### EXCEPTIONAL TRIM TAB SYSTEMS. UNMAICHED RELIABILITY

YAMAHA

Hydraulic & electric systems for boats across the spectrum



BENNETT MARINE













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YAMAHA

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2:0

# Benefits you c Reliability you

For over half a century, boaters have enjoyed the tangible benefits of Bennett Marine's exceptionally durable and dependable marine products.

We're proud to say that boaters trust our brand. After all, we invented the world's first adjustable trim tab—and we've never stopped pushing forward, always striving to make better, more affordable systems with maximum performance. Experience the benefits—get Bennett on board and enjoy the ride!

Reduce bow rise, plane faster, correct listing.



# an feel can trust

## Contents

- 4-5 BOLT Electric Kits
- 6-7 Hydraulic & SLT Trim Tab Kits
- 8-9 Helm Controls
- 10 Actuators & Trim Planes (Tabs)
- 11 Trim Tab Usability Overview



4-5



6-7







10



This kit includes everything necessary for a cost-effective, quick, and easy upgrade from Lenco actuators to Bennett's exceptionally durable and dependable actuators. Bennett electric actuators are built to last, backed by a lifetime limited warranty.

- Works with Lenco "Standard Mount," "Standard Performance,"
   and "Edge Mount" systems
- Plug-and-play connection to your existing standard Lenco controls (Determine compatibility at BennettTrimTabs.com/Lenco-to-Bolt)
- Simply replace the Lenco actuators with Bennett BOLT actuators using the existing drill holes
- No new holes to drill. Keep your existing trim tabs

| PN #      | DESCRIPTION  |
|-----------|--|
| BOLTLKCON | Lenco-to-BOLT Upgrade Kit (Controls & tabs not included) |

#### Hydraulic-to-BOLT Conversion Kit CONTROLS & TABS SOLD SEPARATELY



All you need for a quick and easy conversion from Bennett hydraulic actuators to Bennett BOLT electric actuators. BOLT actuators are exceptionally durable and dependable, backed by a lifetime limited warranty.

- Quick and easy conversion from standard Bennett hydraulic single actuator systems (A1101A & A1101ARC), using your existing wiring, rocker switch, and trim tabs
- · No rewiring or drilling of new holes required
- Plug-and-play connection to your existing standard Bennett Rocker Switch (ES2000 and LS3000)
- Includes auto tab retraction and diagnostics relay module

| PN#        | DESCRIPTION                      |
|------------|----------------------------------|
| HYDBOLTCON | Hydraulic-to-BOLT Conversion Kit |





Balance loads, plane faster, increase efficiency and performance with Bennett BOLT Electric Trim Tab systems, built to outlast any electric trim tab system on the market.

#### **Kits Include:**

- (2) 12-volt fixed upper hinge actuators with 6-ft. wire harnesses and waterproof connectors (BEA2000)
- (2) Stainless steel trim planes (tabs) and mounting plates
- (2) 20-ft. wire harnesses with waterproof connectors (BAW2020)

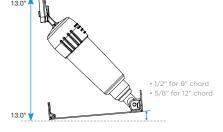
#### Features Include:

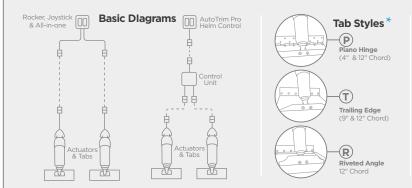
 Completely sealed upper hinge with no exposed wires

| PN#      | SPAN/CHORD   | *TAB  | RETAIL BOX   |
|----------|--------------|-------|--------------|
| BOLT124  | 12"x4"       | P     | $\checkmark$ |
| BOLT129  | 12"x9"       | T     | $\checkmark$ |
| BOLT189  | 18"x9"       | T     |              |
| BOLT249  | 24"x9"       | T     |              |
| B0LT1212 | 12"x12"      | R     | $\checkmark$ |
| B0LT1812 | 18"x12"      | R     |              |
| B0LT2412 | 24"x12"      | R     |              |
| BOLTBLT  | Tabs not inc | luded |              |
|          |              |       |              |

\* BOLTBTL Sets include the same items, less tabs









#### BOLT Electric - Edge Mount Limited Space Trim Tab Kits (12V)



Designed with an adjustable upper hinge for transoms with limited vertical space. Tabs turn up for added strength and feature piano-hinged backing plates.

PN#

#### **Kits Include:**

- (2) 12-volt adjustable upper hinge actuators with 6-ft. cables and waterproof connectors (BEA3000)
- BOLT612ED
   6"x12"
   P
   ✓

   BOLT912ED
   9"x12"
   P
   ✓

   BOLT1212ED
   12"x12"
   P
   ✓

   \* BOLTBLTADJ
   Tabs not included
   ✓

\* BOLTBTLADJ Sets include the same items, less tabs

SPAN/CHORD

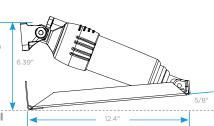
**RETAIL BOX** 

\*TAB

- (2) Stainless steel trim planes (tabs) and mounting plates
- (2) 20-ft. wire harnesses with waterproof connectors (BAW2020)

#### **Features Include:**

Requires less than 6.5" of
 vertical transom space to instal



#### **BOLT Short Electric Actuator Sets NEW**

Designed specifically for boat builder customers needing to accomodate limited-space transom pockets, this set features the new SEA3000 short electric actuators.

| PN#     | SPAN/CHORD | *TAB | RETAIL BOX | CONTROLS S |
|---------|------------|------|------------|------------|
| BOLTSML | 12"x9"     | T    |            | SEPARATELY |



Helm Control Options (Sold separately)







See page 8 for detailed control information

Rocker Control Joysticl (BRC4000) (JOY

Joystick Control All-in (JOY1000) ((

All-in-one Control (OBI9000E)

AutoTrim Pro (AP000A1BC)



Designed for rougher conditions and higher speeds with extremely durable 12-gauge, electro-polished stainless steel, featuring a full-profile backing plate, and up-fins for added strength.

PN#

SPAN/CHORD

BOLT1216HD 12"x16

\*TAB RETAIL BOX

 $(\mathbf{P})$ 

R4 anodes included to

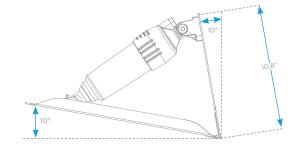
prevent electrolysis damage

#### Kits Include:

- (2) 12-volt adjustable upper hinge actuators with 6-ft. wire harnesses and waterproof connectors (BEA3000)
- (2) 12" span x 16 chord" heavy-duty tapered electro-polished trim tabs
- (2) 20-ft. wire harnesses with waterproof connectors (BAW2020)

#### **Features Include:**

- Requires less than 11" of vertical transom height
- Full-profile 12-gauge backing plate and up-fins for added strength







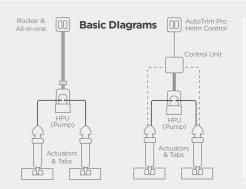
Hydraulic trim tabs are known for power, precision, and durability. Get the most from your boat, no matter what the load, speed, or sea conditions. Using the helm control, you can adjust the tabs individually or in unison to create the perfect cruising attitude. Increase speed and fuel economy, smooth a rough ride, and get on plane faster.

#### Kits Include:

- (2) Trim plane assemblies
- (2-4) Hydraulic actuators (A1101A)
- (1) Hydraulic power unit (V351HPU1)
- Hydraulic tubing and hardware
- Optional helm control
   (See below)

Retail Packaging





#### Low maintenance, long-term value, and ease of service

Features Include:Get on plane fast,

and stay on plane at

intermediate speeds

Improve visibility and safety

Reduce pounding and

eliminate porpoising

Correct listing and

uneven loads

- Exclusive transom mount interlocking tab design
- Sport batwing option (M80/ M120) provides 30% more lift for limited-space installations
- Bottom and piano hinge mounts are available for custom order

Tab Styles \*

Trailing Edge (9" Chord)

Riveted Angle

(S)

Sport M80/M120

(10 & 12" Cho

#### Kits without Control Included

| PN#     | SPAN/CHORD   | *TAB           | *ACT. | RETAIL BOX   |
|---------|--------------|----------------|-------|--------------|
| 129     | 12"x9"       | T              |       | $\checkmark$ |
| 189     | 18"x9"       | T              |       | $\checkmark$ |
| 249     | 24"x9"       | T              |       | ~            |
| 309     | 30"x9"       | $(\mathbf{T})$ |       |              |
| 369     | 36"x9"       | $(\mathbf{T})$ |       |              |
| 429     | 42"x9"       | $(\mathbf{T})$ |       |              |
| 489     | 48"x9"       | $(\mathbf{T})$ |       |              |
| 549     | 54"x9"       | T              |       |              |
| 1212    | 12"x12"      | R              |       | ~            |
| 1812    | 18"x12"      | R              |       | $\checkmark$ |
| 2412    | 24"x12"      | R              |       |              |
| 3012    | 30"x12"      | R              |       |              |
| 3612    | 36"x12"      | R              |       |              |
| 4212    | 42"x12"      | R              |       |              |
| 4812    | 48"x12"      | R              |       |              |
| 5412    | 54"x12"      | R              |       |              |
| 6012    | 60"x12"      | R              |       |              |
| 6612    | 66"x12"      | R              |       |              |
| 7212    | 72"x12"      | R              |       |              |
| *Actuat | tors per tab |                |       |              |

#### Complete Kits with All-in-one Control

| PN#   | SP/ | N/CHORD | *TAB | *ACT. | RETAIL BOX   |
|-------|-----|---------|------|-------|--------------|
| M800  | )BI | 8"x10"  | S    |       | $\checkmark$ |
| M120  | OBI | 10"x12" | S    |       | $\checkmark$ |
| 1290  | BI  | 12"x9"  | T    |       | $\checkmark$ |
| 1890  | BI  | 18"x9"  | T    |       | $\checkmark$ |
| 24901 | BI  | 24"x9"  | T    |       | $\checkmark$ |
| 1212( | OBI | 12"x12" | R    |       | $\checkmark$ |
| 1812( | OBI | 18"x12" | R    |       | $\checkmark$ |
| 2412( | OBI | 24"x12" | R    |       |              |
|       |     |         |      |       |              |

\*Actuators per tab

#### **Helm Control Options**



Rocker Control (ES2000)



All-in-one Control

(OBI9000H)

Complete Kits with Rocker Control



| PN#   | SPAN/CHORD | *TAB           | *ACT. | <b>RETAIL BOX</b> |
|-------|------------|----------------|-------|-------------------|
| M80   | 8"x10"     | S              |       | $\checkmark$      |
| M120  | 10"x12"    | S              |       | $\checkmark$      |
| 129E  | 12"x9"     | T              |       | $\checkmark$      |
| 189E  | 18"x9"     | (T)            |       | $\checkmark$      |
| 249E  | 24"x9"     | T              |       | $\checkmark$      |
| 309E  | 30"x9"     | $(\mathbb{T})$ |       |                   |
| 369E  | 36"x9"     | T              |       |                   |
| 429E  | 42"x9"     | $(\mathbf{T})$ |       |                   |
| 489E  | 48"x9"     | $(\mathbf{T})$ |       |                   |
| 549E  | 54"x9"     | (T)            |       |                   |
| 1212E | 12"x12"    | R              |       | $\checkmark$      |
| 1812E | 18"x12"    | R              |       | $\checkmark$      |
| 2412E | 24"x12"    | R              |       |                   |
| 3012E | 30"x12"    | R              |       |                   |
| 3612E | 36"x12"    | R              |       |                   |
| 4212E | 42"x12"    | R              |       |                   |
| 4812E | 48"x12"    | R              |       |                   |
| 5412E | 54"x12"    | R              |       |                   |
| 6012E | 60"x12"    | R              |       |                   |
| 6612E | 66"x12"    | R              | Ø     |                   |
| 7212E | 72"x12"    | R              |       |                   |
|       |            |                |       |                   |

\*Actuators per tab

#### Complete Kits with AutoTrim Pro

See page 8 for detailed information and more set retrofit options.

| PN# S   | PAN/CHORD | *IAB | *ACT. | RETAIL BOX   |
|---------|-----------|------|-------|--------------|
| M80ATP  | 8"x10"    | S    |       | $\checkmark$ |
| M120ATF | 0 10"x12" | S    |       | $\checkmark$ |
| 129ATP  | 12"x9"    | T    |       | $\checkmark$ |
| 189ATP  | 18"x9"    | T    |       | $\checkmark$ |
| 249ATP  | 24"x9"    | (T)  |       | $\checkmark$ |
| 1212ATP | 12"x12"   | R    |       | $\checkmark$ |
| 1812ATP | 18"x12"   | R    |       | $\checkmark$ |
| 2412ATP | 24"x12"   | R    | Ø     |              |
|         |           |      |       |              |

TAD TAD

\*Actuators per tab





#### **Performance Electro-polished Trim Tab Kits**



Enjoy the electro-polished finish of Performance Tabs. Manufactured with heavy-gauge reinforced stainless steel and powerful hydraulic actuators. Performance Tabs combine strength, durability, and good looks to achieve your boat's maximum potential.

#### Features Include:

· Get on plane fast and stay on plane at intermediate speeds

- Correct listing and uneven loads
- Reduce pounding and eliminate porpoising •
- Improve visibility and safety
- Low maintenance with long-term value

#### Kits Include:

- (1) Helm control (Rocker, EIC, or ATP) (See page 8-9)
- (2) Trim plane assemblies
- (2-4) Hydraulic actuators
- (1) Hydraulic power unit (V351HPU1)
- Hydraulic tubing and hardware

#### **Complete Kits** with Rocker

| PN#    | SPAN/CHORD   | *TAB           | *ACT. | RETAIL BOX   |
|--------|--------------|----------------|-------|--------------|
| ST9    | 12"x9"       | $(\mathbf{T})$ |       | $\checkmark$ |
| ST12   | 12"x12"      | $(\mathbf{R})$ | Ø     | $\checkmark$ |
| ST16   | 12"x16"      | R              | Ø     |              |
| *Actua | tors per tab |                |       |              |



|     | plete Ki<br>AutoTri |            |            |
|-----|---------------------|------------|------------|
| PN# | SPAN/CHORD          | *TAB *ACT. | RETAIL BOX |

| ST9ATP    | 12"x9"    | $(\mathbf{T})$ | $\checkmark$ |
|-----------|-----------|----------------|--------------|
| ST12ATP   | 12"x12"   | R              | $\checkmark$ |
| ST16ATP   | 12"x16"   | R              |              |
| *Actuator | s per tab |                |              |

| Con  | nplete Ki  | ts w | <b>vith</b> |            |
|------|------------|------|-------------|------------|
| All- | in-one Co  | ontr | ol          |            |
| PN#  | SPAN/CHORD | *TAB | *ACT.       | RETAIL BOX |

| ST90BI  | 12"x9"  |   | $\checkmark$ |
|---------|---------|---|--------------|
| ST120BI | 12"x12" | R | $\checkmark$ |
| ST160BI | 12"x16" | R |              |

#### Self-Leveling Tabs (SLT)

SPRING-LOADED. NO HELM CONTROLS NEEDED.



A simple, durable, and affordable trimming solution for smaller boats. Quick and easy installation with nothing to do inside the boat-just mount the actuators and trim tabs on the transom and enjoy the benefits.

#### Kits Include:

- (2) 14-gauge stainless steel tabs with Bennett's exclusive interlocking hinge
- (2) Strong, durable, spring-loaded actuators
- · All stainless steel hardware

#### Features Include:

- Three mounting options to easily change lift
- Plane at lower speeds
- Improve fuel efficiency
- Eliminate porpoising and chine walking
- Improve your hole shot
- Reduce engine laboring and improve fuel efficiency



Retail Packaging

| PN#   | DESCRIPTION  |
|-------|--|
| SLT6  | SLT6 - 6"x 8" Spring-loaded Tabs for Small boats up to 16' (60 lb. spring) |
| SLT10 | SLT10 - 10"x10" Spring-loaded Tabs for Small boats 17'-20' (90 lb. spring) |



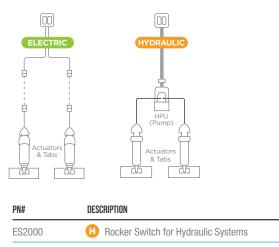
#### Helm Displays & Controls

#### **Rocker Switch Control**



This economic control is ergonomically designed, water resistant, and provides a distinctive "click" when the trim tabs are engaged.

#### **Basic System Diagram**



BRC4000 Rocker Switch for Electric Systems

#### NMEA2000 Indication Kit Hydraulic ONLY

See the position of your trim tabs on your NMEA2000-compatible multi-function display or gauge, GPS/chartplotter, or sonar.

#### Kits Include:

- (1) White plastic clip (ATC9)
- (6) Red butt connectors (THB6)
- (1) NMEA1 sensor (EP30)
- (2) Upper hinges with coil (CC3003S and CC3003P)
- (2) Sensor rods

Controls not included



H NMEA2000 Indication Kit for Hydraulic Systems NMEA2000

#### All-in-one Indicator Control Also known as OBI Control and Integrated Helm Control BEN ) DN DN



An attractive and user-friendly, stand-alone helm control without the need for an external control unit. The functionality and "brains" of the control unit are engineered directly into a single, space-saving, and simple-to-install keypad.

#### Included:

• (1) Helm Control w/3-ft. cable

#### Included with hydraulic only

(2) Upper Hinge Screw-on Sensors

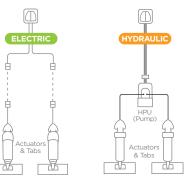
#### Features Include:

- Convenient "All Up" and "All Down" buttons
- Trim tab position LEDs always show you where your tabs are
- Auto tab retraction (tabs retract up when the ignition is powered off)

Retail Packaging

- Easy-to-install single lock nut design
- Compatible with other trim tab system brands
- Easily upgrade from hydraulic systems without tab position indication

#### **Basic System Diagram**



| PN#      | DESCRIPTION  |  |
|----------|--|--|
| 0BI9000H | B All-in-one Indicator Control for Hydraulic Systems |  |
| 0BI9000E | All-in-one Indicator Control for Electric Systems    |  |

DESCRIPTION

PN#



#### **AutoTrim Pro Automatic Control**





**Put Your Trim Tabs** 

AutoTrim Pro is an all-in-one auto trim tab control system designed for boats of all sizes-packing a boatload of essential features into an easy-to-use, space-saving keypad. Reduce bow rise, improve visibility, correct listing—automatically.

#### Kits Include:

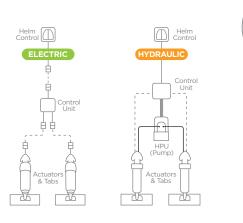
- (1) ATP helm display w/3-ft. cable (ATPDISP)
- (1) ATP control unit w/3-ft. cable (ATPHYDCTRL or ATPBOLTCTRL)
- (1) 25' extension cable (BHW4025)
- Required hardware



#### Features Include:

- Compatible with Bennett hydraulic or electric trim tab
   systems and most non-Bennett trim tab systems
- · Auto trim tab control with favorite buttons
- Take manual control of your trim tabs at any time
- Trim tab position indication with adjustable L.E.D.s
- Auto tab retraction when ignition is powered off

#### **Basic System Diagram**





#### Joystick Helm Control ELECTRIC ONLY





Charles Bennett originally introduced adjustable trim tabs with joystick controls inspired by aircraft ailerons and controls. The joystick helm control acclaimed for it's instinctive and intuitive interface is back—with a sleek redesign!

#### Features Include:

- Easily trim your vessel like a boss!
- Instinctive and intuitive feel and operation
- Connects directly to your actuators with plug-and-play connectors
- Auto tab retraction (tabs retract up when the ignition is powered off)
- · Compatible with other trim tab system brands

# CELECTRIC

**Basic System Diagram** 



| PN#     | DESCRIPTION                                |
|---------|--|
| J0Y1000 | Joystick Helm Control for Electric Systems |



#### Actuators & Trim Plane Assemblies



#### **Actuators**

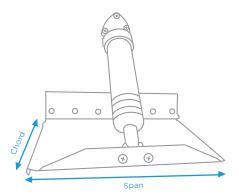
Bennett actuators are built to last, maintenance-free, and backed by Bennett's legendary support.

| PN#     | DESCRIPTION   | POWER     | WARRANTY         |
|---------|---|-----------|------------------|
| SSA     | Premier Line Hydraulic SSA Actuator for SST Systems         | Hydraulic | 1 Year           |
| BXA     | Premier Line Hydraulic BXA Actuator for XPT and BXA Systems | Hydraulic | 1 Year           |
| BEA2000 | BOLT Electric Actuator with Fixed Upper Hinge               | Electric  | Lifetime Limited |
| BEA3000 | BOLT Electric Actuator with Adjustable Upper Hinge          | Electric  | Lifetime Limited |
| A1101A  | Standard Length Hydraulic Actuator                          | Hydraulic | Lifetime Limited |
| A1200S  | Short Hydraulic Actuator                                    | Hydraulic | Lifetime Limited |
| SEA3000 | Short Electric Actuator                                     | Electric  | Lifetime Limited |
|         |   |           |                  |

Actuator variations not shown: A1101CP (Actuator with 30' sensor wire for TPI or NMEA), A1101CPEIC (Actuator with 10' sensor wire for EIC), SLT actuators

#### **Trim Plane Assemblies**

Bennett Marine's durable and dependable trim planes are made of high quality 12 or 14-gauge 304 stainless steel. Each trim plane assembly (for one side of the boat) includes a trim plane, hinge plate, and backing plate.



#### **Assembly Components**

Trim Plane Assemblies (TPA) consist of 3 main components, which can all be ordered separately. When ordering separately, simply swap "TPA" with the acronyms below. For example: HP12 is a 12" Hinge Plate Only.

- BP Backing Plate Only
- HP Hinge Plate Only
- TPO Trim Plane Only



Performance

| PN#      | SPAN/CHORD |
|----------|------------|
| TPAST9   | 12"x9"     |
| TPAST12  | 12"x12"    |
| TPAST16P | 12"x16"    |
| TPAST16S | 12"x16"    |





TPA1212ED 12"x12"

(M80/M120) PN# SPAN/CHORD

TPAM80 8"x10' TPAM120 10"x12"



**Riveted Angle** PN# SPAN/CHORD TPA1212 12

TPA1812

TPA2412

TPA3012

TPA3612

TPA4212

TPA4812

TPA5412

TPA6012

TPA6612

TPA7212

60"x12"

66"x12"

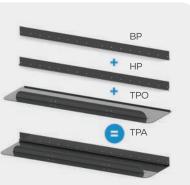
72"x12"

| SI AII/ UIIUIID |        |
|-----------------|--------|
| 12"x12"         | TPA129 |
| 18"x12"         | TPA189 |
| 24"x12"         | TPA249 |
| 30"x12"         | TPA30  |
| 36"x12"         | TPA36  |
| 42"x12"         | TPA429 |
| 48"x12"         | TPA489 |
| 54"x12"         | TPA54  |
|                 |        |

| Trailing Edge |            |  |
|---------------|------------|--|
| PN#           | SPAN/CHORD |  |
| TPA129        | 12"x9"     |  |
| TPA189        | 18"x9"     |  |
| TPA249        | 24"x9"     |  |
| TPA309        | 30"x9"     |  |
| TPA369        | 36"x9"     |  |
| TPA429        | 42"x9"     |  |
| TPA489        | 48"x9"     |  |
| TPA549        | 54"x9"     |  |

11 - 3/4" (2.25" Stroke)

SEA3000





## A BETTER RIDE

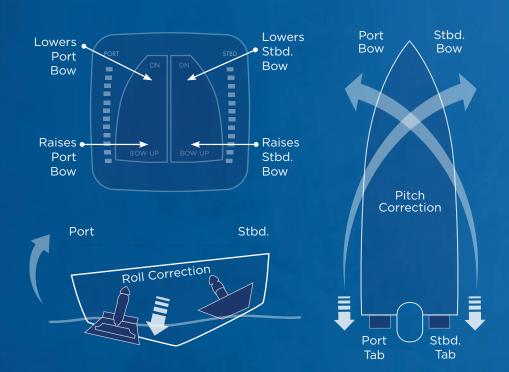
Properly sized trim tabs improve the performance of your boat by adjusting the running angle of your vessel. Bennett Marine trim tabs help you get on plane faster, correct listing to one side, improve visibility, and increase your fuel efficiency.

- Get up on plane quickly, and plane at lower speeds
- Increase performance and fuel
   efficiency
- Increase visibility
- Adjust the boat's attitude for changes in speed, sea conditions, and shifting weight
- Correct listing on either side of the boat



#### Learn more at BennettTrimTabs.com/Guide

- Key features & benefits
- Sizing guidelines
- System comparison
- Install tips, and more



#### **How Trim Tabs Work**

When the tabs are deployed downward, the water force on the trim tab surface creates upward pressure, raising the stern and lowering the bow. The port trim tab lowers the starboard bow, and the starboard trim tab lowers the port bow. The control is intuitively wired so that all you have to do is press the button in the direction you want the bow to move.

When the port tab is lowered independently, an upward force at the port stern of the boat is created. The inverse applies when lowering the starboard tab independently.



MARINE

#### **The Undisputed Leader**

In 1960, Charles Bennett invented the first adjustable trim tab system. Since then, we've continued to push forward and have introduced a myriad of industry-changing innovations, like auto tab control, trim tab position indication, and NMEA2000 integration.

We've worked with the best boat builders and enthusiasts in the world to create a host of exceptional products, and we back them with the best warranty in the industry. Bennett Marine is also the only manufacturer that offers both electric and hydraulic trim tab systems.

## ENJOY THE RIDE

Benefits you can feel. Quality you can trust.

DOE