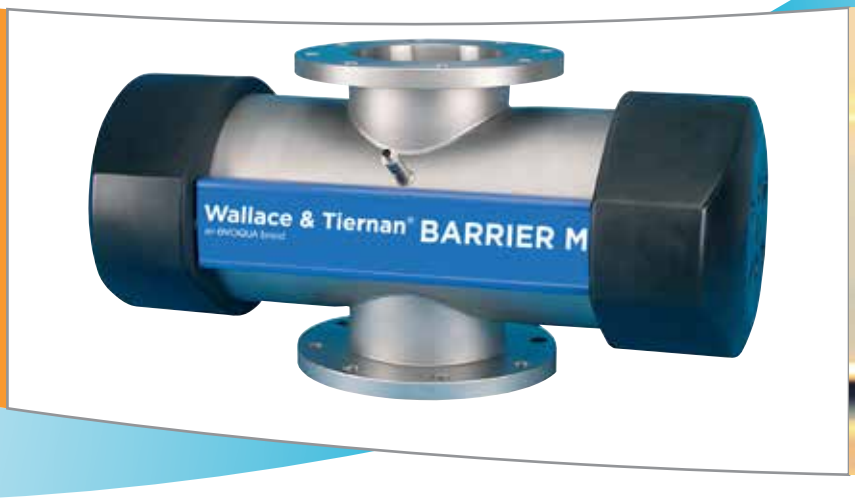

BARRIER® M UV SYSTEMS

WALLACE & TIERNAN® UV DISINFECTION SYSTEMS

The Barrier® M range of UV systems is primarily designed for the treatment of water with flow rates ranging from 10 to 1150 m^3/h (44 to 5000 US gpm). It is equipped with Wallace & Tiernan® medium-pressure lamps, type WTL and electronical ballasts. The wide emission spectrum of the lamps, ranging from 200 to 300 nm, attacks the nucleic acid (DNA), cell wall, proteins and enzymes of waterborne pathogens. Such attacks not only inactivate the microorganism by preventing the replication of its DNA, but also destroy its repair mechanisms. A wide range of DVGW certified systems is available. The Barrier® M system reaction chamber is characterized by optimal hydraulics and low pressure loss, ensuring a high efficiency of the UV system.

Applications

- Potable water
- Swimming pools, including chloramines reduction and disinfection
- Industrial process and wastewater, e.g. food & beverage, pharmaceutical, and fish hatcheries
- Small and medium size wastewater plants

Standard Features

- Optimized operation through steplessamp power control
- Absolute calibrated UV sensor for optimal performance control
- Hydrodynamically optimized chamber design
- Simple, easy-to-use user interface
- Reaction chamber made of stainless steel AISI 316L , particular systems made of 318 LN for seawater available

Key Benefits

- Low operation costs and low head loss through low number of powerful medium-pressure lamps
- Extended lamp life and energy efficient operation through accurate lamp power control
- Low installation costs through space saving design and small footprint, easy installation and retrofit with in-line design
- Wide UV spectrum leads to effective treatment of photoreactivation
- Low life cycle costs with hydrodynamically optimized chamber design

Optional Features

- Manual or automatic cleaning system (automatic for Barrier M 80 system or larger)
- DVGW certification for Barrier M 275, 525, 900, 1250, 2600 and 3800 systems
- Chemical cleaning system

TECHNICAL DATA
BARRIER® M SERIES OF UV SYSTEMS

Model	Disinfection capacity[1]		Chloramine reduction capacity[2]	Connection flange acc. DIN EN 1092-1 ANSI	WTL Lamps	Weight dry	Dimensions UV chamber (A x H x L)[4]	Electrical supply
		$T_{10\,mm}$						
M 35	33 m³/h 145 US gpm	98%	19 m³/h 84 US gpm	DN 80 3″ 150-lb	1 x 1000	14 kg 31 lbs	300 x 214 x 600 mm 11-13/16″ x 8-7/16″ x 23-10/16″	1/N/PE AC 208-277 V, 50-60 Hz (IEC) 2/PE AC 208-277 V, 50-60 Hz, 2-phase 2-wire (USA)
M 80	70 m³/h 308 US gpm	98%	39 m³/h 172 US gpm	DN 125 5″ 150-lb	1 x 1000	59 kg 130 lbs	350 x 306 x 1000 mm 11-13/16″ x 8-7/16″ x 39-3/8″	
M 135	112 m³/h 493 US gpm	98%	61 m³/h 269 US gpm	DN 125 5″ 150-lb	1 x 2000	59 kg 130 lbs	350 x 306 x 1000 mm 13-4/5″ x 12″ x 39-2/5″	
M 275[5]	223 m³/h 982 US gpm	98%	119 m³/h 524 US gpm	DN 200 8″ 150-lb	1 x 2000	63 kg 139 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/2	
M 210	116 m³/h 511 US gpm	90%	n.a.	DN 125 5″ 150-lb	4 x 1000	60 kg 132 lbs	350 x 306 x 1000 mm 13-4/5″ x 12″ x 39-2/5″	3/N/PE AC 360/208-480/277 V, 50-60 Hz (IEC) 3/PE AC 208-277 V, 50-60 Hz, 3-phase 3-wire (USA)
M 290	106 m³/h 467 US gpm	85%	n.a.	DN 125 5″ 150-lb	3 x 2000	60 kg 132 lbs	350 x 306 x 1000 mm 13-4/5″ x 12″ x 39-2/5″	
M 350	130 m³/h 572 US gpm	85%	n.a.	DN 125 5″ 150-lb	4 x 2000	60 kg 132 lbs	350 x 306 x 1000 mm 13-4/5″ x 12″ x 39-2/5″	
M 525[5]	337 m³/h 1484 US gpm	98%	176 m³/h 775 US gpm	DN 200 8″ 150-lb	2 x 2000	64 kg 141 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/2	
M 700	313 m³/h 1378 US gpm	90%	295 m³/h 1299 US gpm	DN 200 8″ 150-lb	3 x 2000	64 kg 141 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/5″	
M 900[5]	298 m³/h 1312 US gpm	85%	n.a.	DN 200 8″ 150-lb	4 x 2000	64 kg 141 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/2″	
M 950	6		402 m³/h 1770 US gpm	DN 250 10″ 150-lb	3 x 2000	72 kg 159 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/5″	
M 1200	6		528 m³/h 2325 US gpm	DN 250 10″ 150-lb	4 x 2000	72 kg 159 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/2″	
M 1250[5]	320 m³/h 1409 US gpm	80%	n.a.	DN 200 8″ 150-lb	6 x 2000	64 kg 141 lbs	400 x 406 x 900 mm 15-3/4″ x 16″ x 35-1/2″	
M 1400	493 m³/h 2171 US gpm	90%	n.a.	DN 350 14″ 150-lb	2 x 3500	160 kg 353 lbs	600 x 590 x 1000 mm 23-5/8″ x 23-1/4″ x 39-3/8″	
M 1700	6		653 m³/h 2875 US gpm	DN 350 14″ 150-lb	4 x 2000	160 kg 353 lbs	600 x 590 x 1000 mm 23-5/8″ x 23-1/4″ x 39-3/8″	
M 2000	709 m³/h 3122 US gpm	90%	750 m³/h 3302 US gpm	DN 350 14″ 150-lb	3 x 3500	160 kg 353 lbs	600 x 590 x 1000 mm 39-2/5″ x 23-1/4″ x 39-2/5″	
M 2600[5]	923 m³/h 4064 US gpm	90%	974 m³/h 4288 US gpm	DN 350 14″ 150-lb	4 x 3500	160 kg 353 lbs	600 x 590 x 1000 mm 39-2/5″ x 23-1/4″ x 39-2/5″	
M 3800[5]	912 m³/h 4015 US gpm	85%	n.a.	DN 350 14″ 150-lb	6 x 3500	160 kg 353 lbs	600 x 590 x 1000 mm 23-5/8″ x 23-1/4″ x 39-3/8″	

1 Capacity at a Fluence (UV dose) of 400 J/m², end of lamp life, at the specified UV transmittance, and based on the multiple point source summation method
2 Capacity at a Fluence of 600 J/m², end of lamp life, and a UV transmittance (254 nm; 1 cm cell) of 95 %
3 Total average power consumption over 9000 h based on constant flow rate, UV transmittance and UV dose as used for the selection of this system (unless specified different)
4 A x H x L: Assembly dimension x height x length
5 Also available in DVGW certified execution; please consult factory or individual datasheet for biodosimetrical certified capacities (DVGW - Internationally recognized authority on certification of UV disinfection systems. DVGW - German Technical and Scientific Association for Gas and Water)
6 When sized for chloramines reduction, this unit will achieve 4 logs inactivation of most waterborne pathogens (bacteria, viruses, protozoa)

EVOQUA WATER TECHNOLOGIES

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