

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Tank Washing Machine**with type designation(s)
SC30T, SC30TH, SC30TH-Multi, SC15TW, SC45TW

Issued to

SCANJET MARINE AB
SJÖBO, Swedenis found to comply with
MARPOL 73/78 Annex 1, Reg. 13 B (2) and IMO Revised Spec. Res. A. 446 (XI) 4.2**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Design:	Media driven, single and dual nozzle, fixed installed tank washing machine, with an integrated programmable drive unit.
Performance data:	Depend on Type, see cert.

This Certificate is valid until **2019-12-07**.Issued at **Høvik** on **2015-12-08**DNV GL local station: **Gothenburg**for **DNV GL**Approval Engineer: **Erik Istad**

Torill Grimstad Osberg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

SC30T, SC30TH and SC30TH-Multi:

Tank cleaning machine, Rotating single nozzle, Powered by a media flow driven turbine.

Materials: The main parts in contact with cargo are made of austenitic stainless steel AISI 316. Bearings and sealing are made of Teflon and Viton rubber.

Nozzle sizes SC30T: 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 24, 26, 28 mm

Nozzle sizes SC30TH: 18, 20, 22, 24, 26, 28, 30 mm

Nozzle sizes SC30TH-Multi: - 3x10, x12, x14, x15, x16, x17mm
- 4x8, x10mm

SC15TW and SC45TW

Tankcleaning machine, Rotating twin nozzles, Powered by a media flow driven turbine.

Materials: The main parts in contact with cargo are made of austenitic stainless steel AISI 316 or bronze. Bearings and sealing are made of Teflon and PEEK.

Nozzle sizes SC15TW: 6, 7, 8, 9, 10, 11 mm

Nozzle sizes SC45TW: 11, 12, 14, 15, 16, 18 mm

Application/Limitation

Performance data:

Type SC30T:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
1 x Ø8	6	7	13	1 x 15	6	19	21
	8	8	14		8	22	23
	10	9	15		10	25	24
	12	10	16		12	27	25
1 x Ø9	6	8,8	14	1x 16	6	22	22
	8	9,9	15		8	25	24
	10	11	16		10	27,5	25
	12	12	17		12	30	26
1 x 10	6	10,5	15	1 x 17	6	24,5	23
	8	11,5	16		8	28,3	25
	10	13	17		10	31,3	26,7
	12	14	18		12	34,5	28
1 x 11	6	12	18	1 x 18	6	27	24
	8	14	19		8	31,5	26
	10	15	20		10	35	28
	12	17	21		12	39	30
1 x 12	6	14	19	1 x 20	8	38	27
	8	16	21		10	43	31
	10	18	22		12	47,5	33
	12	19,5	23				

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1 x 13	6 8 10 12	16 18,3 20,5 22,3	19,3 21,5 22,8 23,9	1 x 22	8 10 12	44 50 54,5	28 31 33
1 x 14	6 8 10 12	18 20,5 23 25	19 22 23 25	1 x 24	8 10 12	50 55 60	27 29 32

Type SC30T:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
1 x 26	8 10 12	54 60 67	25 27 30	1 x 28	8 10 12	56 62 69	24 27 29

Type SC30TH:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
1 x 18	6 8 10	33 36 40	25 27 29	1 x 26	6 8 10	58 67 74	30 34 37
1 x 20	6 8 10	39 45 50	28 30 32	1 x 28	6 8 10	65 74 83	33 37 39
1 x 22	6 8 10	45 52 58	30 33 34	2 x 30	6 8 10	71 82 91	34 37 39
1 x 24	6 8 10	51 60 65	30 33 35				

Type SC30TH-Multi :

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
3 x 10	6 8 10 12	27,3 31,5 35,1 38,4	15,0 16,5 18,0 19,5	3 x 16	6 8 10 12	54,0 61,8 68,8 75,3	18,5 20,5 22,5 24,5
3 x 12	6 8 10 12	37,6 43,1 48,0 52,3	16,5 18,5 20,5 22,5	3 x 17	6 8 10 12	57,7 66,7 76,5 83,0	19,0 21,0 23,0 25,0

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3 x 14	6	46,6	17,5	4 x Ø8	6	24,2	13,0
	8	53,5	19,5		8	27,7	14,5
	10	59,7	21,5		10	30,6	16,0
	12	65,8	23,5		12	33,5	17,5
3 x 15	6	51,4	18,0	4 x 10	6	36,4	15,0
	8	58,4	20,0		8	41,2	17,0
	10	64,4	22,0		10	45,8	18,5
	12	70,3	24,0		12	49,9	20,0

Type SC15TW:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
2 x Ø6	6	7,5	8	2 x Ø9	6	14,5	12
	8	8,5	10		8	17	13
	10	9,5	11		10	19	14
	12	10,5	12		12	20,5	16
2 x Ø7	6	10	10	2 x Ø10	6	16,5	12
	8	11	12		8	19	13
	10	12,5	13		10	21	14
	12	13,5	14		12	23,5	16
2 x Ø8	6	12	12	2 x Ø11	6	19	13
	8	14	13		8	22	15
	10	15,5	14		10	24	16
	12	17	15		12	26	17

Type SC45TW:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
2 x Ø11	6	22	15	2 x Ø14	6	30	15
	8	25	17		8	35	17
	10	28	19		10	38,5	19
	12	31	20		12	42,5	20
2 x Ø12	6	25	15	2 x Ø15	6	32	15
	8	29	17		8	36	17
	10	32,5	19		10	41	19
	12	36	20		12	44,5	21

Type SC45TW:

Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]	Nozzle diameter [mm]	Pressure [bar]	Flow [m³/h]	Max. effective jetlength [m]
2 x Ø16	6	34	14	2 x Ø18	6	35	13
	8	38	16		8	40	15
	10	42	18		10	45	17
	12	45	20		12	49	19

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Type Approval documentation

Tests carried out

Performance of prototype testing in presence of DNV GL surveyor.
Performance of prototype testing is based upon test requirements that meet DNV TA-Program 785.70, item 3.2.

Marking of product

For identification to this certificate the products are at least to be marked with:

- Manufacturers name or trade mark
- Type designation
- Serial No.
- Date of production

Periodical Assessments for Retention of the Type Approval Certificate

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Standard for certification No. 1.2 Type Approval Item 4.

This certificate replaces previous Type Approval Certificate No. P-14600.