



Marine Engineering

# OPERATOR'S MANUAL



NMEA 2000  
NMEA 0183

**Hydrotab BT installation & 4DHC 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**

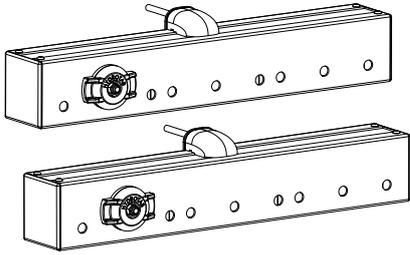
Please register your product online in order the warranty to be valid.

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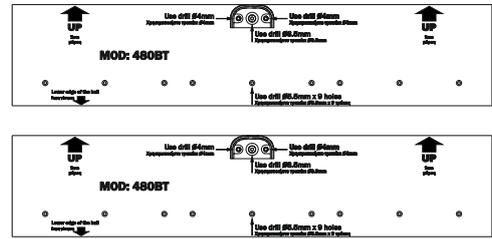
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## Installation Kit

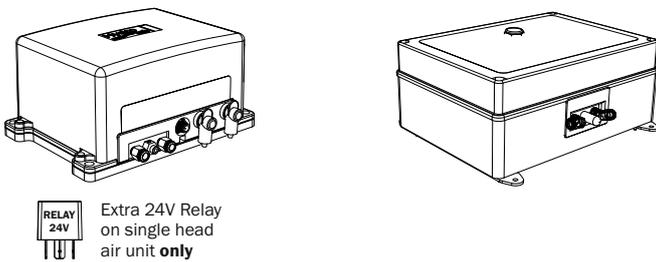
### 1. Two interceptors



### 2. Two interceptor drilling patterns

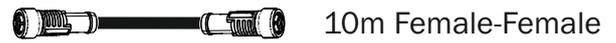


### 3. One Hydrotab AIR unit 12 OR 24VDC

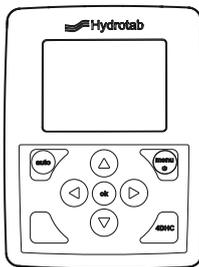


RELAY 24V  
Extra 24V Relay on single head air unit **only**

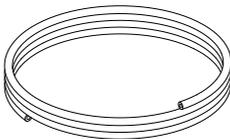
### 4. Cables



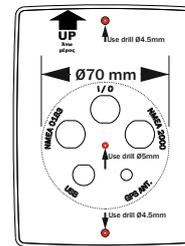
### 5. 4DHC Controller



### 6. Pipe 8mm



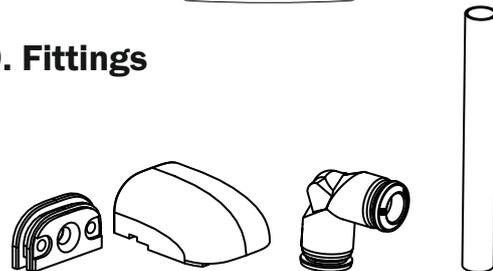
### 7. 4DHC Controller Drilling Pattern



### 8. Screws

- Air Unit wall mounting screws (4,8x25)
- Interceptor mounting screws (6,3x32)
- Fitting mounting screws (4,8x25)

### 9. Fittings



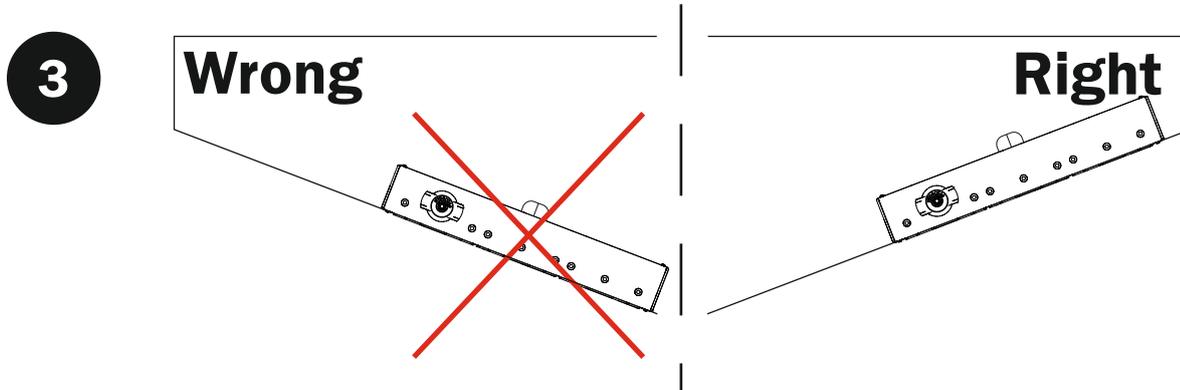
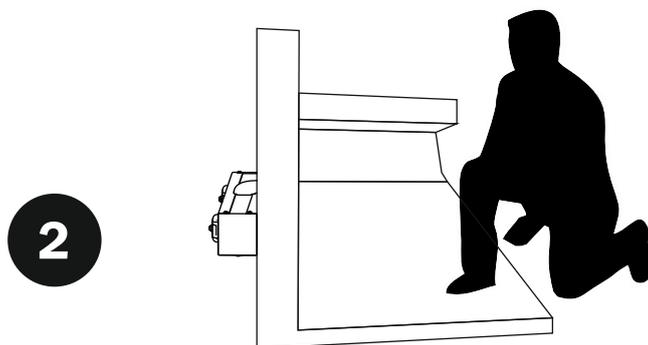
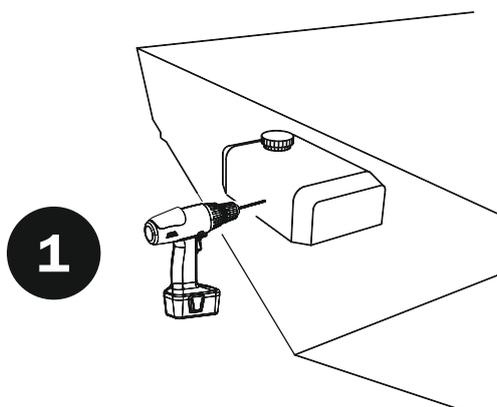
## Required Tools for Installation



## 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).

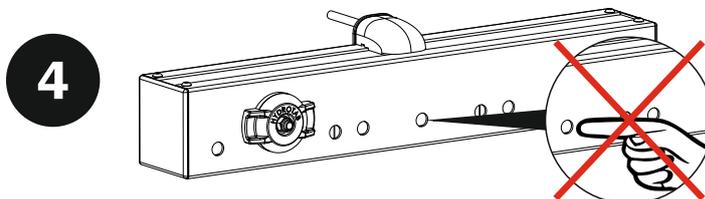


A good hint is that the closer the units are to the water line, the best the bank control of the boat will be (Figure 3).

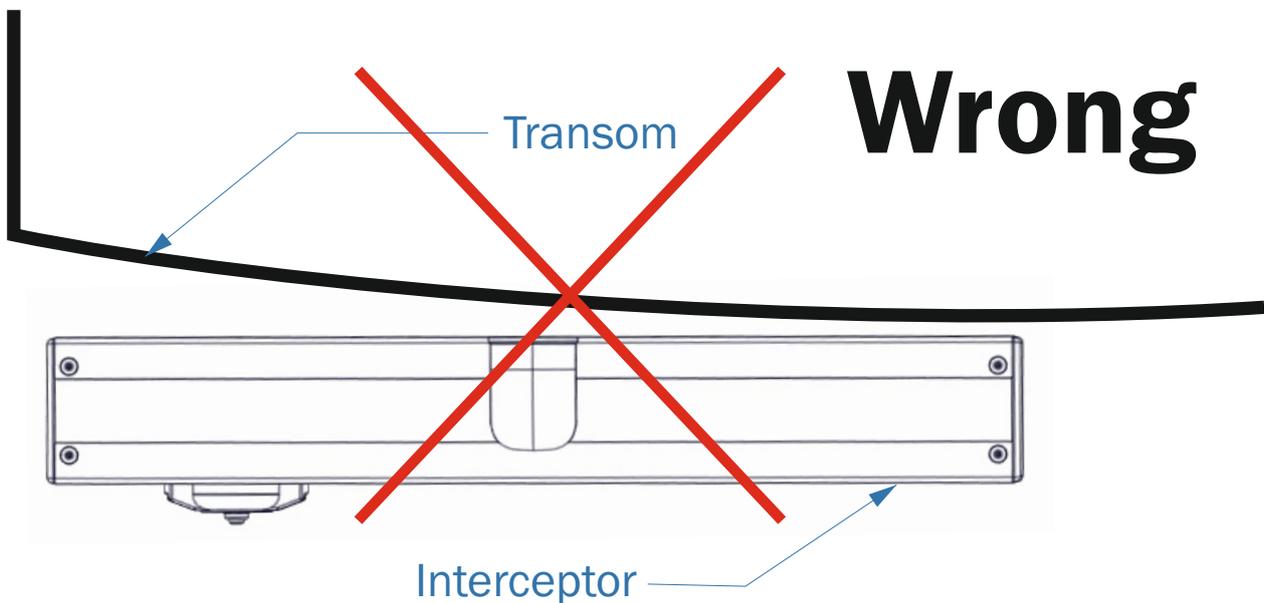
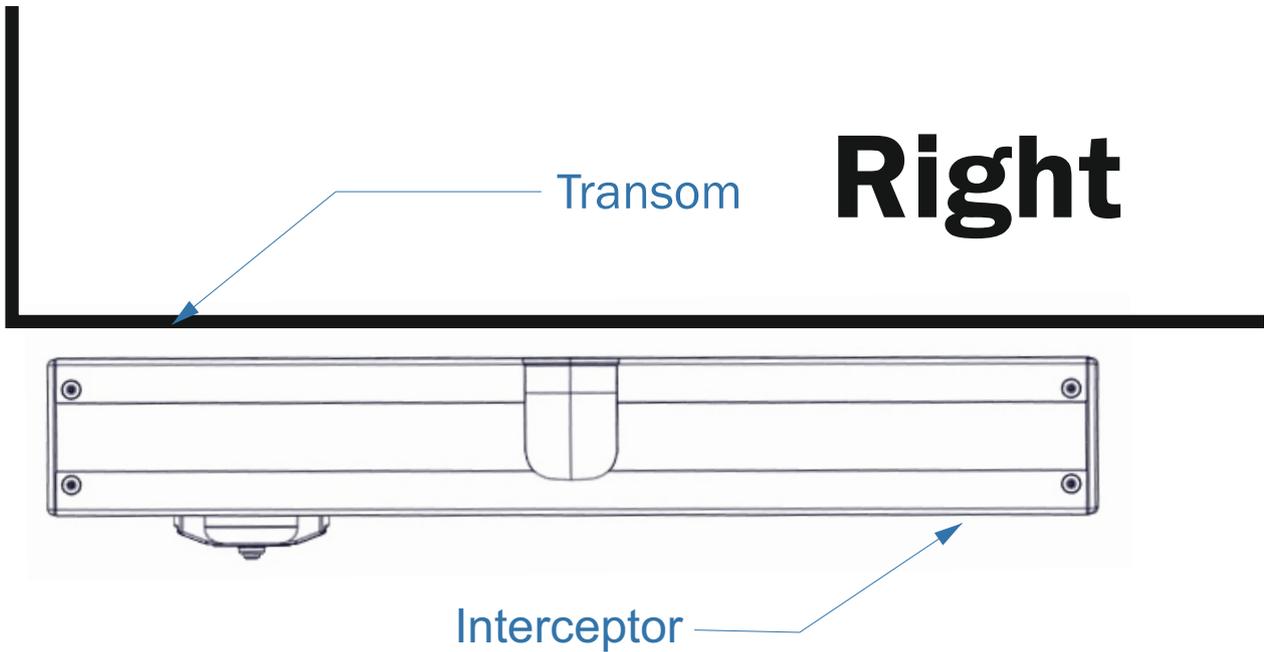
## **WARNING!**

## Safety precautions

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

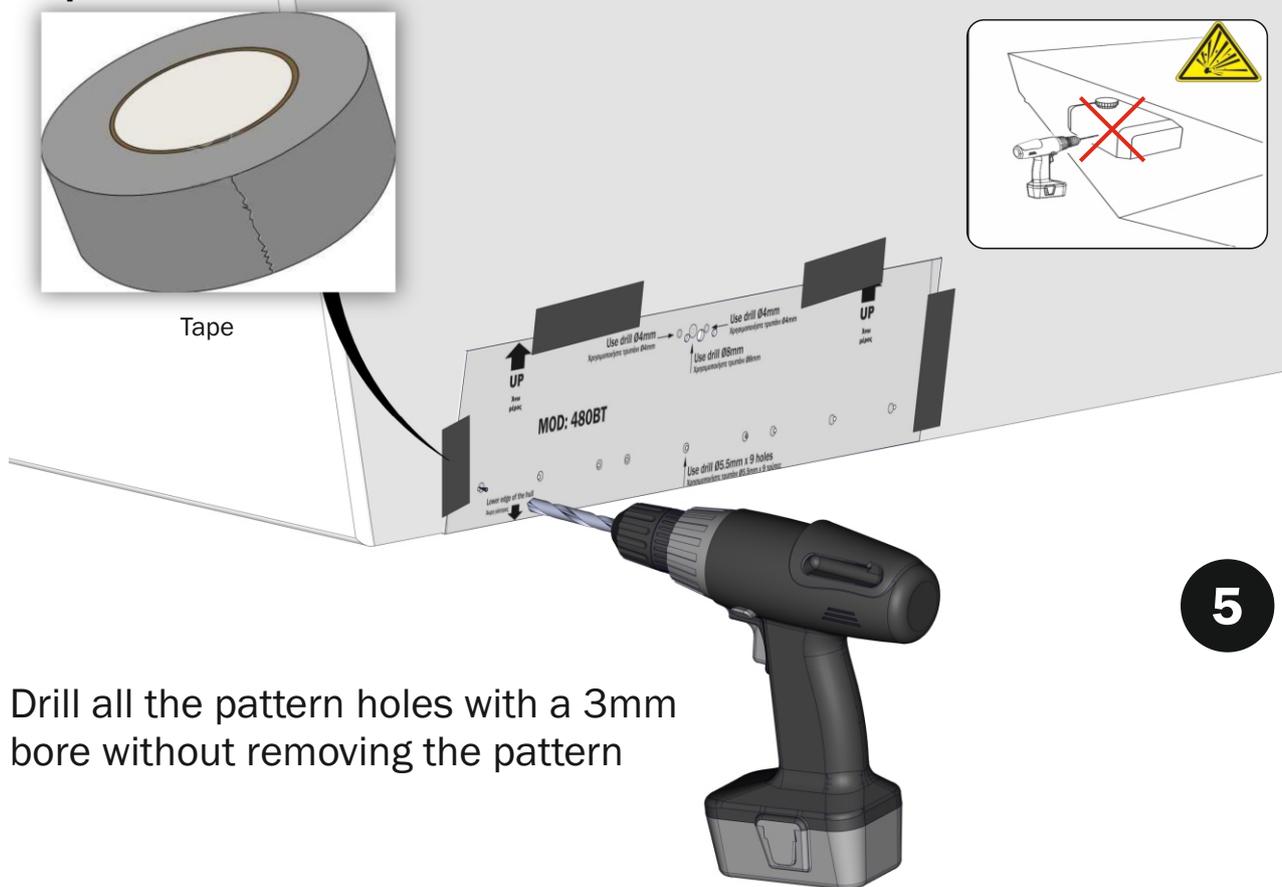


## Proper interceptor installation in transom



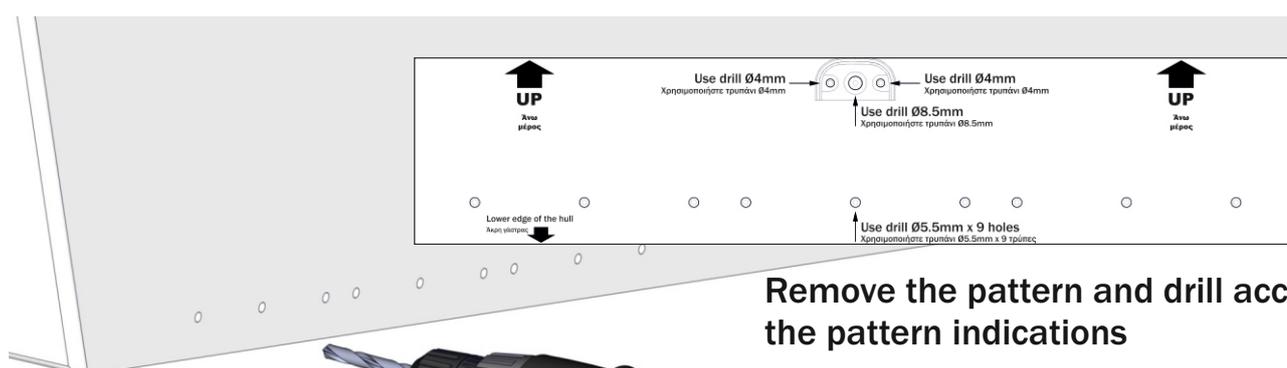
If the boat's transom has a significant curvature, it is necessary to create a flat plane for the installation (acceptable flatness tolerance: 2mm).

## Interceptor Installation



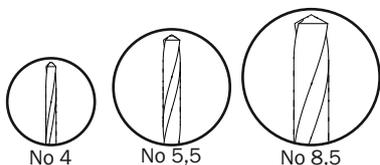
5

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



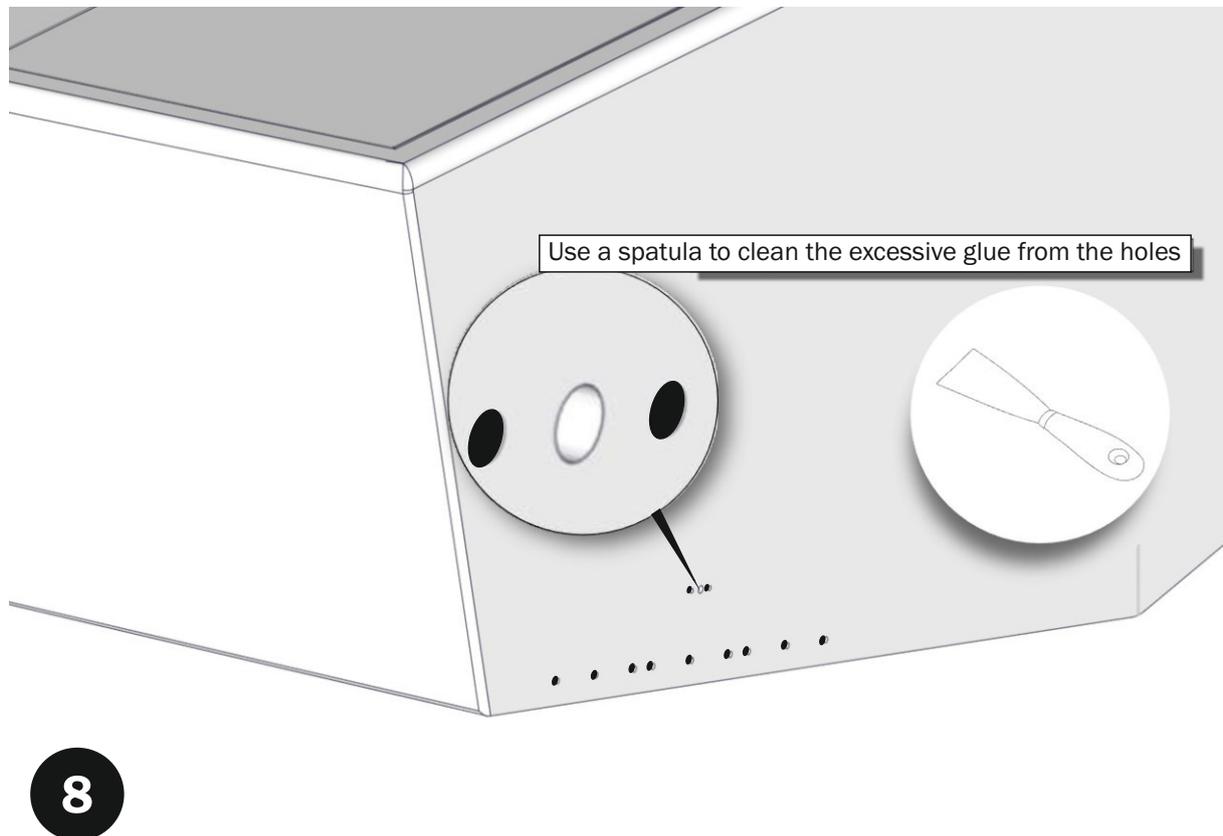
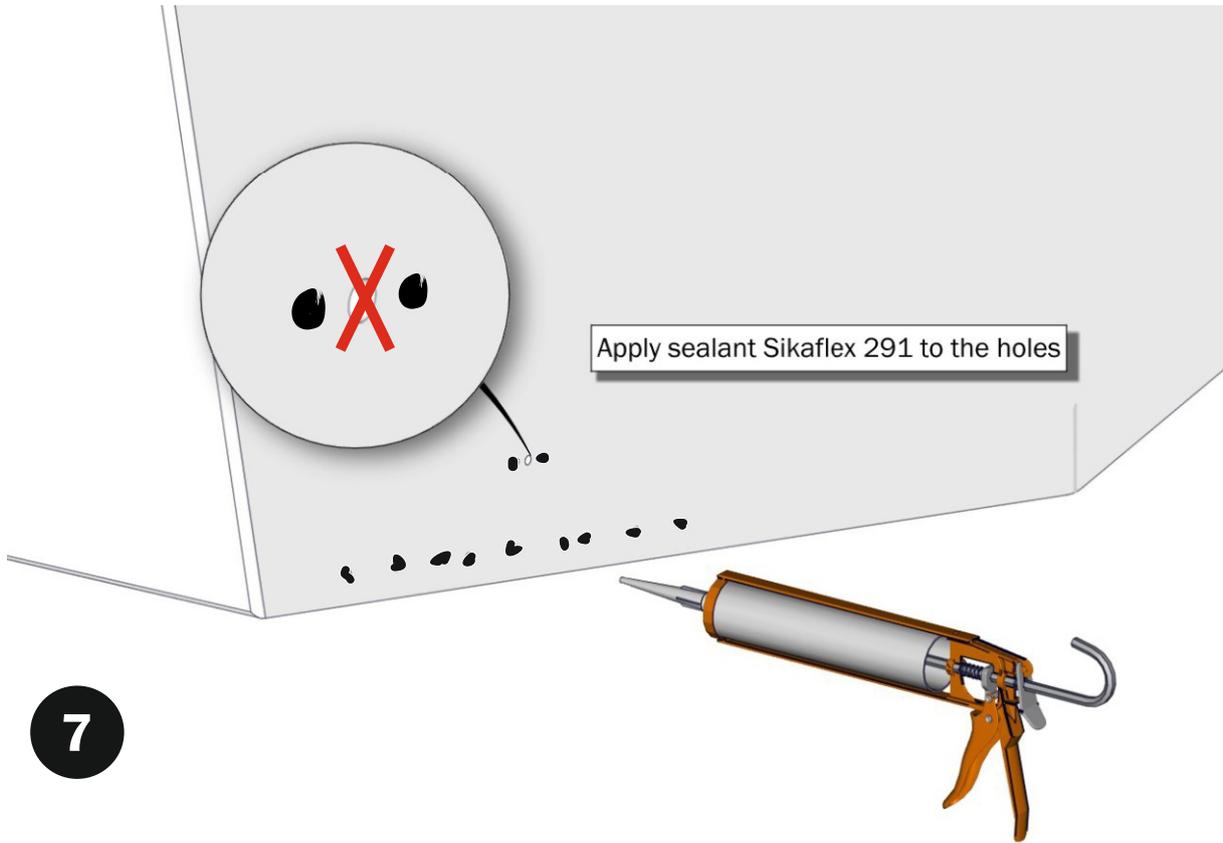
Remove the pattern and drill according to the pattern indications

You will need

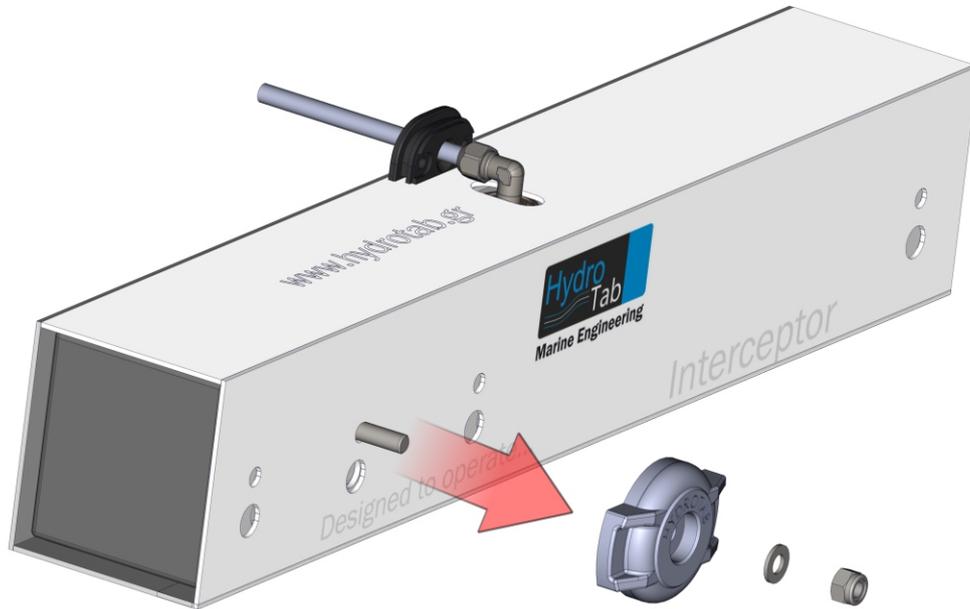


6

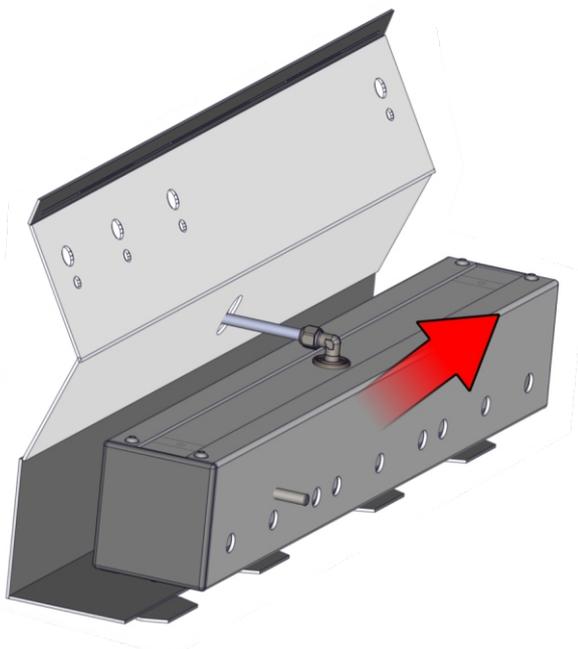
## Interceptor Installation

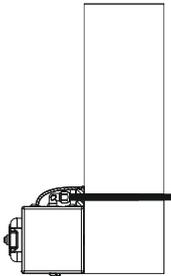
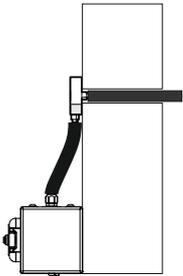


## Interceptor Installation



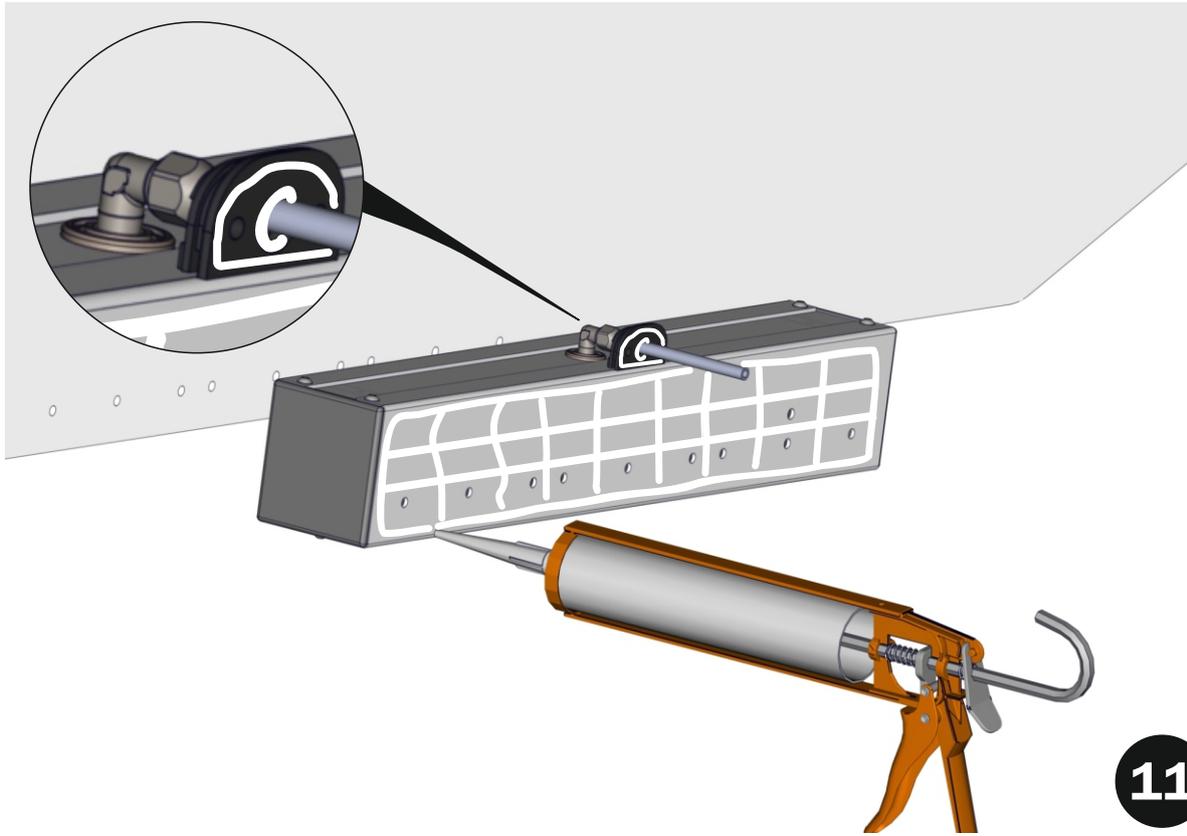
9



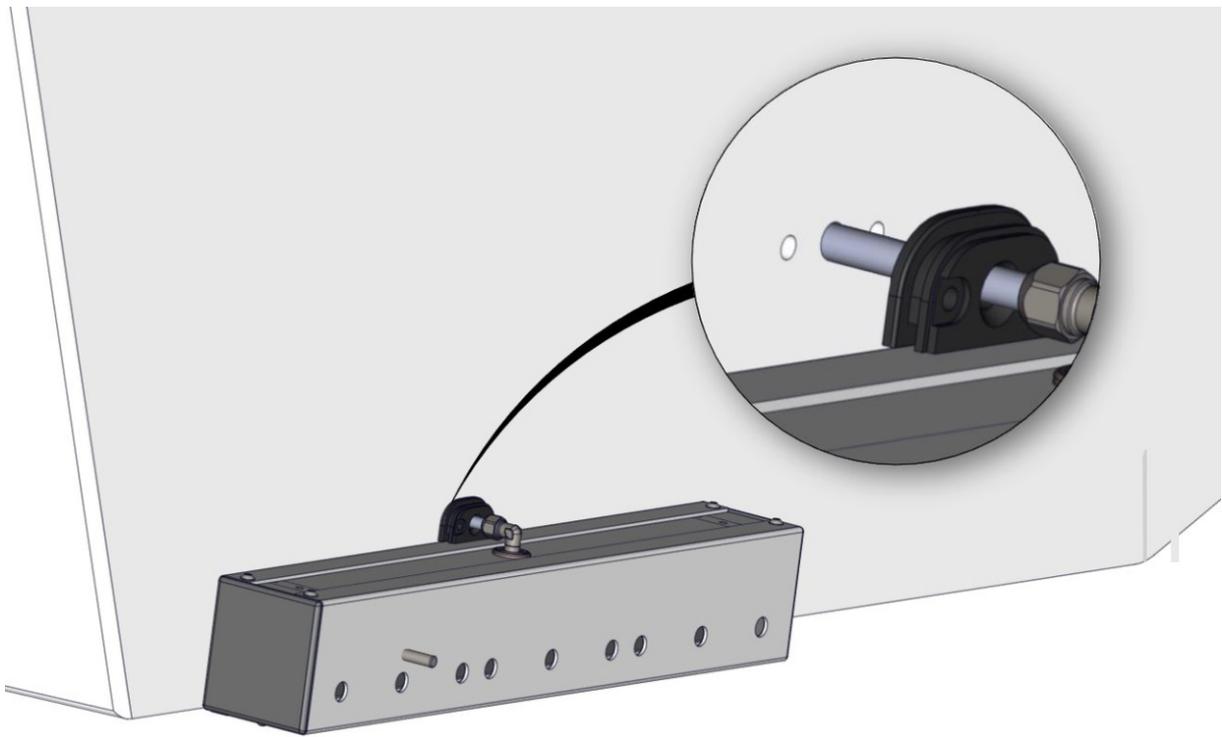
Direct air supply	<b>Optional:</b> Indirect Air Supply Kit
	

10

## Interceptor Installation



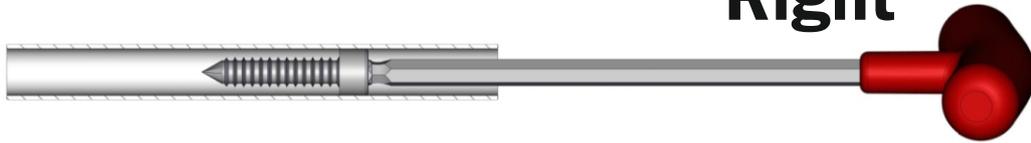
**11**



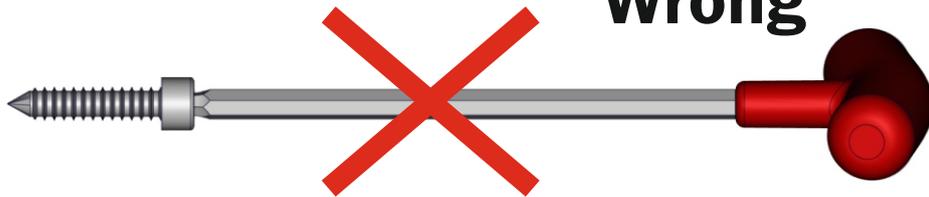
**12**

## Interceptor Installation

**Right**

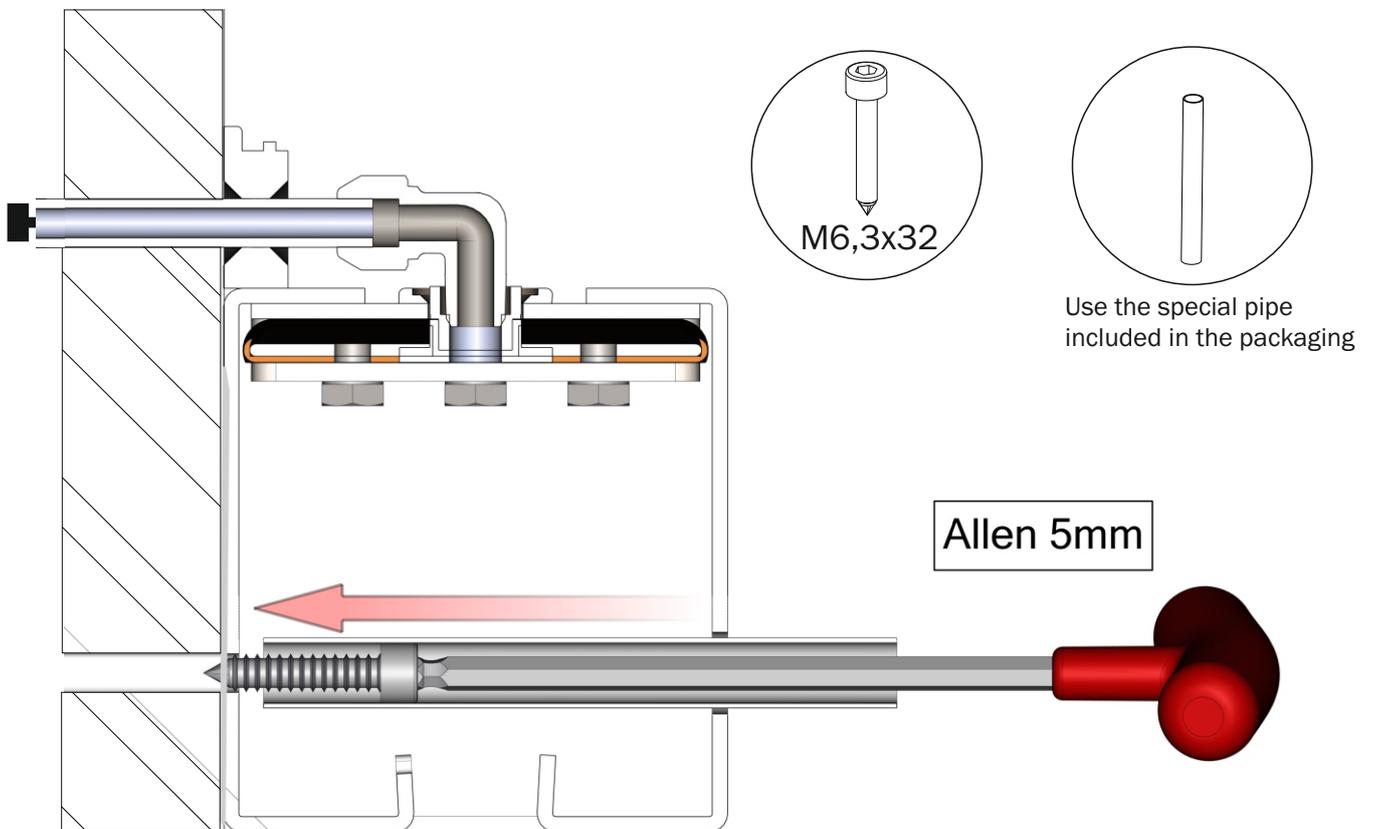


**Wrong**



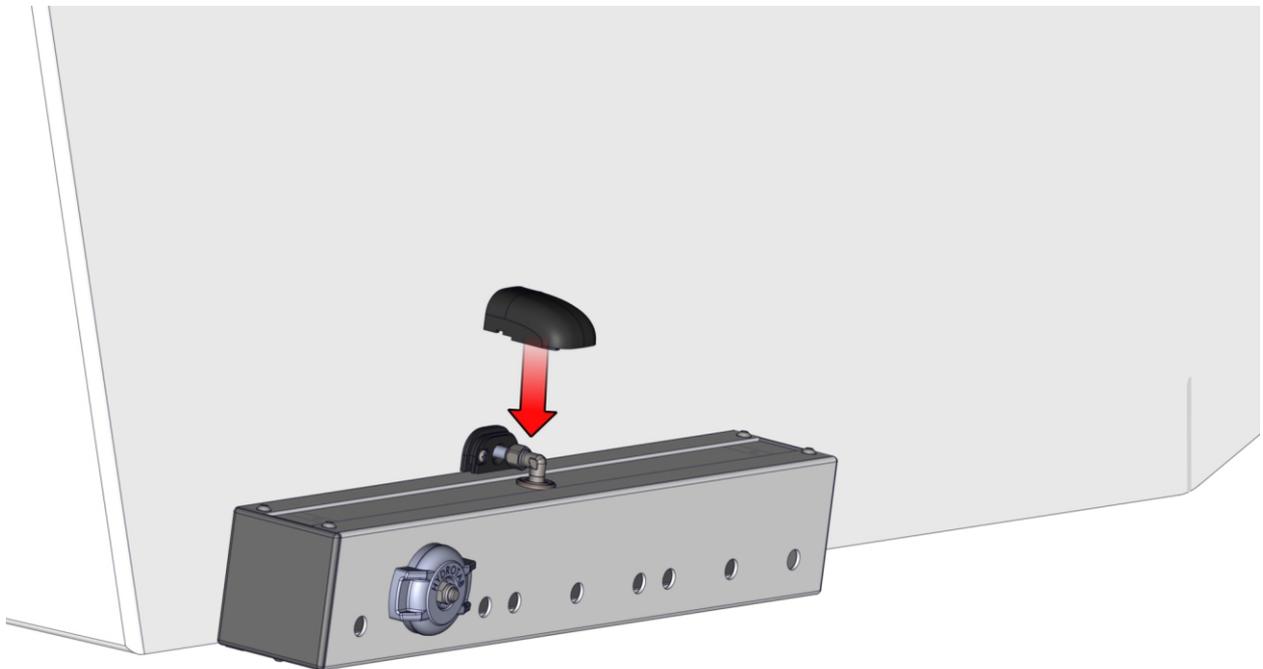
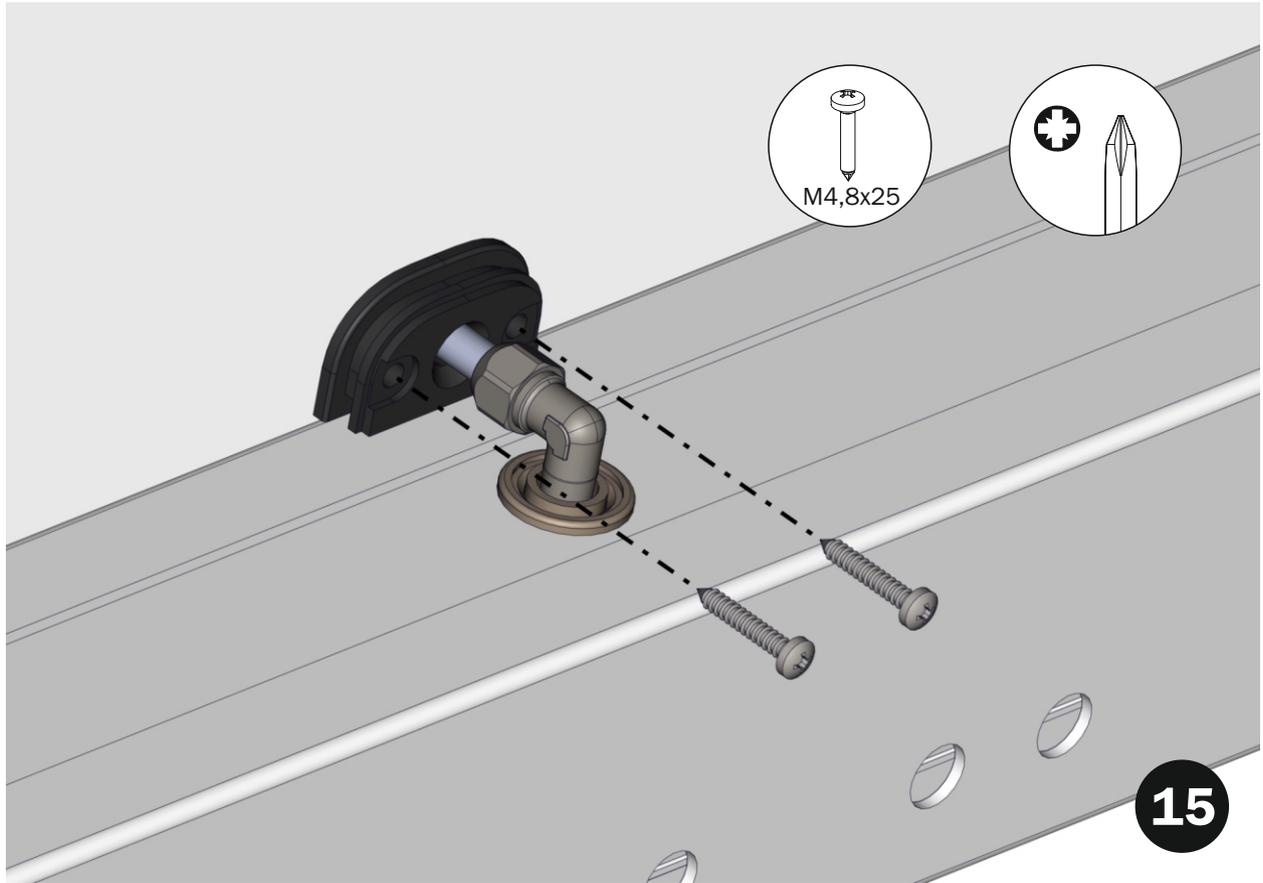
**! WARNING!** Do not try to place the screw without using the guide pipe!  
If the screw falls in the internal of the interceptor, you must disassemble the rear plastic cover, and restore the screw.

**13**

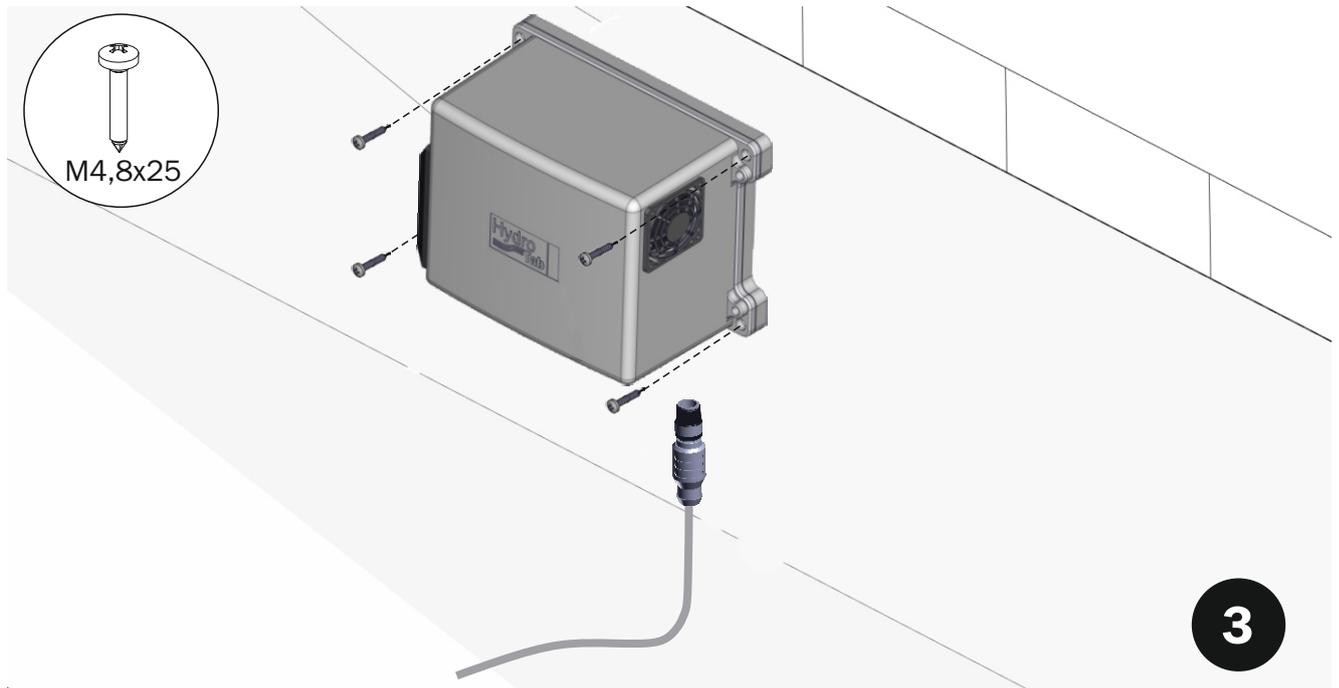


**14**

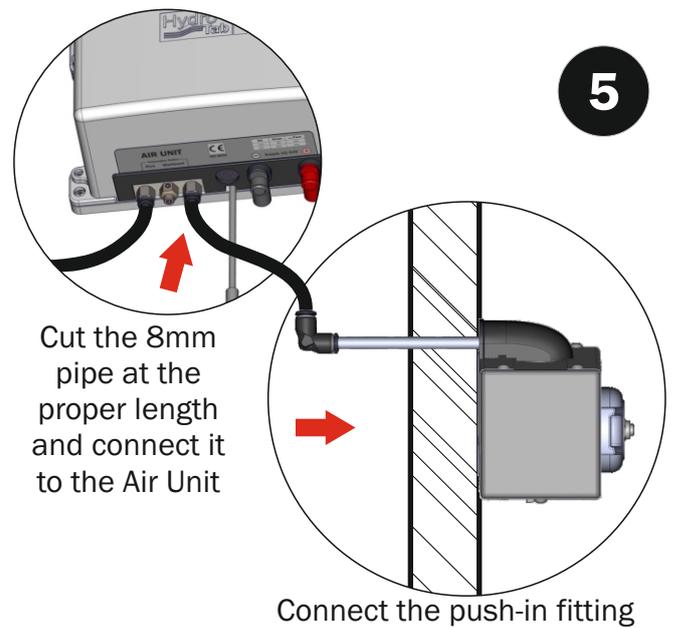
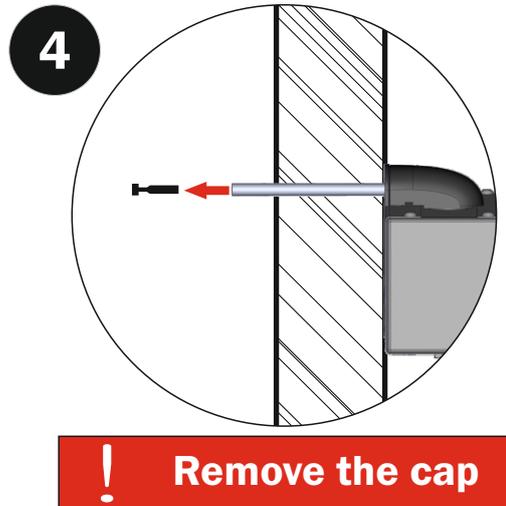
## Interceptor Installation



## Air Unit Installation

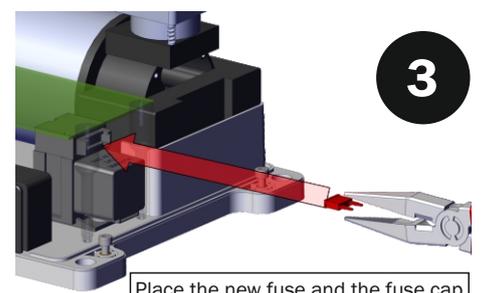
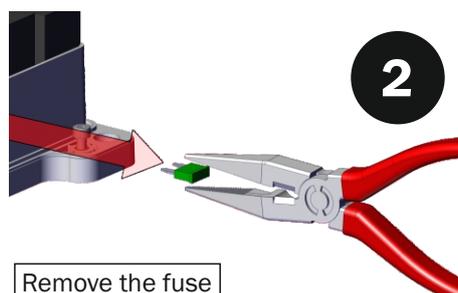
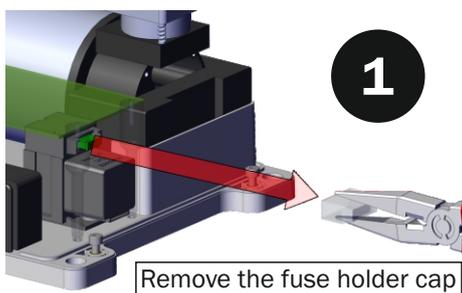


## Pneumatic Connection

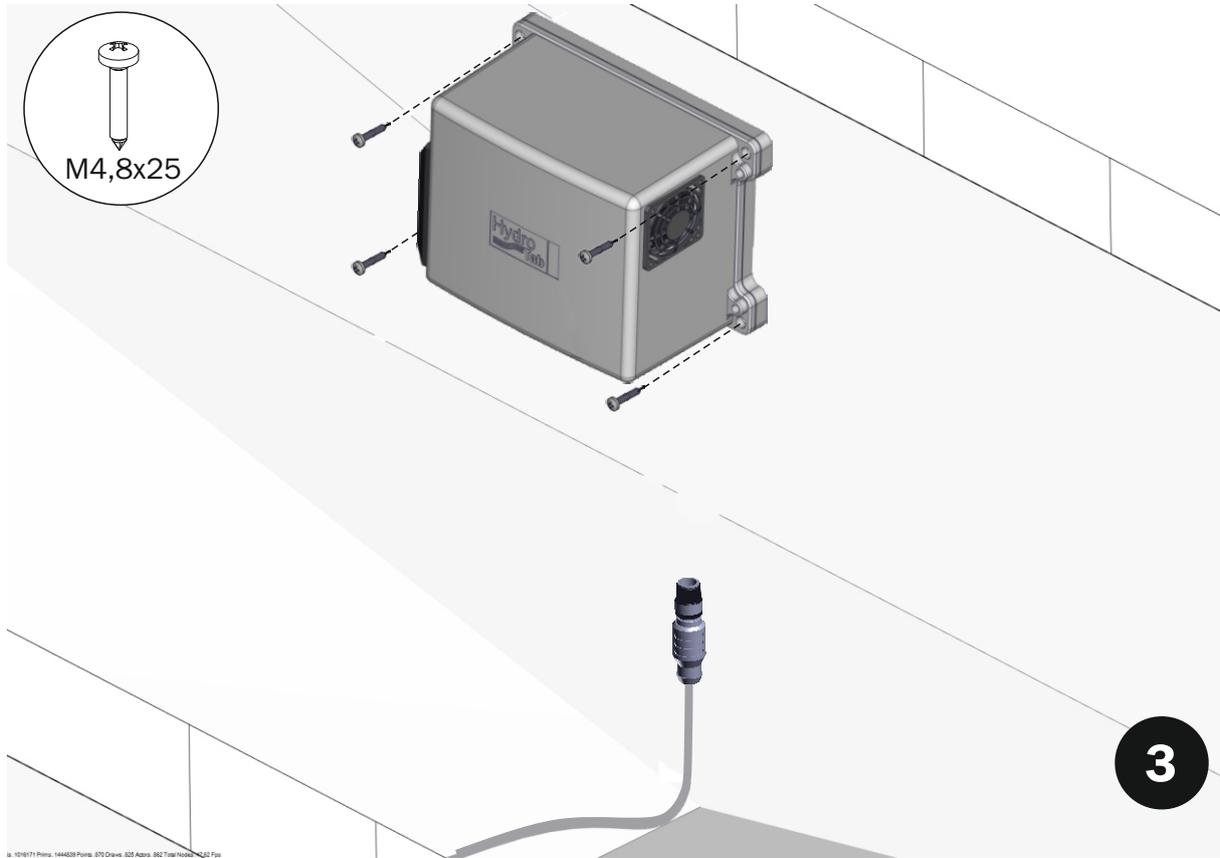


## Air Unit Fuse Replacement

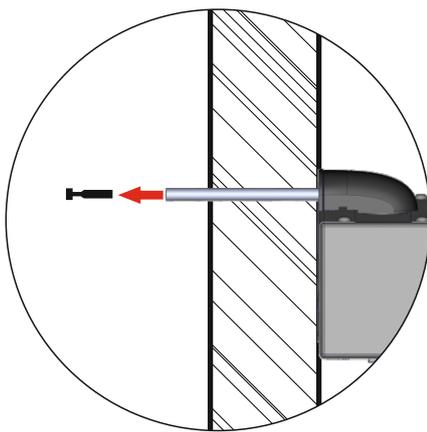
**WARNING:** Remove carefully the Air Unit Top Cover, and ensure that the mounted cables are not pulled out from the connector



## Air Unit Installation



## Pneumatic Connection

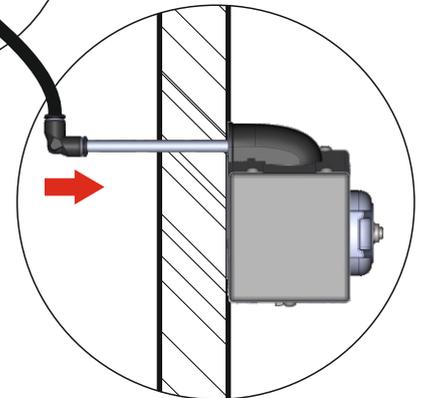


**! Remove the cap**

**4**



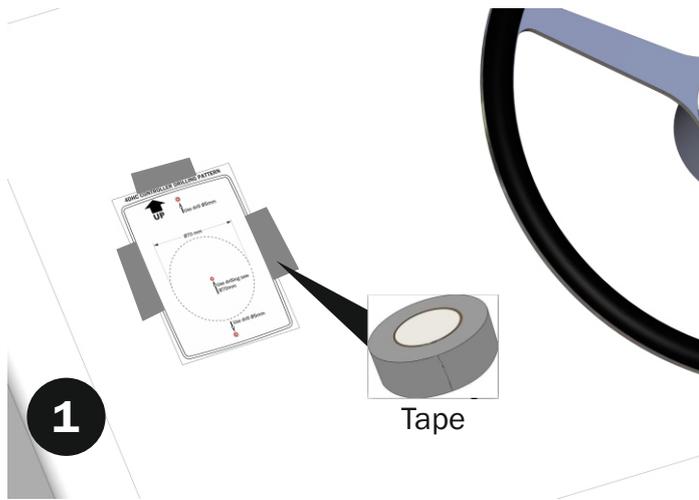
Cut the 8mm pipe at the proper length and connect it to the Air Unit



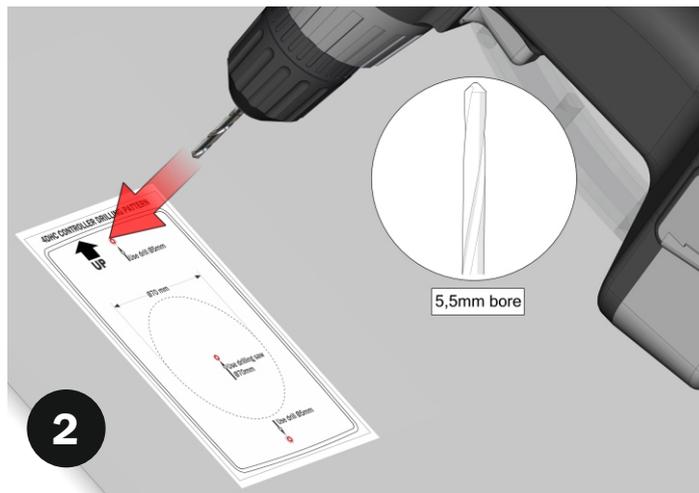
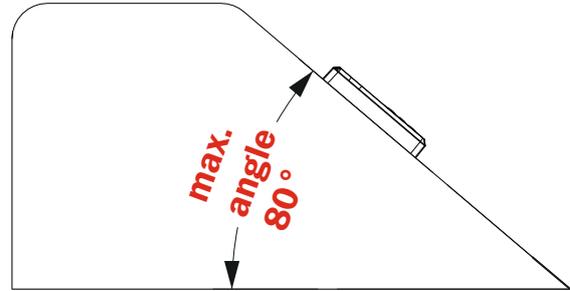
Connect the push-in fitting

**5**

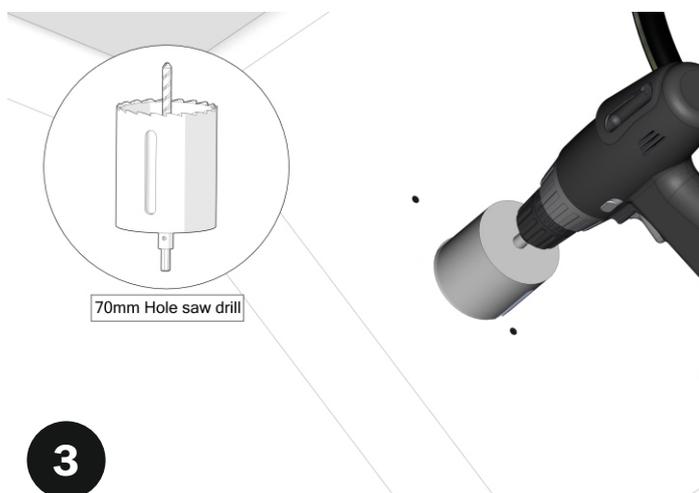
## 4DHC Controller Installation



1. Place the 4DHC Drilling Pattern in the desired position (preferably a clean and easy-to-access area near the steering wheel of the boat, and with max. inclination angle at 80°).



2. Drill the 3 holes according to the provided drilling pattern with a 5,5mm bore

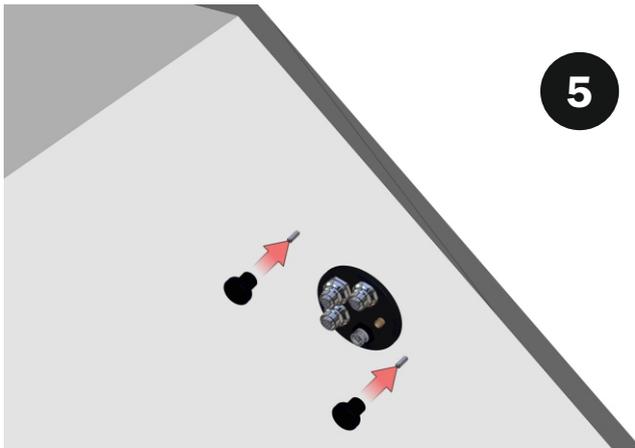


3. Create the central hole with a Ø70 saw drill

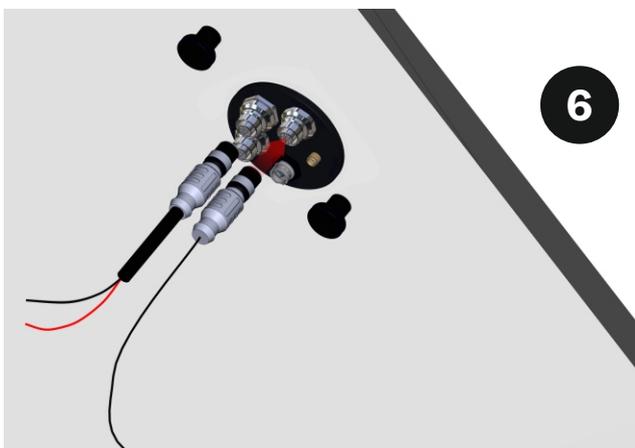
## 4DHC Controller Installation



4. Place the 4DHC Controller in its position

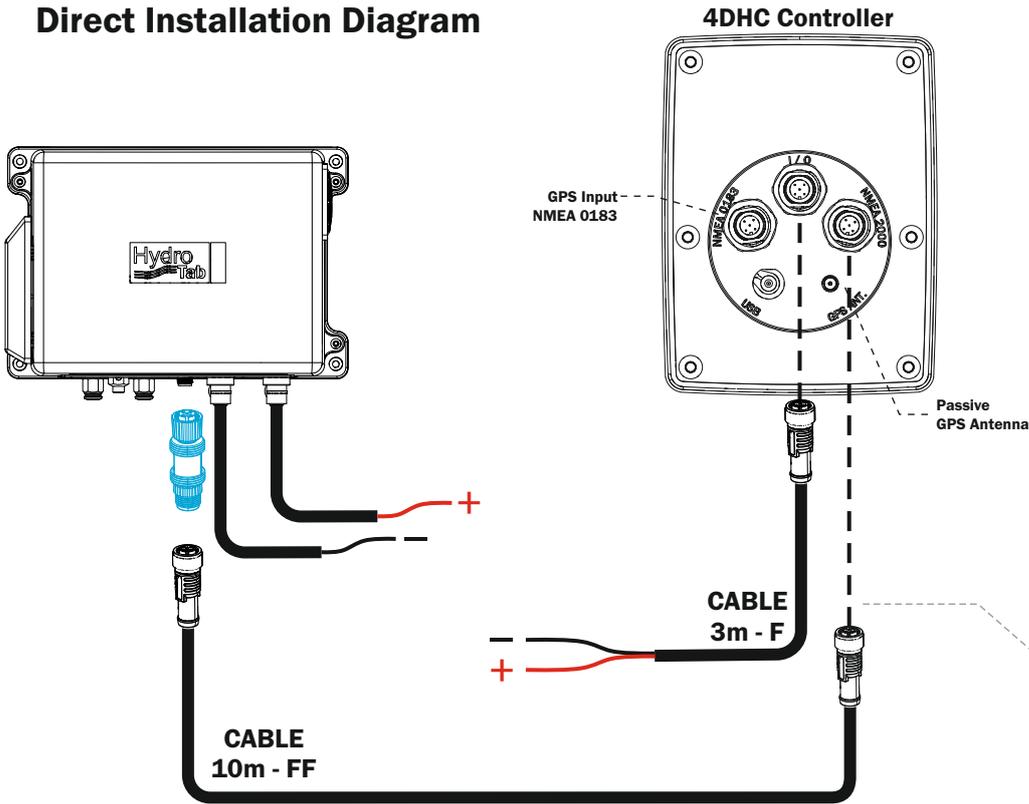


5. Mount the 4DHC Controller from the internal of the cockpit, with the given plastic screws



6. Mount the connection plugs in the 5-pole ports

## Direct Installation Diagram

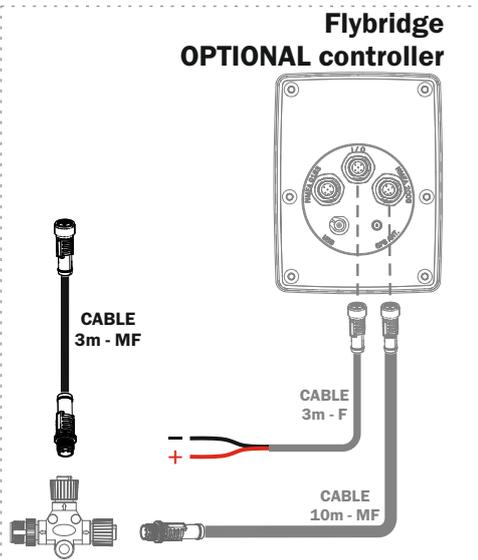


**Attention!**

DC	Amps	Use Fuse
12V	9A	15A
24V	16A	25A

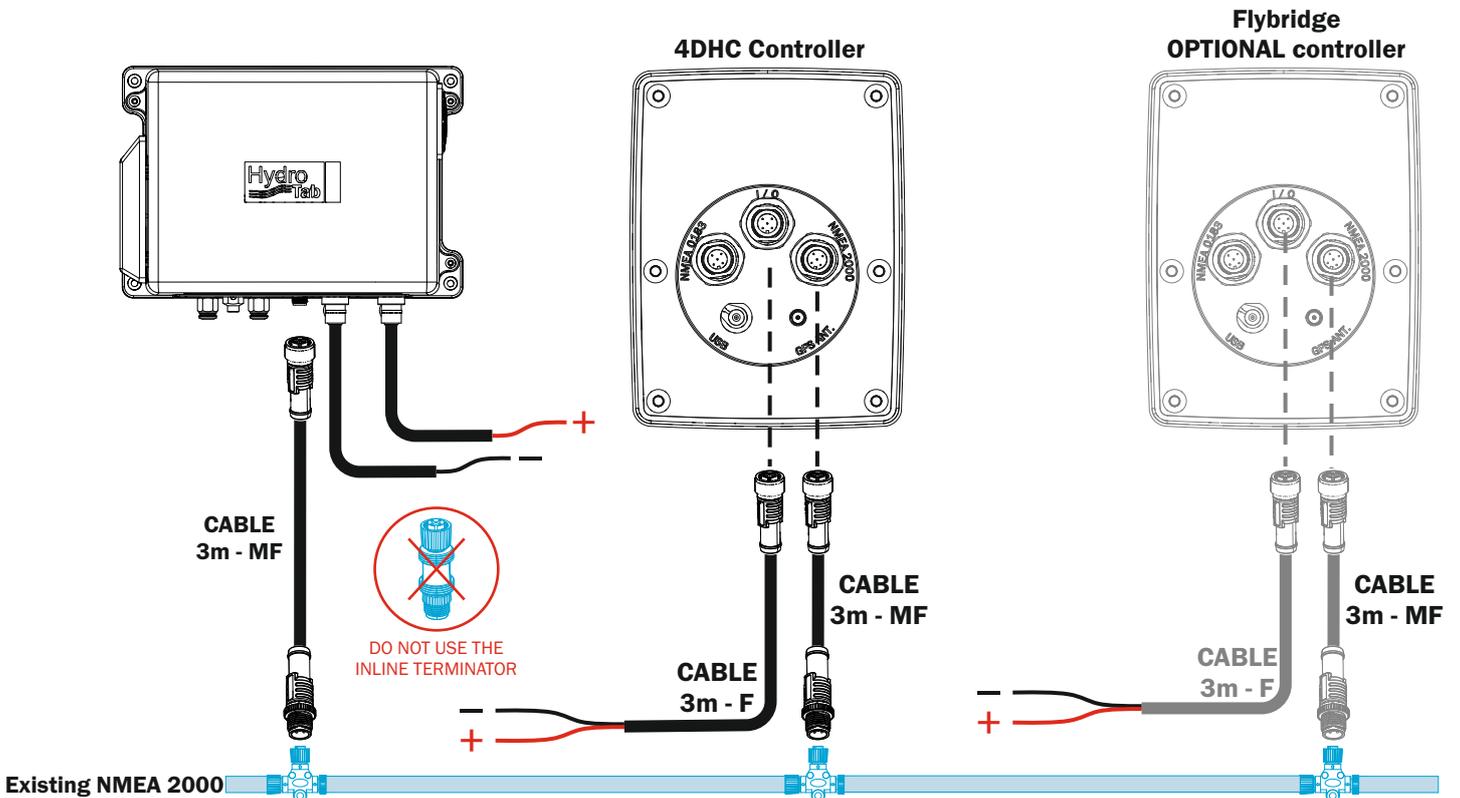
Supply 12/24V

\*Advice the fusing table and ensure that you apply the right fuse according to your boat's voltage.

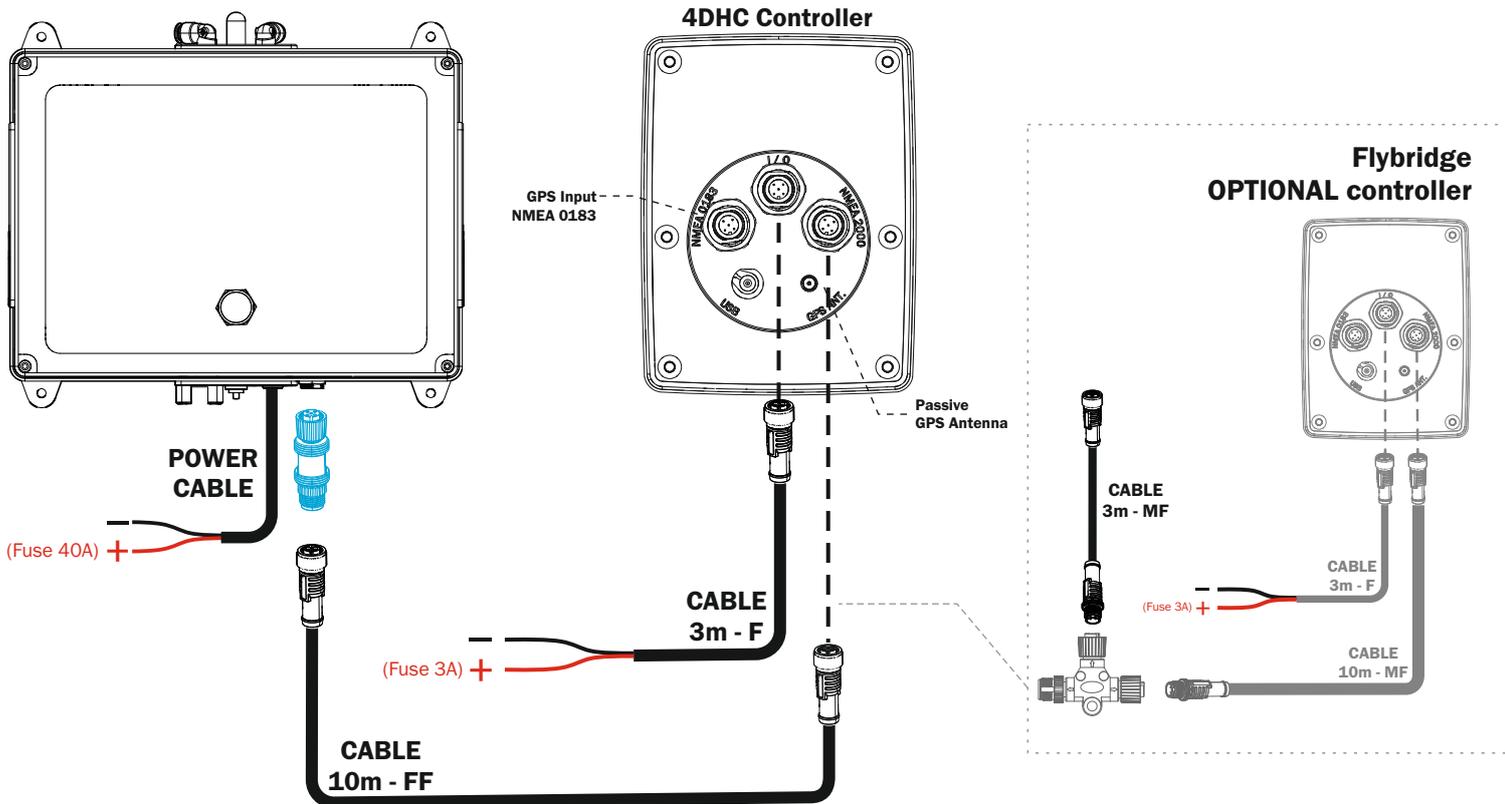


In case a new NMEA 2000 instrument to be added, a proper NMEA Network must be built.

## Installation diagram on existing NMEA Network

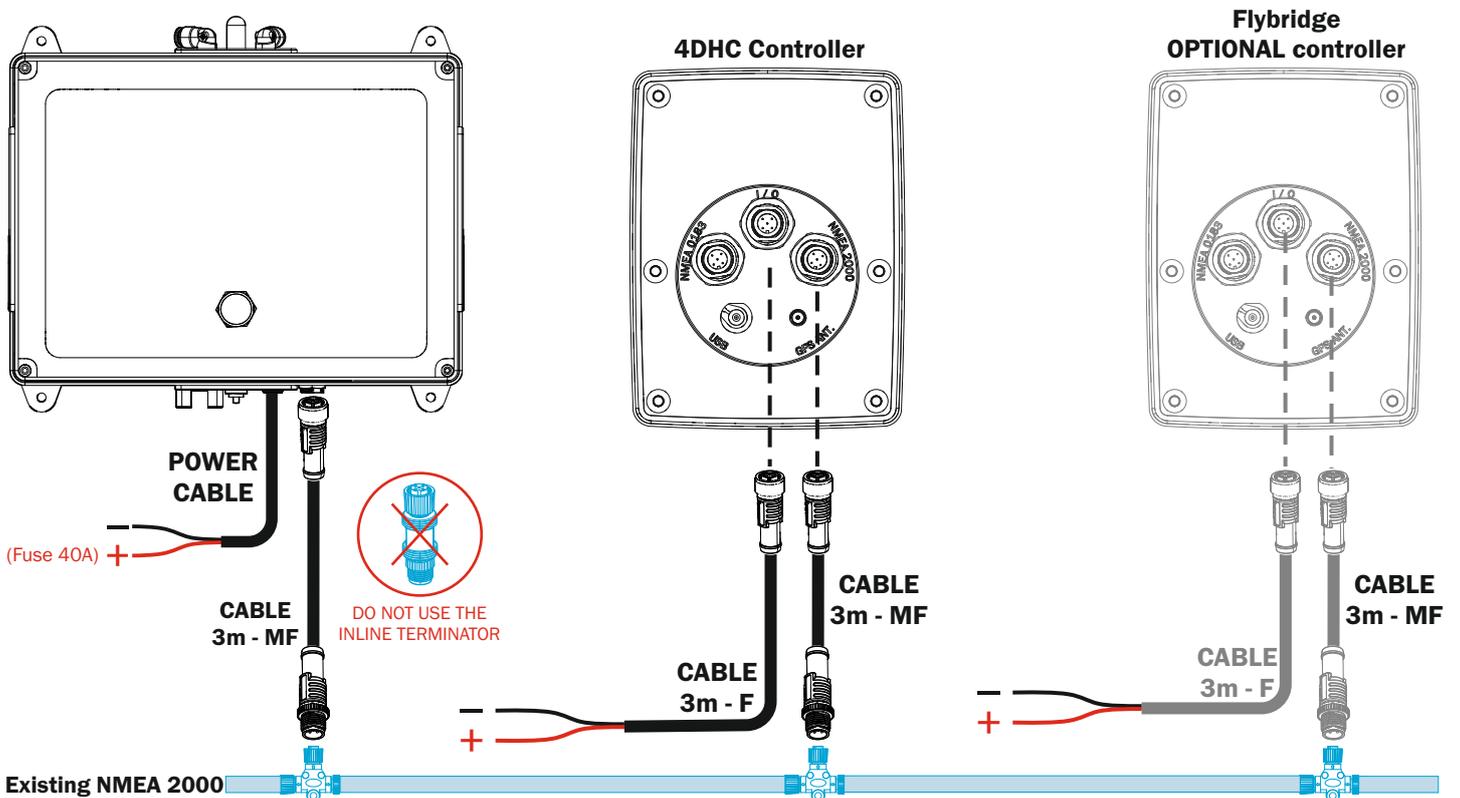


### Direct Installation Diagram - Double Speed Air Unit



**In case a new NMEA 2000 instrument to be added, a proper NMEA Network must be built.**

### Installation diagram on existing NMEA Network



## The 4DHC Controller



### Display Icons

1	GPS Icon	Indication whether GPS signal is acquired
2	Pitch icon	Boat pitch angle indication
3	System operation mode	1. Manual mode: manual operation of the interceptors 2. Auto pitch: interceptors position adjusted according to the current boat speed 3. Full auto: auto pitch and roll operation for optimal boat cruising behavior
4	Speed	Current speed indication
5	Gauges	Interceptors position % indication
6	Roll icon	Boat roll angle indication

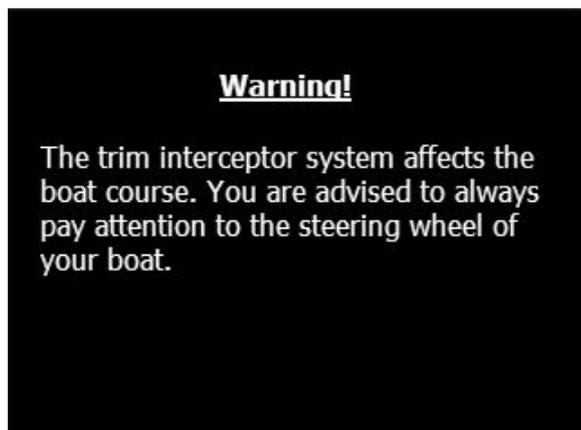
### Buttons

7	Auto Button	Press to select system operation mode. While in system menu, press to return to previous screen
8	Menu button	1. hold for 4 seconds to power on/off the system 2. enter system menu 3. while in system menu, press to return to home screen
9	OK button	Press for in-menu option confirmation
10	Directional buttons	Use for navigation at system menus

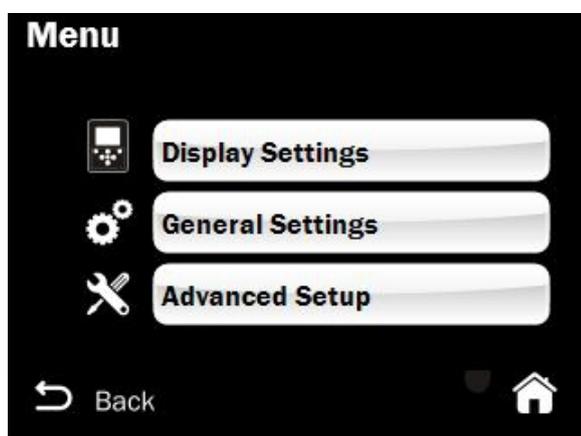
### Ports

11	I/O Port	Power supply
12	NMEA 0183 Port	Connection to NMEA 0183 network
13	NMEA 2000 Port	Connection to NMEA 2000 network
14	USB port	Mini USB port, used for controller firmware update
15	Antenna port	Connection port for GPS antenna

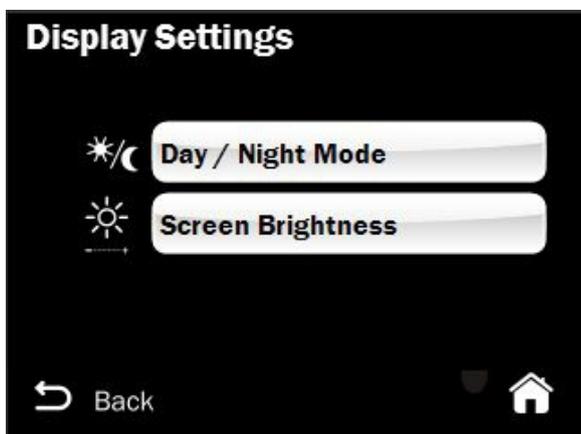
## 4DHC Menu Screens Explanation



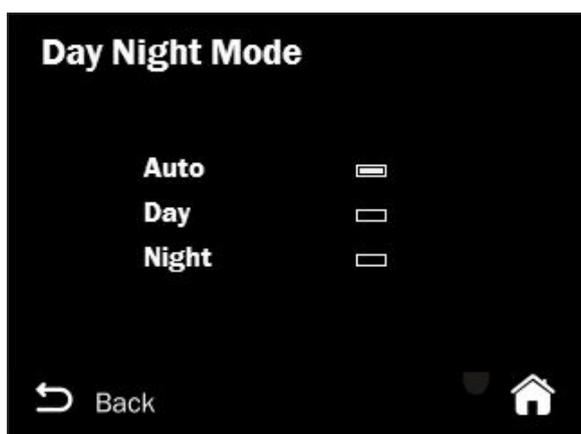
1. Please pay attention to the warning message



2. The main menu screen provides options for adjusting the controller and the interceptor system according to your needs.

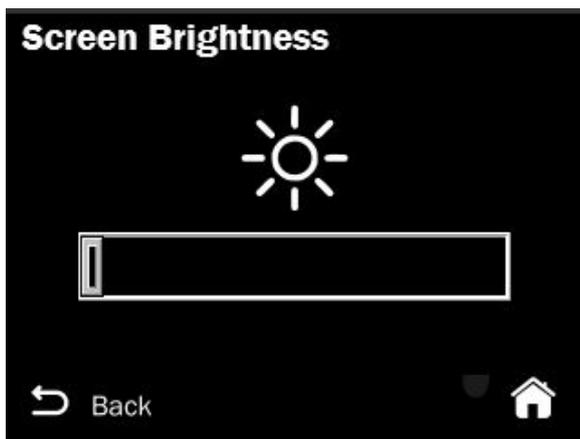


3. This menu allows you to modify the brightness level of your controller at a preset Day and Night Mode, or at a custom level as per your needs.

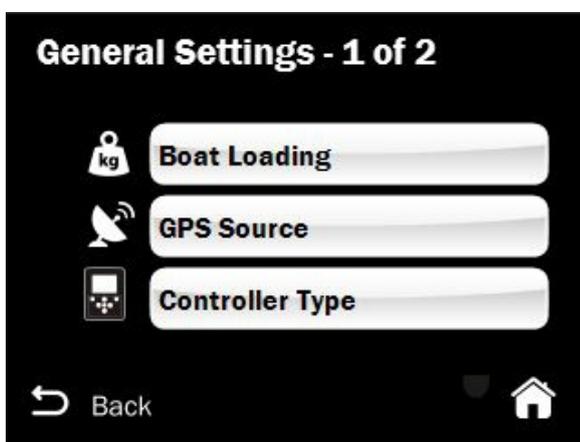


4. Please select  
**Day:** Preset screen brightness for day usage  
**Night:** Preset screen brightness for night usage

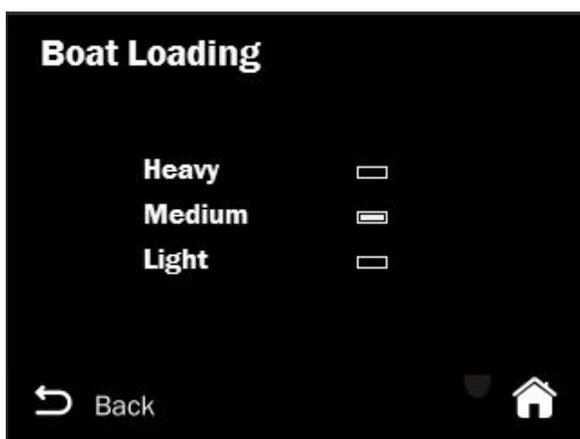
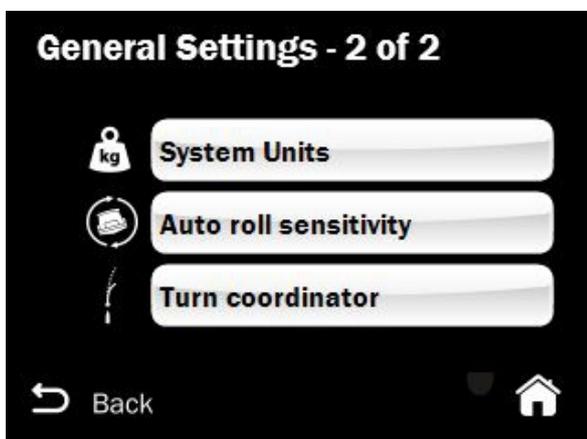
## 4DHC Menu Screens Explanation



5. You may adjust the screen brightness according to your preference, by using the left and right directional buttons to set the brightness at a low or high level accordingly.

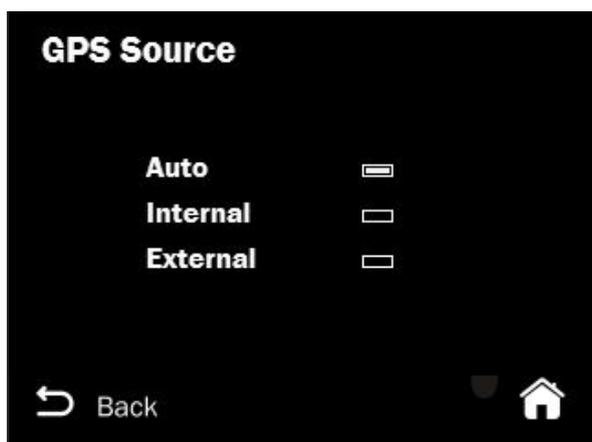


6,7. The General Setting menu allows you to modify the operating parameters of your system.



8. Please select from the following boat loading options:  
**Heavy:** when the boat is fully loaded with fuel, water, luggage etc.  
**Medium:** when intermediate loading has been made.  
**Light:** when the boat is lightly loaded.

## 4DHC Menu Screens Explanation

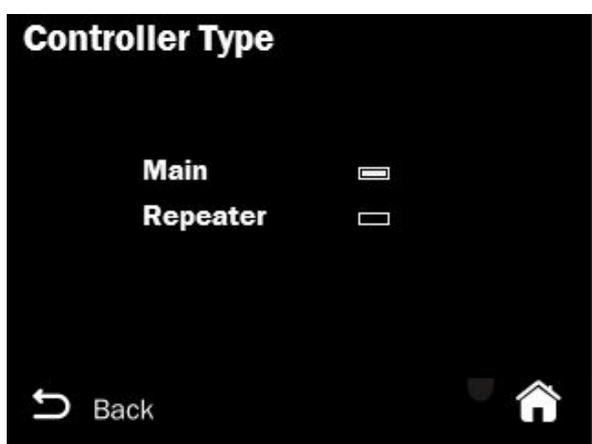


9. You may select the GPS source for your interceptor system

**Auto:** The 4DHC determines and selects the source with the best reception.

**Internal:** Please select this option in order to use the internal receiver with a passive (optional external) GPS antenna connected.

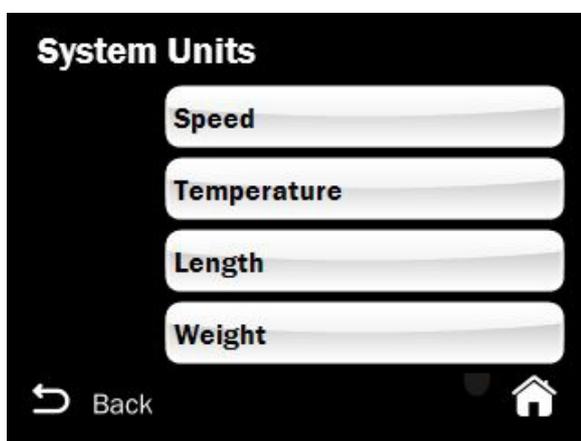
**External:** Please select this option to use GPS data provided by the NMEA network.



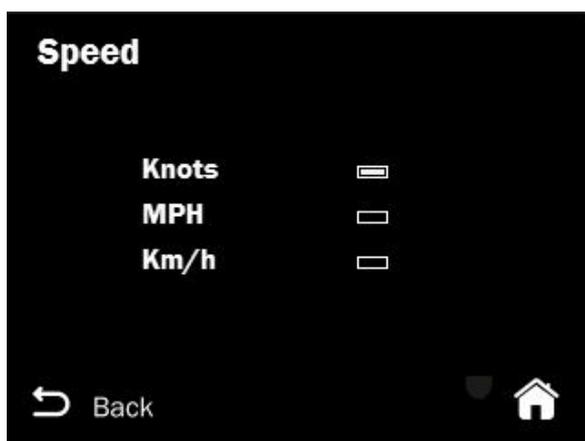
10. Please select

**Main:** if the controller used is placed at the helm, or

**Repeater:** when the controller is placed at the flybridge station



11. The System Units screen allows you to select the units that will appear in the 4DHC menu screens, for the Speed, the Temperature, The Boat Length and Weight



12. You may select the Speed Unit for your interceptor system

**Knots**

**MPH**

**Km/h**

### 4DHC Menu Screens Explanation



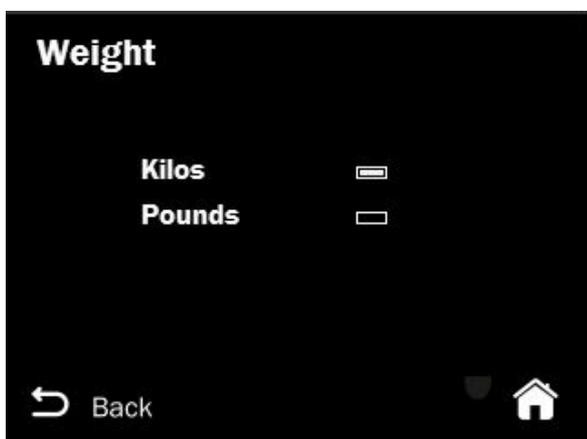
13. You may select the Temperature Unit for your interceptor system

**Celsius**  
**Fahrenheit**



14. You may select the Boat Length Unit for your interceptor system

**Meters**  
**Feet**



15. You may select the Boat Weight Unit for your interceptor system

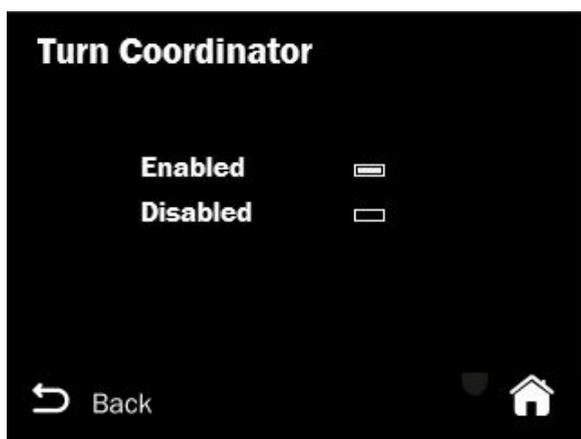
**Kilos**  
**Pounds**



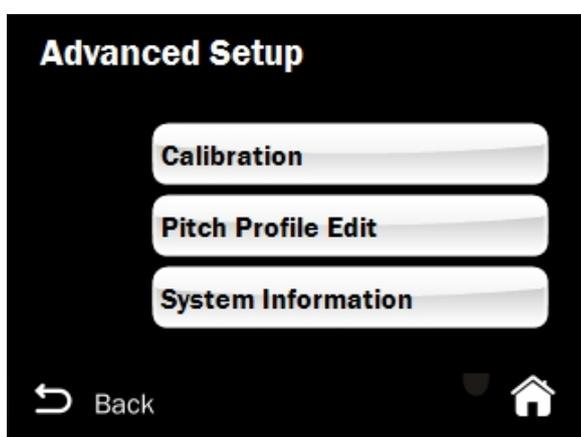
16. This option provides the ability to adjust the system automatic roll sensitivity according to your needs. Higher sensitivity, increases the response of the interceptors.

**Attention!** If you set the sensitivity at max value, it may cause overheating of the Air Unit which will disable the Auto-Roll function until the system cooldown.

## 4DHC Menu Screens Explanation



17. This feature assists in making smoother boat turns while traveling.



18. It allows you to explore through the Calibration procedure, Interceptor Position Calibration and the System Information



19. The Pitch Profile procedure adjusts the position of the interceptors for variable speeds, and it determines the pitch level of your boat during **Auto-Pitch** and **Full Auto** operating mode.

When to use:

1. During the initial setup of the system or
2. When adjustments to the current setup are needed.

In order to complete the calibration successfully, GPS signal is required.



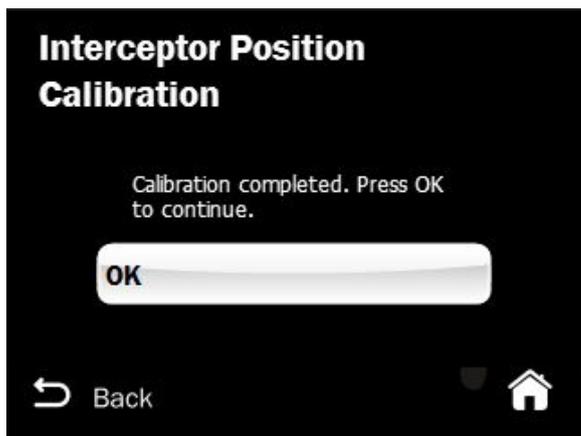
20. This first step, calibrates(\*) the position of the interceptors and requires no action.

When to use:

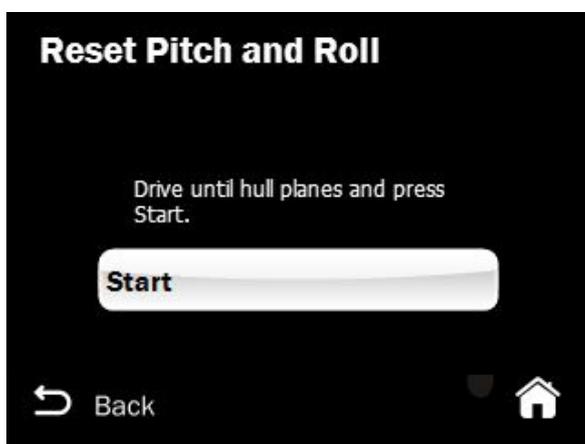
1. During the 1st calibration of the system
2. If you change interceptor units of same or different size

(\*) Calibration of interceptors operates **by the main controller ONLY** (not by the repeater in case of flybridge). Please ensure that you use the main controller for the calibration.

## 4DHC Menu Screens Explanation



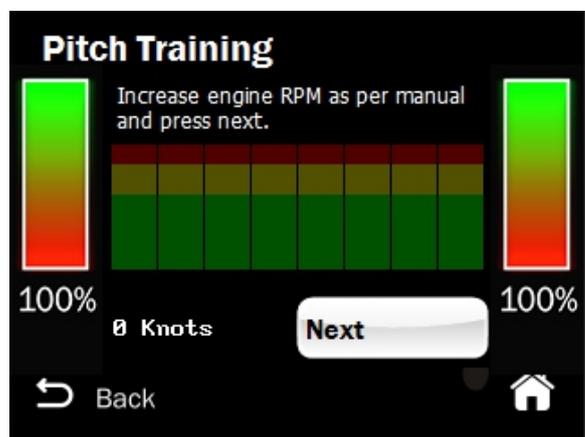
21. When the first step is completed successfully, you will be prompted to press the OK button in order to proceed.



22. Use this option when your boat during docking has undesirable inclination, due to unbalanced loading or construction defect.

Start your boat ride at Manual Operating Mode and adjust interceptors in order to succeed elimination of the undesirable inclination.

Press **OK** to reset the Zero Position



23, 24. **Pitch Training** allows you to edit your boat's pitch for variable engine RPM.

It can be adjusted during the initial calibration and can be modified partially or fully at any time.

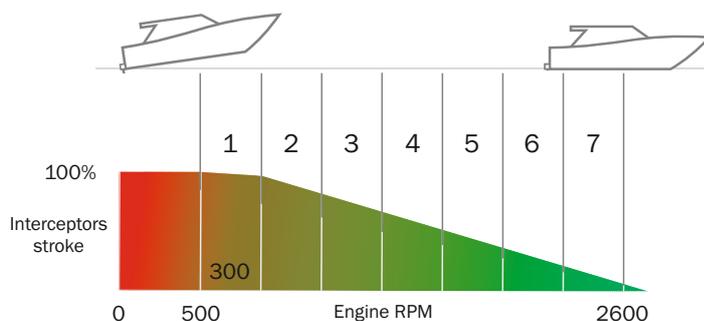
In order to fine tune the 7 points of your pitch training curve, follow the example below.

Press **OK** to save and go to next step

### Pitch Training Example

How to calculate rpm / steps?

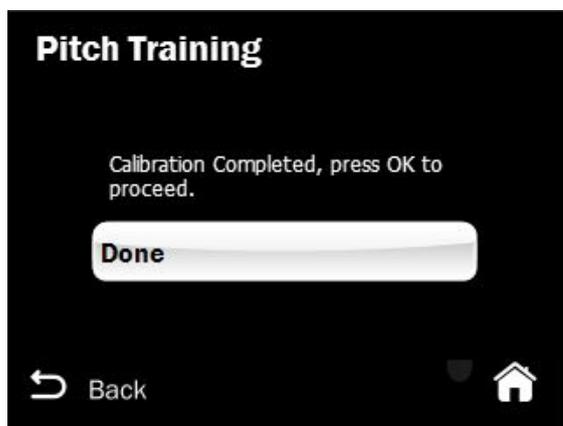
$$\frac{2600 \text{ RPM (at Cruising speed 25kts)} - 500 \text{ RPM (at Idle speed 8kts)}}{7 \text{ (steps)}} = 300 \text{ RPM/step}$$



At each of the 7 steps wait for the speed to stabilize and then adjust the interceptors level until the maximum speed is achieved.



## 4DHC Menu Screens Explanation



25. Press **ok** when complete to save the curve



26. If at any step of the calibration procedure, an error occurs, the process will not be completed until the issue is resolved.

**No GPS Signal:** Please check the connection of the antenna to the controller

**No IMU Data:** Please check all cable connections and verify that the air unit is properly connected.

**Interceptors Fault:** Please check that the air tubes connections to the interceptors are properly fitted and in good state.

## Firmware Upgrade

**Before you upgrade firmware** please remember to keep a note of your pitch profile settings

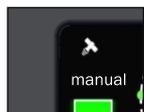
Go to: Advanced Set Up > Pitch Profile Edit, and keep a note or a photo of the screen in order to manually re-store it after the firmware update.

### Upgrade instructions

- Download and install the 4DHC DfuSe software and the latest drivers. (Skip if you already have a 4DHC DfuSe and drivers installed)
- Download the latest Firmware, run the DfuSe software and load the latest Firmware.
- Remove I/O (electrical supply).
- Connect the 4DHC (via USB port) to the computer by holding the menu button of 4DHC Controller, until the Upgrade button become clickable.
- Click at the Upgrade button, wait till the lower bar of the software appears the message 'Upgrade successful !'
- Click at Quit button, your 4DHC is Upgraded. (You can also watch the Video Tutorial)

## Operating modes

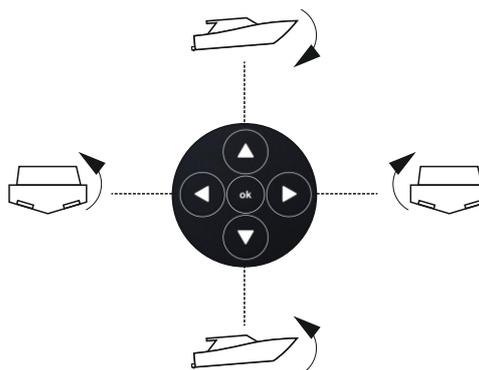
### Manual mode



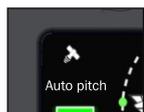
Press the auto button until **Manual mode** appears



**Manual mode** allows you to control the system by the arrows buttons as shown



### Auto pitch



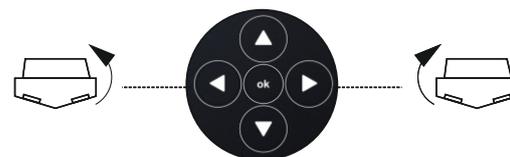
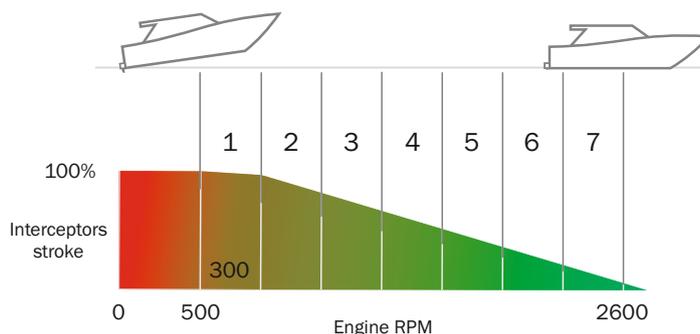
Press the auto button until **Auto pitch** mode appears



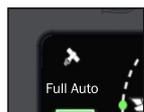
At the **Auto pitch** mode the pitch control of your boat is managed by the **Training pitch curve** that you set during initial calibration. The curve receives speed data by the pre-selected **GPS** settings.

You can adjust manually the pitch at any time by pressing the up and down arrow keys. You can modify any of the 7 steps of the curve at any time by going to the **Menu>Advanced setup >Calibration edit** or by pressing continuously the **OK** button.

The boat's roll is controlled by the left and right arrow keys.



### Full Auto (Can be activated after 8kts)



Press the auto button until **Full auto** mode appears

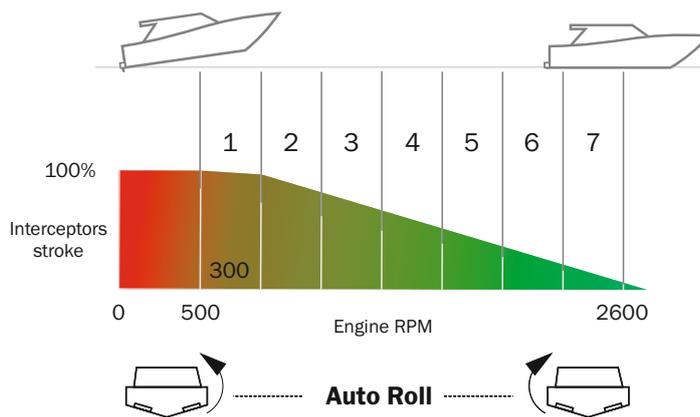


At the **Full auto** mode the pitch and roll control of your boat is fully managed by the 4DHC controller.

Pitch control of your boat is managed by the **Training pitch curve** that you set during initial calibration. The curve receives speed data by the pre-selected **GPS** settings. You can modify any of the 7 steps of the curve at any time by going to the **Menu>Advanced setup>Calibration**

The Roll of your boat is controlled by the internal 4DHC gyroscope. In case you need to adjust the sensitivity go to **Menu>General Settings 2/2 page>Auto Roll Sensitivity**

**Notice:** By pressing any of the arrow buttons the operation mode will revert back to manual!



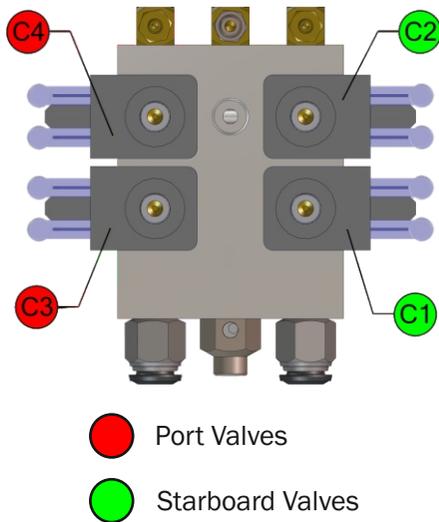
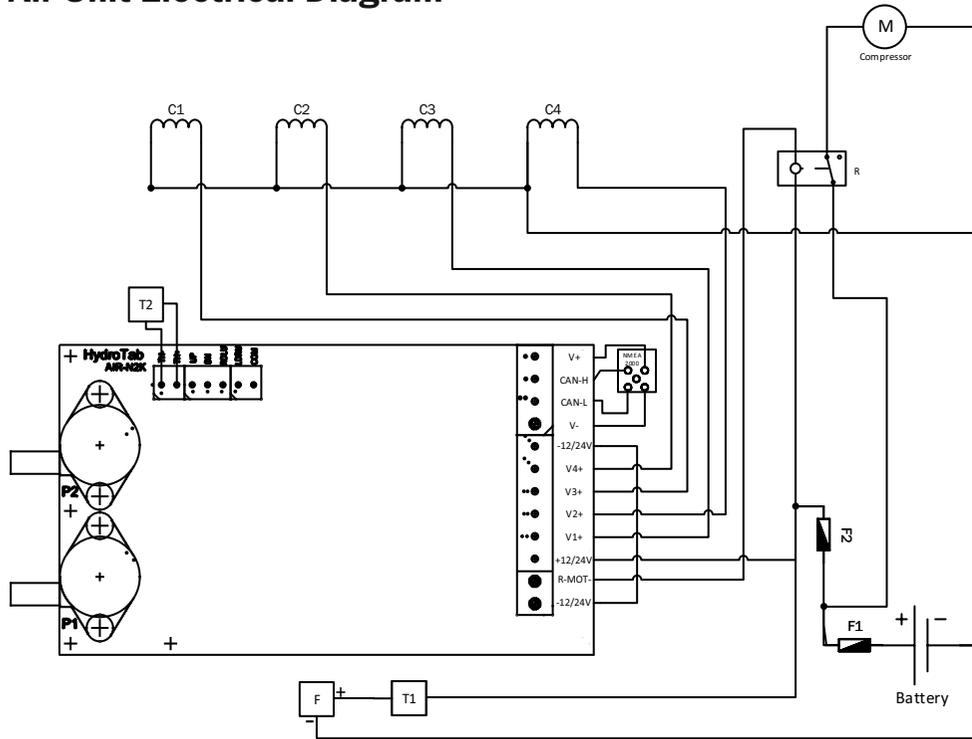
### Important notices:

When extreme roll changes occur, the system will go back to manual mode for safety reasons.

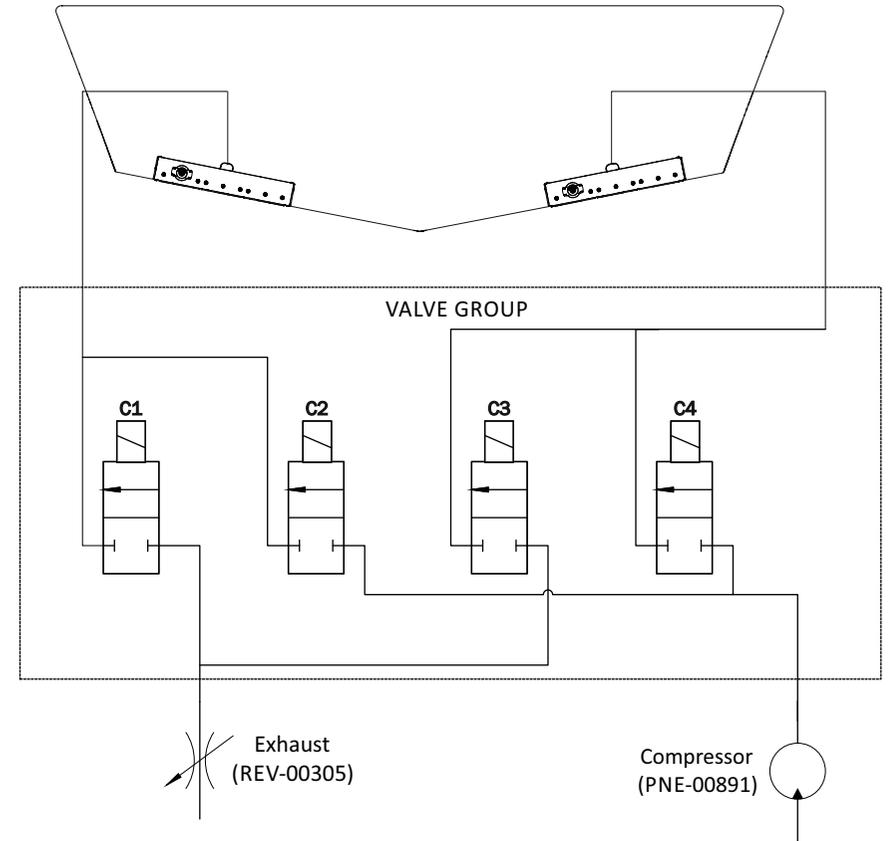
When in Auto-Pitch/Full-Auto Mode, and speed is below 5Knots, the commands (Up, Down, Right, Left Buttons) DO NOT OPERATE.

When in Auto-Pitch/Full-Auto Mode, and speed is below 5Knots for more than 2 minutes, the interceptors retract automatically.

## Air Unit Electrical Diagram



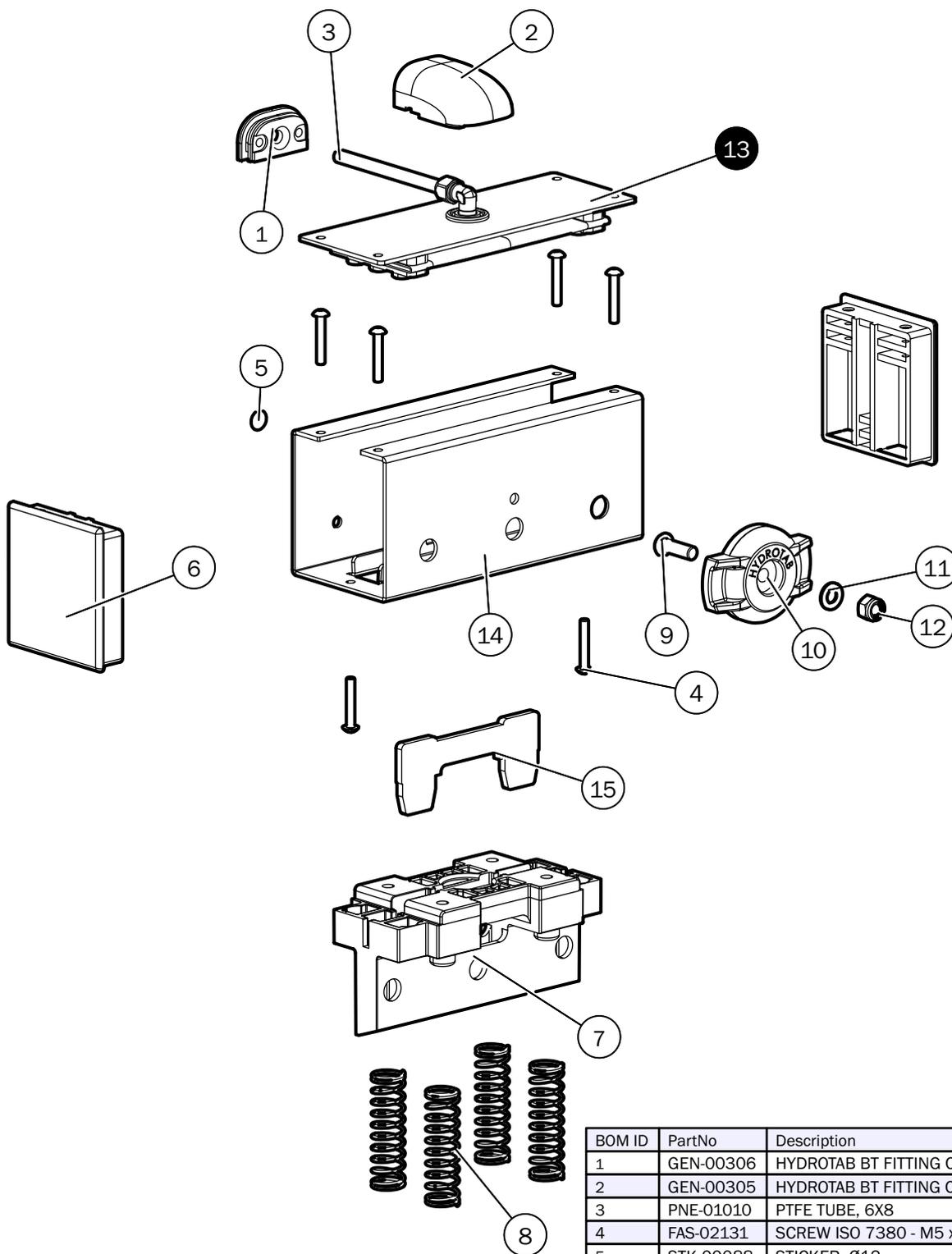
## Air Unit Pneumatic Diagram



SYMBOL	PART No	DESCRIPTION	NOTES
C1	PNE-00924	VALVE COIL	STARBOARD RETRACT
C2	PNE-00924	VALVE COIL	STARBOARD EXTEND
C3	PNE-00924	VALVE COIL	PORT RETRACT
C4	PNE-00924	VALVE COIL	PORT EXTEND
F1		MAIN SUPPLY FUSE 40A	NOT PROVIDED
F2	ELE-00380	ELECTRONICS FUSE 3A	
M	PNE-01107	COMPRESSOR MOTOR	
F	ELE-00591	COOLING FAN	
T1	ELE-00594	THERMAL SWITCH	
T2	ELE-00550	TEMPERATURE SENSOR	

Spare parts list

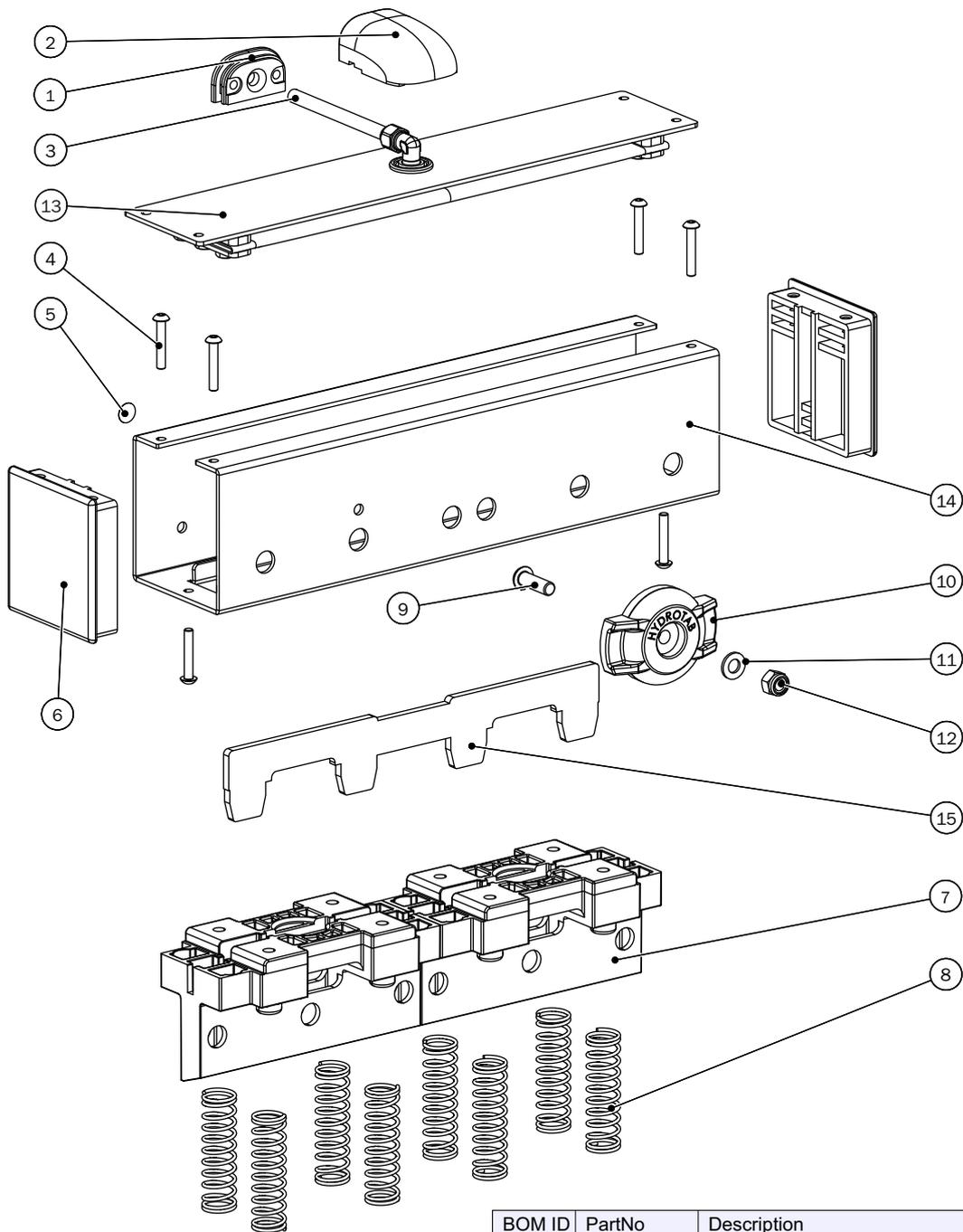
**MOD: 160BT (ASM-00928)**



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	1
6	GEN-00276	HYDROTAB BT, REAR CAP	2
7	GEN-00290	HYDROTAB BLADE, 160mm	1
8	SPR-00025	HYDROTAB BT, SPRING	4
9	FAS-02142	SCREW ISO 7380 - M8 x 25	1
10	GEN-00279	HYDROTAB "T" SERIES, ANODE	1
11	FAS-01025	WASHER DIN 125 - A 8.4	1
12	FAS-02209	PREVAILING TORQUE NUT ISO 7040 - M8	1
13	ASM-00999	TUBULAR ASSY, HYDROTAB 160BT	1
14	LAS-00826	HOUSING, HYDROTAB 160BT	1
15	LAS-00851	HOLDING BLADE PLATE, HYDROTAB 160BT	1

Spare parts list

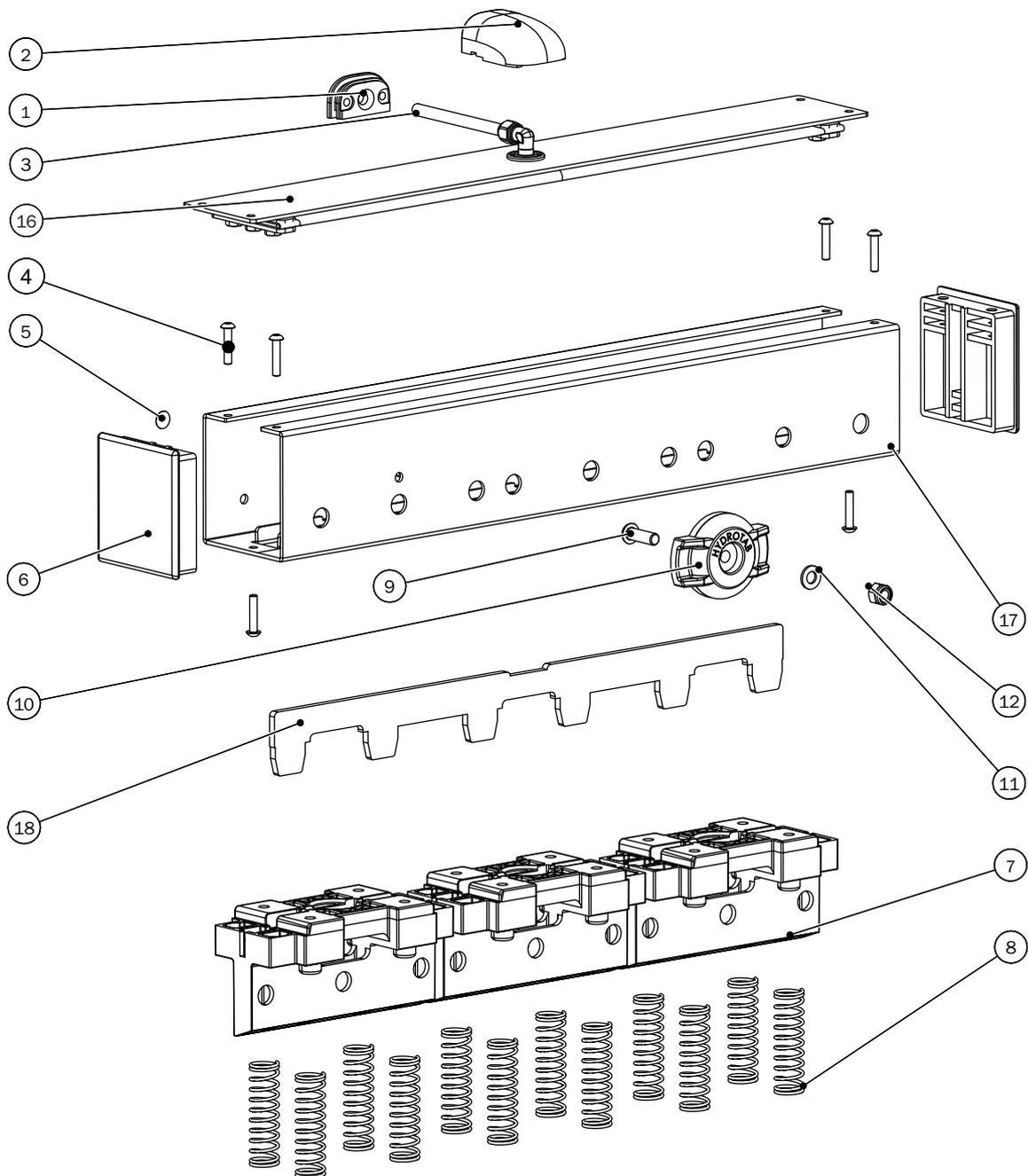
**MOD: 320BT (ASM-00560)**



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	2
8	SPR-00025	SPRING	8
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
13	ASM-00550	TUBULAR ASSY 320BT	1
14	LAS-00479	HOUSING 320BT	1
15	LAS-00489	HOLDING BLADE PLATE 320BT	1

Spare parts list

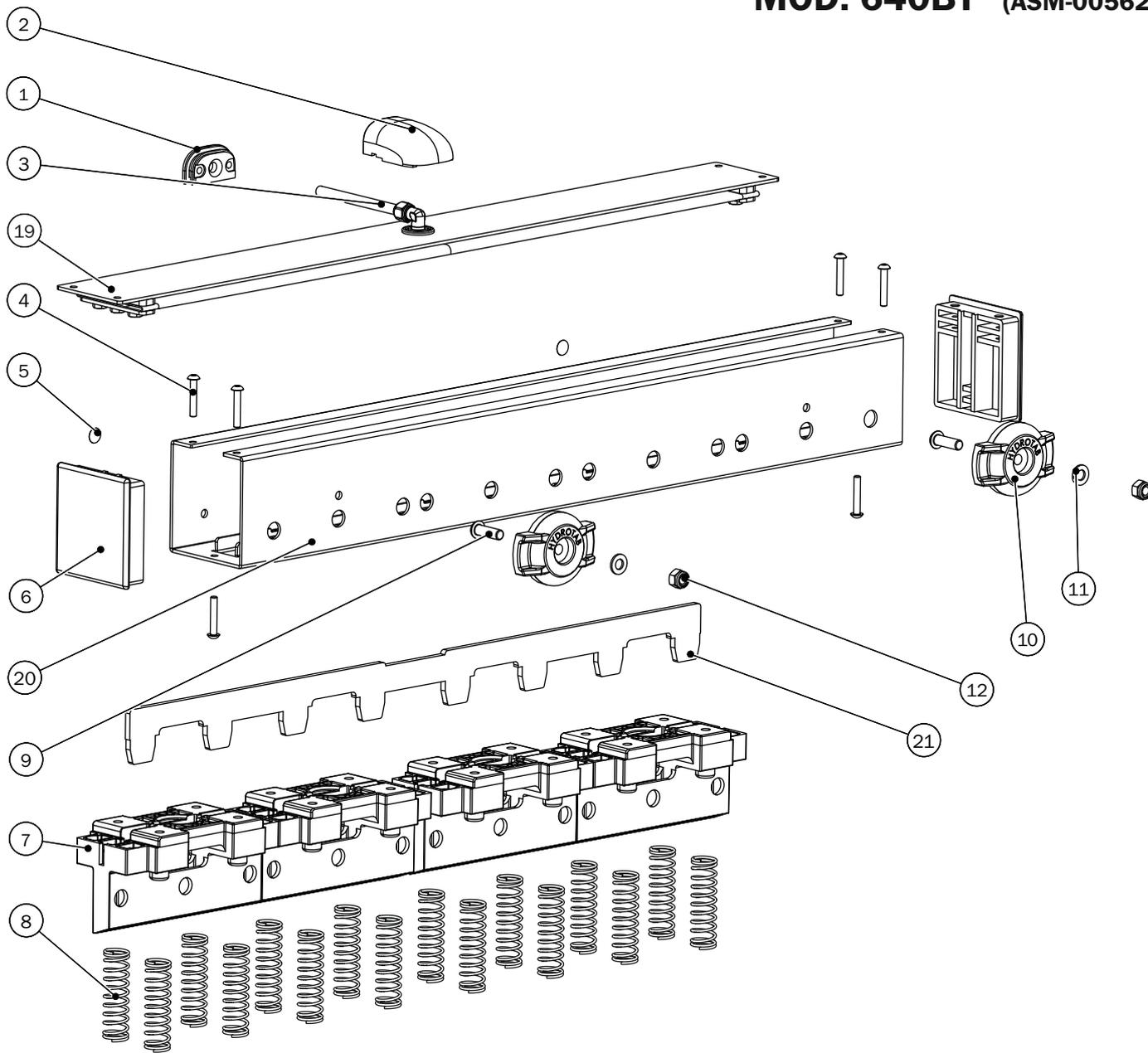
**MOD: 480BT (ASM-00561)**



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
16	ASM-00551	TUBULAR ASSY 480BT	1
17	LAS-00480	HOUSING 480BT	1
18	LAS-00490	HOLDING BLADE PLATE 480BT	1

Spare parts list

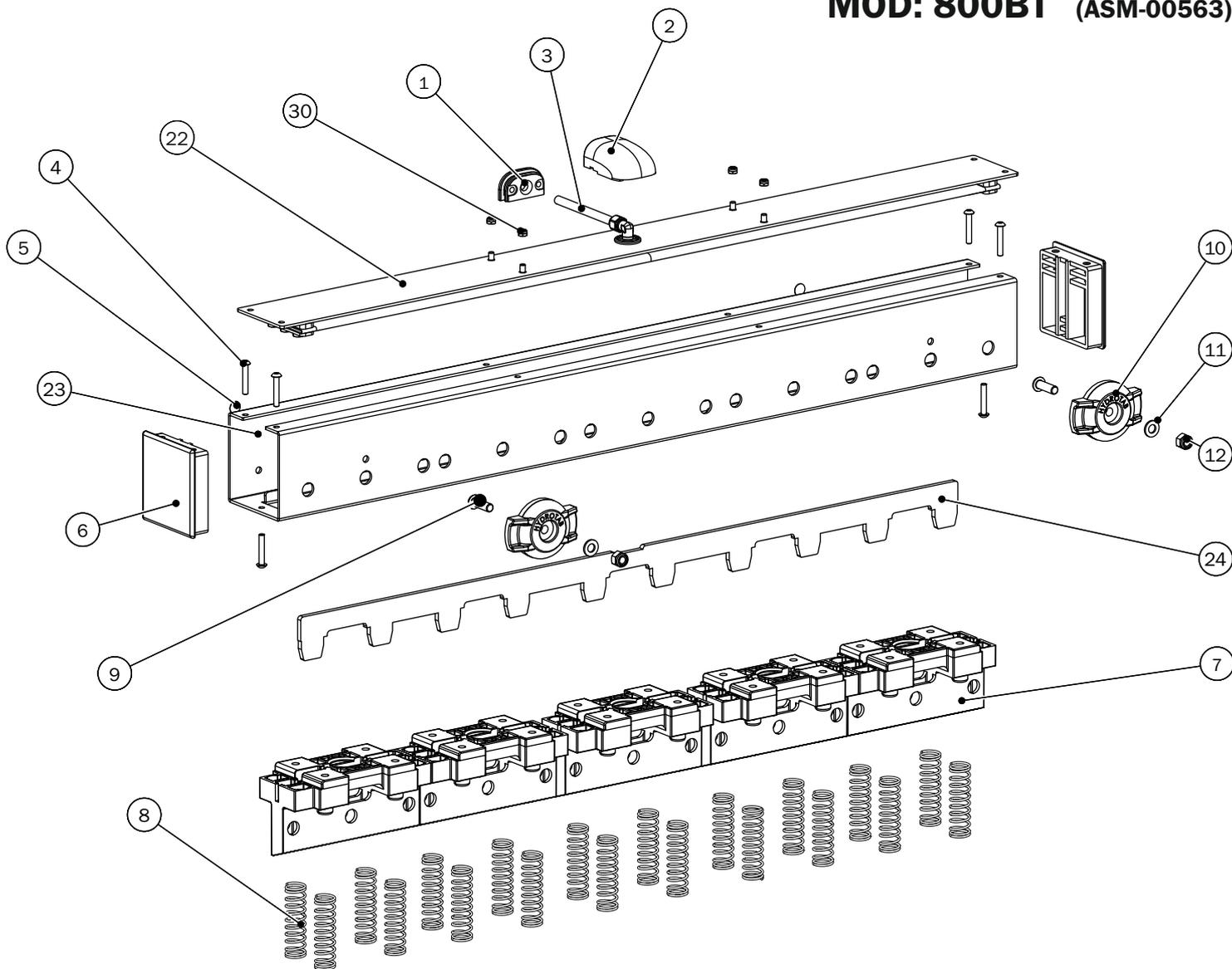
**MOD: 640BT (ASM-00562)**



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	TUBULAR ASSY 640BT	1
20	LAS-00481	HOUSING 640BT	1
21	LAS-00491	HOLDING BLADE PLATE 640BT	1

Spare parts list

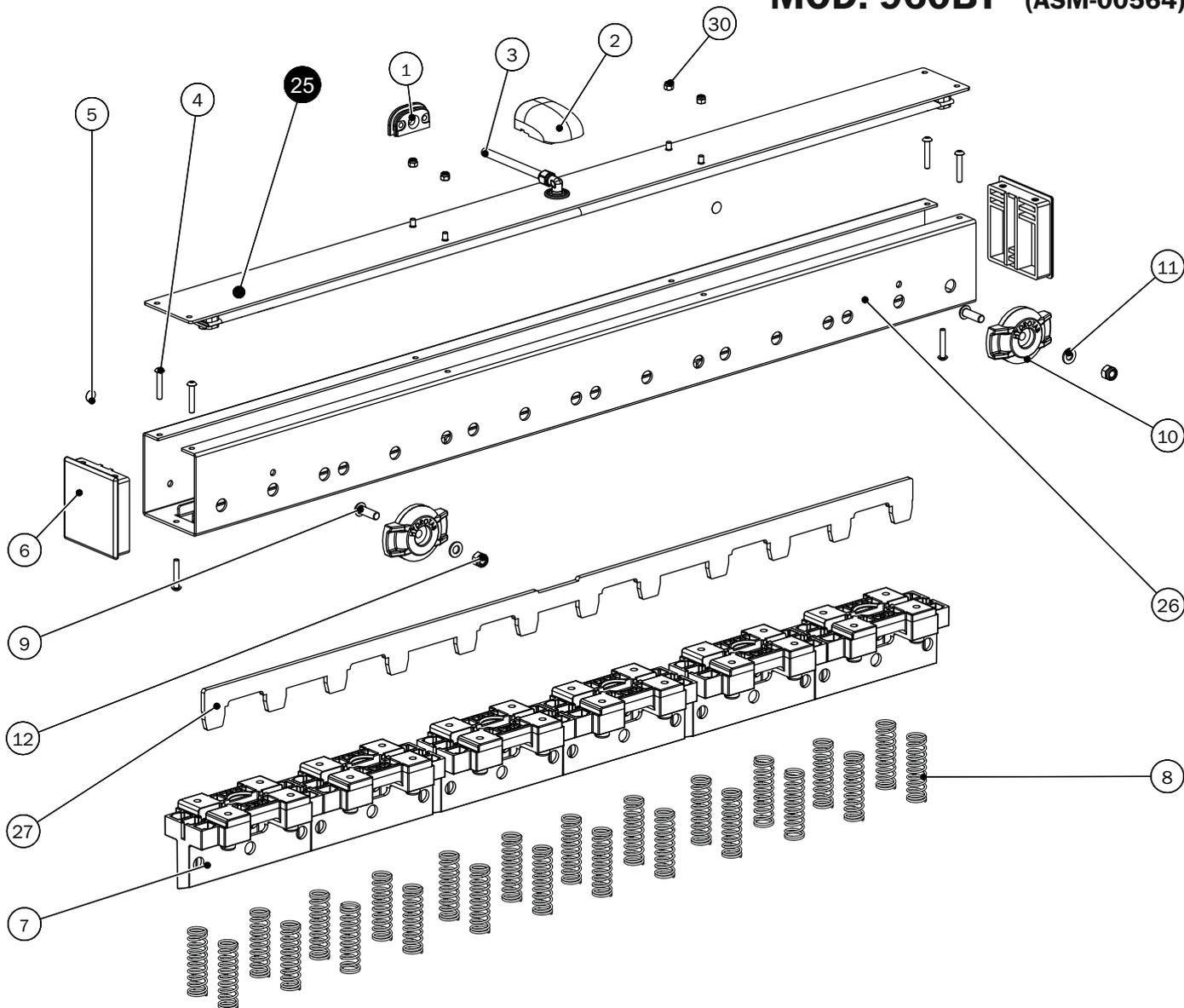
**MOD: 800BT (ASM-00563)**



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	TUBULAR ASSY 800BT	1
23	LAS-00482	HOUSING 640BT	1
24	LAS-00492	HOLDING BLADE PLATE 800BT	1
30	FAS-02207	PREVAILING TORQUE NUT ISO 7040 - M5	4

Spare parts list

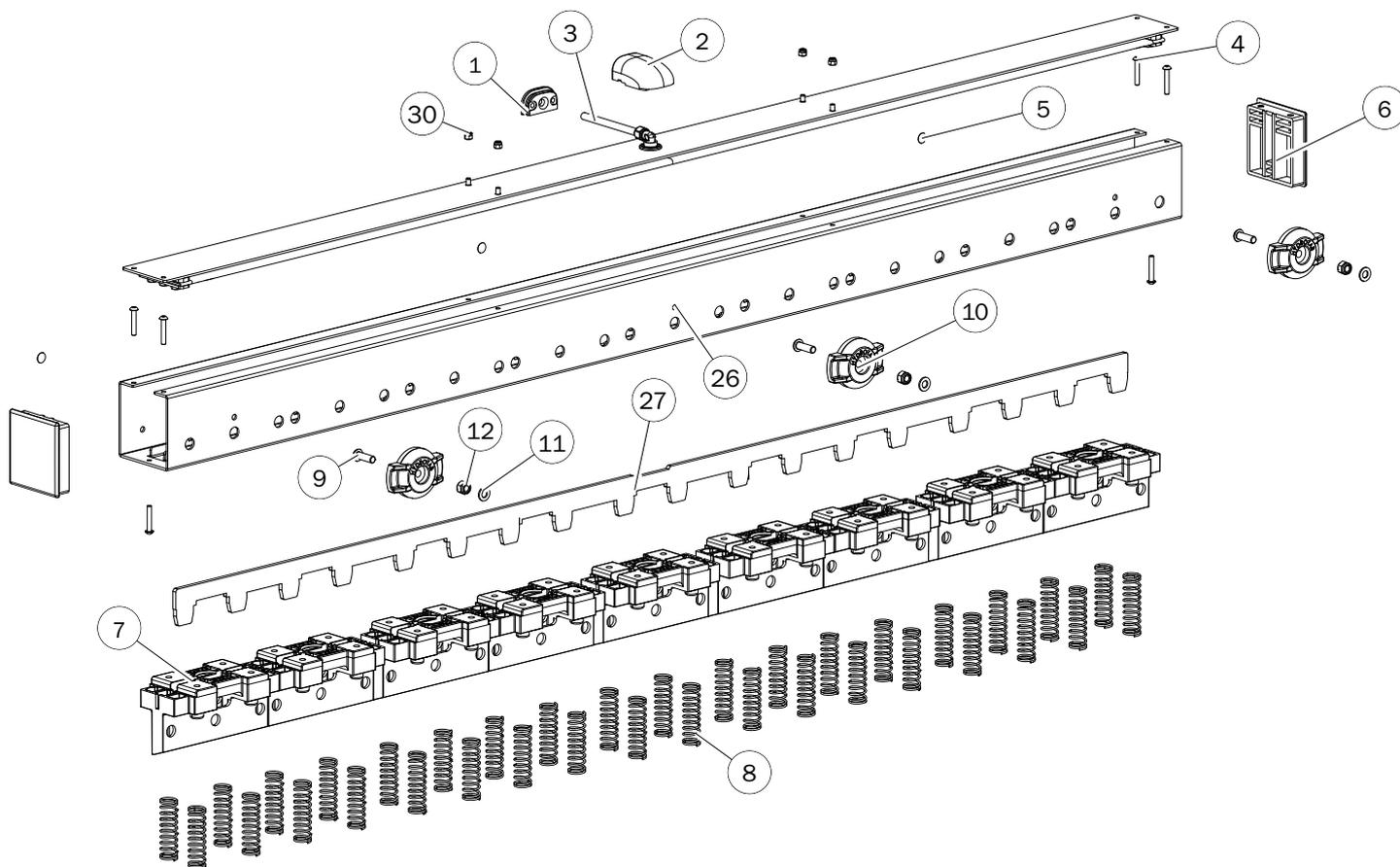
**MOD: 960BT (ASM-00564)**



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	TUBULAR ASSY 960BT	1
26	LAS-00483	HOUSING 960BT	1
27	LAS-00493	HOLDING BLADE PLATE 960BT	1
30	FAS-02207	PREVAILING TORQUE NUT ISO 7040 - M5	4

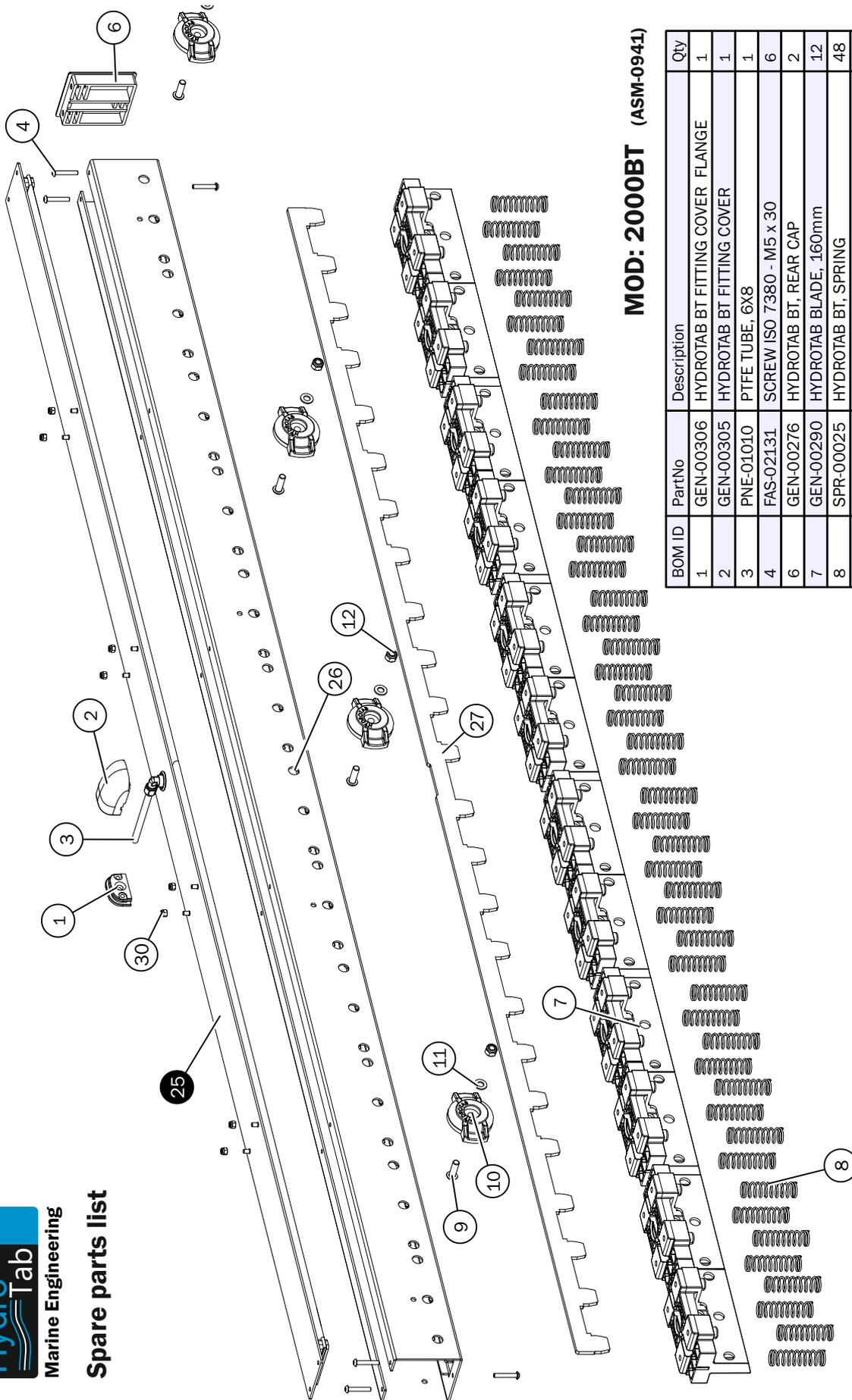
Spare parts list

**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

**Spare parts list**



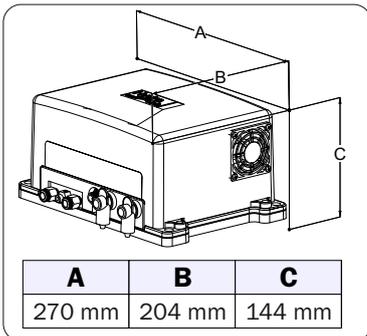
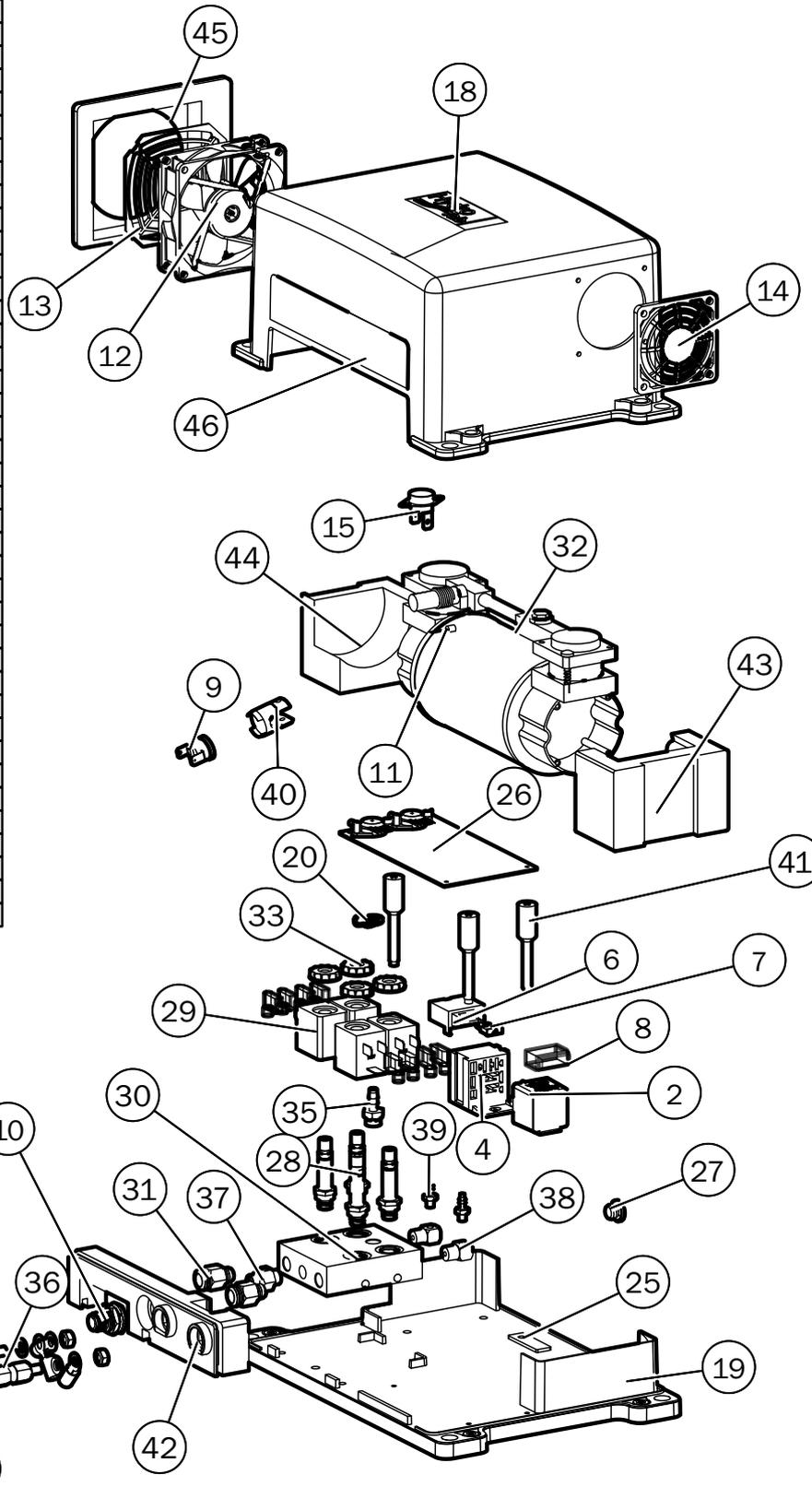
**MOD: 2000BT (ASM-0941)**

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
6	GEN-00276	HYDROTAB BT, REAR CAP	2
7	GEN-00290	HYDROTAB BLADE, 160mm	12
8	SPR-00025	HYDROTAB BT, SPRING	48
9	FAS-02142	SCREW ISO 7380 - M8 x 25	4
10	GEN-00279	HYDROTAB "T" SERIES, ANODE	4
11	FAS-01025	WASHER DIN 125 - A 8.4	4
12	FAS-02209	SCREW ISO 7040-M8	4
25	ASM-01042	TUBULAR ASSY, HYDROTAB 1500BT	1
26	LAS-00835	HOUSING, HYDROTAB 2000BT	1
27	LAS-00837	HOLDING BLADE PLATE, HYDROTAB 2000BT	1
30	FAS-02207	SCREW ISO 7040-M5	8

### Spare parts list

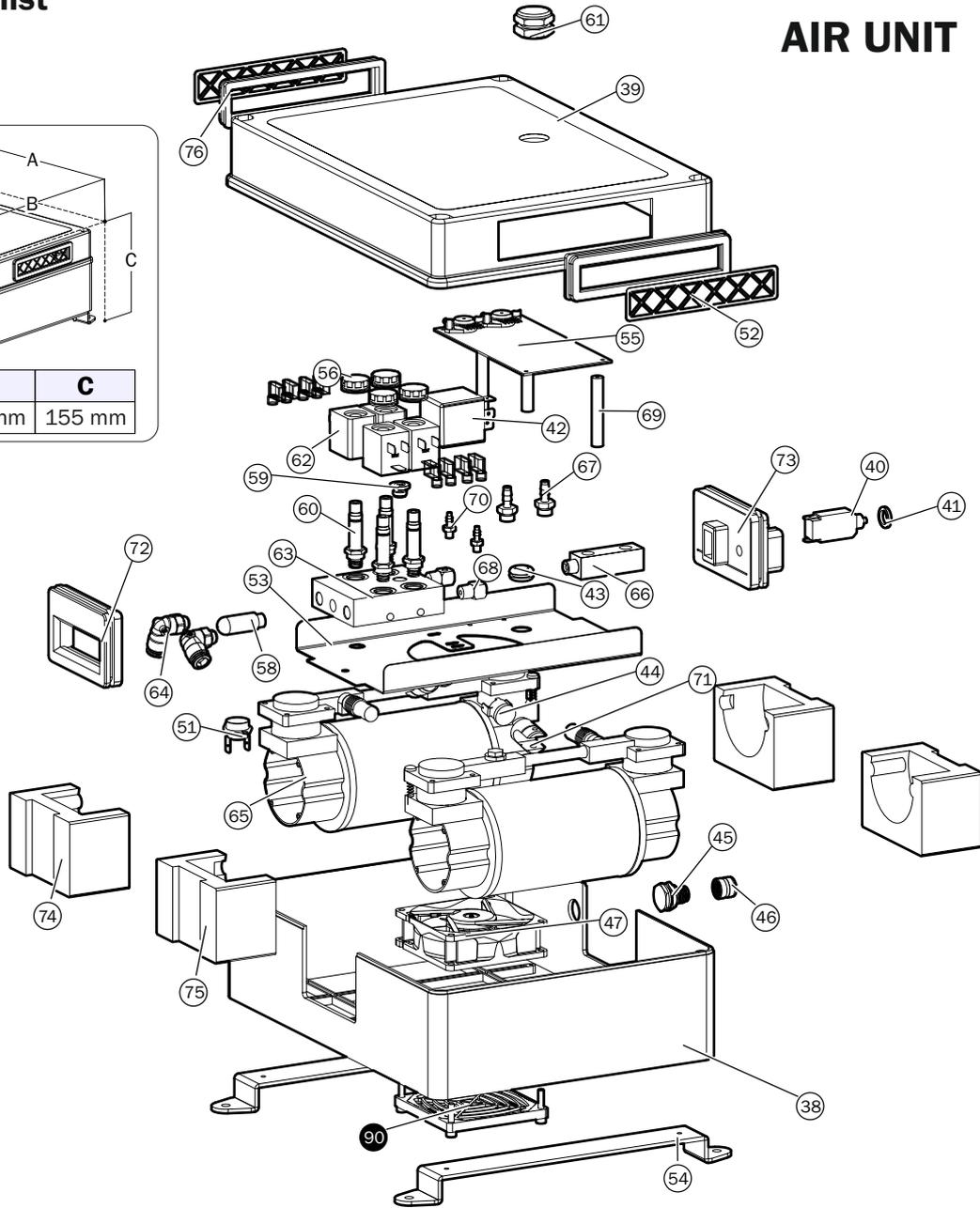
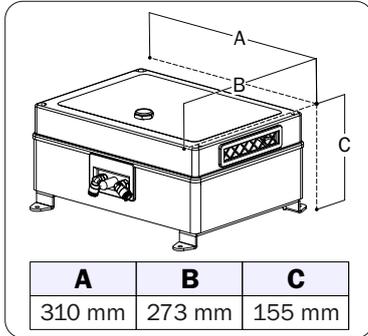
BOM ID	PartNo	Description	Qty
1	ELE-00106	TERMINAL, Φ6, YELLOW	5
2	ELE-00337	MINIRELAY FLOSSER 2262 12V 30A	1
3	ELE-0036	TERMINAL INSULATOR CAP,	2
4	ELE-00372	RELAY BASE	1
6	ELE-00376	ENCLOSED FUSE LINK	1
7	ELE-00380	FUSE 3A	1
8	ELE-00381	FUSE HOLDER CAP	1
9	ELE-00533	THERMOSTAT	1
10	ELE-00535	M12, 5PIN PCB MALE CONNECTOR	1
11	ELE-00550	TEMPERATURE SENSOR	1
12	ELE-00591	AIR UNIT COOLING FAN	1
13	ELE-00592	GRID	1
14	ELE-00593	GRID 60x60	2
15	ELE-00594	THERMOSTAT	1
16	FAS-02323	NUT FOR AIR UNIT	4
17	FAS-02324	WASHER FOR AIR UNIT	4
18	GEN-00156	HYDROTAB AIR UNIT, TOP COVER	1
19	GEN-00157	HYDROTAB AIR UNIT BASE	1
20	GEN-00168	SPRING CLAMP	1
25	LAS-00542	RELAY HOLDING FLANGE	1
26	PCB-00026	PCB FOR AIR UNIT NMEA 2000	1
27	PNE-00072	PLUG, MALE, PARALLEL, 1/8	1
28	PNE-00552	CANNOTTO NO Φ9 3/2 6W	4
29	PNE-00924	COIL EVI 7/9 10W	4
30	PNE-00926	AIR UNIT VALVE BASE, 72x60x20	1
31	PNE-01001	FITTING, STRAIGHT, 1/8-Φ8, FOR AIR UNIT	2
32	PNE-01107	COMPRESSOR, 18VDC, HYDROTAB (V.2016)	1
33	PNE-01113	KNURLED NUT WITH M8 THREAD	4
35	REV-00184	FITTING, CUSTOM, 1/8, HOLE: 3.2	1
36	REV-00304	COMPRESSOR TERMINAL	2
37	REV-00305	FITTING, CUSTOM, FOR AIR UNIT	1
38	REV-00362	CUSTOM FITTING, 1/8 WITH M5	2
39	REV-00419	FITTING	2
40	REV-00422	THERMAL RELAY RECEPTACLE	1
41	REV-00443	LONG PCB SPACER	3
42	RUB-00102	HYDROTAB AIR UNIT FRONT COVER	2
43	RUB-00132	RUBBER MOUNT FOR COMPRESSOR (MALE)	2
44	RUB-00133	RUBBER MOUNT FOR COMPRESSOR (FEMALE)	2
45	RUB-00134	COOLER FAN RUBBER MOUNTING	1
46	STK-00086	STICKER, FRONT, AIR UNIT	1

### AIR UNIT (ASM-01065)



Spare parts list

**AIR UNIT (ASM-01087)**



BOM ID	PartNo	Description	Qty
38	ELE-00034	BOX BASE	1
39	ELE-00035	BOTTOM CAP	1
40	ELE-00048A	SAFETY SWITCH	1
41	ELE-00048B	SAFETY SWITCH RING	1
42	ELE-00181	MINIRELAY 24V 70A	1
43	ELE-00361	ELASTIC HOLDER Ø9	1
44	ELE-00533	THERMOSTAT	2
45	ELE-00535	M12, 5PIN PCB MALE CONNECTOR	1
46	ELE-00540	HYDROTAN NMEA PROTECTION CAP	1
47	ELE-00591	AIR UNIT COOLING FAN	1
48	ELE-00592A	GRID	1
49	ELE-00592b	GRID OUTER COVER	1
50	ELE-00592C	GRID FILTER	1
51	ELE-00594	THERMOSTAT	1
52	LAS-00997	GRID	2
53	LAS-00998	VALVE MOUNTING BASE	1
54	LAS-00999	MOUNTING FLANGE	2
55	PCB-00026	PCB FOR AIR UNIT NMEA 2000	1
56	PNE-00021	COIL NUT, G1/8	4
57	PNE-00047	SILENCER 1/2	1

BOM ID	PartNo	Description	Qty
58	PNE-00050	SILENCER, 1/8, PA	1
59	PNE-00072	PLUG, MALE, PARALLEL, 1/8	1
60	PNE-00552	CANNOTTO NO Ø9 3/2 6W	4
61	PNE-00681	NUT 1/2	1
62	PNE-00924	COIL EVI 7/9 10W	4
63	PNE-00926	AIR UNIT VALVE BASE, 72x60x20	1
64	PNE-01064	ADAPTOR, ELBOW MALE 1/8-Ø8	2
65	PNE-01107	COMPRESSOR	2
66	REV-00111	MANIFOLD 1/8, CUSTOM	1
67	REV-00184	FITTING, CUSTOM, 1/8, HOLE: 3.2	2
68	REV-00362	CUSTOM FITTING, 1/8 WITH M5	2
69	REV-00416	PCB SPACER	3
70	REV-00419	FITTING	2
71	REV-00422	THERMAL RELAY RECEPTACLE	2
72	RUB-00023	VALVE RUBBER FRAME	1
73	RUB-00024	CABLE RUBBER FRAME	1
74	RUB-00132	RUBBER MOUNT (MALE)	2
75	RUB-00133	RUBBER MOUNT (FEMALE)	2
76	RUB-00137	AIR UNIT COOLING COVER	2
90	ELE-00592	GRID SYSTEM 80x80	1



## 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.



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