SERIES S PRO

PRODUCT SPECIFICATION

ZIPWAKE
CHOOSE COMFORT. ENJOY PERFORMANCE.

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1 INTRODUCTION

The Dynamic Trim Control System Series S Pro is an evolved version of the successful Series S that now incorporates pro active motion control, voltage boost, a state-of-the-art family of thirteen durable, rapid interceptors and unique 3D controls which provide the driver with unmatched, user-friendly, intuitive and precise control of running trim, heel or heading.
The system is perfectly engineered to suit planing or semi-planing boats and can be configured for monohull or multihull boats. The fully automatic system significantly enhances the boat's performance, fuel economy, comfort and safety.

KEY FEATURES

COMFORT AND SAFETY
Dynamically eliminates uncomfortable and dangerous boat pitch and roll.

PERFORMANCE AND FUEL ECONOMY
Automatically minimizes wave resistance and saves fuel.

INTUITIVE AND PRECISE CONTROL
Innovative 3D controls provide unmatched control of running trim, heel or heading.

DURABLE AND FAST
Patented series of durable rapid interceptors provide supreme lift force characteristics.

COMPLETE AND COMPETITIVE
All-inclusive standardized modular design provides built-in quality, simple installation and easy expansion, while making the system affordable.

INTEGRATION
The integrator module enables integration with complete system control on compatible multifunction displays (MFDs), making flexible installations and clean dashboard solutions possible. It is also possible to monitor system data on a wide range of plotters via the system's NMEA 2000® interface. The integrator module is compatible with all Zipwake system components.
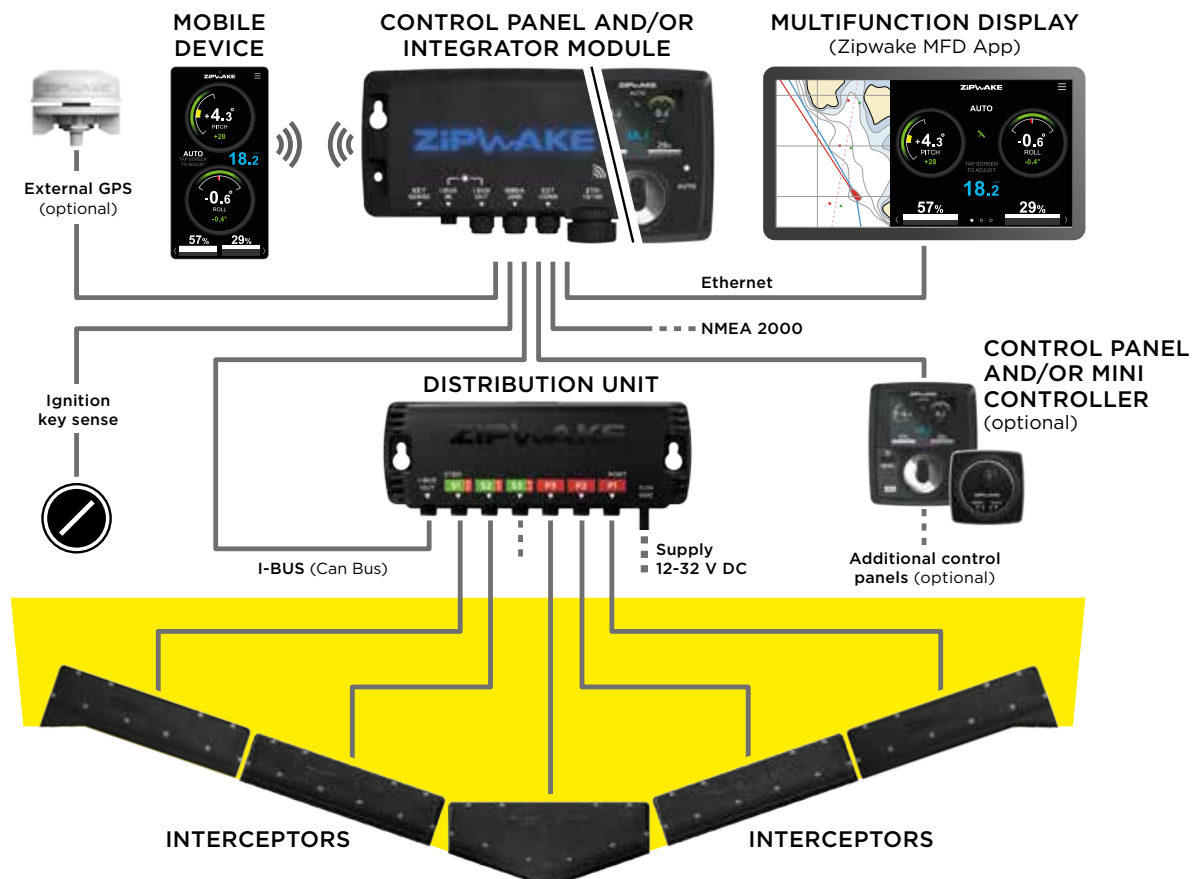
1.1 MOTION CONTROL FEATURES

Mode	Motion	Feature	Standard	Future
Automatic	Pitch	Pro active pitch control	PRO	
		Pitch-offset control with quick save	PRO	
		Curve-based pitch control	●	
		Easy manipulation of pitch control curve	●	
		Basic pitch control curve from boat dimensions	●	
	Roll	Pro active roll control	PRO	
		Pro balanced turns	PRO	
		Advanced turn recognition	PRO	
		Roll angle offset	PRO	
		Roll sensitivity control	●	
	Yaw	Auxiliary steering, controllable by other onboard system		●

Mode	Motion	Feature	Standard	Future
Manual	Pitch	Trim control	●	
		Auxiliary trim control by classic switches	●	
		Speed-progressive control wheel	●	
	Roll	List control	●	
		Auxiliary list control by classic switches	●	
		Wake shaping	PRO	
		Speed-progressive control wheel	●	
	Yaw	Steering control (calm sea or emergency steering)	●	
		Speed-progressive control wheel	●	

For details, refer to the Operator's Manual.

Pro active pitch
Pro active pitch control refers to rapid automated adjustment of the vessel's pitch angle to optimize performance, fuel efficiency, stability, and comfort. Using the system's sensors, the active pitch controller continuously modifies the interceptors' extensions to dampen pitch motions and hold the boat at its optimum running trim angle.

Pitch offset
Depending on the pitch control method used, the pitch offset function allows adjustment of the vessel's target pitch angle or interceptor extension (relative to predetermined settings). This enables the operator to easily fine-tune performance under varying sea states and load conditions. The system includes a means for easy adjustment of predetermined settings.

Pro active roll

Pro active roll control refers to rapid automated adjustment of the vessel's roll angle to optimize performance, stability, and comfort. Using the system's sensors, the active roll controller continuously modifies the interceptors' extensions to dampen roll motions and hold the boat level or at a set list.

Pro balanced turns

The pro balanced turn function is designed to optimize comfort on board by maintaining the ideal heeling angle throughout turns, thereby balancing out the centrifugal forces passengers are subjected to. The function includes advanced turning recognition using the system's built-in sensors, avoiding awkward integration with the steering system.

Roll angle offset

The roll controller's target angle can be offset by turning the control panel or mini controller roll wheel. In certain sea states, running with a loss of a few degrees can result in a dryer ride.

Roll sensitivity control

The system allows adjustment of roll control responsiveness, which can be useful for optimizing system performance in different sea conditions or for use in combination with the auto-pilot.

Auxiliary trim/list control by classic switches

The integrator module supports manual control of trim and list using rocker switches.

Wake shaping

Interceptors are a perfect means of fine-tuning wake shape when wake surfing. The system's wake shaping feature provides easy interceptor blade control to predetermined positions to create the ideal wake shape on either side of the boat.

Steering control

The system's steering mode allows the roll wheel to act as the helm. Turning the wheel clockwise will steer the vessel towards starboard and vice versa. The feature can serve as backup steering in case the regular steering fails.

Speed-progressive control wheel

The intuitive control wheels of the Zipwake control panel and mini controller respond progressively to user input, i.e. the response of the control depends on how fast the wheels are turned; it also depends on boat speed, ensuring safe, effective manual pitch and roll control.

1.2   CONFIGURABLE LIFT FORCE ALLOCATION

The Series S Pro system allows customized allocation of control forces by setting active or inactive control of pitch, roll and yaw for each pair of port and starboard interceptors. A pair's function may also be swapped e.g. to mitigate roll-induced steering forces from another interceptor pair or pairs.
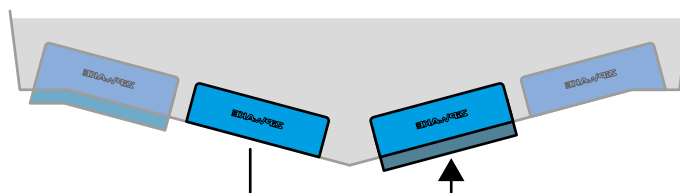
1.3 PRODUCTS AND PARTS OVERVIEW

Zipwake products and parts come as kit boxes, accessories or spare parts.

KIT BOXES

			Kit Box Contents					
		Kit Box Part No.	2021145	2021146	2021147	2021148	2021732	2021733
Model	Part No.	Description	KB300-S PRO	KB450-S PRO	KB600-S PRO	KB750-S PRO	KB300-S PRO CHINE	KB450-S PRO CHINE
CP PRO	2022032	Control Panel Pro with Standard Cable 7 M	1	1	1	1	1	1
DU PRO	2022033	Distribution Unit Pro with Power Cable 4 M	1	1	1	1	1	1
IT300-S PRO	2021232	Interceptor 300 S Pro with Cable 3 M & Cable Covers	2					
IT450-S PRO	2021233	Interceptor 450 S Pro with Cable 3 M & Cable Covers		2				
IT600-S PRO	2021234	Interceptor 600 S Pro with Cable 3 M & Cable Covers			2			
IT750-S PRO	2021235	Interceptor 750 S Pro with Cable 3 M & Cable Covers				2		
IT300-S PRO CHINE PORT	2021702	Interceptor 300 S Pro Chine Port side with Cable 3 M & Cable Covers					1	
IT300-S PRO CHINE STBD	2021703	Interceptor 300 S Pro Chine Starboard side with Cable 3 M & Cable Covers					1	
IT450-S PRO CHINE PORT	2021704	Interceptor 450 S Pro Chine Port side with Cable 3 M & Cable Covers						1
IT450-S PRO CHINE STBD	2021705	Interceptor 450 S Pro Chine Starboard side with Cable 3 M & Cable Covers						1

			Kit Box Contents					
		Kit Box Part No.	2021515	2021516	2021517	2021518	2021519	2021520
Model	Part No.	Description	KBI300-S PRO	KBI450-S PRO	KBI600-S PRO	KBI750-S PRO	KBI300-S PRO CHINE	KBI450-S PRO CHINE
IM	2012241	Integrator Module	1	1	1	1	1	1
SC7-M12	2011257	M12 Standard Cable 7 M	1	1	1	1	1	1
DU PRO	2022033	Distribution Unit Pro with Power Cable 4 M	1	1	1	1	1	1
IT300-S PRO	2021232	Interceptor 300 S Pro with Cable 3 M & Cable Covers	2					
IT450-S PRO	2021233	Interceptor 450 S Pro with Cable 3 M & Cable Covers		2				
IT600-S PRO	2021234	Interceptor 600 S Pro with Cable 3 M & Cable Covers			2			
IT750-S PRO	2021235	Interceptor 750 S Pro with Cable 3 M & Cable Covers				2		
IT300-S PRO CHINE PORT	2021702	Interceptor 300 S Pro Chine Port side with Cable 3 M & Cable Covers					1	
IT300-S PRO CHINE STBD	2021703	Interceptor 300 S Pro Chine Starboard side with Cable 3 M & Cable Covers					1	
IT450-S PRO CHINE PORT	2021704	Interceptor 450 S Pro Chine Port side with Cable 3 M & Cable Covers						1
IT450-S PRO CHINE STBD	2021705	Interceptor 450 S Pro Chine Starboard side with Cable 3 M & Cable Covers						1

ACCESSORIES AND SPARE PARTS

Model	Part No.	Description	Accessory	Spare Part
IM	2012241	Integrator Module	●	●
MC	2012401	Mini Controller with Standard Cable 3 M	●	●
CP PRO	2022032	Control Panel Pro with Standard Cable 7 M	●	●
DU PRO	2022033	Distribution Unit Pro with Power Cable 4 M	●	●
IT300-S PRO	2021232	Interceptor 300 S Pro with Cable 3 M & Cable Covers	●	●
IT450-S PRO	2021233	Interceptor 450 S Pro with Cable 3 M & Cable Covers	●	●
IT600-S PRO	2021234	Interceptor 600 S Pro with Cable 3 M & Cable Covers	●	●
IT750-S PRO	2021235	Interceptor 750 S Pro with Cable 3 M & Cable Covers	●	●
IT300-S PRO CHINE PORT	2021702	Interceptor 300 S Pro Chine Port side with Cable 3 M & Cable Covers	●	●
IT300-S PRO CHINE STBD	2021703	Interceptor 300 S Pro Chine Starboard side with Cable 3 M & Cable Covers	●	●
IT450-S PRO CHINE PORT	2021704	Interceptor 450 S Pro Chine Port side with Cable 3 M & Cable Covers	●	●
IT450-S PRO CHINE STBD	2021705	Interceptor 450 S Pro Chine Starboard side with Cable 3 M & Cable Covers	●	●
IT300-S PRO INTER	2021701	Interceptor 300 S Pro Intermediate with Cable 3 M & Cable Covers	●	●
IT450-S PRO V13	2021482	Interceptor 450 S Pro V13 with Cable 3 M & Cable Covers	●	●
IT450-S PRO V16	2021483	Interceptor 450 S Pro V16 with Cable 3 M & Cable Covers	●	●
IT450-S PRO V19	2021484	Interceptor 450 S Pro V19 with Cable 3 M & Cable Covers	●	●
IT450-S PRO V22	2021485	Interceptor 450 S Pro V22 with Cable 3 M & Cable Covers	●	●
EC1.5-M12	2011258	M12 Extension Cable 1.5 M	●	●
EC3-M12	2011259	M12 Extension Cable 3 M	●	●
EC5-M12	2011260	M12 Extension Cable 5 M	●	●
EC10-M12	2011261	M12 Extension Cable 10 M	●	●
EC15-M12	2012038	M12 Extension Cable 15 M	●	●
EC20-M12	2012039	M12 Extension Cable 20 M	●	●
SC3-M12	2012408	M12 Standard Cable 3 M	●	●
SC7-M12	2011257	M12 Standard Cable 7 M	●	●
SC15-M12	2012037	M12 Standard Cable 15 M	●	●
CC-S	2011071	Cable Cover S Kit	●	●
	2011381	Control Panel Cover, White	●	●
	2011382	Control Panel Cover, Light gray	●	●
CP COVER	2011383	Control Panel Cover, Mid gray	●	●
	2011384	Control Panel Cover, Dark gray	●	●
	2011385	Control Panel Cover, Black	●	●
CP ALU FRAME	2011281	Control Panel Alu Frame	●	●
GPU	2011240	Global Positioning Unit with Cable 5 M & Mount Kit	●	●
GB	2011622	Gimbal Bracket for Control Panel	●	●
AP300-S	2011585	Adaptor Plate 300 S Kit	●	●
AP450-S	2011586	Adaptor Plate 450 S Kit	●	●
SU-S PRO	2021230	Servo Unit S Pro with Cable 3 M		●
IT300-S FRONT	2011252	Interceptor 300 S Front		●
IT450-S FRONT	2011253	Interceptor 450 S Front		●
IT600-S FRONT	2011254	Interceptor 600 S Front		●
IT750-S FRONT	2011255	Interceptor 750 S Front		●
IT300-S CHINE PORT FRONT	2011742	Interceptor 300 S Chine Port side Front		●
IT300-S CHINE STBD FRONT	2011743	Interceptor 300 S Chine Starboard side Front		●
IT450-S CHINE PORT FRONT	2011744	Interceptor 450 S Chine Port side Front		●
IT450-S CHINE STBD FRONT	2011745	Interceptor 450 S Chine Starboard side Front		●
IT300-S INTER FRONT	2011741	Interceptor 300 S Intermediate Front		●
IT450-S V13 FRONT	2011492	Interceptor 450 S V13 Front		●
IT450-S V16 FRONT	2011493	Interceptor 450 S V16 Front		●
IT450-S V19 FRONT	2011494	Interceptor 450 S V19 Front		●
IT450-S V22 FRONT	2011495	Interceptor 450 S V22 Front		●

PRO UPGRADE

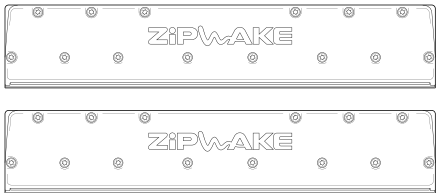| Model	Part No.	Description	Accessory	Spare Part
UPGRADE KIT S PRO	2022521	Upgrade Kit S Pro with one DU PRO and two SU-S Pro	●	
UPGRADE KIT S PRO QUAD	2022524	Upgrade Kit S Pro Quad with one DU PRO and Four SU-S Pro	●	

2   KIT BOXES

Kit boxes include all the parts needed to install a Dynamic Trim Control System with one pair of rapid straight or chine interceptors. There are six standard kit boxes, each with a stylish, user-friendly, intuitive control panel, and six kit boxes for integration with a module for hard-wired system integration and wireless communication.
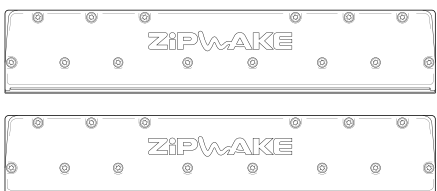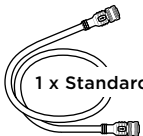
2.1   KIT BOX CONTENTS

Standard kit box contains:

┌─ INTERCEPTOR ──────────────┐
│   │
│ **2 x Interceptors**   │
│ with Cable 3 m & Cable Cover │
└────────────────────────────┘

┌─ DISTRIBUTION UNIT ──────┐
│ **1 x Distribution Unit** │
│ with Power Cable 4 m   │
└───────────────────────────┘

┌─ CONTROL PANEL ──────────┐
│ **1 x Control Panel**   │
│ with Standard Cable 7 m │
└───────────────────────────┘

+ Operator's Manual
+ Warranty Card
+ Installation Guide
+ Drill Templates
+ Mounting Screws
+ Operator's Quick Guide
+ Startup Checklist

Kit box for integration contains:

┌─ INTERCEPTOR ──────────────┐
│   │
│ **2 x Interceptors**   │
│ with Cable 3 m & Cable Cover │
└────────────────────────────┘

┌─ DISTRIBUTION UNIT ──────┐
│ **1 x Distribution Unit** │
│ with Power Cable 4 m   │
└───────────────────────────┘

┌─ INTEGRATOR MODULE ──────┐
│ **1 x Integrator Module** │
└───────────────────────────┘

1 x Standard Cable 7 m

+ Operator's Manual
+ Warranty Card
+ Installation Guide
+ Drill Templates
+ Mounting Screws
+ Operator's Quick Guide
+ Startup Checklist

Any base installation can be expanded with up to two extra pairs of Series S Pro interceptors, thus allowing a total of six interceptors without any need for additional connectors or power supply.

2.2   SPECIFICATIONS

Standard kit box:

Model	KB300-S PRO	KB450-S PRO	KB600-S PRO	KB750-S PRO	KB300-S PRO CHINE	KB450-S PRO CHINE	
Width	680 (26.8)	680 (26.8)	980 (38.6)	980 (38.6)	680 (26.8)	680 (26.8)	mm (in)
Depth	156 (6.1)	156 (6.1)	156 (6.1)	156 (6.1)	156 (6.1)	156 (6.1)	mm (in)
Height	274 (10.8)	274 (10.8)	274 (10.8)	274 (10.8)	274 (10.8)	274 (10.8)	mm (in)
Weight	7.4 (16.3)	8.9 (19.6)	10.9 (24)	12 (26.5)	7.6 (16.8)	9.1 (20.1)	kg (lbs)

Kit box for integration:

Model	KBI300-S PRO	KBI450-S PRO	KBI600-S PRO	KBI750-S PRO	KBI300-S PRO CHINE	KBI450-S PRO CHINE	
Width	680 (26.8)	680 (26.8)	980 (38.6)	980 (38.6)	680 (26.8)	680 (26.8)	mm (in)
Depth	156 (6.1)	156 (6.1)	156 (6.1)	156 (6.1)	156 (6.1)	156 (6.1)	mm (in)
Height	274 (10.8)	274 (10.8)	274 (10.8)	274 (10.8)	274 (10.8)	274 (10.8)	mm (in)
Weight	7.5 (16.5)	9 (19.8)	11 (24.3)	12.1 (26.7)	7.7 (17)	9.2 (20.3)	kg (lbs)

See section 1.2 for details of the contents of each kit box.

2.3   ORDERING DATA

Standard kit box:

Model	KB300-S PRO	KB450-S PRO	KB600-S PRO	KB750-S PRO	KB300-S PRO CHINE	KB450-S PRO CHINE	
Part No.	2021145	2021146	2021147	2021148	2021732	2021733	

Kit box for integration:

Model	KBI300-S PRO	KBI450-S PRO	KBI600-S PRO	KBI750-S PRO	KBI300-S PRO CHINE	KBI450-S PRO CHINE	
Part No.	2021515	2021516	2021517	2021518	2021519	2021520	

3   CONTROL PANEL

Zipwake's stylish control panel is carefully designed to be user-friendly and intuitive to allow the driver to focus on the right thing – enjoying the boat ride!

The panel's two unique control wheels provide easy, quick and intuitive manual control of running trim, heel or heading. However, the system normally operates in automatic control mode, which is enabled by a single press on the AUTO button. In this mode, the built-in high-frequency GPS, 3D gyro sensors and robust motion controller automatically ensure dynamic elimination of un-comfortable and dangerous boat pitch and roll.

The system provides continuous feedback of boat speed, pitch and roll angle, as well as the interceptors' positions, on a 2.8" sunlight-readable wide viewing color display.

The panel's waterproof design withstands harsh marine conditions in open boats or on a flybridge. The sockets for connecting peripherals are located on the rear of the panel. In addition to connectors for the system's distribution unit and multiple control panels, external GPS and NMEA2000 equipment can be connected. The system can also be connected to the ignition key for automatic system power-on. A waterproof cap conceals the USB interface that allows for future software upgrades and ensures that the Zipwake Dynamic Trim Control System is future-proof.

3.1   FEATURES

- Fully automatic
  - Dynamic pitch and roll control
  - Steering and turn enhancement
- Built-in GPS and motion sensors
- Unique and intuitive 3D controls
- Sunlight readable color display
- Instant state user feedback
- Auto power on/off via ignition key sense
- Full range of electrical interfaces
- Waterproof
- Auto dimming / night mode
- Upgradable via USB stick
- Supports up to 3 additional control panels in the system

- Surface, flush or gimbal bracket mount
- Manages installation configurations from 1 to 6 pro interceptors
- Allows configuration of interceptor pair function
- Auto cleaning
  - Selectable periodic cleaning cycle
  - Prevents fouling inside the interceptor
- Monitored and/or controlled from external devices, e.g. multifunction displays or plotters via its NMEA 2000 interface
- Can be combined with the integrator module

3.2 SPECIFICATIONS

Model	CP PRO
Display	2.8'' IPS color TFT LCD, 320 x 240 pixels, double-sided, anti-reflection coated window
Internal sensors	5 Hz GPS, 3D Gyro, 3D Accelerometer, Ambient light
Operating voltage	12 - 32 V DC
Power consumption	10 W max
Operating temperature	-20° to +80°C (-4° to +176°F)
Storage temperature	-40° to +90°C (-40° to +194°F)
Waterproof rating	IP67 / IP64 (front / back)
Compass safe distance	0.5 m (1.7 ft)
Compliance	CE, FCC
Weight	0.22 kg (0.49 lbs)
Mounting	Surface, flush or gimbal bracket mount

3.3 INTERFACES

- I-BUS IN (CAN bus)
- I-BUS OUT (CAN bus)
- NMEA 2000
- Key sense
- USB device port (Type A)
- USB host port (Type B)
- External GPS (NMEA 0183 / RS232 auto baud-rate sensing)

3.4 DIMENSIONS
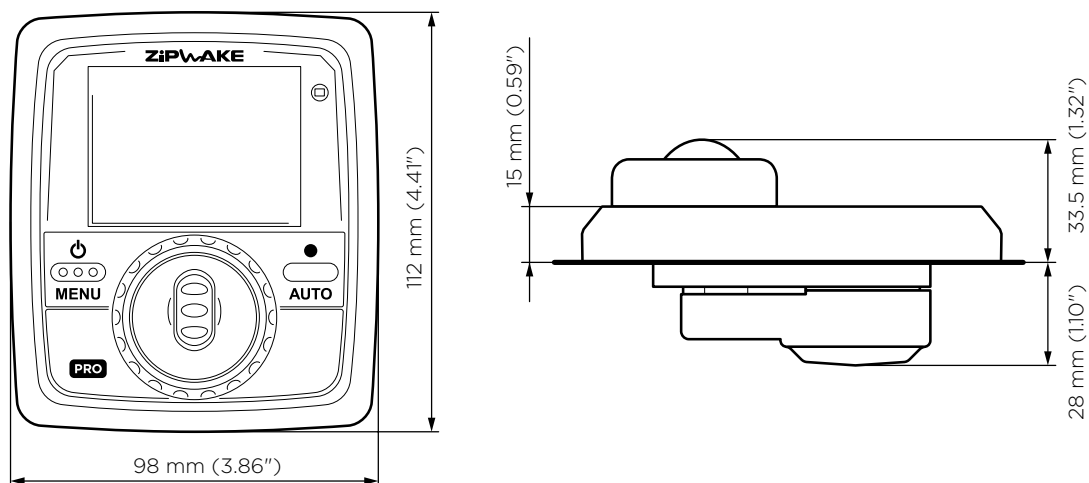
3.5 ORDERING DATA

Model	CP PRO
Part No.	2022032 with Standard Cable 7 m

- Included in kit boxes
- Available as an accessory
- Available as a spare part

4   INTEGRATOR MODULE

The Zipwake integrator module enables total integration and clean dashboard solutions by connecting the Zipwake system to multifunction displays (MFDs) and/or smart devices. The embedded Zipwake user interface provides intuitive, easy control without the need for a separate control panel, although any Zipwake system will allow up to 3 additional control panels and/or mini controllers for anyone wanting both touch buttons and Zipwake's unique control wheels for ultimate manual control.

The integrator module supports connections to a wide range of MFD brands/models via an ethernet interface. Its wireless interface enables connection to smartphones and tablets by means of Zipwake's app for wireless views, control, configuration and software updates.
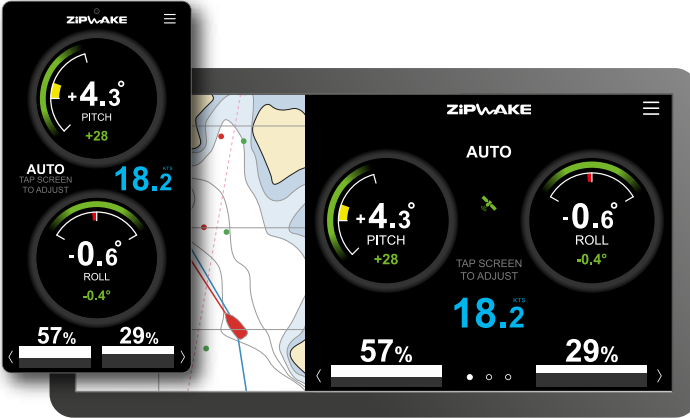The integrator also includes a CAN interface for further external system integration.

The integrator module has built-in motion sensors that also use GPS data acquired from either an NMEA 2000 connected network, an external GPS antenna or an extra control panel to ensure precise and dynamic control of the boat's pitch and roll. The module can be oriented in any direction and its rugged, waterproof design allows for flexible installation e.g. behind the helm/dash, on the flybridge or in the engine room. It comes with a special ethernet connector collar that makes sealing standard ethernet cables easy.

The integrator module is compatible with all Zipwake system components and is available as an accessory, a spare part or included in kit boxes for integration (refer to section 1.2).

4.1   FEATURES

- Fully automatic
  - Dynamic pitch and roll control
  - Steering and turn enhancement
- Motion sensors and magnetic compass
- Instant user feedback
- Auto power on/off via ignition key sense
- Waterproof design
  - Standard ethernet cable sealed by waterproof ethernet connector collar
- RGB LED status indicators for each interface
- Wireless upgradable via smartphones/tablets
- Supports up to three additional control panels and/or mini controllers in the system
- Compatible with all Zipwake system components
- Manages installation configurations from 1 to 6 pro interceptors

- Allows configuration of interceptor pair function
- Auto cleaning
  - Selectable periodic cleaning cycle
  - Prevents fouling inside the interceptor
- Monitored and/or controlled from external devices
  - Multifunction displays (MFDs) via ethernet
  - Smartphones/tablets via wireless interface
  - Plotters via NMEA 2000 interface

4.2 SPECIFICATIONS

Model	IM
Indicators	RGBW LEDs for each communication interface (x4) RGBW backlit logo
Internal sensors	3D Gyro, 3D Accelerometer, Compass
Operating voltage	12 - 32 V DC
Power consumption	4 W max
Operating temperature	-20° to +60°C (-4° to +140°F)
Storage temperature	-40° to +90°C (-40° to +194°F)
Waterproof rating	IP67
Compass safe distance	0.5 m (1.7 ft)
Compliance	CE, FCC, SAE J1171 Ignition Protected
Weight	0.35 kg (0.77 lbs)

4.3 INTERFACES

- I-BUS IN (CAN bus)
- I-BUS OUT (CAN bus)
- NMEA 2000
- Key sense

- External connection
  - GPS (NMEA 0183 / RS232)
  - CAN (J1939)
- Ethernet (10/100G)
- Wi-Fi

4.4 DIMENSIONS
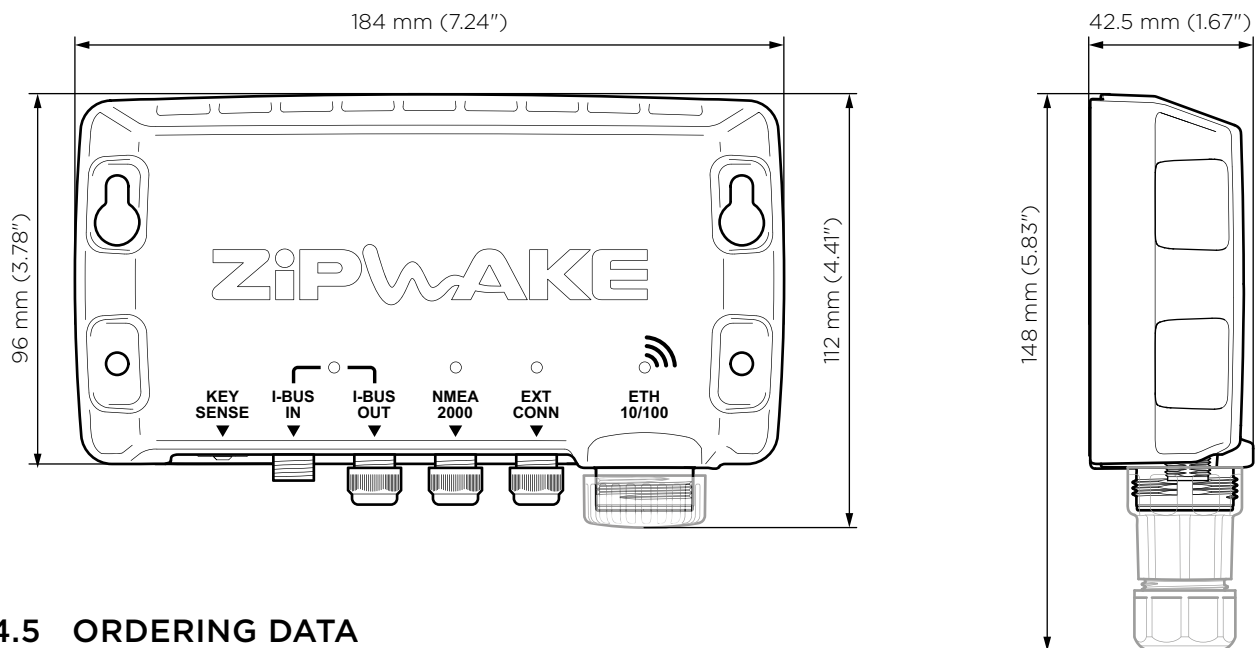
4.5 ORDERING DATA

Model	IM
Part No.	2012241

- Included in kit boxes for integration
- Available as an accessory
- Available as a spare part

5 MINI CONTROLLER

The Zipwake mini controller is the perfect complement for any Zipwake system with integrator module and MFDs. The small and intuitive mini controller provides easy manual control of running trim, heel or heading as well as system settings the same way as the well proven control panel.

The mini controller is designed to withstand harsh marine conditions in open boats or on a flybridge and can be mounted in any position suited for the helmsman. The mini controller can be connected to the integrator module and/or a control panel as well as the ignition key for automatic system power-on.

5.1 FEATURES

- Unique and intuitive 3D controls
- Auto power on/off via ignition key sense
- Surface or flush mount
- LED status indication

5.2 INTERFACES

- I-BUS IN (CAN bus)
- I-BUS OUT (CAN bus)
- Key sense

5.3 SPECIFICATIONS

Model	MC
Indicators	RGBW LEDs
Operating voltage	12 - 32 V DC
Power consumption	2 W max
Operating temperature	-20° to +80°C (-4° to +176°F)
Storage temperature	-40° to +90°C (-40° to +194°F)
Waterproof rating	IP67
Compass safe distance	0.5 m (1.7 ft)
Compliance	CE, FCC
Weight	0.10 kg (0.22 lbs)

5.4 DIMENSIONS

29 mm (1.14″)

32 mm (1.26″)

60 mm (2.36″)

60 mm (2.36″)
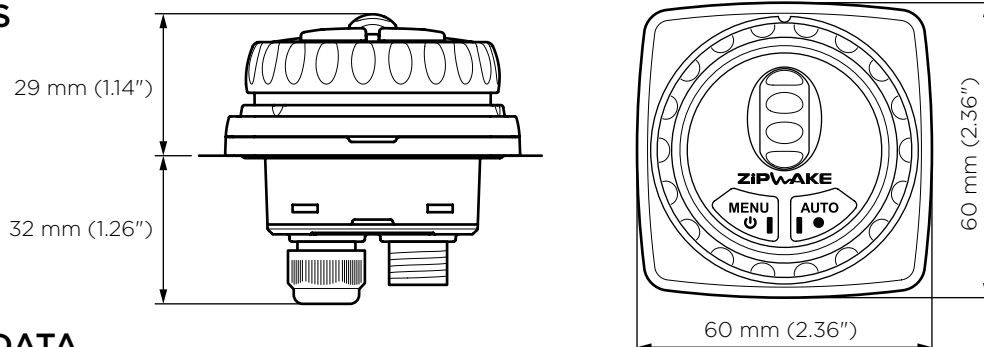
5.5 ORDERING DATA

Model	MC
Part No.	2012401 with Standard Cable 3 m

- Available as an accessory
- Available as a spare part

6 INTERCEPTORS

The Series S Pro interceptors with a 30 mm full stroke
in just 0.3 seconds provide a blade rate sufficient
to perfectly balance most high-speed craft.
The four straight, one intermediate, four
V-shaped and four chine models make for
the perfect transom arrangement.
Because the modular design is ideal for
standardized production, the interceptors
are durable, affordable and particularly well adapted to
any planing or semi-planing boat between 6 m and 15 m (20-50 ft).

All components have been meticulously engineered to withstand impact and avoid
water ingress, minimizing the risk of costly maintenance and downtime. Interceptor or blade
actuation takes place by way of a calibration-free submersible electric servo in the interceptor
unit. Its natural water cooling provides excellent working conditions for the brushless DC servo
motor, which runs on 36 volts.

Installation is made easy with an integral mounting plate and the option of a concealed or above-
waterline, self-sealing, thru-hull cable fitting. The preferred mounting option is achieved by
simply routing the servo cable, as shown below. Each interceptor comes with the thru-hull cable
fitting, cable covers and a practical drill template.

Cable cover

Above waterline
cable mount

Back/Mounting
plate

Front
assembly

Servo
Unit

Concealed
cable mount
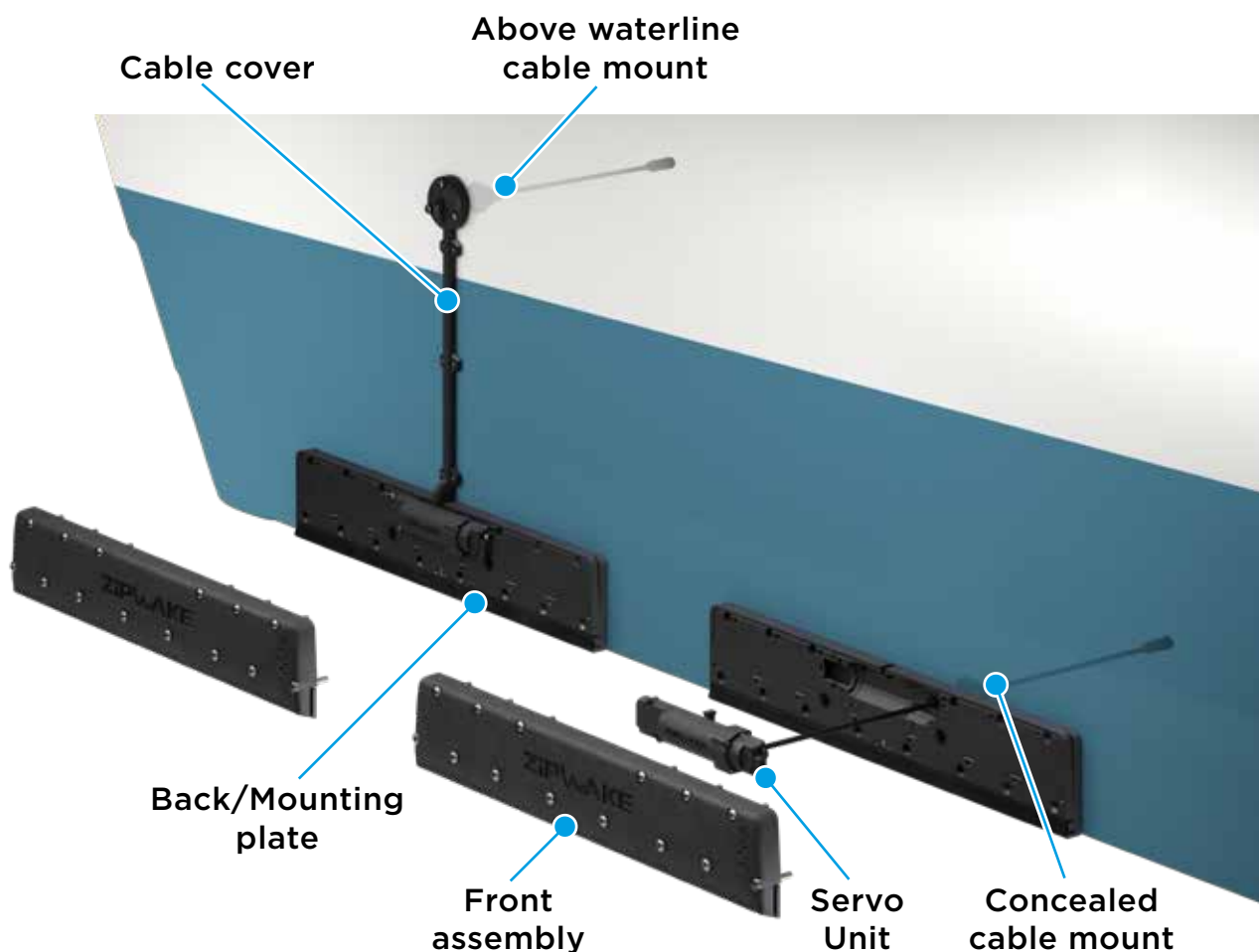
For best effect, different size interceptors can be combined to span as much of the transom edge as possible. A full beam is always the optimal arrangement from a lift-to-drag ratio point of view.

Combine any interceptors to get the perfect system for multihull boats e.g. power catamarans.
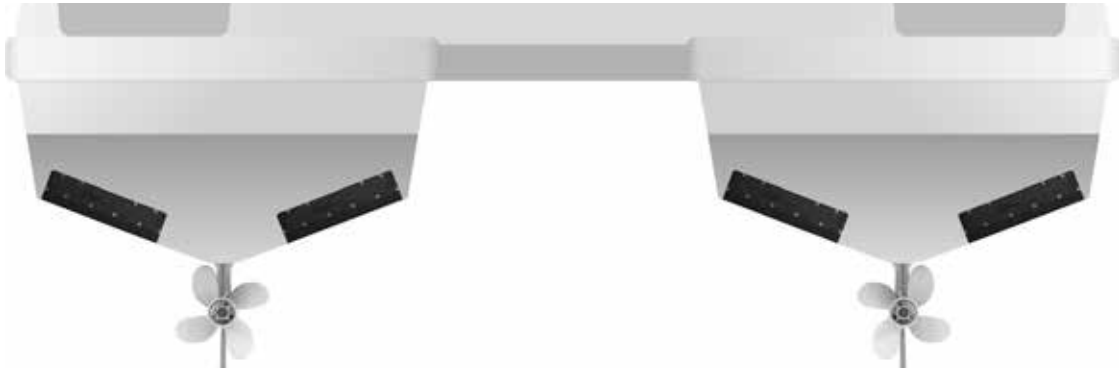
V-shaped interceptors for centerline mounting

V-shaped interceptors for centerline mounting are perfect for filling the gap between twin outboards or sterndrives, as well as dual propeller tunnels.

The four V-shaped models cover deadrise angles effectively between 11 to 24 degrees. Centerline mounted interceptors can be included in new installations, or retro-fitted to already installed systems.
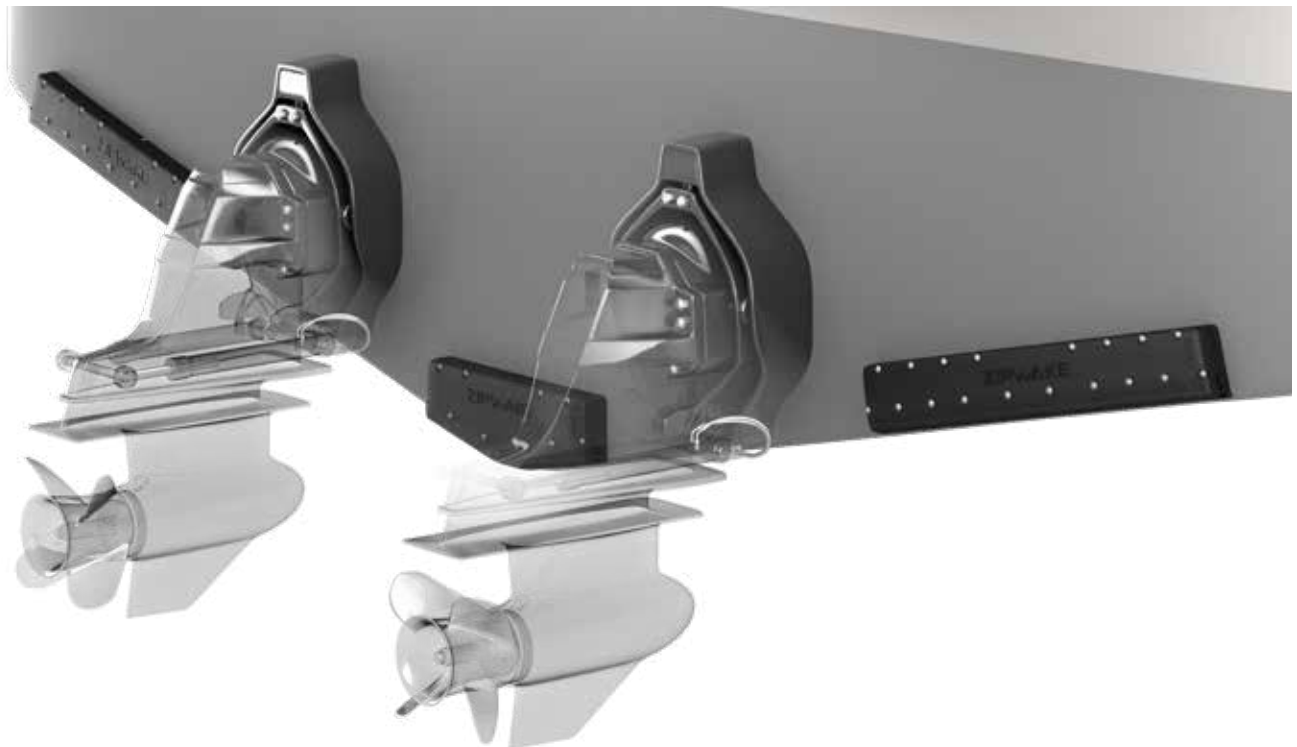
Chine interceptors for maximum lift

Chine interceptors provide a unique means of maximizing pitch and roll motion control by utilizing the furthest outboard surfaces of the hull bottom for lift generation.

As a rule, the lift effect of a chine interceptor matches the lift of a straight interceptor one size larger mounted inboard of the chine, making them the go-to choice when selecting interceptors. Chine interceptors are particularly useful when transom space is limited abeam of outboards or sterndrives.
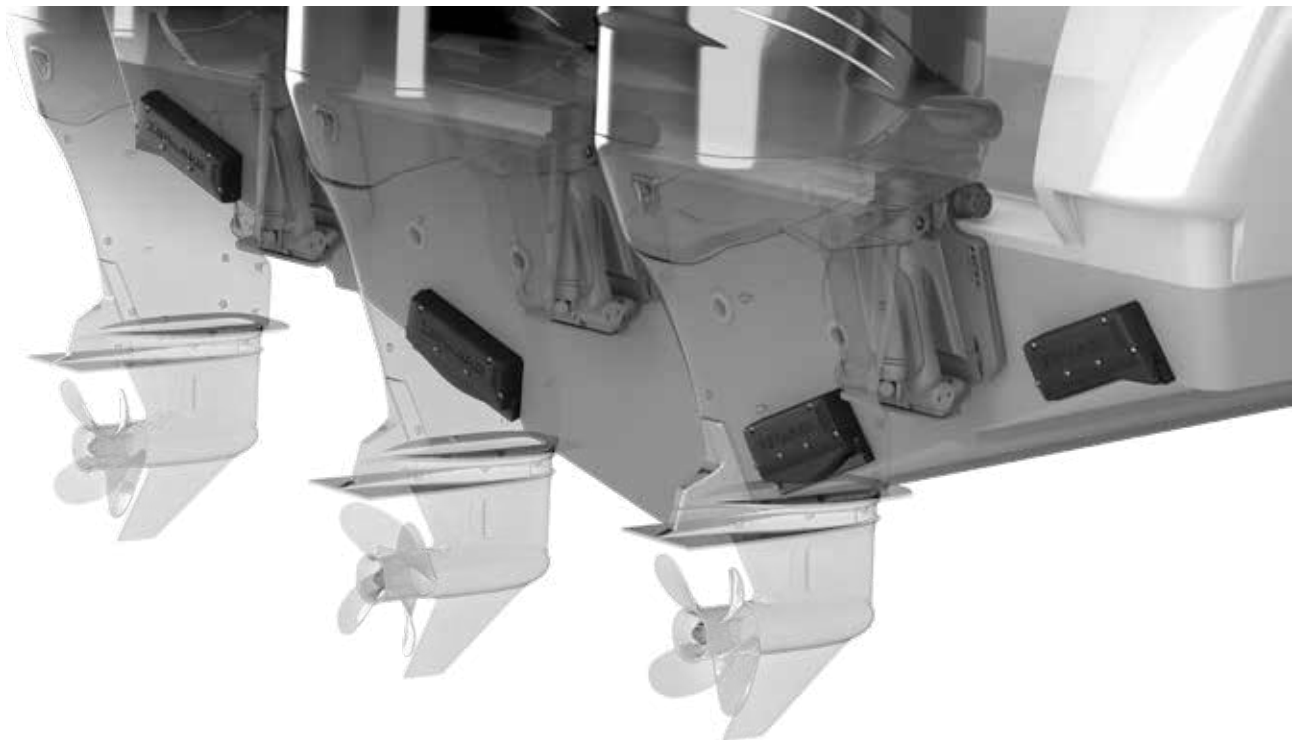
Intermediate interceptor for installing close to propellers

When space between multiple outboards or sterndrives is tight, an intermediate interceptor offers a viable alternative for additional pitch and roll motion control not possible with a straight interceptor without degrading propeller performance.

Thanks to their special blade shape, intermediate interceptors generate a narrower trail, thus mitigating propeller inflow disturbance and even allowing installation between outboards mounted at their minimum offset.
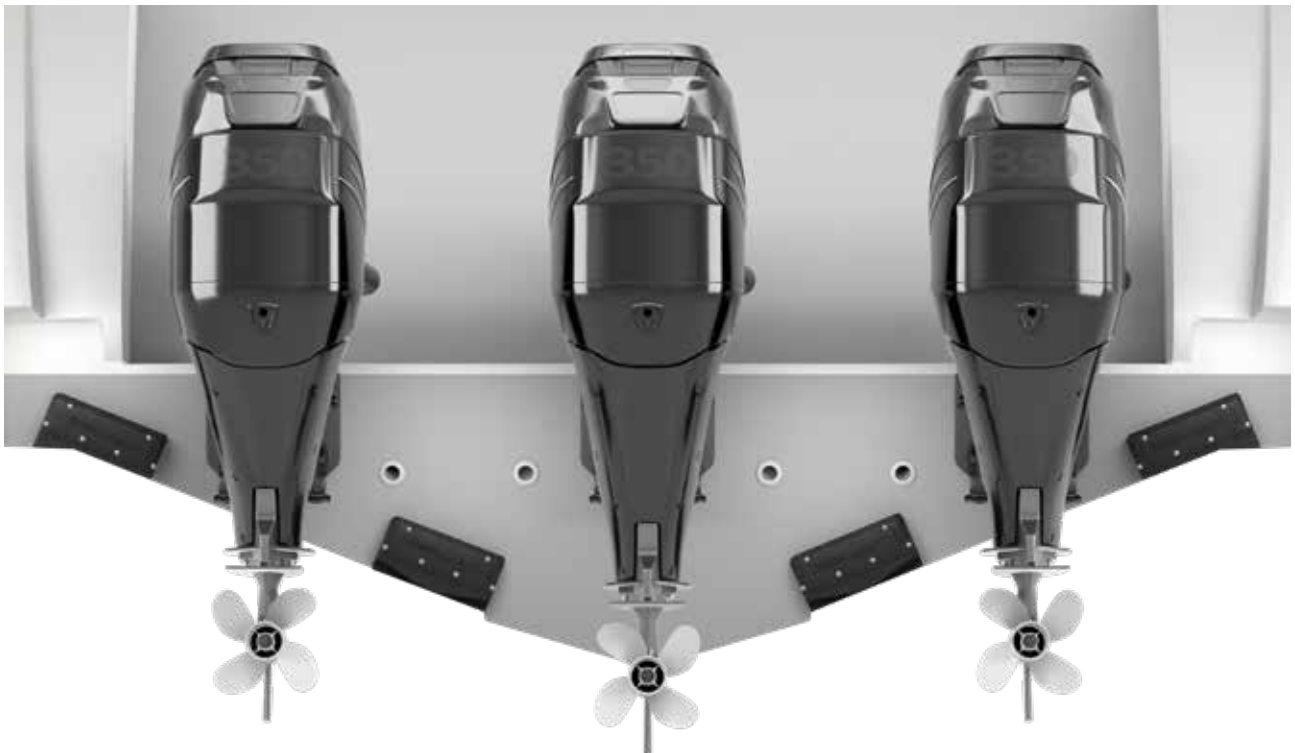
The modular design enables boat designers to develop their own novel applications, e.g. in multihulls or stepped hull high-speed craft.

6.1 FEATURES

- True outboard mount

- Modular design

- Rapid actuation

- Straight, V-shaped, chine and
  intermediate models

- Integrated mounting plate

- Thru-hull fitting options
  - Above waterline
  - Concealed behind interceptor

- Submersible servo units
  - Brushless 36V DC servo motor
  - High-precision positioning
  - Calibration free
  - Durable and accessible

- Auto cleaning
  - Periodically selectable cleaning cycle
  - Prevents fouling inside the interceptor

- No corrosive materials

6.2 SPECIFICATIONS

Model	IT300-S PRO	IT450-S PRO	IT600-S PRO	IT750-S PRO	
Length	300 (11.8)	450 (17.7)	600 (24)	750 (29.5)	mm (in)
Weight	2.1 (4.6)	2.8 (6.2)	3.5 (7.7)	4.0 (8.8)	kg (lbs)

Model	IT450-S PRO V13	IT450-S PRO V16	IT450-S PRO V19	IT450-S PRO V22	
Length	450 (18)	450 (17.7)	450 (17.7)	450 (17.7)	mm (in)
Weight	3.2 (7.1)	3.3 (7.3)	3.4 (7.5)	3.5 (7.7)	kg (lbs)

Model	IT300-S PRO CHINE PORT	IT300-S PRO CHINE STBD	IT450-S PRO CHINE PORT	IT450-S PRO CHINE STBD	
Length	300 (11.8)	300 (11.8)	450 (17.7)	450 (17.7)	mm (in)
Weight	2.2 (4.9)	2.2 (4.9)	2.9 (6.4)	2.9 (6.4)	kg (lbs)

Model	IT300-S PRO INTER				
Length	300 (11.8)				mm (in)
Weight	2.4 (5.3)				kg (lbs)

Max. boat speed	60 knots
Blade stroke	30 mm (1.2 in)
Blade rate	100 mm/s (4 in/s)
Thru-hull cable fitting	Concealed or above waterline
Servo actuator	SU-S PRO
Cable length	3 m (10 ft), extendable up to 6 m (20 ft)
Cable material	PUR
Connector	M12 5-pin circular
Connector diameter	14.5 mm (0.57 in)
Operating voltage	36 V DC
Power consumption	35 W max
Operating temperature	0° to +40°C (+32° to +104°F)
Storage temperature	-40° to +90°C (-40° to +194°F)
Waterproof rating	IP68 5 m (16 ft)
Compliance	CE, FCC

6.3   DIMENSIONS
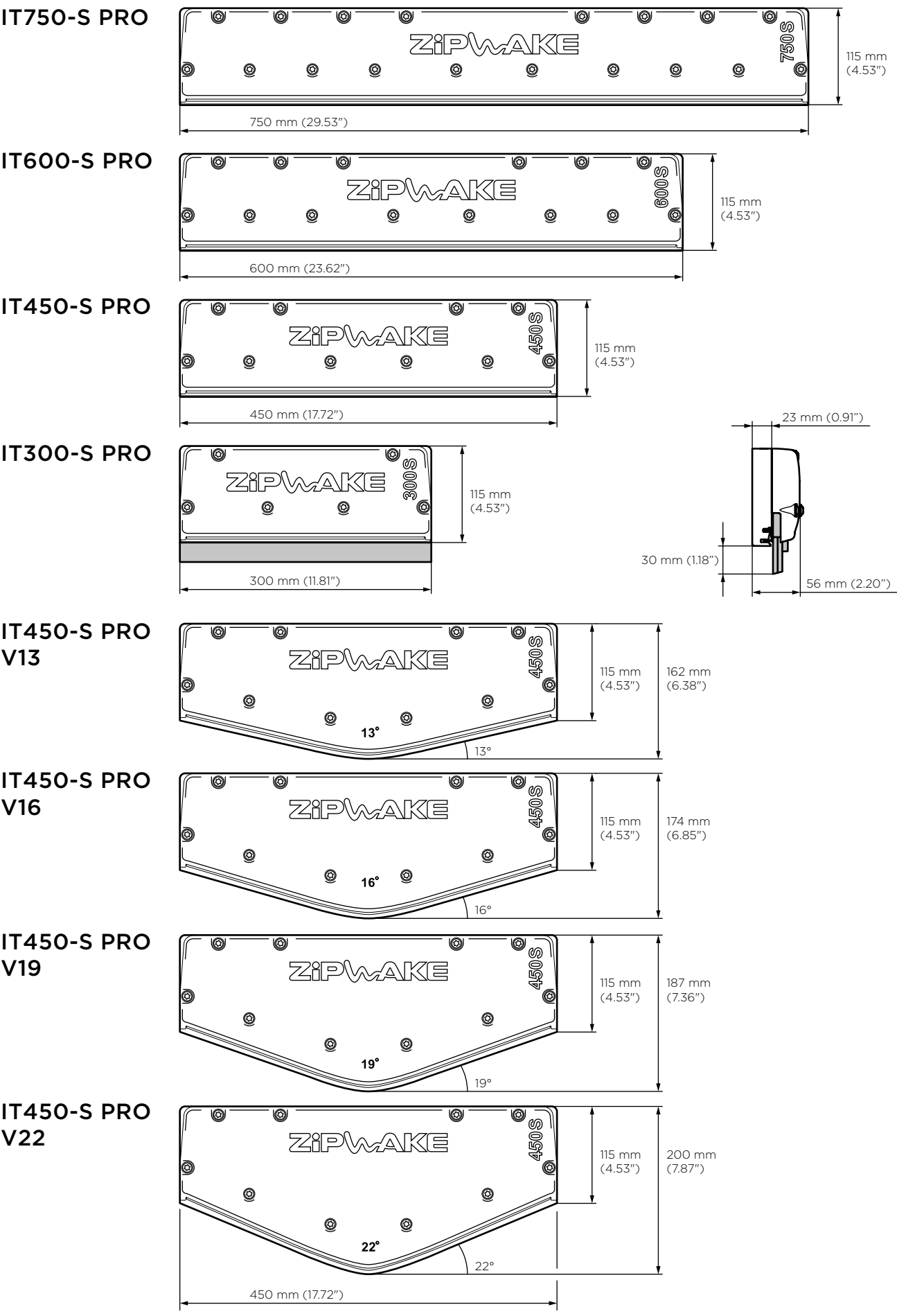
IT750-S PRO
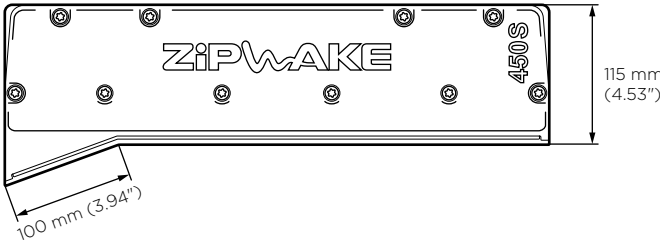
750 mm (29.53")

115 mm (4.53")

IT600-S PRO

600 mm (23.62")

115 mm (4.53")

IT450-S PRO

450 mm (17.72")

115 mm (4.53")

IT300-S PRO

300 mm (11.81")

115 mm (4.53")

23 mm (0.91")

30 mm (1.18")

56 mm (2.20")

IT450-S PRO V13

115 mm (4.53")   162 mm (6.38")

13°

13°

IT450-S PRO V16

115 mm (4.53")   174 mm (6.85")

16°

16°

IT450-S PRO V19

115 mm (4.53")   187 mm (7.36")

19°

19°

IT450-S PRO V22

115 mm (4.53")   200 mm (7.87")

22°

22°

450 mm (17.72")

**IT450-S PRO
CHINE PORT**

115 mm
(4.53")

100 mm (3.94")

**IT450-S PRO
CHINE STBD**

149 mm
(5.87")

356 mm (14.02")

20°

450 mm (17.72")

**IT300-S PRO
CHINE PORT**

115 mm
(4.53")

100 mm (3.94")

**IT300-S PRO
CHINE STBD**

149 mm
(5.87")

206 mm (8.11")

20°

300 mm (11.81")

**IT300-S PRO
INTER**

144 mm
(5.67")

300 mm (11.81")
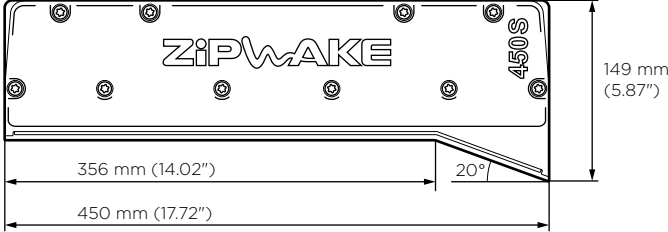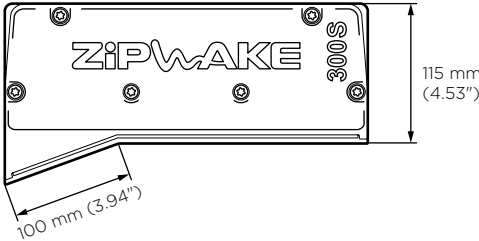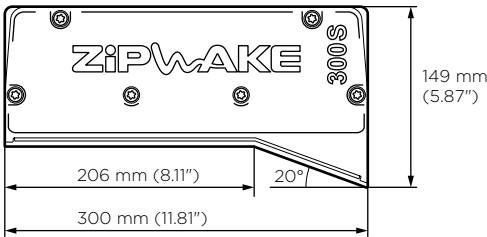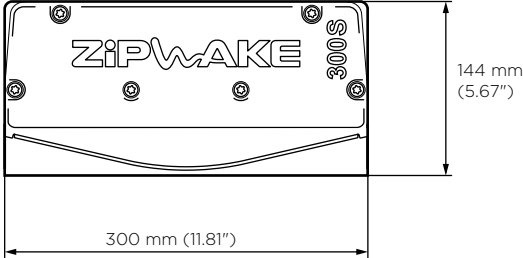
6.4 ORDERING DATA

Model	IT300-S PRO	IT450-S PRO	IT600-S PRO	IT750-S PRO
Part No.	2021232	2021233	2021234	2021235
	Comes with Cable 3 m and Cable Covers			

- Included in kit boxes
- Available as an accessory
- Available as a spare part

Model	IT450-S PRO V13	IT450-S PRO V16	IT450-S PRO V19	IT450-S PRO V22
Part No.	2021482	2021483	2021484	2021485
	Comes with Cable 3 m and Cable Covers			

- Available as an accessory
- Available as a spare part

Model	IT300-S PRO CHINE PORT	IT300-S PRO CHINE STBD	IT450-S PRO CHINE PORT	IT450-S PRO CHINE STBD
Part No.	2021702	2021703	2021704	2021705
	Comes with Cable 3 m and Cable Covers			

- Included in kit boxes
- Available as an accessory
- Available as a spare part

Model	IT300-S PRO INTER			
Part No.	2021701			
	Comes with Cable 3 m and Cable Covers			

- Available as an accessory
- Available as a spare part

7 DISTRIBUTION UNIT

The distribution unit (DU PRO) with built-in voltage boost circuitry supplies the servo units with 36V DC power. It can accommodate up to six Series S Pro interceptors.

The unit is connected to the main control panel or integrator module. It is robust, waterproof, oil resistant and ignition protected for mounting in an engine room.

The power cable is included for easy connection to a battery. The distribution unit has built-in electrical protection, including its own automatic circuit breakers.

7.1 SPECIFICATIONS

Model	DU PRO
Supply voltage	12 - 32 V DC
Power consumption	10 W max
Protection fuse	Integrated and automatic
Power cable	Length 4 m (13 ft), Diameter 9 mm (0.35 in), 12 AWG
Operating temperature	-20° to +85°C (-4° to +185°F)
Storage temperature	-40° to +90°C (-40° to +194°F)
Waterproof rating	IP67 with cables and/or protective caps mounted
Oil resistance	Common engine fluids
Compliance	CE, FCC, SAE J1171 Ignition Protected
Weight	1.1 kg (2.4 lbs) including the power cable

7.2 CONNECTORS

• Six interceptor connections

• I-BUS OUT

• 2-lead power cable

7.3 DIMENSIONS
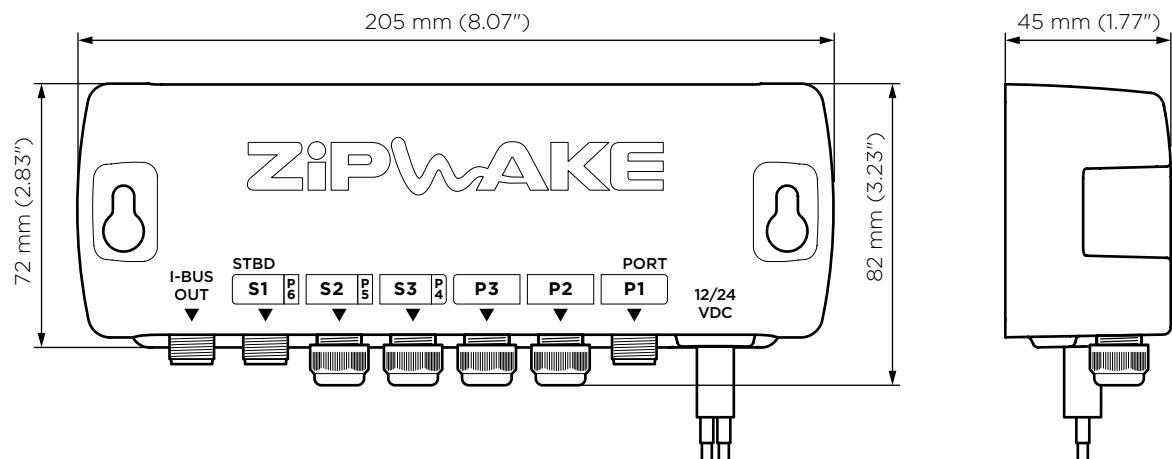
7.4 ORDERING DATA

Model	DU PRO
Part No.	2022033 with Power Cable 4 m

- Included in kit boxes

- Available as an accessory

- Available as a spare part

8   CABLES

Model	Description
SC3-M12	Standard Cable 3 m (10 ft)
SC7-M12	Standard Cable 7 m (23 ft)
SC15-M12	Standard Cable 15 m (49 ft)
EC1.5-M12	Extension Cable 1.5 m (5 ft)
EC3-M12	Extension Cable 3 m (10 ft)
EC5-M12	Extension Cable 5 m (16 ft)
EC10-M12	Extension Cable 10 m (33 ft)
EC15-M12	Extension Cable 15 m (49 ft)
EC20-M12	Extension Cable 20 m (65 ft)

The standard cables are used to connect the main control panel or the integrator module to the distribution unit, usually located on or near the transom and also to connect an extra control panel or mini controller. The standard cables can be extended by using any of the available extension cables. The servo unit cable can be extended using 1.5 m or 3 m extension cables. The total servo cable length must not exceed 6 m (20 ft).

8.1   SPECIFICATIONS

Model		SC3-M12	SC7-M12	SC15-M12	EC1.5-M12	EC3-M12	EC5-M12	EC10-M12	EC15-M12	EC20-M12
Weight	kg (lbs)	0.16 (0.35)	0.38 (0.84)	0.80 (1.76)	0.09 (0.2)	0.16 (0.35)	0.26 (0.57)	0.50 (1.1)	0.75 (1.65)	1.05 (2.31)
Connectors		M12 5-pin circular								
Connector diameter		14.5 mm (0.57 in)								
Cable material		PVC								
Rated current		4 A								
Waterproof rating		IP67 when connected								
Operating temperature		-20° to +85°C (-4° to +185°F)								
Storage temperature		-40° to +90°C (-40° to +194°F)								
Oil resistance		Common engine fluids								
Compliance		CE, FCC								

8.2   ORDERING DATA

Model	SC3-M12	SC7-M12	SC15-M12	EC1.5-M12	EC3-M12	EC5-M12	EC10-M12	EC15-M12	EC20-M12
Part No.	2012408	2011257	2012037	2011258	2011259	2011260	2011261	2012038	2012039

• Available as an accessory

• Available as a spare part

9 CONTROL PANEL ALU FRAME

The control panel comes with a black frame and a wheel cap in a glossy chrome finish.
A conversion kit is available for customers who prefer a brushed aluminum finish. The kit comes with simple instructions to make replacement easy.

9.1 SPECIFICATIONS

Model	CP ALU FRAME
Surface appearance	Brushed aluminum
Items in kit	1 x frame, 1 x wheel cap, 1 x instruction
Weight	0.03 kg (0.06 lbs)

9.2 ORDERING DATA

Model	CP ALU FRAME
Part No.	2011281

• Available as an accessory

• Available as a spare part

10 CONTROL PANEL COVER

Weather cover for the control panel. Protects the display from the harsh marine environment when not in use. Fits standard surface-mounted control panels. Available in five different colors to blend in with other instruments.

10.1 SPECIFICATIONS

Model	CP COVER
Surface appearance	Five different colors, soft-touch
Weight	0.05 kg (0.11 lbs)

10.2 ORDERING DATA

Model	CP COVER				
Color	☐ WHITE	☐ LIGHT GRAY	☐ MID GRAY	■ DARK GRAY	■ BLACK
Part No.	2011381	2011382	2011383	2011384	2011385

• Available as an accessory

• Available as a spare part

11 CONTROL PANEL GIMBAL BRACKET

When space is limited, the gimbal bracket provides a useful installation option for the control panel. The gimbal bracket enables the control panel to be positioned at any angle between 0 and 360 degrees, and it comes with a cable gland that allows waterproof, open-sky installation.

11.1 SPECIFICATIONS

Model	GB
Items in kit	1 x bracket, 1 x frame, 10 x screws, 1 cable gland, 1 x instruction
Weight	0.12 kg (0.27 lbs)

11.2 DIMENSIONS

Cable Gland

23 mm (0.9″)

48 mm (1.89″)

40 mm (1.57″)

125 mm (4.92″)

98 mm (3.86″)

107 mm (4.2″)
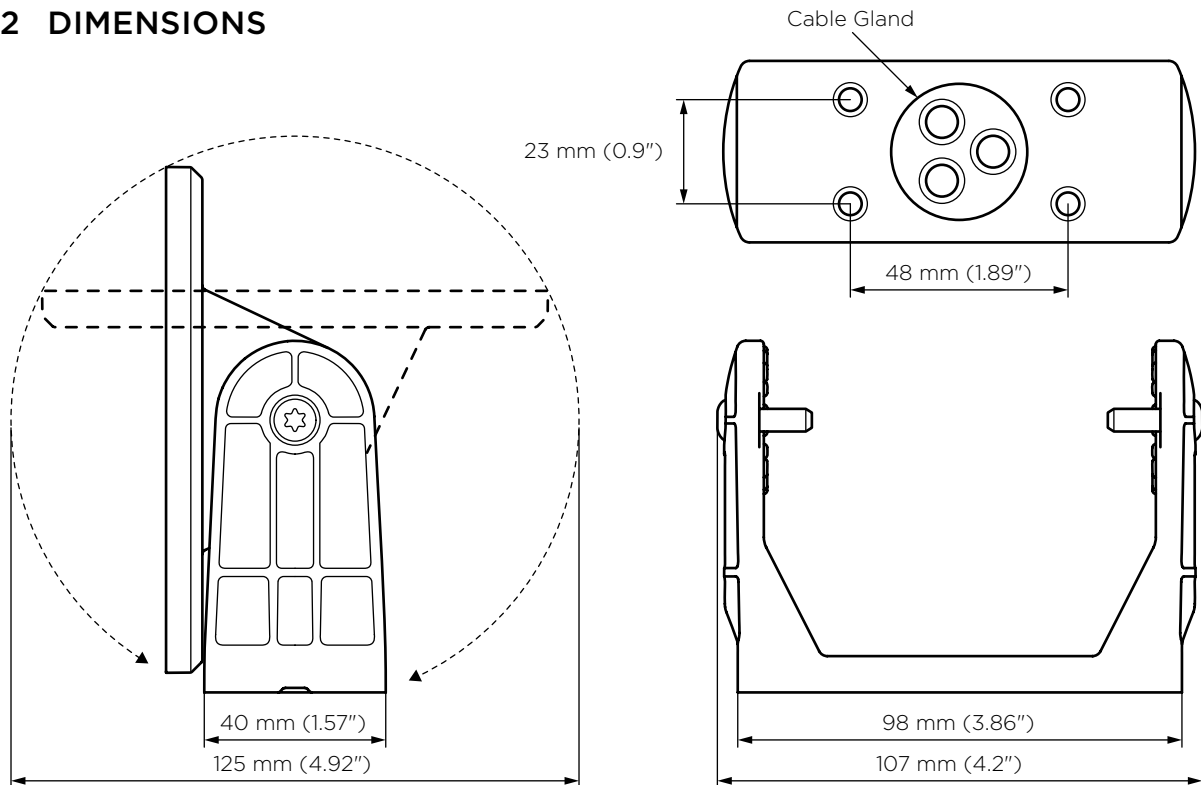
11.3 ORDERING DATA

Model	GB
Part No.	2011622

• Available as an accessory

• Available as a spare part

12 CABLE COVER

The thru-hull cable fitting of Series S interceptors can either be concealed behind the interceptor or positioned above the waterline. If the above-waterline mount is preferred, three parts are available to protect the cable: thru-hull cover, cable cover and a cable cover extension.

These parts are available as a cable cover kit to provide flexible routing of the cable on the transom.

12.1 SPECIFICATIONS

Model	CC-S
Items in kit	1 x thru-hull cover, 1 x cable cover 1 x cable cover extension 15 x screws
Weight	0.17 kg (0.37 lbs)

12.2 DIMENSIONS
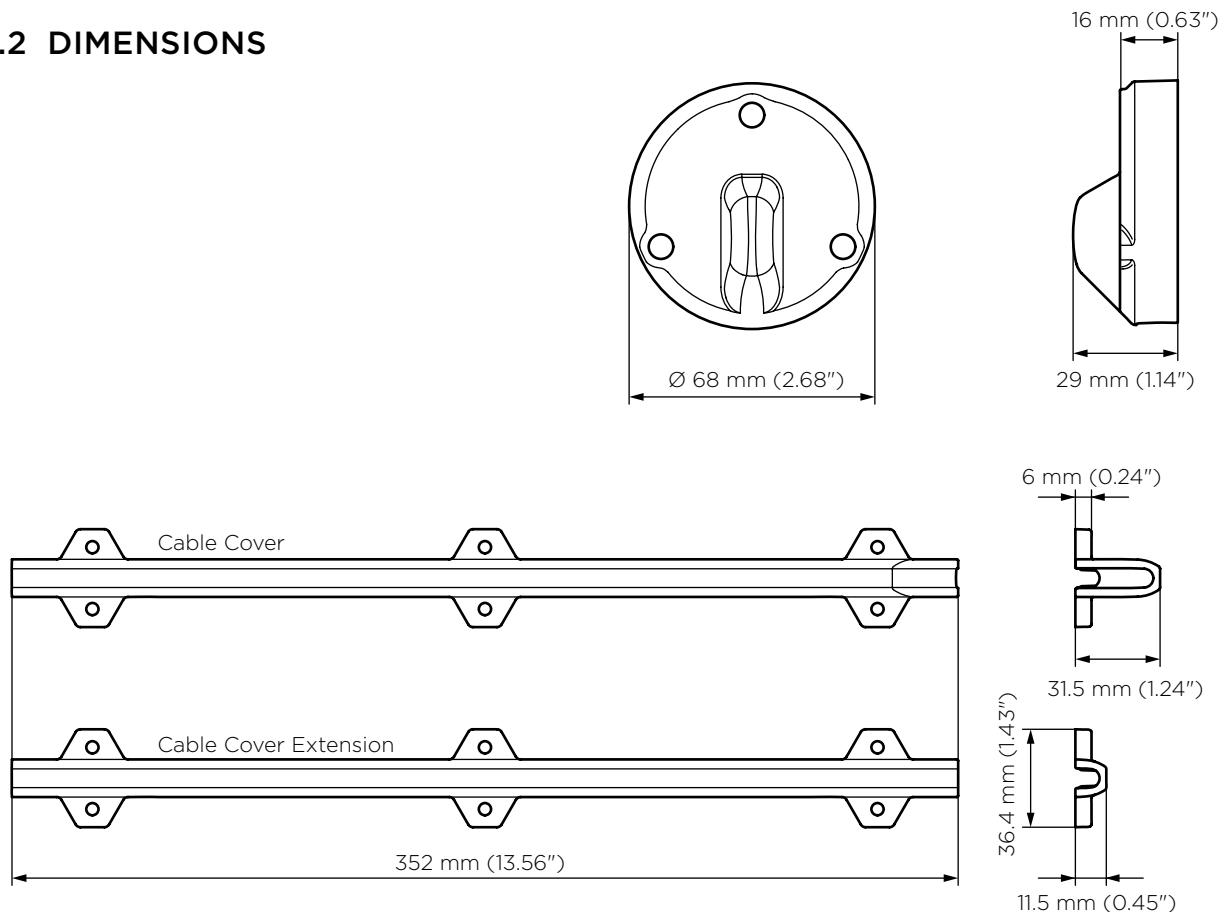
12.3 ORDERING DATA

Model	CC-S
Part No.	2011071 - Comes with each interceptor

• Available as an accessory

• Available as a spare part

13 SERVO UNIT

The Series S Pro submersible electrical servo unit fits inside the interceptor, where it drives with precision the mechanism that provides linear motion to the interceptor blades. The unit is ultra-fast, durable, calibration free and easy to install or replace. It comes with a rugged 3 m cable with a self-sealing thru-hull fitting.

13.1 SPECIFICATIONS

Model	SU-S PRO
Servo motor type	Brushless DC with Hall sensors
Operating voltage	36 V DC
Power consumption	35 W max
Operating temperature	0° to +40°C (+32° to +104°F)
Storage temperature	-40° to +90°C (-40° to +194°F)
Waterproof rating	IP68 5 m (16 ft)
Compliance	CE, FCC
Cable length	3 m (10 ft), extendable up to 6 m (20 ft)
Cable material	PUR
Connector	M12 5-pin circular
Connector diameter	14.5 mm (0.57 in)
Weight	0.7 kg (1.5 lbs) including cable

13.2 ORDERING DATA

Model	SU-S PRO
Part No.	2021230 with Cable 3 m

• Available as a spare part

14 INTERCEPTOR FRONTS

A front assembly comprises the interceptor's front housing, blade and assisting roller blade, the small parts that deal with blade linear motion and the set of screws required to mount the front to the back plate.

The front assemblies of the interceptors have been designed to mitigate further damage to the interceptor in the rare event of contact with floating debris. Each interceptor model's front assembly is therefore available as a spare part.

14.1 SPECIFICATIONS

Refer to interceptor specifications in section 6.2.

14.2 DIMENSIONS

Refer to interceptor dimensions in section 6.4.

14.3 ORDERING DATA

Model	IT300-S FRONT	IT450-S FRONT	IT600-S FRONT	IT750-S FRONT
Part No.	2011252	2011253	2011254	2011255

• Available as a spare part

Model	IT450-S V13 FRONT	IT450-S V16 FRONT	IT450-S V19 FRONT	IT450-S V22 FRONT
Part No.	2011492	2011493	2011494	2011495

• Available as a spare part

Model	IT300-S CHINE PORT FRONT	IT300-S CHINE STBD FRONT	IT450-S CHINE PORT FRONT	IT450-S CHINE STBD FRONT
Part No.	2011742	2011743	2011744	2011745

• Available as a spare part

Model	IT300-S INTER FRONT
Part No.	2011741

• Available as a spare part

15 ADAPTOR PLATES

Zipwake adaptor plates are designed to minimize transom preparations required for upgrading to Zipwake Series S or Series S Pro on boats already equipped with BTS interceptors and/or which have transoms with protruding bottom plates. The adaptor plates allow reuse of the existing screw hole pattern and they seal the previous holes for thru-hull fittings. Because the adaptor plates perfectly match the mounting holes, installation of the Zipwake interceptors is completely straightforward. All that is needed on the transom are the new holes for the Zipwake thru-hull fittings.

15.1 SPECIFICATIONS

Model	AP300-S	AP450-S	
Screw hole pattern	BTS 300	BTS 450	
Weight	0.75 (1.65)	1.00 (2.20)	Kg (lbs)
Items in kit	2 x adaptor plates, 2 x o-rings, 16/24 x screws, 1 x instruction		
Max. protrusion bottom plate	15 mm (0.59 in)		
Max. boat speed	60 knots		
Thru-hull cable fitting	Concealed or above waterline		

15.2 DIMENSIONS

AP450-S

28 mm (1.1")
45 mm (1.77")
106 mm (4.17")
242 mm (9.53")
394 mm (15.51")
450 mm (17.72")

AP300-S

10 mm (0.39")
115 mm (4.53")
106 mm (4.17")
242 mm (9.53")
300 mm (11.81")
15 mm (0.59")
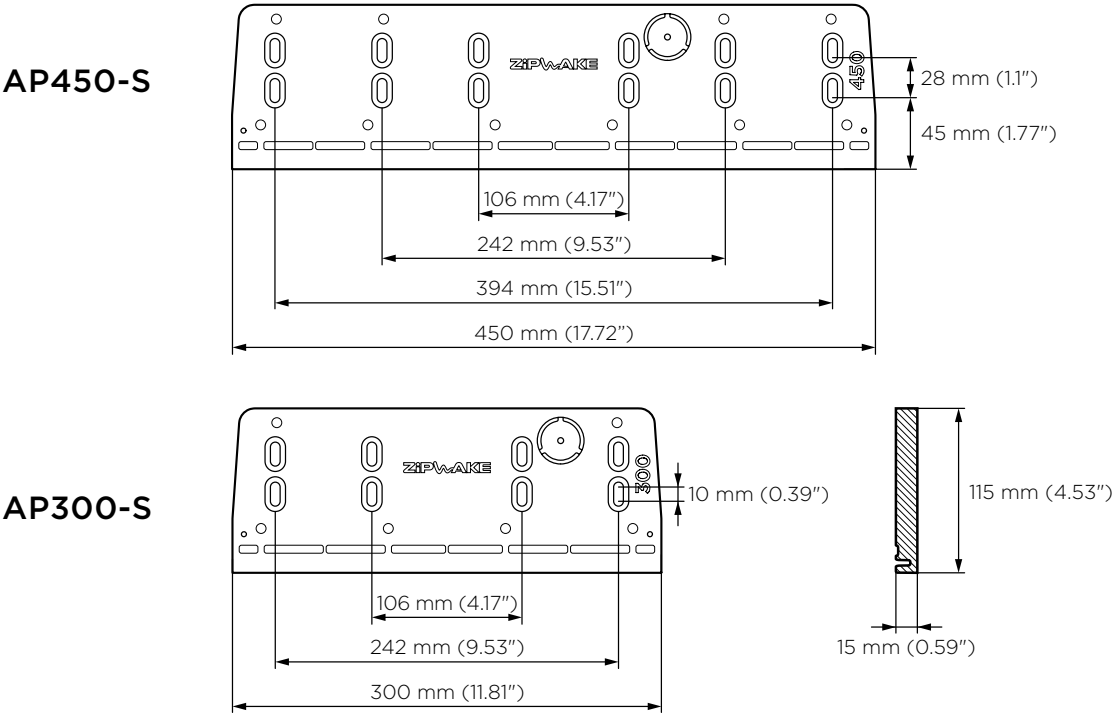
15.3 ORDERING DATA

Model	AP300-S	AP450-S
Part No.	2011585	2011586

• Available as an accessory

• Available as a spare part

16 EXTERNAL GPS ANTENNA

The Zipwake external GPS antenna is a 5Hz, 20-channel receiver with excellent reception that provides accurate and rapid vessel position and speed updates. Vessel speed is a necessary input for the Zipwake's automatic motion controller. The antenna has a rugged construction, is fully waterproof and can be mast or surface mounted on any vessel.

16.1 APPLICATION

The external GPS is optional and intended for use when no other strong GPS signal is available for the Zipwake system, e.g. when the vessel has just one helm station with a shielding top (canopy) and lacks other accessible GPS sources. In this case, the external GPS antenna is a good solution. Its 5 m cable can be extended up to 15 m using Zipwake extension cables. It connects easily to the connector marked EXT GPS on the back of the control panel. The external GPS can be connected to any control panel installed in the system.

16.2 SPECIFICATIONS

Model	GPU
Connectors	M12 5-pin circular
Cable material	White PVC
Cable length	5 m (16 ft) extendable to max 15 m (49 ft)
Operating voltage	5 V DC ±5%
Power consumption	0.28 W, 55 mA (average)
Protocol	NMEA 0183 / RS232
NMEA sentences	RMC, VTG, GGA, GSA, GSV, GLL
Baud rate	38400
Update rate	5 Hz
Number of channels	20
Average time to first fix	Hot start 6 s, Warm start 38 s, Cold start 42 s
Operating temperature	-30° to +85°C (-22° to +185°F)
Storage temperature	-40° to +95°C (-40° to +203°F)
Waterproof rating	IP67
Compliance	CE, FCC
Weight	0.065 kg (0.14 lbs) without cable and connector
Mounting	Flush or pole

16.3 PIN OUT

1	+5 V
2	RX (to GPS)
3	GND
4	Not connected
5	TX (from GPS)
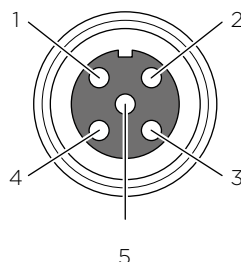
16.4 DIMENSIONS
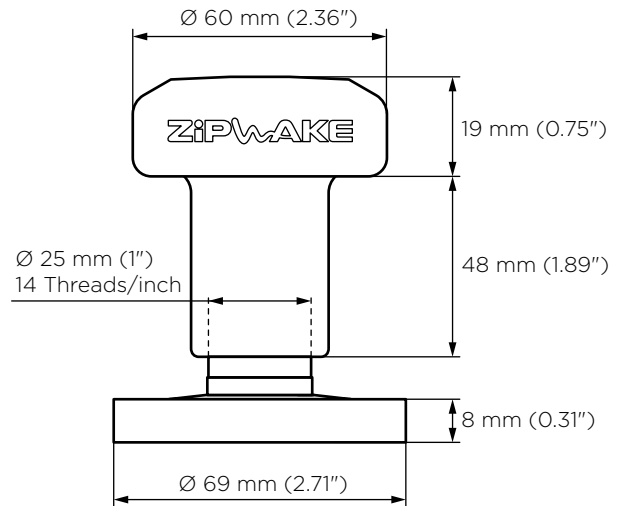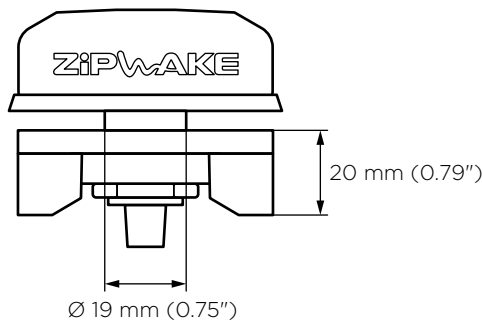
16.5 ORDERING DATA

Model	GPU
Part No.	2011240 with Cable 5 m and Mount Kit

• Available as an accessory   • Available as a spare part

17 UPGRADE KIT PRO

The Zipwake Upgrade Kit Pro is the perfect way to take an existing system to the next level. Simply replace the distribution unit, the servo units and update the software to go pro.

There are two kits available that both come with distribution unit pro (DU PRO):

• **Upgrade Kit S Pro** with two servo units (SU-S PRO) for two series S interceptors.

• **Upgrade Kit S Pro Quad** with four servo units (SU-S PRO) for four series S interceptors.

DU PRO

SU-S PRO

For installations with more interceptors, additional servo unit(s) can be ordered separately.

Refer to the distribution unit and servo unit chapters for more information about each part.

Software upgrade is available at zipwake.com.

17.1 ORDERING DATA

Model	UPGRADE KIT S PRO	UPGRADE KIT S PRO QUAD
Part No.	2022521	2022524
	Comes with 1x DU PRO and 2x SU-S PRO	Comes with 1x DU PRO and 4x SU-S PRO

• Available as an accessory

EXTERNAL GPS (GPU)

The external GPS can be connected to any control panel

GPS cable (5 m)

Max combined cable length (15 m)
(standard + extension cable)

Extension cable
(optional 1.5, 3, 5 or 10 m)

EXTRA CONTROL PANEL (CP PRO)

15(b)

Connect to key sense input on the control panel

Ignition switch

INTEGRATOR MODULE (IM)

(optional connections for hard-wired system integration and wireless communication)

Standard cable (7 m)

✱ Extension cable (optional)
(1.5, 3, 5, 10, 15 and 20 m)

MAIN CONTROL PANEL (CP PRO)

USB (upgrades etc.)

External GPS

NMEA 2000 network

Ignition switch

Distribution unit

Extra control panel

15(b)

Connect to key sense input on the control panel

Ignition switch

Extension cable* (optional)

Extension cable* (optional)

Extension cable* (optional)

DISTRIBUTION UNIT PRO (DU PRO)

PORT   P1   P2   P3   P4   S3   S5 P4   S2 P5   STBD S1 P6   I-BUS OUT

12/24 VDC

Power cable (4 m)

Standard cable (7 m)

To NMEA 2000 backbone
(optional GPS source, external monitoring and/or control)

POWER SUPPLY (12-32 V DC)

NOTE! Do **not** use automatic thermal/magnetic fuse.

Auto Cleaning

Battery

+

−

15A melting type fuse

Main switch

Battery

+

−

NOTE! Connect power directly to the positive battery terminal if interceptor **Auto Cleaning** will be used. Refer to the Operator's Manual on how to turn on the interceptor **Auto Cleaning** function.

NOTE!
Transom inside view

Extension cable (optional 1.5 or 3 m)

Max combined cable length (6 m)
(standard + extension cable)

PORT

**Port
Interceptor 1**

**Port
Interceptor 2**

**Port
Interceptor 3**

(3 m)

(3 m)

(3 m)

Optional:
Centerline mounted Series S Pro interceptor connected to P3

**Starboard
Interceptor 3**

**Starboard
Interceptor 2**

(3 m)

(3 m)

STBD

EXTERNAL GPS (GPU)

The external GPS can be connected to the integrator module or any control panel

GPS cable (5 m)

MULTIFUNCTION DISPLAY

AUTO
-0.6° ROLL -0.4°
29%
18.2 kt/s
TAP SCREEN TO ADJUST
+4.3° PITCH +28
57%

Max combined cable length (15 m)
(standard + extension cable)

To NMEA 2000 backbone
(optional GPS source, external montitoring and/or control)

* Extension cable (optional)
(1.5, 3, 5, 10, 15 and 20 m)

Ignition switch

15(b)
Connect to Key Sense input on the mini controller

MINI CONTROLLER (MC) (optional)

Standard cable (3 m)

Additional control panels

DISTRIBUTION UNIT PRO (DU PRO)

I-BUS OUT STBD S1 S2 S3 P3 P2 PORT P1 12/24 VDC

Power cable (4 m)

Standard cable (7 m)

MOBILE DEVICE

+4.3° PITCH +28
18.2 kt
-0.6° ROLL -0.4°
29%
AUTO
TAP SCREEN TO ADJUST
57%

INTEGRATOR MODULE (IM)

Ethernet
ETH 10/100
EXT CONN
NMEA 2000
I-BUS OUT
I-BUS IN
KEY SENSE

Extension cable (optional 1.5, 3, 5 or 10 m)

Extension cable* (optional)

Extension cable* (optional)

Extension cable* (optional)

Ignition switch

15(b)
Connect to Key Sense input on the integrator module

POWER SUPPLY (12-32 V DC)

NOTE! Do **not** use automatic thermal/magnetic fuse.

15A melting type fuse

Main switch

Battery

Battery

Auto Cleaning

NOTE! Connect power directly to the positive battery terminal if interceptor **Auto Cleaning** will be used. Refer to the Operator's Manual on how to turn on the interceptor **Auto Cleaning** function.

NOTE! Transom inside view

Extension cable (optional 1.5 or 3 m)

Max combined cable length (6 m)
(standard + extension cable)

PORT

Port Interceptor 1

(3 m)

Port Interceptor 2

(3 m)

Port Interceptor 3

(3 m)

Starboard Interceptor 3

(3 m)

Starboard Interceptor 2

(3 m)

Starboard Interceptor 1

(3 m)

STBD

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