

USCG approved type BWTS with operational limitations

2017/8/11 v.1.4

Manufacturers :	Optimarine :	Alfa Laval :			OceanSaver AS :	Sunrui :	Ecochlor :
Product Name	OBS/OBS Ex	Pure Ballast 3			MK II	BalClor	Ecochlor BWTS
(Approved Date)	(02/Dec/16)	(23/Dec16)			(23/Dec/16)	(06/June/17)	(10/Aug/17)
Type	Filtration + UV	Filtration + UV			Filtration + Electrodialysis	Filtration + Electrolysis	Filtration + Chemical Injection
Size	167 – 3000 m3 /h	150 – 3000 m3/h			200 – 7200 m /h	170 – 8500 m3/h	500-16,200 m3/h
Operational Limitations:	Norway	Sweden			Norway	China	USA
Salinity:	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Not Applicable
Temperature:	0 - 55 Degrees C	Not Applicable			Not Applicable	Not Applicable	Not Applicable
Hold Time:	>3 days	>72 hrs			Not Applicable	Not Applicable	>24 hrs
Electrolyte Feed Temperature:	-	-			>17°C	>5°C	-
Electrolyte Feed Salinity:	-	-			>20 Practical Salinity Units (PSU)	>15 Practical Salinity Units (PSU)	-
Filter Pressure:	>1.5 Bar	-			Inlet Pressure >1.6 Bar	Inlet Pressure >1.6 Bar	>0.4 Bar
Total Residual Oxidant (TRO):	-	-			3 mg/L	7.5 mg/L	-
UV-Intensity:	>600 W/m2	UV reactor size	Minimum UVI at 50% TRC	Minimum UVI at 100% TRC	-	-	-
		170 m3/h	530 W/m2	820 W/2			
		300 m3/h	530 W/m2	820 W/2			
		600 m3/h	530 W/m2	820 W/2			
		1000 m3/h	772 W/m2	1383 W/2			
Treatment	In & Out	In & Out			Neutralization	Neutralization	In only
Active Substance Dose	-	-				-	4.25mg/L