



Certificate

357-T6.01C01

Stephen Marsh Boyer c/o Marsh Industries Limited
Units 3-13 Addington Park Industrial Est., NN14 4AS Northants, UK

EN 12566-6, Annex A

Small wastewater treatment systems for up to 50 PT

Prefabricated treatment unit for septic tank effluent Uni:Gem Star
MBBR bioreactor with final settlement

Test report PIA2019-T6-357B21

Nominal organic daily load (influent)	0.11 kg BOD ₅ /d		
Nominal hydraulic daily load	0.90 m ³ /d		
Material	GRP		
Treatment efficiency (nominal sequences)		Efficiency	Effluent
	COD	74.5 %	71 mg/l
	BOD ₅	90.0 %	12 mg/l
	N _{tot} *	22.8 %	41.5 mg/l
	NH ₄ -N*	90.3 %	4.2 mg/l
	P _{tot}	17.5 %	4.6 mg/l
	SS	79.4 %	16 mg/l
Electrical consumption (entire test period)	0.93 kWh/d		
Number of desludging	1		

*determined for temperatures $\geq 12^{\circ}$ C in the bioreactor

Performance tested by:

PIA - Prüfinstitut für Abwassertechnik GmbH
Hergenrather Weg 30
52074 Aachen
Germany

This document replaces neither the declaration
of performance nor the CE marking.



PIA - Sustainable Certification
M. Wermter
geprüft - tested - testé

Martina Wermter

October 2019



Certificate

357.01C01

Stephen Marsh Boyer c/o Marsh Industries Limited
Units 3-13 Addington Park Industrial Est., NN14 4AS Northants, UK

EN 12566-3, Annex B

Small wastewater treatment systems for up to 50 PT

Small wastewater treatment system Uni:Gem Star (stp)
MBBR process with primary and final settlement

Test report PIA2019-357B21

Nominal organic daily load (influent)	0.27 kg BOD ₅ /d		
Nominal hydraulic daily load	0.9 m ³ /d		
Material	GRP		
Treatment efficiency (nominal sequences)		Efficiency	Effluent
	COD	90.3 %	71 mg/l
	BOD ₅	95.9 %	12 mg/l
	N _{tot}	34.3 %	41.5 mg/l
	NH ₄ -N*	89.6 %	4.2 mg/l
	P _{tot}	39.1 %	4.6 mg/l
	SS	95.4 %	16 mg/l
Electrical consumption	0.93 kWh/d		
Number of desludging	1		
<small>*determined for temperatures > 12 °C in the bioreactor</small>			

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Martina Wermter September 2019