

Delta "T" Systems

2020 Product & Service Catalog



Premium Marine Products and Systems

Serving Commercial, Military and Pleasure Vessels for More Than 25 Years.



Fans • Dampers • Moisture Eliminators • Controls • Diesel Exhaust Systems • Marine Hooks



Delta "T" Systems

Application Data Worksheet

Required Fields*

Please fill out completely and return to Delta "T" Systems' Application Engineering Department.

Customer

NAME* _____ COMPANY* _____

ADDRESS* _____

CITY* _____ STATE* _____ ZIP* _____ COUNTRY* _____

TEL.* _____ FAX* _____ EMAIL* _____

Application

<input type="checkbox"/> NEW CONSTRUCTION	MFG./BUILDER/DESIGNER _____
<input type="checkbox"/> NEW DESIGN	HULL NO./VESSEL NAME* _____
<input type="checkbox"/> BUDGETARY QUOTE	MODEL/TYPE _____
<input type="checkbox"/> RETROFIT	LOA _____ BEAM _____ YEAR BUILT _____

Engines

ENGINE MFR.* _____ MODEL NO.* _____ NO. ENGINES* _____

RATING* _____ (eg.: A, B, C, D, E, PLEASURE CRAFT, COMMERCIAL, etc.)

MAX RPM _____ CONTINUOUS RPM _____ RATED HP. _____

Generators

MFR.* _____ MODEL NO.* _____ NO. GENERATORS* _____

KW.* _____ VOLTAGE* _____ HZ.* _____ PHASE* _____ CONTINUOUS RPM _____

MFR.* _____ MODEL NO.* _____ NO. GENERATORS* _____

KW.* _____ VOLTAGE* _____ HZ.* _____ PHASE* _____ CONTINUOUS RPM _____

LOCATION OF GENSETS?* ENGINE ROOM OTHER LOCATION _____

Engine Room

MAX ENGINE RM. HEIGHT* _____ (To Deck Plates) MAX ENGINE RM. WIDTH* _____ MAX ENGINE RM. LENGTH* _____

Is there any fixed tankage within the engine room space? If YES, indicate the tank types and sizes below.*

TANK 1 _____ L x W x H TANK 2 _____ L x W x H

TANK 3 _____ L x W x H TANK 4 _____ L x W x H



Delta "T" Systems

Application Data Worksheet - Page 2

Indicate any existing and/or designed ventilation fans.

Fans

MFR.* _____ MODEL NO.* _____ CFM* _____

ID* _____ QTY.* _____ VOLTS* _____ HZ.* _____ PHASE* _____

DUTY* _____ (INTAKE, EXHAUST, COMBUSTION AIR, etc.)

MFR.* _____ MODEL NO.* _____ CFM* _____

ID* _____ QTY.* _____ VOLTS* _____ HZ.* _____ PHASE* _____

DUTY* _____ (INTAKE, EXHAUST, COMBUSTION AIR, etc.)

Openings

EXISTING ENGINE ROOM VENTILATION OPENINGS* _____ L x W x H QTY.* _____

EXISTING ENGINE ROOM VENTILATION OPENINGS* _____ L x W x H QTY.* _____

Indicate any required approvals.*

Approvals

- | | |
|--|---|
| <input type="checkbox"/> ABS - American Bureau of Shipping | <input type="checkbox"/> Lloyds/MCA - Maritime Coastal Agency |
| <input type="checkbox"/> USCG - United States Coast Guard | <input type="checkbox"/> Australia - National Marine Safety Committee |
| <input type="checkbox"/> DNV - Det Norske Veritas | <input type="checkbox"/> GL - Germanischer Lloyd |
| <input type="checkbox"/> RINA - Registro Italiano Navale | <input type="checkbox"/> TC - Transport Canada |
| <input type="checkbox"/> CE - Certified European | <input type="checkbox"/> BV - Bureau Veritas |
| | <input type="checkbox"/> Maritime New Zealand |

Indicate product and service of interest.*

Quote Type

- | | |
|--|--|
| <input type="checkbox"/> COMPLETE VENTILATION SYSTEM | <input type="checkbox"/> MANUAL FAN CONTROL SYSTEM |
| <input type="checkbox"/> MOISTURE ELIMINATORS | <input type="checkbox"/> WEATHER CLOSURES |
| <input type="checkbox"/> MARINE AXIAL FANS - A/C <input type="checkbox"/> D/C <input type="checkbox"/> | <input type="checkbox"/> COMBUSTION/COOLING AIR OPENING ANALYSIS |
| <input type="checkbox"/> SMOKE & FIRE DAMPERS | <input type="checkbox"/> OTHER _____ |
| <input type="checkbox"/> AUTOMATIC FAN CONTROL SYSTEM | _____ |

Please include photographs and/or drawings of the engine room and existing air openings.*

AVAILABLE: DRAWINGS (.DXF, .DWG) PHOTOGRAPHS (.JPG, .TIF, .EPS, etc.)

Premium Marine Axial Fans



**NEMA
Premium**



Externally mounted junction boxes maximize airflow and simplify wiring connections.

Design & Construction — Axial Ventilation Fans produced by Delta “T” Systems are specifically designed and built for the rigors of the marine environment — not adapted from other industries. Flanged housings of welded marine grade aluminum provide lightweight and excellent corrosion resistance. Major assembly hardware is corrosion resistant stainless steel for long life. An external junction box mounted on the housing exterior is provided for electrical connections.

Motors — Premium efficiency three phase and single phase direct drive motors are utilized to provide quiet continuous duty service. Available with “CE” Classification, 50 or 60 HZ, and optional I-EEE-45 Certification, these motors are designed for worldwide applications and can be provided in nearly any voltage configuration.

Fan Hubs & Blades — Corrosion resistant aluminum hubs are secured directly to the motor shaft using multiple locking methods for enhanced safety and

reliability. Fan blades are non-corrosive fiber-reinforced polypropylene composite and are pitch adjustable to allow for a wide range of flows and duties. The high performance airfoil blade shape provides for exceptional flow characteristics and low sound levels. All fans are tested in accordance with AMCA Standard 210. Axial Ventilation Fans have a non-overloading characteristic; the peak power input occurs within the range of normal operating pressures and is always exceeded by the motor rating.

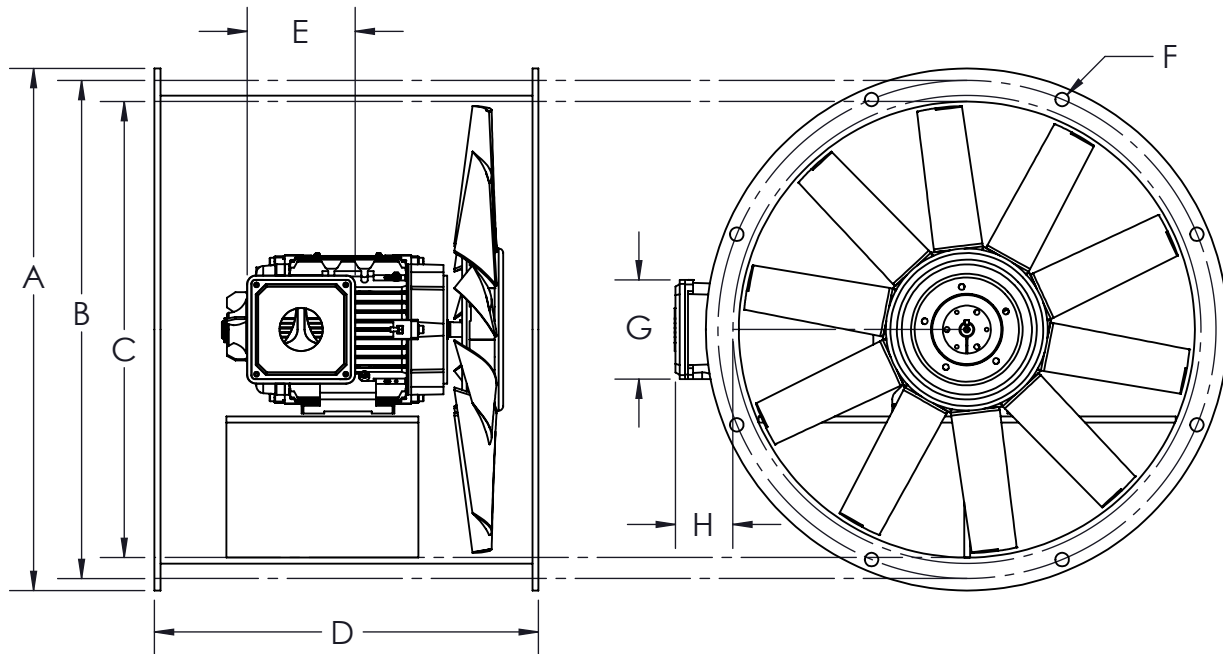
Standard Sizes — Our premium series fans range in size from 12” (305 mm) ID to 60” (1524 mm) ID. For larger vessels, axial marine grade fans are available up to 106” (2690 mm) in diameter with flow rate to 600,000 CFM.

Standard Flows — Ranging from 875 CFM (42 m³/Min) to 100,000+ CFM (1642.4+ m³/Min), Delta “T” Systems Axial Ventilation Fans can be configured to your exacting specifications.

Premium Marine Axial Fans



**NEMA
Premium**



Fan Size	A OD	B Bolt Circle	C ID	D Length	E	F Bolt Holes	G	H	I NPT
12 in. 304.8 mm	14 3/4 in. 374.7 mm	13 3/4 in. 349.3 mm	12 in. 304.8 mm	16 in. 406.4 mm	4 3/16 in. 106.4 mm	8 x 3/8 in. 8 x 9.5 mm	5.5 in. 139.7 mm	3 1/16 in. 77.8 mm	3/4 in.
15 in. 381 mm	17 3/4 in. 450.9 mm	16 3/4 in. 425.5 mm	15 in. 381 mm	16 in. 406.4 mm	4 3/16 in. 106.4 mm	8 x 7/16 in. 8 x 11 mm	5.5 in. 139.7 mm	3 1/16 in. 77.8 mm	3/4 in.
19 in. 482.6 mm	21 3/4 in. 552.5 mm	20 3/4 in. 527 mm	19 in. 482.6 mm	16 in. 406.4 mm	4 13/16 in. 122.2 mm	8 x 9/16 in. 8 x 14.3 mm	6.5 in. 165 mm	3 1/4 in. 82.5 mm	3/4 in.
21 in. 533.4 mm	23 3/4 in. 603.3 mm	22 3/4 in. 577.9 mm	21 in. 533.4 mm	18 in. 457 mm	4 13/16 in. 122.2 mm	12 x 9/16 in. 12 x 14.3 mm	6.5 in. 165 mm	3 1/4 in. 82.5 mm	3/4 in.
24 in. 609.6 mm	26 3/4 in. 679.5 mm	25 3/4 in. 654 mm	24 in. 609.6 mm	18 in. 457 mm	4 13/16 in. 122.2 mm	12 x 9/16 in. 12 x 14.3 mm	6.5 in. 165 mm	3 1/4 in. 82.5 mm	3/4 in.
30 in. 762 mm	33 3/4 in. 857.25 mm	32 5/16 in. 820.7 mm	30 in. 762 mm	28 in. 711.2 mm	5 3/8 in. 136.5 mm	16 x 9/16 in. 16 x 14.2 mm	7 13/16 in. 198.4 mm	4 1/4 in. 107.9 mm	1 in. 25.4 mm
38 in. 914.4 mm	39 3/4 in. 1009.6 mm	38 in. 965.2 mm	38 in. 914.4 mm	28 in. 711.2 mm	5 3/8 in. 136.5 mm	16 x 9/16 in. 16 x 14.2 mm	7 13/16 in. 198.4 mm	4 1/4 in. 107.9 mm	1 in. 25.4 mm

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Redneck Fans

Standard Marine Axial Fans



Standard Line

Available in eight standard sizes from 12 to 48 inches (304.8 to 1219.2 mm)

Design & Construction — Axial Ventilation Fans produced by Delta “T” Systems are specifically designed and built for the rigors of the marine environment — not adapted from other industries. The Standard Line is built from rolled steel housings and powder coated for protection against the elements. Major assembly hardware is corrosion resistant stainless steel for long life.

Motors — Premium efficiency three phase and single phase direct drive motors are utilized to provide quiet continuous duty service. Available with “CE” Classification, 50 or 60 HZ, and optional I-EEE-45 Certification, these motors are designed for worldwide applications and can be provided in nearly any voltage configuration.

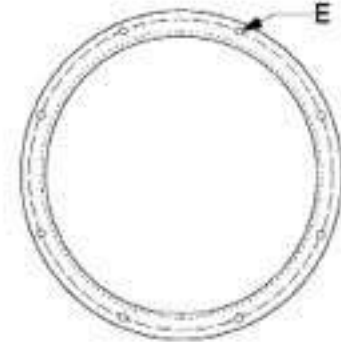
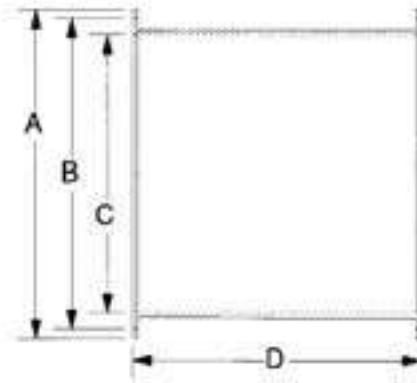
Fan Hubs & Blades — Corrosion resistant aluminum hubs are secured directly to the motor shaft using multiple locking methods for enhanced safety and reliability. Fan blades are non-corrosive polypropylene composite and are factory balanced for smooth operation and long life cycles. The high performance airfoil blade shape provides for exceptional flow characteristics and low sound levels. All fans are tested in accordance with AMCA Standard 210. Redneck Fans have a non-overloading characteristic; the peak power input occurs within the range of normal operating pressures and is always exceeded by the motor rating.

Redneck Fans

Standard and Economy Marine Axial Fans



Standard Line



Fan Size	A OD	B Bolt Circle	C ID	D Length	E Bolt Holes
12 in. 304.8 mm	14 1/16 in. 357.2 mm	13 1/8 in. 333.4 mm	12 in. 304.8 mm	20 in. 508.0 mm	8 x 7/16 in. 8 x 11.1 mm
15 in. 381.0 mm	17 1/16 in. 433.4 mm	16 1/8 in. 409.6 mm	15 in. 381.0 mm	20 in. 508.0 mm	8 x 7/16 in. 8 x 11.1 mm
18 in. 457.2 mm	20 1/16 in. 509.6 mm	19 1/8 in. 485.8 mm	18 in. 457.2 mm	20 in. 508.0 mm	8 x 7/16 in. 8 x 11.1 mm
24 in. 609.6 mm	26 11/16 in. 677.9 mm	25 13/16 in. 655.6 mm	24 in. 609.6 mm	21 in. 533.4 mm	8 x 7/16 in. 8 x 11.1 mm
30 in. 762 mm	32 11/16 in. 830.3 mm	31 3/4 in. 806.5 mm	30 in. 762.0 mm	22 in. 558.8 mm	8 x 7/16 in. 8 x 11.1 mm
36 in. 914.4 mm	39 1/4 in. 997.0 mm	37 7/8 in. 962.0 mm	36 in. 914.4 mm	28 in. 711.2 mm	8 x 7/16 in. 8 x 11.1 mm
42 in. 1066.8 mm	45 1/4 in. 1149.4 mm	43 9/16 in. 1106.5 mm	42 in. 1066.8 mm	29 in. 736.6 mm	8 x 7/16 in. 8 x 11.1 mm
48 in. * 1219.2 mm	51 in. 1295.4 mm	49 5/8 in. 1260.5 mm	48 in. 1219.2 mm	31 in. 787.4 mm	8 x 7/16 in. 8 x 11.1 mm

* Special Order Only

Axial Fan Diverters



Guided Airflow for Optimum Distribution

Airflow Diverters are used to guide the intake air for the engine room to the proper locations in order to feed the engines with an ample supply of combustion air and to efficiently cool the engine room and eliminate any hot spots. Diverters function to split a single column of intake air that the intake fans are bringing into the engine room into two or three separate columns of air and then redirect those columns to places in the engine room where they are most needed. The bolt pattern on the standard diverters has been designed to mate up with the Delta "T" Systems' fan housings. They are constructed of welded marine grade aluminum and are available in mill finish or powder coated in any color.

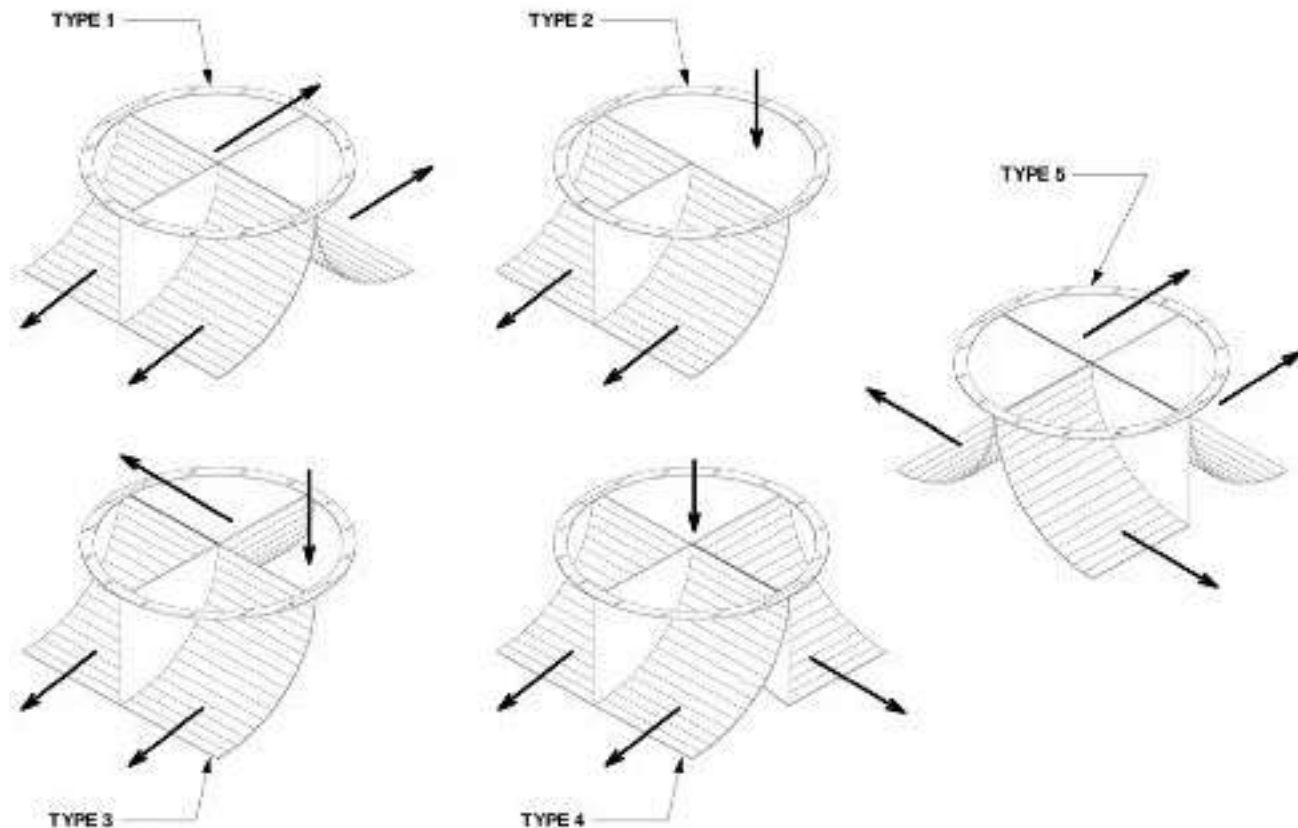


**Standard
Airflow Diverters**



**Custom
Airflow Diverters**

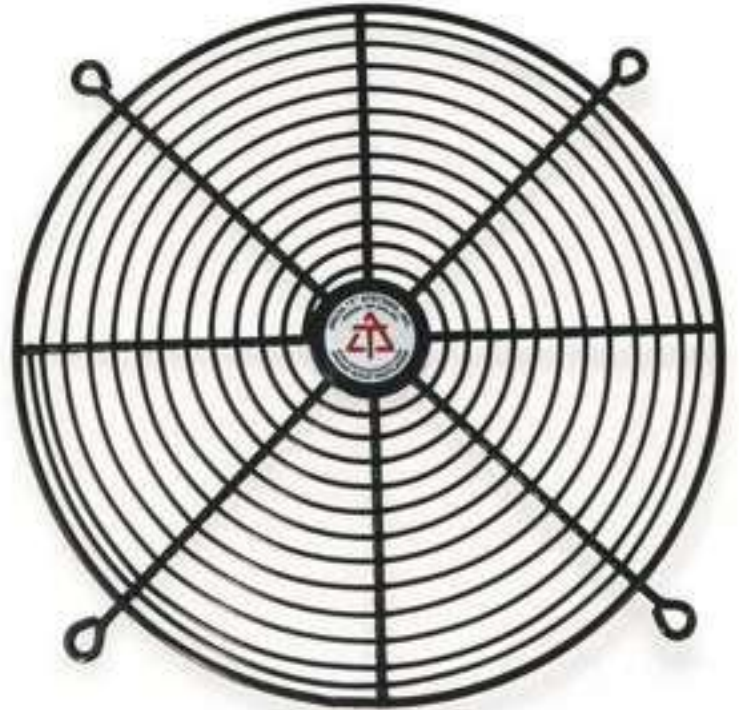
Standard Airflow Diverter Types



Fan Guards

Delta "T" Systems' fan guards are available in all standard sizes. The welded steel construction is plastic dipped for completely sealed protection from the elements.

Fan guards are a highly recommended option on Delta "T" Systems' high-output axial fans in order to prevent debris and other foreign matter from entering the fan.



Frequency Drives

Delta "T" Systems' carries a full line of single and three phase frequency drives for use with all AC powered fans and blowers.



Line/Load Reactors

Delta "T" Systems' carries a full line of line/load reactors for use with all AC powered fans and blowers as required.



Small AC Axial Fans

8 and 11 Inch AC Axial Fans



11 Inch (279.4 mm) Axial Fan

with flow rates to 1100 CFM (1869 m³/h)

Application — Ideally suited for small vessel engine rooms and OEM applications where compact ventilation systems are required. These fans provide over four times the air volume of small AC centrifugal marine blowers with a substantial weight savings. Unbelievably quiet when running, these fans will provide thousands of hours of continuous service.

Design & Construction — The 8" and 11" Axial Ventilation Fans are specifically designed and built for the rigors of the marine environment. With a flanged housing of cast aluminum, this lightweight unit provides a compact fan with excellent corrosion resistance. Extended wiring leads from the motor to a terminal strip provide for simple quick installation.

Motor — 50/60 HZ High efficiency single phase direct drive motor provides extremely quiet continuous duty service, yet draw only 80 WATTS. Motors are totally enclosed (TEAO) double shielded ball bearing type. Available in both 115 VAC and 230 VAC, these motors are designed for worldwide applications.

- 8 Inch Fan-115 Volt AC — Part No. 500-208281/1
- 8 Inch Fan-230 Volt AC — Part No. 500-208281/2



8 Inch (203.2 mm) Axial Fan

with flow rates to 607 CFM (1031 m³/h)

Fan Hubs & Blades — A corrosion resistant hub is secured directly to the motor shaft using multiple locking methods for enhanced safety and reliability. Fan blades are finished with black powder coated paint for corrosion resistance. The high performance blade shape provides for exceptional flow characteristics and low sound levels - only 61 dBA at free air flow.

Finish — Corrosion resistant aluminum housings are provided "mill finish" without paint.

The 8 and 11 Inch AC Axial Fans are speed controllable using the **WC 15 and WC 25 Adjustable Manual AC Fan Controls**.

WC 15



WC 25



- WC 15 — Part No. 600-WC15
- WC 25 — Part No. 600-WC25

- 11 Inch Fan-115 Volt AC — Part No. 500-211115
- 11 Inch Fan-230 Volt AC — Part No. 500-211230

Small AC Axial Fans

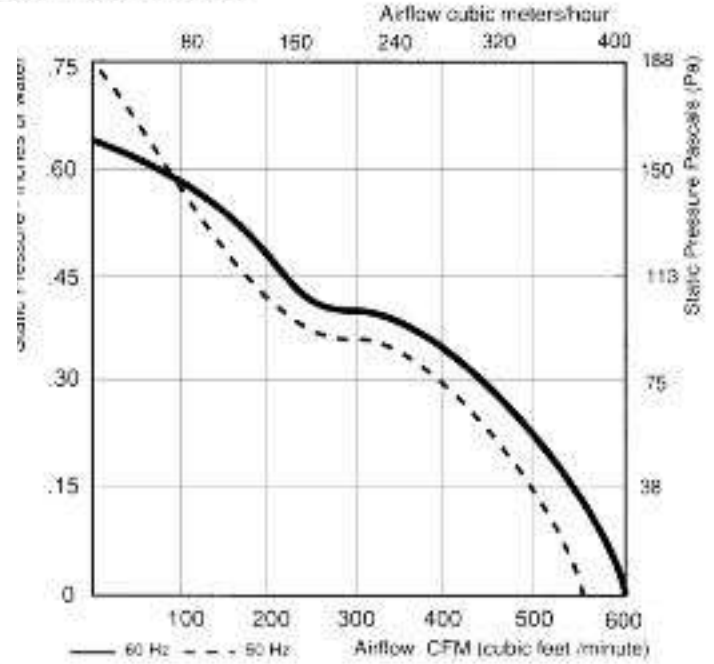
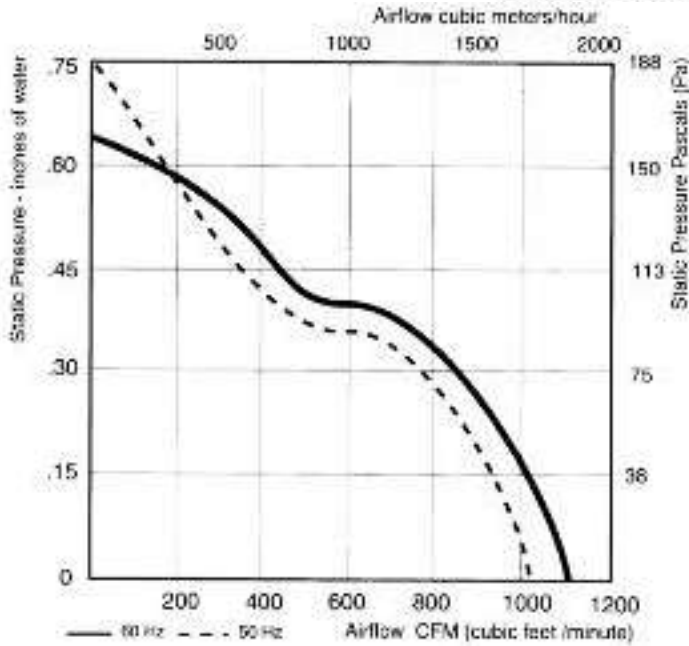
8 and 11 Inch AC Axial Fans



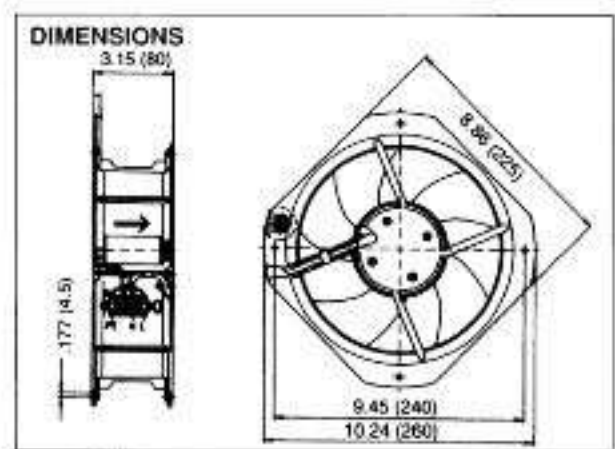
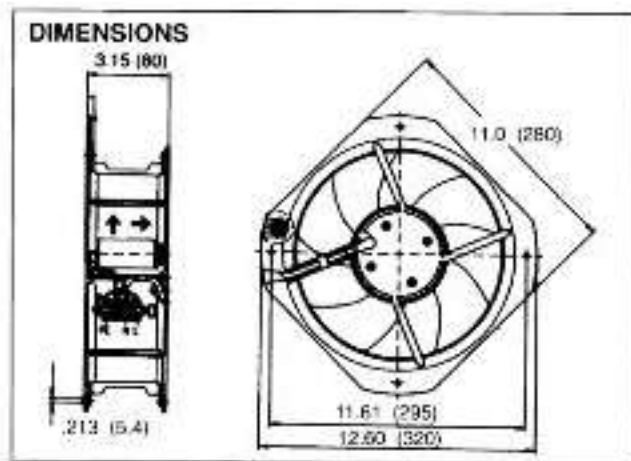
11 Inch (279.4 mm) Axial Fan

8 Inch (203.2 mm) Axial Fan

PERFORMANCE AT 50 & 60 HZ



DIMENSIONS



Centrifugal Blowers

SC-600 6 Inch AC Centrifugal Blower



**6 Inch (152.4 mm) Centrifugal Blower
with flow rates to 1200 CFM (2039 m³/h)**

The 500-SC600 Blower has been specifically designed and built for the rigors of the marine environment – not adapted from other industries. With a white powder coated marine grade aluminum housing that uses stainless steel fasteners, this lightweight unit provides a compact blower with excellent corrosion resistance. Featuring a multi-vane forward curved wheel with a high volumes, up to 1,200 CFM, and low noise characteristic, it is ideal for O.E.M. applications where a quiet, reliable, compact blower is required. Galley fume extraction, head air extraction, engine room ventilation, and interior make up air systems are just a few of the potential applications.

Motors — A 1.5 HP - 60 HZ High efficiency three phase or standard single phase direct drive motor is utilized to provide quiet continuous duty service. The motor is totally enclosed (TEFC) and is available with “CE” Classification and/or optional I-EEE-45 Certification. Designed for worldwide applications, this blower can be provided in nearly any voltage required.

Accessories & Options —

- Inlet Guard
- Outlet Guard
- I-EEE-45 Motor Certification (3 Phase Only)

Labeling for IEEE-45 Certification

Serial Number
Label

Project Number
Label



Tested and
Inspected By Label

IEEE-45 TAG

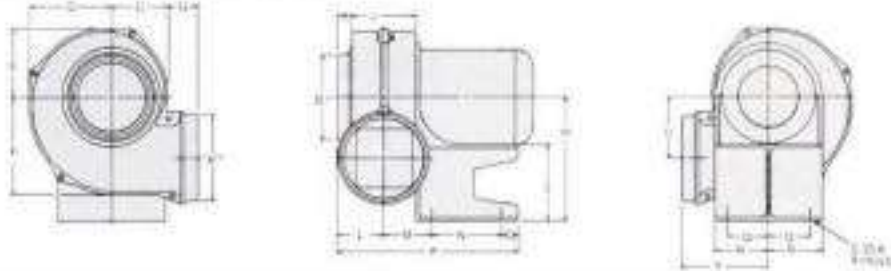
Centrifugal Blowers

SC-600 6 Inch AC Centrifugal Blower



DELTA "T" SYSTEMS

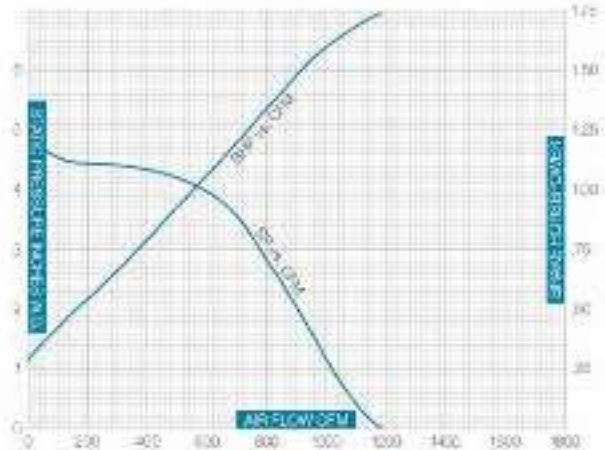
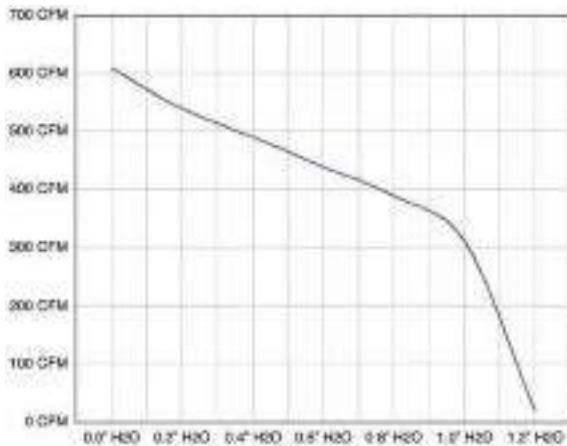
STANDARD DIMENSIONS (IN.)



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
6	6	3 7/8	5 5/8	4 3/4	6 9/16	2 1/8	8 1/2	5	4 1/2	1 1/8	3 3/8	3 3/8	5	1	12 3/4	2 3/4	3 3/4	7/16	6	4 3/16

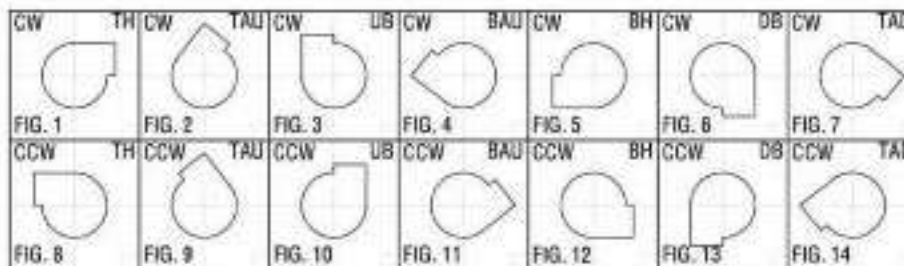
PERFORMANCE AT 1750 RPM - 60 HZ MOTOR

PERFORMANCE AT 3450 RPM - 60 HZ MOTOR



DISCHARGE CONFIGURATIONS

Rotation viewed from the driven (motor) side of the blower housing. Discharge configuration must be specified when ordering.



NOTE: ROTATION VIEWED FROM THE DRIVEN (MOTOR) SIDE.

Note: Due to Delta "T" Systems policy of continuous product improvement, performance and specifications are subject to change.

Centrifugal Blowers

SC-800 8 Inch AC Centrifugal Blower



8 Inch (203.2 mm) Centrifugal Blower with flow rates to 1380 CFM (2345 m³/h)

The 500-SC800-18 Blower has been specifically designed and built for the rigors of the marine environment – not adapted from other industries. With a white powder coated marine grade aluminum housing that uses stainless steel fasteners, this lightweight unit provides a compact blower with excellent corrosion resistance. Featuring a multi-vane forward curved wheel with a high volumes, up to 1,380 CFM, and low noise characteristic, it is ideal for O.E.M. applications where a quiet, reliable, compact blower is required. Galley fume extraction, head air extraction, engine room ventilation, and interior make up air systems are just a few of the potential applications.

Motors — A 1.5 HP - 60 HZ High efficiency three phase or standard single phase direct drive motor is utilized to provide quiet continuous duty service. The motor is totally enclosed (TEFC) and is available with “CE” Classification and/or optional I-EEE-45 Certification. Designed for worldwide applications, this blower can be provided in nearly any voltage required.

Accessories & Options —

- Inlet Guard
- Outlet Guard
- I-EEE-45 Motor Certification (3 Phase Only)

Labeling for IEEE-45 Certification

Serial Number
Label

Project Number
Label



Tested and
Inspected By Label

IEEE-45 TAG

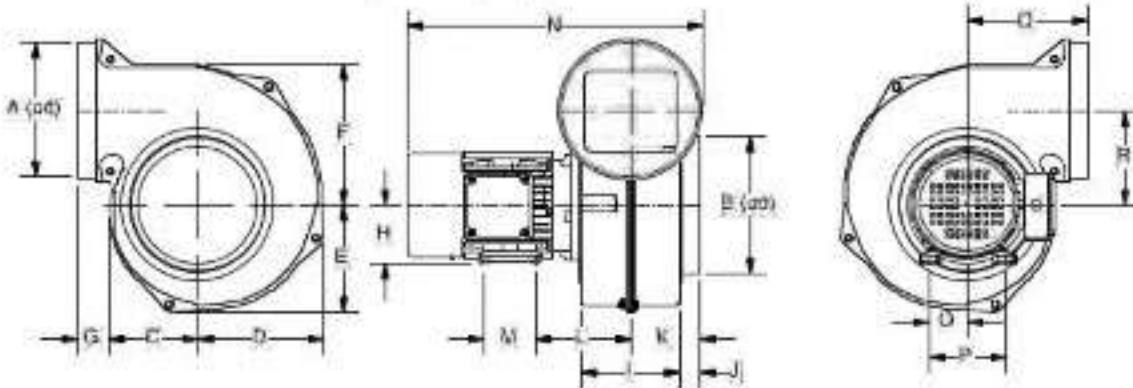
Centrifugal Blowers

SC-800 8 Inch AC Centrifugal Blower



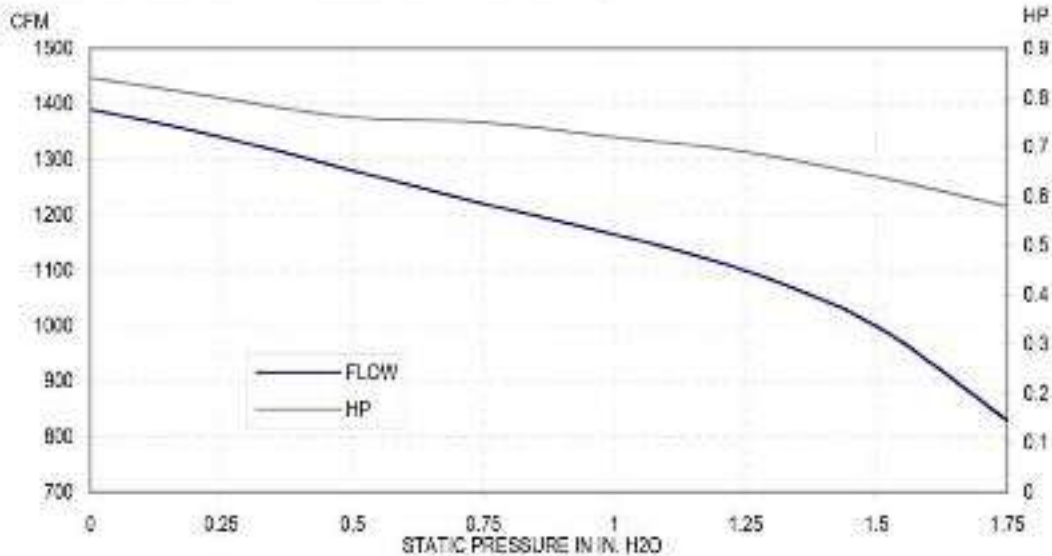
DELTA "T" SYSTEMS

STANDARD DIMENSIONS (INCHES [MM])



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
6	8	5 1/8	7 3/8	6 1/4	8 1/4	1 7/8	3 1/2	5 3/4	1 1/8	4	5 5/8	3	17 1/4	2 1/4	4 1/2	7	5 1/2
[202]	[202]	[131]	[188]	[159]	[208]	[47]	[89]	[148]	[28]	[102]	[142]	[76.2]	[438]	[57]	[114]	[178]	[140]

PERFORMANCE AT 1750 RPM – 60 HZ MOTOR



DISCHARGE CONFIGURATIONS

Rotation viewed from the driven (motor) side of the blower housing. Discharge configuration **must** be specified when ordering.



NOTE: ROTATION VIEWED FROM THE DRIVEN (MOTOR) SIDE.

Note: Due to Delta "T" Systems policy of continuous product improvement, performance and specifications are subject to change.

Inline Duct Fans

800XL Series Inline Duct Fans



Delta “T” Systems’ line of versatile In-line fans are available for ducts from 4 inches to 10 inches in diameter. They feature a rugged plastic housing constructed of UL-recognized, UV-protected thermoplastic resin for the ultimate in lightweight corrosion-proof in-line applications.

The tough protective shell allows the fan to be mounted in wet locations on board a vessel, which makes it suitable for a wide range of marine applications including multiple point exhaust and dual head exhausts.

Because Delta “T” Systems’ in-line fans are caulked at the motor screws, the wiring cables and along the seams of the fan to prevent moisture from entering the housing. They are approved for wet locations. Installation and wiring are simple and the compact size allows the fan to be mounted in the inherently tight spaces on board a vessel. The fan comes pre wired and has been designed for

- 4 Inch Duct Fan — Part No. 500-804XL
- 6 Inch Duct Fan — Part No. 500-806XL

easy connection using an external wiring junction box with a waterproof gasket.

All of Delta “T” Systems’ in-line duct fans are supplied with a mounting bracket and installation instructions for fast, trouble-free installation.

The performance characteristics of this in-line fan make it ideal for marine applications. Flow rates range from 122 CFM to 649 CFM with maximum allowable airstream temperatures of up to 140° F.

All models are speed controllable using the **WC 15** and **WC 25 Adjustable Manual AC Fan Controls**.

WC 15

WC 25



- WC 15 — Part No. 600-WC15
- WC 25 — Part No. 600-WC25

- 8 Inch Duct Fan — Part No. 500-808XL
- 10 Inch Duct Fan — Part No. 500-810XL

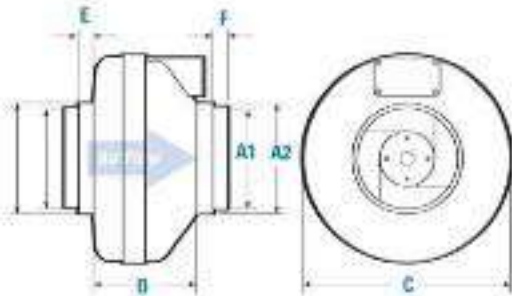
Inline Duct Fans

800XL Series Inline Duct Fans



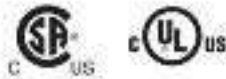
DELTA "T" SYSTEMS

DIMENSIONAL DATA

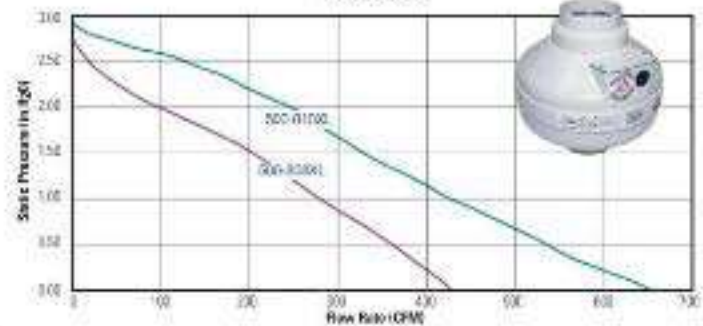
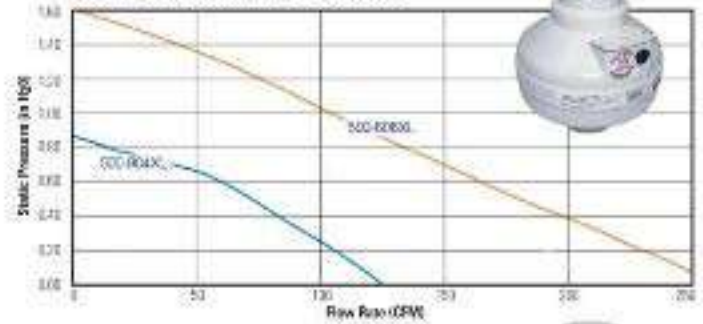


Model	A1	A2	C	B	E	F
500-804XL	4	5	9 1/4	6 1/4	3/4	3/4
500-806XL	6	6 1/4	11 1/4	5 1/4	1	3/4
500-808XL	8	10	13 1/4	8 1/4	1 1/4	1 1/4
500-810XL	-	10	13 1/4	6 1/4	1 1/4	-

All dimensions in inches.
 Duct connections are 1/2" smaller than duct size.



AIR PERFORMANCE GRAPHS

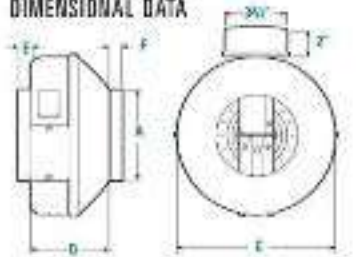


PERFORMANCE DATA

Fan Model	Energy Star	RPM	Voltage	Rated Watts	Voltage Range	Max. Amps	Static Pressure in inches W.G.							Max. P _s	Duct Dia.
							0"	2"	4"	6"	8"	1.0"	1.5"		
500-804XL	✓	2920	115	19	12-19	0.18	122	150	78	55	15	—	—	0.87"	4"
500-806XL	✓	2750	120	21	94-72	0.67	263	230	195	167	130	106	17	1.50"	6"
500-808XL	✓	3100	115	137	111-157	1.35	425	410	385	337	297	260	188	2.48"	8"
500-810XL	—	2850	115	241	145-248	2.40	645	610	563	505	454	403	294	2.58"	10"

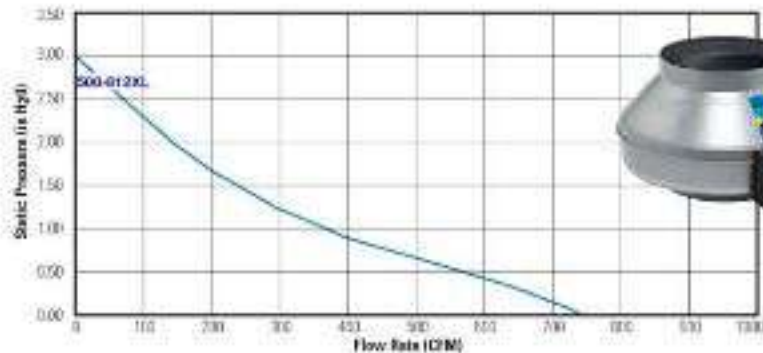
Performance shown is for installation type D - Ducted inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test.
 Performance ratings do not include the effects of applications (accessories).

DIMENSIONAL DATA



Model	A	B	C	D	E	F
500-812XL	12	15	3 1/4	11 1/4	3 1/4	3 1/4

All dimensions in inches. Duct connections are 1/2" smaller than duct size.



PERFORMANCE DATA

Fan Model	Energy Star	RPM	Voltage	Rated Watts	Max. Amps	Static Pressure in inches W.G.										Max. P _s	Duct Dia.	
						0"	0.1"	0.2"	0.4"	0.6"	0.8"	1.0"	1.25"	1.5"	2.0"			2.5"
500-812XL	✓	2600	120	187	1.82	741	711	680	607	515	434	363	290	235	146	72	2.69	12"

Performance shown is for installation type D - Ducted inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test.
 Performance ratings do not include the effects of applications (accessories).

DC Blowers

Lil' Champ 4 Inch DC Blower



**IGNITION PROTECTED
AND
CONTINUOUS DUTY RATED**

The powerful LIL' Champ 4-inch ignition protected DC blower is ideally suited for small vessel engine rooms and OEM applications. It has been designed and manufactured specifically for marine use. Excellent for today's high horsepower gas and diesel vessels, this 4-inch blower provides extreme air volumes even at high static pressures.

The internally housed motor gives the blower an ultra-slim profile - ideal for use in confined spaces. With a housing of marine grade plastic, this unit provides a nearly indestructible, compact blower with superior corrosion resistance.

A specially marinated sealed DC direct drive motor provides quiet reliable service. The motor is a totally enclosed (TEAO) double-shielded ball bearing type, which is constructed with die cast aluminum end plates, O-ring seals, stainless steel shaft and tough black Teflon epoxy coating for superior corrosion resistance. Armatures are dynamically balanced for quiet, vibration free operation.

Exceeds Any Competition By At Least 100 CFM

CE Marked, and conforms to SAE J1171, ISO 8846, ISO 9097, EMC DIRECTIVE 89/336/EEC, IP 68.

- 12 Volt DC — Part No. 500-304121 IP
- 24 Volt DC — Part No. 500-304242 IP



LIL' Champ 4 Inch DC Blower with flow rates to 350 CFM (595 m³/h)

Options:

A 4-inch diameter intake adapter plate is available for hose connection.

Intake Adapter
Part No. 505-201251

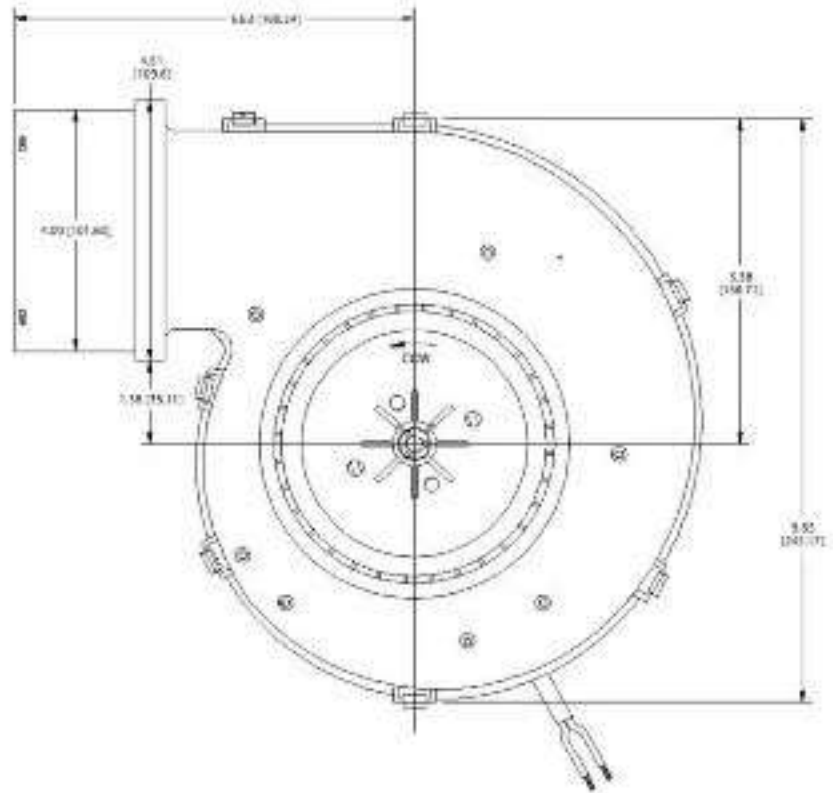
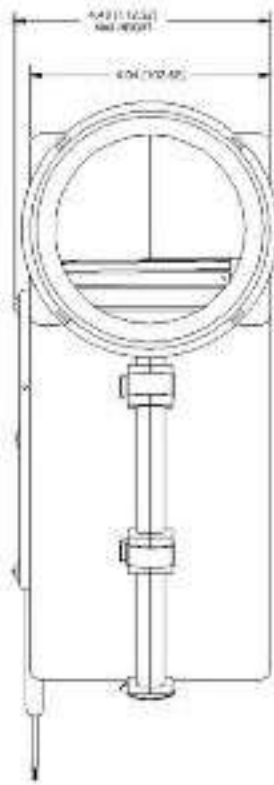


DC Blowers

LiL' Champ 4 Inch DC Blower

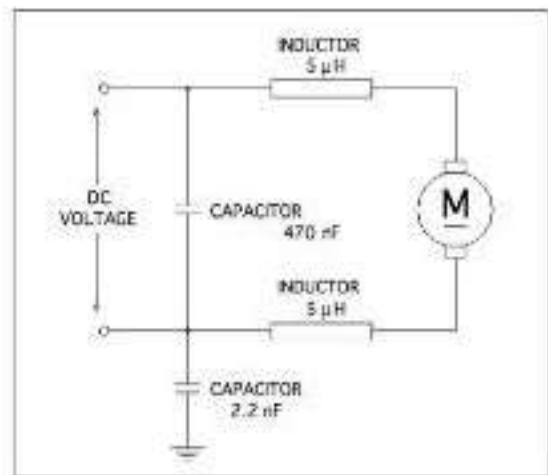


DELTA "T" SYSTEMS



IN/H ₂ O STATIC PRESSURE	TOTAL FLOW (CFM)	AMPS
0	390	8
0.1	343	8
0.2	340	7.9
0.3	329	7.8
0.4	326	7.7
0.5	317	7.6
0.6	310	7.6
0.7	306	7.5
0.8	302	7.4
0.9	294	7.3
1	287	7.2
1.2	272	7
1.4	252	6.6
1.6	234	6.2
1.8	210	5.9
2	179	5.3
2.2	152	4.8
*24VDC PERFORMANCE DATA	STALL @ 3.3"	3.8

4in MOTOR EMC COMPONENT SCHEMATIC



CONFORMS TO EMC DIRECTIVE 89/336/EEC

DC Axial Fans

9 Inch Ignition Protected DC Axial Fan



DELTA "T" SYSTEMS

**IGNITION PROTECTED
AND
CONTINUOUS DUTY RATED**



9 Inch (228.6 mm) DC Axial Fans with flow rates to 737 CFM (1252 m³/h)

Features – CE Labeled with integrated safety guard and reversible hub/blade assembly. Ignition proof construction, conforms to J1171, ISO 8846 and ISO 9097.

Application – Ideally suited for small vessel engine rooms and OEM applications where compact high flow ventilation systems are required. The 9" Axial Fan provides 2 to 3 times the air volume of small DC centrifugal marine blowers with low electrical load requirements.

Design & Construction – Our Axial Ventilation Fans are specifically designed and built for the rigors of the marine environment – not adapted from other industries. With a flanged shroud made of glass filled nylon, this unit provides a

nearly indestructible, compact fan with superior corrosion resistance. Simply changing motor polarity, removing the hub/shaft clip and reversing the hub allows this fan to be used for "pusher" or "puller" applications.

Motor – A specially marinated sealed DC direct drive motor provides quiet reliable service. Motors are totally enclosed (TEAO) double-shielded ball bearing type. Constructed with die cast aluminum end plates, O-ring seals, stainless steel shaft and tough black Teflon epoxy coating for superior corrosion resistance. Armatures are dynamically balanced for quiet, long-term, vibration free operation.

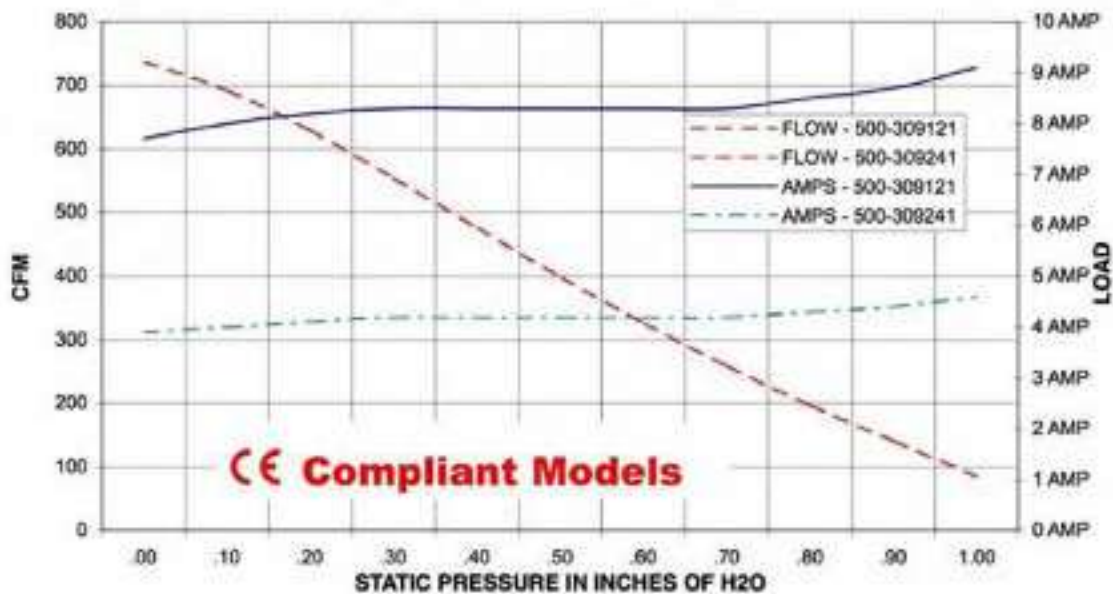
- 12 Volt DC — Part No. 500-309121IP
- 24 Volt DC — Part No. 500-309241IP

DC Axial Fans

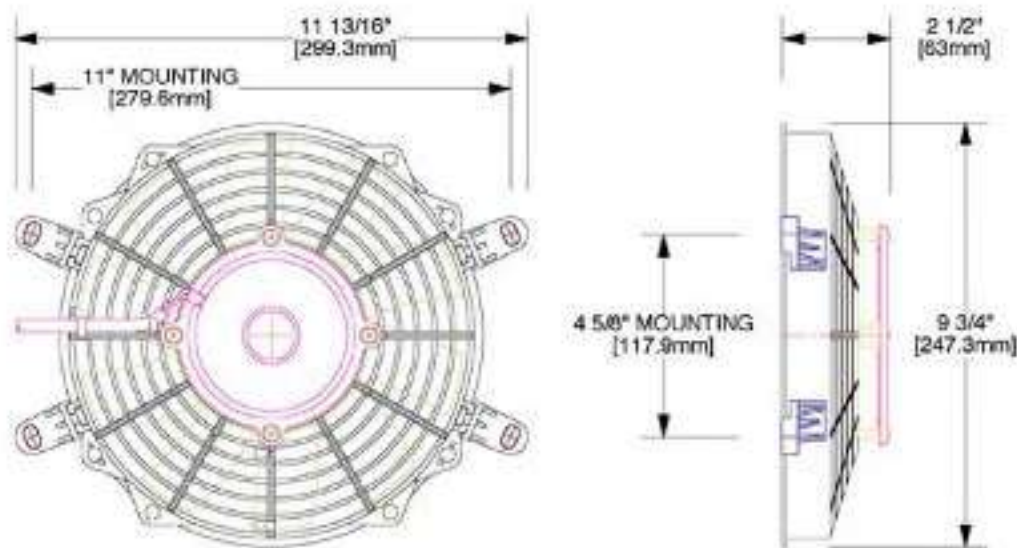
9 Inch Ignition Protected DC Axial Fan



PERFORMANCE



DIMENSION



WIRING

RED = + (Positive VDC)
BLACK = - (Negative VDC)

DC Axial Fans

11 Inch Ignition Protected DC Axial Fans



DELTA "T" SYSTEMS

**IGNITION PROTECTED
AND
CONTINUOUS DUTY RATED**



11 Inch (279.4) DC Axial Fans with flow rates to 1424 CFM (2419 m³/h)

Features – CE Labeled with integrated safety guard and reversible hub/blade assembly. Ignition proof construction, conforms to J1171, ISO 8846 and ISO 9097.

Application – Ideally suited for small vessel engine rooms and OEM applications where compact high flow ventilation systems are required. The 11-inch Axial Fan provides nearly 9 times the air volume of small DC centrifugal marine blowers and the 9" Axial Fan provides 2 to 3 times the air volume of small DC centrifugal marine blowers with low electrical load requirements.

Design & Construction – Our Axial Ventilation Fans are specifically designed and built for the rigors of the marine environment – not adapt-

ed from other industries. With a flanged shroud made of glass filled nylon, this unit provides a nearly indestructible, compact fan with superior corrosion resistance. Simply changing motor polarity, removing the hub/shaft clip and reversing the hub allows this fan to be used for "pusher" or "puller" applications.

Motor – A specially marinized sealed DC direct drive motor provides quiet reliable service. Motors are totally enclosed (TEAO) double-shielded ball bearing type. Constructed with die cast aluminum end plates, O-ring seals, stainless steel shaft and tough black Teflon epoxy coating for superior corrosion resistance. Armatures are dynamically balanced for quiet, long-term, vibration free operation.

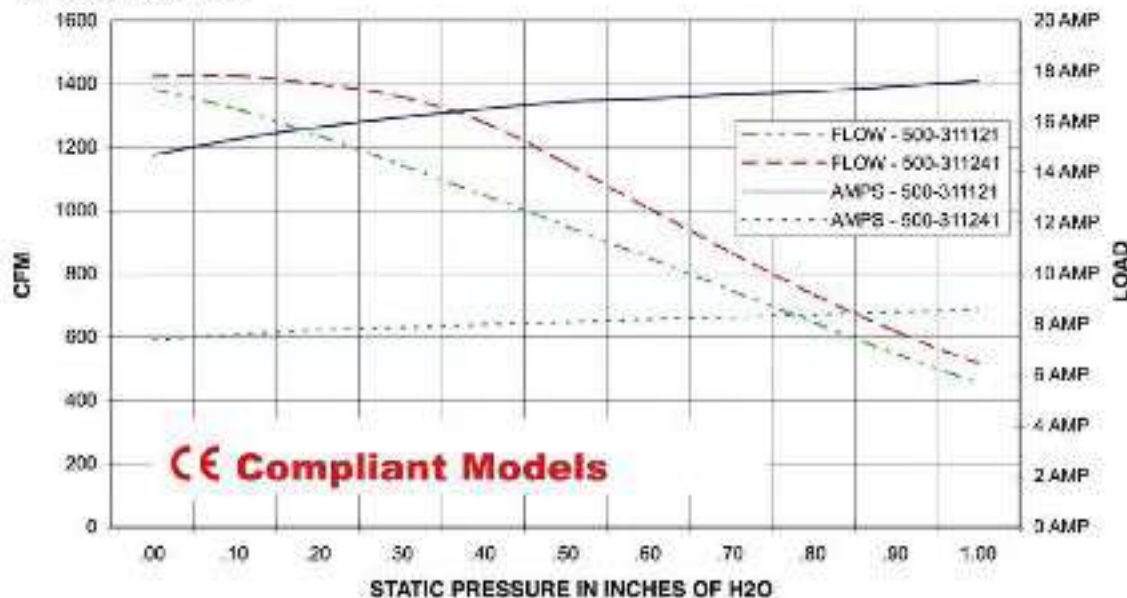
- 12 Volt DC — Part No. 500-311122IP
- 24 Volt DC — Part No. 500-311242IP

DC Axial Fans

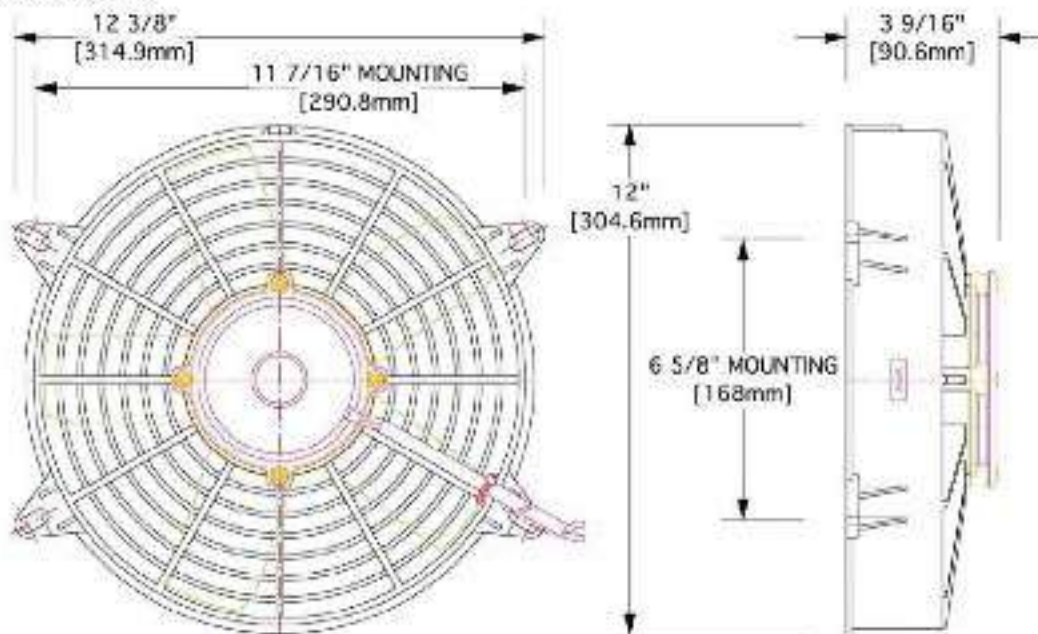
11 Inch Ignition Protected DC Axial Fans



PERFORMANCE



DIMENSIONS



(WEIGHT: 5 lbs)

WIRING

RED = + (Positive VDC)
BLACK = - (Negative VDC)

Moisture Eliminators

Removes Water and Salt From Engine Room Air



Function and Operation - More than 25 years ago, Delta "T" Systems invented and pioneered the marine moisture eliminator that is currently used around the world today. This moisture eliminating air filter is an impingement type separator designed for vertical installation and horizontal airflow. The individual profiles are specially curved and shaped to turn the airflow as it passes over the profile surface. As the entrained liquid droplets have a higher mass than the air, the liquid cannot make the turn as easily as the gas flow, and inertia forces the droplets against the surface of the profile. The liquid forms a film that is pushed along the profile into an area of low pressure located behind the hook. The liquid film is allowed to coalesce into larger droplets and then drains out via gravity at 90° relative to the airflow. The specially curved shape of the Delta "T" Systems moisture eliminator provides a low drag coefficient that allows higher velocities without excessive pressure drop.

Type and Materials - Profiles are available in white or black PVC or Aluminum. Housings are available in PVC or Aluminum, and are custom designed for a specific application's size and airflow requirements. The profile packs can be used as a single stage for optimum pressure drop characteristics with good particle separation (10-20 Micron range) or in multiple stage systems using a coalescing material to optimize the particle separation (1 - 10 Micron range). It is our objective to design each system for maximum particle separation, minimum pressure drop, opening size, and weight for a minimal cost. We will work with you to provide as much, or as little, engineering assistance as you might require. Marine system design is the specialty of Delta "T" Systems. With the thousands of proven applications completed, we have a system or a product to fulfill your needs and budget.

Premium Marine Dampers

Custom Built Electric and Pneumatic Marine Dampers



Application — So often overlooked in the majority of marine applications, this difficult to find, yet vital safety component is now designed and produced for the Yacht & Shipbuilding Industries exclusively by Delta “T” Systems. The effectiveness of any installed fire system can be greatly enhanced if the ventilation openings to the protected compartment are closed at or before the discharge of the extinguishing agent. In the event of a fire system discharge, the Marine Smoke/Fire Damper provides for nearly instantaneous closure of the ventilation openings, thus preventing dilution of the extinguishing agent as well as preventing additional oxygen to enter the space to fuel and spread a fire. The Delta “T” Systems Marine Smoke/Fire Damper is an integral part of a properly designed ventilation and fire protection system aboard any vessel. Our Circular Dampers are designed to close couple directly to either end of Delta “T” Systems Marine Axial Fans to provide the safest, most compact, high volume ventilation component assembly available. The short casing

design allows the damper blade to project into the open section of the plenum to minimize overall length. Dampers may also be installed independently within an air shaft or plenum if no fan is installed. Using silicone blade seals, these units are provided with a simple mounting flange for attachment. These dampers may be configured in a wide variety of sizes. Dampers may be automatically closed via a pneumatically controlled actuator. Actuators are suitable for use with CO², Halon, FM-200 and other pressurized fire suppression systems and are U.S. Coast Guard (162.038/7/0), American Bureau of Shipping, UL (EX-2968) and Factory Mutual type approved. Just 70 PSI is required to provide instantaneous spring loaded closure of the air duct. Dampers may also be manually actuated and reset from outside of the damper casing. As an option, all dampers may be fitted with electric “fail-safe” type actuators. These are available in 24 VDC, or 230 VAC. Electric dampers will close automatically upon loss of electrical current supply.

Slimline A-60 Fire Dampers

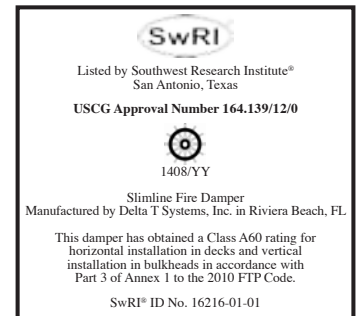


Standard and Custom Sized Marine A-60 Rated Dampers

DELTA "T" SYSTEMS

Slimline Fire Damper

- Made Completely From 316 Stainless Steel
- Slimline Fire Dampers Are Only 4.25 Inches (108 mm) Deep
- Failsafe Operation
- Patented Overlapping Blades and Blade Locking Mechanism
- 28 Standard Sizes Available
- Unlimited Fully Custom Sizes Available up to 46 in x 46 in (1187 mm x 1187 mm)
- Slimline Fire Dampers Come Fully Assembled and Ready to Install.
- Fast Turn Around Times - Most Standard and Semi-Custom Sizes in Stock
- USCG, MED and SOLAS Approved
- Made in the United States of America



Patent Pending

Slimline A-60 Fire Dampers



USCG and MED Approved for Vertical or Horizontal Use

DELTA "T" SYSTEMS

The Actuator



- Failsafe Operation
- Input Power 24 - 240 VAC or 24 - 125 VDC
- Produces 180 in-lb of Closing Torque
- Dry Contact Outputs for Closure Readouts
- NEMA2 IP54 Enclosure ZP Type 2
- CE Approved
- Assembled in USA

The Temperature Sensor/Test Switch

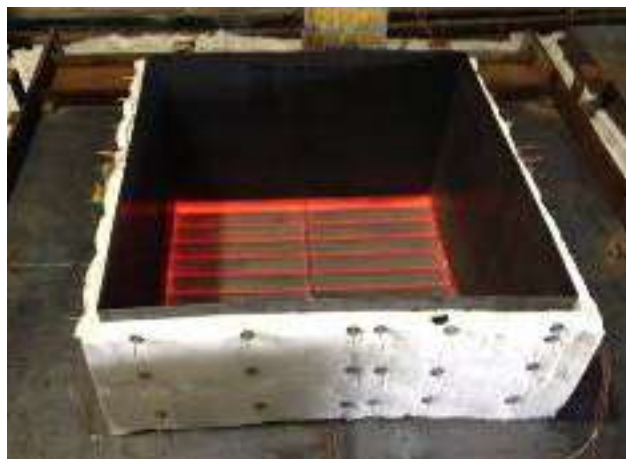


A separate mounting bracket houses the thermal tripping device to sense the temperature of the A-60 rated machinery space and trigger closure of the damper in the event that the the temperature in the space reaches 165°F (72°C) or higher. Unlike other thermal tripping devices, the Slimline Fire Dampers use a device that is manually resettable so it will not need to be replaced in the event of an accidental exposure to elevated heat conditions.

The red mounting bracket also houses a test switch that may be use to test closure of the Slimline Fire Damper at any time to check its functionality or to complete on board inspections.

Rock Solid Performance

At Delta T Systems, we believe that a simple yet robust design using only the finest quality materials will ensure the safety of life on board any vessel. The new Slimline Fire Dampers have been developed using unrivaled experience in marine damper design and manufacturing and have proven themselves in rigorous furnace testing. They are the finest product of this type available anywhere in the world.



Slimline A-60 Fire Dampers



USCG and MED Approved for Vertical or Horizontal Use

DELTA "T" SYSTEMS

	U. S. Department of Homeland Security United States Coast Guard Certificate of Approval
Coast Guard Approval Number: 164.139/12/0	Expires: 05 August 2021
FIRE DAMPERS	
DELTA "T" SYSTEMS, INC. 858 West 13th Court Riviera Beach FL 33404	
<p>"Slimline" fire dampers approved in accordance with Part 3 of Annex 1 of the IMO FTP Code.</p> <p>Multi-louvered, automatic fire dampers for use in penetrating Class A-0, A-15, A-30 and A-60 bulkheads and decks. Damper and ventilation penetrations must be insulated similarly to the division. Damper dimensions limited to a range of 9 x 9 inches through 46 x 46 inches. Approval includes fusible link, and DELTA "T" SYSTEMS P/N 273-A60-24/240 electrical actuators mounted directly to dampers.</p> <p>Identifying Data: Southwest Research Institute (SwRI) reports Project Nos.01.21601.16.407a[1] and 01.21601.16.407b[1]; and manufacturer's drawings nos. 700-A60SL-09, 14 and 46.</p> <p>Follow-up program: SwRI.</p> <p>Approval valid for products manufactured at the above factory location.</p>	
	
1408/YY	
<p>The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 2004 and by the "Agreement between the European Free Trade Association countries which are part of the European Economic Area and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed October 2005. Item complies with requirements of Annex A.1, Item No. A.1/3.22 of the directive.</p>	
*** End ***	
<p>THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.</p>	
	GIVEN UNDER MY HAND THIS 05 th DAY OF AUGUST 2016, AT WASHINGTON D.C.  B. A. BALDWIN Chief, Lifesaving and Fire Safety Division BY DIRECTION OF THE COMMANDANT

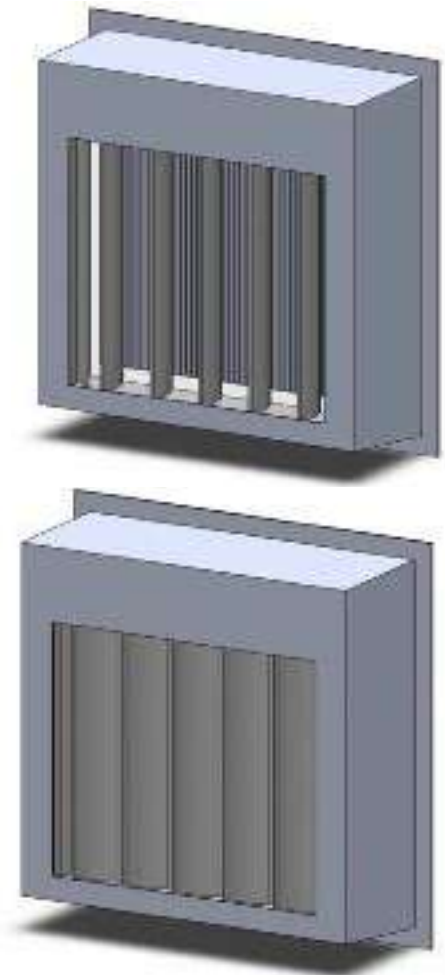
DEPT. OF HOMELAND SECURITY, USCG, CGHQ-10030
(REV. 3-03)

Weather Closures



Remotely Close Off Any Opening From the Wheel House

Application - Delta "T" Systems' Weather Closures offer a closure solution to offshore vessels, work boats, crew's quarters, pump houses or any other situation that requires an opening to be shut down due to weather. Designed to fit any size or shape opening, this closure may be remotely shut down in the event of bad weather, beam seas, extreme wind, or security. This system replaces heavy doors and hatches that require manpower to close them off during heavy seas. Electric actuators are used to remotely close or open any weather closure from the helm or any other location as needed. Designed and built for the rigors of offshore conditions, the marine grade aluminum housings are available in mill finish or powder coated to any color. Housings will also accept paint, so they may be painted along with the rest of the vessel. The Delta "T" Systems Weather Closure also features the same moisture elimination technology that has been used for many years on thousands of engine rooms of vessels around the world. When the weather closure is open, the moisture eliminator will remove the water and salt from the incoming air and is 97 percent effective down to ten microns in water particle size. The water then drains over-board through slots on a face drain. Even a driving rain is no match for the water separation properties of the Delta "T" Systems moisture eliminator.



The Head Vent System

A Fully Automatic Air Extraction System for Multiple Heads



DELTA "T" SYSTEMS

The new Head Vent System is tomorrow's ventilation technology that is available for your vessel today. Noisy and ineffective in line fans are replaced by a single remotely located plenum box, which automatically evacuates the stale air from multiple heads as needed.

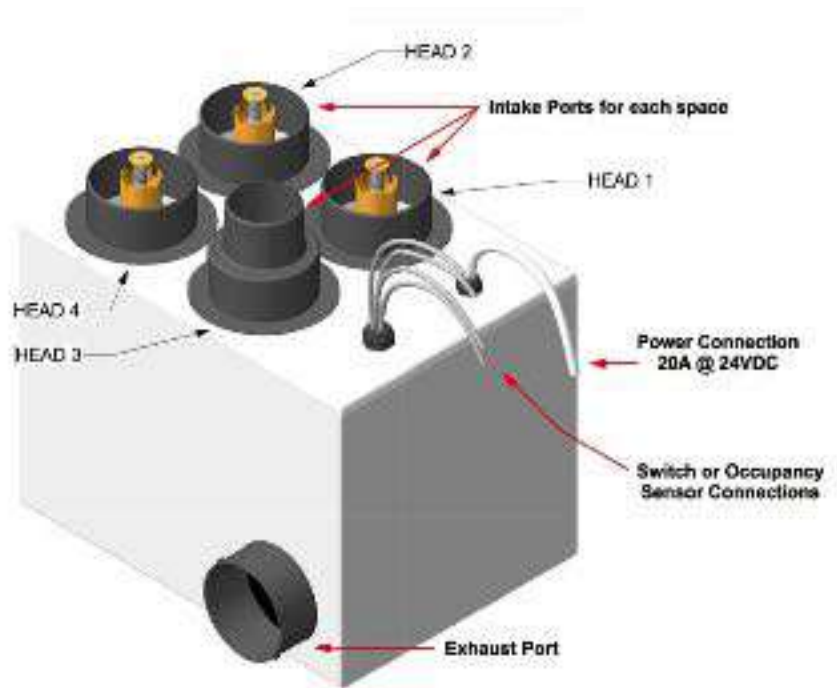
The Head Vent System uses motion sensors mounted in each head to detect occupancy and begin the flow of air. When the occupant leaves the head, the flow of air will continue for a pre-selected period of time and then will automatically shut down. The run time for each head is set by the user when the system is installed. Each head may be set independently with a different run time in order to accommodate varying head sizes as well as personal preferences.

The Head Vent System is powerful, quiet and fully automatic. All major components are housed within a single plenum box and the plenum box may be located in any suitable space on board the vessel. The system is simple to install and may be plumbed using either three or four inch piping. Only one exhaust duct means that only one location is needed for stale air to exit the vessel.

INSTALLATION OPTION

If desired, the system may also be used manually by installing a switch in each head instead of a motion sensor.

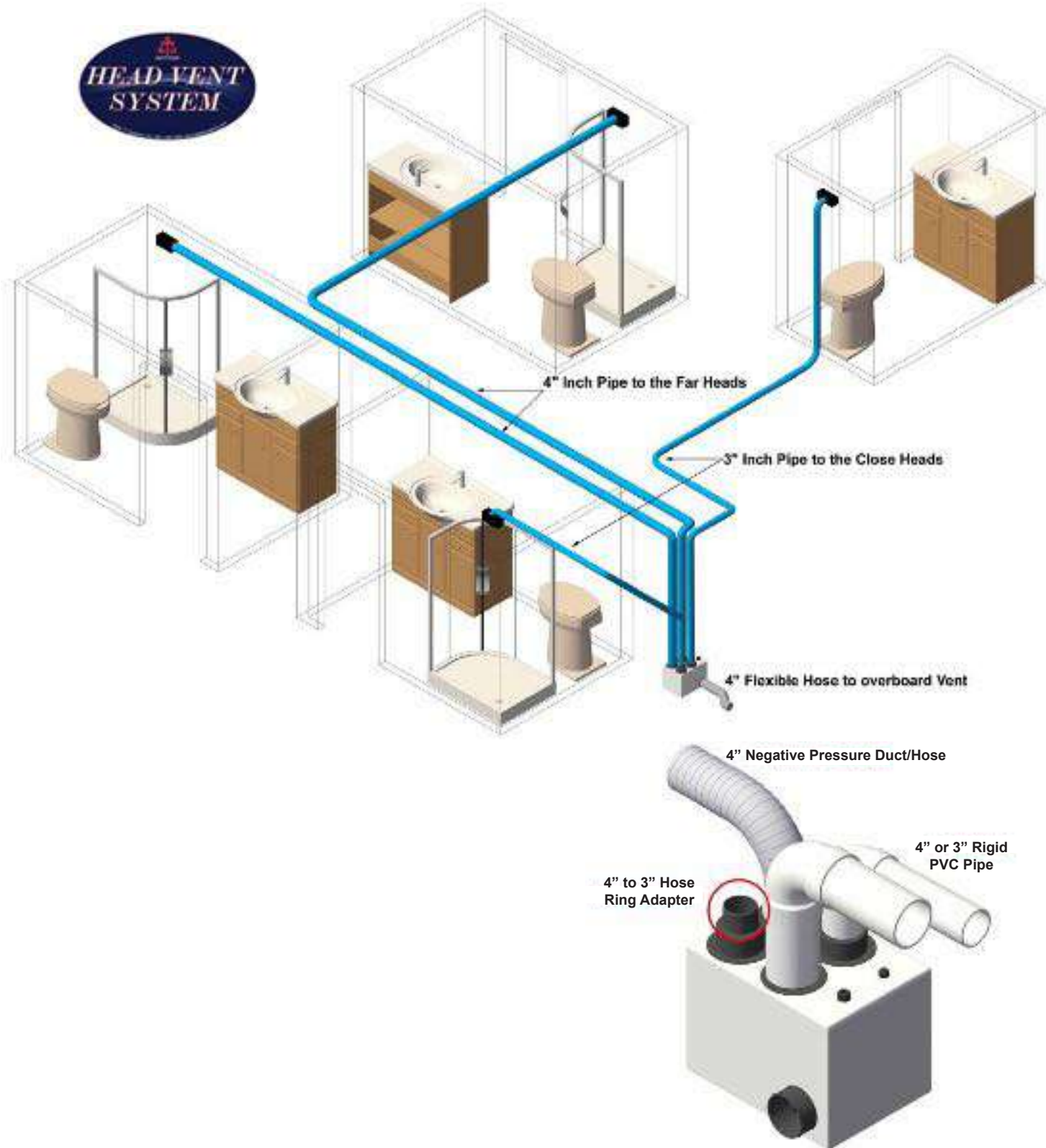
• 24 Volt DC — Part No. 600-HVS-24W



Occupancy Sensors for Automatic Head Vent Operation



The Head Vent System



AC Fan Control Systems



P/T6 Automatic/Manual Fan Control Systems



Overview - The P/T6 Series Ventilation Control System is a state-of-the-art digital ventilation control systems that has been designed and manufactured specifically for the rigors of the marine engine room.

Delta "T" Systems has supplied the P/T6 Fan Control Systems to vessels all over the world, and has added the features that the captains and ship's engineers have requested to make the P/T6 the control system of choice for offshore vessels of every type.

The P/T6 may be run in automatic or manual mode. Normal operation is in automatic mode which goes into effect as soon as the vessel's engines are started. In Automatic mode, engine room temperature and combustion air intake are automatically controlled to optimum levels based on temperature and pressure.

The system includes a color touch screen Fan Control Interface (FCI) and an integrated alarm output that can be connected to a vessel's central alarm system. Help screens and simplified parameter and monitoring screens make operation and adjustment fast and easy. The P/T6 Series Systems allow the variable speed control of two or more three-phase fans via a digital touch screen Fan Control Interface (FCI).

Each system may be configured to accept single or three phase AC input power to the ASDs (Adjustable Speed Drives), depending on the available power aboard the vessel.

Auto Mode: The P/T6 control system start sin Auto Mode when the engines are started. When the P/T6 system switches to Auto Mode, the exhaust fan(s) speed is adjusted automatically as the temperature increases, measured by a sensor located within the engine room. The intake fan(s) speed is controlled by an engine room pressure sensor. This sensor requires a sensing tube to the outside atmosphere as well as to the engine room space to measure the differential pressure. As the engines demand greater volumes of air and the exhaust fan(s) flow increases and as temperature rises, the intake fan(s) speed will increase to supply the required air-flow, thus maintaining the correct pressure and volume in the engine room under any conditions.

Quiet Run: Upon main engine shut down, the P/T6 ventilation control system switches to the Quiet Run Mode which cools the engine room down at a user specified fixed fan speed. Once the user specified temperature has been reached, the fans will stop thermostatically.

Manual Mode: In addition to the two automatic modes of operation there is also a Manual Mode. The Manual Mode allows the operator to control the fans speed and direction independently for maintenance within the engine room or unusual situations. This mode of operation is not recommended for use when underway and the main engines are running.

AC Fan Control Systems

T6 Automatic/Manual Fan Control Systems



Overview - The T6 Series Ventilation Control Systems is a state-of-the-art digital ventilation control systems that has been designed and manufactured specifically for the rigors of the marine engine room.

Delta "T" Systems has supplied thousands of the T6 Fan Control Systems to vessels all over the world, and has added the features that the captains and ship's engineers have requested to make the T6 the control systems of choice for offshore vessels of every type.

The T6 each may be run in automatic or manual mode. Normal operation is in automatic mode which goes into effect as soon as the vessel's engines are started. In Automatic mode, engine room temperature and combustion air intake are automatically controlled to optimum levels based only on the engine room temperature and not the engine room's differential pressure.

The system includes a color touch screen Fan Control Interface (FCI) and an integrated alarm output that can be connected to a vessel's central alarm system. Help screens and simplified parameter and monitoring screens make operation and adjustment fast and easy. The T6 Series Systems allows the variable speed control of

two or more three-phase fans via a digital touch screen Fan Control Interface (FCI). Each system may be configured to accept single or three phase AC input power to the ASDs (Adjustable Speed Drives), depending on the available power aboard the vessel.

Auto Mode: The T6 system starts in Auto Mode when the engines are started. In Auto Mode, the T4 system regulates both the intake and exhaust fans based on engine room temperature alone.

Quiet Run: Upon main engine shut down, the T6 ventilation control system switches to the Quiet Run Mode which cools the engine room down at a user specified fixed fan speed. Once the user specified temperature has been reached, the fans will stop thermostatically.

Manual Mode: In addition to the two automatic modes of operation there is also a Manual Mode. The Manual Mode allows the operator to control the fan speed and direction independently for maintenance within the engine room or unusual situations. This mode of operation is not recommended for use when underway and the main engines are running.

AC Fan Control Systems



C2 Manual Fan Control System



Application — Delta “T” Systems’ robust and reliable C2 Control System allows for the manual variable speed control of one or more three-phase fans within the engine room using a single control station. The C2 Control System may be configured to accept single or three phase input power to the adjustable speed drive(s), depending on the available power aboard the vessel. The system also provides the capability to shut

down all engine room fans in the event of an engine room discharge of the fire system which adds an extra margin of safety to the C2 Control System. Provision for an emergency ventilation shut down switch as well as an emergency over-ride switch are also included. All of Delta “T” Systems’ controls and other components are fully bench and load tested at the factory before being shipped to our customers.

WC 15 and WC 25 Adjustable Manual AC Fan Controls

Application — Delta “T” Systems’ **WC 15** and **WC 25** manual adjustable controls are designed to be used to control the output of small AC fans. The **WC 15** will control a fan of up to 15 Amps, and the **WC 25** will control a fan that draws up to 25 Amps of current.

Ideally suited to control Delta “T” Systems’ small AC Axial Fans and Inline Blowers.



WC 15



• WC 15 - Part No. 600-WC15

WC 25



• WC 25 - Part No. 600-WC25

DC Fan Control Systems



DCT2 Automatic/Manual Fan Control Systems

- Efficient Automatic Temperature Based Operation
- Two Speed Manual Control (High or Low)
- Reduced Noise Levels and Current Draw
- Easy Installation and Maintenance Free
- Fire System Shutdown Capabilities

Application — Delta “T” Systems next generation 600-DCT2-12/24 DC Controller is the most reliable DC ventilation controller in the world, with the capability of 12 or 24 VDC input/output. The 600-DCT2-12/24 control system is designed to automatically control engine room ventilation via a two-temperature setting, while still having the convenience of manual low and high-speed control.

In addition to two voltage options, the new 600-DCT2-12/24 also provides adjustable temperature settings, with two adjustable set points for making easy on-the-fly adjustments for different climates. The system’s new design allows for not only a reduction in noise levels, but also reduces the current draw by up to 25%.

**The 12 VDC version of the 600-DCT2 must run either 9” fans or 4” blowers only.*



The DCT2 DC Fan Control System can be used with the 9 and 11 Inch DC Axial Fans as well as the LIL' Champ 4 Inch DC Blower.

- 12 Volt DC — Part No. 600-DCT2-12
- 24 Volt DC — Part No. 600-DCT2-24



DCT2 Switch Kits

Switch kits for the DCT2 Fan Control System provide attractive yet robust control of the forward, reverse, high and low fan functions.

- Surface Mount Kit — Part No. 610-201376
- Flush Mount Kit — Part No. 610-201377

Surface Mount Kit



Flush Mount Kit



Delta T Systems Modular Exhaust

By DINAK



DELTA "T" SYSTEMS

 DINAK



Delta T Systems Modular Exhaust

By DINAK



DELTA T SYSTEMS

DINAK

At Delta T Systems, we believe that a vessel's dry exhaust system should be cost effective, light weight and simple to install with a clean professional appearance.

The *DINAK GE* dry exhaust system features thin wall stainless steel modular components which are insulated and designed for the exhaust of combustion gases. Never before has it been so easy to design and install a quality dry stack exhaust system on board a vessel. This aesthetically pleasing and cost effective exhaust system solution may be easily installed by boat builders or refit yards without any special tools or training and produces a highly efficient exhaust system with a long life span and superior performance.

DELTA T SYSTEMS DRY EXHAUST SYSTEM FEATURES

Turn Key Dry Exhaust Packages

- Lloyds Type Approved DINAK modular components 304 or 316 stainless steel with 2" thick insulation, sheathed exterior with 304 or 316 stainless steel
- Components easily engage each other seamlessly and seal with a silicon strap then a sheet metal clamp around the seal and v-band style band / clamp which compresses the joint from one component to the other - no fasteners or special gaskets required
- Traditional flanged connections on muffler
- Stainless steel expansion joints for muffler connection
- Traditional flanged connections on expansion joints
- Gaskets, fastener kits, clamping systems, mounting straps supplied with system
- Anti-vibration mount systems
- Exhaust terminus out stack with rain cap and final elbow – type 316L stainless steel

Fully Engineered, and Guaranteed Performance

- Guaranteed to meet or exceed engine manufacturer's back pressure requirements and outside temperatures to conform to classification requirements (as long as mufflers purchased from DTSI)

DTSI Stocks Common Fittings / Diameters

High Performance 2" Thick Insulation

- 110 TO 140°F outside temperature, depending on exhaust temperature

Extremely Lightweight in Comparison to Traditional Schedule 40 Black Iron Pipe

- Example: 3' section of 12" black iron pipe with 2" insulation weighs **194 lbs**
- In comparison, 3' section of 12" ID modular with 2" insulation and sheath weighs **40 lbs**



Delta T Systems Modular Exhaust

By DINAK



Two Year Warranty

Modular Component Design

- Preset piping lengths, adjustable piping lengths, multiple elbow configurations and terminus arrangements as well as a full selection of mounting brackets

Pieces Can Be Easily Removed and Reinstalled Without Damaging the Components

Units Designed to Accommodate Thermal Growth

- Inner wall and outer sheath for each section has integrated bellows geometry where required

No Welding Necessary

- No custom fabrications required and all components are predefined and ready to install

Extremely Simple and Quick Installation

- Does not require any formal training or specialized tradesman for installation

Proven Track Record

- Product has been used successfully with many European shipbuilders for almost two decades

Installation Drawings Provided

- A full system drawing package is provided with each system with clear definitions of component locations

OPTIONS

DNV Type Approved Dry Mufflers - Coated Carbon Steel or Stainless Steel (Muffler insulation quoted upon request)

DNV Type Approved Muffler Performances Offered

- 18-25dBa, 30-35dBa, 35-40dBa

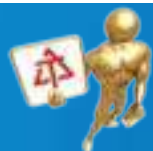
Expansion Joints and Joint Insulation

Primary expansion joint from engine should be procured by customer from engine manufacturer. DTSl can quote upon request.

Custom Components Can Be Fabricated Upon Request

Engineering Services Available

- For retrofits and difficult new builds, DTSl can dispatch engineer on site to design system that will be guaranteed to fit within the vessel (this service is quoted above the system pricing, travel, field rate, expenses)



Type Approval Certificate

RAL is pleased that the Underwritten product has been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval Scheme.

Your Certificate is issued to:

PRODUCT GILUX S.A.
Carretera de Laredo, nº 19
C.P. 38170 LAREDO
Spain

PRODUCT DESCRIPTION Exhaust Gas Systems

PRODUCT TYPE D548 (GDA, GDA, GDA & GDA)

APPLICATION Two-stroke, inboard, outboard, diesel/semi-diesel, exhaust gas piping systems for internal combustion engines.

EXEMPT Seawater : 0508 - 028 (34)
 : 0508 - 040 (34)
Max. pressure : 1380 Pa
Max. exhaust temperature : up to 400 °C

STANDARD US Rules and Regulations for the Classification of Ships
US Rules and Regulations for the Classification of Special Service Craft

Certificate No. 1802612

Issue Date 15 August 2016

Expiry Date 14 August 2021

Mail 1 of 2 I.M. Bullock
Waters Technical Support, LRS

Underwritten by LARA
Waters Underwriting F.R.V. VNTSC Marine

Waters Underwriting F.R.V. VNTSC Marine

Waters Underwriting F.R.V. VNTSC Marine is a member of the Lloyd's Register Group of companies, which is a group of companies controlled by the same person. The Lloyd's Register Group of companies is a group of companies controlled by the same person. The Lloyd's Register Group of companies is a group of companies controlled by the same person. The Lloyd's Register Group of companies is a group of companies controlled by the same person.

STANDARD (see 6)

Following tests were carried out according to EN 12651:2008
CB tests - Requirements for metal exhaust - System exhaust
pressure

- gas tightness
- Thermal performance at low shear rate at defined and undisturbed flow rates

Following tests were carried out according to EN 12651:2008
CB tests - Requirements for metal exhaust - System exhaust
pressure and EN 12651:2008, Chapter - Metal strength - test
method

- resistance to longitudinal load
- resistance to radial load
- resistance to longitudinal load at supports
- resistance to axial load and
- resistance to non-normal installation

OPERATIONAL LIMITATIONS

1. The surface temperature of the exhaust system is not to exceed 120°C, not required previously or continuously to a higher peak, which may be achieved by lagging to maintain the fire of the exhaust system within its limit. Where lagging is not desirable or may prevent the installation of the lagging it is required to cover with a suitable material.
2. The installers of the exhaust system are responsible for an initial check or inspection for Classification with the Society, provided that the design complies with the relevant rules, and to fix and secure the exhaust system to the hull.
3. The installation of the exhaust system is to be carried out in accordance with the instructions of the manufacturer.
4. Supporting of both the CB and the exhaust system is to be in accordance with the relevant rules for Type Approval of Exposed to the weather TUBULAR MANHOLE SYSTEMS for CB and GDA.

Certificate No. 1802612

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Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

The installation of this Type Approval Certificate will be held in the relevant scope of the Society's Classification and is subject to the relevant Rules.

A periodical assessment of the Product Quality Assurance will be required to maintain the validity of the Type Approval of the product. This assessment by LR Services is required 30 months after the date of issue of this Certificate.

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Mail 1 of 2 I.M. Bullock
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I.M. Bullock
Waters Technical Support, LRS

Delta T Systems Modular Exhaust

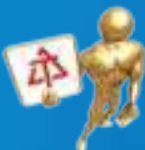
By DINAK

The Modular Approach to Dry Exhaust System Design



DELTA T SYSTEMS

DINAK



Cranston Eagle Hooks

Davit and Boat Mounted Marine Off-Load Hooks



DELTA "T" SYSTEMS



Davit/Crane Mounted Hooks



DELTA "T" SYSTEMS

Cable Mounted 2 and 3.5 Tonne Off-Load Hooks

200-APR-206-CB/CBH

MODEL: 200-APR-206-CB and 200-APR-206-CBH

SWL/WLL: 2000 kg / 4409 lb (6:1)

HOOK TYPE: Davit Mounted Off-Load Hook

RELEASE TYPE: Quick Release With Pull Cable

Models CB and CBH are similar except that the CBH model is fitted with two handles and tag line shackles. The hook is completely made of stainless steel.

**Approved by the US Coast Guard
SOLAS, USCG Approval No. 160.133/35/0**



200-APR-356-CB/CBH

MODEL: 200-APR-356-CB and 200-APR-356-CBH

SWL/WLL: 3500 kg / 7716 lb (6:1)

HOOK TYPE: Davit Mounted Off-Load Hook

RELEASE TYPE: Quick Release With Pull Cable

Models CB and CBH are similar except that the CBH model is fitted with two handles and tag line shackles. The hook is completely made of stainless steel.

**Approved by the US Coast Guard
SOLAS, USCG Approval No. 160.133/22/0**



Davit/Crane Mounted Hooks



Cable Mounted 4 and 5 Tonne Off-Load Hooks

200-DPR-406-CB/CBH

MODEL: 200-DPR-406-CB and 200-DPR-406-CBH

SWL/WLL: 4000 kg / 8818 lb (6:1)

HOOK TYPE: Davit Mounted Off-Load Hook

RELEASE TYPE: Quick Release With Pull Cable

Models CB and CBH are similar except that the CBH model is fitted with two handles and tag line shackles. The hook is completely made of stainless steel.

Approved by the US Coast Guard

SOLAS, USCG Approval No. 160.133/65/0



200-DPR-506-CB/CBH

MODEL: 200-DPR-506-CB and 200-DPR-506-CBH

SWL/WLL: 5000 kg / 11023 lb (6:1)

HOOK TYPE: Davit Mounted Off-Load Hook

RELEASE TYPE: Quick Release With Pull Cable

Models CB and CBH are similar except that the CBH model is fitted with two handles and tag line shackles. The hook is completely made of stainless steel.

Approved by the US Coast Guard

SOLAS, USCG Approval No. 160.133/77/0



Davit/Crane Mounted Hooks



Styles 20, 25, 30 and 35 Off-Load Hooks

STYLE 20

Style 20 model hooks are mounted by one bolt at the top of the hook for attachment to an adapter plate at the end of a davit or crane fall. Pull cable operated release at the hook. Top bolt included in the delivery.

MODEL	SWL/WLL	RELEASE TYPE
200-20-APR-206-CB	2000 kg / 4409 lb	Pull Cable
200-20-APR-356-CB	3500 kg / 7716 lb	Pull Cable
200-20-APR-456-CB	4500 kg / 9920 lb	Pull Cable
200-20-APR-556-CB	5500 kg / 12125 lb	Pull Cable
200-20-APR-656-CB	6500 kg / 14330 lb	Pull Cable
200-20-APR-856-CB	8500 kg / 18739 lb	Pull Cable
200-20-APR-1006-CB	10000 kg / 22046 lb	Pull Cable



STYLE 25

Style 25 is the same as Style 20 except it is fitted with a lever with a pull cable attached to keep it clear of the hook assembly. Release operated at the hook. Top bolt included in the delivery.

MODEL	SWL/WLL	RELEASE TYPE
200-25-APR-456-LCB	2000 kg / 4409 lb	Lever with Pull Cable
200-25-APR-556-LCB	5500 kg / 12125 lb	Lever with Pull Cable
200-25-APR-656-LCB	6500 kg / 14330 lb	Lever with Pull Cable
200-25-APR-856-LCB	8500 kg / 18739 lb	Lever with Pull Cable
200-25-APR-1006-LCB	10000 kg / 22046 lb	Lever with Pull Cable



STYLE 30

Style 30 model hooks are mounted by shackle or clevis at the top of the hook, for attachment to end-of-line gear at the end of the davit or crane fall. Pull cable operated release at the hook. Shackles are optional.

MODEL	SWL/WLL	RELEASE TYPE
200-30-APR-206-CS	2000 kg / 4409 lb	Pull Cable
200-30-APR-356-CS	3500 kg / 7716 lb	Pull Cable
200-30-APR-456-CS	4500 kg / 9920 lb	Pull Cable
200-30-APR-556-CS	5500 kg / 12125 lb	Pull Cable
200-30-APR-656-CS	6500 kg / 14330 lb	Pull Cable
200-30-APR-856-CS	8500 kg / 18739 lb	Pull Cable
200-30-APR-1006-CS	10000 kg / 22046 lb	Pull Cable
200-30-DPR-1206-CS	12000 kg / 26455 lb	Pull Cable



STYLE 35

Style 35 is the same as Style 30 except fitted with a lever with pull cable attached to keep it clear of the hook assembly. Release operated at the hook. Shackles or other attachments are optional.

MODEL	SWL/WLL	RELEASE TYPE
200-35-APR-456-LCB	2000 kg / 4409 lb	Lever with Pull Cable
200-35-APR-556-LCB	5500 kg / 12125 lb	Lever with Pull Cable
200-35-APR-656-LCB	6500 kg / 14330 lb	Lever with Pull Cable
200-35-APR-856-LCB	8500 kg / 18739 lb	Lever with Pull Cable
200-35-APR-1006-LCB	10000 kg / 22046 lb	Lever with Pull Cable



Open Boat Mounted Hooks



Styles 50, 60 and 70 Off-Load Hooks

STYLE 50

Style 50 hooks are mounted using two bolts at the base of the hook, plus in larger models one more bolt is used midway between the hook piece and the hook base. Hand lever operated release at the hook. Positive lock feature. Mounting bolts are included with the delivery. The hook is completely made of stainless steel.

MODEL	SWL/WLL	RELEASE TYPE
200-50-APR-356-L2B or L3B	3500 kg / 7716 lb	Lever
200-50-APR-356-L2B or L3B	4500 kg / 9920 lb	Lever
200-50-APR-356-L2B or L3B	5500 kg / 12125 lb	Lever



STYLE 60

Style 60 hooks are the same as style 50 except the release control is operated by a pull cable at the hook. It is mounted using two bolts at the base of the hook, plus in larger models one more bolt is used midway between the hook piece and the hook base. Positive lock feature. Mounting bolts are included with the delivery. The hook is completely made of stainless steel.

MODEL	SWL/WLL	RELEASE TYPE
200-60-APR-356-C2B or C3B	3500 kg / 7716 lb	Pull Cable
200-60-APR-456-C2B or C3B	4500 kg / 9920 lb	Pull Cable
200-60-APR-556-C2B or C3B	5500 kg / 12125 lb	Pull Cable



STYLE 70

Style 70 hooks are the same as the Style 40 except without the lock pin retainer cam. It is mounted using two bolts at the base of the hook, plus in larger models one more bolt is used midway between the hook piece and the hook base. The positive lock feature mechanically prevents the hook from opening. Mounting bolts are included with the delivery. The hook is completely made of stainless steel.

MODEL	SWL/WLL	RELEASE TYPE
200-70-DPR-656-C4B	6500 kg / 14330 lb	Pull Cable
200-70-DPR-756-C4B	7500 kg / 16535 lb	Pull Cable
200-70-DPR-856-C4B	8500 kg / 18739 lb	Pull Cable
200-70-DPR-1006-C4B	10000 kg / 22046 lb	Pull Cable



200-ZAPR-356-C2B-VMX

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SOLAS, USCG Approval No. 160.133/22/0

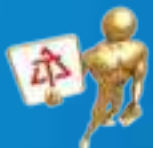
MODEL: 200-ZAPR-356-C2B-VMX

SWL/WLL: 3500 kg / 7716 lb (6:1)

HOOK TYPE: Open Boat Mounted Off-Load Hook With Positive Lock

RELEASE TYPE: Quick Release With Pull Cable

The hook is completely made of stainless steel.



Delta "T" Systems



Fans • Dampers • Moisture Eliminators • Controls • Diesel Exhaust Systems • Marine Hooks