 8.9	250/ 9.8	275/ 10.8	275/ 10.8	340/ 13.4	353/ 13.9	450/ 17.7	470/ 18.5	580/ 22.8	777/ 30.6
Dimensions (D) (mm / Inch) **	450/ 19.7	550/ 19.7	750/ 29.5	1380/ 54.3	1640/ 64.6	1800/ 70.9	1800/ 70.9	1700/ 67.0	1500/ 59.1	1800/ 70.9	2100/ 82.7	2300/ 90.6	2300/ 90.6	2300/ 90.6	2300/ 90.6	2300/ 90.6
Maximum operating pressure (bar/PSI) ***	16/232			10/145												
UV System Control Cabinet																
Ballast type	Electronic, constant output (100% power)					Electronic, high-efficiency, variable output (50 to 100% power)										
Controller	EcoTouch					EcoTouch or PLC			EcoTouch or PLC							
Materials of construction	Painted sheet steel or stainless steel															
Electrical standards	CE					CE, UL, cUL										
Common outputs	System status, Lamp status, Alarm messages, Process values															
Scada communication	EcoTouch or PLC															
Protection class	IP 65			IP 54		IP 54 / cUL Type 12 (Type 4X optional)										
Supply voltage	CE: 1 L/N/PE, 230V +/-10%, 50-60Hz(TNS net, TN-C net)					CE: 1 L/N/PE (GND), 230V +/-10%, 50-60Hz cUL: 1 L/N/PE (GND), 120V/240V +/-10%, 60Hz						CE: 400/230 +/- 10%, 50 Hz (TN-S Net) UL/cUL: 480/277 +/- 10%, 60 Hz (5 Wire WYE; L1,L2,L3,N,PE (GND))				
Power consumption (kW) approx.	0.1	0.12	0.17	0.42	0.53	0.38	0.7	1.34	0.78	1.03	1.34	2.2	2.8	4.0	7.6	15.1

** At 98% UVT, 400 J/m2 EOL (end of lamplife)*
*** Vessel dimensions are approximate and will differ depending on flange size*
**** Additional pressures available*

TECHNICAL DRAWING



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PROFESSIONAL UV SOLUTIONS

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