

USCG BWMS Type Approval Status as per 24 June 2020

Manufacturer	Model	Capacity	Application Date	Approval Status	Coast Guard Approval Number	Technology
Optimarin AS Norway	OBS/OBS Ex	100-3,000 m³/h	20 Sep 2016	APPROVED 2 Dec 2016	162.060/1/2 25 Feb 2019	Filtration + UV
Alfa Laval Sweden	PureBallast 3.0/3.1	85-3,000 m³/h	21 Sep 2016	APPROVED 23 Dec 2016	162.060/2/3 4 Apr 2019	Filtration + UV
TeamTec OceanSaver Norway	Oceanasaver MKII	200-7,200 m³/h	23 Sep 2016	APPROVED 23 Dec 2016	162.060/3/3 18 Oct 2017	Filtration + Electrodialysis
Sunrui China	BalClor	50-8,500 m³/h	24 Jan 2017	APPROVED 6 Jun 2017	162.060/4/2 9 Jun 2020	Filtration + Electrolysis
Ecochlor United States	Ecochlor BWTS	500-16,200 m³/h	31 Mar 2017	APPROVED 10 Aug 2017	162.060/5/1 26 Apr 2018	Filtration + Chemical injection
Erma First Greece	Erma First FIT	100-3,740 m³/h	2 May 2017	APPROVED 18 Oct 2017	162.060/6/3 13 Feb 2020	Filtration + Electrolysis
Techcross Korea	Electro-Clean	150-12,000 m³/h	31 Oct 2017	APPROVED 5 Jun 2018	162.060/7/1 14 Jun 2019	Electrolysis
Samsung HI Korea	Purimar BWMS	250-10,000 m³/h	28 Sep 2017	APPROVED 15 Jun 2018	162.060/8/1 20 Jul 2018	Filtration + Electrolysis
BIO-UV Group France	BIO-SEA	55-1,400 m³/h	12 Mar 2018	APPROVED 20 Jun 2018	162.060/9/2 3 Mar 2020	Filtration + UV
Wärtsilä Water UK	Aquarius EC	250-4,000 m³/h	9 Apr 2018	APPROVED 30 Aug 2018	162.060/10/2 27 May 2020	Filtration + Electrolysis
Hyundai HI Korea	HiBallast	75-10,000 m³/h	31 May 2018	APPROVED 26 Oct 2018	162.060/11/2 17 Apr 2020	Filtration + Electrolysis
Headway China P.R.	OceanGuard	65-5,200 m³/h	9 May 2018	APPROVED 6 Nov 2018	162.060/12/1 5 May 2020	Filtration + Electrolysis
JFE Eng. Japan	BallastAce	500-4,000 m³/h	29 Mar 2018	APPROVED 13 Nov 2018	162.060/13/2 10 Mar 2020	Filtration + Chemical Injection
Panasia Korea	GloEn-Patrol	50-6,000 m³/h	30 Mar 2018	APPROVED 14 Dec 2018	162.060/14/0 <i>Under revision</i>	Filtration + UV
De Nora United States	BALPURE	400-8,570 m³/h	3 Mar 2018	APPROVED 19 Dec 2018	162.060/15/2 4 May 2020	Filtration + Electrolysis
Envirocleanse United States	inTank BWTS	Up to 200,000 m³/h	20 Jul 2018	APPROVED 1 Feb 2019	162.060/16/0	Electrolysis+Chemical Injection
DESMI Denmark	CompactClean	35-3,000 m³/h	18 Oct 2018	APPROVED 16 Apr 2019	162.060/17/1 1 Jul 2019	Filtration + UV
Wärtsilä Water UK	Aquarius UV	50-1,000 m³/h	19 Oct 2018	APPROVED 2 May 2019	162.060/18/1 27 May 2019	Filtration + UV
Alfa Laval Sweden	PureBallast 3.2	85-3,000 m³/h	21 Sep 2016 / 18 Mar 2019	APPROVED 15 May 2019	162.060/19/0 <i>Under revision</i>	Filtration + UV
Cathelco Ltd UK	Evolution	55-1,500 m³/h	19 Oct 2018	APPROVED 25 Jun 2019	162.060/20/0	Filtration + UV
COSCO China	Blue Ocean Shield	100-3,200 m³/h	13 Jun 2019	APPROVED 9 Sep 2019	162.060/21/0	Filtration + UV
Hyundai HI Korea	EcoBallast	250-2,160 m³/h	01 Apr 2019	APPROVED 7 Oct 2019	162.060/22/0	Filtration + UV
Miura Co Ltd Japan	HK-(E)C	160-900 m³/h	16 Apr 2019	APPROVED 28 Oct 2019	162.060/23/0 <i>Under revision</i>	Filtration + UV
HANLA IMS Korea	EcoGuardian	130-4,000 m³/h	28 Jun 2019	APPROVED 5 Nov 2019	162.060/24/0	Filtration + Electrolysis
Miura Co Ltd Japan	HK-S(E)	200-900 m³/h	23 Jan 2019	APPROVED 8 Jan 2020	162.060/25/0	Filtration + UV
BAWAT A/S Denmark	BAWAT BWMS Mk2	50-5,000 m³/h	19 Jul 2019	APPROVED 4 Mar 2020	162.060/26/0	Heat
Panasia Korea	GloEn-Patrol 2.0	50-6,000 m³/h	30 Mar 2018 30 Sep 2019	APPROVED 19 Mar 2020	162.060/27/0	Filtration + UV
NK BMS Korea	NK-O3 BlueBallast II	200-8,000 m³/h	30 Aug 2018	APPROVED 23 Mar 2020	162.060/28/0	Ozone
NK BMS Korea	NK-O3 BlueBallast II Plus	200-8,000 m³/h	27 Sep 2018	APPROVED 23 Mar 2020	162.060/29/0	Ozone

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Hyde Marine Inc United States	Guardian-US	60-3,000 m ³ /h	27 Dec 2019	APPROVED 29 Apr 2020	162.060/30/0	Filtration + Ultraviolet
Miura Co Ltd Japan	HK-(E)R	200-900 m ³ /h	31 Dec 2019	APPROVED 7 May 2020	162.060/31/0	Filtration + Ultraviolet
Techcross Inc Korea	ECS-Hychlor	300-8,000 m ³ /h	13 Jan 2020	APPROVED 11 May 2020	162.060/32/0	Filtration + Electrolysis
Semb-Eco Singapore	LUV U1	500 m ³ /h	27 Nov 2018	APPROVED 27 May 2020	162.060/33/0	Filtration + UV
Kuraray Co Ltd Japan	Microfade II	250-2,000 m ³ /h	4 Feb 2020	APPROVED 24 Jun 2020	162.060/34/0	Filtration + Chemical Injection

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Evoqua Water UK	7 Jun 2019	SeaCURE	500-6,000 m ³ /h	Pending	Filtration + Electrolysis
Panasonic Japan	30 Jan 2020	ATPS- BLUEsy	150-7,200 m ³ /h	Pending	Electrolysis
Glosten Inc United States	12 Jun 2020	OneTank BWTS	Up to 4,000 m ³ per tank	Pending	Chemical Injection
Elite Marine Corp China	17 Jun 2020	Seascape	80-5,000 m ³ /h	Pending	Filtration + UV

LOI to the USCG Marine Safety Center for Type Approval

Date Received	Manufacturer	Model	Readiness evaluation	Application Date for Type approval	Approval Status	Dated
2013-02-07	Desmi Ocean Guard A/S	RayClean	-	-	-	-
2013-12-09	Panasia Co Ltd	GloEn-Patrol	2015-10-27	2018-03-30	APPROVED	2018-12-14
2014-04-17	Wartsila Water Systems Ltd	Aquarius EC	2014-07-22	2018-04-09	APPROVED	2018-08-30
2014-04-28	Trojan Marinex	Marinex	2019-05-07	-	-	-
2014-08-13	Headway Technology Co Ltd	OceanGuard	2014-10-21	2018-05-09	APPROVED	2018-11-06
2014-10-01	ERMA First Esk Engineering Solutions	Erma First FIT	2017-04-18	2017-05-02	APPROVED	2017-10-18
2014-10-16	Optimarin AS	OBS/OBS Ex	2015-10-26	2016-09-20	APPROVED	2016-12-02
2014-10-16	Evoqua Water Technologies LLC	SeaCURE	2015-01-22	2019-06-07	Pending	-
2014-12-04	Ecochlor Inc	Ecochlor	2015-04-10	2017-03-31	APPROVED	2017-08-10
2014-12-17	TeamTec Oceansaver AS	OceanSaver MKII	2015-04-28	2016-09-23	APPROVED	2016-12-23
2015-02-03	Sunrui Marine Environment Engineering	BalClor	2015-07-01	2017-01-24	APPROVED	2017-06-06
2015-03-02	Hyde Marine	GUARDIAN-US	2017-04-23	2019-12-27	APPROVED	2020-04-29
2015-03-25	De Nora Water Technologies	BALPURE	2016-06-14	2018-03-03	APPROVED	2018-12-19
2015-03-27	BIO-UV	BIO-SEA	2015-06-24	2018-03-12	APPROVED	2018-06-20
2015-06-24	Samsung Heavy Industries	Purimar	2015-10-27	2017-09-28	APPROVED	2018-06-15
2015-07-17	Miura Co Ltd	HK-S(E)	2017-04-13	2019-01-23	APPROVED	2020-01-08
2015-07-20	Techcross Inc	ECS-Hychlor	2016-10-24	2020-01-13	APPROVED	2020-05-10
2015-08-10	Elite Marine Ballast Water Treatment System	Seascape	2016-04-26	2020-06-17	Pending	-
2015-08-11	COSCO Shipbuilding Industry Company	Blue Ocean Shield	2017-02-13	2019-06-13	APPROVED	2019-09-09
2015-08-25	Cyeco Environmental Technology Co Ltd	Cyeco	-	-	-	-
2015-09-04	Techcross Inc	Electro-Clean	2016-10-12	2017-10-31	APPROVED	2018-06-05
2015-10-16	Hyundai Heavy Industries	HiBallast	2016-08-15	2018-05-31	APPROVED	2018-10-26
2015-10-27	Jiangsu Nanji Machinery Co Ltd	NiBallast	2017-08-04	-	-	-
2016-02-12	Cathelco Ltd	Evolution	2016-06-13	2018-10-19	APPROVED	2019-06-25
2016-02-19	Alfa Laval Tumba AB	PureBallast 3	2016-03-12	2016-09-21	APPROVED	2016-12-23
2016-04-13	Evonik	Avitalis	2016-08-16	-	-	-
2016-05-13	Semb-Eco Pte Ltd	LUV U1	2016-08-09	2018-11-27	APPROVED	2020-05-27
2016-05-30	NKBMS Co Ltd	NK-CI BlueBallast	2016-09-07	-	-	-
2016-06-27	Hyundai Heavy Industries	EcoBallast	2017-03-16	2019-04-01	APPROVED	2019-10-07
2016-07-04	JFE Engineering Corporation	BallastAce	2016-08-29	2018-03-29	APPROVED	2018-11-13
2016-07-07	HANLA IMS Co Ltd	EcoGuardian	2016-12-07	2019-06-28	APPROVED	2019-11-05
2016-07-07	Wartsila Water Systems Ltd	Aquarius UV	2017-06-05	2018-10-19	APPROVED	2019-05-02
2016-07-12	Bawat A/S	BAWAT	2017-09-21	2019-07-19	APPROVED	2020-03-04
2016-09-13	Aquastar Co Ltd	AquaStar	2020-01-29	-	-	-
2016-09-27	Envirocleanse LLC	inTank	2017-12-01	2018-07-20	APPROVED	2019-02-05
2016-10-26	MMC Green Technology AS	MMC	2018-10-15	-	-	-
2016-11-16	GenSys GmbH	GenSys	2019-02-28	-	-	-
2017-03-13	Kuraray Co Ltd	Microfade II	2017-08-22	2020-02-04	APPROVED	2020-06-24
2017-03-29	Desmi Ocean Guard A/S	CompactClean	2017-09-06	2018-10-18	APPROVED	2019-04-16
2017-05-17	Biomarine SRL	Biomarine	2019-06-27	-	-	-
2017-05-23	Knutsen Ballast Water AS	KBAL	2018-09-19	-	-	-
2017-07-03	Panasonic Environmental Systems & Engineering	ATPS-BLUEsys	2018-03-21	2020-01-30	Pending	-
2017-07-09	NK BMS Co Ltd	NK-O3 BlueBallast II Plus	2017-10-03	2018-09-27	APPROVED	2020-03-23
2017-07-12	Coldharbour Marine	GLD	2019-04-18	-	-	-
2017-10-17	Wuxi Brightsky Electronic Co	BSKY	2018-07-10	-	-	-
2018-01-25	Miura Co Ltd	HK-C	2018-04-24	2019-04-16	APPROVED	2019-10-28
2018-01-31	Atlantium Technologies	Atlantium	2018-05-29	-	-	-
2018-04-10	MH Flow Water Technologies	FlowSafe	2019-03-08	-	-	-
2018-05-17	Veolia Water Technologies Deutschland GmbH	CleanBallast - OBS	2018-10-17	-	-	-
2018-05-20	NKBMS Co Ltd	NK-O3 BlueBallast II	2017-03-28	2018-08-30	APPROVED	2020-03-23
2018-06-01	Miura Co Ltd	HK-R	2018-07-02	2019-12-31	APPROVED	2020-05-07
2018-07-13	Alfa Laval Tumba AB	PureBallast 2	2019-02-07	-	-	-
2018-08-03	SKF Marine GmbH	BlueSonic	2018-10-22	-	-	-
2018-08-31	Jiangsu Lanwei	YP	2019-07-08	-	-	-
2018-10-04	Kurita Water Industries, Ltd.	Kurita	2019-03-12	-	-	-
2019-07-03	Hyundai Heavy Industries	HiBallast-NF	2019-11-06	-	-	-
2019-07-04	Samkun Century Co Ltd	ARA PLUS	-	-	-	-
2019-10-23	Glosten, Inc	oneTank BWTS	2019-11-14	2020-06-12	Pending	-

The USCG regulations on ballast water management entered into force on 21 June 2012 and require compliance with the treatment standard at the first scheduled dry-docking after 1st January 2016 for existing vessels, and at delivery for new-buildings.

LOI to the USCG Marine Safety Center for Type Approval

As per 24 June 2020, **48** BWMS manufacturers have submitted **59** LOI's to the USCG Marine Safety Center for Type Approval.

Alternate Management Systems (AMS)

The USCG requires that ballast water must be treated with a USCG type approved ballast water treatment system.

AMS is a temporary designation given to ballast water treatment systems approved by a foreign administration and does not necessarily mean that the system will achieve USCG type approval!

An AMS may be used to meet the USCG ballast water treatment requirements for up to five (5) years after the ship's ballast water discharge standard compliance date specified in the final rule. After the five-year period, vessel owners must ensure that the system installed on board is USCG type-approved.

As per September 2019, **123** systems have met the criteria for acceptance as AMS.

Source: homeport.uscg.mil/ballastwater and USCG Approved Equipment List.

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