



## MECHANICAL STEERING - POWER & SAIL

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A blue product code or the appearance of this logo indicates the product requires special ordering. Please contact BLA on **1300 252 725** for information on these products.

  
boatinglifestyleadventure

**STEERING SYSTEM KITS**  
Popular mechanical steering systems as a packaged kit.  
Includes helm, bezel and cable to length.



**SeaStar Solutions®**

**Dedicated To Command And Control**

SeaStar Solutions have put boaters in command and control of their vessels for over 60 years. From throttle and shift control cables to your boat's steering, to instrumentation and repair parts for your engine and drive, SeaStar Solutions® continues to lead the recreational marine industry with innovation, quality and a commitment to supplying boat builders, dealers and boaters with the parts they need, when they need them.

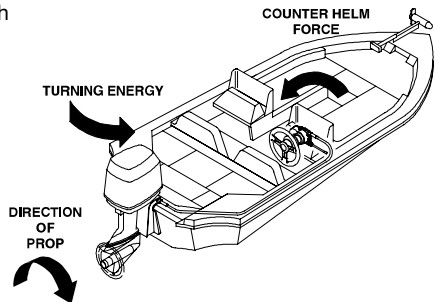
It's this dedication that has kept SeaStar Solutions® at the forefront of the industry – and that continues to play an important role as we grow in the 21st century.

**Steering System Selection Guide**

| SYSTEM                            | OUTBOARD   |    |    |     |     |     |     |     |     |     |         | STERN DRIVE |         | DISPLACEMENT |      |     | INBOARD     |      |     |
|-----------------------------------|------------|----|----|-----|-----|-----|-----|-----|-----|-----|---------|-------------|---------|--------------|------|-----|-------------|------|-----|
|                                   | 40 KNOTS + |    |    |     |     |     |     |     |     |     |         | Non Power   | Power   | Inboard      |      |     | to 40 knots |      |     |
|                                   | 25         | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | present | Steered     | Steered | 5m           | 7.5m | 10m | 5m          | 7.5m | 10m |
| XTREME™ Mechanical                |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| NFB Safe-T® II                    |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| Quick Connect 3 Turn Single Cable |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| Quick Connect 3 Turn Twin Cable   |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| Command 290 Rotary                |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| Quick Connect 4 Turn              |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| NFB 4.2 Single Cable              |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| NFB Twin Cable                    |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| Rack                              |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| NFB Rack                          |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| HPS                               |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |
| Hydraulic                         |            |    |    |     |     |     |     |     |     |     |         |             |         |              |      |     |             |      |     |

**No FeedBack Steering for Outboards**

Steering loads exist in all outboard powered boats. These steering loads are actually turning energy from your engine's propeller. **NFB** steering locks out the prop feedback load which causes hard to handle steering. With **NFB** the wheel doesn't turn until you turn it.



## SeaStar Solutions® Steering System Kit - Quick Connect 3.0 Turn

The most popular boat steering system ever made. Quick response 3.0 turn system rated for all outboards and stern drives to V6. Boats travelling over 40 knots, or when engine flutter is apparent, should use twin cables. Simple and reliable quick-fit connection at the helm makes installation a snap. See page 738 for full details. Steering wheels ordered separately, refer pages 726-732.



### Features:

- Quick-response of 3 turns lock-to-lock
- Kits include: cable, helm, 90° bezel and hardware
- Standard 3/4" round tapered steering shaft
- Stainless steel cable output ends
- Fast, easy installation: uses simple snap-in cable connection, SeaStar Solutions Quick Connect (QC) cable, and industry-standard Safe-T mounting hardware
- Meets A.B.Y.C. standards
- Meets N.M.M.A. certification requirements
- Made, designed and assembled in the USA



| BLA Code | Description                |
|----------|----------------------------|
| 2801XX   | Complete Quick Connect kit |

### Kit Includes:

|        |                   |
|--------|-------------------|
| 280132 | Single cable helm |
| 280154 | 90° bezel         |
| 2811XX | Cable             |

N.B. Last two digits denote cable length in feet

## SeaStar Solutions® Steering System Kit - *nfb* (No FeedBack) Safe-T® II

Latest generation No FeedBack technology. This smooth 3.0 turn system is suitable for all single station boats with single non-power assisted outboard engines up to V4. Boats travelling over 40 knots, or when engine flutter is apparent, should use NFB 4.2 twin cable, see page 741 for details. Steering wheels ordered separately, refer pages 726-732.



### Features:

- Patented No FeedBack™ Steering mechanism
- Quick response of 3 turns lock-to-lock
- Minimal clutch free play
- Standard 3/4" round tapered steering shaft
- Stainless steel cable output ends
- Fast, easy installation
- Quick Connect (QC) cable
- Kits include: cable, helm, 90° bezel and hardware
- Meets A.B.Y.C. standards
- Meets N.M.M.A. certification requirements
- Made, designed and assembled in the USA



| BLA Code | Description         |
|----------|---------------------|
| 2800XX   | Complete NFB II kit |

### Kit Includes:

|        |           |
|--------|-----------|
| 280250 | Helm      |
| 280150 | 90° bezel |
| 2811XX | Cable     |

N.B. Last two digits denote cable length in feet

**SUPER SMOOTH  
PLANETARY GEARING**



## SeaStar Solutions® Steering System Kit - *nfb* (No FeedBack) 4.2 Rotary

Built with an emphasis on safety and durability. The 4.2 turn No FeedBack mechanism eliminates engine torque feedback at the wheel, for the safest mechanical steering on the market. Suited for most single station boats with single non-power assisted outboard engines up to V6. Boats travelling over 40 knots, or when engine flutter is apparent, should use twin cables, see page 742 for details. Steering wheels ordered separately, refer pages 726-732.



### Features:

- Patented No FeedBack™ Steering mechanism
- Comfortable 4.2 turns from lock-to-lock
- Minimal clutch free play
- Standard 3/4" round tapered steering shaft
- Stainless steel cable output ends
- Fast, easy installation: uses SeaStar Solutions Quick Connect (QC) steering cable
- Kits include: cable, helm, 90° bezel and hardware
- Meets A.B.Y.C. standards
- Meets N.M.M.A. certification requirements
- Made, designed and assembled in the USA



| BLA Code | Description                 |
|----------|-----------------------------|
| 2802XX   | Complete NFB 4.2 Rotary kit |

### Kit Includes:

|        |                   |
|--------|-------------------|
| 280232 | Single cable helm |
| 280150 | 90° bezel         |
| 2811XX | Cable             |

*N.B. Last two digits denote cable length in feet*

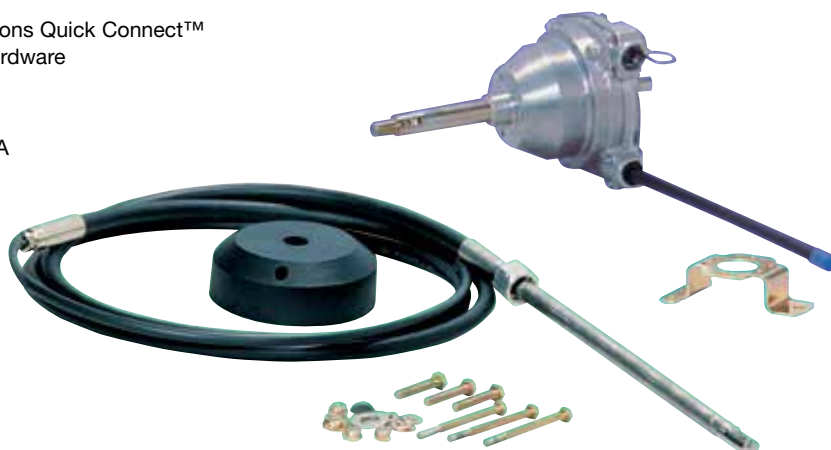
## SeaStar Solutions® Steering System Kit - HPS 3.0 Turn Planetary Gearing

A super smooth planetary drive steering system designed particularly to suit stern drives with power steering. High Performance Steering (HPS) reduces backlash associated with power steered boats by up to 50%. All the components required to create a basic HPS steering system are included. Cable lengths range from 6 feet to 40 feet, see page 740 for details. Steering wheels ordered separately, refer pages 726-732.



### Features:

- Designed exclusively for boats with power-assisted steering
- Unique 3-turn helm with planetary gears and coated helical steering cable combine to deliver a compact helm with incredible response and minimal lost motion
- HPS Rotary helms fit industry-standard
- SeaStar Solutions dash cutouts: either Safe-T/Rotary NFB™ or Tilt
- Compact helm takes up little room behind the dash
- Designed to handle normal steering loads
- Standard 3/4" round tapered steering shaft
- Stainless steel cable output ends
- Fast, easy installation: uses SeaStar Solutions Quick Connect™ (QC) cable & standard Safe-T mounting hardware
- Meets A.B.Y.C. standards
- Meets N.M.M.A. certification requirements
- Made, designed and assembled in the USA



| BLA Code | Description               |
|----------|---------------------------|
| 2806XX   | Complete HPS steering kit |

### Kit Includes:

|        |           |
|--------|-----------|
| 280646 | Helm      |
| 280154 | 90° bezel |
| 2816XX | Cable     |

*N.B. Last two digits denote cable length in feet*

## SeaStar Solutions® Steering System Kit - The Rack

Rack and pinion mechanism for improved efficiency and precision. Easy feel 4 turn system rated for all outboards and stern drives to V6. Boats travelling over 40 knots, or when engine flutter is apparent, should use twin cables. Back mount design allows fast installation of the cable and helm as a unit from behind the dash, see page 746 for details. Steering wheels ordered separately, refer pages 726-732.



### Features:

- Precise, easy 4 turns lock-to-lock
- Kits include: cable, helm, 90° bezel and hardware
- Standard 3/4" round tapered steering shaft
- Stainless steel cable output ends
- Fast, easy installation: back mount design allows quick placement in dash plus mounting hardware fits industry-standard SeaStar Solutions rack holes
- Meets A.B.Y.C. standards
- Meets N.M.M.A. certification requirements
- Made, designed and assembled in the USA



| BLA Code | Description                |
|----------|----------------------------|
| 2803XX   | Complete Rack steering kit |

### Kit Includes:

|        |           |
|--------|-----------|
| 280346 | Helm      |
| 280350 | 90° bezel |
| 2813XX | Cable     |

N.B. Last two digits denote cable length in feet

## How to measure steering cables

Measure cable routing path from wheel centre line to engine connection as follows:

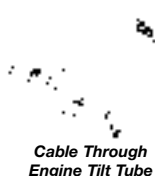
- **A** - Centre line of wheel to gunwale (or deck, if routed downward)
- **B** - Dash to transom
- **C** - Gunwale to centre line of cable connection at centred tiller

For cable installations through the engine tilt tube - Add A, B and C, then add 150mm, then round up to the next size. Order that length cable.

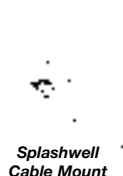
For cable mounted to transom, splashwell or stringer - Add A, B and C, then subtract 150mm and round up to the next size. Order that length cable.

### Replacement of existing cable:

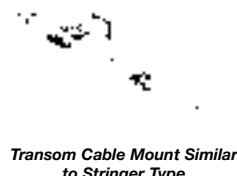
If possible, find the part number stamped on the plastic jacket of the old cable. If you removed the old cable, measure the replacement cable as per the diagrams on the right.



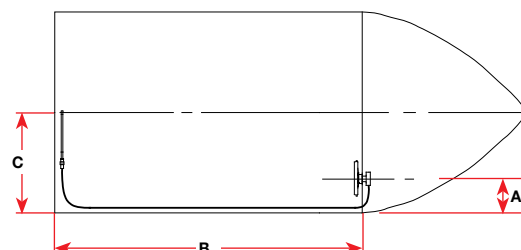
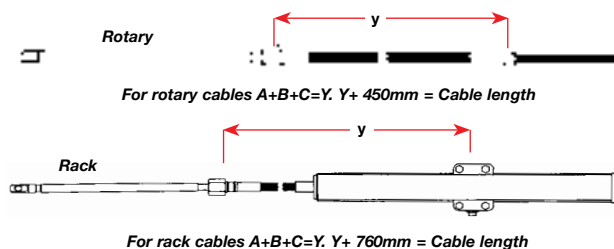
Cable Through Engine Tilt Tube



Splashwell Cable Mount



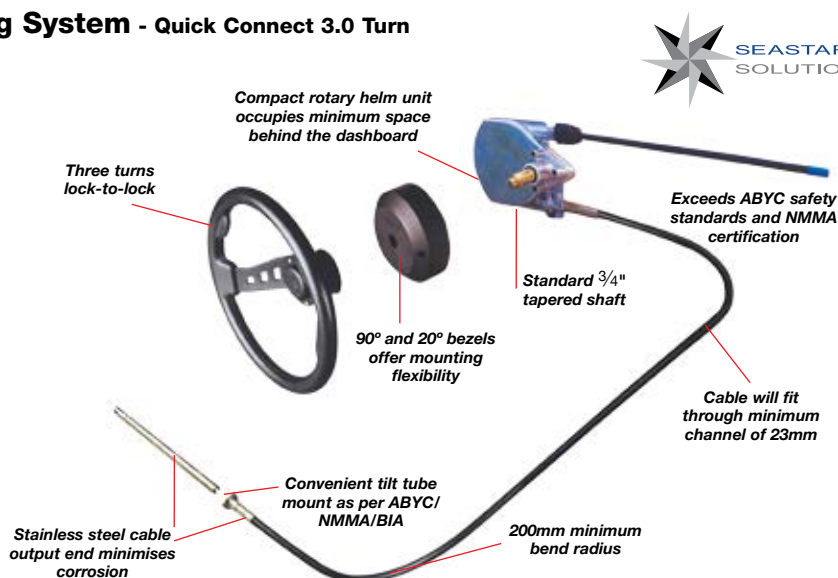
Transom Cable Mount Similar to Stringer Type



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BLA.COM.AU TO DOWNLOAD  
RELEVANT TEMPLATES.

## SeaStar Solutions® Steering System - Quick Connect 3.0 Turn

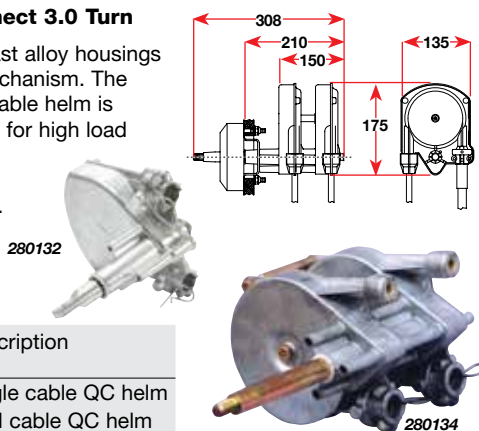
The Quick Connect steering system is the OEM's choice for simple, safe, reliable, easy to install steering for boats up to 7.5m and all outboards to V6. Boats travelling over 40 knots, or when engine flutter is apparent, should use twin cables. This system does not require tools to connect the cable to the helm reducing installation time by up to 50%. The nut on the engine end is trapped in place which saves time chasing coupler nuts during installation. Suitable for steering wheels up to 400mm. Twin cable systems, for a single engine, require the purchase of an additional genuine outboard twin tube mount kit.



## SeaStar Solutions® Helms

### - Quick Connect 3.0 Turn

Durable die cast alloy housings with rotary mechanism. The **280134** dual cable helm is recommended for high load applications. Accepts SSC62 cables.

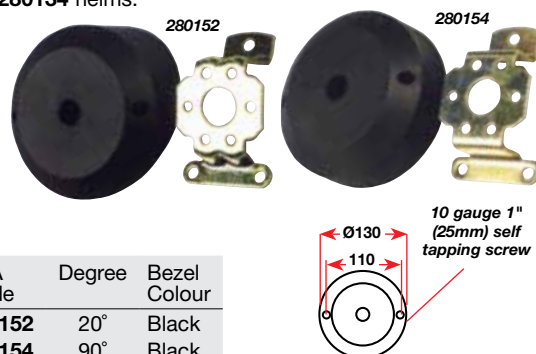


| BLA Code      | Description          |
|---------------|----------------------|
| <b>280132</b> | Single cable QC helm |
| <b>280134</b> | Dual cable QC helm   |

## SeaStar Solutions® Bezel Kits

### - Quick Connect

Bezel kits include mount brackets and fastenings for **280132** and **280134** helms.

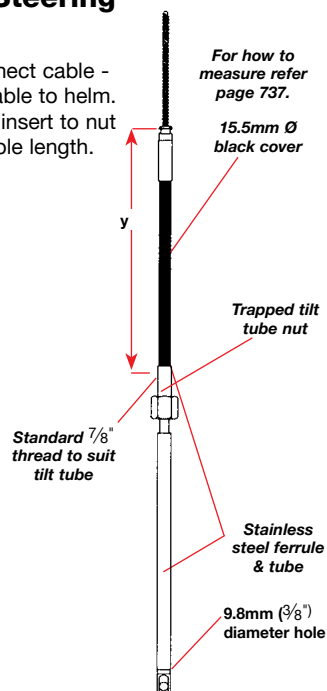


| BLA Code      | Degree | Bezel Colour |
|---------------|--------|--------------|
| <b>280152</b> | 20°    | Black        |
| <b>280154</b> | 90°    | Black        |

## SeaStar Solutions® Steering Cables - Quick Connect

SSC62 type push in quick connect cable - no tools required to connect cable to helm. Length is measured from helm insert to nut plus 450mm. Y + 450mm = cable length.

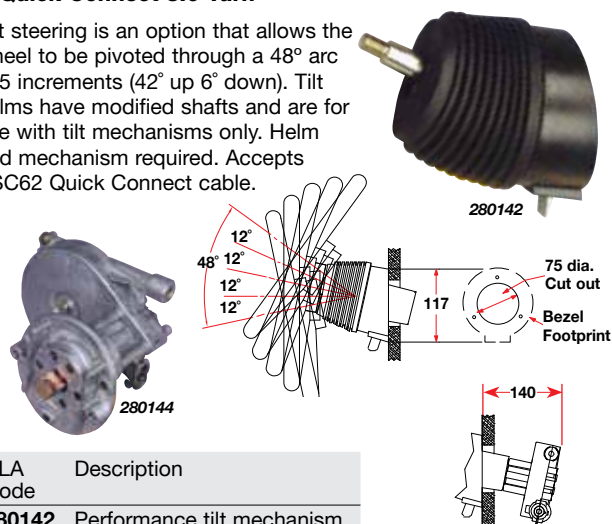
| BLA Code      | Cable Length ft | m    |
|---------------|-----------------|------|
| <b>281109</b> | 9               | 2.74 |
| <b>281110</b> | 10              | 3.05 |
| <b>281111</b> | 11              | 3.35 |
| <b>281112</b> | 12              | 3.66 |
| <b>281113</b> | 13              | 3.96 |
| <b>281114</b> | 14              | 4.27 |
| <b>281115</b> | 15              | 4.57 |
| <b>281116</b> | 16              | 4.88 |
| <b>281117</b> | 17              | 5.18 |
| <b>281118</b> | 18              | 5.49 |
| <b>281119</b> | 19              | 5.79 |
| <b>281120</b> | 20              | 6.10 |
| <b>281121</b> | 21              | 6.40 |
| <b>281122</b> | 22              | 6.71 |
| <b>281123</b> | 23              | 7.01 |
| <b>281124</b> | 24              | 7.32 |
| <b>281125</b> | 25              | 7.62 |



## SeaStar Solutions® Tilt Sport Steering

### - Quick Connect 3.0 Turn

Tilt steering is an option that allows the wheel to be pivoted through a 48° arc in 5 increments (42° up 6° down). Tilt helms have modified shafts and are for use with tilt mechanisms only. Helm and mechanism required. Accepts SSC62 Quick Connect cable.



| BLA Code      | Description                |
|---------------|----------------------------|
| <b>280142</b> | Performance tilt mechanism |
| <b>280144</b> | Tilt helm QC single        |

## SeaStar Solutions® Steering System Kit

### - Quick Connect 3.0 Turn

| BLA Code      | Description                    |
|---------------|--------------------------------|
| <b>2801XX</b> | Includes helm, bezel and cable |



## How to Order

To order a complete set of Quick Connect 3.0 Turn steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit or tilt mechanism, 1 x cable and 1 x connection kit if required. Alternatively BLA offer a pre-packaged basic system that includes a **280132** helm, **280154** bezel and **2811XX** cable.

N.B. Last two digits denote cable length in feet

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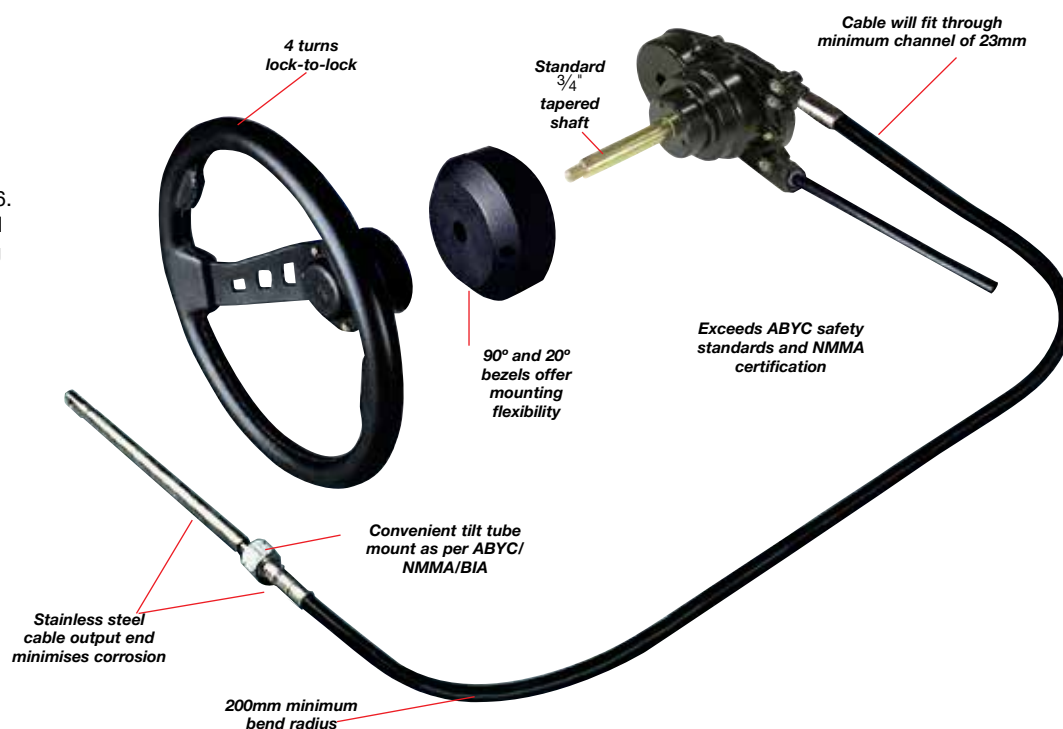
## SeaStar Solutions® Steering System - Quick Connect 4.0 Turn

The 4.0 turn gearing provides surprisingly light turning with engine feel. The precision die-cast alloy helm unit incorporates the Quick Connect helical cable system for fast, easy installation.



### Applications:

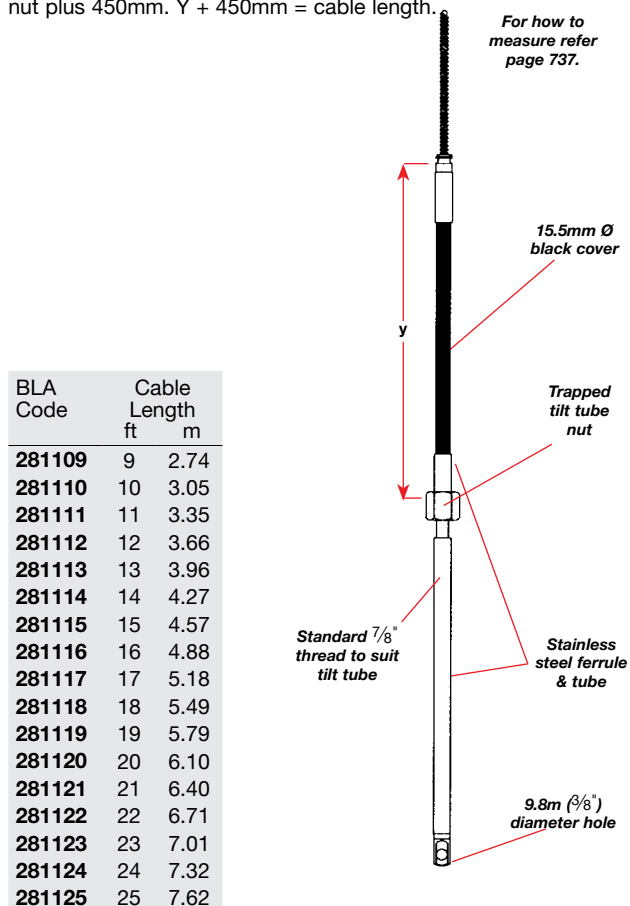
- Wheels up to 400mm
- Sportboats
- Pontoon boats
- Runabouts
- Centre consoles
- All outboards to V6. Not recommended for boats travelling over 40 knots, or when engine flutter is apparent



## SeaStar Solutions® Steering Cables

### - Quick Connect

SSC62 type push in quick connect cable - no tools required to connect cable to helm. Length is measured from helm insert to nut plus 450mm. Y + 450mm = cable length.

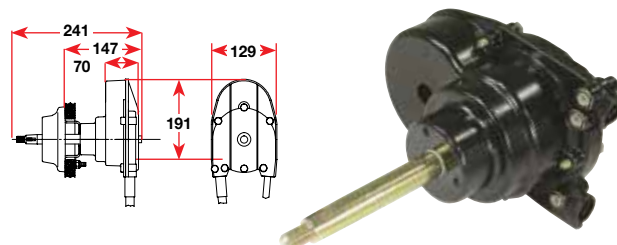


| BLA Code | Cable Length ft | Cable Length m |
|----------|-----------------|----------------|
| 281109   | 9               | 2.74           |
| 281110   | 10              | 3.05           |
| 281111   | 11              | 3.35           |
| 281112   | 12              | 3.66           |
| 281113   | 13              | 3.96           |
| 281114   | 14              | 4.27           |
| 281115   | 15              | 4.57           |
| 281116   | 16              | 4.88           |
| 281117   | 17              | 5.18           |
| 281118   | 18              | 5.49           |
| 281119   | 19              | 5.79           |
| 281120   | 20              | 6.10           |
| 281121   | 21              | 6.40           |
| 281122   | 22              | 6.71           |
| 281123   | 23              | 7.01           |
| 281124   | 24              | 7.32           |
| 281125   | 25              | 7.62           |

## SeaStar Solutions® Helm

### - Quick Connect 4.0 Turn

Durable die cast black alloy housing with rotary mechanism. Accepts SSC62 Quick Connect cables.



| BLA Code | Description                       |
|----------|-----------------------------------|
| 280846   | Single cable 4.0 turn rotary helm |

## SeaStar Solutions® Bezel Kits

### - Quick Connect

Bezel kits include mount brackets and fastenings for 280846 helm.



| BLA Code | Degree | Bezel Colour |
|----------|--------|--------------|
| 280152   | 20°    | Black        |
| 280154   | 90°    | Black        |

## How to Order

To order a complete set of Quick Connect 4.0 Turn steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit, 1 x cable and 1 x connection kit if required.

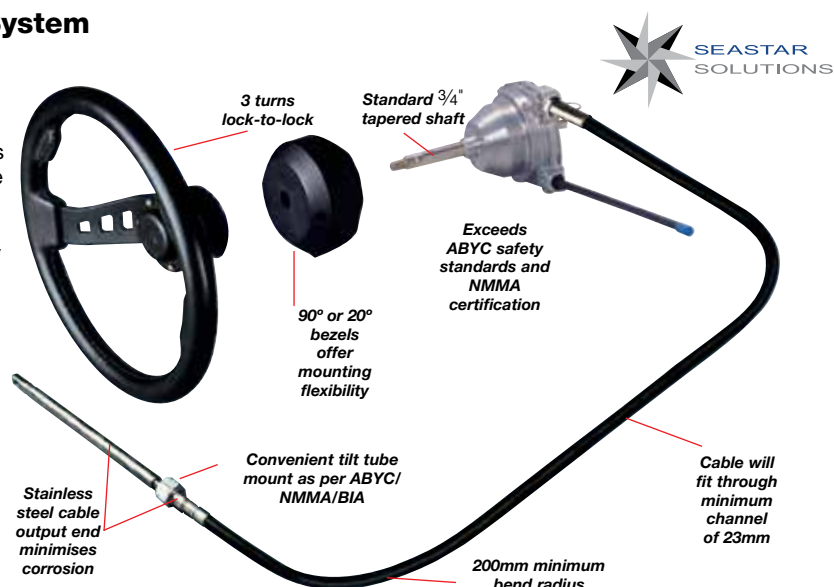


## SeaStar Solutions® Steering System

### - HPS 3.0 Turn Planetary Gearing

High Performance Steering (HPS) designed specifically for stern drives with power steering. With only three turns lock to lock it is a very direct steering system that provides the ultimate in response with minimal backlash often associated with power steered boats. Can reduce backlash by up to 50%. Planetary drive gearing and coated helical inner SSC63 steering cable combine to deliver incredibly smooth steering with minimal lost motion.

**SUPER SMOOTH  
PLANETARY GEARING**



### SeaStar Solutions® Helm

#### - HPS 3.0 Turn Planetary Gearing

Durable die cast alloy housing with low friction, planetary gearing. Accepts SSC63 HPS cable.

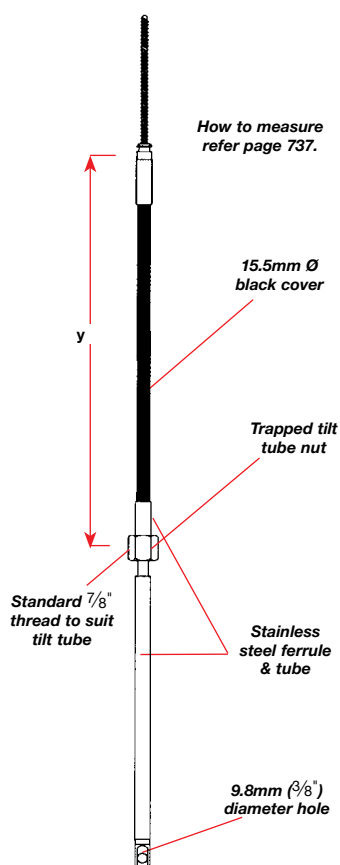


### SeaStar Solutions® Steering Cables

#### - HPS 3.0 Turn Planetary Gearing

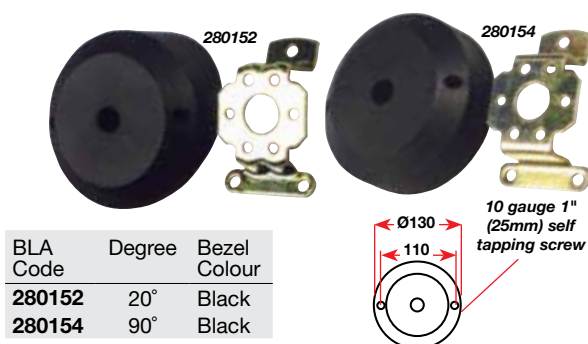
SSC63 quick connect cable with coated helical inner core for ultimate smoothness. Length is measured from helm insert to nut, plus 450mm. Y + 450mm = cable length.

| BLA Code | Cable Length |       |
|----------|--------------|-------|
|          | ft           | m     |
| 281606   | 6            | 1.83  |
| 281607   | 7            | 2.13  |
| 281608   | 8            | 2.44  |
| 281609   | 9            | 2.74  |
| 281610   | 10           | 3.05  |
| 281611   | 11           | 3.35  |
| 281612   | 12           | 3.66  |
| 281613   | 13           | 3.96  |
| 281614   | 14           | 4.27  |
| 281615   | 15           | 4.57  |
| 281616   | 16           | 4.88  |
| 281617   | 17           | 5.18  |
| 281618   | 18           | 5.49  |
| 281619   | 19           | 5.79  |
| 281620   | 20           | 6.10  |
| 281621   | 21           | 6.40  |
| 281622   | 22           | 6.70  |
| 281623   | 23           | 7.01  |
| 281624   | 24           | 7.32  |
| 281625   | 25           | 7.62  |
| 281626   | 26           | 7.93  |
| 281627   | 27           | 8.23  |
| 281628   | 28           | 8.53  |
| 281629   | 29           | 8.84  |
| 281630   | 30           | 9.14  |
| 281632   | 32           | 9.75  |
| 281634   | 34           | 10.36 |
| 281636   | 36           | 10.97 |
| 281638   | 38           | 11.58 |
| 281640   | 40           | 12.19 |



### SeaStar Solutions® Bezel Kits

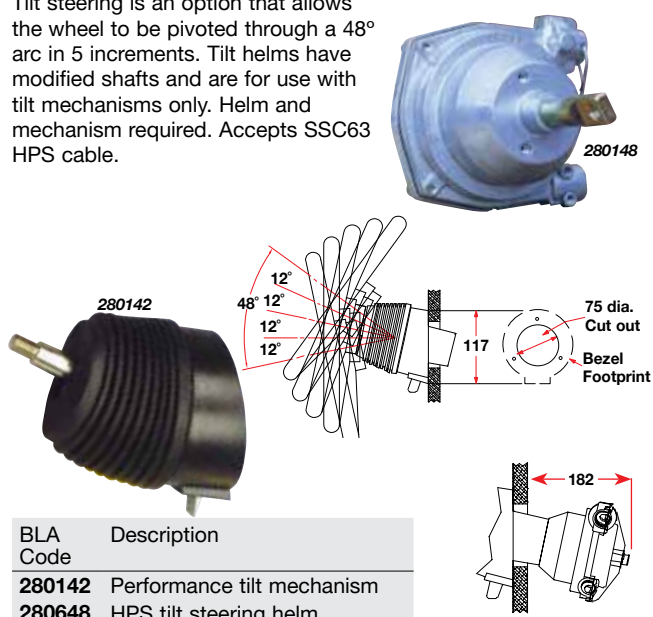
Bezel mount kits include all brackets and fastenings to suit 280646 helm.



### SeaStar Solutions® Tilt Sport Steering

#### - HPS 3.0 Turn Planetary Gearing

Tilt steering is an option that allows the wheel to be pivoted through a 48° arc in 5 increments. Tilt helms have modified shafts and are for use with tilt mechanisms only. Helm and mechanism required. Accepts SSC63 HPS cable.



### How to Order

To order a complete set of HPS steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit or tilt mechanism, 1 x cable and 1 x connection kit if required. Alternatively we offer a pre-packaged basic system 2806XX, that includes a 280646 helm, 280154 bezel and 2816XX cable.

N.B. Last two digits denote cable length in feet



## SeaStar Solutions® Steering System - Safe-T® II

It's the next generation of the world's number one rotary steering system; rugged, compact, lightweight and with the latest No FeedBack technology. There simply isn't an easier way to upgrade to the comfort and control of No FeedBack steering. The Safe-T® II helm fits directly into existing SeaStar Solutions® rotary dash cut outs.



**3 turns lock-to-lock**

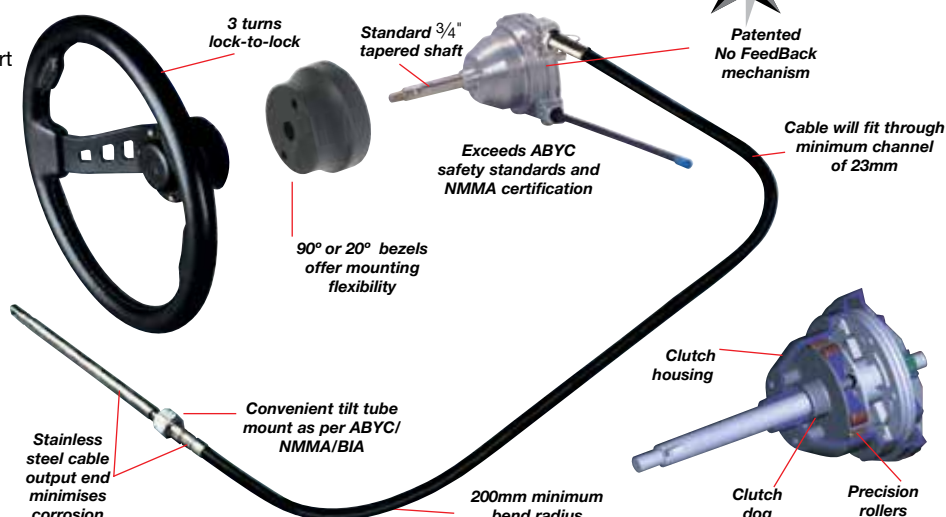
**Standard 3/4" tapered shaft**

**Exceeds ABYC safety standards and**



**Applications:**

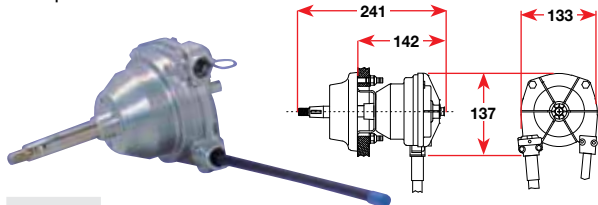
All outboards to V4. Boats travelling over 40 knots, or when engine flutter is apparent, should use NFB 4.2 twin cable, see page 742.



## SeaStar Solutions® Helm

-  **Safe-T® II**

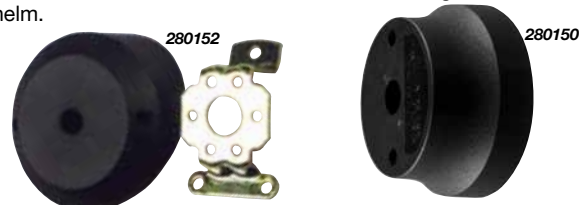
Durable die cast housing, with planetary gearing.  
Accepts SSC62 Quick Connect cable.

BLA  
Code  
**280250**

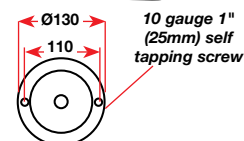
## SeaStar Solutions® Bezel Kits

-  **Safe-T® II**

Bezel kits include mount brackets and fastenings for **280250** helm.



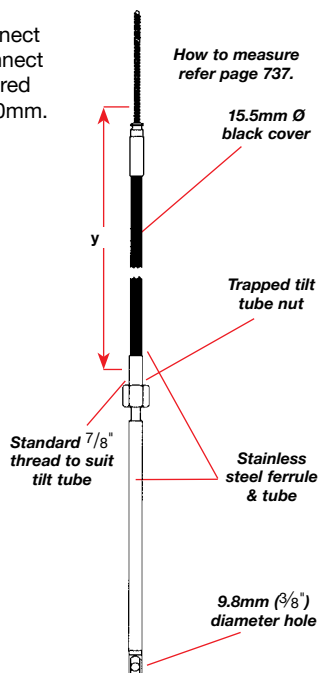
| BLA Code      | Degree | Bezel Colour |
|---------------|--------|--------------|
| <b>280150</b> | 90°    | Black        |
| <b>280152</b> | 20°    | Black        |



-  **Safe-T<sup>®</sup> II**

SSC62 type push in Quick Connect cable - no tools required to connect cable to helm. Length is measured from helm insert to nut plus 450mm. Y + 450mm = cable length.

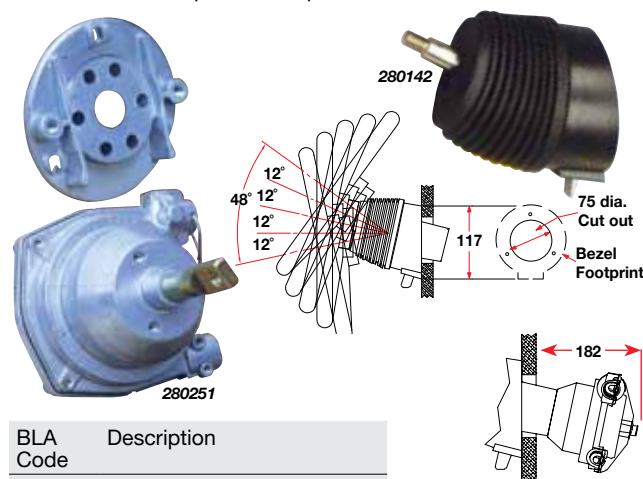
| BLA<br>Code   | Cable<br>Length |      |
|---------------|-----------------|------|
|               | ft              | m    |
| <b>281109</b> | 9               | 2.74 |
| <b>281110</b> | 10              | 3.05 |
| <b>281111</b> | 11              | 3.35 |
| <b>281112</b> | 12              | 3.66 |
| <b>281113</b> | 13              | 3.96 |
| <b>281114</b> | 14              | 4.27 |
| <b>281115</b> | 15              | 4.57 |
| <b>281116</b> | 16              | 4.88 |
| <b>281117</b> | 17              | 5.18 |
| <b>281118</b> | 18              | 5.49 |
| <b>281119</b> | 19              | 5.79 |
| <b>281120</b> | 20              | 6.10 |
| <b>281121</b> | 21              | 6.40 |
| <b>281122</b> | 22              | 6.71 |
| <b>281123</b> | 23              | 7.01 |
| <b>281124</b> | 24              | 7.32 |
| <b>281125</b> | 25              | 7.62 |



## SeaStar Solutions® Tilt Sport Steering

-  **Safe-T<sup>®</sup> II**

Tilt steering is an option that allows the wheel to be moved through a 48° arc in 5 increments. Tilt helms have specially modified shafts and are for use with tilt mechanisms only. Helm and mechanism required. Accepts SSC62 Quick Connect cable.



| BLA Code      | Description                |
|---------------|----------------------------|
| <b>280142</b> | Performance tilt mechanism |
| <b>280251</b> | nfb Safe-T® II tilt helm   |

## How to Order

To order a complete set of NFB Safe-T® II steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit or tilt mechanism, 1 x cable and 1 x connection kit if required. Alternatively we offer a pre-packaged basic system that includes a **280250** helm, **280150** bezel and **2811XX** cable.

*N.B. Last two digits denote cable length in feet*

## SeaStar Solutions® Steering System Kit

-  **Safe-T<sup>®</sup> II**

| BLA Code      | Description                    |
|---------------|--------------------------------|
| <b>2800XX</b> | Includes helm, bezel and cable |

*N.B. Last two digits denote cable length in feet*

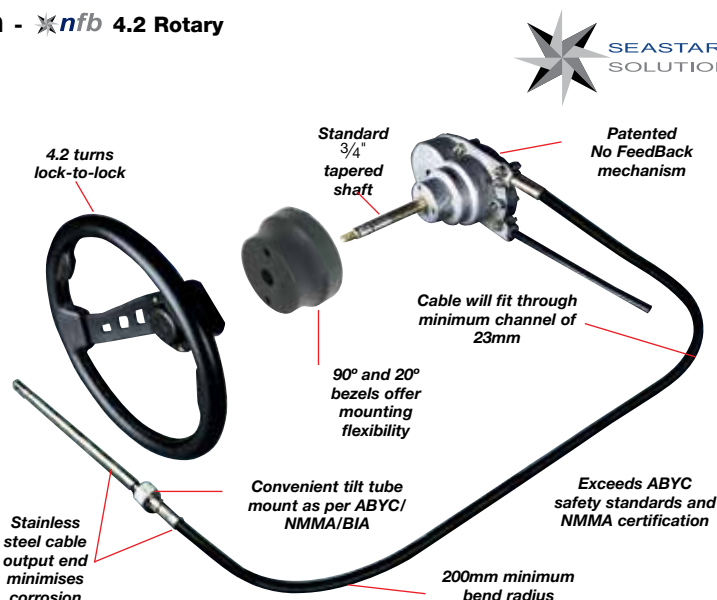


## SeaStar Solutions® Steering System - *nfb* 4.2 Rotary

Built with an emphasis on safety, durability and performance, the No FeedBack 4.2 helm unit effectively eliminates torque feedback at the helm making for the safest mechanical steering on the market today. The precision die-cast zinc helm unit incorporates the Quick Connect helical cable assembly for quick and easy installation. Twin cable systems, for a single engine, require the purchase of an additional genuine outboard twin tube mount kit.

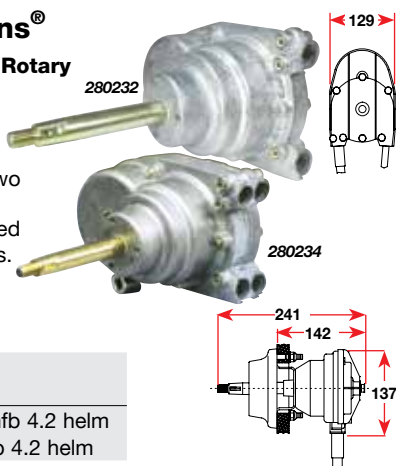
### Applications:

- Wheels up to 400mm
- Runabouts
- Sportboats
- Centre consoles
- Pontoon boats
- All outboards to V6. Boats travelling over 40 knots, or when engine flutter is apparent, should use twin cables with **280234** helm



## SeaStar Solutions® Helms - *nfb* 4.2 Rotary

Durable die cast alloy housing with rotary non feedback mechanism. The **280234** helm with two cable connection to outboard is recommended for high load installations. Accepts **SSC62** Quick Connect cables.

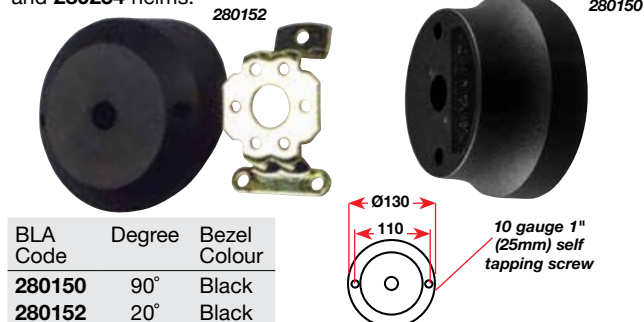


| BLA Code      | Description               |
|---------------|---------------------------|
| <b>280232</b> | Single cable nfb 4.2 helm |
| <b>280234</b> | Dual cable nfb 4.2 helm   |

## SeaStar Solutions® Bezel Kits

- *nfb*

Bezel kits include mount brackets and fastenings for **280232** and **280234** helms.



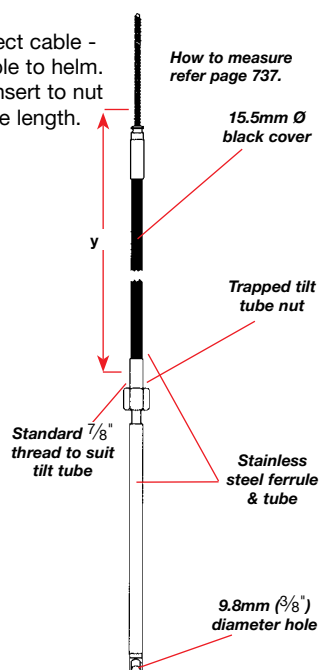
| BLA Code      | Degree | Bezel Colour |
|---------------|--------|--------------|
| <b>280150</b> | 90°    | Black        |
| <b>280152</b> | 20°    | Black        |

## SeaStar Solutions® Steering Cables

- *nfb*

SSC62 type push in quick connect cable - no tools required to connect cable to helm. Length is measured from helm insert to nut plus 450mm.  $Y + 450\text{mm} = \text{cable length}$ .

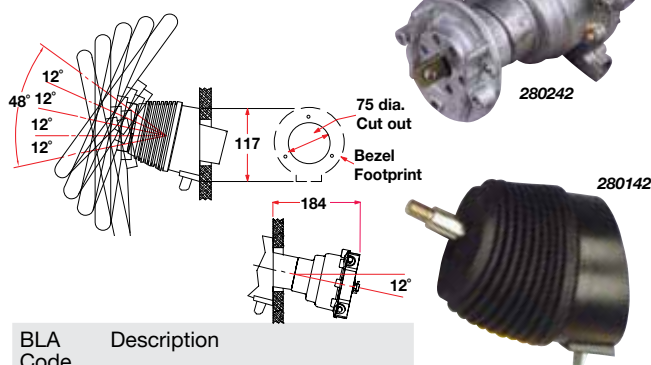
| BLA Code      | Cable Length ft | Cable Length m |
|---------------|-----------------|----------------|
| <b>281109</b> | 9               | 2.74           |
| <b>281110</b> | 10              | 3.05           |
| <b>281111</b> | 11              | 3.35           |
| <b>281112</b> | 12              | 3.66           |
| <b>281113</b> | 13              | 3.96           |
| <b>281114</b> | 14              | 4.27           |
| <b>281115</b> | 15              | 4.57           |
| <b>281116</b> | 16              | 4.88           |
| <b>281117</b> | 17              | 5.18           |
| <b>281118</b> | 18              | 5.49           |
| <b>281119</b> | 19              | 5.79           |
| <b>281120</b> | 20              | 6.10           |
| <b>281121</b> | 21              | 6.40           |
| <b>281122</b> | 22              | 6.71           |
| <b>281123</b> | 23              | 7.01           |
| <b>281124</b> | 24              | 7.32           |
| <b>281125</b> | 25              | 7.62           |



## SeaStar Solutions® Tilt Sport Steering

- *nfb* 4.2 Rotary

Tilt steering is an option that allows the wheel to be pivoted through a 48° arc in 5 increments. Tilt helms have specially modified shafts and are for use with tilt mechanisms only. Helm and mechanism required. Accepts SSC62 Quick Connect cable.



| BLA Code      | Description                |
|---------------|----------------------------|
| <b>280142</b> | Performance tilt mechanism |
| <b>280242</b> | Tilt helm nfb 4.2 single   |

## SeaStar Solutions® Steering System Kit

- *nfb* 4.2 Rotary

| BLA Code      | Description                    |
|---------------|--------------------------------|
| <b>2802XX</b> | Includes helm, bezel and cable |



### How to Order

To order a complete set of NFB 4.2 Rotary steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit or tilt mechanism, 1 x cable and 1 x connection kit if required. Alternatively we offer a pre-packaged basic system that includes a **280232** helm, **280150** bezel and **2811XX** cable.

N.B. Last two digits denote cable length in feet

N.B. Last two digits denote cable length in feet

## SeaStar Solutions® Steering System - JBS Jet Boat

Just for Jets! JBS™ by SeaStar Solutions means Jet Boat Steering! Designed exclusively for jet boats, JBS features a choice of two steering arcs, a special steering cable (not a control cable) plus an assortment of mounting options for virtually any boat!

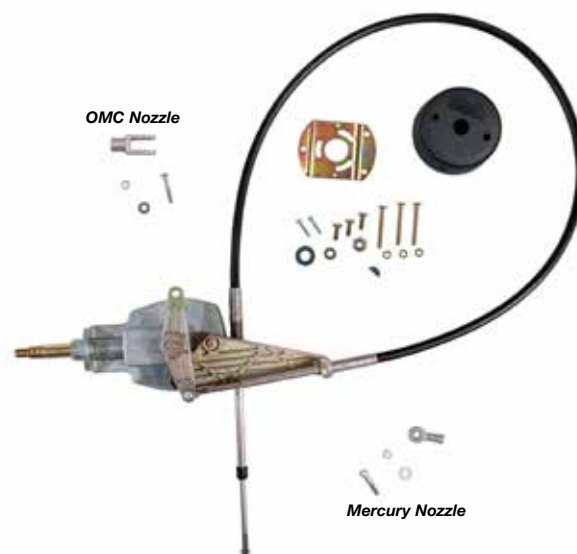


### Applications:

SeaStar Solutions JBS is recommended for use in all jet boat applications powered by Mercury® Sport Jet or OMC® Turbo Jet.

### Features:

- Ultra-compact helm with stylish 4.4" bezel is easy to install and very rugged
- 135° or 270° turning arc lock-to-lock
- Uses a special steering cable
- 90° dash mount
- 90° or 180° cable entry into helm allows alternate cable routing (Looking at dash, options are 9:00, 12:00 or 3:00 routing positions)
- Built-in steering stops prevent additional cable stress in hard over positions
- Standard 3/4" round tapered steering shaft, 3.5" total allowable cable travel
- Mercury® & OMC® nozzle/gate connection kits
- Stainless steel cable output ends
- Meets A.B.Y.C./N.M.M.A. requirements
- Made, designed and assembled in the USA



## SeaStar Solutions® Helms - JBS

Designed exclusively for jet boats, JBS features a choice of two steering arcs - 135° or 270°.



| BLA Code | Description        |
|----------|--------------------|
| 280402   | Helm jet boat 135° |
| 280404   | Helm jet boat 270° |

## SeaStar Solutions® Bezel Kits - JBS

Bezel kits include mount brackets and fastenings for 280402 and 280404 helms.

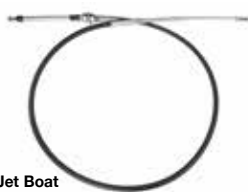


| BLA Code | Description        |
|----------|--------------------|
| 280406   | Bezel kit jet boat |

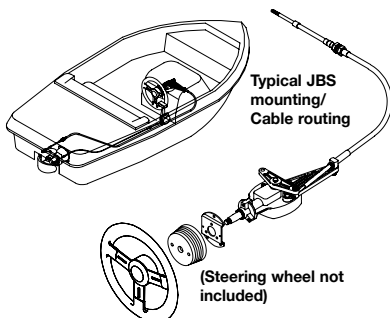
## SeaStar Solutions® Steering Cables

JBS steering cable for the SeaStar Solutions Jet boat steering helms; SH5087P, SH5088P.

\*Note: Direct Replacement for SSC229XX



| BLA Code | Cable Length | ft   | m |
|----------|--------------|------|---|
| 281906   | 6            | 1.83 |   |
| 281907   | 7            | 2.13 |   |
| 281908   | 8            | 2.44 |   |
| 281909   | 9            | 2.74 |   |
| 281910   | 10           | 3.05 |   |
| 281911   | 11           | 3.35 |   |
| 281912   | 12           | 3.66 |   |
| 281913   | 13           | 3.96 |   |
| 281914   | 14           | 4.27 |   |
| 281915   | 15           | 4.57 |   |
| 281916   | 16           | 4.88 |   |
| 281917   | 17           | 5.18 |   |
| 281918   | 18           | 5.49 |   |
| 281919   | 19           | 5.79 |   |



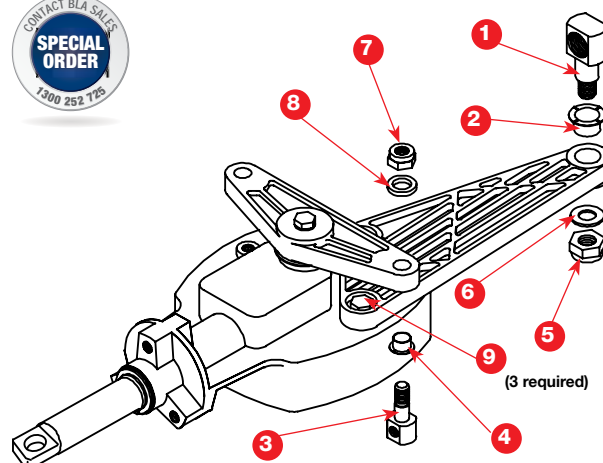
## SeaStar Solutions® JBS Service Items

### Helm Parts (see diagram below)

1. Pivot – cable conduit fitting **55-3941615**
2. Bushing for cable cond. ftg. pivot **55-3604811**
3. Pivot – cable terminal end **55-3941117**
4. Bushing for cable term. end pivot

### Helm Cable Bracket Hardware Kit Contents **55-3962715**

5. Locknut (3/8-24) – conduit fitting pivot
6. Lock Washer for 3/8-24 Locknut
7. Locknut (1/4-20) – cable terminal end pivot
8. Lock Washer for 1/4-20 Locknut
9. 3 Hex Bolts (anti-vibratory patch) – bracket



## How to Order

If you are replacing a jet boat steering cable, you must determine the part number of the existing steering cable. SSC219 cables are ONLY for JBS systems shown on this page.

\*Note: SSC219XX replaces SSC229XX cables.

N.B. Last two digits denote cable length in feet



✦xtreme **Mechanical Steering**



SeaStar Solutions® has developed a new Xtreme™ steering system based on their current industry leading Xtreme™ technology to deliver the most efficient mechanical steering possible.

Designed to provide new levels of smooth, effortless handling and precision control this advanced mechanical steering system is ideal for a wide range of outboard powered boats and hulls with large surface areas.

**Features:**

- Smoothest and lowest steering effort mechanical helm offered in the market place
- Only five turns lock to lock
- Complete steering system including new helm, high efficiency Xtreme™ steering cable design and new style bezel
- Quick connect feature on both steering cable and spent travel tube for easy quick installation
- Installs in same mounting pattern and bracket location as current SeaStar Solutions® steering systems
- Smallest footprint possible to accommodate small/tight dash helm stations



**SeaStar Solutions® Steering Helm - ✦xtreme**

Designed in conjunction with the Xtreme™ steering cable, the new Xtreme™ steering helm features a highly efficient custom gear train with an improved No FeedBack (NFB) clutch function that minimises the affects of engine torque. Requiring only five turns lock to lock, the new NFB clutch design allows for smoother clutch release which results in seamless steering in both directions at all engine speeds. Using the same mounting pattern and bracket location as current SeaStar Solutions® steering systems, the Xtreme™ helm has been designed with the smallest available footprint making it ideal for tight helm stations such as centre consoles. Where required, the SeaStar Solutions® Sport and Sport Plus tilt mechanisms can be utilised with the Xtreme™ tilt helm. Utilising the innovative dual Quick Connect feature makes attaching the steering cable and spent travel tube to the back of the helm a fast and simple operation.

**Features:**

- Designed to deliver the most efficient mechanical steering possible
- Least effort, least lost motion, smooth release of NFB clutch with the best holding power
- Only five turns lock to lock
- Quick Connect feature on both cable and spent travel tube side
- No tools required to snap steering cable or spent travel tube in place
- Easy system installation, single steering cable to route with standard 200mm bend radius for the cable
- No bleeding of hydraulic system or electrical wiring required
- Fits standard SeaStar Solutions® dash cut out with standard Safe-T® and 4.2 bracket
- Helm is available to suit SH91800/SH91900 tilt mechanism
- Gear train allows smallest foot print with the lowest effort available in a mechanical helm
- **280940** NFB helm supplied complete with **280948** black bezel



280940



280944



280940

280948

| BLA Code | Description                              |
|----------|--|
| 280940   | Helm XTREME™ NFB – Includes 290948 Bezel |
| 280944   | Helm XTREME™ NFB Tilt                    |
| 280948   | Bezel Kit XTREME™ 90° NFB Black          |

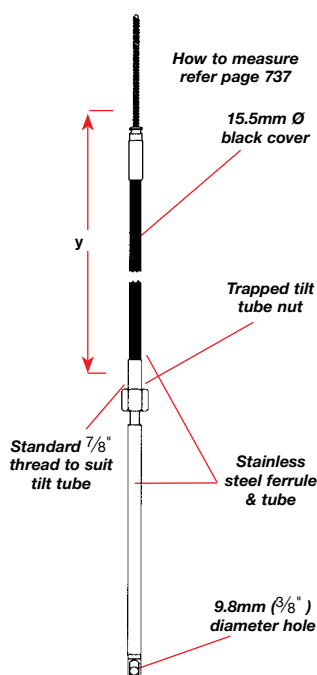
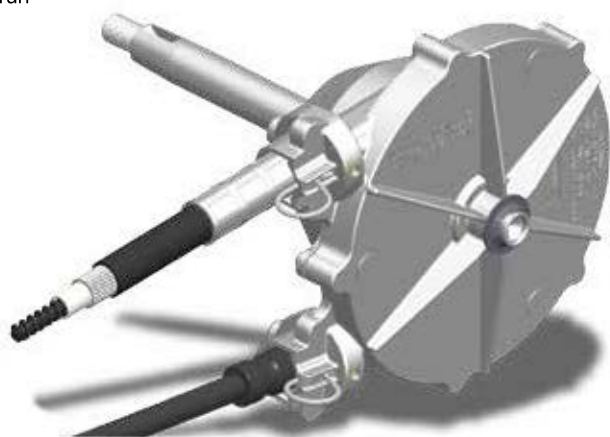


## SeaStar Solutions® Steering Cables - *xtreme*

The new high performance Xtreme™ steering cable features splined ridges on the inner liner for minimal contact between the liner and core, allowing the core to glide easily and freely, offering minimal lost motion and smoother, easier steering. The resulting reduction in cable friction improves performance, allows the entire steering system to run smoother for longer and provides precision control.

### Features:

- Steering cable based on industry leading Xtreme™ technology
- Splined ridges on the inner liner allows close contact with core
- Minimum contact means the core glides freely
- Tight fit for minimal lost motion
- Reduced friction for extended cycle life
- Robust construction supports the highest steering loads in the mechanical range



### SSCX64 Cable Only

| BLA Code | Cable Length<br>ft | m    |
|----------|--------------------|------|
| 281710   | 10                 | 3.05 |
| 281711   | 11                 | 3.35 |
| 281712   | 12                 | 3.66 |
| 281713   | 13                 | 3.96 |
| 281714   | 14                 | 4.27 |
| 281715   | 15                 | 4.57 |
| 281716   | 16                 | 4.88 |
| 281717   | 17                 | 5.18 |
| 281718   | 18                 | 5.49 |
| 281719   | 19                 | 5.79 |
| 281720   | 20                 | 6.10 |
| 281721   | 21                 | 6.40 |
| 281722   | 22                 | 6.71 |
| 281723   | 23                 | 7.01 |
| 281724   | 24                 | 7.32 |
| 281725   | 25                 | 7.62 |
| 281726   | 26                 | 7.93 |
| 281727   | 27                 | 8.23 |
| 281728   | 28                 | 8.53 |
| 281729   | 29                 | 8.84 |
| 281730   | 30                 | 9.14 |

### SSX176 Complete Kit Cable, Helm & Bezel

| BLA Code | Cable Length<br>ft | m    |
|----------|--------------------|------|
| 281810   | 10                 | 3.05 |
| 281811   | 11                 | 3.35 |
| 281812   | 12                 | 3.66 |
| 281813   | 13                 | 3.96 |
| 281814   | 14                 | 4.27 |
| 281815   | 15                 | 4.57 |
| 281816   | 16                 | 4.88 |
| 281817   | 17                 | 5.18 |
| 281818   | 18                 | 5.49 |
| 281819   | 19                 | 5.79 |
| 281820   | 20                 | 6.10 |
| 281821   | 21                 | 6.40 |
| 281822   | 22                 | 6.71 |
| 281823   | 23                 | 7.01 |
| 281824   | 24                 | 7.32 |

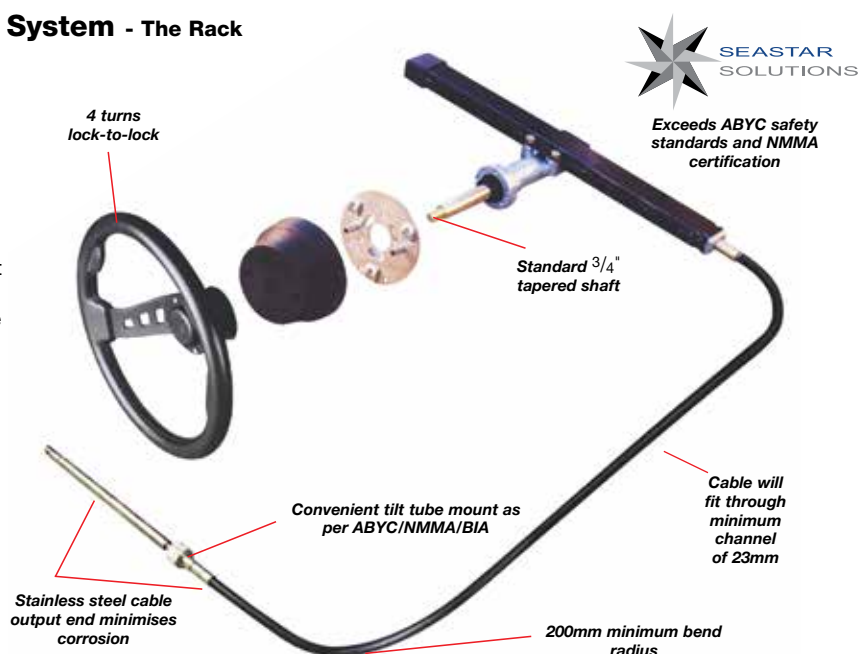


## SeaStar Solutions® Steering System - The Rack

The Rack Steering features the precision and easy feel of four turns lock to lock and a back mount design that allows connection of the cable to the helm prior to installation of the helm to the dash. Best of all, it's a drop in replacement for 1985 - 1996 'The Rack' system and also 'Command 200'. The helm unit incorporates a machine cut pinion gear that engages a rack and cable assembly, which drives an armour standard core to minimise steering effort.

### Applications:

- Ski boats
- Runabouts
- Small cruisers
- House boats
- Steering wheels up to 400mm
- All outboards to V6



## SeaStar Solutions® Helm - The Rack

Featuring a back mount for easy installation. Die cast zinc alloy housing. This helm accepts SSC134 rack cables.



| BLA Code |
|----------|
| 280346   |

## SeaStar Solutions® Bezel Kit - The Rack

Plastic 90° bezel with cast zinc alloy back mount bracket. Mount fastenings included. For installation with **280346** helm.

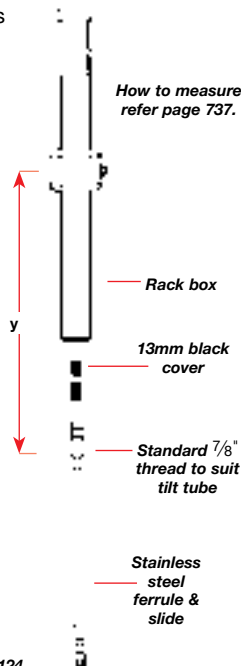


| BLA Code | Bezel Colour |
|----------|--------------|
| 280350   | Black        |

## SeaStar Solutions® Steering Cable

### - The Rack

SSC134 type steering cables. Cable length is measured from centre of rack to nut, plus 760mm. Y + 760mm = cable length.



| BLA Code | Cable Length ft | m    |
|----------|-----------------|------|
| 281312   | 12              | 3.66 |
| 281313   | 13              | 3.96 |
| 281314   | 14              | 4.27 |
| 281315   | 15              | 4.57 |
| 281316   | 16              | 4.88 |
| 281317   | 17              | 5.18 |
| 281318   | 18              | 5.49 |
| 281319   | 19              | 5.79 |
| 281320   | 20              | 6.10 |

N.B. Not compatible as a replacement cable for SSC124

### How to Order

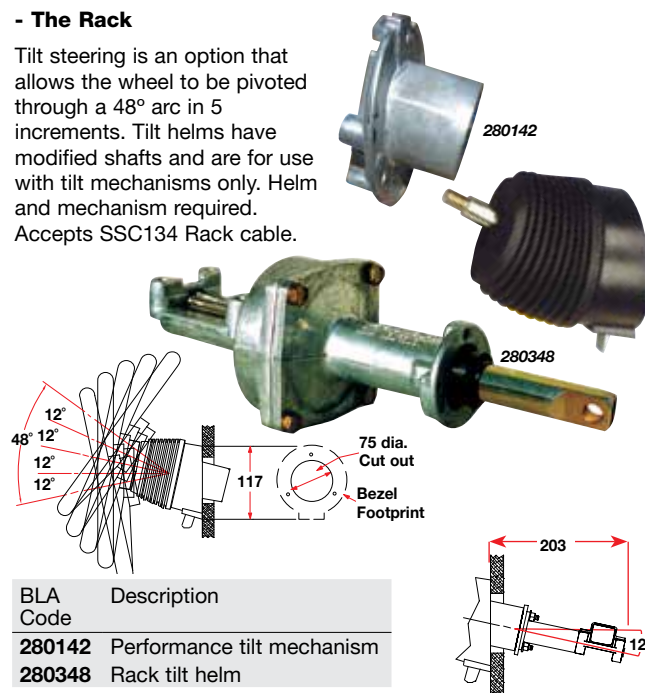
To order a complete set of Rack steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit or tilt mechanism, 1 x cable and 1 x connection kit if required. Alternatively we offer a pre-packaged basic system that includes a **280346** helm, **280350** bezel and **2813XX** cable.

N.B. Last two digits denote cable length in feet

## SeaStar Solutions® Tilt Sport Steering

### - The Rack

Tilt steering is an option that allows the wheel to be pivoted through a 48° arc in 5 increments. Tilt helms have modified shafts and are for use with tilt mechanisms only. Helm and mechanism required. Accepts SSC134 Rack cable.



| BLA Code | Description                |
|----------|----------------------------|
| 280142   | Performance tilt mechanism |
| 280348   | Rack tilt helm             |

## SeaStar Solutions® Steering System Kit

### - The Rack

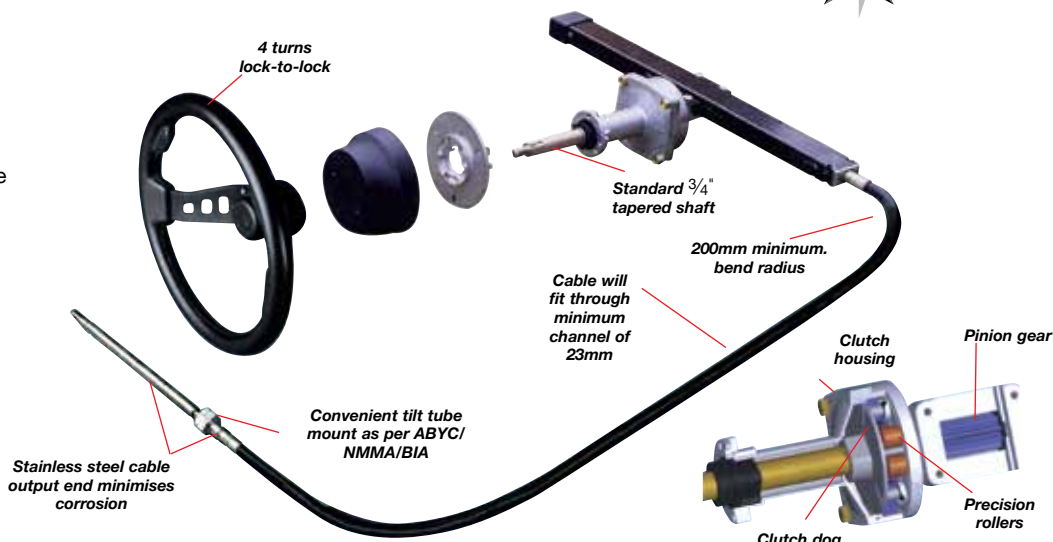
| BLA Code | Description                    |
|----------|--------------------------------|
| 2803XX   | Includes helm, bezel and cable |

N.B. Last two digits denote cable length in feet



## SeaStar Solutions® Steering System - *nfb* The Rack

SeaStar Solutions® has combined its patented No FeedBack technology with the precision of a rack and pinion system to engineer serious advances in steering comfort and control. The Rack provides precise four turn lock to lock steering while the nfb mechanism isolates the driver from the considerable prop torque that today's high horsepower outboards deliver. The nfb Rack suits all outboards to V6. Suits steering wheels up to 400mm.



## SeaStar Solutions® Helm - *nfb* The Rack

Easy installation, back mount design allows the cable to be connected to the helm before installation. Planetary nfb mechanism to lock out prop feedback. Accepts SSC134 Rack cable.



## SeaStar Solutions® Bezel Kit

- *nfb* The Rack

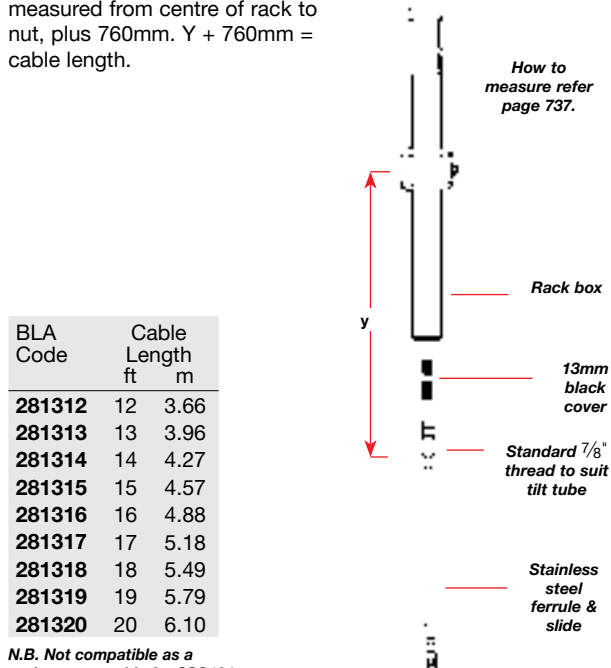
Plastic 90° bezel, includes cast zinc back mount bracket and mount fastenings for 280370 helm.



## SeaStar Solutions® Steering Cables

- *nfb* The Rack

SSC134 type steering cables. Cable length is measured from centre of rack to nut, plus 760mm. Y + 760mm = cable length.



N.B. Not compatible as a replacement cable for SSC124

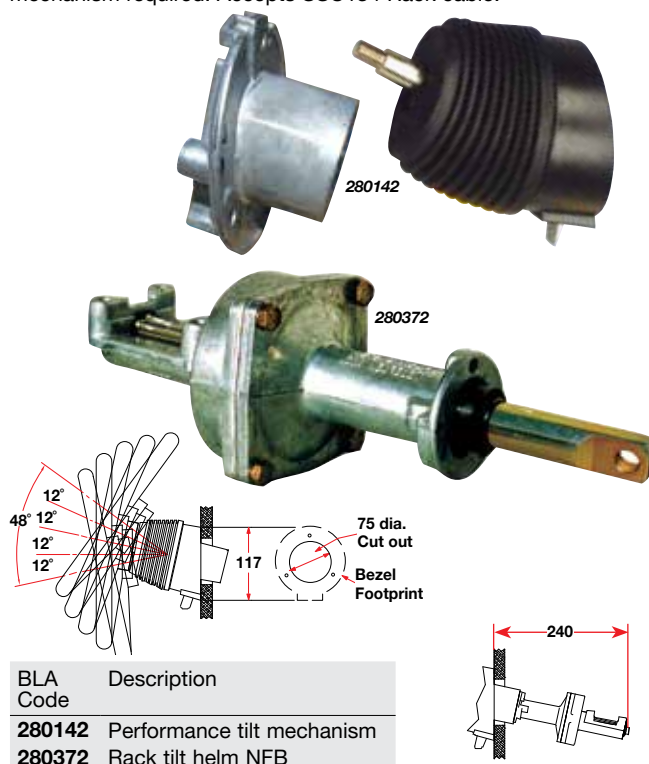
## How to Order

To order a complete set of NFB Rack steering you will require 1 x steering wheel, 1 x helm, 1 x bezel kit or tilt mechanism, 1 x cable and 1 x connection kit if required.

## SeaStar Solutions® Sport Tilt Steering

- *nfb* The Rack

Tilt steering is an option that allows the wheel to be pivoted through a 48° arc in 5 increments. Tilt helms have modified shafts and are for use with tilt mechanisms only. Helm and mechanism required. Accepts SSC134 Rack cable.

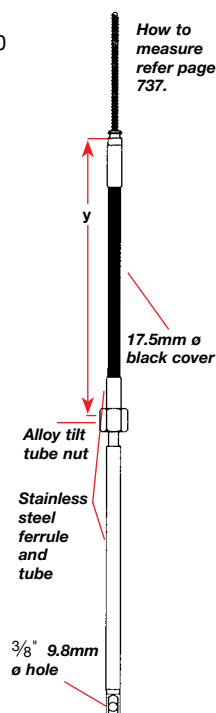




## SeaStar Solutions® Steering Cables Only - ssc290

SSC290 steering cable. Used by boat manufacturers worldwide. Connects D290 helm directly to all outboard manufacturers' tilt tube. Length is measured from helm insert to nut, plus 450mm. Y + 450mm = cable length.

| BLA Code | Cable Length ft | Cable Length m |
|----------|-----------------|----------------|
| 283710   | 10              | 3.05           |
| 283711   | 11              | 3.35           |
| 283712   | 12              | 3.66           |
| 283713   | 13              | 3.96           |
| 283714   | 14              | 4.27           |
| 283715   | 15              | 4.57           |
| 283716   | 16              | 4.88           |
| 283717   | 17              | 5.18           |
| 283718   | 18              | 5.49           |
| 283719   | 19              | 5.79           |
| 283720   | 20              | 6.10           |
| 283721   | 21              | 6.40           |
| 283723   | 23              | 7.01           |



## SeaStar Solutions® Link Arm Kit - Outboard

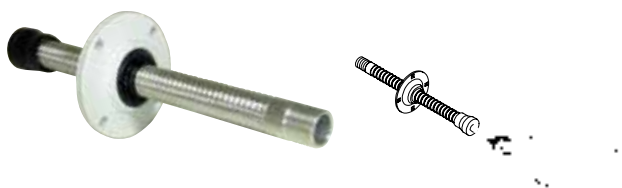
Connection for outboards with standard tilt tube. Supplied with grease wipe end boot. Suits most popular brand outboards. Supplied with 3/8" x 1 1/2" (9.8mm x 38mm) tiller mount bolt.



| BLA Code |
|----------|
| 280508   |

## SeaStar Solutions® Mounting Kit - Splashwell 90°

White powder coated pressed metal plates. 89mm outside diameter mount plate. 7/8" (23mm) x 268mm threaded alloy tube; one end accepts steering cable mount nut. Supplied with four 38mm x 6mm mount fastenings and grease wipe end boot.



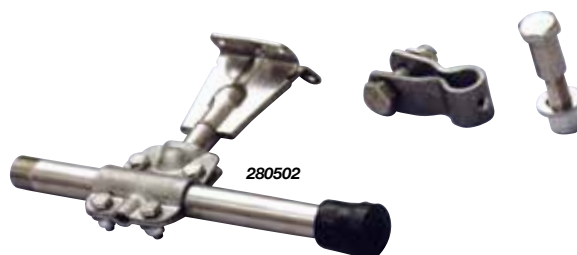
| BLA Code | Description              |
|----------|--------------------------|
| 280522   | Splashwell Mount Kit 90° |

### Accessories:

|        |                         |
|--------|-------------------------|
| 280523 | Replacement small plate |
|--------|-------------------------|

## SeaStar Solutions® Mounting Kit - Transom Support

These cable connections are used for older model outboards without tilt tubes, low HP outboards or installations where transom design interferes with standard tilt tube mounting. Supplied with grease wipe end boot. Available in stainless steel or corrosion resistant construction.



| BLA Code | Material            | Consists of                |
|----------|---------------------|----------------------------|
| 280502   | Stainless Steel     | 280535<br>280532<br>280552 |
| 280504   | Corrosion resistant | 280534<br>280530<br>280552 |

## SeaStar Solutions® Mounting Kit - Splashwell 15°

White powder coated pressed metal plates. 146mm outside diameter mount plate. 7/8" (23mm) x 268mm threaded alloy tube; one end accepts steering cable mount nut. Supplied with six 38mm x 6mm mount fastenings and grease wipe end boot.



| BLA Code | Description              |
|----------|--------------------------|
| 280516   | Splashwell Mount Kit 15° |

### Accessories:

|        |                         |
|--------|-------------------------|
| 280517 | Replacement large plate |
| 280523 | Replacement small plate |

## SeaStar Solutions® Clamp Blocks - Outboard

Stands off transom 125mm. Pressed metal clamp plates. Supplied with 6mm x 63mm mount bolts. Available in stainless steel or white powder coat finish steel.



| BLA Code | Material               |
|----------|------------------------|
| 280534   | White power coat steel |
| 280535   | Stainless steel        |



## SeaStar Solutions® Support Tubes



7/8" (23mm) x 268mm tube to be used in conjunction with clamp blocks. One end is threaded to accept steering cable mount nut. Supplied with grease wipe end boot.



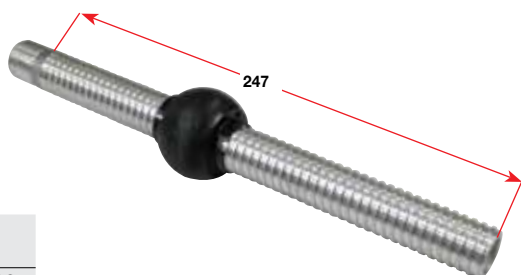
| BLA Code | Material        |
|----------|-----------------|
| 280530   | Aluminium       |
| 280532   | Stainless steel |

280576

## SeaStar Solutions® Splashwell Threaded Tube



7/8" (23mm) x 268mm threaded alloy tube; one end accepts steering cable mount nut. PVC universal ball.



| BLA Code |
|----------|
| 280526   |

## SeaStar Solutions® Mount Ball



Nylon half ball, designed to hold grooved tube in transom bracket or splashwell mount. Sold per half.



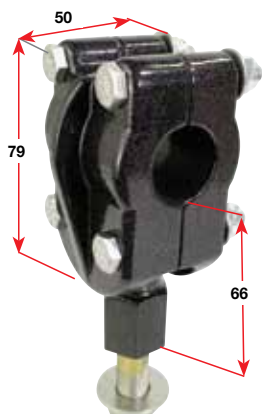
| BLA Code |
|----------|
| 282520   |

## SeaStar Solutions® Clamp Block - Inboard Heavy Duty Short Post



Heavy duty cast zinc alloy clamp. Black metal flake finish. Stands off 66mm. Supplied with 1/2" (12.5mm) x 1 1/4" (32mm) mount bolt.

Clamps around 280530 and 280532 support tubes.



| BLA Code |
|----------|
| 280538   |

## SeaStar Solutions® Grooved Tube



Alloy tube used for securing steering cable when the engine does not have a tilt tube. Threaded at one end to accept cable. Grease wipe end boot at other end.



| BLA Code |
|----------|
| 282530   |

## SeaStar Solutions® Pillars



Manufactured from stainless or passivated steel. These pillars bolt to a solid surface via the internally threaded base. Provides a secure mount for metal or nylon clamps.



282535

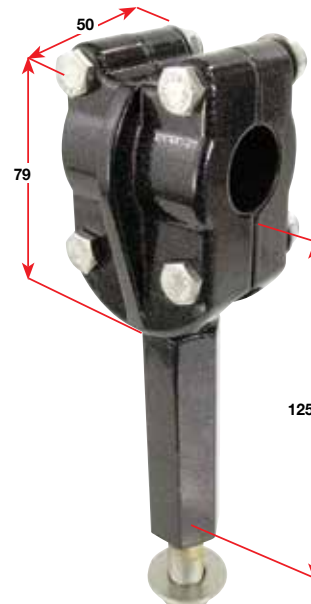
| BLA Code | Material | Length mm |
|----------|----------|-----------|
| 282535   | Steel    | 70        |
| 282536   | Steel    | 110       |

## SeaStar Solutions® Clamp Block - Inboard Heavy Duty Long Post



Heavy duty cast zinc alloy clamp. Black metal flake finish. Stands off 125mm. Supplied with 1/2" (12.5mm) x 1 1/4" (32mm) mount bolt.

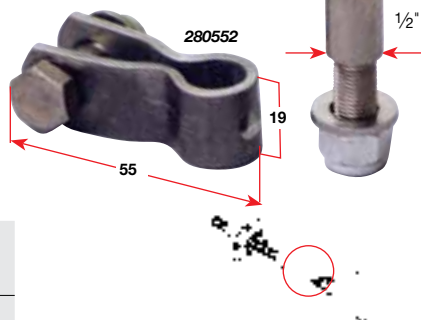
Clamps around 280530 and 280532 support tubes.



| BLA Code |
|----------|
| 280539   |

## SeaStar Solutions® Clevis Kits - Standard

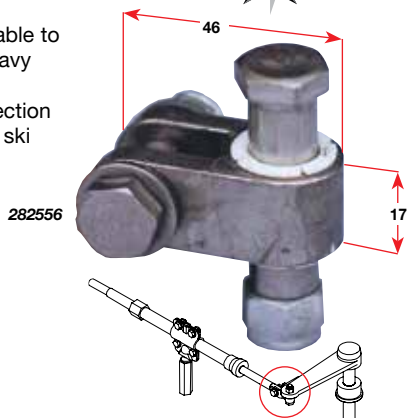
Required for end of cable to motor connection. Pressed stainless steel plate. Suits most applications. Supplied with either 45mm or 55mm stainless steel long bolt.



| BLA Code | Bolt Length mm |
|----------|----------------|
| 280552   | 45             |
| 280553   | 55             |

## SeaStar Solutions® Clevis Kits - Heavy Duty

Required for end of cable to motor connection. Heavy duty cast stainless to reduce steering connection play. Ideal for inboard ski boats.



| BLA Code | Bolt Length mm |
|----------|----------------|
| 280556   | 46             |
| 280557   | 60             |

## SeaStar Solutions® Replacement Bearing Flange

Flange used as an internal liner in stainless steel support tube to prevent abrasion with cable push rod.



| BLA Code | Height mm | OD mm | ID mm |
|----------|-----------|-------|-------|
| 280566   | 29        | 16.5  | 15.5  |

## SeaStar Solutions® Grease Wipe End Boot

Replacement grease wipe end boot to suit 7/8" tilt tubes.



BLA Code  
280576

## SeaStar Solutions® Key and Nut

Used to locate steering wheels on all SeaStar Solutions® mechanical helm shafts. 5/8" UNF thread, 3/16" key.



BLA Code  
280578

## SeaStar Solutions® Adaptor Nut - D290 Helm

Marine grade anodised alloy construction. Enables an SSC62 or SSC92 Quick Connect type cable to fit a D290 helm.



BLA Code  
280546

## SeaStar Solutions® Adaptor Nut

Marine grade anodised alloy construction. One end has a 7/8" thread to suit Safe-T® and Quick Connect threaded ports. The other end accepts Quick Connect SSC62 or SSC92 type cables. This adaptor can be used to connect an SSC62 or SSC92 cable to the threaded port of a Quick Connect helm should it be a requirement to route the steering cable down the port side of the vessel. Can also be used in conjunction with a Quick Connect SSC62 or SSC92 type cable as a replacement for Safe-T® SSC72 type cables.



BLA Code  
280550

## SeaStar Solutions® Adaptor Nut - SSC72 to Morse 290

Adapts Morse Command 290 single-cable helms for use with SSC61 (QC II) steering cables.



BLA Code  
280547

## SeaStar Solutions® Quick Connect Hitch Pin

Replacement pin for helms used in conjunction with Quick Connect cable. Supplied with installation and removal tag.



BLA Code  
280580

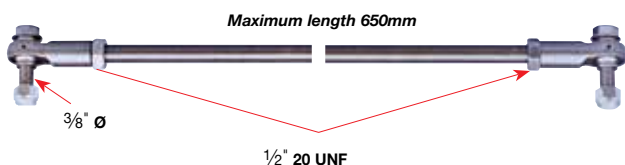
## SeaStar Solutions® Universal Tie Bar Kit



For twin engine installations. Threaded rod can be cut to size with final engine alignment via thread adjustment.

### Contains:

- 2 x stainless steel ball joints
- 1 x stainless steel threaded tie bar
- 2 x stainless steel locking nuts
- 2 x stainless steel connection bolts



| BLA Code |
|----------|
| 280558   |

## SeaStar Solutions® Spent Travel Tubes



| BLA Code | Description  |
|----------|--|
| 280568   | Suits nfb Safe-T® II, nfb 4.2, HPS and Quick Connect 4 turn helm |
| 280570   | Suits Quick Connect helm (starboard cable installation only)     |

## SeaStar Solutions® Rod End Kit



Available in a choice of stainless steel or zinc plated ball joints, both with stainless steel fastenings.



| BLA Code | Ball Joints       |
|----------|-------------------|
| 280560   | Zinc plated steel |
| 280561   | Stainless steel   |

## SeaStar Solutions® Clevis Pin



Gold passivated cast steel construction. Used to connect threaded end steering cables to steering tiller arm.



| BLA Code | Internal Thread | Clevis Pin |
|----------|-----------------|------------|
| 282552   | 3/8" UNF        | 3/8"       |

## SeaStar Solutions® Ball Joints



Available in stainless steel or gold passivated steel. Used to connect threaded end steering cables to tiller rudder arm.

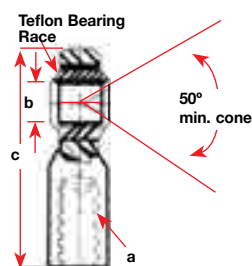


| BLA Code | Material        | Internal Thread |
|----------|-----------------|-----------------|
| 282559   | Steel           | 3/8" UNF        |
| 282561   | Stainless steel | 3/8" UNF        |
| 282562   | Stainless steel | 1/2" UNF        |

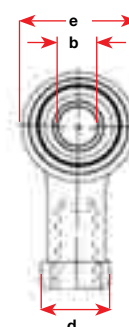
## Stainless Steel Spherical Rod Ends



Stainless steel construction with Teflon bearing for optimum smooth operation, even under severe marine conditions. Surface hardened stainless steel ball for high wear resistance. Applications include universal control cable connection, linkage rods and tie rods.



| BLA Code | a UNF | b mm  | c mm | d mm | e mm |
|----------|-------|-------|------|------|------|
| 309736   | 10-32 | 3/16" | 35   | 10   | 16   |
| 309738   | 1/4"  | 1/4"  | 43   | 12   | 19   |
| 309740   | 5/16" | 5/16" | 46   | 13   | 22   |
| 309742   | 3/8"  | 3/8"  | 54   | 17   | 28   |
| 309744   | 1/2"  | 1/2"  | 71   | 22   | 33   |
| 309746   | 5/8"  | 5/8"  | 83   | 25   | 38   |
| 309748   | 3/4"  | 3/4"  | 95   | 29   | 45   |



## Lewmar® Steering

Lewmar's® sail boat steering systems have been world leaders for over 50 years and constantly evolving to meet the performance and aesthetic needs of both cruisers and elite racers. Each product is CE certified and proven to be able to handle the most adverse conditions.

Lewmar® steering systems come in three types. **Constellation™** is the well proven cable and chain system which can be tailored to suit most vessels. **Cobra™** utilising a rack and pinion head driving through a draglink and lever, this system is highly regarded for it's powerful mechanical advantage and it's sensitive feel on the wheel. **Mamba™** Steering is the ultimate system providing both feedback and strength through it's bevel heads, rotating tubes, and gearbox components all of which is specified then custom designed to suit a diverse range of sailing craft.

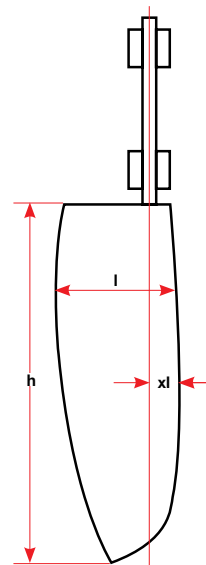
### Steering System Specifications

Efficient and enjoyable sailing is about the trim of the sails and feel on the helm. If the feel on the helm is too light it is difficult to know if your sails are trimmed correctly, too heavy and speed is either lost or fatigue will make steering difficult or impossible to do for long periods of time.

Selection of your steering system and components starts with selecting your desired helm location with attention to the location of the rudder stock.

Once this is confirmed, submit the following measurements so BLA can work out the products which will deliver the correct mechanical advantage required for efficient course keeping for cruising or racing sail craft.

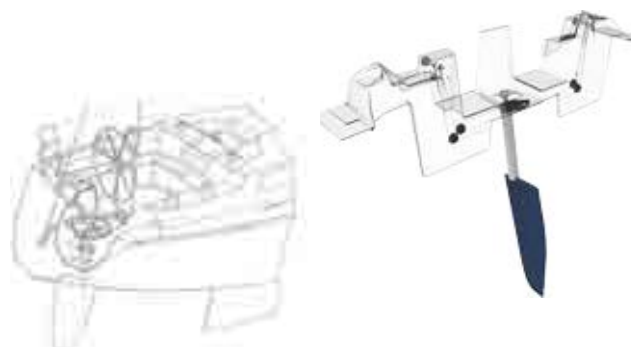
| Description                   | Dimension |
|-------------------------------|-----------|
| Average Rudder Height (h)     | mm        |
| Average Rudder Cord (l)       | mm        |
| Balance (xl)                  | mm        |
| Vessel Overall Length (LOA)   | M         |
| Vessel Waterline Length (LWL) | M         |
| Vessel Displacement (displ)   | Kg        |
| Hull Speed                    | Knts      |



### Lewmar Constellation™ Steering System

#### - Wire Steering

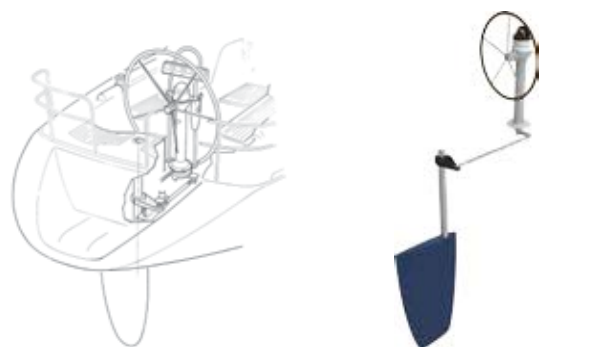
Wire steering systems are suitable for yachts from 7m/25' to Maxis. This diversity has enabled Lewmar to develop the Constellation system with feedback from various types of boat builders. Wire systems are ideal for aft cockpit installations, either single or tandem. Wire-in conduit systems are also available for centre cockpit installations. The conduit system overcomes the difficulties that are experienced when using open wire in centre cockpit installations.



### Lewmar Cobra™ Steering System - Rack &

#### Pinion

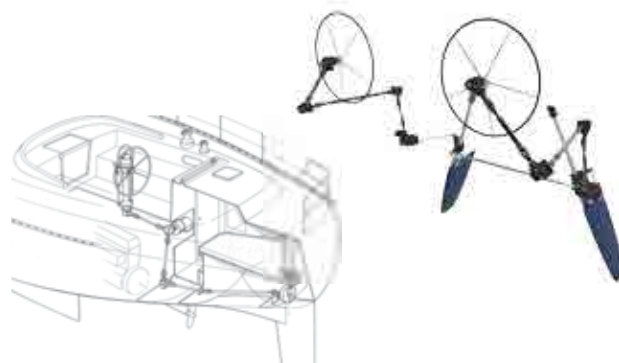
Cobra uses rack and pinion in the head of the pedestal to provide the necessary mechanical advantage required for sensitive steering. Cobra has been designed for use in aft cockpit sailboats and is a world leader in its field. Lewmar also offers customised Cobra systems for use in non-aft cockpit applications.



### Lewmar Mamba™ Steering System -

#### Rotating Torque Tube & Bevelhead

The ultimate steering system providing feedback and strength; both benefits are inherent to gearbox and bevelhead steering systems. Mamba is a suitable steering system for a diverse range of sailboats from blue water cruisers to America's Cup contenders. It offers unique features such as variable mechanical advantage steering whilst retaining versatility in the type of installation it can be used in i.e. Tandem systems.



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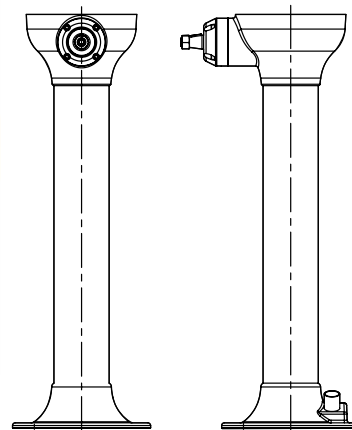
## Lewmar Enguard Steering Pedestal

Lewmar's® traditionally styled Enguard Pedestal is available in Constellation™, Cobra™ or Mamba™ configuration. The Enguard pedestal incorporates an integral guardrail base which minimises the footprint area the pedestal takes up on the cockpit floor.

### Features

- Integrated guardrail base providing compact and rapid guardrail installation
- Wide range of accessories available
- Custom heights available
- Includes steering brake (Brake Spinner required, see page 732)

| BLA Code           | Description   |
|--------------------|---|
| <b>287100</b>      | Enguard Constellation™ Pedestal 11T to suit 5/8 chain |
| <b>287110</b>      | Cobra Cruising Enguard Pedestal                       |
| <b>55-89900046</b> | Mamba Enguard BH10 with Brake                         |



\* Pedestal does not include wheel or optional extras as shown in photo

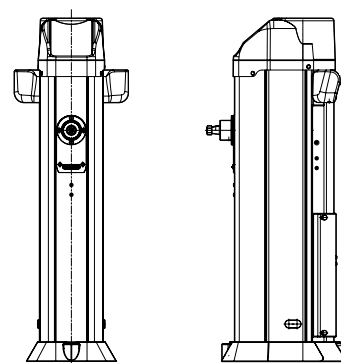
## Lewmar Integra Steering Pedestal

The Integra Pedestal can also be ordered to suit all three of the Lewmar® steering systems.

### Features

- Compass mounting platform and integrated housing
- Ability to mount 1 single instrument in the top moulding
- Pre-installed single lever engine control
- Cobra™ style includes the provision to install integrated autopilot drive
- Includes steering brake (Brake Spinner required, see page 732)

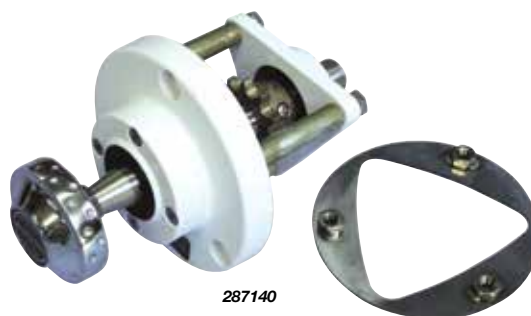
| BLA Code      | Description   |
|---------------|---|
| <b>287120</b> | Integra Constellation™ Pedestal 11T to suit 5/8 chain |



\* Pedestal does not include wheel or optional extras as shown in photo

## Lewmar Constellation™ Bulkhead Steerers

The Quick Mount Bulkhead Steerers offer a cable and chain steering solution for catamarans and where the boat builder plans to make their own pedestal or steering housing. Available with or without brake mechanism and a choice of 11 tooth through to 15 tooth sprockets, as well as provision for an autopilot drive sprocket to be added. The Quick Mount Bulkhead Steerer is easy to install.



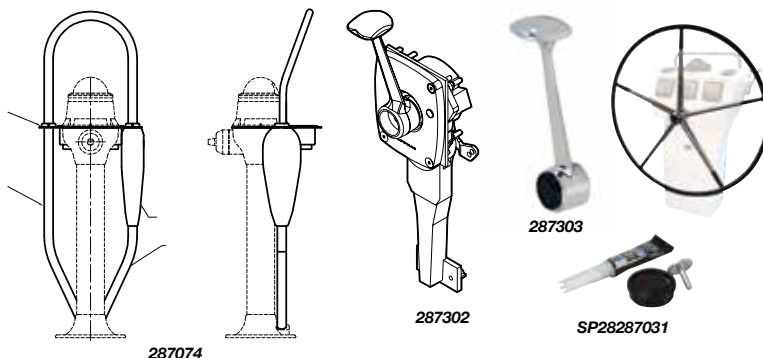
287140

| BLA Code           | Description                                       |
|--------------------|---|
| <b>55-89100004</b> | Quick Mount Bulkhead Steerer 11 Teeth No Brake    |
| <b>55-89100006</b> | Quick Mount Bulkhead Steerer 13 Teeth No Brake    |
| <b>287140</b>      | Quick Mount Bulkhead Steerer 15 Teeth No Brake    |
| <b>SP28287116</b>  | Quick Mount Bulkhead Steerer No Sprocket No Brake |
| <b>SP28287112</b>  | 11 Tooth Sprocket with Keyway and Screw           |
| <b>55-89100718</b> | 13 Tooth Sprocket with Keyway and Screw           |
| <b>SP28287114</b>  | 15 Tooth Sprocket with Keyway and Screw           |



## Lewmar Steering Pedestal Accessories

A range of accessories are available to compliment Lewmar® pedestals to aid in controlling the boat and enjoying the cockpit area while anchored, moored or at the marina. A variety of guardrails can be used as a secure hand hold while underway and a range of kickback guardrails allow instrument pods to be attached. Having an engine control mechanism positioned on the guardrail and a binnacle and compass to suit the pedestal goes further to control the boat from the steering position. Cockpit tables are available to attach to the pedestal system in unvarnished teak. For more information about what guardrail or table option will suit your pedestal contact BLA on **1300 252 725**.



| BLA Code           | Description  |
|--------------------|--|
| <b>287070</b>      | Guardrail Kit with Top Plate and Cup Holder  |
| <b>287076</b>      | Guardrail Kit Top Plate, Cup Holder, Engine Control on Starboard Side                            |
| <b>287060</b>      | Guardrail Kick Back Rail Only  |
| <b>287072</b>      | Guardrail Kit Kick Back, Top Plate and Cup Holder  |
| <b>287074</b>      | Guardrail Kit Kick Back, Top Plate, Cup Holder, Housing to suit Engine Control                   |
| <b>287126</b>      | Compass Binnacle to Suit Enguard Pedestals   |
| <b>287306</b>      | Engine Control, Cranked Handle and Housing   |
| <b>287300</b>      | Engine Control Mechanism, Handle and Facia Plate (For cockpit seat or vertical surface mounting) |
| <b>287302</b>      | Morse SL3 Control Mechanism and Handle Only  |
| <b>287303</b>      | Cranked Handle Only  |
| <b>287304</b>      | Morse SL3 Control Mechanism Only   |
| <b>287310</b>      | Lewmar Control Mechanism Fitting Kit   |
| <b>SP28287032</b>  | Engine Control Housing Only  |
| <b>SP28287031</b>  | Control Handle Replacement Button & Plunger  |
| <b>SP28287118</b>  | Pedestal Bolts 12mm x 70mm   |
| <b>SP28287120</b>  | Pedestal Bolts 12mm x 80mm   |
| <b>SP28287122</b>  | Pedestal Bolts 12mm x 90mm   |
| <b>55-89400284</b> | Teak Table Unvarnished for Enguard Pedestal  |

## Lewmar Constellation™ Wire in Conduit System

The wire in conduit system is used where a straight run to the quadrant is not possible. The use of the Conduit Sheave adapter provides 90° change of wire direction capability. In line greasers provide a handy way to keep the system lubricated.

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| BLA Code          | Description                                |
|-------------------|--|
| <b>287180</b>     | Chain Kit 5/8" to suit Quadrant < 305mm    |
| <b>287182</b>     | Chain Kit 5/8" to suit Quadrant < 457mm    |
| <b>SP28287009</b> | Conduit Blue per Metre                     |
| <b>SP28287010</b> | Conduit End                                |
| <b>SP28287106</b> | Conduit In Line Greaser (Pair)             |
| <b>SP28287100</b> | Conduit Sheave Adapter Single 152mm Sheave |
| <b>SP28287102</b> | Conduit Sheave Adapter Double 152mm Sheave |
| <b>SP28287107</b> | Conduit Grease 400ml Cartridge             |



## Lewmar Sheave Assemblies

The Cross Wire Idler is essential to use with pedestal steering where the pedestal is forward of the rudder post. Other idlers are also available. For use with Quick Mount Bulkhead and other steerers, a range of separate sheave assemblies in Articulated, Upright, Flat, Double and Single are also available.

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| BLA Code           | Description                              |
|--------------------|--|
| <b>SP28287092</b>  | Cross Wire Idler 152mm Sheave            |
| <b>SP28287094</b>  | Sheave Assembly 152mm Articulated Single |
| <b>55-89100026</b> | Sheave Assembly 152mm Upright Single     |
| <b>55-89100027</b> | Sheave Assembly 152mm Flat Single        |



## Lewmar Autopilot Drive Units

**LEWMAR®**

Lewmar® offer an Autopilot Drive Unit provision for all of their steering systems as well as for retro-fitting to any boat. Models for Constellation™, Cobra™ and Mamba™ steering systems come in 12v or 24v models and are all compatible with the major brands of autopilot electronics on the market. Many production boat builders install Lewmar® steering system with the provision to add a drive unit to their boats with minimal installation issues compared with buying a competitors system off the shelf. For more information regarding a Lewmar® drive unit installation on your boat contact BLA on **1300 252 725**.

| BLA Code          | Description                              |
|-------------------|--|
| <b>287240</b>     | Mamba Drive Unit 1/4 HP 12 volt          |
| <b>287248</b>     | Integra Mamba Drive Unit 12 volt         |
| <b>287250</b>     | Integra Base Drive 12 volt Bavaria       |
| <b>55-8930039</b> | Direct Drive Unit 166mm OL with Draglink |
| <b>287280</b>     | Multi Position Direct Drive Tiller Lever |



## Lewmar Cobra™ Steering Components

**LEWMAR®**

The Cobra™ steering system is made up of the steering pedestal, draglink and tiller lever. A Stop Ring is available to act as an impact protection system which will prevent damage to the pedestal in the case of grounding or other rudder impact. In all cases a separate rudder stop system should be used as well. The tiller lever is pilot bored to enable the user to machine the lever to suit their needs. Likewise the draglink comes with one end loose to enable cutting and welding to suit the particular installation. For more information in regards to Cobra™ steering, contact BLA on **1300 252 725**.



| BLA Code          | Description   |
|-------------------|---|
| <b>287260</b>     | Tiller Lever Pilot Bored 203mm Centres 80mm Max Diameter (pin not included) |
| <b>SP28287060</b> | AHFT10 Pin Set  |
| <b>SP28287014</b> | Draglink 1000mm AHFT10 Loose One End  |
| <b>SP28287090</b> | Cobra Stop Ring   |
| <b>SP28287084</b> | AHFT10 Rod End Spare  |

## Lewmar Quadrants

**LEWMAR®**

A range of sizes in both 260° as well as 80° quadrants is available to suit boats up to approximately 80 feet. Fabricated in 6082 aluminium alloy, they are pilot bored so machining of the bore can be done to match the rudder shaft by the installer. In all cases a rudder limit stop needs to be installed. The design of both type of quadrants provides a solution to installing a rudder stop. Eye bolt/cable tensioners are not supplied with quadrants and must be ordered separately.

| BLA Code           | Description                | Maximum Bore Dia. mm | Typical Boat Size Metre |
|--------------------|----------------------------|----------------------|-------------------------|
| <b>55-89100049</b> | 260° Quadrant 152mm Radius | 80                   | 10                      |
| <b>287350</b>      | 260° Quadrant 203mm Radius | 80                   | 9-11.5                  |
| <b>287354</b>      | 260° Quadrant 254mm Radius | 80                   | 10-13                   |
| <b>55-89100052</b> | 260° Quadrant 254mm Radius | 100                  | 10-13                   |
| <b>55-89100053</b> | 260° Quadrant 305mm Radius | 100                  | 12-15                   |
| <b>287360</b>      | 80° Quadrant 305mm Radius  | 80                   | 10-13                   |
| <b>55-89100061</b> | 80° Quadrant 305mm Radius  | 100                  | 10-13                   |
| <b>55-89100062</b> | 80° Quadrant 381mm Radius  | 80                   | 12-15                   |
| <b>55-89100063</b> | 80° Quadrant 381mm Radius  | 100                  | 12-15                   |
| <b>287368</b>      | 80° Quadrant 457mm Radius  | 100                  | 14-16                   |
| <b>SP28287096</b>  | Eye Bolt/Tensioner 10mm    | -                    | -                       |





## Lewmar Steering Wheels

Lewmar's® range of steering wheels and accessories can be seen in section 27.

**LEWMAR®**



*Lewmar® Folding Steering Wheel*

For full range of Steering Wheels  
See Section 27



*Lewmar® Brake Spinner*

## Lewmar Custom Steering

**LEWMAR®**

With Lewmar's® acquisition of Whitlock Steering over a decade ago, comes a long history of providing steering solutions for a variety of sail boats from Historic J Boats to cruising and racing boats of all sizes and more. Custom steering products are available and may be what you need for your steering system. Lewmar's® Mamba™ steering system, for example is responsible for providing a solution to some of the most challenging steering issues brought about during refits of some of the world's most iconic classic yachts. For more information on how Lewmar® can provide a steering solution for your boat please contact BLA on **1300 252 725**.





## Scanstrut Helm Pod

SCANSTRUT

With great new design features, the Scanstrut Helm Pod is a perfect choice for all cockpit configurations. With options to fit radar displays, chartplotters and standard navigation instruments, the choice is yours!

### Features:

- Universal helm fixing (all pods come with detailed templates and spacers to suit a range of rail diameters and centres)
- Secure & watertight install
- No drill fixing kit
- Hassle free install & service
- Increased protection
- Supplied uncut

| BLA Code      | Description | Size mm   | Overall Dimensions Pod W x H x D mm |
|---------------|-------------|-----------|-------------------------------------|
| <b>287504</b> | Compact     | 228       | 325 x 225 x 190                     |
| <b>287506</b> | Compact     | 305       | 390 x 280 x 195                     |
| <b>287502</b> | Deep        | Up to 228 | 320 x 220 x 190                     |
| <b>287508</b> | Deep        | Up to 305 | 420 x 230 x 205                     |



## Scanstrut Helm Pod

SCANSTRUT

### - 3 x Standard Instruments

With great new design features, the Scanstrut Helm Pod is a perfect choice for all cockpit configurations. With options to fit radar displays, chartplotters and standard navigation instruments, the choice is yours!

### Features:

- Can accommodate 3 standard instruments
- Universal helm fixing (all pods come with detailed templates and spacers to suit a range of rail diameters and centres)
- Secure & watertight install
- No drill fixing kit
- Hassle free install & service
- Increased protection
- Supplied uncut

| BLA Code      | Range Fits mm | Overall Dimensions Pod W x H x D mm |
|---------------|---------------|-------------------------------------|
| <b>287516</b> | 203-381       | 425 x 175 x 120                     |



## Scanstrut Pod - Rail Mounted

SCANSTRUT

Designed with the latest generation screens in mind, the ultra compact 7" Scanpod Range is as low profile as it can get. Rail mounted pod for 7" displays or standard instruments (ultra compact, slim back). Achieve a neat and streamlined look overall, perfect for installations where there is limited space available.



287518



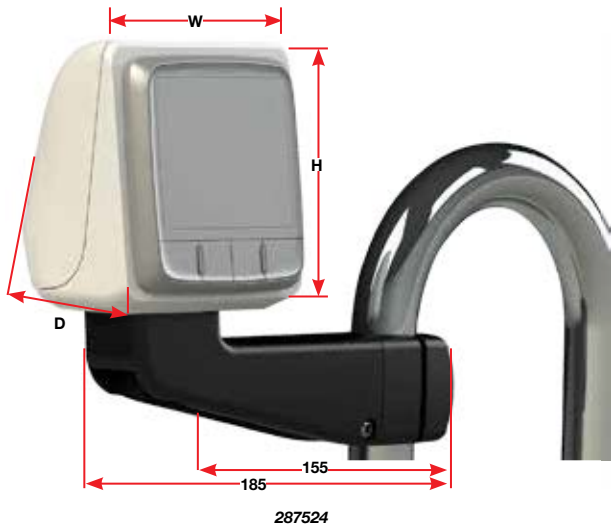
287522

| BLA Code      | Description   | Size mm                       | Overall Dimensions Pod W x H x D mm |
|---------------|---------------|-------------------------------|-------------------------------------|
| <b>287518</b> | Deep          | Suits 1 x standard instrument | 123 x 135 x 95                      |
| <b>287520</b> | Deep          | Up to 178                     | 275 x 200 x 190                     |
| <b>287522</b> | Ultra Compact | Up to 178                     | 275 x 195 x 135                     |

Scanstrut Pod - Arm Mounted

SCANSTRUT

Designed with the latest generation screens in mind, the ultra compact 7" Scanpod Range is as low profile as it can get. White, arm mounted Pod for 7" displays or standard instruments (ultra compact, slim back). Achieve a neat and streamlined look overall, perfect for installations where there is limited space available.

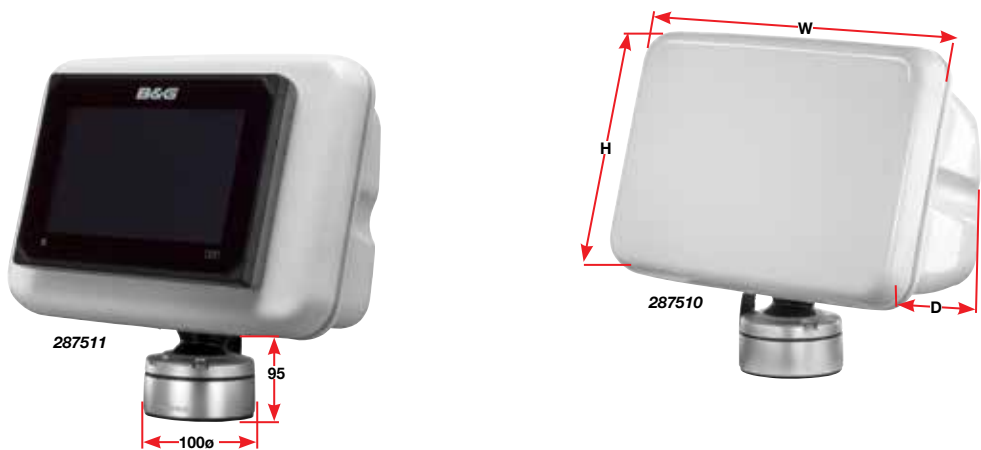


| BLA Code | Description   | Size<br>mm                    | Overall Dimensions Pod<br>W x H x D<br>mm | Dimensions Arm |                        |
|----------|---------------|-------------------------------|---|----------------|------------------------|
|          |               |                               |   | Overall<br>mm  | To centre thread<br>mm |
| 287524   | Deep          | Suits 1 x standard instrument | 123 x 135 x 95                            | 185            | 155                    |
| 287526   | Deep          | Up to 178                     | 275 x 195 x 185                           | 185            | 155                    |
| 287528   | Ultra Compact | Up to 178                     | 275 x 200 x 140                           | 185            | 155                    |

Scanstrut Deck Pod

SCANSTRUT

Designed with the latest generation screens in mind, the ultra compact 7" Scanpod Range is as low profile as it can get. White deck pod for displays up to 7" displays (ultra compact, slim back). Achieve a neat and streamlined look overall, perfect for installations where there is limited space available. Heavy duty polished alloy ball joint mount allows a range of movement and viewing angles.



| BLA Code | Description   | Size<br>mm | Overall Dimensions Pod<br>W x H x D<br>mm | Dimensions Ball Joint |            |
|----------|---------------|------------|---|-----------------------|------------|
|          |               |            |   | Height<br>mm          | Dia.<br>mm |
| 287510   | Deep          | Up to 178  | 275 x 195 x 185                           | 95                    | 100        |
| 287512   | Deep          | Up to 228  | 320 x 220 x 190                           | 95                    | 100        |
| 287511   | Ultra Compact | Up to 178  | 275 x 200 x 140                           | 95                    | 100        |