
RONSTAN
ORBIT WINCH™

# INTRODUCING RONSTAN ORBIT WINCHES™

## THE ORBIT WINCH™ STORY

Laying the foundation for a new range of aluminium self-tailing winches, we were able to draw on years of experience manufacturing Andersen Stainless Steel Winches® within our own operations in Denmark. This experience was invaluable, setting the standard for reliability, mechanical efficiency, and an unparalleled user experience. For everything else, the new winches were developed from the deck up with different priorities determining material selection, weight optimisation, dimensions, gear and power ratios, manufacturing processes, surface finish, and performance.

The first Orbit Winches™ were released in 2023, with three sizes suitable for boats up to around 12m where Ronstan is renowned for its comprehensive and competitive deck hardware range. Notably, the initial product launch marked the debut of the patented QuickTrim™ self-tailer*. The significance of this unique innovation was acknowledged with the Orbit Winch™ being named as a 2023 DAME Award joint category winner.

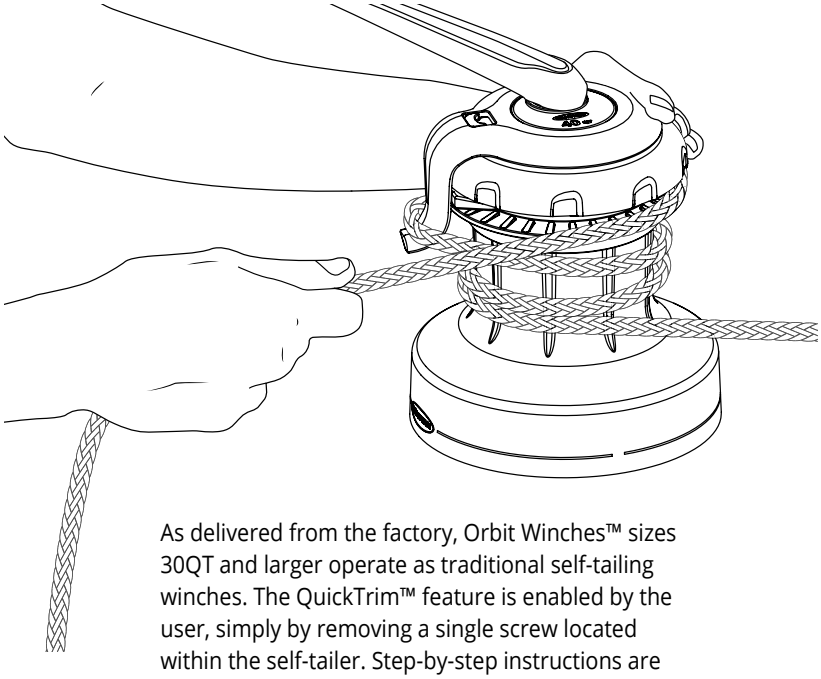
Building on the momentum of these award-winning winches, we have extended the range with the addition of two larger sizes: 45QT and 50QT. This offers new opportunities for using Orbit Winches™ on larger boats of 14m or more. In addition to the QuickTrim™ feature, the 45QT and 50QT can be specified with either a two-speed or a three-speed configuration.

E1 Electric Orbit Winches™ are a further addition to the range. Perfect for enjoying sailing short-handed or with friends and family, E1 Electric winches are engineered with unsurpassed levels of functionality, monitoring, and protections. Electric winches and conversion kits are available for sizes 30QT and 40QT in either 12V or 24V systems.

*Available from size 30QT and up

# ANATOMY OF AN ORBIT WINCH™

# INTRODUCING QUICKTRIM™



The innovative QuickTrim™ functionality allows sailors to easily and safely ease line tension to make minor sail trim adjustments without having to remove the winch handle or take the line out of the self-tailer. Racing sailors can react and respond instantly to minor changes in wind direction or steering, providing an unmatched advantage when frequent sail trim adjustments are required. It's also a nice convenience for cruising sailors.

On the water, using QuickTrim™ is intuitive and quickly becomes second nature. With one hand on the tail of the sheet, rotating the top cover of the winch anti-clockwise against spring pressure allows the self-tailer to turn beneath it like a sheave as the rope is eased out, with smooth grip and control assured by the drum surface and Power Ribs™. When the top cover is allowed to spring back, the self-tailer locks again and grips the line to resume normal use. This simple, reliable feature is a real advantage when making frequent minor adjustments.

As delivered from the factory, Orbit Winches™ sizes 30QT and larger operate as traditional self-tailing winches. The QuickTrim™ feature is enabled by the user, simply by removing a single screw located within the self-tailer. Step-by-step instructions are included in the Quick Reference Guide provided with the winch, and in the product manual available from the Ronstan website.

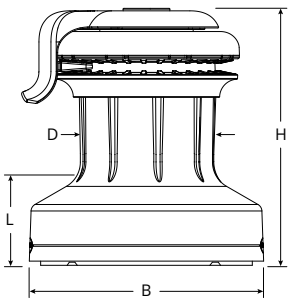
# POWER RIBS™

Inspired by the distinctive drum profile of Andersen Stainless Steel Winches®, Power Ribs™ have been incorporated into the fully machined drums of Ronstan's Orbit Winches™ to deliver the same impressive line handling with maximum grip and minimal rope wear.

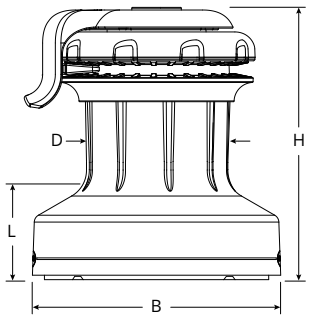
The exceptional grip provided by the Power Ribs™ offers a multitude of benefits: requiring fewer wraps around the drum, reducing the load held in the self-tailer, and encouraging the line to slide easily upward on the drum to avoid riding turns. The non-abrasive drum surface extends the service life of running rigging and allows for smooth and controlled easing, even under high loads.

# 20ST


| RA6201 | | |
|---|---|---|
| Gear Ratio | 2.7 : 1 | |
| Power Ratio | 19.5 : 1 | |
| | METRIC | IMPERIAL |
| Line Size | 6 - 10mm | 1/4" - 13/32" |
| Drum "D" | 75mm | 2 15/16" |
| Base "B" | 120mm | 4 23/32" |
| Height "H" | 124mm | 4 7/8" |
| Line Entry "L" | 42mm | 1 21/32" |
| Weight | 1.7kg | 3.75lb |
| Max Pulling Load | 550kg | 1210lb |




- Sprung self-tailing jaws to accept 6 - 10mm line.
- Proven Andersen winch gearing configuration.
- Power Rib™ ensures a controlled grip on the line at all times, whether trimming or easing. Minimal rope wear compared to more abrasive drum surface finishes.
- No tools required for disassembly and servicing.
- Machined aluminium drum – stronger and lighter than traditional cast aluminium drums.
- Lightweight aluminium centre stem provides significant weight savings over traditional bronze stems.
- Low line entry due to gearing configuration geometry.
- Hard anodised aluminium drum and centre stem.
- Grade 316 stainless steel shaft, pawls, and axle pins.
- Aluminium bronze gears.
- Hard anodised aluminium self-tailing arm.
- Glass-filled nylon jaws.
- Self-lubricating acetal bearings.






- Sprung self-tailing jaws to accept 7 - 12mm line.
- QuickTrim™ patented self-tailing feature for rapid sail trim and smooth adjustment.
- Ball bearings carry the thrust loads, roller bearings carry the radial loads of the drum to minimise rotational friction.
- Proven Andersen winch gearing configuration.
- Power Rib™ ensures a controlled grip on the line at all times, whether trimming or easing. Minimal rope wear compared to more abrasive drum surface finishes.
- No tools required for disassembly and servicing.
- Machined aluminium drum – stronger and lighter than traditional cast aluminium drums.
- Lightweight aluminium centre stem provides significant weight savings over traditional bronze stems.
- Low line entry due to gearing configuration geometry.
- Hard anodised aluminium drum and centre stem.
- Grade 316 stainless steel shaft and pawls.
- Grade 316 and 2205 stainless steel axle pins.
- Aluminium bronze gears.
- Hard anodised aluminium self-tailing arm.
- Glass-filled nylon jaws.
- Self-lubricating acetal bearings.

| PRODUCT No. | WINCH MODEL | GEAR RATIO 1ST SPEED | GEAR RATIO 2ND SPEED | POWER RATIO 1ST SPEED | POWER RATIO 2ND SPEED | LINE SIZE mm | DRUM "D" mm | BASE "B" mm | HEIGHT "H" mm | LINE ENTRY "L" mm | WEIGHT kg | MAX PULLING LOAD kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| METRIC DIMENSIONS | | | | | | | | | | | | |
| RA6302 | 30QT | 1.4 : 1 | 5.2 : 1 | 8.3 : 1 | 30.2 : 1 | 7 - 12 | 86 | 136 | 166 | 57 | 3.1 | 700 |
| RA6402 | 40QT | 1.4 : 1 | 6.8 : 1 | 8.3 : 1 | 39.5 : 1 | 7 - 12 | 86 | 151 | 166 | 57 | 3.1 | 850 |

| PRODUCT No. | WINCH MODEL | GEAR RATIO 1ST SPEED | GEAR RATIO 2ND SPEED | POWER RATIO 1ST SPEED | POWER RATIO 2ND SPEED | LINE SIZE in | DRUM "D" in | BASE "B" in | HEIGHT "H" in | LINE ENTRY "L" in | WEIGHT lb | MAX PULLING LOAD lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IMPERIAL DIMENSIONS | | | | | | | | | | | | |
| RA6302 | 30QT | 1.4 : 1 | 5.2 : 1 | 8.3 : 1 | 30.2 : 1 | 9/32-15/32 | 3 3/8 | 5 11/32 | 6 17/32 | 2 1/4 | 6.84 | 1540 |
| RA6402 | 40QT | 1.4 : 1 | 6.8 : 1 | 8.3 : 1 | 39.5 : 1 | 9/32-15/32 | 3 3/8 | 5 15/16 | 6 17/32 | 2 1/4 | 6.84 | 1870 |

## NO TOOLS REQUIRED

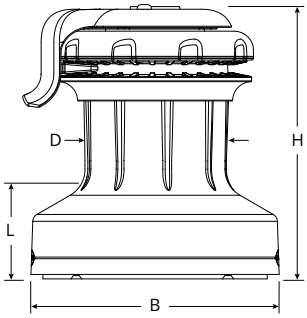
Full disassembly and reassembly can conveniently be performed without the need for any tools. To remove the drum, pull back the spring-loaded release latch and a slight anti-clockwise rotation will allow the self-tailing arm to be lifted from the winch. From there, the drum can be removed from the winch centre stem.

When completing reassembly in reverse order, an audible click confirms positive engagement between the self-tailing arm and bayonet notches on the centre stem. These notches allow the self-tailing arm to be locked in one of 8 positions at rotational increments of 45 degrees.

# 45QT & 50QT








| PRODUCT No. | WINCH MODEL | GEAR RATIO 1ST SPEED | GEAR RATIO 2ND SPEED | GEAR RATIO 3RD SPEED | POWER RATIO 1ST SPEED | POWER RATIO 2ND SPEED | POWER RATIO 3RD SPEED | LINE SIZE mm | DRUM "D" mm | BASE "B" mm | HEIGHT "H" mm | LINE ENTRY "L" mm | WEIGHT kg | MAX PULLING LOAD kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| METRIC DIMENSIONS | | | | | | | | | | | | | | |
| RA6452 | 45QT | 3.0 : 1 | 10.0 : 1 | - | 13.4 : 1 | 45.5 : 1 | - | 8 - 14 | 110 | 183 | 207 | 80 | 5.4 | 1200 |
| RA6453 | 45-3QT | 1.4 : 1 | 3.0 : 1 | 10.0 : 1 | 6.3 : 1 | 13.4 : 1 | 45.5 : 1 | 8 - 14 | 110 | 183 | 207 | 80 | 5.9 | 1200 |
| RA6502 | 50QT | 3.0 : 1 | 10.8 : 1 | - | 13.4 : 1 | 49.3 : 1 | - | 8 - 14 | 110 | 183 | 207 | 80 | 5.4 | 1350 |
| RA6503 | 50-3QT | 1.4 : 1 | 3.0 : 1 | 10.8 : 1 | 6.3 : 1 | 13.4 : 1 | 49.3 : 1 | 8 - 14 | 110 | 183 | 207 | 80 | 5.9 | 1350 |

| PRODUCT No. | WINCH MODEL | GEAR RATIO 1ST SPEED | GEAR RATIO 2ND SPEED | GEAR RATIO 3RD SPEED | POWER RATIO 1ST SPEED | POWER RATIO 2ND SPEED | POWER RATIO 3RD SPEED | LINE SIZE in | DRUM "D" in | BASE "B" in | HEIGHT "H" in | LINE ENTRY "L" in | WEIGHT lb | MAX PULLING LOAD lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IMPERIAL DIMENSIONS | | | | | | | | | | | | | | |
| RA6452 | 45QT | 3.0 : 1 | 10.0 : 1 | - | 13.4 : 1 | 45.5 : 1 | - | 5/16 - 9/16 | 4 1/3 | 7 7/32 | 8 5/32 | 3 5/32 | 11.91 | 2650 |
| RA6453 | 45-3QT | 1.4 : 1 | 3.0 : 1 | 10.0 : 1 | 6.3 : 1 | 13.4 : 1 | 45.5 : 1 | 5/16 - 9/16 | 4 1/3 | 7 7/32 | 8 5/32 | 3 5/32 | 13.01 | 2650 |
| RA6502 | 50QT | 3.0 : 1 | 10.8 : 1 | - | 13.4 : 1 | 49.3 : 1 | - | 5/16 - 9/16 | 4 1/3 | 7 7/32 | 8 5/32 | 3 5/32 | 11.91 | 2980 |
| RA6503 | 50-3QT | 1.4 : 1 | 3.0 : 1 | 10.8 : 1 | 6.3 : 1 | 13.4 : 1 | 49.3 : 1 | 5/16 - 9/16 | 4 1/3 | 7 7/32 | 8 5/32 | 3 5/32 | 13.01 | 2980 |


- Sprung self-tailing jaws to accept 8 - 14mm line.
- QuickTrim™ patented self-tailing feature for rapid sail trim and smooth adjustment.
- Ball bearings carry the thrust loads, roller bearings carry the radial loads of the drum to minimise rotational friction.
- Proven gearing configuration.
- Power Rib™ ensures a controlled grip on the line at all times, whether trimming or easing. Minimal rope wear compared to more abrasive drum surface finishes.
- 45QT and 50QT available as three-speed models.
- Machined aluminium drum – stronger and lighter than traditional cast aluminium drums.
- Lightweight aluminium centre stem provides significant weight savings over traditional bronze stems.
- Low line entry due to gearing configuration geometry.
- Hard anodised aluminium drum and centre stem.
- Grade 316 stainless steel shaft and pawls.
- Grade 316 and 2205 stainless steel axle pins.
- Aluminium bronze gears.
- Hard anodised aluminium self-tailing arm.
- Glass-filled nylon jaws.
- Self-lubricating acetal bearings.

## THREE SPEED MODE

Featuring the fastest line speeds in our range, Ronstan three-speed Orbit Winches™ offer significant advantages in many racing and cruising situations that require rapid line retrieval. In the initial stages of trimming or hoisting sails, the high-speed first gear reduces the time and effort required to adjust sails efficiently. After quick initial line recovery at low load, the winch can be shifted to the slower second and third gears as load increases, using their greater mechanical advantage for precise control of heavy loads. The added versatility provided by the extra gear results in improved performance and safety on the water.

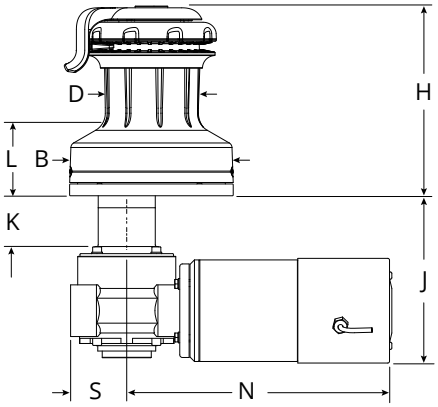
To engage the first gear with a fast 1.4:1 gear ratio, push the button on top of the winch and turn the winch handle clockwise. When the load becomes too heavy, turn the handle anti-clockwise to switch to the second gear. The winch will now operate as a two-speed winch, shifting between second and third gear with changes in handle direction. To return to the first gear for extra speed, simply push the button again.

# ORBIT WINCH™ E1 ELECTRIC


## ELECTRIFY YOUR EXPERIENCE

Orbit Winches™ are now available with an E1 Single Speed Electric Motor. Perfect for enjoying sailing short-handed or with friends and family, E1 Electric winches are engineered with unsurpassed levels of functionality, monitoring, and protections. Installation is simple with no external control box required, while the illuminated "intelligent" push button aids in several safety precautions including overload protection, thermal overload protection, accidental start protection, reverse polarity protection, and more. At the heart of the system is a high quality, European engineered and manufactured series-wound motor, matched with the optimum gearbox for efficient pulling power and line speed.

Available for sizes 30QT and 40QT in 12V or 24V versions.





| WINCH MODEL | PRODUCT No. 12V | PRODUCT No. 24V | LINE SIZE mm | DRUM "D" mm | BASE "B" mm | HEIGHT "H" mm | LINE ENTRY "L" mm | MAX. DECK "K" mm* | MOTOR DEPTH "J" mm | GEAR LENGTH "S" mm | MOTOR LENGTH "N" mm | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| METRIC DIMENSIONS | | | | | | | | | | | | |
| 30QT | RA630201100 | RA630201200 | 7 - 12 | 86 | 136 | 182 | 74 | 50 | 182 | 65 | 300 | 15.2 |
| 40QT | RA640201100 | RA640201200 | 7 - 12 | 86 | 153 | 182 | 74 | 50 | 182 | 65 | 300 | 15.3 |

| WINCH MODEL | PRODUCT No. 12V | PRODUCT No. 24V | LINE SIZE in | DRUM "D" in | BASE "B" in | HEIGHT "H" in | LINE ENTRY "L" in | MAX. DECK "K" in* | MOTOR DEPTH "J" in | GEAR LENGTH "S" in | MOTOR LENGTH "N" in | WEIGHT lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IMPERIAL DIMENSIONS | | | | | | | | | | | | |
| 30QT | RA630201100 | RA630201200 | 9/32 - 15/32 | 3 3/8 | 5 11/32 | 7 3/16 | 3 | 2 | 7 3/16 | 2 9/16 | 11 13/16 | 33.5 |
| 40QT | RA640201100 | RA640201200 | 9/32 - 15/32 | 3 3/8 | 6 1/32 | 7 3/16 | 3 | 2 | 7 3/16 | 2 9/16 | 11 13/16 | 33.7 |

* Extensions available to suit longer "K" dimensions.

## E1 ELECTRIC CONVERSION KITS

All Orbit Winches™ size 30QT or 40QT can be easily converted to electric with an E1 Electric Conversion Kit for either 12V or 24V systems. The Conversion Kit includes the E1 Electric Motor unit, input/output cable from motor, illuminated push button, and mounting deck plate. Marine grade circuit breakers are also available for protection and isolation.


| WINCH MODEL | E1 WINCH CONVERSION KITS 12V | 24V |
|---|---|---|
| **Conversion Kits** | | |
| 30QT | RA630251100 | RA630251200 |
| 40QT | RA640251100 | RA640251200 |

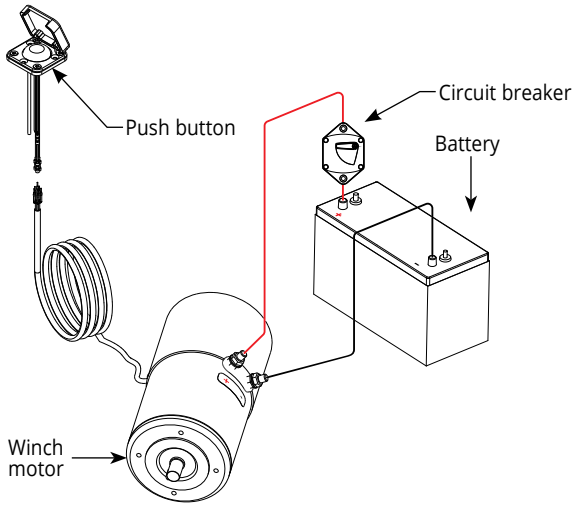
What's included in the Conversion Kit?

- E1 Electric Motor
- Input/output cable
- RA582000 push button
- Deck Plate

## PUSH BUTTONS


| PRODUCT No. | DESCRIPTION |
|---|---|
| **Push Buttons** | |
| RA582000 | Push button on/off switch, LED, plastic hinged cover, incl. 500mm (19 5/8") cable with connectors |
| RA582010 | Push button on/off switch, LED, stainless steel hinged cover, incl. 500mm (19 5/8") cable with connectors |
| RA582020 | Push button on/off switch, LED, stainless steel hinged cover with finger access, incl. 500mm (19 5/8") cable with connectors |

- Rubber gasket included.
- Requires only 25mm (1") clearance below mounting surface.




## CIRCUIT BREAKERS

| PRODUCT NO. | DESCRIPTION | COMPATIBLE WINCH SIZES |
|---|---|---|
| **Circuit Breakers** | | |
| RA590070 | Circuit breaker 70 amp | For full technical and installation details, refer to Winch Data Sheets and User Manuals available on ***www.ronstan.com*** |
| RA590120 | Circuit breaker 120 amp | |
| RA590150 | Circuit breaker 150 amp | |
| RA590200 | Circuit breaker 200 amp | |

- "Slow blow" type, manual reset
- On/Off switch capability
- External ignition protected (ABYC E-11; CE; SAE J1171)
- Marine weatherproof rated
- DC power systems only
- 8mm (5/16") cable terminals (same as E1 motor unit)

# ORBIT WINCH™ SELECTION GUIDE

Choose your Ronstan Orbit Winch™ keeping in mind the size of your yacht and your sailing requirements. This selection guide is intended for masthead rigged monohull yachts of medium displacement. Refer to the notes to the right regarding other rig or displacement types.

Please note that this table lists typical winch sizing for the given applications, but can not take into account all variables due to the wide variety of sailing vessels and conditions.

For electric winches, the size selection is generally similar to that of a manually operated winch.

For further details see our website at ***www.ronstan.com*** or consult your local Ronstan representative for assistance in selecting your winches and information on features, options and installation.

**Masthead Rigged**
Use the Length Overall (LOA) figures as your primary selection criteria.

**Fractional Rigged**
Refer primarily to the sail area, rather than LOA.

**Heavy Displacement**
For boats with heavy displacement and/or a high righting moment, it is advisable to choose a winch larger than those indicated in the table.

**Multihulls**
Catamarans and trimarans have higher righting moments than monohulls of the same size, and should use winches larger than those indicated in the table.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **LOA** (Feet) | 25-28 | 29-32 | 33-35 | 36-39 | 40-43 | 44-48 | 49-54 |
| **LOA** (Metres) | 7.6-8.5 | 8.8-9.8 | 10.1-10.7 | 11.0-11.9 | 12.2-13.1 | 13.4-14.6 | 14.9-16.5 |
| **Genoa Sail Area** ($ft^2/m^2$) | 300/28 | 350/33 | 470/44 | 560/52 | 770/72 | 880/82 | 1300/120 |
| **Spinnaker Sail Area** ($ft^2/m^2$) | 410/38 | 600/56 | 800/74 | 1200/111 | 1600/150 | 2000/185 | 2800/260 |
| **Main Sail Area** ($ft^2/m^2$) | 150/14 | 210/20 | 260/24 | 320/30 | 430/40 | 470/46 | 750/70 |

| *Application* | *Recommended Winch Size* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Genoa Sheet** | 20 | 30/40 | 40 | 45/50 | 50 | | |
| **Spinnaker Sheet** | 20 | 20 | 20/30 | 30/40 | 40/45 | 45/50 | |
| **Main Sheet** | 20 | 20 | 20/30 | 30 | 30/40 | 45/50 | 50 |
| **Genoa Halyard** | 20 | 20 | 20/30 | 30/40 | 40/45 | 45/50 | 50 |
| **Spinnaker Halyard** | 20 | 20 | 20/30 | 30 | 40/45 | 45 | 50 |
| **Main Halyard** | 20 | 20 | 20/30 | 30/40 | 40 | 40/45 | 45/50 |
| **Reef Line** | 20 | 20 | 20 | 20 | 20/30 | 40 | 40/45 |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