

OPERATOR'S MANUAL



Hydrotab BT installation & 3DHC Automatic controller



Disclaimer

The interceptor units are also steering equipment and it is the sole responsibility of the navigator-operator to ensure that, at any point, any problem that will alter the boat's course, rising from malfunction of interceptors, should be dealt immediately by the operator. At no circumstances, fault of our interceptor equipment leading to any kind of accident, creates liability for the manufacturer.

Trademark Notice

Hydrotab is a registered trademark of Olympic Engineering Ltd, Greece. All other trademarks, trade names or company names referenced herein are used for identification only and are property of their respective owners.

Patent Notice

The Hydrotab products are protected by patents and industrial design patents, patents pending or design patents pending.

Declaration of conformity

This product conforms to the following Electromagnetic Compatibility (EMC) regulations and standards for use in marine environments.

CE EN 60945

Technical information and Documentation

The technical information provided in this document was accurate and correct at the corresponding production time of the Hydrotab interceptors. Our operating principal for improving the manufactured product, may lead to changes regarding its specifications without prior notice. Liability will not be accepted for any inaccuracy considering the product and the user manual.

Fair use statement

This manual can be printed or copied for your own use only. Copies should not be provided to third parties and manual should not be commercialized.

Product Disposal

Waste removal of this product must be according to the Waste Electrical and Electronic Equipment (WEEE) Directive.

Product Registration

Please register your product online in order the warranty to be valid.



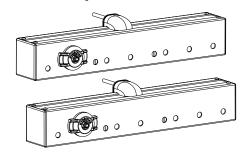
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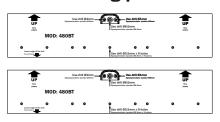


Installation Kit

1. Two interceptors



2. Two drilling patterns



3. One Hydrotab AIR unit 12 OR 24VDC





4. Cables

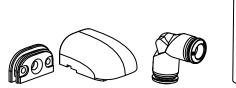


5. 3DHC Controller

9 to 30 VDC panel with position indicators



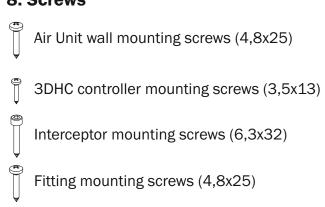
6. Fittings



7. Pipe 8mm

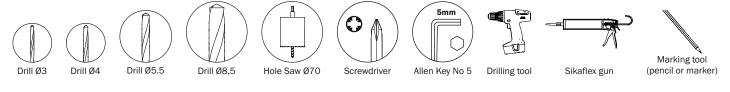


8. Screws





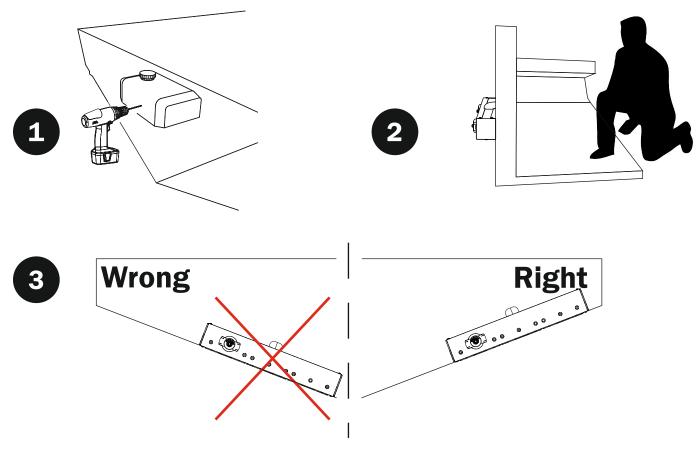
Required Tools for Installation



Before Installation

Make sure there are no obstructions behind the drilling area (tanks, fuel lines, cabling) which can be damaged or prevent the installation (Figure 1).

Attention! Please make sure that the pipe insertion hole is accessible from the engine room (Figure 2).

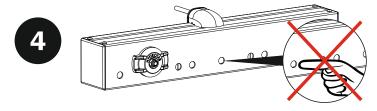


A good hint is that the closer the units are to the water line, the best the bank control of the boat will be (Figure 3).

WARNING!

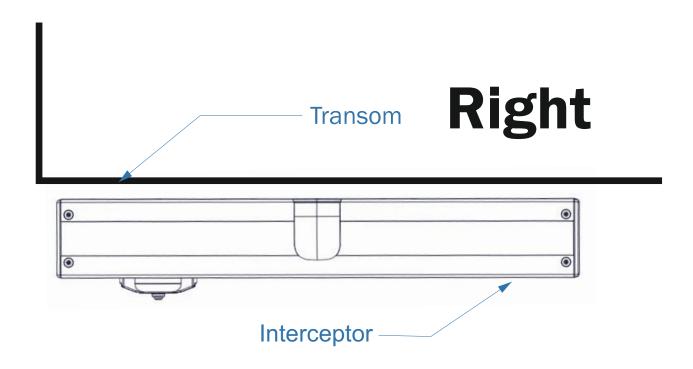
Safety precautions

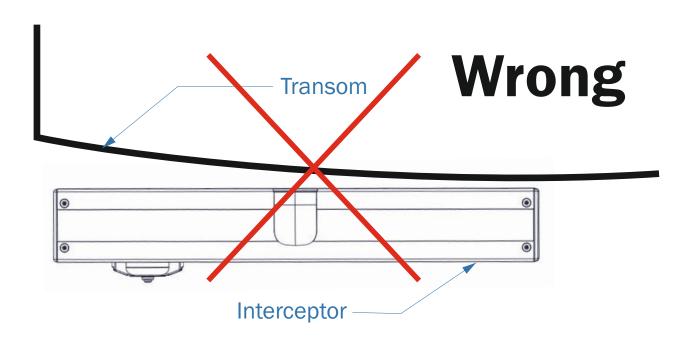
- 1. For high speed boats, overtrim may cause unexpectable turn. Improper use of trim tabs, may result to accident or injury.
- 2. Please DO NOT PLACE YOUR FINGERS INSIDE THE INTERCEPTOR, through the front holes (Figure 4).





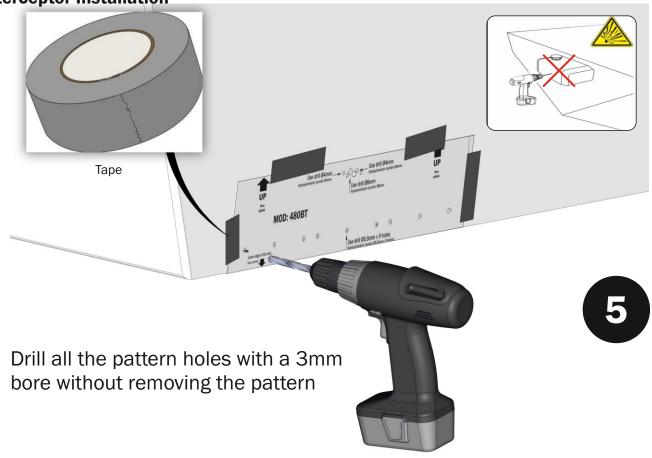
Proper interceptor installation in transom

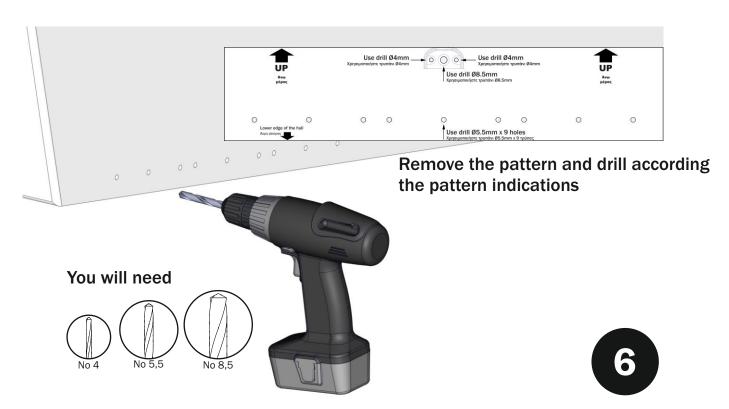




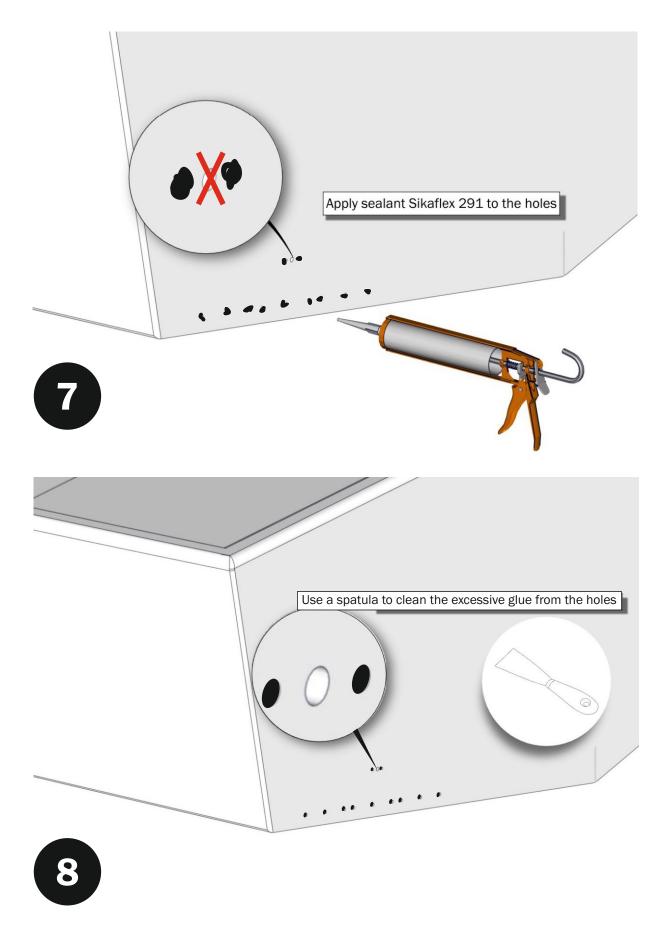
If the boat's transom has a significant curvature, it is necessary to create a flat plane for the installation (acceptable flatness tolerance: 2mm).



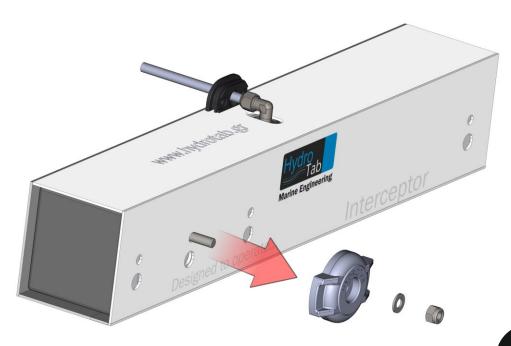




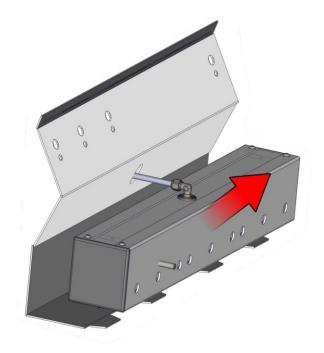


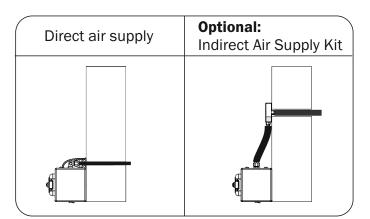






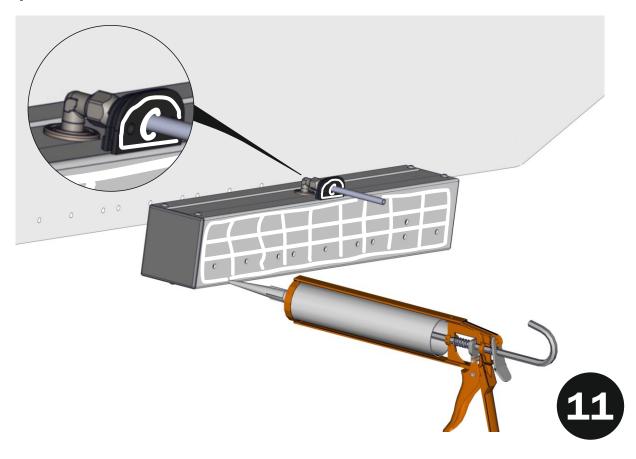


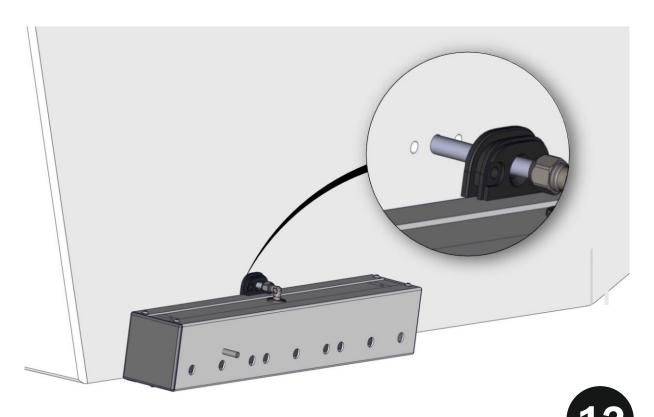




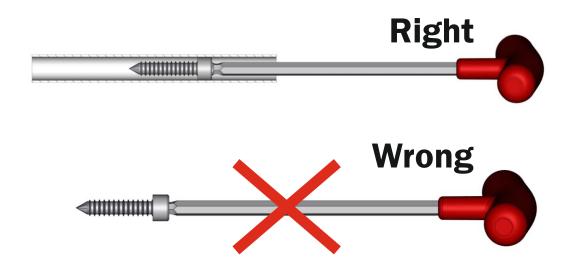




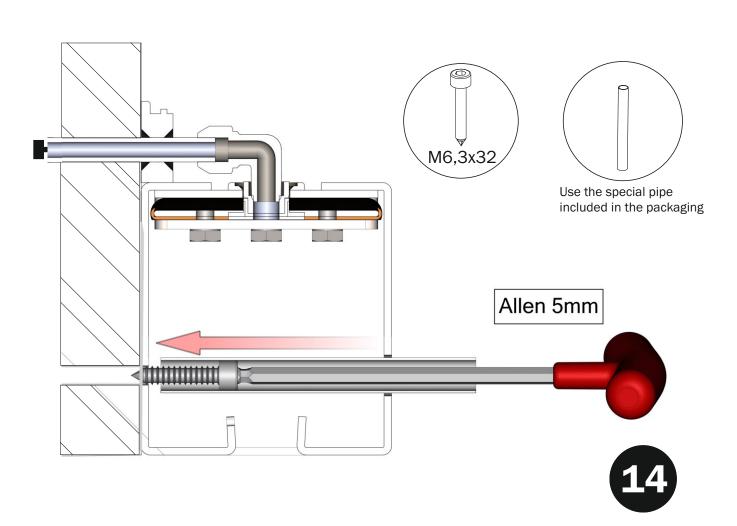




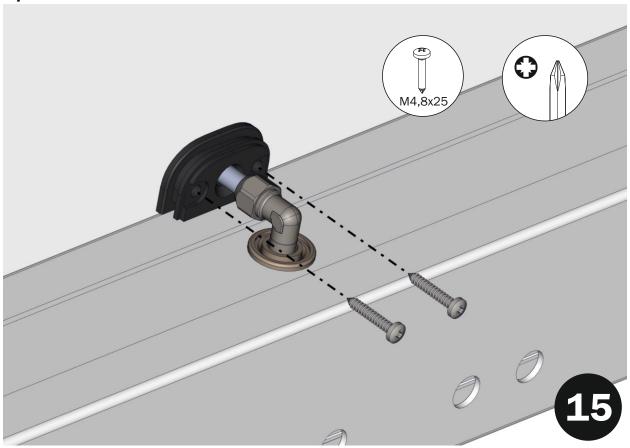


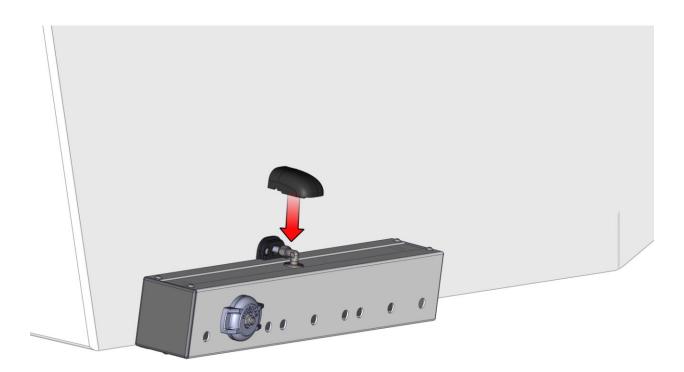


WARNING! Do not try to place the screw without using the guide pipe! If the screw falls in the internal of the interceptor, you must disassemble the rear plastic cover, and restore the screw.









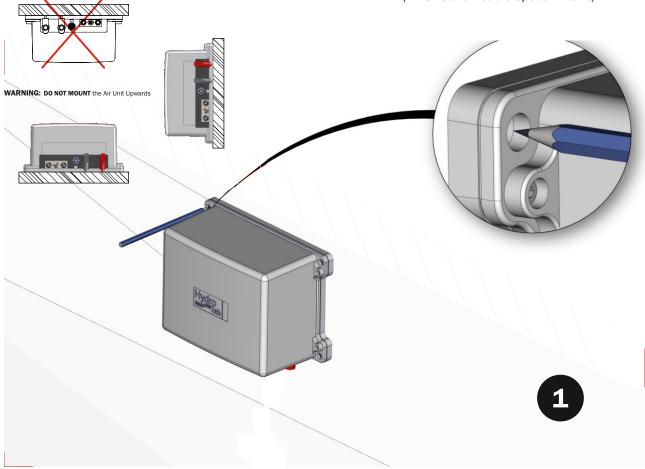


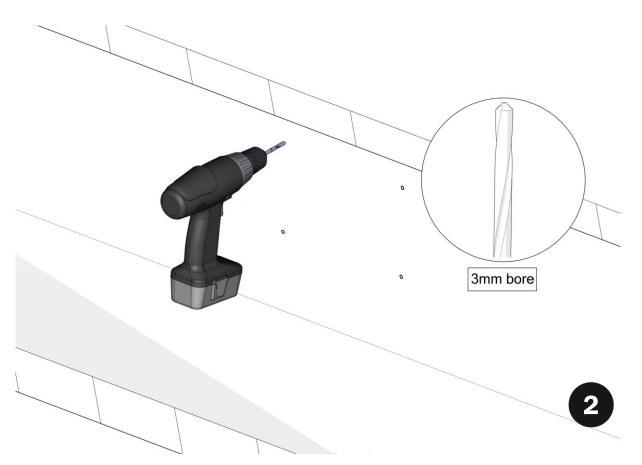


Air Unit Installation

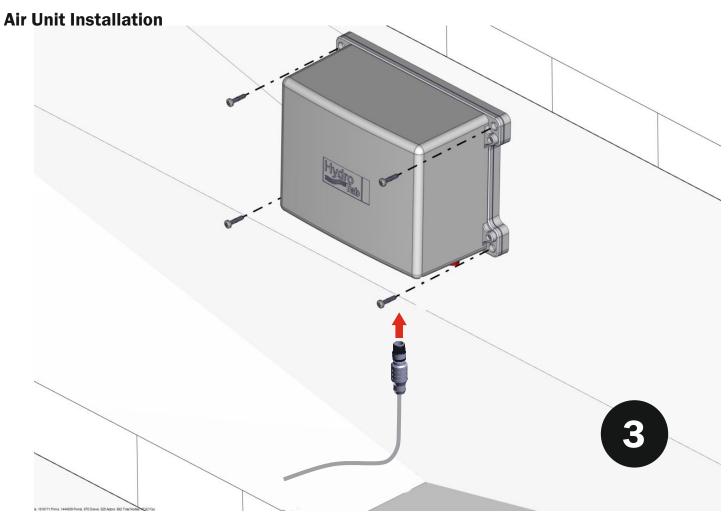
Air Unit Installation instructions applies to both models (Air Unit and Double Speed Air Unit)



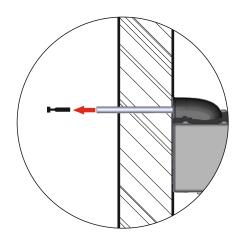






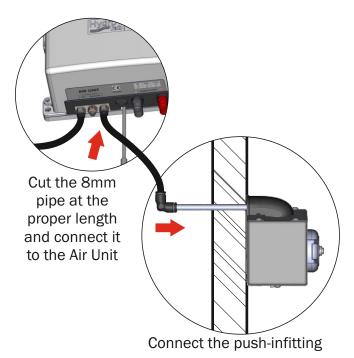


Pneumatic Connection



Remove the cap

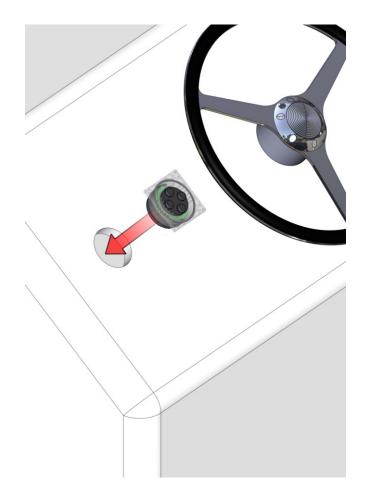


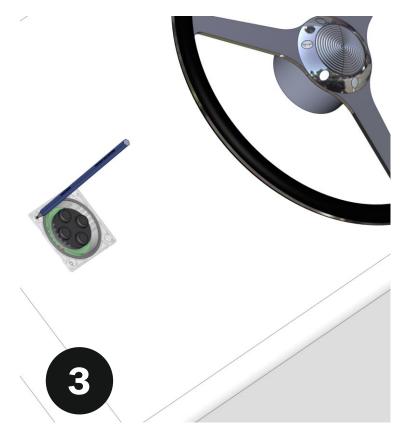


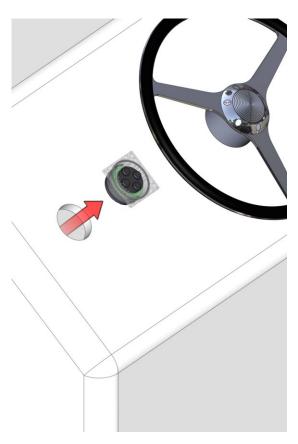
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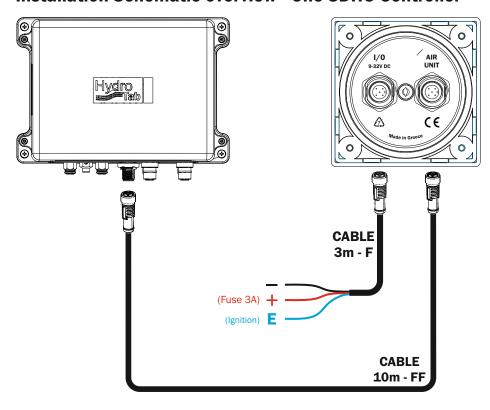


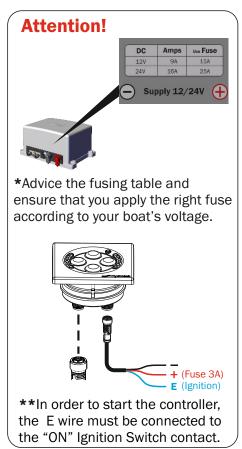




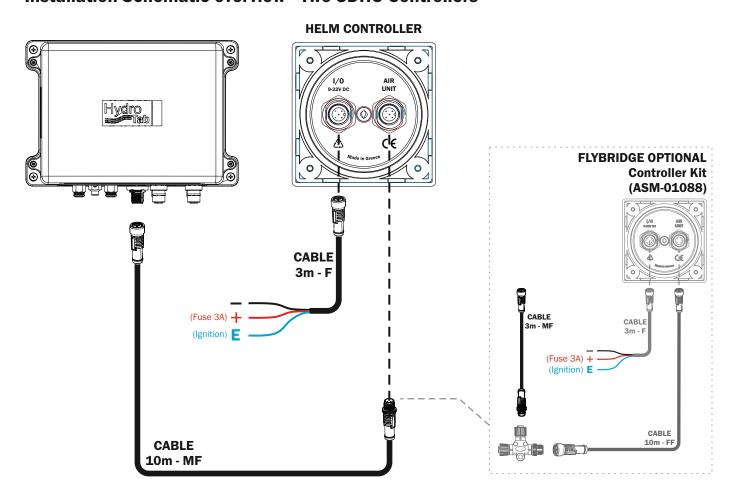


Installation Schematic overview - One 3DHC Controller



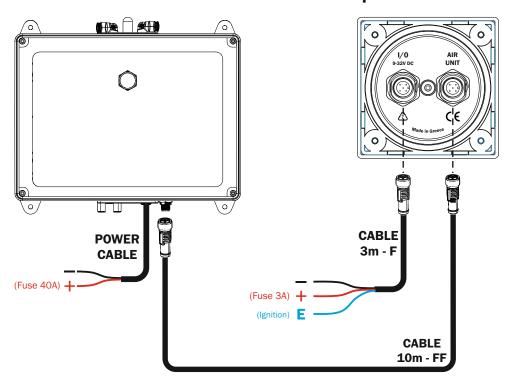


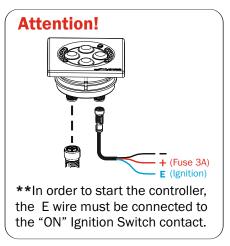
Installation Schematic overview - Two 3DHC Controllers



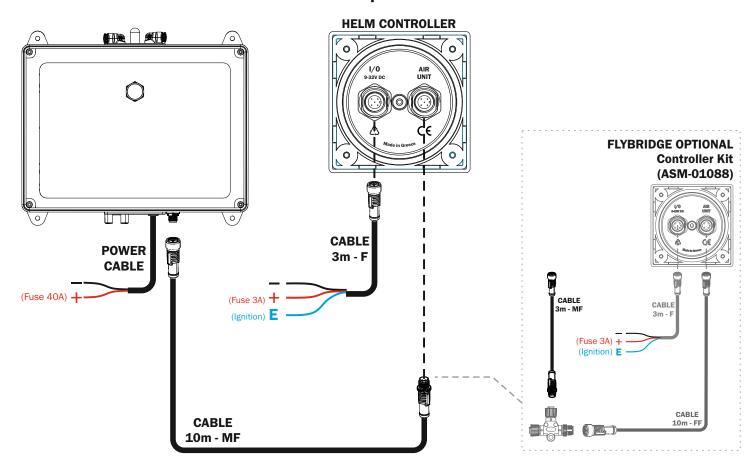


Installation Schematic overview - Double Speed Air Unit with One 3DHC Controller



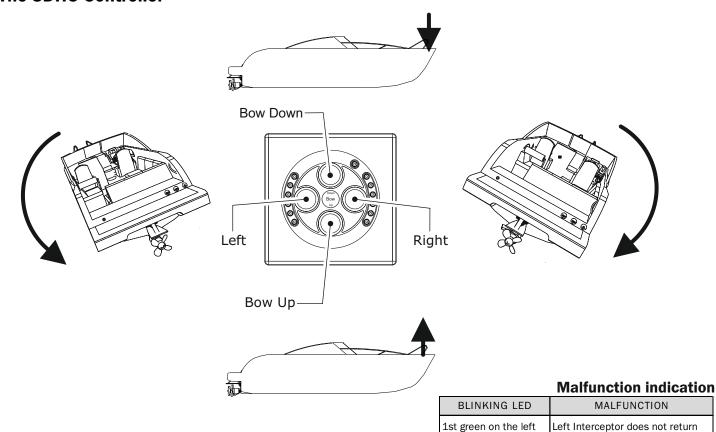


Installation Schematic overview - Double Speed Air Unit with Two 3DHC Controllers





The 3DHC Controller



The 3DHC controller operation

Interceptors operate when voltage comes from the ignition. When there is no voltage from the ignition, system does not work.

System Reset-Retracting

The system resets and interceptors retract automatically:

- On Engine start
- On Engine stop
- On simultaneously pressing the UP + DOWN buttons for 1 second.

Note: During reset process controller LEDs are flashing.

Night and day mode

The indication brightness changes by pressing simultaneously the buttons LEFT + RIGHT for 1 second.

Memory

Setting the desired trim angle

You may save the desired trim angle for the cruising speed.

Just manually adjust the position and then press simultaneously any diagonal press buttons for about 3 seconds. This position of trim tabs is stored in 3DHC memory and the power-on led is flashing to confirm the setting.

Right Interceptor does not return

Left Interceptor does not extend Right Interceptor does not extend

1st green on the right

2nd green on the left

2nd green on the right

Whenever the user presses instantaneously two diagonal press buttons, the trim tabs get the preset position.

The saved position is stored even after switching off the main switch of the boat.

Maintenance

Check connectors for corrosion or liquid pollution. Check in regular intervals the condition of the sacrifice anodes. Below 50% in volume, anodes must be replaced.

When the boat is out of the water (end of season):

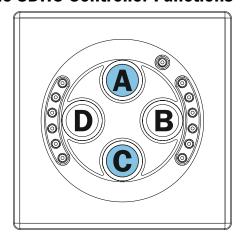
- a. extend the blades
- b. spread the decalcifying liquid with a brush
- c. let it for 15-20 min
- d. wash out with clean water
- e. retract the blades

Every two years remove the cover and clean the inside of the units, using water pressure.

Every three years check the springs condition.

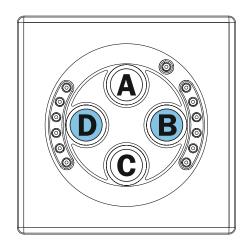


The 3DHC Controller Functions



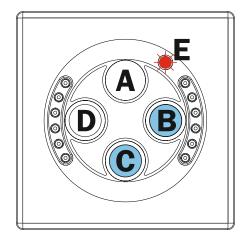
EMERGENCY RETRACTING

Press the **A** + **C** buttons simultaneously for 1 second.



NIGHT AND DAY MODE

The indication brightness changes by pressing simultaneously the ${\bf B}+{\bf D}$ buttons for 1 second.



INTERCEPTOR POSITION MEMORY

Press **B** + **C** buttons simultaneously until the red led **E** blinks, to save the interceptor position in the memory.

Next time you press **B** + **C** simultaneously for 1 second, the interceptors will be extended automatically in the previous memorized position.

If you save a new position in memory, automatically the previous position is cancelled.



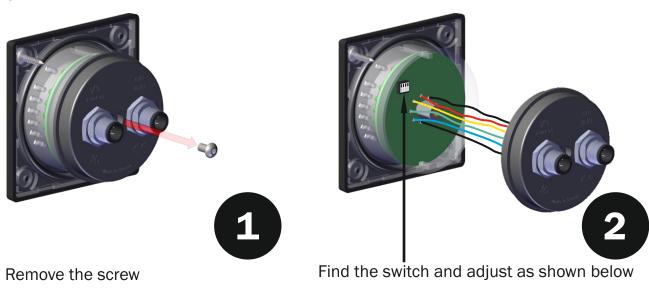
3DHC Controller Adaptation

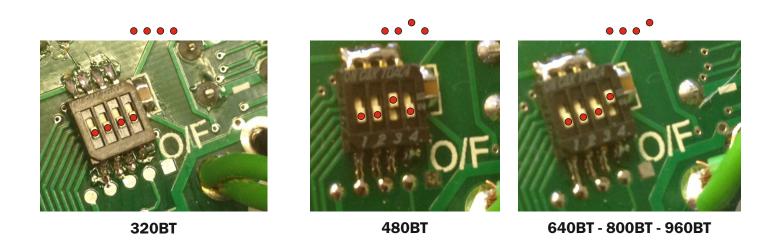
The controllers included in packaging, are pre-adjusted.

The instructions of this page must be executed only by authorised technicians and only in case of:

- Controller replacement with a new one after failure
- Installation of a secondary controller that **does not included in the initial set** (Flybridge)

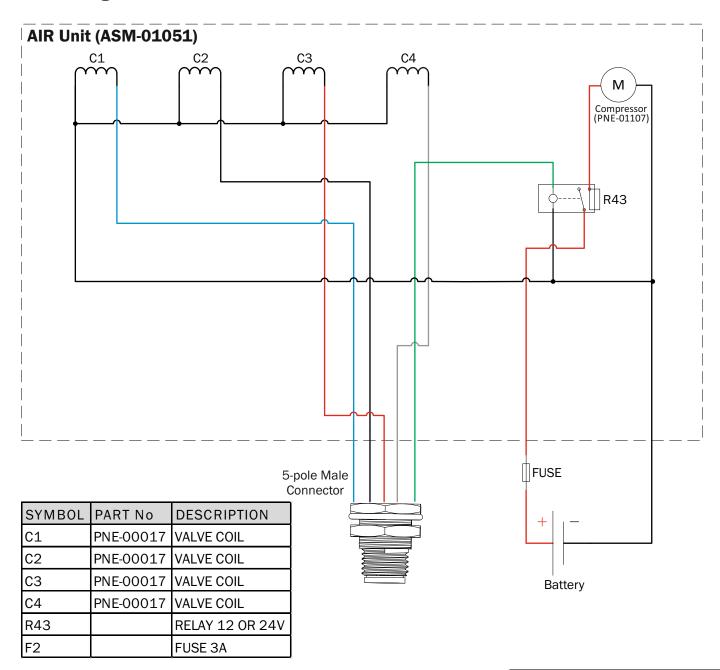
To open the 3DHC Controller







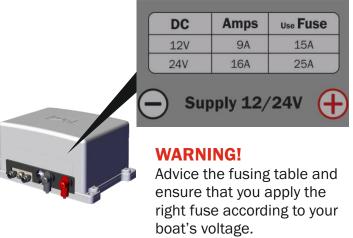
Electrical Diagram



ATTENTION!

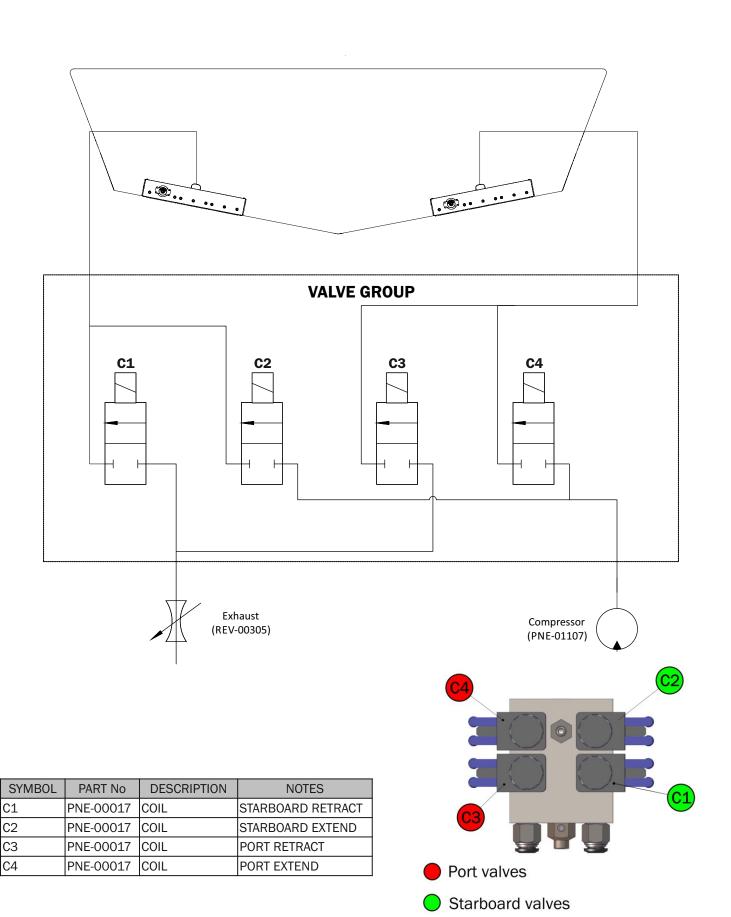
To avoid voltage drop use the right cable size.

AIR UNIT POWER CABLE SIZE			
DISTANCE FROM BATTERY	CABLE SIZE		
up to 2.5m	2 x 2.5mm		
up to 4m	2 x 4mm		
up to 6m	2 x 6mm		
up to 10m	2 x 10mm		



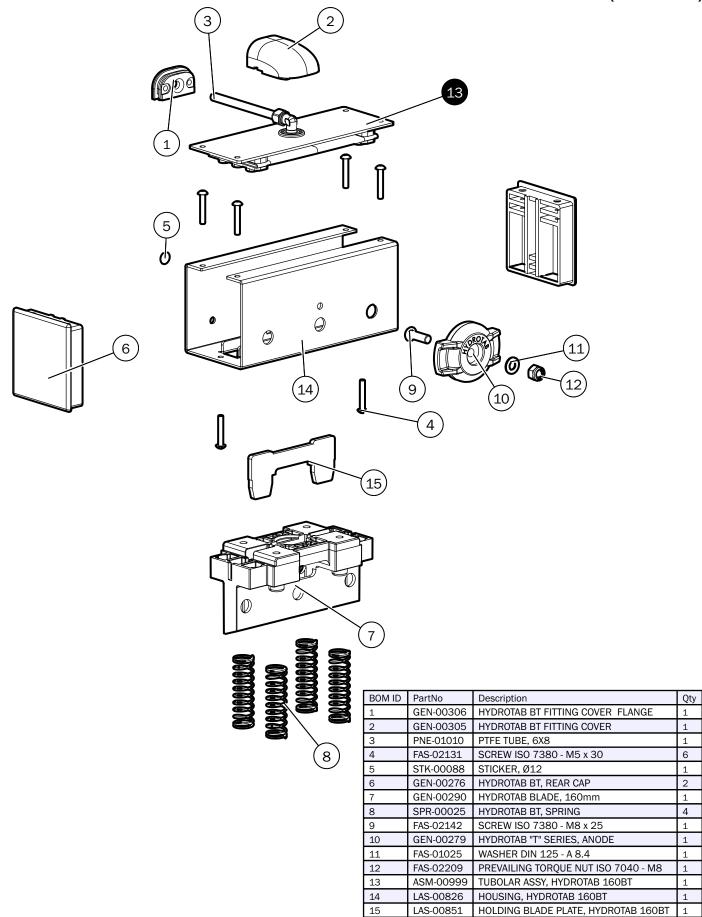


Pneumatic Diagram



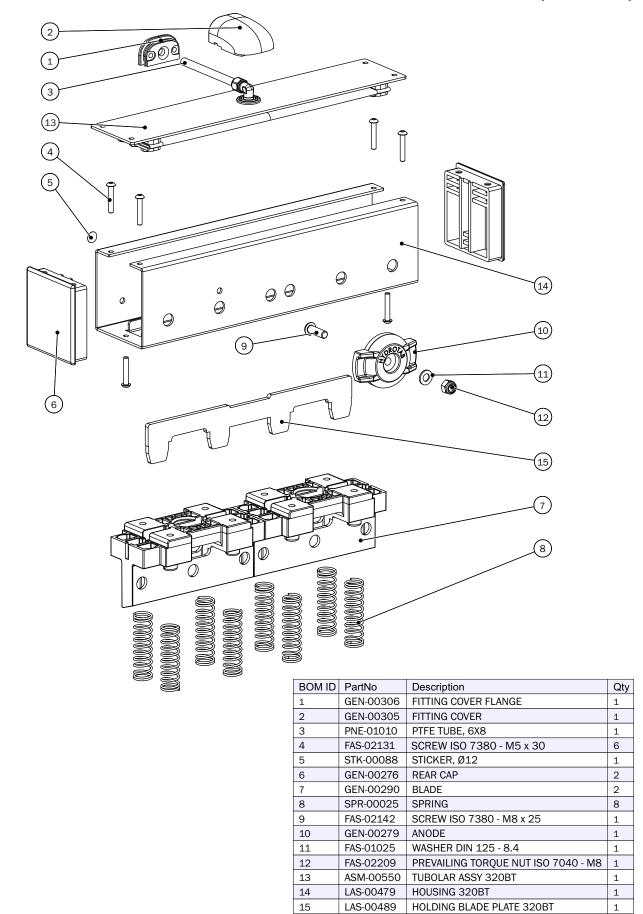


MOD: 160BT (ASM-00928)



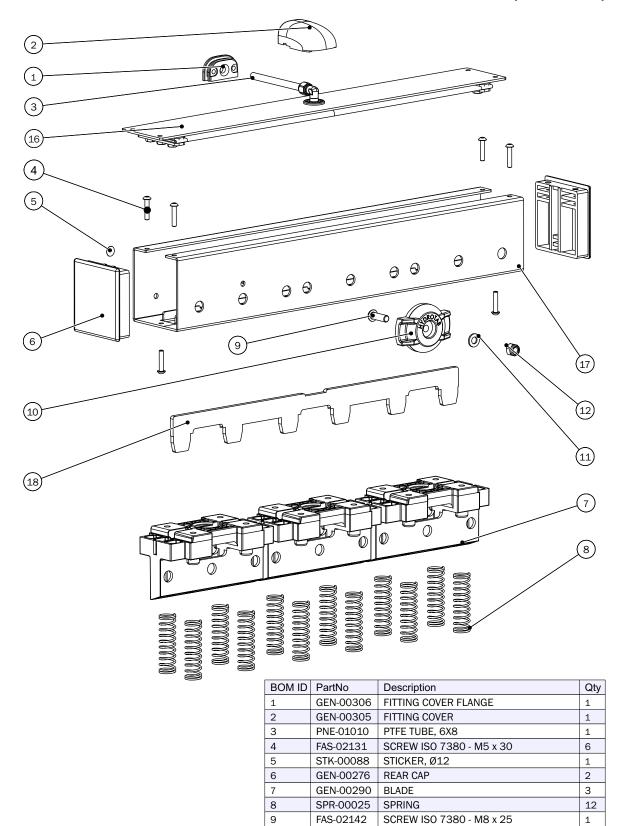


MOD: 320BT (ASM-00560)





MOD: 480BT (ASM-00561)



10

11 12

16

17

18

GEN-00279

FAS-01025

FAS-02209

ASM-00551

LAS-00480

LAS-00490

ANODE

WASHER DIN 125 - 8.4

TUBOLAR ASSY 480BT

HOLDING BLADE PLATE 480BT

HOUSING 480BT

PREVAILING TORQUE NUT ISO 7040 - M8

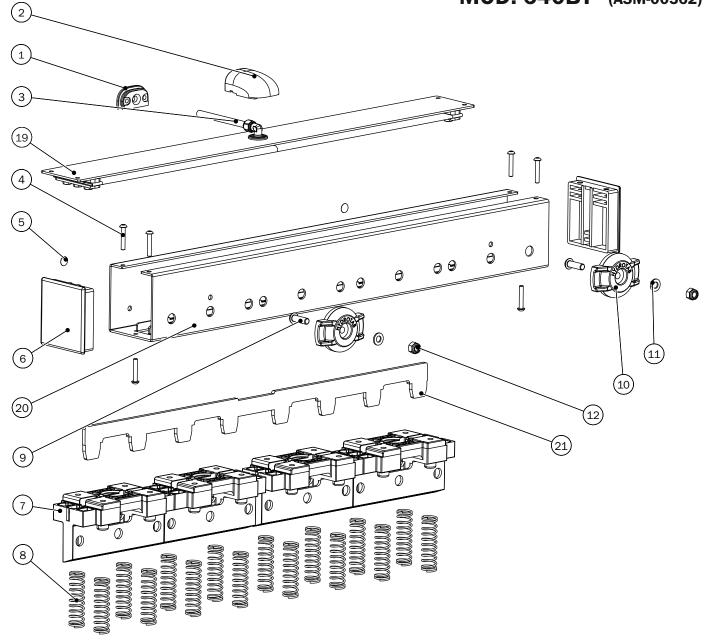
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1







BOM ID	PartNo	Description	Qty
1	GEN-00306	FITTING COVER FLANGE	1
2	GEN-00305	FITTING COVER	1
3	PNE-01010	PTFE TUBE, 6X8	1
4	FAS-02131	SCREW ISO 7380 - M5 x 30	6
5	STK-00088	STICKER, Ø12	1
6	GEN-00276	REAR CAP	2
7	GEN-00290	BLADE	3
8	SPR-00025	SPRING	12
9	FAS-02142	SCREW ISO 7380 - M8 x 25	1
10	GEN-00279	ANODE	1
11	FAS-01025	WASHER DIN 125 - 8.4	1
12	FAS-02209	PREVAILING TORQUE NUT ISO 7040 - M8	1
19	ASM-00552	TUBOLAR ASSY 640BT	1
20	LAS-00481	HOUSING 640BT	1
21	LAS-00491	HOLDING BLADE PLATE 640BT	1



Spare parts list MOD 800BT (ASM-00563) (30) (22) 5 (11) 9 (8)

BOM ID	PartNo	Description	Qty
1	GEN-00306	FITTING COVER FLANGE	1
2	GEN-00305	FITTING COVER	1
3	PNE-01010	PTFE TUBE, 6X8	1
4	FAS-02131	SCREW ISO 7380 - M5 x 30	6
5	STK-00088	STICKER, Ø12	2
6	GEN-00276	REAR CAP	2
7	GEN-00290	BLADE	5
8	SPR-00025	SPRING	20
9	FAS-02142	SCREW ISO 7380 - M8 X 25	2
10	GEN-00279	ANODE	2
11	FAS-01025	WASHER DIN 125 - A 8.4	2
12	FAS-02209	PREVAILING TORQUE NUT ISO 7040 - M8	2
22	ASM-00553	TUBOLAR ASSY 800BT	1
23	LAS-00482	HOUSING 640BT	1
24	LAS-00492	HOLDING BLADE PLATE 800BT	1
30	FAS-02207	PREVAILING TOROUE NUT ISO 7040 - M5	4

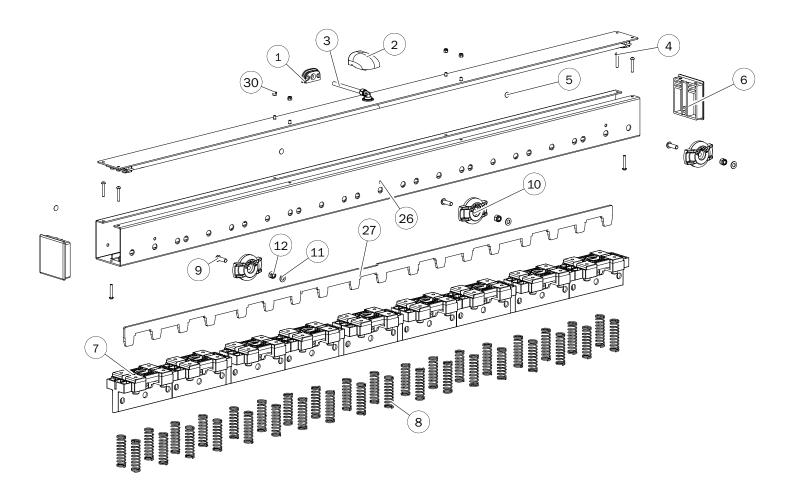


Spare parts list MOD: 960BT (ASM-00564) (11) (10) 26 9 (12) 8 27

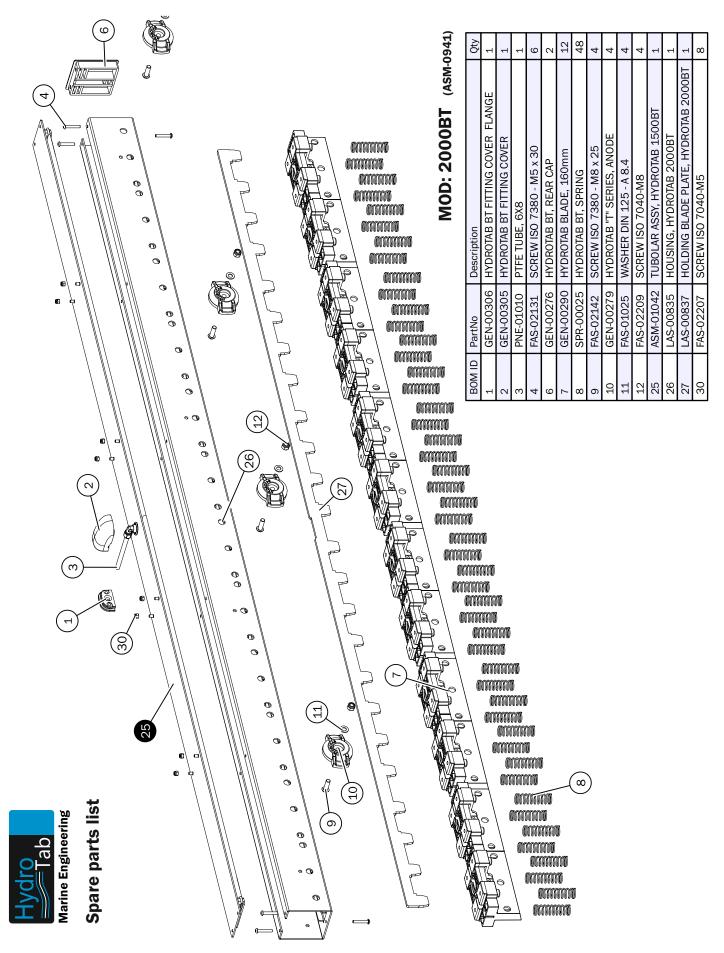
BOM ID	PartNo	Description	Qty
1	GEN-00306	FITTING COVER FLANGE	1
2	GEN-00305	FITTING COVER	1
3	PNE-01010	PTFE TUBE, 6X8	1
4	FAS-02131	SCREW ISO 7380 - M5 x 30	6
5	STK-00088	STICKER, Ø12	2
6	GEN-00276	REAR CAP	2
7	GEN-00290	BLADE	6
8	SPR-00025	SPRING	24
9	FAS-02142	SCREW ISO 7380 - M8 x 25	2
10	GEN-00279	ANODE	2
11	FAS-01025	WASHER DIN 125 - A 8.4	2
12	FAS-02209	PREVAILING TORQUE NUT ISO 7040 - M8	2
25	ASM-00554	TUBOLAR ASSY 960BT	1
26	LAS-00483	HOUSING 960BT	1
27	LAS-00493	HOLDING BLADE PLATE 960BT	1
30	FAS-02207	PREVAILING TOROUE NUT ISO 7040 - M5	4



MOD: 1500BT (ASM-0940)



BOM ID	PartNo	Description	Qty
1	GEN-00306	HYDROTAB BT FITTING COVER FLANGE	1
2	GEN-00305	HYDROTAB BT FITTING COVER	1
3	PNE-01010	PTFE TUBE, 6X8	1
4	FAS-02131	SCREW ISO 7380 - M5 x 30	6
5	STK-00088	STICKER, Ø12	3
6	GEN-00276	HYDROTAB BT, REAR CAP	2
7	GEN-00290	HYDROTAB BLADE, 160mm	9
8	SPR-00025	HYDROTAB BT, SPRING	36
9	FAS-02142	SCREW ISO 7380 - M8 x 25	3
10	GEN-00279	HYDROTAB "T" SERIES, ANODE	3
11	FAS-01025	WASHER DIN 125 - A 8.4	3
12	FAS-02209	PREVAILING TORQUE NUT ISO 7040 - M8	3
26	LAS-00832	HOUSING, HYDROTAB 1500BT	1
27	LAS-00834	HOLDING BLADE PLATE, HYDROTAB 1500BT	1
30	FAS-02207	PREVAILING TORQUE NUT ISO 7040 - M5	4





A B C 270 mm 204 mm 144 mm

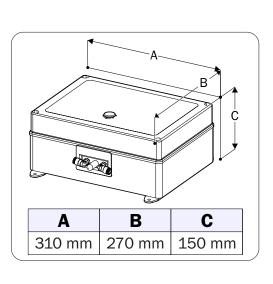
AIR UNIT (ASM-01051) (10) (28) (20) 17) 4 <u>(2</u>)

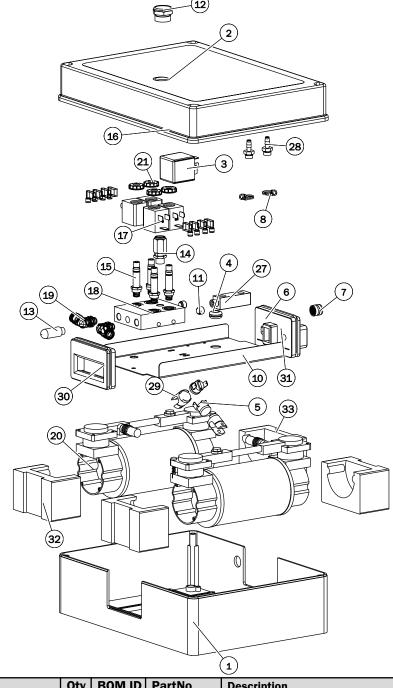
BOM ID	PartNo	Description	Qty
1	ELE-00106	TERMINAL, Φ6, YELLOW	5
2	ELE-00337	MINIRELAY FLOSSER 2262 12V 30A	1
4	ELE-00372	RELAY BASE	1
5	ELE-00374	MINIRELAY FLOSSER 4268 24V 20/30A	1
6	ELE-00533	THERMOSTAT	1
7	ELE-00535	M12, 5PIN PCB MALE CONNECTOR, PLASTIC MATERIAL	1
8	FAS-02323	NUT FOR AIR UNIT	4
9	FAS-02324	WASHER FOR AIR UNIT	4
10	GEN-00156	HYDROTAB AIR UNIT, TOP COVER	1
11	GEN-00157	HYDROTAB AIR UNIT, FS, BASE	1
14	LAS-00542	RELAY HOLDING FLANGE	1
15	PNE-00072	PLUG, MALE, PARALLEL, 1/8	3
16	PNE-00552	CANNOTTO NO Φ9 3/2 6W 09F07401A30NN	4
17	PNE-00924	COIL EVI 7/9 10W	4
18	PNE-00926	AIR UNIT VALVE BASE, 72x60x20	1

BOM ID	PartNo	Description	Qty
19	PNE-01001	FITTING, STRAIGHT, 1/8-Φ8, FOR AIR UNIT	2
20	PNE-01107	COMPRESSOR, 18VDC, HYDROTAB (V.2016)	1
21	PNE-01113	KNURLED NUT WITH M8 THREAD	4
23	REV-00184	FITTING, CUSTOM, 1/8, HOLE: 3.2	1
24	REV-00304	COMPRESSOR TERMINAL	2
25	REV-00305	FITTING, CUSTOM, FOR AIR UNIT	1
26	REV-00422	THERMAL RELAY RECEPTACLE	1
27	RUB-00102	HYDROTAB AIR UNIT FRONT COVER	1
28	RUB-00132	RUBBER MOUNT FOR COMPRESSOR (MALE)	1
29	RUB-00133	RUBBER MOUNT FOR COMPRESSOR (FEMALE)	1
30	STK-00086	STICKER, FRONT, AIR UNIT	1
34	ELE-00369	TERMINAL INSULATOR CAP, BLACK	1
35	ELE-00368	TERMINAL INSULATOR CAP, RED	1



Double Speed Air Unit (ASM-01086)





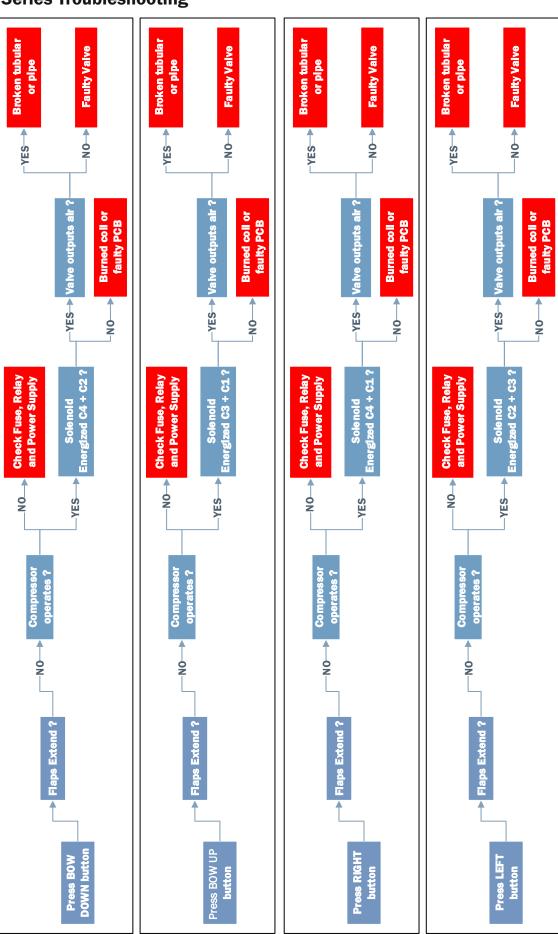
BOM ID	PartNo	Description	Qty	BOM ID	PartNo	Description	Qty
1	ELE-00034	AIR UNIT BOX BASE	1	15	PNE-00552	PILOT NO Φ9 3/2	4
2	ELE-00035	AIR UNIT BOTTOM CAP	1	16	PNE-00681	NUT 1/2	1
3	ELE-00181	MINIRELAY 24V 70A	1	17	PNE-00924	COIL EVI 7/9 10W	4
4	ELE-00361	ELASTIC HOLDER Φ9	1	18	PNE-00926	AIR UNIT VALVE BASE	1
5	ELE-00533	THERMOSTAT	2	19	PNE-01064	ADAPTOR, ELBOW MALE 1/8-Φ8	2
6	ELE-00535	M12, 5PIN MALE CONNECTOR	1	20	PNE-01107	COMPRESSOR	2
7	ELE-00540	PROTECTION CAP	1	21	PNE-01113	NUT	4
8	GEN-00168	SPRING CLAMP	2	27	REV-00111	MANIFOLD 1/8, 2 OUTPUTS	1
10	LAS-00114	MOUNTING BASE	1	28	REV-00184	FITTING, CUSTOM, 1/8	2
11	PNE-00009	CAP 1/8	2	29	REV-00422	THERMAL RELAY RECEPTACLE	2
12	PNE-00047	SILENCER 1/2	1	30	RUB-00023	VALVE RUBBER FRAME	1
13	PNE-00050	SILENCER, 1/8, PA	1	31	RUB-00024	CABLE RUBBER FRAME	1
14	PNE-00092	SAFETY VALVE, 1/8	1	32	RUB-00132	RUBBER MOUNT (MALE)	2
				33	RUB-00133	RUBBER MOUNT (FEMALE)	2

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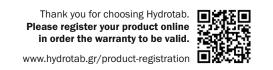


Hydrotab BT Series Troubleshooting

Before attempting any fault finding, check all fuses and that there is electric power to all connections







Warranty conditions

All Hydrotab interceptors and accessories are provided with a five (5) years operation warranty.

The return springs and electrical parts come with a two (2) year warranty.

The anodes (consumables) are not included in the warranty.

Hydrotab's warranty only covers the availability of spare parts.

The warranty period starts from the sale of the product and invoice issue at the end-user.

If the product has been purchased by a dealer, the warranty period starts by the invoice issue at the end-user.

The authorized dealer is in charge of the product's service.

The cost of dismantling - assembly and spare parts transportation is borne by the user.

For any services or spare parts requirements during warranty period the original invoice is necessary to be presented.

The warranty does not foresee, under any circumstances, replacement of the whole Hydrotab system.

What is not covered by the warranty:

- Damage caused by the lack or non-replacement of worn anodes.
- Damage caused by improper installation and use not consistent with the manual.
- Damage with external visible deformation of the product caused by misuse of the user or other external causes.
- Damage to any component caused during transportation, installation or repair from non-authorized personnel.
- Conversions or modifications made after the initial sale.

N. Triantafyllis Ltd is not liable for incidental, indirect or consequential damages or losses, including, without limitation, travel expenses, transport, lifting and hauling costs, loss of income, loss of time, loss of property, loss of profits, personal injury or damage of any products, different from those that the company distributes.

Any further (except the above mentioned) commitment of the intermediate dealer regarding the sale terms or servicing of Hydrotab products does not create any liability of our company.

