



**SR Series & 3DHC Installation - Operation Manual** 



#### 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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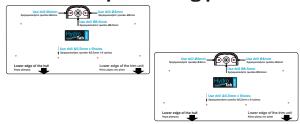
#### **Installation Kit**

## 1. Two interceptors





## 2. Two interceptor drilling patterns



## 3. One Hydrotab AIR unit 12 OR 24VDC





### 4. Cables

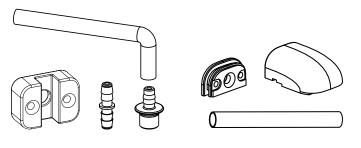


#### 5. 3DHC Controller

9 to 30 VDC panel with position indicators



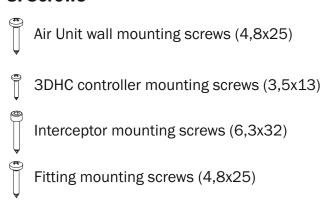
## 6. Fittings



## 7. Pipe 8mm

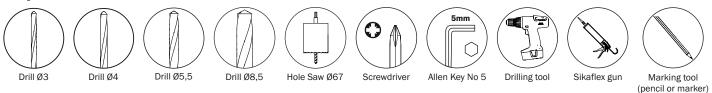


#### 8. Screws



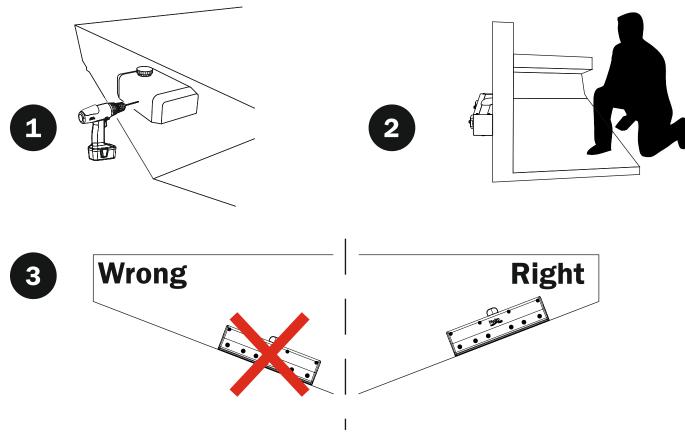


## **Required Tools for Installation**



#### **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).

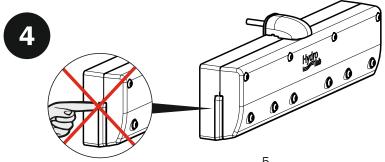


A good hint is that the closer the units are to the water line, the best the bank control of the boat will be (Figure 3).

#### WARNING!

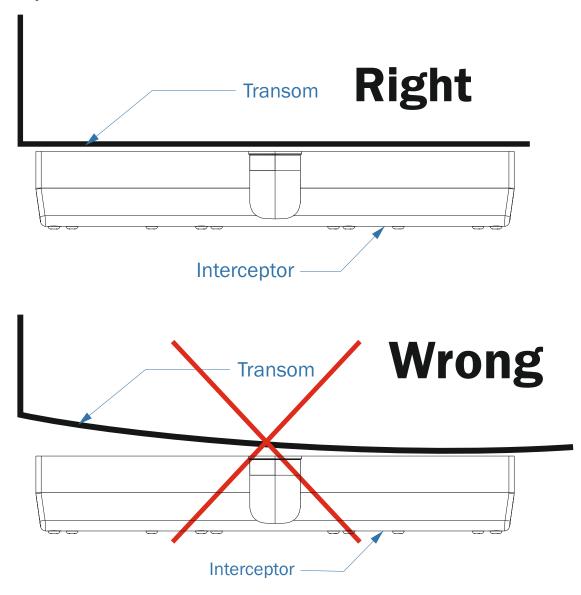
## **Safety precautions**

- 1. For high speed boats, overtrim may cause unexpectable turn. Improper use of trim tabs, may result to accident or injury.
- 2. DO NOT PLACE YOUR FINGERS ON THE SIDES OF THE INTERCEPTORS (Figure 4). Severe injury danger!!!



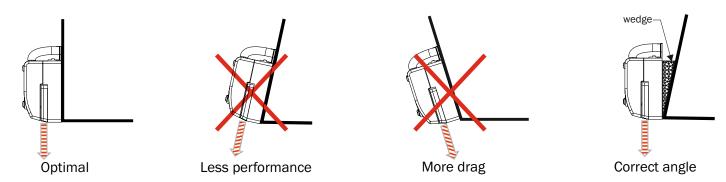


#### **Proper interceptor installation in transom**



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

For aluminum hulls, it is suggested Isolation Plates between hull and interceptors to be installed. You can find installation instructions in the Isolation Plates Kit.



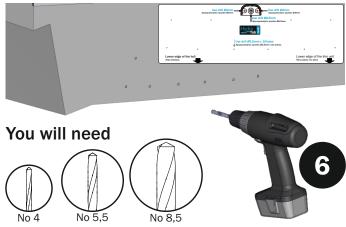
For maximum performance and less drag, install interceptors on the transom so blades deploy vertically. If transom is not vertical to water plane, correct the angle by using wedges or other means.



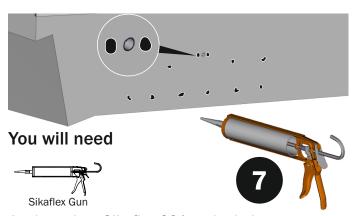
## **Interceptor Installation**



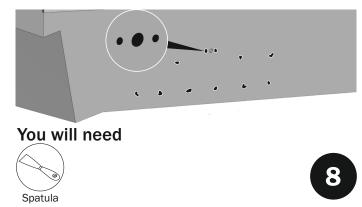
Drill all the pattern holes with a 3mm bore without removing the pattern.



Remove the pattern and drill according to the pattern indications.



Apply sealant Sikaflex 291 to the holes.



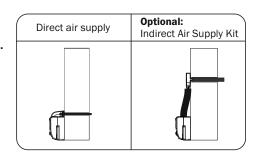
Use a spatula to clean the excessive glue from the holes.

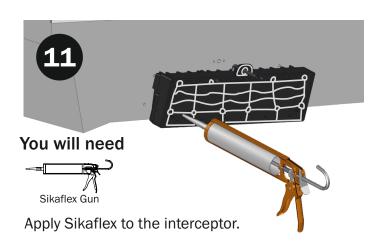


Remove the screws and open the interceptor.



For Direct Air Supply: Advise the instructions.
For Indirect Air Supply: Use the components included in the kit.

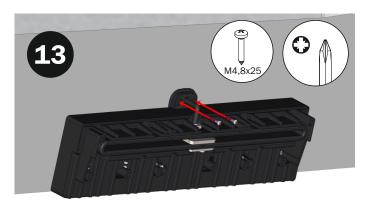




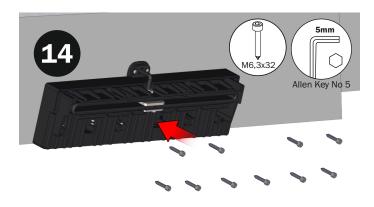


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Mount the pipe into the drilled hole.



Mount the cap base to the transom.



Mount the interceptor to the transom.

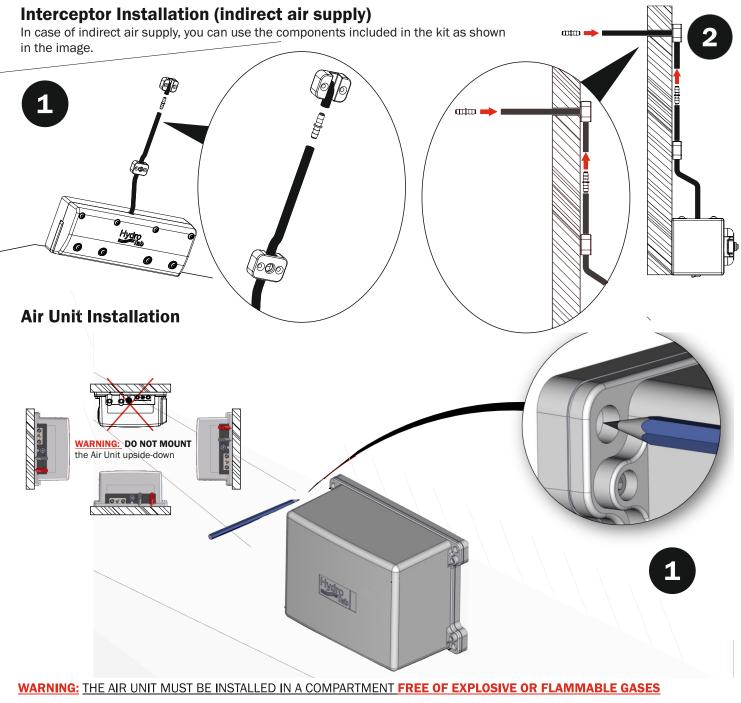


Mount the front cap and tighten the screws.

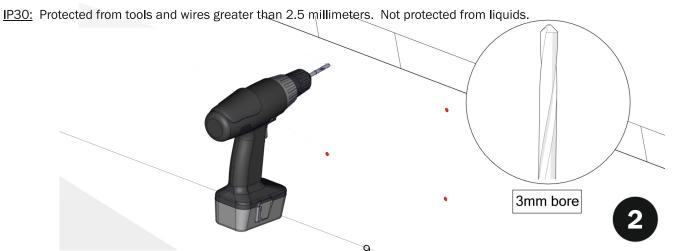


Mount the cap.

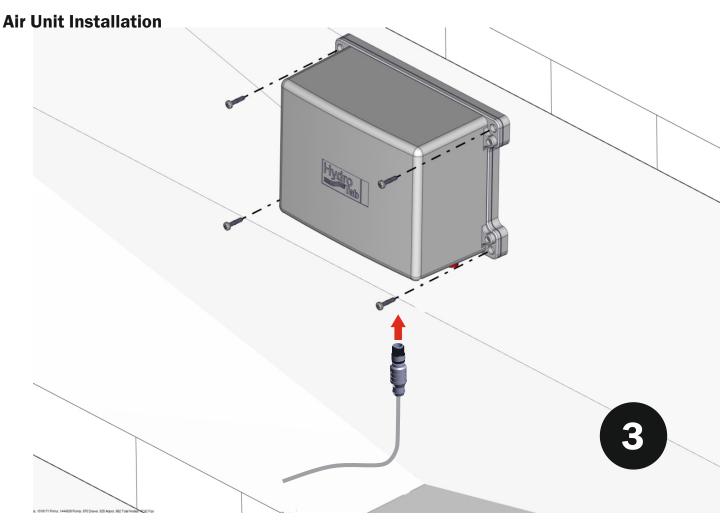




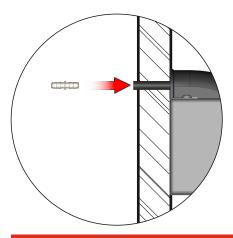
WARNING: PLEASE INSURE THAT THE AIR UNIT IS INSTALLED ACCORDING TO THE IP30 LIMITATIONS.



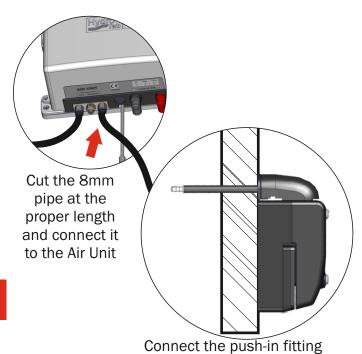




## **Pneumatic Connection**



After you install the hose through the transom, mount the air fitting into the hose.

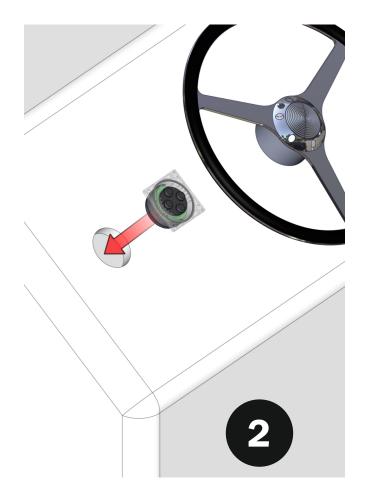




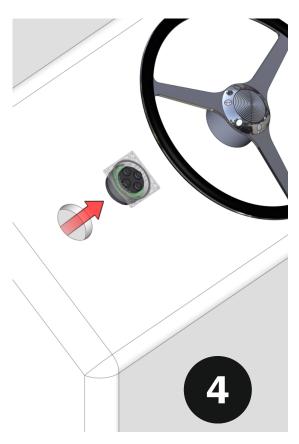
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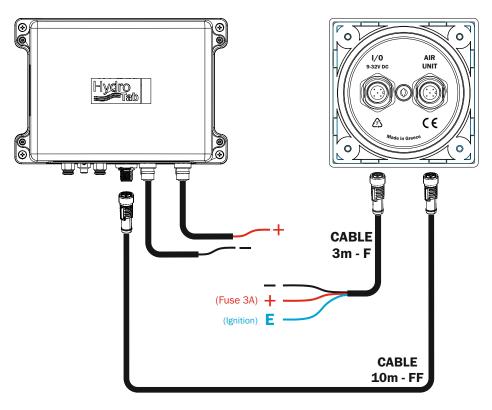


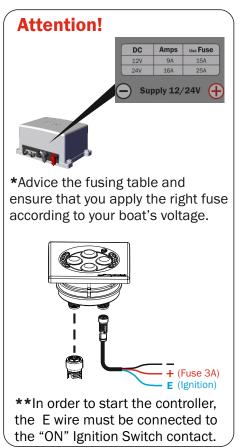




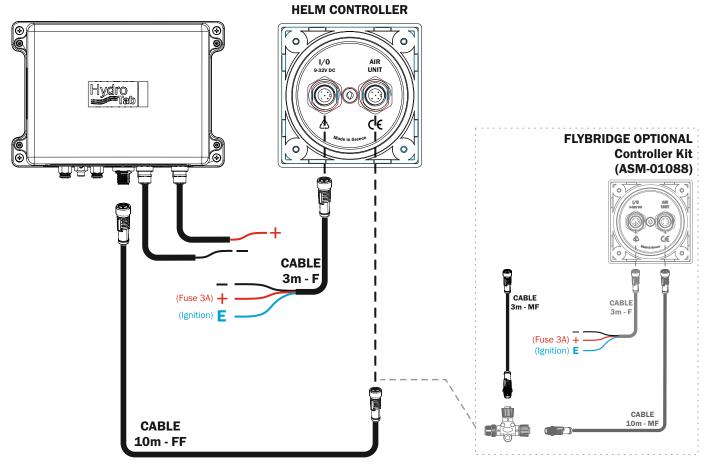


## Installation Schematic overview - Single Compressor Air Unit with One 3DHC Controller



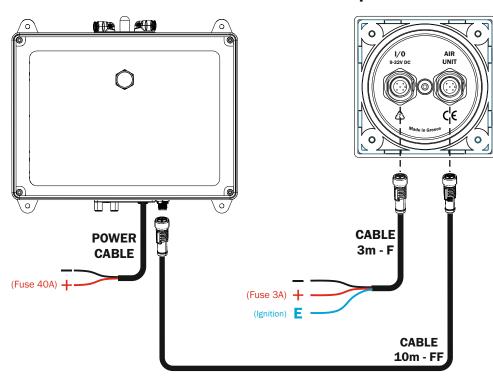


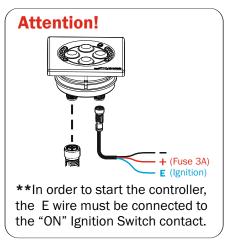
## Installation Schematic overview - Single Compressor Air Unit With Two 3DHC Controllers



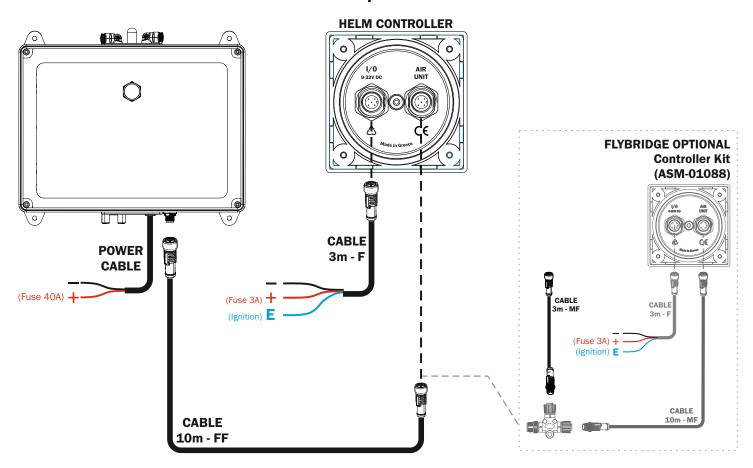


## Installation Schematic overview - Double Speed Air Unit with One 3DHC Controller



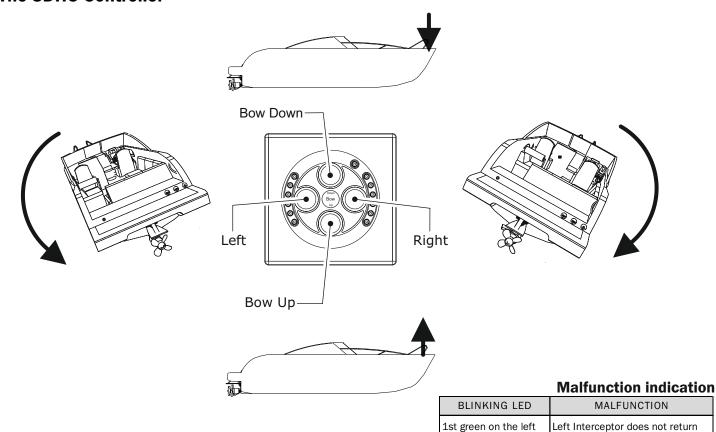


## Installation Schematic overview - Double Speed Air Unit with Two 3DHC Controllers





#### 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):

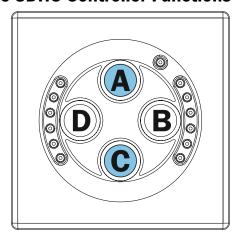
- a. extend the blades
- b. spread the decalcifying liquid with a brush
- c. let it for 15-20 min
- d. wash out with clean water
- e. retract the blades

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

Every three years check the springs condition.

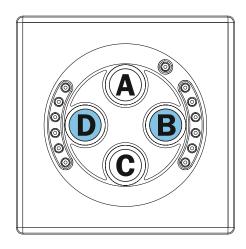


#### **The 3DHC Controller Functions**



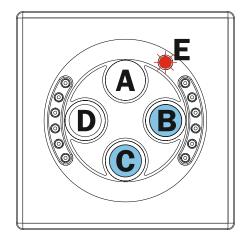
## **EMERGENCY RETRACTING**

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.



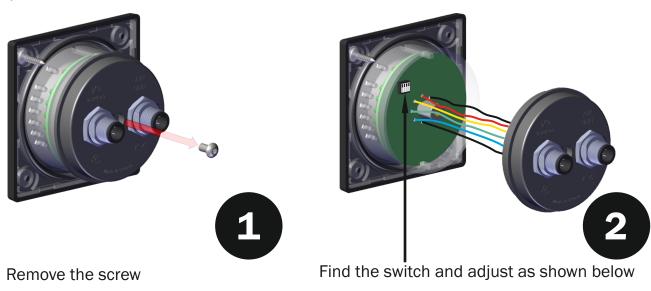
## **3DHC Controller Adaptation**

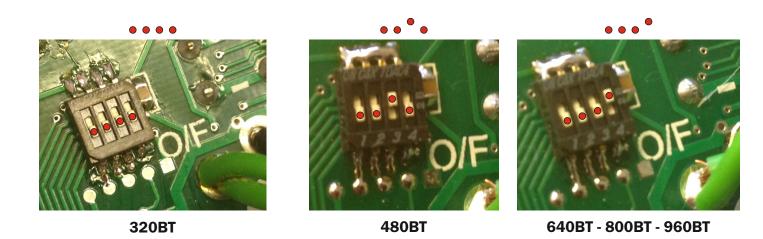
## The controllers included in packaging, are pre-adjusted.

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)

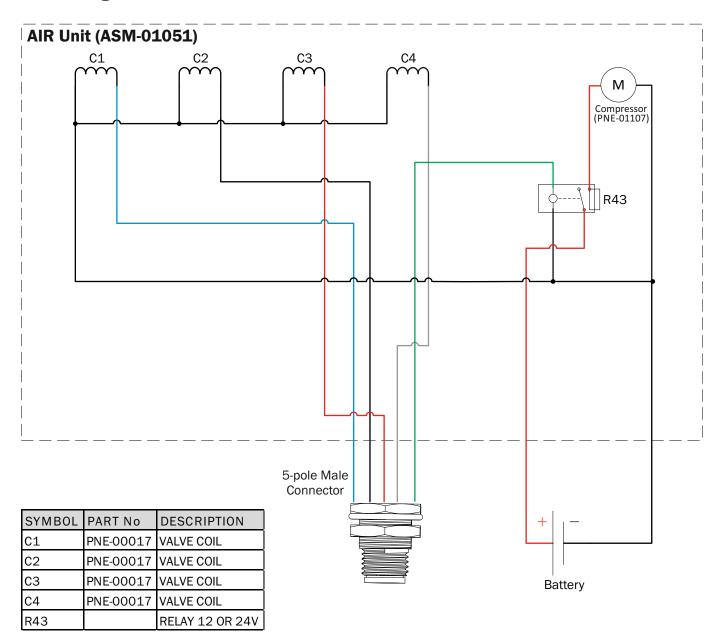
## To open the 3DHC Controller







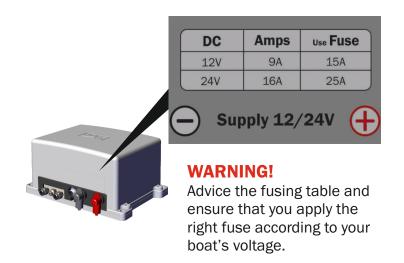
## **Electrical Diagram**



#### **ATTENTION!**

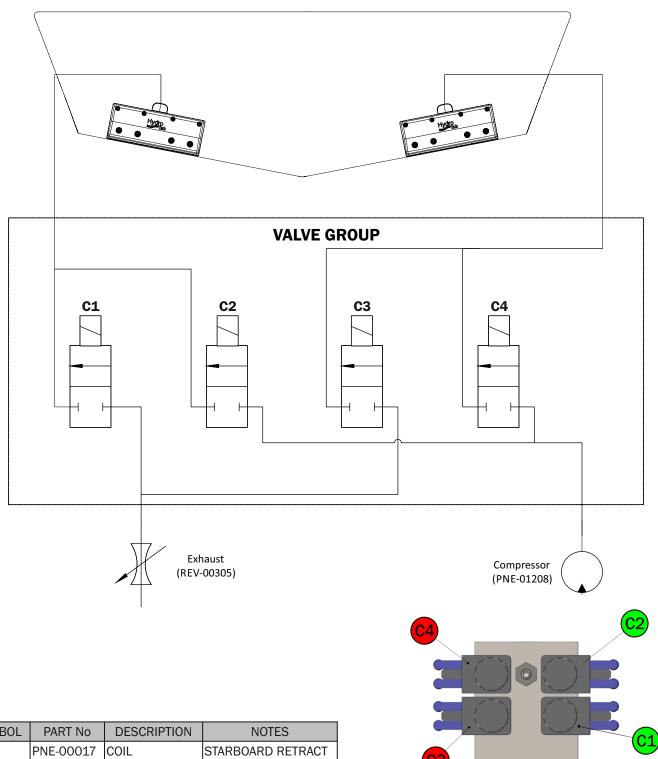
To avoid voltage drop use the right cable size.

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	





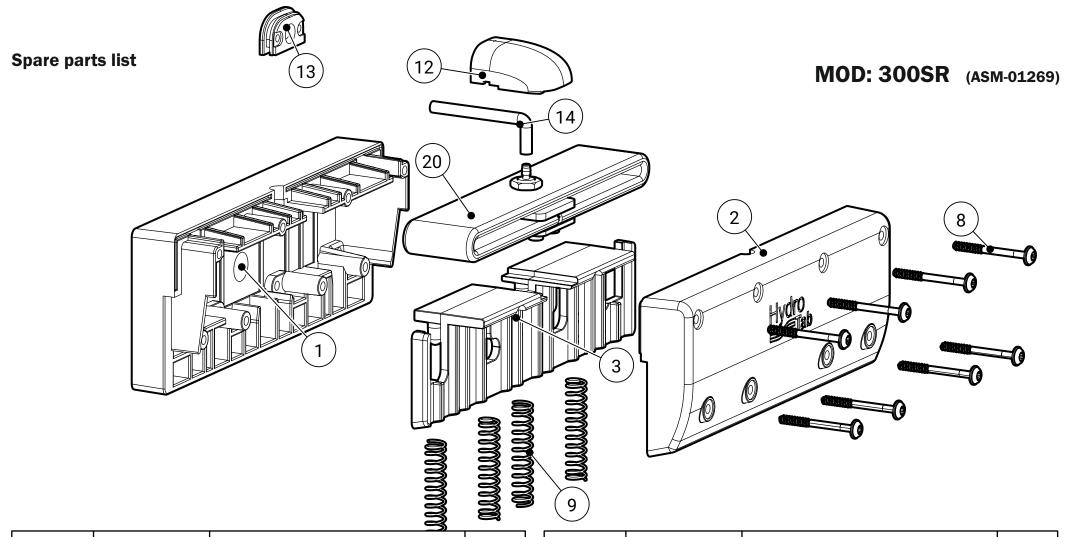
## **Pneumatic Diagram**



SYMBOL	PART No	DESCRIPTION	NOTES
C1	PNE-00017	COIL	STARBOARD RETRACT
C2	PNE-00017	COIL	STARBOARD EXTEND
C3	PNE-00017	COIL	PORT RETRACT
C4	PNE-00017	COIL	PORT EXTEND

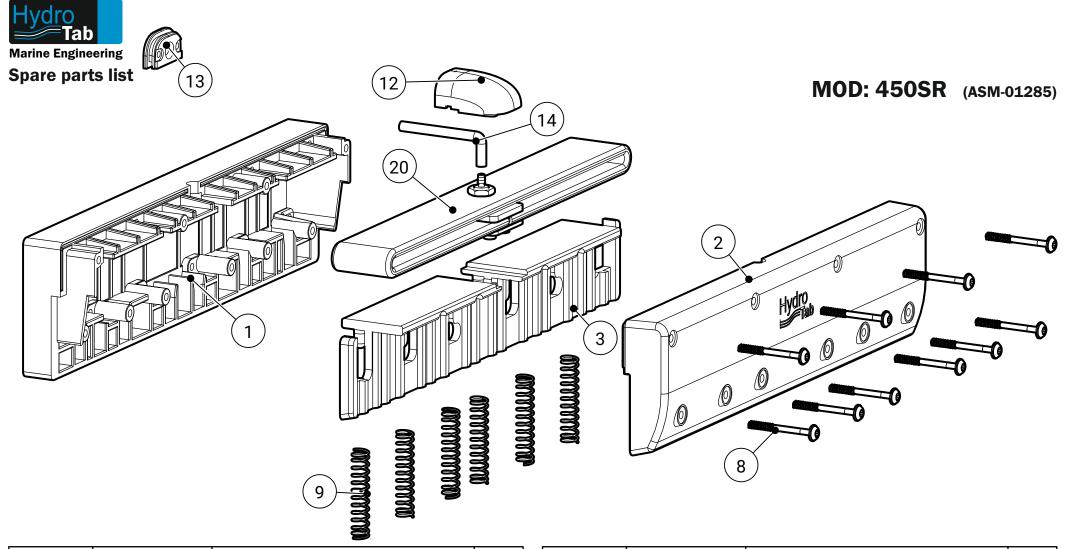
Port valves

Starboard valves



BOM ID	PartNo	Description	QTY.
1	GEN-00506	SR300 BACK BODY	1
2	GEN-00508	SR300 FRONT COVER	1
3	GEN-00507	SR300 BLADE	1
8	FAS-02549	SCREW 6,1x48(23)	8
9	SPR-00037	SPRING	4

BOM ID	PartNo	Description	QTY.
12	GEN-00305	FITTING COVER	1
13	GEN-00306	FITTING COVER FLANGE	1
14	PNE-01215	DIRECT AIR SUPPLY PIPE	1
20	ASM-01268	SR300 TUBULAR ASSEMBLY	1



BOM ID	PartNo	Description	Qty
1	GEN-00520	SR450 BACK BODY	1
2	GEN-00522	SR450 FRONT COVER	1
3	GEN-00521	SR450 BLADE	1
8	FAS-02549	SCREW 6,1x48(23)	10
9	SPR-00037	SPRING	6

BOM ID	PartNo	Description	Qty
12	GEN-00305	FITTING COVER	1
13	GEN-00306	FITTING COVER FLANGE	1
14	PNE-01215	DIRECT AIR SUPPLY PIPE	1
20	ASM-01284	SR450 TUBULAR ASSEMBLY	1



## **Spare parts list**

В

270 mm | 204 mm | 144 mm

# AIR UNIT (ASM-01051-RE) (10) (28) (20) (17) 4 (2)

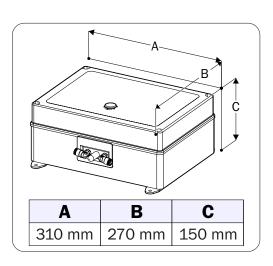
BOM ID	PartNo	Description	Qty
1	ELE-00106	TERMINAL, Φ6, YELLOW	5
2	ELE-00337	MINIRELAY FLOSSER 2262 12V 30A	1
4	ELE-00372	RELAY BASE	1
5	ELE-00374	MINIRELAY FLOSSER 4268 24V 20/30A	1
6	ELE-00533	THERMOSTAT	1
7	ELE-00535	M12, 5PIN PCB MALE CONNECTOR, PLASTIC MATERIAL	1
8	FAS-02323	NUT FOR AIR UNIT	4
9	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

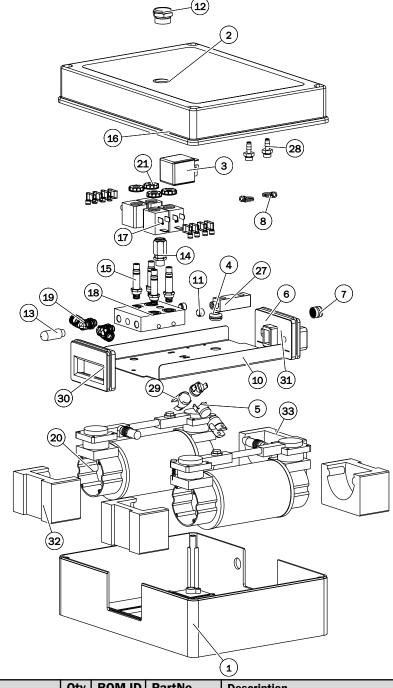
BOM ID	PartNo	Description	Qty
19	PNE-01001	FITTING, STRAIGHT, 1/8-Φ8, FOR AIR UNIT	2
20	PNE-01208	COMPRESSOR, 20VDC	1
21	PNE-01113	KNURLED NUT WITH M8 THREAD	4
23	REV-00184	FITTING, CUSTOM, 1/8, HOLE: 3.2	1
24	REV-00304	COMPRESSOR TERMINAL	2
25	REV-00305	FITTING, CUSTOM, FOR AIR UNIT	1
26	REV-00422	THERMAL 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



## **Spare parts list**

## Double Speed Air Unit (ASM-01086-RD)





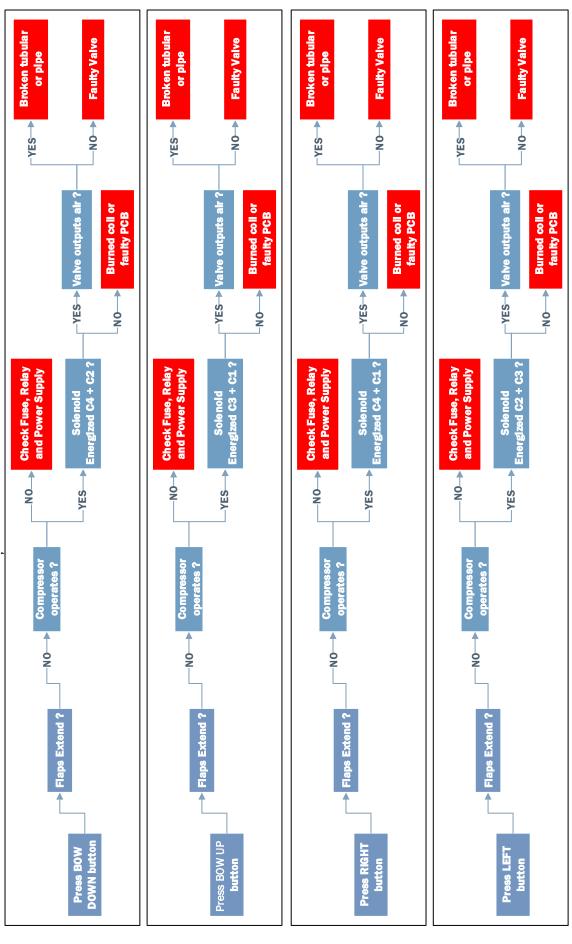
BOM ID	PartNo	Description	Qty	BOM ID	PartNo	Description	Qty
1	ELE-00034	AIR UNIT BOX BASE	1	15	PNE-00552	PILOT NO Φ9 3/2	4
2	ELE-00035	AIR UNIT BOTTOM CAP	1	16	PNE-00681	NUT 1/2	1
3	ELE-00181	MINIRELAY 24V 70A	1	17	PNE-00924	COIL EVI 7/9 10W	4
4	ELE-00361	ELASTIC HOLDER Φ9	1	18	PNE-00926	AIR UNIT VALVE 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-01208	COMPRESSOR, 20V	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
<u> </u>		_		33	RUB-00133	RUBBER MOUNT (FEMALE)	2

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## **Troubleshooting**

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





#### **Warranty conditions**

FW, TS and BT Series Interceptor units (and not complete systems) are covered by a 5-year Warranty. SR Series Interceptor units (and not complete systems) are covered by a 2-year Warranty. Recoil springs, electrical/electronic parts and devices come with a 2-year warranty. Anodes (consumables) are not included in the warranty (for BT, FW, TS Series). Hydrotab's warranty only covers the repair or replacement of spare parts.

#### **System selections**

It is the sole responsibility of the buyer to choose the correct system and even with Hydrotab's suggestion for a system, the overall responsibility is with the buyer.

#### **Limited warranty**

Provided that the system has being installed in accordance with the installation manual we provide, and no damage has been caused due to improper handling or practices, Hydrotab will replace any defective parts or parts that failed due to improper manufacturing withing the applicable warranty period.

Hydrotab only covers the parts' replacement. Fitting or shipping costs are not covered by warranty.

Hydrotab will select if we will repair or replace any given part.

Repaired or replaced products will assume the remainder of the warranty time and under no conditions will the full time of warranty be renewed.

#### **Limited warranty periods**

Limited warranty period is two years (2 years) from the product shipment from our premises.

#### **Extended limited warranty period**

It is provided in case:

- a) Hydrotab trim system is included as equipment of a newly purchased boat directly by from the boat-builder or his reseller.
- b) Hydrotab trim system has been purchased through a Hydrotab dealer.

The extended limited warranty period is valid for three (3) years from the shipping date, provided that the customer has downloaded, completed and submitted the online registration form within one month (30) days from the purchase in the following url.

https://www.hydrotab.gr/product-registration

In case the dealer sells separate units of Interceptors, Air Units and Controllers that constitute a full system that is not initially sold (as a complete system) by Hydrotab, the dealer has the responsibility to provide the separate Serial Numbers for the Interceptors, Air Units and Controllers and guide the end user for the proper registration of his serial numbers for the extended warranty to be valid.

The authorized dealer is responsible for the product's service.

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

For the replacement of any part of the system (interceptors, Air Unit, any controller etc.) under warranty, the replaced parts must be returned to Hydrotab Marine Engineering for inspection, otherwise warranty is not valid.

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

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 (for BT, FW, TS Series).

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.

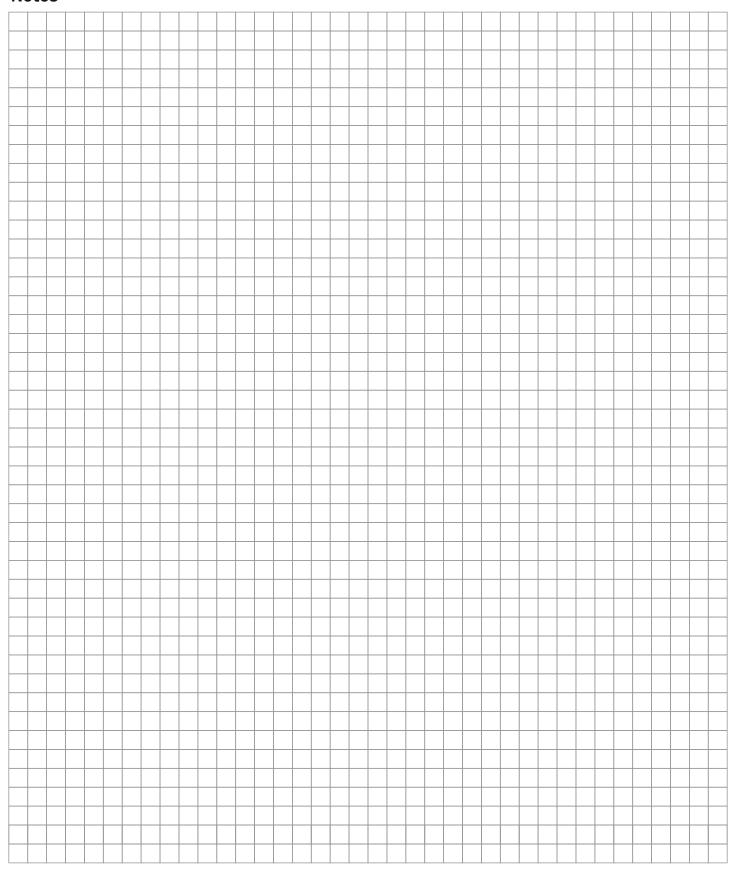
Damage to any component caused during transportation, installation or repair from non-authorized personnel.

Conversions or modifications made after the initial sale.

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## **Notes**





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